



Abstract Book

5th World Planning Schools Congress

16th Asian Planning Schools Association Congress

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In Collaboration with GPEAN Members





FOREWORD

On behalf of the Organizing Committees, I would like to express a warmest welcome to all delegates and participants to the WPSC – APSA Conference 2022. It is a great honor for Indonesian Planning Schools Association (ASPI), as the local organizing committee, to organize such important event in Bali, Indonesia. A joint between the 5th WPSC and the 16th APSA Congress would be a very monumental event not only to celebrate two decades of global planning education association but, more importantly, to seek more productive collaborations among planning education institutions across the globe.

I believe that this conference is an important forum for exchange latest information and knowledge on planning education and research. With the theme *“Planning A Global Village: Inclusion, Innovation, and Disruption”*, the congress will bring together several relevant and important issues that challenge planning notions and practices.

Recent trends, however, indicate the dramatic and significant shift from the traditional approach of seeing things for granted to ‘disruptive innovation.’ It splintered into many aspects of individuals and communities, including planning and design. Not only does disruptive innovation become a cornerstone in current academic discourses, it also calls for new approaches in observing, critiquing and analyzing our contemporary issues and problems. As such, disruptive innovation deconstructs our traditional-comfort planning notions and practices and engages us in a new unprecedented era and territory.

Coupled with the trends toward inclusivity, understanding, conceiving, and planning our global village, the idea that we throughout the world are interconnected through the use of new media technologies, become more exciting and interesting journey. Several questions could be rise from these situations and challenges: what are roles of space, time, and culture in this global village under the era of inclusion and disruption? How planning comprehends and conceive this unprecedented era? Can planning still able to provide useful directions to course the future of our global village?

The joint 5th WPSC congress and 16th APSA congress in 2022, uses these ideas as backdrop for critically examining the effect of disruptive innovation and inclusion in planning and design. At the same time, the congress also considers topics related to globalization and the way it stimulates creative disruption and inclusion in planning and design. We encourage ideas that consider disruptive innovation and inclusion as other forms of machine capable to co-opt various actors and institutions in disseminating certain social, economic and cultural values, planning and design as a form of resistance against the commodification process diffused across space and social groups and is systematically embedded in the structural power relations of innovation politics, and historical assessment of space and built environment as a form of disruptive innovation.

Last but not least, I would like to thank to all GPEAN and APSA committee for the good cooperation and the successful of organizing WPSC and APSA Congress 2022. I would like to thank also to all valuable contributors for impressive participation and cooperation in this event.

Prof Dr. Iwan Rudiarto
Chair of the WPSC - APSA Congress 2022

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Research on the coupling relationship and spatial-temporal evolution between industrial agglomeration and urban-rural space in London Metropolitan Area

Tao Ma (深圳大学) and Xiaochun Yang (深圳大学).

Abstract

There is a close relationship between industrial agglomeration and urban-rural spatial evolution. In view of the coupling relationship between the two, this paper takes the London Metropolitan Area as an example and uses the statistical data of 88 regional units in three-time sections of 2001, 2011, and 2021 to construct a comprehensive evaluation index system of industrial agglomeration and urban-rural spatial evolution. Based on the panel regression model and the coupling coordination degree model, this paper studies the coupling coordination relationship and spatial-temporal evolution pattern between the two. The results show that there is an obvious coupling relationship between the industrial agglomeration system and the urban-rural spatial system in the London Metropolitan Area, but the overall coordinated development degree is in the stage of imbalance and recession. The development trend is slow from 2001 to 2021, and the spatial differentiation is obvious. Taking City of London as an example, the comprehensive evaluation index of its industrial agglomeration system is significantly higher than that of the urban-rural spatial system, indicating that its urban-rural spatial development level is slightly weak, and the development of industrial agglomeration does not play a good positive role in promoting urban-rural spatial development. In this regard, this paper will further analyze the spatial and temporal distribution characteristics and evolution trend of the coupling degree between industrial agglomeration and urban-rural spatial systems through the spatial gravity center model and the panel regression test. Then, it will explore the reasons for the generally low level of coordinated development between the two systems through the interpretation of the British industrial strategy and the Greater London planning policy over the years. Finally, it will try to compare with the Shenzhen metropolitan area, so as to provide a case reference for the future coordinated development of industries and urban-rural space in Shenzhen and other metropolitan areas

An Assessment of Open Spaces for the Low-Income Neighbourhoods of Gurugram City.

Ishita Bhartia (TERI School of Advanced Studies).

Abstract

The health of cities has always been closely associated with planning. Provision of open spaces is not the sole determinant of a healthy city, nonetheless, it is an essential indicator of the same. Inequitable distribution of open spaces is often observed in the cities of developing countries. In India the provision of open spaces in urban settlements is guided by 2 national-level frameworks- The Urban Greening Guidelines (2014) by the Town and Country Planning Organization, and the Urban and Regional Development Plans Formulation and Implementation Guidelines (2015) by the Ministry of Urban Development. Intercity and intracity variations in open space provision are common amongst Indian cities. Policy and physical factors mostly contribute to intercity differences, whereas intracity variations are more complex in nature. Due to the rapid expansion of the Gurugram Metropolitan Area (GMA), planned development is in fragmented pockets, resulting in inequitable access to city-level resources. To monitor and review this inequity in the development of GMA, a Liveability Metric and a Draft Social Infrastructure Plan is being formulated by the Gurugram Metropolitan Development Authority (GMDA). This study was undertaken as a part of the Draft Social Infrastructure Plan. The study aimed at analysing the existing provision of open spaces in Gurugram city, identifying gaps, and proposing policy and on-site solutions to bridge the same. 4 study neighbourhoods were identified, using ward level population data. Percentage of backward class and scheduled caste population, along with population density, were used as indicators to select 2 low-income and 2 high-income neighbourhoods. A qualitative and quantitative analysis was done to map the existing provision, against a formulated criterion. This, along with a needs-based assessment, done via primary survey, brought out the disparity in the provision of open spaces amongst different socio-economic neighbourhoods in Gurugram. Issues related to access and inclusivity also emerged. The multiplicity of institutions, lack of funding, and scarce land resources were some of the causal factors, identified via policy analysis. Recommendations included the transfer of implementation and maintenance of all open spaces to the Gurugram city government, which had been using innovative funding mechanisms such as CSR and participatory approaches for planning open space projects. Rooftop gardens, and green streets, were some of the on-site urban design recommendations to incorporate open spaces into the high-density, low-income neighbourhoods in Gurugram city.

Public spaces delivered by the suburban growth machine

Antti Roose (University of Tartu).

Abstract

The suburbs in Estonia represent a sprawling case where an oversupply of undeveloped land leads to an illogical and fragmented land use pattern of randomly arranged plots at different stages of development. The paper deconstructs the placemaking of public spaces in the rise of new publics (Hristova and Czepczyński 2018) making future-proof cities (Wilson 2021). The concept of public space is not mainstreamed being highly dynamic arena of urban planning in Estonia. Public space in suburban districts usually takes the form of green areas, bicycle and pedestrian paths, footpaths, playgrounds and sports fields, bus stops, car parks, shopping centres and petrol stations. Place making around new housing combines a few trees, a hedge, a car park and a playground. The classic street is rarely seen in new suburbs. In contrary, bicycle and pedestrian paths are the most popular public spaces. A large-scale transport landscape with junctions is designed for the public use. Even, public car parks can also be considered public spaces, quite functional with the elements of pseudo. Petrol stations, which are often the first service sites to appear in suburbs, are part of the privately owned public space offering not only fuel but also performs the grocery store, café and fast food. Shopping centres providing plenty of public space in suburban zones feature the privately owned public space. In regard the planning process, adding playgrounds, bus stops and other public sites to an existing quiet suburb has given rise to planning disputes. In the context of power and participation, local governments, as the bodies adopting comprehensive and detailed plans, have undivided authority in the final decisions regarding suburban development. The suburb has been increasingly the hotspot of public and private spaces. A wide range of complex and interrelated actions – not just planning of the physical fabric and placemaking – are necessary to tackle the suburban growth machine.

The 'global metropolis' as a buzzword: rethinking the theoretical boundaries of the global city

Chensi Shen (Tianjin University), Chunyan Zhang (Tianjin University) and Zhiwei Huang (Department of Geography, University College London).

Abstract

Since its introduction in the mid-1980s, the concept of the global city has become an important methodological framework for understanding the relationship between globalisation and urbanisation under neoliberal regimes. The global city has also become a way of rating and promoting cities and, as a result, a driving force in urban policy and urban development projects.

In urban practice, however, the more popular terminology is the global metropolis. Classical theory suggests that the existence of city networks cannot deny the importance of global city brands. London, New York and Shanghai have reason to be hotspots in their own right, not just as a focal point in a global network. While the network perspective, which is more concerned with the international movement of capital, services, people and goods, argues that the global city should go beyond the classic view of the city as a point. Rather than global cities per se, city clusters or metropolitan areas become regions where networks intersect.

By reflecting on global relations in a regional context, this paper hopes to argue that it is no accident that 'global metropolis' or 'cosmopolitan' has become a buzzword for urban promotion. It indicates an expectation to be both a leader in regional development and a centre of global attention. A metropolis does not necessarily become a global city: it does not necessarily have a significant position in international trade networks. For the Global South, many metropolises do not always have the international infrastructure. But global cities are invariably metropolises, inevitably having a siphoning effect on the surrounding areas.

Using Tianjin, China, as an example, this paper aims to discuss the dynamics of the city's pursuit of internationalisation and becoming a regional core in the creation of a 'global metropolis'. The paper argues that the popularity of the term has ensured that urbanisation spreads beyond the urban frontier in the name of the global city. Regional semi-urban and non-urban areas within the metropolitan sphere are redefined in the globalization context. The creation of global cities in areas of relative resource scarcity implies a geographical redistribution of regional resources. Thus, not only do global cities become sites of polarisation internally, but global metropolises also create regional inequalities. This paper, therefore, wishes to appeal to a view of the global city theory that goes beyond the city itself not at global levels, but also within regional networks.

Community governance in suburban resettlement neighbourhoods: state control and civic engagement

Zhu Qian (School of Planning, University of Waterloo).

Abstract

China's unprecedented urbanization has generated numerous government arranged resettlement neighbourhoods to accommodate villagers who lost their land to urban expansion. Resettlement community has been jointly governed by formally structured, voluntarily based and contractually selected neighbourhood associations and the state's continuous grassroots influence. This paper investigates recently resettled villagers' transformation in two suburban Shanghai resettlement neighbourhoods that are managed by resident committee, homeowner association, and property management agencies. Long lasting rural-urban divide and rising civil society have rendered the community governance of resettlement neighbourhoods different from that of conventional urban neighbourhoods. Lack of policy legitimacy, manpower shortage and uneasy relationships between the neighbourhood associations and resettled villagers have been the main challenges in community governance.

Managing the Urban Environment: The Case of Bangkok, Thailand

David Edelman (School of Planning, University of Cincinnati).

Abstract


This project focuses on the practice of Urban Environmental Management (UEM) in developing countries, which face more immediate, critical problems than the developed world and have fewer resources to deal with them comprehensively. It uses Bangkok, Thailand as a case study and was a graduate studio that took place in late 2021. The objective of the studio was to prepare a mixed class of seventeen domestic and international students to work overseas in data-poor environments as professional consulting planners. The students operated in seven collaborative sector-level teams (Poverty Alleviation, Industry, Transportation, Energy, Water, Sewage and Sanitation, and Finance) preparing a 5-year Environmental Plan for Bangkok utilizing a real-world database and a realistic, limited budget. Their work resulted in a professional quality planning document. Bangkok is the political, economic and commercial capital, as well as the largest city, of Thailand. It is located on the delta of the Chao Phraya River, about 25 miles (40 km) from the Gulf of Thailand. It was formerly divided into two municipalities — Krung Thep on the east bank and Thon Buri on the west — connected by several bridges. In 1971, the two were united as a city-province with a single municipal government. In 1972, the city and the two surrounding provinces were merged into one province, called Krung Thep Maha Nakhon (Bangkok Metropolis) governed by the Bangkok Metropolitan Administration or BMA. The metropolis is a bustling, crowded city, with temples, factories, shops and homes juxtaposed along its roads and canals. While it is also a major tourist destination, noted for fabulous cultural attractions and a nightlife with a flourishing sex trade, it has severe environmental problems, which include air pollution from vehicle emissions, water pollution from organic and factory wastes, water scarcity, and hazardous waste disposal. Furthermore, Bangkok's rapid growth coupled with little urban planning has resulted in a haphazard cityscape and inadequate infrastructure. Despite an extensive expressway network, an inadequate road network and substantial private car usage have led to chronic and crippling traffic congestion, which caused severe air pollution in the 1990s. The city has since turned to public transport in an attempt to solve the problem, operating five rapid transit lines and building other public transit, but congestion still remains a widespread issue. Bangkok also faces long-term environmental threats such as sea level rise due to climate change and subsidence, the latter which is a major concern.

Land Value Capture In Overcoming Gentrification Of Urban Area

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Abstract

The phenomenon of urban gentrification is marked by changes in the social order in terms of income and business opportunities for local indigenous people as well as changes in land use functions towards commercial land uses, housing, house rental prices and property taxes increase. The new business took place to serve the high-income consumer base and reduce accessibility to less affluent natives. The purpose of writing the article is to produce a concept paper to overcome gentrification as a social problem through the Land Value Capture (LVC) approach by the government. LVC redistributes a portion of the revenue generated by regional development effectively to allocate affordable housing and basic and social services and is able to reduce the burden of financing conventional government development. The LVC literature study approach is deliberately carried out, considering the results of its application show that there are many other mechanisms



to overcome social inequality due to development. However, not all LVC mechanisms can be implemented easily. Government policies are needed in implementing the mechanism, including the participation of the private sector and local communities to run as expected.

Peri-urban landscape coverage ratio as the stormwater management tool of the metropolis, the case of Phnom Penh

Sokuncharia Srey (Waseda University).

Abstract

Developments in the peri-urban areas has been linked to adverse hydrological implication within the overall urban area, especially in developing countries that are found to be most vulnerable to flood events. However, there is a lack of discussion about how peri-urbanization affects the flood management capacity of the metropolitan area. Phnom Penh is a flood prone city in Cambodian that relies heavily on grey infrastructure and the peri-urban area for flood protection. It is suffering from increasingly disastrous and more frequent flood events as it continues to expand into the surrounding fringe area. As the peri-urban arena is being urbanized, this poses a serious problem in terms of flood management but the discussion on peri-urbanization and its influence on the city in terms of flooding is severely limited. Moreover, the effect of how large-scale developments in the region can affect the city, especially its hydrological dynamic, is also poorly understood This study seeks to investigate the extent in which the peri-urban area help control flooding in the larger metropolitan area and determine the main flood control asset of the peri-urban realm. To achieve these objectives, flood susceptibility maps of Phnom Penh before and after the development of the peri-urban area were created through the weighted sum model in ArcGIS Pro. Visual and qualitative results of the flood risk maps indicate that the peri-urban area contribute greatly to flood management as the business-as-usual development pattern will increase Phnom Penh's flood hazard exponentially. Alteration in this area is expected to impact the hydrological characteristic of the entire metropolitan, beyond the peri-urban's watershed boundaries. Furthermore, analysis of the maps and the flood-inducing factors shows that it is not the size and depth of the peri-urban arena that is the main contributor to flood control but the water percolation characteristic of the area that can be manipulated by the landscape coverage ratio. Although this study is limited to the confine of physicality, the finding that landscape coverage ratio can be utilized as the main peri-urbanization pattern for flood resilience allows for a more sustainable development approach to urbanization in emergent nations. Further study can also consider how to incorporate the landscape coverage of the peri-urban area as a flood control tool in the entire region.

Urban shrinkage in the USA, Germany, Japan and China: A Comparative Perspective

Yuqi Zhang (Kyoto University, Graduate School of Global Environmental Studies) and Chiho Ochiai (Kyoto University, Graduate School of Global Environmental Studies).

Abstract

Urban shrinkage has become a global phenomenon, existing not only in Europe, the USA, Japan but also in China, which undergoing rapid urbanization. Urban shrinkage is evolved in the global process and is embedded in the local context. Despite the growing literature on shrinking cities, little research has been done on a transnational comparison. This research aims to fill this gap by providing an overview that compares the similarities and differences between the USA, Germany, Japan, and China. By a systematic literature review, this study endeavors to address the following questions: (1) How do different countries define and identify shrinking cities? What are their spatial distributions? (2) When and what caused urban shrinkage? (3) What are the policies adopted by different countries to respond to it, and who are the main actors? The study shows that: (1) Although 'shrinking cities' has not come to a unified definition, it is widely regarded as a process of continuous depopulation and economic decline. Most scholars use population data to identify shrinking cities, while some use multi-dimension indices of population, economy, and land use. And recently, nighttime light data is also considered an effective indicator. Shrinking cities are mainly located in old industrial cities and small-sized cities in geographically marginal areas. But declined districts differ in distribution, such as 'perforated', 'doughnut', or 'anti-doughnut' structure. (2) Shrinking cities in the USA emerged in the 1950s and were mainly affected by deindustrialization and suburbanization. In the 1970s, Japan showed a tendency of shrinkage due to the changed population structure. In the 1990s, German reunification and falling birth rate led to lots of shrinking cities. And since 2000, China has seen shrinking cities mainly due to industrial restructuring. (3) In terms of policy responses, the USA, Germany, and Japan showed an adaption to shrinkage, from growth-oriented planning to appropriate-sized planning. In the USA, it is mainly local authority-led, with reduced federal involvement and eds and meds playing an increasing role. While in Germany, there is more federal involvement, with policies mainly focusing on demolishing vacant buildings and improving the quality of life. Policies in both Japan and China are state-led, with Japan focusing on promoting population growth, while China focusing on economic

restructuring. At the local level, Japan tried to tackle the problem of vacancy, but there are few strategies in China aimed at communities. And affected by land fiscal policy, China is still pursuing growth-oriented planning.

Developing a Conceptual Framework for Sustainable Suburban Industrial District in the Peripheries of Tokyo Metropolitan Area

Ruiyi Zhang (Keio University) and Wanglin Yan (Keio University).

Abstract

Industrial districts and parks were often considered 'growth poles', where scarce fiscal and human capital were concentrated for efficient transportation and communication. And the Tokyo Metropolitan Area (TMA), the largest metropolis in the world, has developed hundreds of industrial parks in its peripheries which induced massive land use change and multifaceted social-environmental impacts. The suburban industrial districts (SIDs) are valued for sustainability of cities more than ever in the past, while confronting the challenges from global environmental crisis, regional industrial transition and local demographic transformation. For portraying Sustainable SID in the metropolitan peripheries, this research aims to develop a conceptual framework of sustainability indicators at multiple spatial scales. It will contribute to policy making and local planning of municipalities in the peripheries, and to sustainable development of metropolitan. In this research, industrial lands and industrial parks are studied at both regional and local scale in the context of local population change and regional transport infrastructure across three time periods (the 1980s, 1990s, and 2000s). Second, through literature review on development of inland industrial district and policy study for spatial governance in the TMA, the conceptual framework of Sustainable SID is identified by 4 perspectives of sound development process, green environment, economic efficiency and social equity. Third, typical SIDs are found out through a hierarchical clustering, and an assessment indicator system is developed based on the differences in sustainability of the cases due to 5 aspects of location, spatial design, socio-economic structure, environment and safety, which are identified by a semi-structured interview on local municipalities. Finally, the heterogeneity of the SIDs in the TMA helps to train the sustainable indicator system. The results indicate that the change of context of transport connectivity affects the suburban industrial land transition, and the land resource conservation is challenged in the 30-50km area of the TMA. By using the indicator system, the suburban industrial districts (SIDs) with industrial park in the core are able to assess their sustainability performance and compare with each other. Based on the conclusion, recommendations regarding Sustainable SID approach could be given for renaissance of municipalities in the metropolitan peripheries.

Industrial location criteria – the viewpoint of investors for the case of Ho Chi Minh city

Phuong-Thao Hoang-Thi (Ton Duc Thang University), Shiann-Far Kung (National Cheng Kung University) and Hsueh-Sheng Chang (National Cheng Kung University).

Abstract

Vietnam develops in the direction of industrialization and modernization of the country. The overall development objective of Vietnam is striving to become an industrial country, including the establishment of a system of industrial parks (IPs) as the base for such development. The industrial planning process is mainly under the control of Ho Chi Minh City (HCMC) authorities. Government planners usually follow the existing criteria to choose the rational location for new IPs. The planning process seems to forget the investors' voices, and this missing creates the deficiencies that could prevent the success of planning projects. This research aims to clarify the industrial location criteria from the investors' point of view. By collecting the primary data via the questionnaire of investors and applying Fuzzy Analytic Hierarchy Process (FAHP), this research tries to emphasize the critical and the major concern of investors in the planning process. The results show that the investors remain to consider physical factors (such as transportation system, distance), economic factors (such as cost, market), social factors (such as labor resources, education). However, the change of times, technology, production methods, and political fluctuations also lead to significant changes in the priority order and importance of the criteria. The research results may become a cornerstone for the new industrial park planning process. A planning process for selecting a new industrial park location is also proposed to optimize the success of the new industrial park planning project with investors' participation.

More of the same: when urban planning law is incomplete and fragile, real estate production remains concentrated and segregated.

Érica Paulino (Universidade de São Paulo (USP)) and Paula Santoro (Universidade de São Paulo (USP)).

Abstract

International literature analyzed the use of Floor Area Ratio (FAR) to produce sustainable development objectives (Dunning & Lord, 2020), to articulate urban development with mobility (Carlton, 2009; Ibraeva et al., 2020), affordable housing production (Calavita & Mallach, 2010), urban renewal projects (Swyngedouw et al., 2002), land value capture (Marthur, 2019). Many Brazilian authors analyzed how urban policies use building rights as real estate incentives. They studied their historical and theoretical trajectory in Latin America and Brazil (Rezende et al., 2009; Bacelar and Furtado, 2016), and also their application, regulation or management (Cymbalista et al., 2007; Maleronka, 2010; Nogueira, 2019). This article aims to analyze the relation between Onerous Grant on the Right to Build (OGRB), real estate developments and territorial pattern, in Osasco, a São Paulo Metropolitan Region city, in Brazil. OGRB is an instrument that charges a counterpart for using the right to build above the basic FAR (how much the owner has the right to build without paying), up to the maximum FAR (which should be established by law, according to urban infrastructure). The analysis showed a fragile regulation, which determines a high basic FAR, reducing public revenue; a high maximum FAR equal for many neighbourhoods, without differentiating them according to the infrastructure; several types of built-up areas not to pay the counterpart; and uses outdated property tax values for calculating the counterpart. City government is giving up public resources rather than encouraging certain urban uses. Real estate developments produced under this regulation, between 2008 and 2016, reinforced spatial patterns. The cartography showed its concentration in areas: with basic FAR higher than 1 (61% of the developments), occupied with more than 60% of white population (75% of the developments), where average family income is higher than 6 minimum wages, what is considered high average (64% of the developments) (IBGE Census, 2010) and concentrated around a metropolitan axis of urban mobility (40% of the developments). It concludes that when urban planning law is fragile, not committed to urban planning desires, real estate production remains concentrated, segregated and exclusionary, the collect revenues are low and the public efforts to change the territorial pattern neither take place. The study provides inputs for the OGRB regulation and management of urban space to redirect the real estate production and mitigate its impacts. It ends by reflecting on how to overcome these challenges through more or different forms of regulation or urban management.

Regional CBD Hierarchical System in the New Urbanisation Era: A Case Study of the Greater Bay Area Mega-City Region, China

Zixin Luo (the University of Hong Kong) and Anthony Yeh (the University of Hong Kong).

Abstract


Central Business District (CBD) is a term derived from economic geography and land economics, referring to the most central places, which are usually occupied by establishments with the highest rent-pay capability (see bid-rent theory, Alonso, 1960). Advanced Producer Services (APS) are among the leading business types in the CBD and are believed to affect the growth and death of a CBD (Daniels, 1975; Coffey et al., 1996). Previous studies on CBD mostly focused on its inner structure other than external linkages, i.e. the regional hierarchical structure. However, the networked CBD system is shaping worldwide in the regional urbanisation age (Soja, 2011), strongly affecting regional development. Meanwhile, some regions witnessed an over-supplying issue, causing CBDs' low vibrancy. Also, urban scholars' call for looking beyond the 'monocentric dualism' (Soja, 2011) requires researchers to renew previous CBD studies at a greater scale. Thus, this paper aims to study the feature of CBD hierarchical structure in the Greater Bay Area using multi-sourced socio-economic big data from producer services establishments' evolutionary location perspective (1990-now). On top of this, an important question that if the CBDs are oversupplied would be answered. Above all, this paper would contribute to outlining and understanding the regional structure of CBD system. It can hopefully help to put forward favourable suggestions for urban planners and government municipals on the CBD development in mega-city regions in the new regional urbanisation era.

The Effect of the Bocimi Toll Road Development on the Increase in the Number of Tourists at the Ciletuh Geopark - Palabuhanratu

Ruchyat Deni Djakapermana (Master Study Program of Regional and City Department UNPAK Bogor - Indonesia), Hari Ramdiansyah (Professional) and Titik Penta Artiningsih (Master Study Program of Regional and City Department UNPAK Bogor - Indonesia).

Abstract

Sukabumi Regency has great tourism potential, both natural tourism and cultural tourism, which are very attractive to tourists for the surrounding urban areas, especially the Ciletuh-Palabuhanratu Geopark area, which has been part of the



UNESCO Global Geopark since 2018. The construction of the Bocimi Toll Road is expected to increase accessibility between the Jabodetabek urban area as a tourist market and Geopark Ciletuh-Palabuhanratu as a tourist destination. The aims of this study are (1) to analyze the interaction between Jabodetabek and Sukabumi Regency, and (2) to analyze the effect of the Bocimi toll road development on the number of tourists. The research was conducted using a quantitative method by utilizing secondary survey data sourced from agencies that have duties and authorities in their respective fields. For the first purpose, the method used is Gravity Model Analysis to determine the level of change in the interaction between the areas, while for the second purpose, we used Linear Regression Analysis and Pearson Correlation Model to see the effect of the Bocimi Toll Road on the number of tourists at the Ciletuh Geopark. The results of the analysis of the gravity model show that the operation of Section I toll road has had a positive impact on the interaction between the two regions, and it is hoped that with the completion of Section II, can further strengthen regional interactions, while the results of the 2 processes of linear regression analysis and Pearson correlation can be seen that the relationship between the V/C Ratio, which is influenced by the construction of the Bocimi Toll Road, with the development of the number of tourists, has a value of "r" of 0.8854 and "R²" of 0.7839. From these two values, it can be concluded that the relationship between the two variables has a close relationship in the opposite direction, and the effect of the V/C Ratio on the number of tourists is 78.39%. The conclusion that can be drawn from the results of the research is that the Ciletuh-Palabuhanratu Geopark has become a destination that has its own market share, and the existence of the Bocimi toll road affects the interaction between the Greater Jakarta area and Sukabumi, but the number of tourist visits to the Ciletuh-Palabuhanratu Geopark has increased the number of tourists, which continues to grow.

The TOD Strategies in Medium-sized Cities in Hunan China : the Reshape of Three Comprehensive Transportation Hubs

Zhijing Yang (China Railway Group Limited, Changsha Planning & Design Institute), Ziyue Li (College of Architecture and Urban Planning, Tongji University) and Simin Sun (China Railway Group Limited, Changsha Planning & Design Institute).

Abstract

Transit-oriented development (TOD) is a general concept in many metropolis, and is originally aimed to solve the problems of over-loaded public transportation in the high-density urban context. In the early 20th century, several medium-sized cities in central China tried to introduce the TOD theory and implemented it in new development projects. However, the theories and formulas that are applicable to metropolises cannot suit completely in the medium-sized cities. Moreover, the long construction periods are faced with difficulties to adapt to the rapid changes on spatial demands, such as new technologies like 5G.

This Study offers a 12-year retrospect of TOD projects in medium-sized cities in Central China, and found three key forces - policy, planning and design, and operation schemes that shaped and reshape the projects in the whole life cycle. Furthermore, we analyze the TOD models in the medium-sized city, and put forward localization ideas based on the typological analysis.


Compared to big cities, medium-sized cities experienced more radical shifts in urban space, along with the transfer of the urban center system. The new TOD strategies are seek to adapt the new combinations of size and functions in medium-sized cities and keep the possibilities of retrofitting reservation for future transformation. Meanwhile, from an architectural perspective, architecture in large-scale urban design is necessary to stitch and connect its form and the urban context from an integral perspective.

The Need for Facilities to Support The Lifestyle of The Elderly in Traditional and Urbanized Bali

Jefferson Edmund (Kyoto University), Kanki Kiyoko (Kyoto University) and Catrini Pratihari Kubontubuh (Bali Kuna Santi, Badan Pelestarian Pusaka Indonesia (BPPI)).

Abstract

Traditional and urbanized Balinese environmental conditions have differences that affect the way of life of the people who live in each area. This way of life is a process of adaptation of society from young to old age. This adaptation process is created because of the factors that shape the environment itself, the user, and the quality of the environment. The Balinese Hindu belief is one of the factors that distinguishes the Balinese way of life from other regions in Indonesia. However, there is quite a contrast between the Balinese way of life in traditional and urbanized areas, especially in the subject of the



elderly, which is an interesting cultural transform to study. This research is a collaboration with the Bali Kuna Santi organization in conducting qualitative surveys and interviews. After the data collection process, the authors conducted an analysis to find the connection between the traditional and urbanized Balinese way of life which can be applied as a new idea for the development of an elderly friendly area, especially in the southern Bali area, which is one of the development areas for modern Bali tourism. Activities related to religion are the main thing in living daily life. Unlike the elderly who live in urbanized areas, their backgrounds and daily activities are very diverse and have been affected by the effects of modernization and globalization. Elderly people in traditional areas with village backgrounds are still able and safe to visit other places on foot, although the condition of pedestrian street has not yet been clearly established, the intensity of transportation is not as busy as in urbanized area. Facilities such as village offices, health center, stalls / shops, can be reached within +/- 500 m, and Pura as a place of worship and places of work such as rice fields are still within +/- 500 m ~ 1 km. While due to the large number of developments and the high intensity of mobilization, urbanized areas are deemed less safe and comfortable for the elderly to walk to places. Therefore, it is also necessary to concentrate on developing pedestrian areas in urbanized areas so that it is comfortable for especially the elderly to walk.

Exploring the participation of collaborative governance in neighborhood regeneration: using social network analysis

Yuhan Zheng (School of Management Science and Real Estate at Chongqing University).

Abstract

Numerous urban regeneration projects have resulted from the rapid development of the economy and urbanization, Participation of stakeholders and collaborative governance is increasingly promoted to address the management issues that arise during urban regeneration. Neighborhood regeneration (NR), being perceived as the fundamental scale of urban regeneration and the frontline for enhancing sustainable development, is chosen to be the subject of this study. To better understand the current practice and systematically explore the mechanism of collaborative governance of NR projects, this paper adopts social network analysis (SNA) to probe the collaborative governance of NR projects in Chongqing. The results indicate that the interrelationships among stakeholder groups are relatively close, and the powers are less centralized. It refers that the NR project is initiated by joint participation of all governance bodies. The government sectors are also revealed to be significant, sharing many connections with most other stakeholders. Finally, a further discussion was conducted, based on which policy implications were drawn to promote collaborative governance in Neighborhood regeneration.

Exploring the Measurement of Urban Resilience and its Influencing Factors under the COVID-19

Yuhan Zheng (Chongqing University).

Abstract


To provide direction for thought for urban planning and construction in the post-epidemic era, urban resilience theory is applied to urban response to epidemic infectious diseases, a resilience evaluation model was constructed using 42 Chinese cities that had largely recovered from the coronavirus disease 2019 (COVID-19) as a sample, with seven indicators and 16 factors selected from the social, political, and economic dimensions. Using TOPSIS and multiple linear regression models, the impact of each factor on the resilience of cities was quantitatively analyzed. Urban resilience was significantly influenced by both its social ($\beta=0.338$, $p=0.015$) and political ($\beta=0.091$, $p=0.030$) aspects: improving the social and political levels of a city significantly increased its resilience. Recommendations are thus provided for cities to respond to epidemics.

The (hidden) epicenter of a public health and equity planning crisis: Rapidly transitioning peri-urban food environments in the Global South

Lesli Hoey (University of Michigan), Ramiro Llanque (Consejo de Salud Rural Andino), Jennifer Blesh (University of Michigan) and Andrew Jones (University of Michigan).

Abstract

Throughout the Global South, a nutritional double burden – persistent undernutrition alongside increasing chronic, diet-related disease – is disproportionately affecting children and women from low-income households. Despite this urgent, global trend, research explaining the double burden is still nascent, leaving local planners with little understanding of how



– or where – to intervene. Fast-growing peri-urban edges of cities in the Global South appear to be of particular concern. This is where urban planners find it most challenging to keep up with needed services and infrastructure and where recent migrants from agriculture-centered regions often settle first, becoming dependent on uncertain wage labor opportunities and vulnerable to volatile food prices as they begin to rely predominantly on purchased foods. While food environment studies tracking disparities in the production, distribution and retail of food have been common in the Global North, few studies have rigorously examined the nature of food environments in transitioning regions of the Global South or how they relate to health outcomes. Furthermore, nutrition research that does exist in low-income countries has tended to focus on dichotomous rural-urban populations, homogenizing the “urban” and ultimately making peri-urban fringes invisible or leaving them out altogether.

We examine the characteristics of food environments across a continuum of urban, peri-urban and rural environments in two contrasting, rapidly growing metropolitan regions of Bolivia: the Andean city of El Alto and the Amazonian city of Montero. Our mixed methods included a survey with nearly 4,000 households, a windshield survey in a transect of both regions covering over 1,000 food outlets, and over 300 interviews with a sub-sample of food store owners.

We found that peri-urban areas were more likely than rural and urban areas to demonstrate multiple forms of the nutritional double burden, within and across households. Differences also exist between urban areas and peri-urban areas in terms of unhealthy food marketing and food sales. One particularly concerning finding is that street food kiosks selling fast food were more common in peri-urban areas where they offer flexible livelihood options for women who are likely themselves (or who have children) experiencing the double burden. Ultimately, we argue that food system planning aimed at addressing nutritional inequities should customize interventions to different regions, invest most in peri-urban areas, develop livelihood-supportive measures for food outlets disproportionately contributing to the dual burden, and address industry-driven harmful food marketing.

South Korean peri-urban greenfield development: land value capture perspectives

Hyung Min Kim (The University of Melbourne).

Abstract


Peri-urban expansion is one of the key spatial outcomes in response to the rapid increase in urban population. This research investigates South Korean experiences of peri-urban greenfield developments from the perspectives of infrastructure funding that has been centred on Land Value Capture. Those urban development projects in peri-urban areas of major South Korean cities were self-funded at ‘no cost’ to government by institutionalising and implementing a value capture mechanism on planning gains. These planning gains have been generated from a mix of land use conversion, new infrastructure installation, and a population increase. By illustrating the southern part of Seoul where large-scale government-led greenfield development projects, carried out in the 1980s and 1990s to accommodate rapidly growing population, this paper articulates the institutional foundation, development processes, and allocation of planning gains in South Korea. In the South Korean planning and development institutional context, this research explores four key actors in the allocation process of the planning gains: (1) original landowners (or landed farmers), (2) the government undertaking up-zoning and land acquisition, and (3) developers, and (4) end-users of developed properties. South Korean greenfield developments also follow these four steps: (1) land acquisition; (2) formal land use conversion; (3) land sales; and (4) construction and property sales.

Infratecture: Exploring the urban and architectural implications of small-scale community infrastructure hubs in Central Java

John Doyle (RMIT University School of Architecture and Urban Design), Ben Milbourne (RMIT University School of Architecture and Urban Design) and Neville Mars (Dynamic Cities Foundation).

Abstract

This proposal explores the urban and architectural implications of the provision of a network of small-scale decentralised community infrastructure hubs in Central Java, Indonesia. The project has been carried out within the ‘Metro Java 2045’ project (www.metrojava2045.org). It builds upon recent work carried out by the Dynamic Cities Foundation and UTSEUS (Shanghai University) which demonstrates a time-based analysis of the road network of a section of Central Java between Semarang and Yogyakarta and identifies a series of critical node points in the peri-urban *desakota* landscape of Central Java, between Magelang, Yogyakarta and Surakarta. These locations describe critical points of interchange between the intercity road infrastructure and the local road network (which service most of the *desakota*). These locations were filtered



and weighted to provide maximum access to market for agricultural and small industrial producers. These locations represent bottlenecks in the transport system in which high-volume high-speed transport infrastructure transition to a small scale, local road network unsuited for traditional logistics. Infrastructure investment is widely recognised to be a significant catalyst in economic development, particularly in developing economies. Investment in infrastructure is overwhelmingly directed towards transport. Conventional infrastructural solutions to this challenge would be: - large-scale manufacturing and logistics hubs on the periphery of cities. - upgrading of local rural road networks to accommodate industrialisation and development. These solutions would have a dramatic and negative impact on the existing form of desakota urbanisation in the region. An alternative solution put forward by this research proposes the introduction of a series of intermodal logistics interchanges located at the identified nodes in the Magelang, Yogyakarta and Surakarta corridors. These interchanges facilitate transition from existing local road networks to intercity highways, providing access to national and international markets for communities within desakota environments serviced by existing small roads, lanes and tracks. This strategy potentially reduces the need for extensive new secondary and tertiary road development, while providing the positive economic benefit of increased market access for existing communities. Separate research teams developed speculative proposals for these individual logistics interchanges at each of the identified nodes. Each team explored how these interchanges could be inserted into the particular built environment conditions of each identified node; the principal programmatic elements, proportions and organisational arrangements for each node; and their formal, materials and construction systems. The ambition of this research is to development a series of architectural prototypes for multi-functional urban 'hubs' that support local economic development.

Brutopian Suburbia? The Evolving (Sub)Urban Structure and Morphology of Perth, Western Australia 2006-2016

Paul Maginn (University of Western Australia).

Abstract

This paper adopts a broad historical approach to examine the evolving socio-spatial structure and morphology of (sub)urban Perth. More specifically, it examines a number of demographic and housing variables – age/sex; population density; housing type and tenure; household income; car ownership and journey to work; and country of birth and religious affiliation –to analyse the geography of suburbanisms across the Perth metropolitan region for period 2006-2016. This is an important decade because it was marked by significant economic and population growth in Perth/Western Australia fuelled by a resources boom that in turn facilitated high levels of international migration. Furthermore, it was a period that overlapped with different state governments articulating the need for greater residential densification and urban consolidation via a series of metropolitan planning strategies.


The paper paints a broad brush overview of the origins and evolution of the modern suburban genus. Next, attention turns to a review of recent scholarly debates on definitions of suburbia, suburbanisms and suburbanisation. This provides the foundations for an empirical analysis of the socio-spatial and morphological profile of the suburban landscape within metropolitan Australia with particular attention on Perth, Western Australia, for the period 2006-2016. As one of the most suburbanised cities on the planet, this analysis illustrates the evolving geographies of suburbia within Perth and points to the degree/extent of suburban-ness across the metropolitan region. In essence, Perth has moved away from being (mis)characterised as a suburban landscape to becoming an increasingly suburban blendscape.

Aligning peri-urban land use planning with Sustainable Development Goals in the case of India

Richa Kandpal (United Nations University Institute for the Advanced Study of Sustainability, Tokyo; Keio University) and Mahesti Okitasari (United Nations University Institute for the Advanced Study of Sustainability, Tokyo).

Abstract

The peri-urban areas are the locations of dynamic transition in land-use, socio-economic, and environmental conditions and are intrinsically linked to the urban bodies they surround. Land-use planning processes for these areas face acute trade-offs between urban development, economic improvement, and environmental preservation. In the context of India, the vested interests of private developers, local authorities, and the local people are resulting in a predatory effect on the agricultural land and other environmentally sensitive lands within the peri-urban areas, as the short-term benefits seem to outweigh the socio-environmental disadvantages in the long run. The development process in peri-urban areas contributes to achieving several Sustainable Development Goals (SDG) targets but has trade-offs with several other SDG targets. This study analyses these synergies and trade-offs between the peri-urban land use planning processes being adopted in the country and the global SDG targets and indicators. A mapping of the planning processes and the government provisions with the individual SDG targets is done to explore the synergies and trade-offs between them. This is supported by empirical



evidence on the land-use changes being witnessed in selected peri-urban areas of the country. Peri-urban areas are distinctive systems in transition, and this study demonstrates how the formal planning processes for these areas have to go beyond the established development mechanisms to ensure pathways to sustainability in rapid transition by making them coherent with SDG implementation. A theoretical debate on how the land-use planning decisions can be supported to consider the diverse sustainability goals is developed. The conclusions from the study will inform strategies to improve land-use planning by achieving the SDGs.

Patterns and driving force of urban shrinkage in southwestern China: case of Chengdu-Chongqing Urban Agglomeration

Cuiping Tan (The University of Hong Kong) and Junxi Qu (The University of Hong Kong).

Abstract

Urban shrinkage is a widely spread phenomenon across the world, expanding to rapidly urbanizing China since 2000s. Urban shrinkage emerging around core cities is one of the typical shrinking modes in China. A salient example is the severe shrinkage of cities surrounding Chengdu and Chongqing in the past twenty years. However, previous research has paid a lot attention to the identification of urban shrinkage in overall China and its driving force in north-eastern and south-eastern China, but there are few in-depth studies in China's southwestern regions, wherein urban shrinkage is driven by both the force of market, that is, the flow of population and capitals from small cities to core cities, and state intervention, namely, the policy and financial support to regional core cities, which is unlike that in the northeast region, which is mainly driven by resource depletion, and that in the southeast coast, which is significantly driven by the choice of market. Considering the contextual differences with respect to the economic development stage and in the governance models, case studies on southwestern China should be considered.

This study attempts to provide a comprehensive case study of Chengdu-Chongqing Urban Agglomeration, located in southwestern China, and critically analyse and interpret urban shrinkage in this region, contributing to the understanding of the extent that core and more developed cities impact on their surrounding smaller cities in its regional context. Methodologically, this study intends to firstly identify and classify urban shrinkage based on multidimensional changes in the population, economy, and space from 2000 to 2020 based on the county-level data. Secondly, the spatial multinomial logit model is expected to be applied to measure the extent of the impact of core cities on shrinking cities and the spatial spill over effects between the shrinking cities. The projected results are as follows: First, there are different types of spatial-temporal urban shrinkage in this region; Second, administrative, geographical, and industrial connections with core cities lead to the shrinkage of surrounding cities. The deeper the connection, the greater the impact. Third, there are spatial spill over effects between shrinking cities, that urban shrinkage might be affected by the neighbourhood. The findings will contribute to certain potential implications for shrinking cities both from the perspective of spatial planning and developmental policies.

What gave rise to China's land finance?

Nannan Xu (The University of British Columbia).

Abstract

The first two decades of the 21st century witness an unprecedented development of China's city regions, most of which are buttressed by massive infrastructure development. While it is well known that the land finance practice, or *tudi caizheng*, helped Chinese local governments capture land value for financing infrastructures, few studies seriously explain how the land finance practice took its shape. How did the Chinese local governments create such an institutional tool to control land and capture land value? What are the factors shaping the financial arrangements that the city governments pledge on future land value to borrow funds for building infrastructures? This study systematically investigates the origin and development of China's land and infrastructure institutions. Borrowing the methods of process tracing and 'semi-negative case' study from political science, this study observes a three-decades evolution of China's 37 city regions' land and infrastructure development institutions. It concludes that the institutions are determined by five factors, i.e., the central government's policy, local government's development strategy, local government's administrative reform, the competition of land control between city government and land occupiers, and the local financial resources. This study also provides an insight to the regional differences in China's land finance practices. This research reveals that the emergence and development of China's land finance practices stem from an enduring and meticulous efforts of central policymaking, local

strategy-making and administrative reform. This discovery contradicts the dominant belief that China's land finance practice is a by-product of a 1990s' fiscal-federalist reform. It will provide new Chinese references for countries in Asia and other parts of the world in making urban development policies.

Policy on land use change in a sustainable and pro-people Metropolitan Area (Case Study in Jati Asih District, Bekasi City)

Reny Savitri (Universitas Krinadwipayana), Irwan Prasetyo (Universitas Krisnadwipayana) and Digita Annisa Belqis (Universitas Krisnadwipayana).

Abstract

The Bekasi City, which is located in the east of Capital City Jakarta, has a very dynamic urban growth, resulting in land use conversion. The rapid population growth in the central area of Bekasi City also has an impact on land use specifically in Jatiasih Sub-district.

Based on the results of the 2020 land use overlay with the Bekasi City Spatial Detail Plan (RDTR), it was found that the land use was not in accordance with its designation/plan. The results of the overlay analysis from 2015-2020 has shown a significant violation in land use. The percentage of residential land use increased by 14%, an indication of non-compliance with an average percentage of 54%. The highest is in the category of violation is in the conversion of green open space and watershed or high voltage transmission area into the residential land.

The conversion of green space and watershed could cause a potential flood more higher in Bekasi City, also in the Pandemic situation green space is more needed to reduce the spread of COVID 19

Land conversion and violations of green open spaces, watershed and high voltage transmission area into residential areas need to be resolved with the right policies, both with community involvement, technological engineering, involvement of the private sector and technological engineering

This research is expected to provide input to local governments to preserve protected areas, make sure that the regulation are maintained and followed by the community for their own benefit.

Urban Regions in Transition: Transversality and Reflecting on the Future of Urban in Indonesia

Teti Armiaati Argo (Bandung Institute of Technology), Arini Murwindarti (Bandung Institute of Technology), Muthahhari Wali Hidayatjati (Bandung Institute of Technology), Hesti Prawati (Bandung Institute of Technology) and Endriana Prasetyawati (Bandung Institute of Technology).

Abstract

Some large cities of Indonesia have become major centers of agglomeration, concentrating on expanding the economic activity within, known as the term of mega metropolitanization, and mega urban regions. The other smaller cities, located further away from these major urban regions, develops divergent characteristics. Some resembles metropolitan phenomena albeit at a smaller scale, others follow the patterns of hierarchical rural-urban hubs or intermediate cities. Studies of experiences and experiments of forming urban growth centres and empowering cities through policies, formal logics versus cities developed spontaneously, situationally have not been well identified. This research aims to formulate Indonesia's urban trends and dynamics based on the 'transversality' concept. Inviting understanding of cities not only from formal logics such as through planning and policies but also from situationality, improvisation, transgressing and boundary crossing redefine urban in Indonesia. The use of statistical urban data and geographical maps reveal 60% of urban population resides outside of municipalities. Rural settlement has concentrated to resemble small cities in Java, and nodes of growth in outside Java. Urban policies of managing cities follows the modern patterns of certainty and generability, reflecting the interests at the national level. This research uses qualitative and quantitative analytical methods to examine the existing urban literature and Indonesia's urban data, which include text, statistics, and spatial data. The developments of such urban centres can be driven by various actors which engage transversally in multiple logics, from the process of liberalization of property, of industrial capitalism, and agricultural expansion through transmigration programs. Discussions on urban regions need to account for multiple levels of the urban space in process of urbanization including non-physical forces, from the movement of people and capital that influence development to the established regulations and their implementations. These forces are not to be ignored in formulating future "interventions" recognizing transversality and transgressive practices.

How settlement affect migration? a case study of Shanghai based on the 5th and 6th census

Lu Xigang (同济大学).

Abstract

Due to the stagnation of population natural growth in China, migration is playing a key role in determining the population redistribution among settlements at different space scales. As an important destination of internal migration, population redistribution within metropolitan area in China become hot point in recent studies. Meanwhile, it is no clear what role of the settlement attributions played in the population redistribution within metropolitan area. In view of this, it is necessary to examine the relationship between the settlement attribution and population change at a fine spatial granularity. Using the data from 5th and 6th population census of Shanghai at neighborhood level (i.e. Village Committees and residential committees), this paper aims to explore how settlement attributions affect migration. Firstly, settlement types were identified based on its population characteristics. Secondly, the types of population growth of settlement were defined according to the growth rates of native people and migrants between 5th-6th census. In the third step, a crossover analysis between settlement types and its growth types was conducted to discover the matching relation. Finally, some interpretation and discussion were presented based on the logic of long-distance and short-distance migration. The result indicated that settlement attributions have different effect on natives and migrants' destination selection. In brief, the natives pay more attention on amenities such as environment, landscape, public services, etc. In contrast, migrants mainly from inland rural area gave more weight to economic opportunity or livelihood such as job opportunity/house rent. As a result, it is in suburban area especially in village rather than in urbanized area that a process of invasion-succession mainly occurred, which indicated a very different pattern from that in development countries.

A new concept of Green Infrastructure for green urban regeneration: therapeutic gardens.

Costanza Mondani (Tsinghua University, Beijing, China), Jian Liu (Tsinghua University) and Andrea Mati (MATI 1909).

Abstract

The necessity of Green Infrastructure to regenerate urban spaces has been exponentially growing after the COVID-19 pandemic. In the aftermath of this period, the need of fresh food from within the metropolis have been running in parallel with the necessity of socializing between people for contrasting depression and solitude thanks to the beneficial effects deriving from activities in contact with nature. Investing on urban agriculture for food-growing projects has become frequent actions in world-wide urban regeneration projects. Moreover, the public green spaces have dealt with profound changes in their recent implementations. If once green spaces used to be considered a place for rest and leisure, today these spaces actively participate to people's education and enhancement of life quality. Despite the social benefits given by urban agriculture and green areas of some cases, the interventions for the green urban regeneration projects in Italy still lack of several aspects: awareness in design given by an interdisciplinary approach (active cooperation between agronomists, landscape architect, planners), the maintenance and the knowledge transmission to citizens for the correct fruition of the spaces; aspects leading toward degradation of the green areas, polluted horticulture and greening, suffering vegetation. Knowledge about plants requirements is fundamental for guaranteeing a successful green spaces in terms of health for both vegetation and people. An interdisciplinary approach can play a capstone role since specific plants used within a specific design can alleviate mood disorder, such as depression and anxiety that affect the majority of the urban citizens, and reduce the quantity of carbon dioxide and heavy metals in polluted air that causes frequent diseases. Moreover, in terms of government spending, the benefits derived from parks, public and therapeutic gardens are multiple, offering an higher mental and physical health conditions to their citizens. Among several positive Italian cases, the paper brings to evidence two case-studies of therapeutic gardens in Pistoia, Tuscany region, as models of a correct design of ecosystem services for social regeneration, mental illness healing, environment sustainability and food supply. By the analysis of the literature and through the concrete evidences and experimentations from people healed by therapeutic gardens, the aim of the paper is to underline the fundamental rules required into the design of therapeutic gardens in order to get the highest beneficial results. Therefore, therapeutic gardens hopefully can become a new model of designing and shaping the green urban regeneration interventions, respecting both the vegetation and the people.

The Role of Universities as Social Agents in the Urban Regeneration of Fragile Local Communities

Mariana Auad Proenca (Politecnico di Milano).

Abstract

The complex of contemporary cities and their urban dynamics and challenges are demanding from Higher Education Institutions (HEIs) new approach in the process of teaching and learning in order to plan cities for social inclusion and urban regeneration. Therefore, the role of universities is becoming more socially active through promoting co-production of knowledge and new innovative educational practices combining the engagement of students and communities to build a better society. Universities are increasingly becoming organizations that seek to comprise social and civic aspects in their areas of research, in particular, in the area of for urban regeneration. In this sense, the universities in general are adapting their action strategies according to the local needs of their cities and communities. The urban regeneration approach and the local development of marginal and peripheral areas consisted by local fragile communities, in the last decades have become more inclusive, due to the presence of different actors, consisting active agents as citizens and local organizations capable of bring local resources and competences to achieve concrete interventions. Therefore, this work intends to present how the role of universities is being practiced in dealing with fragile territories in the search for urban regeneration, through a case study analysis of the Mapping San Siro (MSS) project. The Mapping San Siro (MSS) project is an example of how university and communities are working together in the development of new forms of learning, new skills, co-production of knowledge in order to find alternatives for urban regeneration and improvement of quality of life. The methodology of MSS, the living laboratory, will be highlighted as a way to understand the realization of urban social changes in the largest social housing district in the city of Milan. In this sense, it is important to emphasize the role of the university in these local communities, which in fact can provide a positive impact by giving them a voice and the possibility that things can change. In addition, the creation of common knowledge and the improvement of academic skills through learning in a real context is an important aspect to be emphasized. To conclude, the role of universities are important and necessary to guide and build better and safe environments. Although the pathway is still a challenge, the outcomes and positive impacts can be noted even with small changes, gathering efforts of all actors involved.

The power of dust: The role of decaying places and their iconisation for the future of urban life form - Case study of Bangkok

Andrea Taglioni (Chulalongkorn University, Faculty of Architecture, MUS program).

Abstract


The iconization of abandoned and decaying modern infrastructures plays an unprecedented role to fight for the right back to the city by the people in developing cities, where malls, luxury hotels, and condominiums projects are seen as the only symbols of progress. Previous documents point out the old, the abandoned, the dusty, the decay and the ruin as synonyms of failure and identify them as shameful descriptors, classically drawing cities to either hide or replace these infrastructures. Ongoing research on urban development primarily focuses on private-sector-driven-regeneration projects and criticize their ability to gentrify cities. Yet some of these newly built artifacts have fallen victims to fast and uncontrolled development and are termed as 'modern ruins', giving locals, tourists, artists and organizations room to re-appropriate places and reallocate their functions. By focusing on the case of Bangkok, the paper study would supplements the understanding of fast development dynamics and emphasizes the many undocumented functions modern ruins can hold. The perception of the role of abandoned buildings is examined through semi-structured interviews of a variety of actors, the iconization is evaluated through social media-based research and the different dimensions of these places are identified through field observations and literature review. These artefacts are later analyzed as the people'symbols for the future of urbanity, for they are the paradox of cities and work as economic, political, social, cultural and alternative icons of opposition to development 'as expected'.

Spatio-temporal characteristics and changes in agricultural land into settlements in the urbanization process in Indonesia: A Case Study of Metropolitan Jakarta and its surroundings

Setyardi Mulya (ITB, IPB) and Delik Hudalah (ITB).

Abstract

Urbanization is a complex spatial process that changes rural land use (predominantly agriculture) to urban use (predominantly settlements) and causes various impacts on ecosystem structure, function, dynamics, and human



livelihoods. With urbanization, permanent residence development and agriculture continue to develop together or compete. Since the 1980s, The Jakarta Metropolitan Area has been starting to experience rapid urbanization, which has consequences for residential and agricultural land dynamics. This paper aims to discover the changes in agricultural land into settlements since the 1990s and see how they are related based on distance, type of agriculture, and land suitability (fertility). The distance aspect represents proximity to the city center (market) and the level of urbanization pressure, while land suitability shows the fertility level of agricultural land. The data used is a map of paddy field cover and settlements from the Ministry of Environment and Forestry (in 1990, 1996, 2000, 2003, 2006, 2009, 2011, 2014, and 2019) and a map of the land system. A geographic information system approach and spatial logic matrix were applied to analyze land change (1990-2000, 2000-2011, and 2011-2019) and process land cover maps according to time series. Furthermore, they interpret changes in spatial patterns according to (distance) radius every 10 km from the city center (centroid:Jakarta) and analyze the urbanization process based on the type of agriculture. The dynamics of land area that can be compared are based on comparisons between years. The analysis results show that 1) between 1990 to 2000, settlements were concentrated in a radius of 10-20 km, while over the 2000s, they were concentrated from a radius of 0 km and continued to decline further away from the city center; 2). Percentage of the most extensive non-rice field agricultural land in 1996 with a radius of 30 km; 3). The most extensive conversion of non-rice fields and rice fields into settlements occurred from 2000 to 2011; 4). Between 1990 to 2000, paddy fields converted to settlements were dominated by the most suitable land (fertile), while between 2000-2011, conditionally suitable rice fields (medium fertility), and between 2011-2019 fertile and fertile rice fields were converted to the same area but different radius. It is necessary to cross-check the population growth rate in each radius to ensure changes that occur due to the urbanization process. However, the initial conclusion that there is an indication of the impact of urbanization on agriculture can be shown in this study.

A study on the influencing factors for local governments with high crude birth rate compared to total birth rate

Yeoung Kim (Seoul National University Graduate School of Environmental Studies) and Youngsung Lee (Seoul National University Graduate School of Environmental Studies).

Abstract

Previous studies on low birth-rate in Korea actively used total birth-rate as a dependent variable. However, since many cities with high total fertility rates in Korea are mainly declining provincial cities so research in the direction of increasing the total fertility rate is not realistically helpful for urban planning. Therefore, in this study, the percentage difference between the total fertility rate and the crude birth rate was used as dependent variables to find out the characteristics of cities abundant with newborn babies even if each woman in city has small number of children.

In addition, previous studies on the fertility rate of local governments have been conducted based on the cause of low birth-rate at the individual level, or external factor like economic, cultural, policy aspects. However, when comparing the regional average of the fertility rate-dependent variables, similarities are found between cities in the metropolitan area or between cities of similar population size, so the influence of the location of a city in Korea cannot be ignored. In the case of Korea, since the national land space has developed around large cities, it was estimated that the degree of urban development could reflect differences between 'regions', so variables related to 'urban decline' were added to the independent variables of existing local government fertility studies for analysis.

As a result of the analysis, it was found that the ratio of high-order industry workers(+), the ratio of elderly living alone(-), the ratio of social welfare budget(+), and the early marriage rate(+) had an effect on the dependent variables. From the results, local governments abundant with babies relative to population have developed industries, fewer elderly households (poor households), abundant welfare budgets for social consideration, and fewer factors to delay marriage.


Can Multi-Level Collaboration Help Historic Towns in Metropolitan Peripheries Preserve their Identity and Maintain Economic Viability?

Sarin Adhikari (Virginia Commonwealth University) and John Accordino (Virginia Commonwealth University).

Abstract

Background

The growth of metropolitan areas into their hinterlands presents both challenges and opportunities to small towns in their path. Sprawling growth can undermine the character and economic well-being of traditional town centers, diminishing their quality of life and in some cases, extinguishing their identity entirely. This is more likely now than ever, in an age of chain stores and internet retail, as a key function of traditional town centers declines.



Yet, traditional small towns may be able to take advantage of their proximity to a growing metro area, adding economic functions and connections to the core, while also maintaining their character and their roles as nodes within rural areas or green belts. The latter aspect is envisioned in smart-growth theory. But most states have not enacted regional smart growth policies and in many that have, implementation has been compromised by the opposition. Nevertheless, some combination of factors may be able to help towns balance growth and character preservation.

Purpose, Data & Methodology

This paper describes the challenges historic downtowns in the metropolitan periphery perceive and their efforts to address them, as revealed through the results of a national survey of historic towns in metropolitan peripheries in the US.

Results & Potential Contributions

Our survey finds that the mix of downtown uses is changing. There are more housing, beverage, and dining establishments in or near the historic towns now. Physical commuting and telecommuting from the town towards the metropolitan core have also increased. Yet less than half of their surrounding regions appear to support both the economic vitality and historic physical fabric of these towns. In the absence of supportive regional growth strategies, these towns may turn into minor centers in a region of edgeless cities. We recommend three strategies that these communities can pursue for maintaining the balance between historic preservation and economic vitality, in the face of regional change. They should consider improving communication with local developers and other stakeholders to identify shared values and improve trust. Second, they may need to position themselves strategically by supporting new activities in the knowledge sector or in small-scale manufacturing and services that contribute to regional growth and for which a historic downtown is an optimal location. Third, these communities or their supporters may need to advocate more assertively at county and state levels for regional development policies that support established centers and produce a sustainable regional pattern.

Public Participation in the process of Regeneration and Planning in Indian Heritage Cities: Its Challenges and Opportunities

Fazlur Rahman (Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia, Johor Bahru, Malaysia) and Norhazliza Halim (Faculty of Built Environment and Surveying, Universiti Teknologi Malaysia, Johor Bahru, Malaysia).

Abstract


Public participation in the process of planning and urban regeneration has been hailed as a powerful method for improvising city structures in the inner city. Regarding the process of urban regeneration in Indian heritage cities, democratically, it has had strong local governance, that was enacted through 73rd & 74th constitutional amendment act (CAA-1992). This CAA is significantly aimed at the redistribution of power to promote local governance (ULBs) which are benefitted with a more quick and efficient response to local issues, rather than expecting action from distant central bodies (state or central agencies). However, discussing the participatory practices in planning and regeneration in Indian heritage cities, which has been noticed as more based on tokenistic nature, that leads to a challenge in implementation during the process of decentralization. Thereby, an evolution in the paradigm of public engagement in the process of regeneration of core city has been observed as a shift in traditional redressal of grievances, that can help in bringing a collaborative solution to both government and citizens together. Therefore, this paper aimed to enquire about the participation in process of regeneration and planning in such heritage cities, particularly in Kochi heritage city, India. It focuses on the opportunities for citizens in the inner city region, which are further notified as institutionalized and non-institutionalized aspects of participatory planning in regeneration. Conclusively, the paper attempts to highlight the identified possible ways of overcoming challenges in participatory planning in regeneration, which can be utilised as opportunities in effective urban regeneration.

Characteristics of Urban Sprawl in The Global South and Evidence from Java, Indonesia

Arsan Nurrokhman (School of Architecture, Planning and Policy Development, Institut Teknologi Bandung) and Delik Hudalah (School of Architecture, Planning and Policy Development, Institut Teknologi Bandung).

Abstract

Urban sprawl has become an important challenge for urban development in the Global South or developing countries. However, the literature in the context of developing countries is still small compared to the literature in the context of Global North. This study aims to identify the characteristics, causes, processes and impacts of urban sprawl in developing countries, particularly in Java, the island where more than half of Indonesia's population is concentrated. The research results are expected to add a more comprehensive understanding of the urban sprawl phenomenon in developing countries so that it can be mitigated with more appropriate policies. Research in the early stages was carried out by systematically studying the literature to determine the characteristics in several developing countries. Furthermore, secondary data processing and surveys to selected locations were carried out in several metropolitan areas in Java Island to confirm the



research findings. The study found that the high rate of urbanization coupled with the low financial and institutional capacity of the government led to uncontrolled urban expansion. Inadequate regional planning and governance is the main cause of urban sprawl in developing countries based on the literature studied. In addition, the role of government and the effect of population poverty are interrelated factors in causing urban sprawl. In the context of Java, rich people can get a formal housing environment with adequate facilities, both in the city center and on the outskirts of the city. However, the poor mostly occupy non-formal housing and build their own houses. Without adequate public transportation, the poor use their motorbikes to access houses that are further from the city center. The orientation to low-priced land, even though it is far from the highway and without adequate basic facilities, makes urban sprawl on the island of Java have a more serious impact on the goals of sustainable cities development.

Is There Too Much Office Space? —Research on the Office Space in Shanghai Based on Diandianzu Data

Jiahui Fan (Tongji University).

Abstract

The rapid development of the new Internet economy has brought about changes in office models, especially since the new crown pneumonia epidemic, new office forms such as online office and video conferencing have been vigorously expanded, which has brought about changes in the demand for traditional physical office space. At the same time, with the construction of new office buildings such as the North Bund Business District, the market supply of office space in Shanghai will increase substantially. This raises many questions: Does Shanghai really need to build a lot of office buildings? Is there too much office space? What's wrong with the current office space? What should we pay attention to in future office space planning? Therefore, this paper sorts out the overall supply and demand of office space in Shanghai, analyzes the basic situation, spatial distribution and characteristics of office space to be rented in Shanghai, and puts forward suggestions for the development of office space in Shanghai under the new development environment. The expected conclusions are as follows. (1) There is a certain degree of excess in the office space of Shanghai. (2) Different business districts show different development characteristics. The development of suburban new towns lags behind that of main urban areas. (3) Shanghai's office space planning lacks relevant subdivision planning, and lacks continuous dynamic monitoring and tracking of supply and demand. (4) In the future, Shanghai should pay attention to the dynamic balance of supply and demand, optimize the internal structure, perfect the hierarchical system, and accelerate the transformation of stock, to support the construction of a multi-center structure in Shanghai.

The configuration of actors of unplanned suburbanisation within Metropolitan Areas

Belinda Aulia (University of Liverpool) and Sebastian Dembski (University of Liverpool).

Abstract

Rapid urbanisation in metropolitan areas of the Global South has primarily posed a problem of urban sprawl. There are difficulties in directing and controlling development in metropolitan areas with layered governance, particularly for nations that have recently shifted to a decentralised system. According to a previous publication, a fragmented institutional landscape has made coordination within and between multilevel governance difficult. Therefore, a framework for collective action is required to manage metropolitan growth. The crucial question, however, is why it is so difficult to counter urban sprawl within a decentralised planning system. A modified actor-centred spatial planning lens was used to investigate how actors participate in the production and reproduction of urban expansion. To comprehend the difficulty of coordination within and between levels in directing and controlling development within a multilevel configuration, the dimension of power dynamics has been added. Desk analysis, spatial analysis, and content analysis had been utilised to investigate the research question. The result demonstrates that urban sprawl was caused by the development of housing estates because there was a significant difficulty in coordinating the direction of development due to problematic discretionary power and a lack of regional awareness. Meanwhile, urban sprawl was caused by individual housing and plotted subdivision because there was a significant coordination challenge for controlling development due to cultural norms of land ownership and the problematic power of at the lowest layer of administrative level. Consequently, the power dynamic within and between levels is an important factor that must be considered when managing growth in metropolitan areas that has layered of multi-actor configurations.



Aerotropolis Transformation Model and Disaster Risk in Kulon Progo Regency

Iwan Aminto Ardi (Institut Teknologi Nasional Yogyakarta), Iwan Priyoga (Institut Teknologi Nasional Yogyakarta), Yusliana Yusliana (Institut Teknologi Nasional Yogyakarta), Wiwandari Handayani (Universitas Diponegoro) and Jawoto Sih Setyono (Universitas Diponegoro).

Abstract

The development of Kulon Progo Regency in the last 10 years has been very rapid. Changes in land cover and large-scale land use are marked by the construction of Yogyakarta International Airport. This study aims to explore the phenomenon of regional transformation and changes in the concentration of activities and their relation to potential disaster risk in the Kulon Progo region and formulate them in a regional transformation model within the last 10 years. The research was carried out in two major stages, in the first year focusing on the study and analysis of the physical transformation of the area based on spatio-temporal remote sensing data for the last 10 years supported by field observations and studies of regional and urban spatial plans in Kulon Progo Regency. The method used in this research is satellite image interpretation and map overlay technique. The results of the study indicate that regional transformation has an effect on increasing the potential for disaster risk.

Social housing development projects in the post-covid era: A decision support system in the eyes of the urban sustainability paradigm

Jhon Ricardo Escorcía Hernandez (Politecnico di Torino), Sara Torabi Moghadam (Politecnico di Torino) and Patrizia Lombardi (Politecnico di Torino).

Abstract

Since the early stages of the global outbreak, broad research has been dealing with the impacts of the pandemic on urban life at the operational, organizational, and social levels. In the context of post-pandemic recovery plans, the role of housing projects and urban development plans play an important part at the international level. Likewise, has been concluded that low-income people, who before the covid-19 outbreak were under multidimensional high vulnerability, have been the most affected by the effects of the pandemic. Also, it has been highlighted that developing countries are the most affected by the pandemic and post-pandemic effects. Given the relevance of these issues, this study aims to illustrate the construction process of a decision support tool in the urban development process associated with social housing projects in the context of a developing country. Colombia was selected as a case study for this evaluation. This tool is intended to evaluate such plans under the urban sustainability paradigm considering the effects of the pandemic on the paradigm. Consequently, it is based on the multi-criteria assessment methodology, which in turn is based on the quantification of key performance indicators. The selection of these indicators became crucial in this process. Initially, an extensive list of indicators was defined from different sources of international initiatives, such as the SDG11 and the urban sustainability framework. Subsequently, it was necessary to assess the relevance and pertinence of these indicators in the post-pandemic context of the case study. For this reason, a selection process was carried out based on the criteria of the main actors in this sector, through a stakeholder involvement mechanism. Thus, the development of the tool was defined by the assessment, visualization, and systemic integration of the stated indicators. Further, it was executed a testing process of the tool by the execution of an evaluation of Ciudad Verde, a social housing “macro-project” that has been broadly studied. In this assessment, it was possible to evidence the change in the criteria to define sustainability, safety, inclusion, and resilience within the urban environments in a post-covid situation. Finally, it is expected that this tool could empower decision-makers of public and private organizations involved in the urban development process to promote the sustainability paradigm in a post-covid context. Also, it is expected to be helpful in the multidimensional recovery of the most vulnerable communities and the achievement of the international agenda leaving no one behind.

Formalisation of Informal Governance as an Urbanisation Strategy in Peri-urban China: Some Lessons from Village Collectives in Beijing

Yang Xu (University of Hong Kong).

Abstract

The traditional rural governance structure of Chinese peri-urban communities has long been criticised as a significant obstacle to China's official pursuit of urban modernisation. How to achieve the institutional urbanisation of peri-urban communities while completing the spatial redevelopment is still a core challenge in China's urbanisation transformation. In recent years, driven by national policies and urban development needs, many Chinese cities have actively participated in redeveloping peri-urban communities (villages in the city, chengzhongcun). Some scholars consider the redevelopment to be a process of formalisation, which will dismantle the informal structure formed in the original rural society and generate more contradictions and problems. This study examines the role of village collectives in Beijing from a micro-history perspective through an in-depth analysis of how village collectives interact with the state and the market through formal and informal governance in the urbanisation transition. This study argues that the retention and development of village collectives are the flexible tactics of the local state. Under the flexible tactics, the state formalises informal governance endowing complementary informal rules with legitimacy to maximise its governance capacity and avoiding the competitive informal rules to eliminate community conflicts. Institutional urbanisation through formalisation has transformed village collectives from an institution barrier into an institution carrier under the urban-rural dichotomy. It also elucidates that the state re-legitimises itself in rural community governance while delegating responsibilities to village collectives. This study sheds light on the complexity of urbanisation transition, the rethinking of formal and informal governance relations and the reconstruction of state-society relationships at the community level.

Social Justice and Infrastructure in Lagos: How Women Residents of Low-lowest-income Communities are Bridging Governance Gaps in Health, Water and Sanitation Services

Damilola Oluwo (University of Lagos) and Damilola Odekunle (University of Lagos).

Abstract

Despite strong policy statements, infrastructure projects that are supposed to engender social justice in Lagos have primarily failed to target the most vulnerable groups in the society (the urban and peri-urban poor and those in the informal sector). As a result, residents of low-lowest income groups live in communities without access to adequate infrastructure and services such as health, water and sanitation, waste disposal, education, electricity, etc. Regrettably, women are the most affected. Taking Iwaya as a case study, the research investigates the realities in the governance of healthcare, water, and sanitation infrastructure and how women residents currently bridge the gaps in services in Lagos low-income communities. The data was gathered through an exploratory survey of existing health, water and sanitation facilities and interviews with fifteen (15) women in Iwaya Community. Findings reveal that women in Iwaya community have to pay exorbitant fees to access healthcare services. Hence, they patronise affordable and accessible services of traditional healers for alternative treatment. Also, due to irregularity in water supply, the women access water through water gifting from neighbours and private commercial supply. The women also practise open defecation because there is only one public toilet in the community. The study concludes by recommending home-grown initiatives to foster social justice in the priority areas: health, water and sanitation in Lagos, highlighting the roles and responsibilities of key stakeholders and governmental support needed to ensure effective and efficient implementation of the initiatives.

Resilience Analysis Of The Street Vendors In Sukasari Street, Bogor City During The Covid-19 Pandemic

Mujio Mujio (Master's Program in Urban and Regional Planning, Pakuan University), Rindiani Agustina Rahayu (Urban and Regional Planning, Pakuan University) and Ichwan Arif (Urban and Regional Planning, Pakuan University).

Abstract

The informal sector that is impacted the most by Covid-19 is Micro, Small, and Medium Enterprises (SMEs). Despite the small income, in Indonesia SMEs become a driver of the national economy. One of the economic sectors most affected in Indonesia is the sector of Micro, Small and Medium-sized vendors to be one of the parts of the SMEs that are experiencing the impact of the presence of Covid-19, including on-street vendors in Sukasari Street Bogor City. This research uses the method of decision-making with engineering Eckenrode and Topsis. The purpose of this study is to determine which factors are most influential in the recovery strategy and the resilience of street vendors in Sukasari Street, Bogor City; and develop

a strategic direction of recovery and resilience in Sukasari Street, Bogor City. The analysis of the research used in this research is the analysis of the decision-making multicriteria approach with Fuzzy Eckenrode. The factors that most influence the resilience of SMEs on street vendors on Jalan Sukasari, Bogor City after the Covid-19 pandemic are work culture, leadership and social networks. Meanwhile, the direction of the recovery strategy are the government assistance strategy, the digital technology introduction strategy, and the debt relief strategy.

A study of small municipalities' support for citizen-operated communication sites for elderlies in Japan.

Shun Ozawa (Ushiku City) and Sayaka Fujii (University of Tsukuba).

Abstract

As an aging society, social isolation and homebound elderlies are emerging issues in Japan, and municipalities provide support to establish citizen-operated communication sites in privately-owned spaces to tackle the issues. This study aimed to investigate the outcomes and challenges of small municipalities' support for the sites. And this study provided implications that would help improve the support of small municipalities, that in general face budgetary limitations and staff shortage, to prevent elderlies from social isolation through citizen-operated communication sites. A questionnaire survey was conducted to one hundred small municipalities with less than 200,000 population in Japan, followed by interviews with municipal officers and site operators. Results of the survey indicated that: 1) 19 small municipalities have the support in place and 18 of them were located in surrounding areas of major metropolitan areas, 2) The numbers of sites were increased in certain municipalities that provided both financial and non-financial supports to site operators, 3) Communication sites were categorized into three types based on the purposes and characteristics, 4) The sites, meeting demands of users in terms of location, entrance fee, and opening days, were used frequently by many elderlies and operated for years, 5) Municipalities acknowledged many advantages of the sites for their proactive management, relaxed atmosphere, low operational cost, etc, 6) Due to the lack of a systematic approach to finding new operators, municipalities faced challenges to obtaining new applicants to open sites. The implications of the results can be summarized into three points. First, communication sites may play a role in reducing social isolation for elderlies. Second, to increase the number of sites, it may be effective for municipal officers to have direct conversations with site operators to encourage them to sustain the sites and obtain feasible feedback for better support. Third, the divisions in charge of municipalities consisting of small numbers of staff may have the advantage to realize timely and quick decision-making to improve the support.

Participatory Slum Upgrading and Governance Innovations – A Case Study of Jaga Mission of Odisha, India

Tathagata Chatterji (XIM University Bhubaneswar).

Abstract

While the world at large is steadily moving towards an urban future, over one billion people, or 24 percent of the global urban population continue to live in slums. The Covid-19 crisis has further widened this urban divide, in the Global South. Slum dwellers, who are predominantly engaged informal economy faced disproportionately higher livelihood vulnerabilities with loss of income; encountered threats of evictions due to inability to pay rents; and greater health risks because of unsanitary living environment.

Taking into consideration close interdependencies between access to shelter, tenure security, livelihood and healthy living conditions, the global policy discourses, such as the New Urban Agenda and Sustainable Development Goals (SDG) framework emphasize up in-situ slum upgradation through participatory processes. However, participatory slum upgrading involves extensive coordination with several public and private actors and large numbers of stakeholders, and difficult to implement. Most cities in the Global South Cities do not have political mandate and institutional capacities to undertake such complex interventions or sustain it over long time.

This paper includes a case study of a composite land titling cum slum upgrading programme launched by the Indian state of Odisha called Jaga Mission (Odisha Liveable Habitat Mission). Within a span of four years, the programme had been able to provide land titles to over 197,000 households spread across 109 small and medium sized towns and spurred comprehensive slum upgrading throughout the state. This research is based on key informant interviews and focus group discussions with the slum households in two medium sized towns.

The research brings out several innovative approaches in urban governance regarding: (a) combination of top-down and bottom-up planning involving multiple stakeholders located at different levels of government; (b) application of advanced geospatial technology in a people friendly manner; (c) replicable and scalable model to provide livelihood support to urban poor; and (d) gender inclusivity in urban planning.

Riverine People of Borneo: everyday political ecology of 'lanting' community in Urban Sintang

Mira Lubis (Dept. of Urban and Regional Planning, Tanjungpura University, Pontianak, Indonesia).

Abstract

In the cities of Global South, riverbank settlements is often generalized, even stigmatized as slums. It also happened in the cities of Borneo, the largest island in Maritime Southeast Asia, which historically are deeply rooted in riverine culture. This study figures out the everyday political ecology of the inhabitants of the Kapuas River settlements in the form of 'lanting' or raft houses, in the midst of rapid urban development and environmental changes, which reflects their efforts in defending their existence as part of the urban society. Spatial ethnographic approach supported with observation and in-depth interviews were used to reveal the everyday political ecology of the lanting's inhabitants in Sintang, the city chosen for this study. Converting the events into Lefebvre and De Certeau's tactic-strategy approaches, this study reveals the important meanings behind the daily activities of the lanting inhabitants which reflects the significant influence of people's thoughts and actions in the production and reproduction of their living space. The results of this study confirm that the dwelling practice of the lanting community is not merely something caused by economic limitations. More than that, it is deeply integrated with urban economic activities and makes significant contributions to urban-rural socio-economic linkages based on dendritic river networks.

Disaster risk narratives and the legitimization of evictions: The context of the Rio 2016 Olympic Games and the housing and environmental rights

Augusto Cesar Oyama (Kyoto University) and Chiho Ochiai (Kyoto University).

Abstract

Rio de Janeiro was the second host city for the Summer Olympics, after London in 2012, to be selected following the formal inclusion of the "legacy" concept in the 2002 Olympic Charter, generating a growing expectation that the mega-event would bring a positive socio-economic legacy for the city that receives it. Six years after the Rio 2016 Olympics, there are still many elements to be uncovered about the articulations, negotiations, and violations of human, housing, and environmental rights. The role of activists, social movements, researchers, and independent media has been crucial in this sense. In the last 50 years, more than 2 million people have lost their homes due to the gentrification and "urban renewal" process for this mega-event. In Rio alone, 119 slums were removed for the Olympics. The purpose of this study is (i) to illuminate the use of disaster risk discourses and how they carry specific agendas in the context of evictions in informal settlements; (ii) to discuss the idea of 'voluntary' versus 'involuntary' risk-taking; and, based on fieldworks and interviews with residents of Vila Autódromo, the main community symbol of resistance against the Olympic displacements in Rio. It is discussed (iii) how the International Olympic Committee along with local governments instrumentalize public policies to achieve economic interests, notably for the real estate market. The survey grasped the situation before and after the development of the Olympics, using counter-cartographies to critically look at the negative legacy, the racial and class framework of those displaced, and the current situation. As a result of the study, (i) the narratives of the local government and that notably legitimized the involuntary displacements ranged from "aesthetic, scenic and tourist damages", and from "environmental criminals" to the elimination of disaster risks and threat to the security of the Games; (ii) risks, vulnerabilities and, by extension, environmental injustices are socially constructed, closely correlated with socioeconomic positions. In fact, as other studies have already documented, those targeted for displacement have been poor, minorities, and vulnerable populations; (iii) disruptive cartographies play an important role in counter-narratives of the facts, highlighting hidden interests of evictions. To conclude, the Olympics often tend to exacerbate the issues that the city already has. It is hoped that this research will contribute to discussions surrounding risk narratives and the incongruities of this sport's largest mega-event. At this moment, the face of the Olympics is still the Vila Autódromo.

The Foreign Community's adaptation to the Local Community Based on the Inclusiveness of Residential Environment: The Case of Seoul in South Korea

Jaeun Cho (Dept. of Environmental Planning, Seoul National University Graduate School of Environmental Studies) and In-Kwon Park (Dept. of Environmental Planning, Seoul National University Graduate School of Environmental Studies).

Abstract

Although international migration is shrinking world-widely due to COVID-19, the population of Korean-Chinese is steadily expanding in South Korea for reasons of residence, employment, and educational. Most of Korean-Chinese live in Seoul, and ethnic enclaves are formed in Garibong-dong and Derim2-dong in the southwestern part of Seoul and Jayang4-dong in the northeastern part of Seoul. Previous studies have investigated that the characteristics such as the fact that they were located in a declining area, the process of capital formation and the rise of real estate values in the opening of commercial stores for Korean-Chinese within the cluster were common (Lee and Kim, 2014). Daelim2-dong achieved quantitative growth with the largest number of Korean-Chinese residents, and in Jayang4-dong, Korean-Chinese people cooperated with the existing Korean community and achieved qualitative growth that positively changed local culture and space. On the other hand, in Garibong-dong, the redevelopment issue reduced the will to improve the residential environment, and the spatial separation from Koreans was strengthened along with the existing urban tissue problem (Park and Lee, 2010). The purpose of this study is to examine how Korean-Chinese residents adapt to the local community and how it is determined by the inclusiveness of its residential environment of each cluster. In-depth interviews with the ethnic merchant active in each cluster are done for the empirical study to find out the triggers of community building, the interaction with the existing resident community, and the link with the district organization. In addition, a survey of Korean-Chinese living and working in the case areas is done to assess the degree of adaptation to the local community. We also reconstruct the residential environment inclusiveness index based on social factors (religion and hobbies, bonding, and so on) and spatial factors (housing type, home ownership, and work location, and public transportation accessibility) from Lee and Park (2020). We introduce a regression model where the inclusiveness index is used as an explanatory variable, with personal factors (age, gender, education level, residence period, and so on) controlled for and the degree of adaptation to the local community is used as the dependent variable. The findings of this study are expected to show that the inclusivity of the residential environment has a favorable impact on the foreign community's adaption to the local community. It will also recommend a policy direction for the management of ethnic enclaves from the perspective of a diverse and inclusive city.

Towards an Inclusive Development-led Urban Regeneration Era in Contemporary China: A Comparative Study of Urban Regeneration at District Level on 12 Case Cities

Yuetong Jia (Tongji University), Shiyun Chen (Tongji University) and Zhijie Chen (C-Studio, Shanghai Urban Planning and Design Institute, Co, Ltd.).

Abstract

Having gone through over 40 years of soaring urbanization, the future development theme of Chinese cities will be more emphasized on the urban restructuring rather than urban growth. The urban restructuring in Chinese cities was represented by urban renewal featured in fully demolished old urban areas with obvious inclusive challenges, however, urban regeneration is now becoming an important phenomenon in the development of Chinese cities at an unprecedented speed and scale, given the promotion of "people's city" (ren min cheng shi) by President Xi Jinping and Ministry of Housing and Urban-rural Construction (MOHURD) 's policy of "prevention of large-scale demolition and construction" (fang zhi da chai da jian). As previous research has concluded that urban regeneration in China usually deviates from the western model due to its unique social, economic, and institutional background, this research endeavors to explore on whether China's most up-to-date urban regeneration practice may work under the new development philosophies mentioned above. Applying the analytical framework of "subject-process-result", this research examines the flagship urban regeneration projects at district level in 12 cities (including Beijing, Shanghai, Guangzhou, Shenzhen, Chongqing, Chengdu, Xi'an, Shenyang, Haikou, etc.) with pilot policy approved by MOHURD through the lends of inclusive development. The authors conducted a one-month on-site investigation from January to February, 2022 by using mixed research methods including on-site investigation, semi-structured interview, questionnaire survey and geo-spatial statistical analysis. This research attempts to disclose the urban regeneration pattern from the perspective of inclusive development based on the 12 case cities. Preliminary findings reveal that public participation is playing an increasingly important part in local governance at both city and community level, and the inclusiveness in terms of economic, social, cultural and spatial dimensions could be observed in urban regeneration projects in Chinese cities with different governance culture, although not in the name of inclusive development. Moreover, this research also discusses the role of public, semi-public and private sector and how their interaction in commercial activities may impact on the inclusive development in urban regeneration in Chinese cities. The experience and challenges discussed above also reveal that the economic development level, population

agglomeration, natural conditions, as well as the historical and cultural accumulation in each case city may be the most important drivers for inclusive development in their urban regeneration projects. Finally, this research offers discussion on policy implications towards an inclusive development-led urban regeneration era in contemporary China and other similar developing economies.

Activate, Articulate, Advocate: Co-production For the Right to Occupy, Hold Ground, and Upgrade

Ana Paula Pimentel Walker (University of Michigan, Ann Arbor), Maria Arquero de Alarcón (University of Michigan, Ann Arbor) and Benedito Roberto Barbosa (Universidade Federal do ABC, LabJuta.).

Abstract

This paper theorizes an alliance between universities, housing movements, advisory non-profits offices and informal dwellers' associations in Brazil in terms of co-production of knowledge and action. The network is part of a multi-year activist participatory action research¹ addressing one of Latin America's most pressing issues: the rapid, unequal and precarious informal urbanization of urban peripheries. With the goal of coalition building and housing advocacy, the Network of Favelas and Occupations, connects the experiences of young and consolidated informal areas in their struggle for adequate housing in São Paulo's Periphery. The Network raises awareness of land occupiers' rights, while advocating for transformational housing policy and universal access to public utilities, regardless of tenure status or age of the settlement.

The PAR approach emerged in the 1960s/70s, inspired by Paulo Freire² and the Latin American liberation theology movement, incorporating the participation of the poor in a pedagogical journey for self-emancipation and transformation of local and global structures of oppression.³ Building on this tradition, community participation and co-production of housing, popular urbanization plans, upgrading policies,⁴ serve to pressure the government to provide funds, while denouncing the structural causes of environmental injustices in informal and precarious settlements.^{5,6}

We theorize three tactical components in the academic engagement: capacity building through service learning (extensão); knowledge exchange through the articulation of 14 younger and consolidated informal communities; and advocacy advancing funding and policy reform, for the right to occupy, hold ground, and upgrade through the celebration of popular symposia (Encontros de Favelas e Ocupações).

Informal dwellers are citizen-planners,⁷ creating secure shelter and resilient habitats. Universities must recognize their protagonism, joining their fight to defy inequalities. Occupying land and holding ground transforms the land occupiers' personal and positional identities.⁸ In raising awareness of one's position in the social relations of power,⁹ the role of the academic is to join forces, expanding the network of solidarity for social and housing justice.

Singles in Cities: Fear of Uncertainty and Community Participation among Single Women in Tokyo, Japan


Naka Matsumoto (Meiji University Graduate School of Governance Studies).

Abstract

In the past several decades, the number of single-person households in the city centers of large metropolitan areas has significantly increased worldwide (Klinenberg, 2012). Tokyo, the largest city in Japan, is no exception (Ronald & Hirayama, 2009). In Japan, an increased number of women in the workforce and growing economic uncertainty (given that man can no longer support an entire family as a sole breadwinner) are the major reasons for females and males in Japan staying single. As a result, marriage is no longer economically essential, especially for women, and can even be considered a burden/risk (Retherford, Ogawa, & Matsukura, 2001).

The individuals in such single households are often considered temporary residents with weaker ties to their neighbors and are viewed as unengaged in neighborhood activities (Putnam, 1995; Rohe & Stewart, 1996). These actions may hurt neighborhood well-being. Through an examination of singles in Tokyo, Japan, this paper explores the social relationships singles have within and outside of their neighborhoods and how the nature of such relationships influences a neighborhood's condition. Using a recent survey and interviews with singles in central Tokyo, the paper tries to shed light on their daily lives, especially single women's social relationships and the meaning of neighborhood activities.

The results indicate that social relationships are influenced by a single person's gender and age cohort. While single women aged 50–64 have relatively active social relationships, both within and outside of the neighborhood, and feel less fear regarding the future, younger women between 35 and 49 tend to withdraw from neighborhood activities and worry more about finances, housing, and isolation. Uncertainty about the future related to social change (including loss of jobs), the



threat of natural disasters, and negative social perceptions associated with being singles prevent the younger group from participating in neighborhood activities and expanding their social networks. At the same time, younger single women do not entirely avoid participating in neighborhood activities, as men often do, and remain open to the idea of staying in the neighborhood as long-term residents.

Based on the results, this paper advocates for the engagement of local governments and neighborhood organizations to include singles—especially younger women—in neighborhood activities, but with non-traditional ways such as personal and social interest-based groups. It also highlights eliminating economic gender gaps and a shift in social norms regarding family composition as key to neighborhood well-being.

Experiences In Participatory Management And Planning In Intermediate Scales: Comparative Analysis In The Southern Cone, 1990-1980

Leticia Faria (UFMG) and Gisela Souza (UFMG).

Abstract


The re-democratization in Southern Cone countries, in the 1980s, was a great experimentation time, driven by a desire to deepen and enlarge democratic practices, and materialized by a decentralizing, participatory and anti-bureaucratic aspiration. This process developed a popular participatory mechanism at the intra-urban level, introduced into a movement that supported and exceeds municipalism, characterized by a local scale method and urban participative management bet. Therefore, the experiments of participatory democracy at the local scale are one of the most important non-hegemonic exponents. They search, by decentralization at decision-making instances, alternatives to participatory and representative issues, as abstentionism increased and distance between electors and their representatives. This paper analyses comparative experiences in Brazil, Argentina and Uruguay — countries where popular participation was fomented and legitimized by the local scale. Besides, it tries to build a perspective of different political drawings occasioned by urban planning and management at a local level in Southern Cone re-democratizations, and whose beginning and conception precedes ONU good practices seal to Participatory Budgeting in 1996. In general, the southern cone popular participatory experiences are very diverse. It was noted that all Argentine (Córdoba, Rosario and Buenos Aires) and Uruguayan (Montevideo) studies experiments necessary pass through an equipment of municipal services decentralization, may it be central or not in participatory drawing – this equipment are known as Centros Comunales. This scenario contrast with Brazilian analyzed cases (Porto Alegre, Recife and Belo Horizonte), where the creation of decentralized municipal equipment is an exception. In the first re-democratization years is not observed in Argentina any development of local level representative mechanism. Therefore, effective popular participation was accomplished without intra-urban territorialization, through direct democracy mechanism articulated with Strategic Planning. Differently, the Uruguayan Descentralización Participativa used this decentralized municipal equipment as a support of popular acting – at the Planes Quinquenales (five-years plan), and also in the local management of territories. Compared to the others experiments, Uruguayan case has the most diverse participatory drawing, with more diversity of popular acting in urban planning and management. Brazilian participatory democracy is profoundly based on resources co-management, atwart experiences of Participatory Budgeting, restricting to this usually. Thereby, it's important to note that the principal divergence between Montevideo experience and the Brazilian Participatory Budgeting is situated on decentralization by municipal equipment tendency – that allows the creation of a physical space relation in neighbors, encoring direct involvement.

Enhancing urban resilience: Informality, basic services and livelihoods

Priyam Das (University of Hawaii at Manoa), Lakpa Sherpa (UNDP Nepal) and Ashok Das (University of Hawaii at Manoa).

Abstract

The last decade or so has witnessed a heightened focus on building urban resilience. It is buoyed by the compounding threats of climate change, accelerating urbanization in developing regions, and deepening urban inequality, illuminating a growing recognition of the need for better urban planning. This chapter argues that to enhance urban resilience, planning and policymaking must engage with informality to improve the urban poor's access to basic services and livelihoods. To better prepare for a future increasingly prone to uncertainty and extremes, it is imperative to critically evaluate how the status quo in urban planning and departures therefrom impact informality. The authors present a critical analysis by weaving together lessons learned from their synergistic research agendas. They examine primary data collected through fieldwork amidst the COVID-19 pandemic in Nepal and India to draw inferences for practice, which are also informed by findings from prior primary mixed-methods investigations of related issues elsewhere. Specifically, the chapter explains how physical infrastructure (water, sanitation, housing) and services (human and economic development) are enhanced



when institutions of the state, community, and civil society are incentivized to work in concert. To enhance resilience, emergent wisdom suggests rethinking assumptions and approaches to urban development (sectoral separation), governance (institutional insularity), and planning (scalar specifics).

Distribution and Transformation of Informal Areas in Small and Medium-sized Cities

Lin Ma (Graduate School of Frontier Sciences, The University of Tokyo), Qianwei Cheng (Center for Spatial Information Science, The University of Tokyo) and Akiko Okabe (Graduate School of Frontier Sciences, The University of Tokyo).

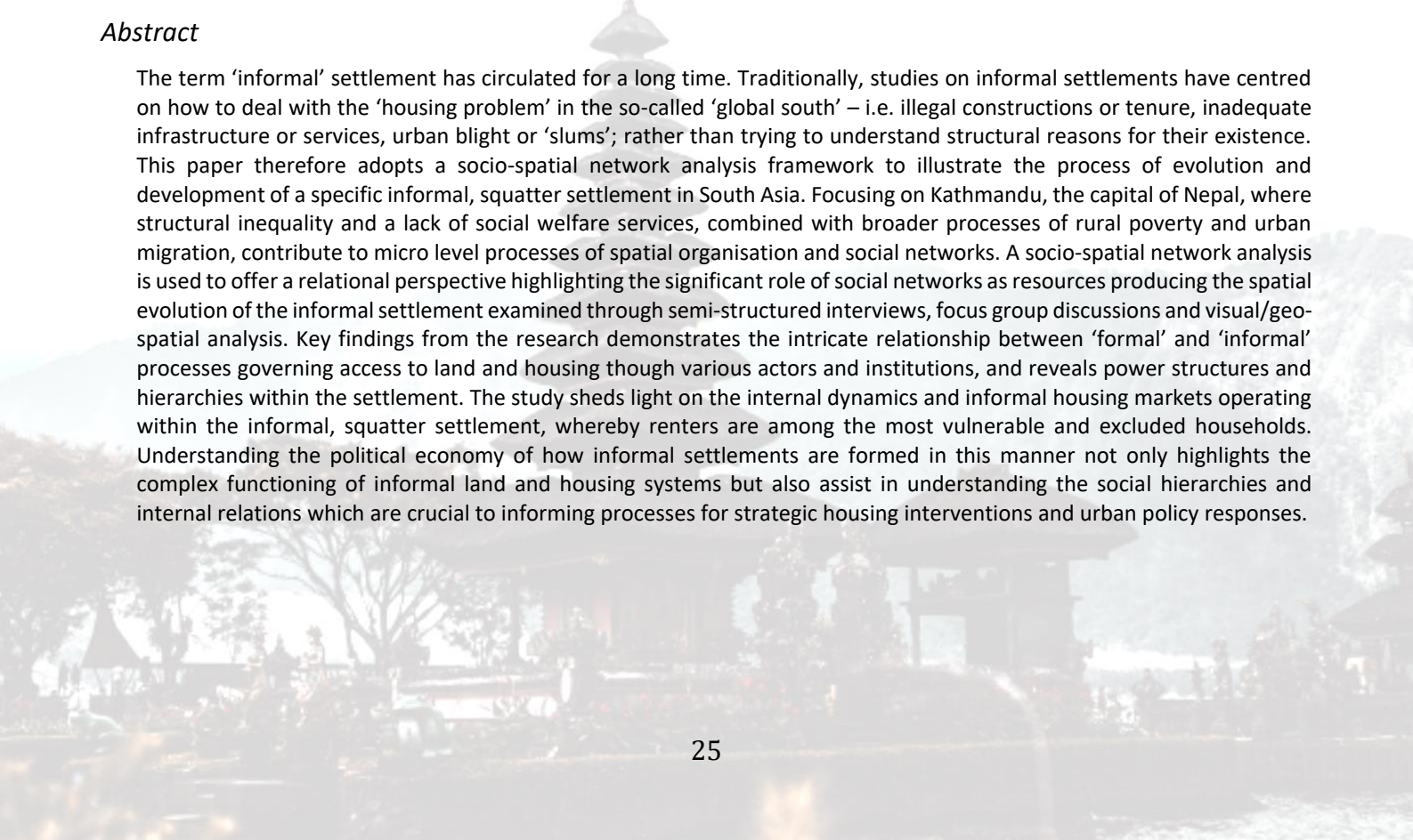
Abstract

Informal areas are one of the toughest challenges in many cities of developing countries. There has been an increasing number of research about informal areas limited in megacities, even though many small and medium-sized cities face severe problems as well. It has been known that informal areas tend to fill remained space of planned urbanization, such as riversides and steep slopes, as well as peripheries. Moreover, it seems that informal areas have a certain transformation nature (the occupation /densification /deprivation and the extension process or the improvement process), and it could be a key to the effective policies. This research attempts to reveal the transformation process of informal areas, taking 14 small and medium-sized cities in different developing regions in the world as cases. We choose 14 cities with urbanized areas of 10x10km square, in which their transformation tendencies are relevant. Firstly, based on Google Earth's satellite images, we draw the urban environment maps (UEmaps) of 14 cities by the grade of informality. The distribution characteristics of each different region are discussed. Secondly, by comparing the UEmaps of 2005 and 2020 in 14 cities, we propose a new classification method to describe the transformation process of informal areas over time. We classified the process into six types (new case, expanding, densifying, unchanged, improved and removed). It has been revealed that a rapid growth of informal areas can be seen in some small and medium-sized cities during the 15 years. However, even in those cities where informal areas rarely increase, cases of being improved and removed are very rare. Most informal areas continue to exist in these cities. This research clarified the transformation trends in small and medium-sized cities. Furthermore, it will help discuss when, where and how the policy interventions for informal areas will work better in urban environment, including larger agglomerations of megacities.

How are 'informal' settlements formed? Insights from squatter settlements in Kathmandu, Nepal

Pranita Shrestha (School of Architecture, Design and Planning, The University of Sydney) and Nicole Gurrán (School of Architecture, Design and Planning, The University of Sydney).

Abstract



The term 'informal' settlement has circulated for a long time. Traditionally, studies on informal settlements have centred on how to deal with the 'housing problem' in the so-called 'global south' – i.e. illegal constructions or tenure, inadequate infrastructure or services, urban blight or 'slums'; rather than trying to understand structural reasons for their existence. This paper therefore adopts a socio-spatial network analysis framework to illustrate the process of evolution and development of a specific informal, squatter settlement in South Asia. Focusing on Kathmandu, the capital of Nepal, where structural inequality and a lack of social welfare services, combined with broader processes of rural poverty and urban migration, contribute to micro level processes of spatial organisation and social networks. A socio-spatial network analysis is used to offer a relational perspective highlighting the significant role of social networks as resources producing the spatial evolution of the informal settlement examined through semi-structured interviews, focus group discussions and visual/geo-spatial analysis. Key findings from the research demonstrates the intricate relationship between 'formal' and 'informal' processes governing access to land and housing through various actors and institutions, and reveals power structures and hierarchies within the settlement. The study sheds light on the internal dynamics and informal housing markets operating within the informal, squatter settlement, whereby renters are among the most vulnerable and excluded households. Understanding the political economy of how informal settlements are formed in this manner not only highlights the complex functioning of informal land and housing systems but also assist in understanding the social hierarchies and internal relations which are crucial to informing processes for strategic housing interventions and urban policy responses.

Neighborhood Futures Design Workshop: Making Alternative Scenarios with “Value Change Cards”

Takuo Inoue (The University of Tokyo) and Rikutarō Manabe (The University of Tokyo).

Abstract

In neighborhood planning, place is a growing concern. The global movement to create vibrant and attractive public spaces has led to the term “place-based” approach being presented in neighborhood planning documents, notably in the U.S. and Australia. Urban planning, which used to be more about the planning of spaces, is now including the planning of places. In line with this change, methods to collaboratively develop visions for the future of neighborhoods must also change. Futures design is a method of collaboratively envisioning creative and innovative solutions in the future, which has been used for considering the future of the whole society or businesses. Though futures design has been exercised in neighborhoods, debates in those practices have often been limited to “what should be preserved”. The newly developed toolkit and workshop proposed in this paper differs from existing futures design practices targeting neighborhoods in that it asks what values neighborhoods have and how they are being transformed in the future. The project aimed to provide residents with a new opportunity to think about the future of their neighborhood by setting up alternative scenarios from the perspective of “values”. In the first half of the workshop, participants walk around their neighborhoods, take photos, create collages from these photos, and present their collages to other participants. Through these activities, they are asked to express the value of the neighborhoods in some keywords. In the second half of the workshop, several alternative scenarios for the future of the neighborhood are set up using the newly developed “Value Change Cards,” and participants select one as the most preferable future scenario through discussion among themselves. Participants then imagine the future image of the neighborhood that would be realized under the scenario they have chosen. In the trial, the participants were able to determine what “values” they perceive are essential, and what adaptation or mitigation measures can be considered in response to the inevitable external social changes. Based on the feedback from participants, the following points were identified for further refining this methodology and implementing it as a participatory opportunity in the early stages of the process of developing official plans or concepts for neighborhoods: (1) flexible rules depending on the purpose of the workshop are important, (2) participants with different perspectives should be included in the team; and (3) the hints for the discussion on the “transformation of values” should be offered to participants.

A Study on the Participation of Public Service Facilities for the Elderly from the Perspective of Residential Differentiation: A Case Study of Tianjin City, China

Zhiqiang Si (天津大学).

Abstract


Since the 21st century, residential differentiation has become a common phenomenon in Chinese cities. As a socially vulnerable group, the elderly's ability to access public service facilities is an important factor affecting the social participation and social inclusion of the elderly. At the same time, the fair allocation of public service facilities for the elderly population is also of great significance to promoting social harmony and achieving social equity. Taking the six districts in Tianjin as an example, according to the housing prices, plot rates, greening rates, property fees and other factors of each community, the community is stratified into four classes, and the distribution of public service facilities obtained by Baidu Map API data and questionnaires are used to obtain the use of public service facilities for the elderly, and the accessibility and fairness of the life service facilities of the elderly in each class are calculated. The results show that the social class is distributed from the inside to the outside, and the structure of the dot-like distribution of the high class and the poor class is the middle class, the elite class, the low class and the poor class are in order of the middle class, the elite class, the low class and the poor class, and the participation of the elderly under the difference in residence is significant.

Peripheral Feminist Spaces? Women in Action in Dar es Salaam’s Increasingly Contested Peripheral Territories

Priscilla Izar (School of Architecture and Planning, University of the Witwatersrand).

Abstract

This paper discusses women’s protagonism in the urbanization of predominantly low income and self-built (i.e., peripheral) territories in rapidly urbanizing Southern African cities. Its geographical focus is Keko Machungwa in Dar es Salaam, Tanzania. In-depth investigation of women’s action in a local federation informs the analysis. On the ground, women’s work on water and sanitation issues unfold in an environment marked by, gender inequality at multiple levels and dimensions,



and the persistence of government policy, as well as public, private, developmental and financing institutions in promoting strategies that prioritize economic growth, financial gain and the construction of a homeownership society. The research reveals tensions, contradictions, as well as insurgencies and reinventions in women's daily and strategic actions, which can be described as a feminist approach towards the urban production and transformation of Keko Machungwa. Moreover, while women embrace the federation's collective goals and strategies, their individual identities and subjectivities affect their own engagement in, and perception about, their private and public lives, and their grassroots work, in Keko Machungwa and in other similar peripheral territories.

Displacement as violence: out of place processes in low-income communities in Shanghai and Caracas

Gabriela Quintana Vigiola (University of Technology Sydney) and Paula Morais (University College London).

Abstract

Since World War II, the world has experienced the biggest displacement of people, reaching its highest in 2020 with 40.5 million new displacements (World Economic Forum 2016, 2021). However, global movements are just one type of displacement that does not account for all the internal changes that citizens experience within their countries and urban areas. Within this context, this paper explores urban villages in Shanghai and informal settlements in Caracas. Both host low-income communities that have suffered different forms of displacement on three primary levels: displacement from rural to urban areas, from the inner-city to planned peripheries (China) or barrios (Caracas), and within the neighbourhood out of the public space. The first two levels are widely discussed in academic literature. However, the last level of displacement is yet to be investigated. Therefore, the contribution of this paper focuses on this previous level of displacement within the neighbourhood out of the public space by assessing how criminal violence and urban renewal act as displacement drivers and by discussing the underpinning role of institutions in this process.

It is informed by empirical case-study investigations carried out in Caracas and Shanghai with a qualitative methods approach. The main data collection techniques were on-site observations and in-depth interviews with residents, supplemented by spatial analysis to contextualise the prior. The data was interpreted through qualitative content analysis, where interviews and field notes were coded by themes arising from the participants' accounts. These demonstrated their complex relationship with place, often having strong ties and a sense of place mediated by community and family bonds. Simultaneously, residents also experience externalities such as criminal violence in the case of Caracas and government interventions in the case of Shanghai, which negatively impact people's relationships with their public spaces, leading to exclusion. Consequently, this third level of displacement within the neighbourhood out of the public space is experienced by residents.


In conclusion, these three levels of displacement are mainly driven by macroeconomic and political influences, both through direct action as in the case of Shanghai and by lack of action as in the case of Caracas. Governments' approaches to the issues at hand are not effective, to say the least, as they create further displacement of these populations that may be deemed as vulnerable. In both cases, these displacement processes are a form of violence themselves as power structures continue to force people out of their place.

Housing vulnerabilities and structural failures: evidence from migrants' lived experiences in informal housing

Zahra Nasreen (The University of Sydney), Nicole Gurrán (The University of Sydney) and Pranita Shrestha (The University of Sydney).

Abstract

Informal housing often emerges as the only housing option for many low-income households. These households, on one hand, are excluded from formal rental markets to access adequate housing due to unaffordable rents and tight eligibility criteria; and, on the other hand, they are vulnerable to experience overcrowding, exploitation and eviction in informal housing markets. Many of these low-income households are international migrants in global cities, such as Sydney, who are further disadvantaged to access government support by language barriers and their limited understanding of tenant rights and the regulations governing local housing markets. This phenomenon raises important research questions for urban studies. What are the living condition and vulnerabilities of migrants in informal rental housing in global cities, such as Sydney? What are power imbalances between private landlords and tenants that generate socio-spatial inequalities, and what are structural failures that give rise to these inequalities? What are the implications for policymaking for addressing migrants' exclusion and marginalization in housing and planning policies? This paper answers these important research questions by drawing on informal housing listings, review of policy documents and interviews of 32 international



migrants living in informal share housing in Sydney. These migrants were sharing the bedroom with non-related roommates, along with sharing common areas such as the living room, kitchen, and laundry. The findings highlight that informal housing often emerges as a profit opportunity for private landlords who are in a powerful position to ‘work the system’ to sub-divide properties into multiple room rentals and sub-let these rooms and properties without written lease agreements. These conditions generate multiple challenges for tenants such as privacy issues and difficulties to perform day-to-day activities in overcrowded properties. Living without written tenancy agreement and rental receipts means these tenants cannot seek government support in case of conflicts with landlords. Furthermore, government authorities often turn a blind eye to these living arrangements because of the issue of migrants’ homelessness as alternative affordable housing is not provided. The study contributes to growing literature on Global South-North migration and explains how low-income migrants are at the mercy of capitalist and exploitative landlords in both the Global North and South as urban authorities are failing to provide affordable housing and accommodate vulnerable households for their housing emergencies.

Learning From: knowledge transfer in the trajectories of informal and precarious informal settlements in the Southern periphery of São Paulo City

Maria Arquero de Alarcon (University of Michigan Taubman College of ARchitecture and Urban Planning), Ana Paula Pimentel Walker (University of Michigan Taubman College of ARchitecture and Urban Planning), Luciana Ferrara (Universidade Federal do ABC, Lab JUTA) and Fernando Botton (Universidade Federal do ABC, Lab JUTA).

Abstract

In the city of São Paulo, as in many countries of the Global South, the affordable housing crisis pushes low-income families to ever more distant urban peripheries and drives the densification of consolidated informal and precarious settlements and irregular subdivisions, and the emergence of young land occupations. While some governments put in place comprehensive upgrading policies and funding, they tend to prioritize investments in areas with potential for real estate development and land value capture. As a result, informal dwellers occupying environmentally sensitive areas are left alone to provide for infrastructure and other incremental improvements.

This paper analyses the trajectory of three young land occupations and eleven consolidated informal and precarious settlements in the Southern periphery of São Paulo. Methods include in-depth interviews with fourteen community leaders documenting the trajectory of their occupations and settlements regarding the occurrence of land conflicts, the stage(s) of infrastructural improvements and urbanization, and history of eviction threats, evolving forms of community organizing, the gender roles, access to water, and covid-19 impacts. City-wide and community maps complete the portrait of each settlement in the Community Atlas. Last, six structured interviews with professionals working with social architecture non-profit firms, legal aid offices, the public defender office, and the housing movements offer additional insights into the entanglements in the long-term struggle for informal dwellers to attain the right to the city. These interviews took place virtually via video conference due to the pandemic between June and December 2020, as part of the Participatory Action Research (PAR).


The goal of the interviews has been to increase knowledge about the trajectories of young land occupations, informal and precarious settlements, and irregular subdivisions in the Southern periphery of São Paulo City, while fostering coalition building and co-producing strategies to advance tenure security and upgrading. The project aims to facilitate community organizing and coalition building and develop policy recommendations and advocacy tools that will change the long-lasting pattern of unequal urban development. Findings demonstrate that while young land occupations are the most vulnerable in the fight for acquiring tenure security, consolidated precarious settlements struggle to maintain it in the face of ever-expanding urban redevelopment projects and real estate pressures. Tenure insecurity can also affect communities that have been formally recognized under official land regularization programs.

Democratising open space by responding to the disability neglect in planning policy and practice: a case study of four global cities

Alicia Yon (University of Melbourne).

Abstract

Worldwide, disability continues to be neglected in planning policy and practice. This ‘disability neglect’ largely stems from the way that disability is conceptualised in urban planning, which inhibits how urban planners respond to access and participation barriers for people with diverse disabilities. Specifically, urban planners have adopted a simplistic and narrow understanding and definition of universal design that fall short of considering the full spectrum of physical and non-physical barriers in access to, and participation in, spaces and places, nor the diversity among people with disabilities. Addressing



the disability neglect, this case study is based on a rapid policy assessment of public open space policies rooted in universal design in four cities considered to be some of the most disability-friendly destinations in the world (Barcelona, Warsaw, Melbourne and Singapore). The analysis applies an intersectional and equity lens to shed light on dominant urban planning responses to broader access challenges experienced by diverse people with disabilities. Informed by the policy diagnosis, some key issues are canvassed that need to be addressed in planning policy and practice in order to foster greater inclusion of all people with disabilities in the public domain. Preliminary findings point to a lack of consideration of non-physical barriers and a heterogeneity of unmet needs that fail to take into account intersectional discrimination and diversity as a defining feature of disability. By positioning diverse experiences at the centre of policy analysis, the learnings offer a methodology for more inclusive environments where no one gets left behind.

Mobilizing Legal Expertise In and Against Cities: Urban Planning Amidst Increased Legal Action in Bogotá

Luisa Sotomayor (York University), Sergio Montero (Universidad de Los Andes) and Natalia Angel-Cabo (Universidad de Los Andes).

Abstract

In the past decade, there has been a rise in legal action around urban policy and planning in Colombia. Lawyers and the courts are being increasingly called upon urban planning issues by a plethora of actors, from social movements and progressive urban think tanks to NIMBY groups and elites. This rise in legal action in and against cities has resulted in legal experts and judges often dictating how social housing, transport corridors, public space, or waste management schemes ought to be implemented by municipal administrations. In this context, mayors and planners complain that the increasing involvement of judges and lawyers in urban planning drains local resources and undermines the power of mayors to set and implement the political agenda they were democratically elected to execute. Based on quantitative and qualitative data, in this article, we explain and analyze the rise of legal action against urban planning projects in Bogotá. We conclude by proposing a research agenda for socio-legal and urban scholars interested in further exploring the potential implications of the increasing mobilization of legal expertise in urban planning.

Self-Organised Arrangements or Formal Intervention: Basic Infrastructure and Land Provision in Informal Settlements

Heru Purboyo Hidayat Putro, Binsar Parasian Naipospos, Mahfira Azka Maharani and Ninik Suhartini (Institut Teknologi Bandung)

Abstract

Basic infrastructure and land provision in informal settlements have been on the different sides of the coin as they contradict from each other in terms of provision and legality. Land is considered as an economic asset by the community on one hand and part of public asset by the government. Inhabitants in informal settlements are seen as illegal occupants of public premises and thus are not eligible to access public infrastructure. Nonetheless, this is not always a case, inhabitants of informal settlements can manage to access such formal infrastructure via development planning arrangements. Moreover, infrastructure provision reflects grassroot initiatives in the community regardless the presence of formal interventions. This study shows that land in informal settlements are expressions of part of self-reliance arrangements as expressed in local 'formality' on land uses and access to basic infrastructure.

Supplying Water to Informal Settlement in Jakarta: The Sustainability of Community based Water Supply System

Sri Maryati, Fika Novitasari and Dina Indriyanti (Institut Teknologi Bandung)

Abstract

B Clean water is the primary need of the community. Fulfilling the community's need for clean water is a human right. In addition, equal access to clean water is one of the goals contained in the Sustainable Development Goals. Apart from the importance of water for the community, access to drinking water in developing countries is still very limited. The water access condition in informal settlement is even worse. The community based water supply system is an informal system that has a contribution to fulfill the community's clean water needs. These systems address the limitations of large-scale piping systems. One of the issues of community-based systems is their sustainability. Therefore, the factors that affect the



sustainability of the system need to be identified. This study aims to identify the factors that influence the sustainability of the community-based clean water supply system. The association analysis is used to identify the relationship between system management and the level of sustainability of the system. System management factors are derived from Ostrom's sustainable resource management indicators, while the level of system sustainability is determined from current conditions. The study explored the condition of community based water supply ini Jakarta. The results of the analysis show that the management right to the system and resources, financial aspects, and information influence the sustainability of the system.





Characteristics of Toraja Settlement Composition. Through a Comparison of Tana Toraja and Mamasa Toraja Settlements

Pascarianto Putra Bura (UNIVERSITY OF THE RYUKYUS) and Tetsuya Ando (UNIVERSITY OF THE RYUKYUS).

Abstract

The purpose of this study is to identify the characteristics of Toraja settlements by comparing the settlements of Tana Toraja in South Sulawesi and Mamasa in West Sulawesi. The settlements examined are two Tana Toraja settlements (kete-kesu and pallawa) and four Mamasa Toraja settlements (orobua, uekata, mambuliling and balla tumuka). The research methods for the study include literature review, satellite photo survey, and field survey. A common feature of the Tana Toraja settlements is the configuration of a central square (the center of ceremonies) that stretches in an east-west direction, flanked by warehouses on the north side and houses on the south side. This linear settlement configuration is believed to be based on Arc (by ancient religion). However, some literature states that this settlement configuration is relatively new, formed about 100 years ago at the time of the relocation of the settlement by the Dutch government. The Mamasa Toraja settlement configuration is naturally curved according to the topography rather than straight. There are various access to the houses, and the houses' orientation is also varied although the axis is roughly north-south oriented. According to the restored 1992 layout map of the Orobua settlement of Mamasa Toraja, the houses and warehouses of one family are located in close proximity. In addition, while the Tana Toraja houses are relatively uniform in size, the Mamasa Toraja houses are strictly defined according to social stratification. The largest house with the highest rank is located in the center of the settlement, and the size of the house decreases as one moves to the periphery. Furthermore, Tana Toraja houses are roofed with bamboo, while Mamasa Toraja houses are roofed with wood. This difference may be due to the fact that Mamasa Toraja settlement is located at a higher altitude than Tana Toraja settlement. The oldest house in Orobua is considered to be over 400 years old, and there is no record of the settlement having been relocated. From these points of view, the Mamasa Toraja settlements are significant examples of the past Toraja settlement patterns, especially Orobua. The Tana Toraja settlements are on the Indonesian government's Tentative World Heritage List, but the Mamasa Toraja settlements have not been included. It is hoped that the Orobua Settlement, an important cultural heritage site, will be included in the list as soon as possible to preserve it.

Brunching While Black: An Ethnographic Study of Black Joy and Communal Kinship in American Cities

Tyeshia Redden (Gettysburg College).

Abstract

The research project examines the ways in which an ascendant Black Millennial middle class is co-opting historically white elite cultural practices, specifically weekend brunches. The study reveals how Black millennials are hybridizing elite conspicuous consumption with Black cultural production through the analysis of "Trap Brunches" in three major U.S. cities, each associated with a distinct Black urban experience: Atlanta, Georgia; Detroit, Michigan; and Washington, D.C. Brunch, historically a family affair for middle-class and affluent white Americans, has evolved to a decadent weekend tradition for urban millennials and Trap Brunch, has emerged in recent years as a themed variant proliferated by their Black counterparts. Often located in the historic downtown districts of predominantly Black American cities, Trap Brunch is a cultural repository for Black millennials, acting as a centralized and weekly hub of fashion, dance, and communal fellowship. Using a mixed method approach that employs both ethnographic interviews and participant observation in all three study sites, I detail how Trap Brunch provides a vibrant, analytical lens through which to witness Black Millennials fusing place-making and Black American cultural production in subversive ways and in historically white spaces. Trap music, a hip hop subgenre emerging in the American South in the mid-2000s, is known for gritty street narratives that detail the illicit drug trade and the increasing economic disparities that fall squarely along racial cleavages in the United States. The merger of trap music and brunch cuisine is not coincidental or random but rather is the intersection of economic ascendancy and staunch reminders of the structural barriers and violence that many Black millennials are transcending in order to enjoy bottomless mimosas and eggs benedict. Trap Brunch (and its R&B-themed variants) acts as a site of Black joy, optimism, and kinship immersed in the soundtrack of Black resilience and nourished by ancestral Southern fare.

Preserving Historic Buildings in Malaysia Through the Implementation of Effective Conservation Strategies

Muhammad Afiq Wasie Mohd Asri (National University of Malaysia) and Nor Zalina Harun (National University of Malaysia).

Abstract

Historic buildings have historical significance for a region or individual and were originally built for a specific purpose, such as administrative centres, places of worship, or commercial venues. Malaysia's historic structures include palaces, forts, religious institutions, monuments, private residences, and public structures. The government has gazetted a total of 183 heritage buildings and has recognised a total of 67 buildings as heritage nationality until 2020, according to the list of historic structures gazetted under the Antiquities Act (Act 168) in 1976 to the National Heritage Act (Act 645) in 2005. However, preliminary examinations revealed that the state of the building and the poor level of conservation appear to indicate that there are issues with the country's historic building preservation. From 2005 to 2020, the National Heritage Department's conservation section, for example, conserved only 21 structures. Because of this small number, it appears that the majority of ancient structures are neglected and poorly maintained by the authorities. As such, the purpose of this research is to create a conceptual framework that elucidates the critical concerns and critical techniques used by specific parties who have successfully conserved historic structures in their original locations. In terms of methodology, this study takes a qualitative approach, conducting an exploratory literature review on 150 research publications involving the observation of conservation advances both within and outside the country. This method is hoped to allow for the completion of a complete concept that can be used later. According to data analysis from the exploratory review, the issues confronting historic building preservation include inefficient conservation management, allocation issues, local development, and bureaucratic issues, among others. Along with these concerns, this study finally summarised that three critical factors are critical in ensuring the long-term effectiveness and sustainability of building conservation programmes. The following aspects have been identified: i) legal empowerment, ii) appropriate use of heritage structures, and iii) involvement of the local community as a stakeholder. As a result, this research is hoped to assist in identifying the approaches and tactics that should be used to protect the value of heritage. Literature reviews indicates that such conservation issues are a global concern. This is due to other challenges such as unsupervised legal issues, politics, urban growth, and modern building construction, as well as stakeholders who are not proactive in promoting education and heritage interests from an early age.

Remaking the Duolun Road in Time: The Urban Heritage as a Contact Zone

Xuerui Wang (Tongji University), Chensi Shen (Tianjin University) and Zhaoyi Ma (Tianjin University).

Abstract

Duolun Road is a historical zone in the Hongkou district of Shanghai. Taking this road as an instance, this paper explores the relationship between the evolution of urban spatial forms and their cultural contexts. The paper proposes that the continuous superposition of urban forms, where culture and space interact to shape the ongoing changing urban landscape reflects the culturally oriented spatial production at different temporal and resolution dimensions.

Through the process of semi-colonization, political turmoil, and transformation of urban functions, the spatial evolution of Duolun Road since 1911 is a reflective case of the changing urbanization and socio-cultural contexts of modern Shanghai. This paper reviews three historical stages of Duolun Road: the formation, solidification, and redevelopment. It first examines how the colonial context and urban expansion gave rise to the initial urbanization process in Northern Shanghai. Second, it retells the spatial narrative of left-wing culture to explore the particular environmental elements which contribute to the multicultural space. Finally, it unfolds the redevelopment process to transform Duolun Road as a cultural heritage asset and explores how the historical urban form has produced different spatial qualities under the current changing socio-cultural environment and local policy orientations.

From the perspective of cultural criticism, the paper argues that urban heritage is not a historical fossil of cultural capital. While intercepting and showcasing the urban historical information, the continuity and authenticity of urban reality, the memories, and the right to the city should weigh more than the significance of displaying historical architecture. Also, by exploring the interaction mechanism between the urban form and socio-cultural capital at a micro-level, and introducing the concept of cultural "contact zone", this paper brings socio-historical analysis, architectural history, and urban morphology methods together, trying to innovate at the methodological level.

People's Engagement with Public Memorials in Daily Life: Taking the Korean War Memorials in Melbourne as an Example

Jie Zhu (RMIT).

Abstract

Public memorials become a space for daily use, developing from objects to spaces. Recent research has suggested that people's daily uses at memorials contribute to continuing memorials' culture and memory. However, there is little research about how people exactly engage with memorials in daily life, what factors influence people's engagement with memorials, and how these factors affect engagement. This research aims to fill this knowledge gap and provide advice for future memorials' design and management.

Existing research claimed that three primary elements, physics, activities, and people's perceptions, compose a place and interact with each other. This research looks into these three elements to explore people's engagement with memorials through taking the Korean War Memorial as a case. Memorials' physics refers to memorials' environment context and physical forms, which were collected through archives and fieldwork. Also, people's activities and behaviours, including who they are, locations, memorials, and moving routes, were mapped out during the fieldwork. In addition, utilizing descriptors and diagrams, the investigator recorded his six sensories to memorials, including visual, aural, kinetic, olfactory, tactile, and thermal senses. All the data worked together to conclude factors influencing people's engagement with memorials and analyze how these factors affect engagement. Then, this paper briefly suggests how to design engaging memorials at the end.

This research found that commemorative acts were rare in everyday life at the Korean War Memorials, like placing tributes, grieving, reading texts on memorials, and mourning. More relation between memorials and visitors is built through using, playing, and sensing. Physical and spatial features of memorials significantly affect people's engagement, including location, land use of memorials and their surroundings, forms, scales, materials, and imagery. These features of memorials impact which group frequently visits memorials in daily life. In addition, they also determine what sensories' stimulation visitors could have and what behaviours and activities could happen at memorials.

The Degradation of the Aluk Todolo Tradition as an Indicator of Toraja Spatial Metamorphosis

Hasanuddin Hasan (University of Bosowa , Makassar, South Sulawesi), Murshal Manaf (University of Bosowa , Makassar, South Sulawesi) and Randy Obertias (University of Bosowa , Makassar, South Sulawesi).

Abstract

This study departs from the phenomenon that occurs is the transition of spatial form in Toraja from one phase as a traditional city to a city without an identity which is marked by the high dynamics of population growth and the current development of current needs which creates the need for space. Along with technological improvements and cultural transformation towards modern life as well as the influence of globalization, the cultural heritage and values of local wisdom of Aluk Todolo face challenges to their existence. A number of cases on spatial planning control prove that the traditional values of a region play a major role in realizing the utilization of regional space in accordance with the spatial plan. The approach of traditional values that is integrated with modern knowledge is now increasingly being carried out so that local participation is an absolute requirement for this approach to be carried out. This study aims to explore the traditional values of Aluk Todolo which are used as the basis for creating local spatial expressions towards the sustainability of the Toraja traditional city. This study uses qualitative research methods, with a rationalistic approach, ethnography and quantitative methods through an inferential statistical approach. The research results produce at least three main points discussed in the research, namely; (1) The traditional values contained in Aluk Todolo, (2) The decline in the values of the Aluk Todolo tradition has implications for the form of Toraja spatial planning and (3) The values of the Aluk Todolo tradition create the sustainability of Toraja spatial planning. The conclusions in this study include (1) The values of the Aluk Todolo tradition contain the values of the embodiment of spatial planning proclaimed by the current government (2) The decline in the values of the Aluk Todolo tradition makes Toraja lose its original identity.

"Bats are Our Identity": The Role of Bats as Urban Identity in Watang Soppeng City

Fitrawan Umar (Doctoral Program of School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung), Haryo Winarso (School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung) and Iwan Kustiwan (School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung).

Abstract

The study of urban identity in the planning literature has increased, especially since the strengthening of globalization which has an impact on the uniformity of the city's image. Generally, identity studies of cities pay a lot of attention to architecture and geographical landscapes as features that make cities recognizable and distinguishable from other cities. However, there is little discussion about the biotic elements as a potential identity-forming feature of the city. There is no specific literature that links between biotic elements and the identity of the city. The consequence is biotic identity has been neglected in urban regeneration and transformation projects. This article aims to reveal the role of the city's biotic features by taking the case of bats in the town of Watang Soppeng, South Sulawesi, as the identity of the city. The research was conducted using interview, observation, and documentation methods. Qualitative analysis is carried out using a biocultural approach, which is an approach that views society and biotic elements as interconnected. The results showed the significant role of bats as a form of urban identity in Watang Soppeng City. Bat colonies are of particular concern in the practice of urban planning in Watang Soppeng. In addition, people not only associate their city with bats but also associate themselves with bats.

Urban Transformation: Does it Grow Belonging or Dis-belonging?

Felicity Hwee-Hwa Chan (Nanyang Technological University Singapore) and Angela Teo (Singapore University of Technology and Design).

Abstract

Urbanization and urban redevelopment are like socio-spatial ruptures that disrupt the stable social rhythm and conditions upon which we form our sense of belonging in the city. Given that our everyday urban environments are silent repositories of personal and social memories that shape the culture and identity of a city, what are the effects of urban transformation on the formation of belonging in the city? How do urban inhabitants view urban transformation as it creates a dialectical tension between the past, present, and future? Is the production of space (Lefebvre (1991 [1974])) growing or undermining their lived space of place belonging and home in the city?

In the last two decades, Singapore has undergone continual physical transformation and demographic diversification in its residential neighbourhoods as the city competes to host international capital and labour flows. This paper presents the findings of a study on how a sense of home and place belonging respond to social and spatial changes resulting from urban growth in the densely populated city-state of Singapore, known for its highly coordinated urban planning.

Drawing on results of an online survey collected between June and December 2020 from 172 participants across different age groups, the paper discusses the following: What is the geographical scale most important to the formation of belonging in the city—the neighbourhood, the region, or the city? What are the anchors of sense of belonging and home in places of flux? What kind of changes bring about dis-belonging? How different are youths' formation of their sense of home in the urban environment from older adults? Preliminary findings suggest that a sense of home in the neighbourhood is much enhanced by good public transportation mobility in the city among the youth.

The paper will offer theoretical insights on how our belonging is tied to our urban built environment. It will also provide critical insights for urban planners and designers who seek to enhance the identity and culture of the city through urban transformation.

Study on Emerging Creative Industry from Creative Ecosystem Viewpoint The Case of Jakarta Capital City, Indonesia

Angga Putra Perdana (Toyo University) and Norihisa Shima (Toyo University).

Abstract

In today's digital era, creativity and innovation are the keys to the success and sustainability of an industry. Compared to other sectors, the creative industry is one of the industries with reasonably rapid development, which continues to rise. This paper sees the creative industry into two sectors: the local creative sector, which has cultural and heritage values such as culinary, art, craft, and the global creative sector with a modern value such as apps, games, film, and publishing. As the research background, this paper compares the development of these two creative industry sectors in Jakarta. This paper



aims to discuss the challenges and opportunities of creative industry development from a creative ecosystem viewpoint. This comparison study between local and global creative will enhance the academic research of Jakarta's creative industry. This paper took four cases study in Jakarta. First, the Tofu and tempeh local culinary complex at Semanan village. Second, the small metal industry at PIK-Pulogadung, Cakung. The local metal crafting in Cakung. The third is M Bloc Space, built-in 2019, which adopted the adaptive reuse method in South Jakarta. Fourth is the Pos Bloc at Pasar Baru - Sawah Besar, a newly emerging global creative space in Central Jakarta. Then, this paper clarifies the relationship between creative space and creative industry in Jakarta and discusses how spatial planning can contribute to creative industry development. Interview with the stakeholders conducted as the research methodology to clarify the creative industry development on each case study on the creative industry ecosystem. This research also collects data from government papers and documents. The survey result shows that although the creative industry in Jakarta is emerging, it still lacks creative space. Creative space not only for creative performance but also for skill improvement of the creative actor. Also, the local creative sector still struggles to survive because of low support from the government, such as subsidies, low market expansion, and accessibility. The government has created new creative space for the global creative sector by using spatial planning TOD integration and adaptive reuse adoption. It also indicates unbalanced development; the global creative sector is more than others. The government needs to build new creative space and improve accessibility to the local creative sector for balanced development and not lose their identity as a local creative industry.

Current Situation and Crisis: Conservation of Private Gardens in Japan

Shuwei Yang (Graduate School of Global Environmental Studies, Kyoto University) and Chiho Ochiai (Graduate School of Global Environmental Studies, Kyoto University).

Abstract

Since 1950, the Japanese gardens with high historical and artistic value have been conserved under the category of “monuments” by the Law for the Protection of Cultural Properties. Surveys, funding, and technical supports have been provided for gardens restoration and conservation; however, the objects were mainly public gardens and the conservation for private gardens have been overlooked. In the context of urbanization and aging society, traditional-style private gardens in Japan are facing decline nowadays.

Therefore, the purpose of the study is to understand the current situation and clarify the problems existing in the inheritance of traditional-style private gardens. Two typical cases of traditional “Donketsu Style” private gardens in Higashiomori City of Shiga Prefecture, Japan designed by famous Japanese landscape architect Hanabun were selected as study objects. Two research questions were focused on, including 1) What is the current situation of the gardens and owners? 2) What are the difficulties of keeping a traditional Japanese private garden? To answer the questions, field surveys, 3D Scanning (Polycam-LiDAR & 3D Scanner with iPad Pro), drawings, and in-depth semi-structured interviews were applied in the research.

The results comprise two aspects. First, the current situation of the garden area, layout, and main components were clarified, meanwhile, the process for the regeneration of Omi merchants Garden A and the construction of Garden B were understood. Second, it was found that expense and time cost for garden maintenance are the main challenges for owners. For example, although the daily maintenance was conducted by the owners, the annual cost for professional gardener service is more than 1 million Japanese Yen (around \$8,650) for both Garden A and B. Daily maintenance including removing weeds, moss maintenance, and healthy management of trees need to be held constantly and it was a burden for the owners. Moreover, the owners recognize that it is difficult to get any support from the local government as the private property, and the inheritance is a problem because young generations are not interested in the traditional Japanese gardens.

In conclusion, the research identified that the maintenance of private Japanese gardens is a heavy task and requiring much efforts. Additionally, many abandoned gardens and houses were found in the rural areas during the field survey. It is urgent and necessary to expand the current scope of Japanese gardens and seek new conservation mechanisms, particularly letting more young generations to be involved.

Identifying the landscape of historic district: a cultural gene perspective

Huilei Yue (Key Laboratory of Green Construction, School of Architecture, Inner Mongolia University of Technology), Lixia Guo (Associate Professor of Green Building Key Laboratory of School of Architecture, Inner Mongolia University of Technology) and Ling Zeng (Key Laboratory of Green Construction, School of Architecture, Inner Mongolia University of Technology).

Abstract

With the rapid development of urbanization, the original urban fabric has been replaced by high-density urban forms, and the continuation of historic districts, which represent the connotation of the city, is under threat. With the improvement of cultural awareness, people gradually realize the importance of historic districts in enriching urban characteristics. Although great progress has been made in the development of the concept of the cultural gene, research has mostly focused on qualitative analysis, and there is a lack of qualitative and quantitative comprehensive research. From the perspective of cultural gene, this paper identifies the cultural gene of Dazhao district in Hohhot City through two aspects of dominant gene and recessive gene. The research shows that : 1) Recessive gene : Dazhao district is developed from religious buildings, and religious culture affects all aspects of the continuation and development of the district. 2) Dominant gene: The osm road network is analyzed by space syntax, combined with POI, it is found that Dazhao district takes Dazhao Temple as the core, the circle is expanded, the traffic accessibility is high, and the business and service industries develop around Dazhao Temple. The fully convolutional neural network (FCN) is used to identify street view images, analyze the spatial scale of the street, the openness index of the sky, and the degree of spatial enclosure. And it is found that blocks form a spatial sequence of "roads, streets, alleys, courtyards, and houses". The commercial street adopts the style of imitation of the Qing Dynasty, forming the architectural features of "front shop and back factory" and "front shop and back house". Through multi-source data and machine learning to identify the cultural genes of Dazhao district and build a historic district identification system, it is possible to quantitatively analyze the spatial elements such as road accessibility and the spatial form of the district, thereby promoting the enhancement of the vitality of the historic district and the continuation of the cultural heritage of the historic district more scientifically and objectively. Through the identification method and system construction of the cultural gene of the Dazhao district, this paper hopes to provide some references for the inheritance and development of historic districts.

Reimagining Historic Places: Adaptive Reuse as a Catalyst of Community Revitalization

Sasha Tsenkova (University of Calgary).

Abstract

Propelled by a growing commitment to sustainability and creative place-making, heritage-led regeneration is transforming the urban fabric of Canadian cities and is creating a dynamic new civic identity. Heritage planning is a key component of the New Urban Agenda and the implementation of UNESCO's Historic Urban Landscape Approach guiding global and national efforts for inclusive and vibrant cities. We capitalise on the synergies of this approach and use it as a framework to reimagine the future of historic places in Canadian cities.

Our comparative research explores case studies from Toronto, Vancouver, Montreal and Edmonton to illustrate the diversity of architectural, social and cultural heritage. Historic places are an assemblage of heritage buildings and public spaces that have acquired new functions and continue to be a catalyst of community life and social interaction. We focus on innovative design to facilitate adaptive reuse in line with Standards and Guidelines for the Conservation of Historic Places in Canada. The conservation activities (preservation, rehabilitation and restoration) are a sequence of actions progressing from understanding the historic place through inventory, planning for its conservation, and intervention. Our methodology builds on case study analysis, experiential learning, key informant interviews and critical reflection on design thinking for social innovation. The research offers a simple method for classification of adaptive reuse historic sites using several domains: scale, function, typology, character-defining elements, authenticity, community integration and partnerships.

The key findings of our research illustrate that the adaptive use of historic places creates a model for people-centered, livable, and mixed-use spaces. We argue that historic places that have survived the test of time offer important lessons for more equitable planning that reflects cultural diversity, preserves authentic architecture, and promotes community resilience. This builds a more global sense of place where the global constitutes the local and the built environment builds bridges for more inclusive multicultural cities.

Research on the evaluation method of block cultural perception from the perspective of big data

Ling Zeng (Green Building Lab, School of Architecture, Inner Mongolia University of Technology), Lixia Guo (Green Building Lab, School of Architecture, Inner Mongolia University of Technology) and Huilei Yue (Green Building Lab, School of Architecture, Inner Mongolia University of Technology).

Abstract

Blocks are the space carrier of urban residents' life, and culture is an important source of cohesion of urban residents. Block culture can enhance the sense of belonging, identity and responsibility of urban residents, and enrich the spiritual world of urban residents. Therefore, the perception of block culture is the important part of construction of the living environment. The traditional evaluation methods of street culture perception are mainly based on qualitative analysis and subjective evaluation, which lacks objectivity and scientificity. Taking Shiba Ti in Chongqing as an example, this paper evaluates the cultural perception of the block from the perspective of the evaluation of the cultural perception of the block, combining the objective material characteristics of the block and the subjective feelings of the public. The research surface: 1) Material characteristics: Using GIS spatial analysis, combined with street view image analysis, it is found that the architectural culture and street pattern of Shiba Ti are well perceived. 2) Public perception: Through statistical surveys and Internet data analysis, it is found that the public's perception of its cultural background, living customs and other intangible forms is relatively weak. Through the method of combining large and small data, a multi-dimensional and deep-level characteristic evaluation model is established from three levels, such as qualitative analysis, geographic data analysis, and big data mining analysis, to provide technical support for the evaluation of block culture perception, and hope to promote the improvement of human settlements better build.

Inheritance Problems to the Peservation of Tadtional Dellings Owned and lived in by Ordinary People – Though the case of Machiya in Fushimi, Kyoto

Yohei Kiyoyama (Kyoto univercity) and Kiyoko Kanki (Kyoto Univercity).

Abstract

In Kyoto, the decline of traditional urban dwelling, called Machiya, is a serious problem. The main reason for the decline is actually the issue of inheritance. The division of ownership among relatives through inheritance, and increasing property and inheritance taxes due to tourism and other factors, have led to the trend of demolishing Machiya, and selling the land that has been cleared, for Machiya is not valued as real estate. The Kyoto city government recognizes the importance of Machiya and provides several subsidies for renovation and utilization, but there is no support for inheritance problem. Even if Machiya is registered as a cultural asset, property tax and inheritance tax are only partially exempted, which is not sufficient support. As a result, even though most of them were originally inhabited by ordinary people, only large Machiya owned by people who could afford to pay taxes, or those that were purchased and converted into hotels or guesthouses trend to remain. To preserve traditional dwellings owned and lived in by ordinary people, and the condition in which such dwellings are ubiquitous, practical and specific knowledge from around the world needs to be shared.

This paper introduces the case of one Machiya located to the central area of Fushimi, Kyoto. This wooden townhouse, over 110 years old, was owned by more than 10 relatives due to inheritance problems that had persisted for several decades, and was in danger of being demolished. After several years of court mediation among the relatives and negotiations with Kyoto Shinkin Bank (credit union) for financial assistance using the preservation and utilization plan, the prospect of preservation was finally achieved last year. And the author of this paper has participated in all of this process.

Using the data of actual process of court mediations and financial negotiations, we describe and analyze the process of struggling to preservation in detail. Critical in the process was the flexible work of the Kyoto Shinkin Bank to finance the purchase of the divided ownerships. Through the case of Machiya in Kyoto, the importance of credit union, including identified specific issues for financing and how to solve them, in preserving the heritage of the ordinary people is clarified.

The Study of Spatial Boundary in Gyeongseong During 1930s Focused on Department Store and Apartment

Seongwon Yang (Seoul National University).

Abstract

The 1930s in Korea, the colonial power was dominating Korea peninsula. During this period, there were several department stores and apartments that were built and runned in Gyeongseong(Seoul). Major department stores(Mitukoshi, Minakai, Geochiya, Hirada) which were located southern side of Gyeongseong were runned by Japanese while only one of those(Hwashin) was owned by Korean. At the same time, initial form of modern apartments(Mikuni, Chisan, Cheongwunjang, etc) appeared nearby the department stores. This study covered 1) the specific process of locating department stores and apartments in the central area and 2) people who visited the department stores or resided in the apartments. Based on these findings, the study looked for whether 3) the spatial boundary between Korean and Japanese in Gyeongseong was distinctive as the previous researches have revealed. This research was done by qualitative methodology which is historical data analysis (reviewing newspaper, formal documents and magazines published during the 1930s). Also with GIS, this study visualized the location of the department stores and the apartments in Gyeongseong during the 1930s. As a result, there was the spatial boundary between Japanese and Korean in Gyeongseong. However, the space where department stores and apartments which served as the representative place of consumer society and the suggested solution for shortage of houses worked as contact zone that the spatial boundary between Japanese and Korean was blurred in this space compared to other places in Gyeongseong.

Tourism Components Identification of Betang House Cultural Heritage in Melapi Village and Urang Unsa Village, South Putussibau

Erni Yuniarti (Universitas Tanjungpura), Meta Indah Fitriani (Universitas Tanjungpura) and Klaudia Efvania (Universitas Tanjungpura).

Abstract


Betang Houses at Melapi Village and Urang Unsa Village offer many attractive indigenous culture. The shape and structure of the Betang House shows the originality of Taman Kapuas Dayak tribe's culture. Visitors can see Dayak carvings, sculptures in the form of human heads and traditional musical instruments inside the Betang House. Various traditional ceremonies and the life of the tribe can also be observed by visitors during their visit. The purpose of this study was to identify the tourism components consist of attractions, accessibility and amenities of Betang House Cultural Heritage Tourism in Melapi Village and Urang Unsa Village. This study was conducted using qualitative descriptive research method to identify the tourism components. The identification results show that the attractions in Melapi Village and Urang Unsa Village are historical buildings consisting of Betang houses and historical monuments, handicrafts that can be purchased, as well as traditional and cultural ceremonies. The accessibility to Melapi Village and Urang Unsa Village is reachable by motorcycle and car. The distance from district capital to Melapi Village is approximately 10 km, while the distance to Urang Unsa Village is approximately 30 km. The amenities available in this cultural heritage area are parking area, lodging, health facility, churches, stalls, and multipurpose building. These tourism components are the main factors that attract visitors to come to the Cultural Heritage Tourism area in Melapi Village and Urang Unsa Village.

A Study on Spatio-Temporal Characteristics of Rural Settlements in Multi-Scale in Yongding River Valley

Xin Wang (School of Architecture and Design, Beijing Jiaotong University), Panpan Zhang (School of Architecture and Design, Beijing Jiaotong University) and Xuanli Ma (School of Architecture and Design, Beijing Jiaotong University).

Abstract

There are dozens of rural settlements located along the Yongding River, flowing through the western suburbs of Beijing. The water system influences the settlement space at different scales and shows diachronic characteristics. At the macroscopic scale, rural settlements are connected, and their spatial distribution is closely related to water systems and transportation corridors. At the mesoscopic scale, the spatial pattern of settlement units is influenced by water resources, and the spatial layout of settlements along different levels of rivers has its own characteristics according to the water demands of local drinking and agricultural irrigation. Some settlements have carried out water conservancy facilities one after another to solve the problems of seasonal water shortage and flooding. At the microscopic scale, the water system has influenced the culture of the river valley, including praying for rain, worship, temple festivals and other folk beliefs,



which continue to promote the creation and iteration of public space within settlements. In the process of interdependence between settlements and rivers, rural space has undergone a dynamic process from "water-proof" to "water-use" and then to "water-respect". The establishment of a multi-scale analysis framework helps to comprehensively recognize the spatial patterns of rural settlements, and provides methodological support for the conservation and renewal operations.

Revitalization Opportunity or Collective Aphasia? Deformed Cultural Negotiations in Urban Regeneration of Old Urban Districts in Chinese Cities

Zhuyang Liu (Department of Urban Planning, Tongji University), Can Wang (Yangtze Delta International Institute for AI-Assisted Planning) and Chen Chen (Department of Urban Planning, Tongji University).

Abstract

With the efforts of the Chinese central government to promote "people's cities" (ren min cheng shi) and "refined governance," (gao zhi liang fa zhan), more attention were drawn to the urban rights of the floating population in urban regeneration. The theory of cultural rights contends that the floating population carries the cultural memory to define the space where they live and work. The collision of old and new cultures will inevitably lead to competitive behavior, when the competitiveness is usually defined by the number of people within the same social group. Therefore, urban regeneration can also be observed as a cultural negotiation process between different social groups and the winning group gets better chance to express their culture in the urban regeneration process. This research focuses on the urban regeneration of Qianjin District in Yancheng City, China, which is a typical old urban district, with the rapid urbanization of which the local residents gradually moved out for better housing, and the district are gradually occupied by migrants. With the migrants gaining advantage in total population, a cultural negotiation tendency will inevitably rise between the foreign culture migrants bring and the indigenous traditional culture of the local. The authors collected 208 valid questionnaires through the combination of qualitative methods (on-site research, semi-structured interviews) and quantitative methods (CiteSpace, questionnaire survey, semantic recognition and so on). The preliminary results show that the migrants in Qianjin District did not enjoy the opportunity of cultural revitalization in the process of urban regeneration. Instead, there was a deformed cultural negotiation phenomenon of collective aphasia. Analyzing the migrants' social network, this research argues that a lack of communication among migrants and the state of atomization in social structure have all led to the failure of forming a stable social alliance between migrants. At the same time, the local landlord firmly excludes the migrants from the formal opportunity to express themselves. The long-term feeling of being deprived of cultural rights will also weaken the migrants' sense of belonging, or even "emotional autism". The findings of this research will provide experience and policy implications for urban regeneration in similar countries and regions which have just passed the phase of rapid urbanization.

Development Style Sustainability City With Aerotropolis Concept (Case Study Of Makassar City)

Randy Obertias Oheo Sumarata (Universitas Bosowa Makassar), Murshal Manaf (Universitas Bosowa Makassar) and Hasanuddin Achank (Universitas Bosowa Makassar).

Abstract

Cities are the center of social, economic, political and cultural dynamics so that they need to be understood, anticipated and designed so that growth does not lead to undesirable things with a comprehensive and sustainable approach. The airport as a development catalyst that has evolved into a business driver has provided a multiplier effect on the development of a city and region. The airport development towards the aerotropolis concept will stimulate economic growth in the surrounding area. Therefore, connectivity between centers of economic growth is needed so that greater economic growth can be boosted. The airport serves transportation and communication requests with fast and flexible services. Land use patterns that have been significantly transformed due to the aviation service sector are able to develop other sectors such as hotels, manufacturing, medium-sized housing, warehousing, transportation accessibility and have an influence on changes in land use. The number of business activities or commercial services around the airport is the basis for the formation of the airport city concept/model which is the embryo of the aerotropolis concept. This concept develops organically and starts from the airport itself, where the airport is not only a supporter of aviation activities. This study aims to determine the ideal urban model of the aerotropolis in the city of Makassar, to find out the extent of the urban development pattern in the airport area and to find out how big the influence of airport growth is on the area around the airport. This type of research in this case uses quantitative and qualitative methods. In the development of the airport, there are problems in local and regional planning, especially around the airport which is surrounded by many old buildings so it takes several years for future planning with coordination efforts with the parties to adapt to the surrounding land use.



Symbiotic Space Of Multi-Ethnic Settlements In Semarang, Indonesia

Anityas Dian Susanti (Gadjah Mada University) and Bakti Setiawan (Gadjah Mada University).

Abstract

The city is a social environment with various ethnic groups living in it. One of the characteristics of a multi-ethnic city is Semarang City. The city of Semarang is known as a port city and a trading city, has a journey of hundreds of years with people of different ethnicities living side by side. They use a common space with various ethnic and cultural activities of each without disturbing each other which in this case is referred to as a symbiotic space. The use of a symbiotic space of coexistence (peaceful side by side) and multiethnic interaction (reciprocal relationship) in an urban settlement area. The purpose of this study was to obtain a symbiotic pattern in urban space in a multiethnic settlement. Several previous studies on urban symbiosis have not investigated the symbiotic relationship in multiethnic settlements. This is certainly an opportunity in developing the theory of urban design, related to multiethnic settlements and the concept of symbiosis that is applied. This proposal aims to determine the pattern of symbiosis that occurs in multiethnic settlements, identify spatial typologies and the process of urban space formation in multiethnic settlements. The research design used is grounded research to generalize empirical facts, define concepts and validate these concepts and develop theories. Empirical studies are carried out by conducting a grand tour and summarizing the phenomena which are then taken into consideration in determining the sample location of the research, conducting a literature review from various references and making important notes as background knowledge and theory enrichment, working on qualitative research steps and making a resume from preparatory steps to data collection. Interaction and Coexistence in the research area is divided into the physical form of the area and the non-physical form of the area. The physical form of the area consists of physical space patterns, architectural forms and regional settings. While the non-physical form consists of patterns of integration of socio-cultural, economic and religious. The symbiotic space can also be interpreted as a symbolic space that increases the cultural value of the research area.

The Aspects Of Perception And Feeling Of Place Rootedness In Traditional Settlement: Case Research At Kampung Pulau Sekati

Nazatul Huda Ruhizar (The National University of Malaysia) and Nor Zalina Harun (The National University of Malaysia).

Abstract

In general, the theory of place attachment and place rootedness is defined as a study that connects human relationships and feelings to a special or unique space or place. Previous research has shown that the attachment that results from processes involving psychology, activities, and space benefits a locality's development in terms of tourism and social capital empowerment. Place rootedness is essentially the study of a person's background or origins who grew up or spent the majority of his or her life in a settlement, which ultimately creates an individual quality or character that is resilient and has a strong sense of identity. However, in comparison to the theory of attachment, the study of place rootedness is still limited, so this study aims to fill the gap by studying the definition, dimensions, and process of place rootedness in traditional settlements that have long existed on the Peninsula's East Coast, Malaysia. This study employs a qualitative methodology that includes a library study and interviews with residents of the settlements under consideration. The interview seeks to gain a better understanding of the process of place rootedness formation. Data from 25 original residents of Kampung Pulau Sekati who have lived there since birth were analyzed using the main dimensions found in the theory of place rootedness via NVIVO. The findings revealed that almost all of the major dimensions that comprise a sense of place rootedness were present in every interview response. Nonetheless, the study discovered that the aspect of origin was selected as the main dimension considered important by residents in preserving their settlements and ways of life to this day. Furthermore, the findings of this study have been formalized through the development of a theoretical framework that addresses the definition, dimensions, and process of place formation among residents living in traditional settlements in Kampung Pulau Sekati. It is hoped that the study's findings will help people better understand environmental psychology, which is becoming increasingly important as the country faces a pandemic.

Research on the relationship between the maintenance of traditional pottery production methods and cultural landscape

Fumihiko Omori (Yokohama City University) and Yoko Omori (Kurume Institute of Technology).

Abstract

Sarayama, Hita City, Oita Prefecture in Japan, where Onta-Yaki pottery is produced, has been a ceramic village since the 1710s. The village was built in a steep mountain valley to begin the ceramic industry. There are nine kiln owners, whose ancestors were the three kiln owners when the kilns were opened, continue to produce pottery using traditional methods without the use of machines. Their traditional methods have been highly evaluated, and in 2008, the village was selected as an Important Cultural Landscape in recognition of its landscape surrounded by satoyama (village-vicinity mountain). Many ceramic villages in Japan experienced a folk pottery boom in the 1960s and 1970s, and chose to abandon traditional methods in favor of mechanized mass production. There is a Koishiwara pottery village near Sarayama (Onta pottery village), which is said to be a sibling kiln of the Onta pottery village, but it has chosen the path of mechanized mass production. The purpose of this research is to clarify how cultural and industrial landscapes can be maintained regardless of social changes. In other words, how Sarayama of Onta Pottery has maintained traditional pottery production and formed a cultural landscape. In order to understand the characteristics of the pottery making process and the village landscape of Sarayama, the research is conducted in comparison with Koishiwara Pottery. As a result, maintaining the traditional method of construction was based on the following two reasons. (1) The strong influence of the teachings of Yanagi Muneyoshi, a folk art activist who highly praised Onta pottery and made it known throughout Japan, and (2) The fact that potters could talk with each other of whether to mechanize their production or not. The amount of potter's clay digging is limited each year and pottery cannot be produced in large quantities. Even during the folk pottery boom, they did not make a large profit. But they did not lose a lot of money after the boom passed, and they were able to maintain their kiln business. This autonomous form of ceramic production became a sustainable industry and was maintained without depopulation, despite the location in a deep mountain village. In addition, traditional construction methods that utilize local soil, water, and wood have led to the maintenance of the village landscape's appearance, including the surrounding natural environment.

Studying Place Attachment and Transfer of Knowledge Between Generations of Saung Angklung Udjo's Cultural Wealth in Bandung, West Java

Achyar Al Rasyid (Ph.D., Candidate, Urban Planning, School of Architecture, Tianjin University, China).

Abstract


Cultural preservation is essential to maintain the identity of a group. A place with a traditional culture will face challenges over time. This is because modern society tends to be individual and material-focused. Businesses can address this issue through place attachment and knowledge transfer processes to survive in the future. Place attachment as a form of personal attachment to a place, in general, can be manifested in inner bonds, meaning, satisfaction, and social ties that can be seen from a person's treatment of objects around him. This study then examines Saung Angklung Udjo, which teaches culture by attracting Saung Angklung Udjo for visitors. This study uses a qualitative approach with descriptive methods in presenting research data. This data collection was carried out by conducting in-depth interviews with 8 people related to Saung Angklung Udjo, namely: Owner, Manager, Teacher, Student, Member of the Performance, Head of Performance, Head of the Community Association (Environment) of Saung Angklung Udjo, Head of the Culture Service and Tourism Government of West Java Province. This data analysis was carried out with the help of NVivo 11 QSR software. The results showed that Saung Udjo was considered attractive to visitors. This can then increase the number of visitors to run the knowledge transfer process at Saung Angklung Udjo. The younger generation will continue to study at Saung Angklung Udjo to maintain the culture and knowledge in the future.

Investigating the Significance and Potential of Museums as Heritage Asset

Amirah Athirah Yaacob (Institute of the Malay World and Civilization, The National University of Malaysia) and Nor Zalina Harun (Institute of the Malay World and Civilization, The National University of Malaysia).

Abstract

The preservation of cultural assets is a valuable resource for the country. Regardless of the rapid urbanization activities that are taking place, this is an effort that must be made. This is because the conservation process is critical in assuring the preservation of national assets. This can be accomplished by paying extra attention to and focusing on regions with unique antiquities, such as colonial relics. The museum, out of all the departments, appears to be the most involved in such a



conservation endeavor. This study argues that the creation of a museum within a heritage or historical site should be successful in attracting visitors and serving as an important reference center for the local community. A preliminary examination of a museum located in a historical site in Peninsular Malaysia revealed that the museum's historical and architectural potential has not been fully realized, and it is unable to attract good number of visitors and tourists. The continuous discourse in Malaysia about the significance of maintenance in heritage building protection has aggravated until today. This study aims to fill this gap through an exploratory examination in revealing what are the comprehensive and best practice in heritage building maintenance management? and how heritage organizations currently approach heritage building maintenance issues? This study is therefore designed to identify the history and important events that occurred at a number of historical sites around the world, followed by analyses of their potential and importance as a local heritage asset, in order to understand the maintenance and management strategies that make a successful heritage building preservation with the above criteria. This research also intends to create a strategic framework for heritage assets in order to improve the function of the governing organizations that oversee them. To do this, the study used an exploratory examination of 143 linked articles covering cultural heritage management, heritage conservation, and heritage attraction. It is intended that by understanding the relevance of cultural and historical legacy, this study will raise local agencies as well as community knowledge and interest in many aspects. The study concludes that when a conservation method is implemented intelligently on heritage assets, then only the worth of the history can be preserved hence attracting visitors or tourists to the area.

Culturalization Through Bulldozing: The Case of Zurafa Street, Beyoglu, Istanbul

Cansu Çiçek (Istanbul Technical University) and Enes Aydın (Yildiz Technical University).

Abstract

Today, various informal economies that have been in existence for many years have become regarded as a threat to maintaining the neoliberal system, especially in urban settings. Having existed since the earliest points of human history, brothels have also got their share from this current situation. In the 2000s, many brothels around the world were transformed into various new function areas with urban development projects. These initiatives, identified with the creative-destruction concept, emerge as a different type of gentrification, and are named as culturalization. Zurafa, Alageyik, and Kadem Streets in Beyoglu are the first addresses of the brothels in Istanbul with a history dating back to the 19th century. This research aimed to illuminate the reasons behind the bulldozing of this area, which has been reorganized for different political purposes and is seen as a part of an upper-scale project. This study will bring the area, which has been removed from the urban memory and literature to the agenda again. A mixed-method design was adopted in the study. In-depth interviews and media surveys were conducted with the actors and stakeholders of the bulldozing process, and the purposes and possible effects behind bulldozing were examined. The economic structure of the sector was analyzed by using quantitative data. The results of the study show that the bulldozing of Zurafa Street is a cornerstone and connector between the Galata Port Project in the south and the transformation of Istiklal Street in the north by playing a crucial role in Beyoglu Culture Way Project. Destruction is debated only over property and economy whereas the daily life in the city, urban identity, and urban memory are kept behind. While the central government rapidly continues the culturalization projects in Beyoglu, the metropolitan government contributes to the area's sterilization with restoration projects. Characterizing the images which give variety to cities as bad, and the bulldozing of the urban heritage sites through the "culturalization projects" cause the cities to become dedifferentiated and disidentified. This growing problem in today's metropolises is demolishing the urban memory. Additionally, so-called cultural function areas are causing the alienation of urban dwellers especially to the heritage sites of the cities.

Kampung Tua Dalam Bugis as a Pontianak Heritage Tourism Area

Agustiah Wulandari (Universitas Tanjungpura) and Nana Novita Pratiwi (Universitas Tanjungpura).

Abstract

Kampung Tua is a notable historical area in Kota Pontianak. Its cultural symbolism represents a historical character attached to the era of its formation. Its existence is considered a precious treasure and has the potential as a heritage tourism area. However, the current problem is that the environmental conditions are not good, so it is necessary to improve the site. Issues related to this are inadequate infrastructure and low public awareness of regional potential. Thus, this study aims to analyze the potential and issues to improve the Kampung Tua Dalam Bugis area to strengthen the heritage tourism area of Pontianak City. The method used is qualitative analysis through observation and in-depth interviews. The results showed that the Kampung Tua Dalam Bugis area has the potential as a heritage tourism area for Pontianak City because it has tourist icons in the form of historic buildings, namely the Kadriyah Palace and the typical Malay Stage House. However, some problems still need to be fixed to meet the criteria for a tourist village. Improvements required to create a heritage

tourism area in this region are strengthening the attractiveness, increasing accessibility, building public facilities, especially tourist facilities, empowering the community, and intensifying regional promotion.

The Spatio-temporal Vibrancy Characteristic of Historic Urban Area and its Influencing Factors in Qingdao, China

Shanshan Wu (Department of Urban Planning, University of Tianjin) and Tianjie Zhang (Department of Urban Planning, University of Tianjin).

Abstract

Vibrancy is indispensable and beneficial for sustainable revitalization of historic urban area. The preservation of cultural heritage, especially the integral conservation of historic urban area appealed by ICOMOS is a global career. Recently, the Chinese government issued "Opinions on Strengthening the Preservation and Inheritance of History and Culture in the Construction" to better the preservation and revitalization of historic urban area. To date, by incorporating big spatial data and its analysis into solutions, new opportunities are provided to quantitatively evaluate vibrancy and to support revitalization among historic urban area. Current research mostly focused on the public space vibrancy microscopically by analyzing the human behavior and the influence of Urban Built Environment (UBE) factors. However, the research with ignorance of cultural factors, temporal heterogeneity and planning-connected research units can hardly be applied to the integral conservation of historic urban area. Therefore, by using the data from Baidu over 24-h periods in workday, weekend and holiday as the proxy for vibrancy, this study measures neighborhood vibrancy in the historic urban area of Qingdao, China. Furthermore, by using Geographical and Temporal Weighted Regression model, visualization analysis and cross analysis, the factors related to cultural and heritage, land use, traffic accessibility and urban morphology are considered to reveal the formation of vibrancy and develop enhancing strategies. The results demonstrated that: (1)the vibrancy of historic urban area presents the spatial and temporal heterogeneity, and generally negatively correlated with the degree of conservation and construction restrictions; (2) Mixed use and diversity, density, commercial facilities, public facilities contributed to the vibrancy of historic urban area; meanwhile, it was more susceptible to the cultural elements during nonworking times; (3)Nevertheless, the great variance presented between different elements of cultural factors, the vibrancy negatively related to the quantity and density of the cultural heritage, while positively related to the diversity and quantity of economic cultural facilities. This study confirms that historic urban preservation with cultural elements can accelerate the vitality regeneration, and historic urban area urgently need reutilization which contributed to revitalization. It is verified that UBE factors have similar influence in historic urban area as it performed in normal urban areas. With the deeper understanding of spatio-temporal characteristic of individuals reflected by vibrancy, the effectively and meticulously implications are propound for promoting historic urban area by optimizing UBE and heritage reutilization in specific districts.

Abdals as a Cultural Heritage and The Sustainability of This Cultural in Post-Urban Renewal Process


Albeniz Tuğçe Ezme Gürlek (Kirsehir Ahi Evran University).

Abstract

Kırşehir (Turkey) represents a small-scale Anatolian city with a population of approximately 150000. It is home to a very unique cultural identity, the Abdals besides it has many historical and cultural values. Because of this, Kırşehir, which geographically located in the middle of the country, is known as a representative of Bozlak music and the Abdals. The term 'Abdal' refers to a unique cultural group, as well as the local folk musicians in Turkey. They are one of the most significant communities in terms of Anatolian musical heritage and the Bağbaşı neighborhood of Kirsehir has been a home for them for years. For this reason, Kırşehir is the first and only city from Turkey to be included in the UNESCO music cities list in 2019.

Abdals, as a result, have been especially vulnerable to Bağbaşı urban renewal project implemented by the local government in 2011. The community was neither consulted or informed, nor able to provide their input to the renewal plan due to the poverty and educational problems created by their socio-economic positions. Like most other Anatolian people, they value their identity and the collective right to practice it in social life. However, thanks to the national development goals, the Abdals, confront serious risks, chief among them displacement. Due to a decision made without their contribution, the Abdal community suffers the worst possible outcome of the process.

This study was structured on a field work which was conducted using two qualitative methods: participant observation and open-ended interviews. In June of 2021, 32 ethnographic observation forms based on Bağbaşı, its renewal process and the cultural sustainability of Abdals were filled by participants working in different fields of social sciences and living in the



urban renewal area. Also, 20 semi-structured deeply interviews were done with members of Abdal community. This permits us to understand the process from both the perspectives of those who observed, and those who were affected by the implementation. Importantly we can gain insight into whether and how the Abdals were incorporated in the process. Findings of the study lead to the conclusion that the renewal process, as it was implemented, was a violation of the cultural rights of Abdals.

Preservation and regeneration of "Workers' New Village" in Shanghai based on the analysis of spatial pattern evolution: The case of Caoyang

Miao Hu (Tongji University).

Abstract

"Workers' New Village", the settlement built for workers from 1949 (the establishment of PRC) to the 1990s (before the real estate market bloomed) is one of the most distinctive forms of living in Shanghai, also a typical type of urban living heritage. How to recognize its values? How to preserve and promote these values by proper planning interference along with the simultaneous modernization of the living condition of these historic houses?

This paper reviews relative concept of heritage and suggests "Workers' New Village" not only reflects the political, economic, and social systems of different periods of its construction and reconstruction but also accumulates livability created by its residents over a long time of living. It also embodies collective memory and the spirit of place. Such layered historic values are contained in its spatial pattern, which is formed dynamically and whose components are interrelated.

This paper analyzes the development of China's first "Workers' New Village" Caoyang in a framework how the institution, space, and daily life evolves. Institutional change drives the spatial pattern to evolve, while the results of its evolution shape people's life and vice versa. This paper identifies five spatial relations that shape the characteristics of Caoyang as a living heritage. a) Street system: An relatively independent street system that is curved, narrow, and dense forms a peaceful street environment and suitable neighborhood scales; b) Plot combination: The multi-center hierarchical planning structure meets residents' hierarchical demands for goods and activities; c) Green and open space system: A natural ringlike river that strings series of parks promotes communications across different neighborhoods and groups; d) Street boundaries: Buildings, walls, and fences formed continuous boundaries of street, which allows abundant various small shops run by residents to break walls and occur in the later development after 1979; e) Building arrangement: Similar blocks of row patterned houses around a small central green space shaped similar daily routines of residents. All these spatial relations make Caoyang New Village a unified organic whole with strong community cohesion. They also shaped the group of workers in a very special era in China. In short, this paper focuses on how the historic and livability value of the Workers' New Village in Shanghai came into form in the long interaction of institution, space, and daily life. As a specific type of urban living heritage, it complements the theory of living heritage and provides empirical evidence.

Possibilities of Tsunami Events in the Coastal Areas of Pakistan, Estimation of their Impacts and Vulnerability Assessment.

Babar Ali (Toyo University, Tokyo.) and Ryo Matsumaru (Toyo University, Tokyo.).

Abstract

In 1945, a tsunami triggered by an M8.2 earthquake struck the coastal areas of Pakistan. Although tsunamis are a rare phenomenon along the coast of Pakistan, historical evidence of tsunamis, geological settings and seismological characteristics indicate a high possibility of tsunamis. Since the last tsunami, some coastal areas have notable population growth and infrastructure and economic development. Therefore, it is important to consider tsunami risk for urban planning and housing development. However, considering the current situation of urban expansion, it can be said that tsunami risk has not been taken into account in urban planning. The authors attempt to assess the tsunami risk on coastal settlements in Pakistan. The risk assessment comprises two parts: estimating the maximum possible tsunami in the area and examining the vulnerability of the area. This paper presents preliminary results of tsunami risk assessment in the region.

Tsunami numerical simulation is conducted by using the source parameters of the 1945 M8.2 earthquake, considering various scenarios to evaluate the maximum tsunami height and its arrival time along Pakistan's coast. The simulation results show that tsunami with more significant wave height may hit the western parts but its arrival is abrupt all along the coast.

The western parts of these coasts are at a higher elevation and the population is scarce, while the eastern parts are low-lying and more populous. Physical and social vulnerabilities are examined by reviewing the seismo-tectonics data, demographic data, and building materials of the housing structure. As a result, overall, four coastal settlements (tehsils) are marked as high-risk areas to tsunami, out of which three are situated on the eastern side. In addition, the safety of some national assets, including nuclear power plants, is examined with reference to tsunami simulations.

Recommendations and suggestions regarding suitable structural measure for tsunami prevention focusing on urban planning along the coasts of Pakistan are presented for planners and policymakers. This study may provide a foundation for further studies on reducing tsunami risk, its vulnerability, and capacity enhancement.

Relinking City and Landscape for Holistic Sustainability and Resilience

Guoping Huang (University of Richmond).

Abstract

The Muni Lagoon lying on the west edge of the City of Winneba, Ghana, is an important component in a system of lagoons, estuaries, and wetlands along the Gulf of Guinea in West Africa. Unlike many coastal lagoons, especially those next to big cities, that have become heavily polluted and deprived of ecological functions, the Muni Lagoon still offers habitat to many plant and wildlife communities. The hydrology, flora, and fauna of Muni also provide the necessary conditions for traditional livelihoods that have supported Winneba's inhabitants for nearly nine hundred years. However, pressures from human development and climate change now threaten the long-term sustainability of the eco-system, as well as the cultural identity of the Effutu people of Winneba. A recent flood washed away salt ponds, eliminating the entire salting industry in the city. The lagoon has already lost its mangrove forest buffer and become exposed to illegal housing encroachment. Winneba's renowned Deer Festival is dwindling because no deer has been found in recent years in the traditional hunting grounds. This eight-year ongoing research and planning project conducts comprehensive surveys and field researches. Spatial analysis and modelling reveals the intricate interdependence of a city and its surrounding landscape. By engaging multiple disciplines with local community stakeholders through Geodesign and collaborative planning framework, this project calls for urgent collective actions to address sustainability and resilience issues holistically. In recent years, planning scholars, practitioners, local stakeholders and communities have worked together made encouraging steps towards reestablishing and stewarding a shared healthy and economically vital future for Muni Lagoon and the City of Winneba.

Seeking equitable outcomes in involuntary resettlement

Richard Sliuzas (University of Twente), Alice Nikuze (University of Twente), Johannes Flacke (University of Twente) and Martin van Maarseveen (University of Twente).

Abstract

Urban involuntary resettlement may be driven by development projects (e.g., road widening or urban renewal) or be justified as a measure to reduce risk by moving a community to a less hazardous location. Resettlement may increase the deprivation levels of those relocated. It is a sensitive issue that can make or break a community's socio-economic prospects for years, even decades. Our research on resettlement in India and Rwanda has shown significant deprivation impacts, including many that are location-related, and that local officials have made little effort to engage target communities in site selection.

By investigating the processes and impacts of resettlement in Kigali, Rwanda, we have developed an interactive REsettlement Site Evaluation Tool (RESET) that supports a collaborative approach to site selection for reach fairer outcomes with lower deprivation risks. RESET enables stakeholder groups to independently review and apply criteria for site selection and to identify and prioritise potential resettlement locations. These alternate perspectives can then be compared to reveal similarities and differences to be negotiated in an interactive multi-stakeholder setting. Surveys of households and experts in Kigali identified the most important criteria for selecting resettlement sites and revealed five for which the two groups had significantly different preferences. To reach a joint decision, most debates should focus on these criteria. Though RESET has not yet been tested with actual stakeholders, initial role-playing experiments with master students demonstrates its usefulness in jointly negotiating resettlement site selection.

Mitigating Urban Fire Risk through Urban Form Management in the Mandalay Historical Precinct, Myanmar

Aye Thandar Phyo Wai (The University of Melbourne).

Abstract

Urban fires are physical and social events that can affect the built environment and cause numerous deaths and property damage. The risk of urban fire increases when the incidents are combined with a vulnerable built environment. The urban form of historical precincts or old city areas is highly vulnerable to urban fire. However, there has been limited research into urban fire risk reduction through urban form management of historical precincts. This research aims to address this gap by exploring whether urban fire risk reduction through urban form management is mainstreamed across government levels and between sectors in the Mandalay historical precinct. This research applied a mixed method approach by integrating qualitative and quantitative data. Urban form assessment, policy evaluation and interview analysis were conducted to investigate the existing conditions of urban form and to examine how the policy and other government actions address urban fire risk reduction. Based on a study of selected areas of the Mandalay historical precinct, this paper demonstrates that certain urban form features contribute to increased urban fire risks. It was found that the built environment of the historical precinct is concentrated and unplanned. The traditional buildings, old street networks which impede the movement of fire apparatus, minimal open space and fire breaks, and unreliable firefighting water supplies can not only facilitate the growth and spread of urban fire but also increase the risks. The policy evaluation results showed that urban policies pay limited attention to urban fire risk reduction measures. Limitations on enforcement and implementation of policies allow the urban form in the Mandalay historical precinct to be vulnerable to urban fire and to increased risks. The research also found that policies are inconsistent across different levels of government and different sectors. Moreover, the interview analysis results showed that the government officials have limited awareness and capacities regarding urban fire risk reduction through urban form management due to insufficient staff, experts and financial resources. Therefore, an increased awareness among institutions, appropriate legislative and institutional arrangements, capacity building and development and a sustained financial plan are suggested to enhance the mainstreaming processes which in turn to reduce the risk of urban fire in the Mandalay historical precinct.

Influence of the regional characteristics on the floating population change after COVID-19: A case study of Seoul, Korea

Hong Seok Choi (UNIST (Ulsan National Institutional of Science and Technology)), Hyun Joo Eom (UNIST (Ulsan National Institutional of Science and Technology)), Gi Hyoung Cho (UNIST (Ulsan National Institutional of Science and Technology)) and Seo Yeon Nho (Ulsan National Institute of Science and Technology).

Abstract

Many countries implemented social distancing in response to COVID-19 which lead to changing of floating population. Population change varied across the regions, there were population decrease in some districts. The decrease caused economic damage in retails, and a lot of regions have not recovered yet. For providing knowledge to make better policies and reduce the damage in the future pandemic, we have to identify the factors that relate to population change. We investigated the patterns of floating population change after COVID-19 and conducted statistical analysis by using the regional characteristics. The study area and temporal scope are 424 administrative dong in Seoul, from January 2020 to December 2021, and the data is provided by Seoul Big Data Campus. We divided the data into 4 phase based on social distancing policies, classified the administrative dong by using time-series K-means clustering. We used ANOVA for identifying the factors. In the results, we classified the time-series data into 4 clusters in each phase, the average pattern of the clusters has similarity among phases. The average patterns are fully recovered, half-recovered, steadily decreased and steadily increased. Statistically, there are significant difference among clusters in terms of socio-economic factors and composition of regional business. In conclusion, population change due to social distancing varied according to socio-economic factors and composition of regional business. The damage in regional economic caused by population decrease would be decreased if the direction and context of polices in response to COVID-19 are determined in consideration of these factors.

Examining geographical and built environment's attributes as predictors of human vulnerability during tsunami evacuations: findings and recommendations for urban planning

Jorge León (Universidad Técnica Federico Santa María / CIGIDEN), Alejandra Gubler (Research Center for Integrated Disaster Risk Management (CIGIDEN)) and Alonso Ogueda (George Mason University).

Abstract


Evacuation is the most important and effective method to save human lives during a tsunami. In this respect, challenges exist in (1) developing quantitative analyses of the relationships between the evacuation potential and the built environment and geographical attributes of coastal locations, and (2) mainstreaming these findings into local urban planning schemes. This paper proposes a computer-based modelling approach (including inundation, evacuation, and built environment metrics), followed by multivariate regressive analysis, to estimate how those attributes might influence the expected tsunami death ratios of seven Chilean coastal cities. We obtained, for the examined variables, their average values to different thresholds of the death ratio. Also, our statistical analysis allowed us to compare the relative importance of each metric, showing that the maximum flood, the straightness of the street network, the total route length, and the travel time can have a significant impact on the expected death ratios. Lastly, we propose spatial planning guidelines for developing new urban areas into exposed territories (if this expansion cannot be restricted or discouraged) or retrofitting existing ones, with the final aim of enhancing evacuation and therefore increasing resilience.

Factors Influencing Unwillingness to Participate in Flash Flood Mitigation in the Himalayan Communities of North India: Implications for Practice

Praveen Maghelal (Rabdan Academy) and Sudha Arlikatti (Amrita Vishwa Vidyapeetham).

Abstract

On July 17, 2013, Uttarakhand, a hilly Himalayan state in North India suffered a devastating flash flood due to torrential rains along with glacial melting resulting in heavy landslides and flooding along the river. About 169 people were estimated to be dead and more than 4000 missing (presumed dead) with complete damage to over 2500 houses in 4200 villages in the region. Exposure to flash flooding and associated losses continue to grow around the world despite improvements in forecasting and early warning systems, there is currently a knowledge gap between flood experts and the general public about flash flood risks. To overcome this, a bottom-up approach that is more comprehensive and includes multiple stakeholders that allows individual owners to take the best approach for their properties has been recommended. But risk area residents do not usually accept or acknowledge their individual responsibilities due to various reasons. In light of these



challenges, the aim of this paper is to contribute to gaining a more nuanced understanding of factors that encourage or more specifically deter individuals from adopting flash flood flash mitigation measures in developing countries such as India. Most studies, till date, do not tell us why there are a large number of respondents unwilling to take any mitigation actions. This is very important to understand if we want to save more lives and also reduce the capital expenditures on flash flood mitigation in locales with high social and economic vulnerabilities. A semi-structured survey instrument was used to collect information from 316 respondents from 17 flood affected villages. Using the Multiple Correspondence Analysis (MCA) and regression analysis, the unwillingness of respondents to engage in preparedness is investigated. About 30% to 56% of respondents are unwilling to engage in preparedness (both structural and non-structural) to flooding. Individuals in high risk locations and high risk perception, however, are more willing to prepare for flood risk. On the contrary, financial constrains restricts willingness to engage in structural mitigation while hazard experience, cultural influence, and socio-demographic influences non-structural approaches such as family and village emergency planning. Recommendations for public entities and emergency planning departments (such as the National Institute of Disaster Management) to develop a comprehensive flood disaster reduction strategy that incorporates resident-based preparedness along with strategies to engage local knowledge and resources are suggested. This will help save lives and mitigate the loss of property due to unwillingness to preparedness are proposed.

Reading the urban form of the city of Fes, through the prism of Resilience

Lamiae Moujoud (international university of Rabat).

Abstract

The proposed research will attempt to understand and explore the potential links and associations between urban form and resilience. Both notions will be explored based on research and theoretical and practical studies simultaneously.

This work will consider the following hypotheses:

Understand the constitution and evolution of the urban fabric of the city of Fes (Morocco), regarding urban morphology based on the method of diachronic reconstruction of the process of genesis of its urban fabric, according to the Italian school of urban morphology (CANIGGIA 1997).

Explore the resilience of urban forms using three approaches:

- Theoretical and critical development of the concept, the theory of Resilient Eco-systems by (Holling 2002) "ability of a system to absorb a shock and to reorganize while essentially retaining the same functions, structure, identity and reaction capacities".
- Concrete and operational, go beyond the analysis of the concept and identify its capacities in action.
- Prospective and innovative, identify beyond risk management, tools, and methods for implementing the concept of resilience. The Carbon Zero city, the quarter-hour city, urban renewal, as tools to be put in place to strengthen the resilience of cities.

This work will question three typologies of the urban fabric of the city Fes, namely the traditional, modern, and contemporary fabric, in order to measure their resilient potential, adaptation, and transformation.

From this general observation will arise the main question of the research:


How can we read the urban form of the city of Fes, and understand the way in which its physical structure can facilitate or hinder urban resilience

The Impact of Changes in Living Environment on Life Satisfaction: A Comparative Study between Relocated and Non-relocated People in Japanese Disaster Areas

Siyi An (Tohoku University), Toshiaki Aoki (Tohoku University), Toei Yoshihara (TOHOKU INSTITUTE OF TECHNOLOGY), Hajime Inamura (TOHOKU INSTITUTE OF TECHNOLOGY) and Akira Kikuchi (TOHOKU INSTITUTE OF TECHNOLOGY).

Abstract

Long-distance relocation after a natural disaster is likely to end the established relationships and social ties between dwellers in the communities, which may consequently decline life satisfaction. However, whether this effect persists in the long term has not been statistically verified. Considering that maintaining the life satisfaction of relocated residents is one of the important goals in post-disaster recovery, it is crucial to investigate the impact of changes in the living environment on life satisfaction. For that purpose, this study investigates the change in life satisfaction between relocated and non-relocated residents who experienced the Great East Japan Earthquake. A questionnaire survey regarding the living environment and life satisfaction was conducted with current and previous residents located in disaster areas, i.e. Ishinomaki and Onagawa in Miyagi prefecture, Japan. By comparing the evaluation on the living environment between the



relocated and non-relocated residents, we found that the relocated people showed less satisfaction with human relations in their community and more satisfaction with new housing and living convenience. However, these changes in their living environment did not lead to a significant change in overall life satisfaction. The regression analysis results show that life satisfaction is maintained as a result of the offset between the increase in housing quality and the decrease in social relationships. These results suggest the elasticity of the subjective evaluation of life satisfaction. Furthermore, they imply that the disruption of social relations caused by post-disaster relocation can be compensated by the improvement of housing quality and living convenience in the relocation site.

Rethinking the socioeconomic recovery after the disaster— from the perspective of housing extension

Sung Lun Tsai (Kyoto University) and Chiho Ochiai (Kyoto University).

Abstract

In August 2009, Typhoon Morakot had hit Taiwan and brought about unprecedented rainfall. The precipitation had rendered 160 southern tribal communities uninhabitable and subjected to the subsequent settlement relocation—the biggest post-disaster relocation project in Taiwan. After the relocation, 3,575 permanent housings were built and allocated to the disaster victims. However, many housing extensions were observed after the reconstruction project was completed after ten years.

Therefore, this research aims to find out 1. What were the incentive and reasons for housing extension? 2. What was the subsequent risk of building these housing extensions? 3. What is the possible solution to mitigate the risk and construct the resilient post-disaster community? To answer the above questions, this research applied the drone spatial survey and the in-depth semi-structured interview (settlement residents, local government, NGOs, architects, and academics)

The research found that the indigenous community usually had the most housing extension per household compared to the Han Chinese groups. The larger housing extension was related to their pre-disaster livelihood and adaptation to the post-disaster lifestyle. Second, due to the building code violation, the local government deemed the housing extension unlawful. Moreover, despite the residents having house ownership, the land ownership belonged to the government. Therefore, some of the extensions had been demolished by the government. The demolition incident had prompted the confrontation between the government and the community. The stalemate also shattered already weak government—community trust.

Therefore, this research suggested that the government should recognize the housing extension if the structure can meet specific safety requirements. Moreover, it is crucial to consider the flexibility of housing layout during the post-disaster settlement and permanent housing planning stage. This research had contributed to the post-disaster reconstruction studies since it bridged the gap between spatial design and socioeconomic issues in the field.

Spatial identification of disaster-resistant multifunctional landscapes in informal settlement

Roosna Maryani Octaviana Adjam (Universitas Diponegoro), Imam Buchori (Universitas Diponegoro) and Wakhidah Kurniawati (Universitas Diponegoro).

Abstract

Multifunctional landscape is a concept that has developed with multidimensional benefits which provides an efficient way to achieve sustainable landscape management. It is stated that the improvement of multifunctional landscapes can be solutions to the feature of disaster resilience. This study aims to spatially identify multifunctional landscapes in informal urban areas and relevant influencing factors. Land cover indicators were obtained by analyzing Sentinel-2 Image using the Normalized Difference Vegetation Index (NDVI), Soil Adjusted Vegetation Index (SAVI) and Normalized Difference Wetness Index (NDWI) methods. Topographic maps are obtained by analyzing and classifying Digital Elevation Model (DEM) data and analyzing rainfall maps for 10 years, from 2011 to 2020. Mapping and ranking are carried out to analyze areas in particular that had the potency to floods, landslides, and windstorms resistance, and areas of water availability and economic productivity. The results of the study explained that the function of regulation landscape, which are the function of controlling floods, landslides and windbreaks synergized in several areas, while human needs had a significant conflict with the water supply function in the area. Multifunctional landscapes cover less than a third of the study area, and is located in low-lying areas with gentle slopes. The area is located on a high level of vegetation cover, a fairly good level of water availability, a social ties, and economic resilience, and is quite close to rivers and roads. The study categorizes landscape functions into four parts, namely climate disaster-resistant area, regional economic area, watershed ecological area, and community cultural area. Policy makers should establish policies on regional economic development and ecological protection that are appropriate to the type of landscape function of the informal area of the city.

Family Financial Planning for Disaster Preparedness: A Case Study of North Semarang, Indonesia

Rukuh Setiadi (Universitas Diponegoro) and Rambu Frederika (Plan International Indonesia).

Abstract

This paper examines two important themes namely 'family financial literacy and planning' and the 'utilization of digital cash' in disaster preparedness. It aims to identify community's preparedness from family financial planning point of view. It also looks at how digital cash plays its role in the community and explores the extent of its connection to preparedness activities at family level. This study focuses on evidence gained from a case study in the North Semarang District, Indonesia, which has experienced tidal flood for decades. We employ questionnaire survey to 100 households, four series of focussed group discussion, and in-depth interview to 25 key persons. The study shows that family literacy on financial planning for disaster preparedness is relatively significant, though only a few of the families implemented financial plan and specifically considered it for (tidal) flood preparedness. Additionally, digital cash model can be used as an individual solution to disaster preparedness at the family level, and as a collective solution to financial mechanism for disaster preparedness aid at the community level. Yet, its penetration remains low and it is relatively concentrated to young adult families and the youth. It will be promising and potential in the future, for the next generation.

Impact of Multimodal Transportation Network Disruption on Travel Demand Considering Detour, Traffic Congestion, and Lack of Information

Nur Diana Safitri (Hiroshima University) and Makoto Chikaraishi (Hiroshima University).

Abstract


Disaster can cause serious impacts on transportation networks. When the disaster occurs, many links on the transport network would be degradable or unavailable. The available information may lack, forcing the traveller to take a detour or cancel the trip. Congestion can also occur in multiple links on the transport network, which then triggers economic loss. Focusing on the resilience of the transport system, many studies discuss the performance of the degradable transportation network, where the decrease of the performance is in line with the decrease of available links. By borrowing this concept, this study aims to analyze the impact of multimodal transportation network disruption on travel demand, focusing on the economic loss due to three different factors: lack of information, detour, and traffic congestion. Exploring the relative contribution of these three factors on network performance would help policymakers to make better decisions. Particularly, if the impact on congestion is greater than the lack of information and/or detour, then managing the congestion will be most important under the disrupted condition, likewise with detours. Improving the network is more important if detours have much larger impact. Meanwhile, providing better and more complete information will be much more critical if the lack of information has a greater impact. In the empirical study, we focus on July 2018 heavy rain disaster in Hiroshima, Japan, using GPS trajectory data obtained from ETC 2.0 (electronic toll road) and Fujitsu probe vehicle data from June-September 2018, which also considers the vehicle type. We utilize these data to estimate parameters using the recursive logit model, which is consistent with random utility theory and efficiently computes the link flows. The consideration of the detour pays attention to the actual route used by the travellers, where they may choose a long route to get to their destination under disaster. The calculation of the parameters using the shortest route is then carried out to identify the loss due to lack of information, while the consideration of congestion uses the increase in travel cost. We consider three-time points: before (June-July 6, 2018), during (July 9-12, 2018), and after the disaster (July 13-September 28, 2018), to get parameters on each time point. We then calculate and compare the economic loss of those three factors using the resilience triangle concept. These results will give a broader picture of loss due to disruption to the demand and help to provide suggestions for the policymakers.

Willingness to deal with wildfires via spatial planning

Constanza Gonzalez Mathiesen (Universidad del Desarrollo).

Abstract

Wildfires are an especially complex challenge for urban-rural interfaces and peri-urban areas exposed to wildfire hazard. It is increasingly common in wildfire-prone areas that spatial planning is expected to integrate wildfire risk management considerations. Spatial planning is particularly suited to avoiding, reducing and remediating risks via spatial and morphological regulation and design. To implement wildfire measures, the willingness to deal with wildfires via spatial planning of the diverse stakeholders involved in the planning processes is an essential precursor for the changes needed



for integrating wildfire measures into the planning system. Therefore, this research aims to explore the ways the willingness of stakeholders influences the spatial planning processes of integrating wildfire risk management considerations.

This qualitative research was approached as a multiple case study of Victoria (Australia) and Chile's spatial planning processes of (a) identification; (b) reframing; and (c) implementation of wildfire measures. Documents and archival records (Victoria=148 documents; Chile= 135 documents) and semi-structured interviews (Victoria=24 interviews; Chile=18 interviews) were used as sources of data. Three data analysis techniques were selected: (1) time-series analysis; (2) qualitative content analysis; and (3) cross-case synthesis.

The case studies findings show that stakeholders' willingness to support (or not) integrating wildfire considerations into the spatial planning system does not depend on the appropriateness of the measures but on diverse personal motivations. The research distinguished that the dynamics associated with the willingness to integrate wildfire considerations into the spatial planning system vary depending on the process stage. Initially, the willingness to 'do something' about wildfires increases post-disaster; but this often does not translate into a willingness to change the spatial planning system. Instead, other fast-return interventions tend to be privileged. Furthermore, the willingness to address wildfire via spatial planning tends to diminish through the process of integrating wildfire considerations due to stakeholders' diverse motivations. Lastly, the willingness to implement new spatial planning instruments and practices for wildfire risk reduction tends to further diminish as time passes due to changing perceptions, poor design, or individuals' opposition.

Overall, the research concludes that for successfully integrating wildfire considerations into the planning systems, the acceptance and use of the logics of the stakeholders' willingness that condition and limit each stage of the planning process is required. This research contributes practical understandings about the Chilean and Victorian spatial planning system's ability to integrate wildfire considerations and the dynamics associated with the willingness of stakeholders that might condition this ability.

Comparative analysis on the effects of the different number of visitors and the different timing of evacuation on crowd evacuation in an underground shopping mall during a disaster - A study using multi-agent simulation -

Hibiki Motoi (Osaka Institute of Technology, Graduate School of Engineering, Architecture, Civil Engineering and Urban Design) and Yukikazu Yamaguchi (Osaka Institute of Technology, Faculty of Engineering, Department of Civil Engineering and Urban Design).

Abstract


Underground shopping malls, which have become increasingly large and complex in recent years, are important walking spaces for an unspecified number of users. To safely evacuate many visitors of underground shopping malls in the event of a disaster, it is effective to predict evacuation behavior in advance and to improve problems during evacuation. The multi-agent system is an effective method to understand the evacuation behavior. In this study, we construct a multi-agent simulation model that considers the behavioral characteristics and interactions of individual visitors in an underground shopping mall, guide evacuees, and analyze the effects of the guidance on the completion time of evacuation and other factors. The method of evacuation guidance is to place guides at the intersections of underground shopping malls to guide evacuees passing through the intersections to the nearest exit. This will enable evacuees who were heading for distant exits to evacuate from the nearest exit, thus reducing the time required to complete the evacuation. Furthermore, to optimize the timing of evacuation guidance, we will compare and analyze simulation models with different numbers of visitors to the underground shopping mall and different timing of evacuation guidance. This research will enable us to provide information that will contribute to future disaster prevention planning and evacuation drills.

Developing a community-based risk acceptance threshold for small-scale recurring disasters to inform land use planning

Kishani Tennakoon (University of Waikato), Silvia Serrao-Neumann (University of Waikato) and Raven Cretney (University of Waikato).

Abstract

As small-scale disasters continue to occur more frequently, their impacts become cumulative with time and therefore intolerable for the communities affected. In spite of this, because of their less significant immediate effects, they receive little scholarly and practice attention. There are no clear policies to address small-scale recurring disasters and they are not often captured through existing risk assessment processes, thereby missing the opportunity of being escalated to a higher level for further evaluation to scrutinise their impacts.



While it is imperative to have guidelines and criteria for emergency management to address small-scale recurring disasters for early recovery of the communities, the recurrence of these events in quick succession may lead to higher risks that need to be examined as part of the planning process. Short-term solutions, such as insurance, that facilitate the recovery from these disasters may obscure the underlying issues and therefore the actual vulnerability of the communities may be exacerbated with the quick succession of events. Without this background of information, land use planning decisions can further exacerbate disaster risks and their impacts on communities.

Drawing on empirical data from practitioners operating in Aotearoa-New Zealand, this study examines how extensive risk pertaining to small-scale recurring disasters, the vulnerability of the affected communities and their exposure to disasters should be considered in land use planning policies. The paper argues for mechanisms to be developed to capture those elements and reevaluate the risk based approach currently informing land use planning decisions. This includes mechanisms for engaging at risk communities in the development of minimum threshold levels of risk acceptance for their locality, especially when the end goal is to increase community resilience to disasters through land use planning.

Technical and socioeconomic issues of rural housing after the earthquakes of September 2017, in Mexico.

Maria Perez (Graduate School of Global Environmental Studies, Kyoto University).

Abstract

On September 7th and 19th in 2017, two strong seismic events of 8.2M and 7.1M respectively on the Richter scale occurred in the south-eastern region of Mexico. Both earthquakes provoked severe damages to infrastructure and 191,574 buildings were reported with damages. These events caused a total of 726,798 affected victims, and more than 180,000 housing units were severely damaged. Inhabitants in rural areas were found amongst the most affected, and communities with higher percentages of poverty and vulnerability were affected in the highest degree.

The study aims to answer the following questions: Which factors contribute to higher earthquake proneness in rural communities? What has been done in terms of policies and programs? Which materials, structures and techniques are considered for the reconstruction solutions? and, How did they respond to the socio-economic and cultural context of these communities in a sustainable way? To respond to these questions, a comprehensive literature review on the events of 2017, official data from national programs, entities, documents and evaluations, newspapers and a study on post-disaster housing proposals in two rural communities affected by the events were used. Semi-structured online interviews with NGO, local entities and observational analysis were conducted.

As a result, diverse complex problems regarding rural housing were found, which could be placed inside two main categories: Technical-structural conditions and socioeconomic conditions. Problems such as the lack of regulation and informal construction, risk-prone housing locations, the lack of infrastructure and the combination of traditional and local materials contributed to technical-structural problems. On the other hand, problems like poverty, migration, cultural detachment from local roots, lack of trust in external entities, social scarcity and violence, were generating a constant state of socioeconomic vulnerability that showed most evident when a strong natural disaster occurs.

In summary, further research needs to be made in order to understand which factors can be considered and applied to develop resilient post-disaster recovery housing proposals that consider both technical-structural and socioeconomic conditions affecting rural communities, especially in developing countries with higher levels of deeply rooted and complex social inequality issues. Seeing housing recovery as a way of reconstructing not only physical structures but long-lasting damaged social fabric among marginalized communities using cooperation, local empowerment and pride for one's cultural roots as a way of modifying patterns of inequality could be considered as a further research question.

Research on the efficiency of urban medical and healthcare facilities planning based on the hierarchical diagnosis and treatment system with Shanghai as an example

Jie Li (TONGJI UNIVERSITY).

Abstract

The service efficiency of the Medical and Healthcare Facilities, which are directly associated with post-disaster relief, largely affects the emergency management capacity of cities. With the frequent occurrence and expansion of the impact of Public Health Events, it becomes increasingly important to assess the current situation of the Medical and Healthcare Facilities in China, so that make our medical and healthcare system more resilient in future practice. This paper constructs an evaluation system of planning efficiency about the service capacity and service scope of medical and healthcare facilities based on China's hierarchical diagnosis and treatment system, and conducts an empirical analysis by using the data of medical and healthcare facilities and the spatial and temporal distribution of the population in Shanghai. The results show

that: ①The medical and healthcare facilities in Shanghai show significant central clustering characteristics, and the relationship between the supply and demand of medical and healthcare facilities in the central city is coordinated, while the supply of facilities in the peripheral suburbs is significantly insufficient. ② The high-grade medical facilities in Shanghai are more complete, and the planning efficiency of primary medical facilities is lower. ③In general, the current efficiency of planning medical service facilities is still at risk when responding to public health emergencies in Shanghai. On the basis of the analysis results, the medical and healthcare facilities planning suggestions are proposed with the aim of enhancing the efficiency in disaster mitigation in Shanghai.

The Built Environment and Economic Resilience of Food Retail Businesses during COVID-19

Feiyang Sun (University of Washington), Siman Ning (University of Washington), Jan Whittington (University of Washington), Gundula Proksch (University of Washington), Qing Shen (University of Washington) and Sofia Dermisi (University of Washington).

Abstract

This study examines the role of the built environment in mediating food and retail business continuity, offering an indicator of urban economic resilience during the COVID-19 pandemic. In particular, this study investigates three groups of built and economic environment characteristics—business types, indoor and outdoor spatial strategies, and neighborhood characteristics—with primary surveys of 921 businesses from 44 census block groups. The sampling schema covers 17% of all food retail businesses in the City of Seattle, during the first and second peaks of policy designed to suppress viral transmission. The study found that restaurants and coffee/tea shops were more vulnerable to the economic shock from the pandemic and related policies compared to grocery stores, which were required to stay open to customers. Interestingly, spatial strategies shaped by health guidelines, such as the provision of sanitizers or distancing marks, were found to have no association with the continuation of business operations. Spatial strategies that generated significant effects included posting of signage and the placement of counters, tables or similar podiums at entryways, which are not directly related to health concerns but could have potentially facilitated safe communication and interaction between businesses and their customers. The associations between neighborhood characteristics, such as population density, job density, and percentage of non-asian people of color, and business continuity provide evidence of temporal migrations during the pandemic and suggest potential inequities in social mobility.

Verification of the Effectiveness of Tactical Urbanism in the Recovery of Local Livelihoods -the Case of the Great East Japan Earthquake

Shino Miura (The Univ. of Tokyo) and Hideya Fukushima (The Univ. of Tokyo).

Abstract

In the areas affected by the Great East Japan Earthquake, the robust construction of hardware had provided people with the option of living in their hometowns; nevertheless, the population decline has been accelerating. A significant issue for the areas' future is building a sustainable community, economy, and environment for the next era. Approximately ten years since the disaster, it is time that should review the process of response and recovery academically to understand the situation of participation to communities of the younger generation responsible for the future. However, such target-focused research is not seen sufficiently. Internationally, it is indicated that "tactical urbanism", which involves the younger generation, has positively impacted the built environment. Its come out is the urban policy diffusion brought by grass-root idea trials which can flexibly adapt to changes in budgets and human resources. It is reported that it was also applied to the 2011 Christchurch earthquake and the 2020 COVID-19 response process. This research hypothesized that the same approach as tactical urbanism was taken at the response and recovery for the local livelihood, which is indispensable for the lives of young people in the area of the Great East Japan Earthquake. The objective is to clarify 1)the existence of trial actions by the youth's own hands at the time, 2) their content, including the continuity and development possibility, and 3) the social effect on the town. The effectiveness of tactical urbanism is verified by these results. Because there are no existing database and monitor reports from this perspective, the authors extracted the relevant cases from the available reports, mainly of the Japanese Reconstruction Agency. It conducted their current status by original questionnaire follow-up survey, for the Agency reports only explain the situation during the recovery period (within three years after the disaster). The interviews also applied to sort out the detail of the process and challenge of the case study group. The social effects on the town were analyzed by the synthetic control method. As a result, although the hypothesis was proved by the fact that the tactical urbanism process was found in communities that meet specific contexts and conditions, the number of cases was few. External factors influenced the effect on towns. In conclusion, the research suggested the contents of the program to involve multiple generations and enhance the sustainability of local livelihoods in the event of a disaster in municipalities with a declining population.

Establishment of the local community at post-disaster public housing in Kesennuma, Miyagi prefecture, Japan

Chiho Ochiai (Graduate School of Global Environmental Studies, Kyoto University).

Abstract

Ten years have passed since the Great East Japan Earthquake caused enormous damage to the coastal areas of the Tohoku region of Japan. Tremendous days and years have been spent on land readjustment projects, consensus-building of regional reconstruction plans, public works projects, and reconstruction of permanent housing. It has been about four to five years since the completion of post-disaster public housing and people moved in. During this period, little research has been done on understanding the establishment and activities of local communities, especially residents' associations. The purpose of this study is to clarify the community establishment of the post-disaster public housing in Kesennuma City, Miyagi Prefecture, from 1) the selection process of public housing sites and residents, 2) current condition of the establishment of the resident's associations, and 3) the influence of COVID 19. To answer the above questions, this research applied a survey of existing literature, a geographical understanding, and an interview survey with local government staff and residents. It was found that public housing sites were selected by the local residents, or by the initiative of the local government. In some government-led sites, residents are called and selected by lottery, therefore, there is a mixture of residents from different areas coexisted. It influenced the establishment of the local communities, especially the formation and activities of residents' associations since selecting a leader is difficult without a previous human relationship/network. Also, in some areas, rather than establishing a residents' association immediately after moving into the public housing, it took some time, and some issues like garbage management became the catalyst. It was relatively easy to select leaders at the site where the majority of the residents are from the same area, but it was difficult in the newly formed area. In addition, due to the COVID 19, there are many cases that establishment or activities of the resident's associations were interrupted such as resident's gatherings being restricted, local tea gatherings, and festivals being restricted to hold. In conclusion, it became clear that the establishment of the resident's association is still in progress in some residential areas, and community consensus building and support from the local administration are necessary.

Participatory method for assessing neighborhood resilience capacity and enabling/disabling factors from multiple stressors in urban riverbank kampongs.

Irsyad Adhi Waskita Utama (Shibaura Institute of Technology) and Hitoshi Nakamura (Shibaura Institute of Technology).

Abstract

Climate-related disaster, socio-economic risk, and the recent COVID-19 pandemic have overwhelmed and exacerbated dwellers' quality of life in an informal settlements. These multiple stressors have challenged how dwellers cope and adapt to the predicament condition in unprecedented ways. Despite the shock and stresses in disaster prone environment, riverbank kampong has the potential to self-organized its resource and community to sustain life. This paper aims to propose a community-based participatory approach for self-assessing kampong risk, resilience capacity, and identifying enabling/disabling resilience factors from multiple stressors in urban riverbank kampong. A Series of focus group discussions followed by a semi-structured interview with 36 participants was carried out in two urban riverbank kampong in Yogyakarta, Indonesia. Our preliminary findings suggest that despite the differences in the community's initiatives to achieve resilience, the disabling (negative) factors were more significant than the enabling (positive) factors to achieve resilience progress. In the factors categorization, we found that physical setting (street dimension and layout), location, poor disaster mitigation infrastructure, funding and maintenance are the amongst the disabling factors while the social norm such (e.g. helping each other "gotong royong", tolerant) and spirit to survive and progress better are positive factors that enable neighborhood resilience. The application of the approach effectively understood the current state of resilience capacity. It raised the awareness of local actors/communities to set priorities and take action based on its current resilience state.

Deciphering the spatial-temporal evolution of urban resilience within Yangtze River Delta urban agglomeration, China

Yuhan Zheng (Chongqing University), Zhiyuan Zhu (Chongqing University) and Pengcheng Xiang (Chongqing University).

Abstract

Urban agglomeration, a highly evolved spatial form of integrated cities, has become more developed due to growing interconnections among cities. While benefiting from its invigorating development, cities also confront more complicated and systematic risk. Urban resilience and regional synergetic development are also being challenged in a more permanent and serious way. Urban resilience refers to the urban capacity to adapt, resist and recover quickly from external disturbances. However, little attention has been given to transforming the resilience study from the urban level to the urban agglomeration level. To fill this gap, this study develops a four-dimensional evaluation index (economic, political, social, and infrastructure) of urban resilience to quantitatively evaluate the spatial-temporal evolution of urban resilience in the Yangtze River Delta urban agglomeration. The study aims to better guide urban resilience construction and regional synergistic development. Taking the Yangtze River Delta urban agglomeration as the research scope, the study finds that: (1) the level of urban resilience in this urban agglomeration has increased significantly and continues to grow, with regional differences narrowing; (2) distributed around the central city, the urban resilience shows a high level of polycentric clustering and a radial decrease from the center to the periphery; (3) the urban resilience gradually decreases from east to west, from the coast to the interior; (4) cities with high economic and political resilience may have lower social and infrastructural resilience, and vice versa, requiring complementary strengths between cities.

A Historical Study of Long-Distance Mass Relocation after Disasters in Japan: Livelihood Transformation and Environmental Adaptation over a Relocation Distance of 1800km

Miwa Abe (Faculty of Humanity and Science, Tokai University) and Chiho Ochiai (Graduate School of Global Environmental Studies, Kyoto University).

Abstract

There are many cases in Japan where people are forced to move their place of residence due to natural disasters, and since 1972, when the post-disaster group relocation promotion project was established, many areas have moved their place of residence. In recent years, post-disaster relocation/resettlement has been rebuilt on the premise of a short distance and with the same village people, but in the past, long-distance and group relocation of residents from different areas was carried out. However, these long-distance group relocations have not been evaluated. To have options for future post-disaster relocation policy, re-evaluation of past cases is important. The purpose of this study is to organize the changes in the lives of people who migrated from Nara Prefecture to Hokkaido after the 1889 flood, environmental adaptation, and infrastructure development by the government at that time, and to analyze the changes in their lives due to long-distance group relocation. The research methods include a survey of existing literature and interviews with residents and local government officials in Totsukawa Village, Nara Prefecture and Shin Totsukawa Town, Hokkaido. The findings are: 1) The group relocation was carried out while the Hokkaido local government was in the process of developing or after the completion of some infrastructure, agricultural land, simple housing, and transportation support. 2) Regarding the Shin Totsukawa town in Hokkaido, there has been a continuous exchange program with the mother village (Totsukawa village in Nara) and there is an impression that the residents of one village have relocated as a group and formed current town. However, in reality, there were groups from different areas that moved into the town, and some residents moved out or came in resulting that the area consisting of people from various regions. 3) Newly relocated people had a common goal of getting land to grow crops and living a stable life, and also they jointly set rules like brewing sake when rice cultivation became stable. In conclusion, in the mass relocation carried out after 1889 from Nara to Hokkaido, people who were able to adapt to the local environment lived together with common goals and rules beyond the constraints of their hometown. Also, people there further improved their infrastructure of the region, setting up shrines or holding festivals, etc to form a living environment.

Cross-cultural Community-based Strategies for Sustainable Urban Streams: Lessons from Des Moines and Jakarta.

Eka Permanasari (Monash University), Dian Nostikasari (Drake University), Irwan Tamrin (universitas Padjajaran) and Emma Cress (Drake University).

Abstract

Over half of the world population lives in urban areas where water sources continue to play a significant role in sustaining its quality of life. However, many places have experienced more frequent and intense climate events. For example, rising sea levels and overflowing rivers both can lead to repeat flooding risks in vulnerable areas. Many metropolitan areas in the U.S. are vulnerable to flooding, particularly in the Midwest (Wilson et.al. 2010). However, the challenge of managing rivers and streams in urban areas is not unique to the Midwest and the US. As the fastest sinking city in the world, flooding is no stranger to the approximately 10 million people living in the city of Jakarta, Indonesia. Unsurprisingly, repeated exposure to extreme climate events such as flooding have affected some of the most vulnerable communities with the fewest resources to recover. The paper analyses the ways communities interact with nearby streams in Jakarta and Des Moines and their strategies responding to the flood. It investigates community engagement approaches on water-sensitive issues for a more sustainable environment. Through mapping, interviews and observation, this paper concludes that two communities provide a novel comparison between a community-based approach in Jakarta where the local residents really drive sustainability/resilience to flooding and Des Moines where the municipal government in coordination with the state and federal government make the community resilience to flooding happened.

Use of the land where the original village was located in fishing villages after the Great East Japan Earthquake

Takuya Hagiwara (The University of Tokyo).

Abstract


Tsunami-affected communities often relocate their settlements to safer land. On the other hand, in areas where the demand for land use is low, one of the spatial planning issues is how to use or manage the land where the original settlement was located. This study examines (1) how residents use land designated as a disaster risk area and (2) the relationship between post-disaster land use and pre-disaster land use/ownership in the absence of government planning intervention, targeting fishing communities affected by the 2011 Great East Japan Earthquake in the Tohoku region of Japan. We hope to provide suggestions on supporting and planning for appropriate land use management in lands affected by large-scale disasters through this study. We visually surveyed the land-use status of the village of Toni-Hongo in Iwate Prefecture as of 2021. The results were compared with past registration information and housing maps for each land, and the relationship between past land ownership/use and post-disaster land-use trends was analyzed. While some land was not managed in the disaster risk areas, a certain amount of land was used as work sheds and warehouses for fishing and vegetable gardens. In particular, it was found that some land used as residential land before the disaster was used as work sheds and warehouses for fishing. In fishing villages, some residents continue to use the land near the coast even after their houses have left the coastal areas, and it is considered necessary to expand support to achieve a match between continued use and demand.

Are We Planning for Disaster Resilience? An Evaluation of 10 Adaptive Plans for Coastal Cities

Ziang Xie (Tongji University) and Lei He (Tongji University).

Abstract

In the context of disaster normalization, how to reduce disaster vulnerability and create a resilient and livable urban environment is an urgent problem to be solved. Many experts and scholars generally believe that the concept of disaster resilience is of great significance to urban plan and construction, especially the preparation of high-quality plan document is the basis for realizing urban disaster resilience. However, at present, few studies have formed a systematic principle of disaster resilience, and explored whether we have truly integrated the concept of disaster resilience into the medium and long-term adaptive planning at the urban scale. Based on the literature analysis of disaster resilience and plan quality evaluation studies, this paper constructs a conceptual framework and plan evaluation criteria of disaster resilience. The climate adaptation plan of 10 typical coastal cities (New York, Vancouver, London, Rotterdam, Barcelona, Singapore, Seoul, Sydney, Cape Town and Rio de Janeiro) in the Rockefeller Foundation's "100 Resilient Cities" project are selected for analysis. Combined with the evaluation framework, compare the plan quality of disaster resilience in typical cities, and



summarize problems and experience. It is expected that this study will provide an implementable and popularized planning strategies to improve the disaster resilience of coastal cities, and promote the climate adaptability and sustainable development of coastal cities.

Analysis of the disrupted urban traffic flow on the interdependent spatial networks in extreme pluvial flooding with multi-source data: A case study of Shanghai, China

Zihao Li (College of Architecture and Urban Planning, Tongji University), Hui Chen (Tongji University) and Shanlin Wan (College of Architecture and Urban Planning, Tongji University).

Abstract

Resilience, as a planning concept to mitigate risks and deal with uncertain disturbances, is receiving extensive attention internationally. As the foundation for urban resilience, the spatial element is both a disaster-bearing body of various disturbances and a key factor in planning and regulating urban resilience developments. However, existing research is mainly currently concerned with the conceptual framework and static evaluation of urban resilience, and little is known about its dynamic evolution process and mechanism. Our study aims to find an empirical research method for characterizing urban resilience through flow data and to analyze the dynamic evolution process of the urban element flow and the services it supports for urban residents under disturbance. This approach was applied to Shanghai, the largest city in China, to describe the impact of heavy rain on residents' commutes. Mobile phone signaling data were used to calculate the full-purpose OD matrix during Shanghai peak times, reflecting the urban functional connection and travel structure after coupling urban road traffic with land use patterns in the city. Then we analyzed the changing characteristics of urban travel flow under disturbances based on the storm and waterlogging scenarios established by flood map (10-year, 20-year, 50-year, and 100-year), including overall characteristics, the intensity of citizens' flow, and travel distance costs. In addition, a calculation method for the centrality of road networks was presented to study the mechanism by which changes in travel flow affect the service level of road networks in different scenarios and to identify bottleneck roads that could go through sudden changes in carrying capacity. This study will assist governments in estimating affected populations rapidly and calculating indirect service losses caused by labor disruptions and work delays.

Suitability analysis of spatial use in riverbank protected areas for resilient city: a case study of the Bekasi River watershed

Darmawan Cahya (Universitas Esa Unggul) and Dwi Nugroho (Universitas Esa Unggul).

Abstract

Flood disaster is one of the problems that can threaten the sustainability of cities in Indonesia. The intensity of major floods continues to increase as a result of high rainfall and land conversion, as well as poor urban drainage systems. Therefore, these cities need to increase their capacity to deal with flood disasters. City capacity building needs to be well designed to achieve a resilient city. Spatial planning in Indonesia emphasizes that spatial planning based on disaster mitigation is needed as an effort to improve the safety and comfort of life and livelihood. Flood disasters that occur in watersheds always cause property losses and even fatalities. The flood disaster had an impact on the lives of its citizens, especially in riverside settlements caused by changes in the use of riverbank protected areas to become built-up areas, especially in densely populated slum areas. This study aims to analyze the suitability of the use of space in a riverside protected area for a resilient city by taking a case study of the Bekasi River watershed. The data used are existing land cover and spatial plan. The method used is maps overlay using ArcGIS software. The result of the maps overlay show that there are around 190 locations indicating violations of spatial use in protected areas along the riverbanks of Bekasi River. This indicates that the violation of space utilization is one of the causes of flooding on the riverbanks of Bekasi River. The riverbank area which is supposed to be a water catchment area will reduce its function because it has changed its function into a built area. The results of this study are used in controlling the use of space as well as input in the formulation of policies and strategies for climate change mitigation and adaptation in the field of adaptive and responsive spatial planning toward a resilient city.

Smart City and Resilience Concept of Huge Tsunami Natural Disaster

Yunita Arafah (Urban and Regional Planning, School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung.), Haryo Winarso (Urban and Regional Planning, School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung.), Djoko Santoso Abi Suroso (Urban and Regional Planning, School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung.) and Ibnu Syabri (Urban and Regional Planning, School of Architecture, Planning, and Policy Development, Institut Teknologi Bandung.).

Abstract

Since the beginning, the development of the smart city concept has been strongly dominated by the influence of hard infrastructure and information and communication technology (ICT), which the smart city also refers to as a digital city. But slowly, the smart city concept is starting to focus on the other more important factors, which are soft infrastructure and the human aspect. This research considered those factors in applying the soft smart and resilient city concept, which aims to determine the smart city concept's soft infrastructure resiliency towards the huge natural disasters caused by earthquakes. This paper's objective is to examine the concept of resilience to the enormous disaster caused by the tsunami based on the sociological institutionalism approach. Due to the research purpose criteria, the case study is in Gampong Lambung, Banda Aceh City, Aceh Province.

This study uses a qualitative approach, and the sources of the data are collected through in-depth interviews, ground checks observation, focus group discussion (FGD) as the primary data, and related literature as the secondary data. The data was processed by creating a transcript, coding, descriptive qualitative analysis, and verification. The analysis method uses manual coding by the categories of sociological institutionalism dimensions which are specific episodes, governance process, and governance culture. Each dimension consisted of three up to five aspects to be analyzed in terms of the Tsunami disaster periods which are before the tsunami era (-2004), emergency response-rehabilitation and reconstructions era (2005-2010), and after the Tsunami (2010-present).

According to the purpose of this research, the result showed that among the sociological institutionalism dimensions described in three periods of Tsunami, the specific episodes dimension played a significant role in initiating the disaster resilience concept in Gampong Lambung. It could be concluded that the influential dimension constructs institution in Gampong Lambung run well, inclusive, and emphasize the value of sociological. The point-out aspect of a specific episode is the actor, taking the most important part in shaping the smart and resilient institution.


The Dependence of Resilience on Complex Infrastructure Systems: A Call to Spatial Planners

Sandra Pinel (Cybersecurity and Infrastructure Security Agency, DHS, US Government), William Delong (Cybersecurity and Infrastructure Security Agency, DHS, US Government), Katherine F. Chambers (Engineering Research and Development Center, USACE), Wynne Kwan (Federal Emergency Management Agency, DHS US Government), Natallia Diessner (Cybersecurity and Infrastructure Security Agency, DHS US Gov) and Austin Becker (University of Rhode Island Maritime Studies).

Abstract

Disaster risk and resilience planning increasingly focus on multiple hazards threatening community resilience and recovery. Essential community services and supplies, however, increasingly depend on a complex and rapidly changing web of telecommunications technology, marine transportation, and other infrastructure systems owned or operated by the public or private sector at regional and sometimes global scales that are outside the control of municipal, county, provincial or national planning jurisdictions. To reduce the consequences of disasters, planners must consider not only the threat or hazard, but also the potential of cascading consequences across the system and plan to reduce the vulnerability of essential community or business services. Enhanced resilience requires the development of spatial planning approaches that can address these infrastructure dependencies and facilitate public and private action across sectors, boundaries, and scales to reduce the consequences of these complex and overlapping.

This panel discussion offers participants an opportunity to examine how the new US Cybersecurity and Infrastructure Security Agency is approaching this set of challenges through its US and global partnerships, critical infrastructure information, and the development and delivery of local and regional infrastructure assessment and planning methodologies. After an overview of how this global human, technological, and natural changing threat landscape impacts critical infrastructure functions and services, panelists will highlight on-going efforts of the Cyber-security and Infrastructure Security Agency and other DHS components to build the capacity of the private sector and different levels of government to understand and manage infrastructure system risk. Specifically, panelists will share the following examples: 1) lessons from regional resiliency assessments of the water and health care sectors that enhanced urban recovery from ice storms and COVID-19; 2) collaborative public and private planning and assessment of sea-level rise impacts to essential port functions and supply chains; 3) collaborative approaches to infrastructure and resilience decision-



making in the context of dams and competing interests; and 4) a recently published Infrastructure Resilience Planning Framework for local governments and regional planners. The panel will conclude by discussing the importance of further developing spatial planning practice.

Urban borders and disasters: Towards an integrated conception of the urban border as an intersection space between informal urbanization, natural surroundings and risk prone areas

Sebastian Laclabere (Universidad de Santiago USACH).

Abstract

Due to its geographical location within the "Pacific Ring of Fire", in one of the most active subduction areas in the world, Chile is a territory exposed from its very origins to the occurrence of disaster events, particularly physical and geomorphological events such as earthquakes and tsunamis, to name the best known. Besides this context we must consider the global context of climate change in which we have found ourselves for the last decades, that has caused a multiplicity of climate related disasters, such as heavy rains, floods and extreme droughts. On the other hand, the latest census data show that Chile has a high urbanization rate, with 87.8% of the population living in urban areas (INE, 2017). This combination puts Chile in a complex situation, in which the way cities relate to their surroundings within this context of climate change becomes highly relevant. This is where the field of Disaster Risk Management (DRM) is presented as a fundamental aspect to achieve more sustainable and resilient cities for the future.

Starting from this point, the current research seeks to reflect on the idea of the "urban limit" as a border and mediation space between the city and the territory that surrounds it, specifically from the perspective of DRM. From this perspective, it seeks to investigate the role of these edge or border spaces in reducing vulnerabilities to disaster risk, in addition to their ability to improve the reaction of cities to such events, particularly in the "response" stage of the cycle. of DRG.

The research focuses on issues of urban morphology, urban informality, disaster risk management and urban resilience, specifically during the response stage of the DRM cycle, from the point of view of urban design and planning. Within this framework, special interest is defined in the figure of the "urban limit" in its condition of idea or fixed planned construct and its relationship of tension with the notion of "border" as a mediator between the urban and the natural, in its diffuse and dynamic character, closely related to informal urbanization processes. In a context of widespread urban expansion, its extremely important to understand the dynamics, frictions, coincidences, and divergences in urban borders especially considering the informal urbanization dynamics, in order to be able to better face the challenges derived from these diffuse and complex borders in the city-territory-risk interaction.

Coupling analysis framework of "technology assessment and planning policy": improving the resilience of key facilities

Meng Wei (School of Architecture and Urban Planning, Nanjing University,China) and Jiangang Xu (School of Architecture and Urban Planning, Nanjing University,China).

Abstract

(background) the frequent occurrence of flood disasters poses an increasingly serious threat to urban areas, which not only causes large-scale surface water interference but also causes human death, damage to socio-economic infrastructure, and social chaos. Due to the trend of global urbanization and climate change, the number and scale of flood damage in urban areas will continue to increase in the coming decades. (academic research status) in the face of increasing urbanization and uncertainty related to climate change, the scientific community has integrated the concept of resilience into urban management practice. Dealing with network vulnerability, especially physical access to various key post-disaster emergency facilities and their services, is a key step towards a resilient city. However, the extent to which local planning policies address this vulnerability remains unclear. (research purpose) therefore, this paper plans to propose a comprehensive interactive coupling analysis framework of "technology assessment and planning policy", and integrate the analysis of key infrastructure networks into urban planning policy, to analyze the policy concerns of solving the vulnerability of road infrastructure networks in urban key facilities. (research methods and research contents) therefore, based on the complex network theory, this paper constructs a transportation network model to calculate the accessibility of key infrastructure spatial distribution points such as "medical treatment, supermarket, and gas station" to the transportation network and the attention of planning policies related to infrastructure under different disaster scenarios. (study area) and plans to use the analysis framework to conduct analysis and research in the Yangtze River Delta integration demonstration area. (research results) it is expected that the survey results can reveal the resilience characteristics of key infrastructure networks in the study area and summarize the advantages and disadvantages of various planning policies in solving the emergency problems of key facilities after disasters. (research prospect) the analysis framework introduced in this paper

can provide stakeholders with a tool to evaluate the existing key infrastructure networks and optimize the corresponding planning strategies, to improve urban resilience.

Model of Adaptive Creative Economic Activity for Supporting a Resiliency of Tourism Kampung in the Era of Covid-19 Pandemic

Winnie Astuti (Universitas Sebelas Maret), Rufia Andisetyana Putri (Universitas Sebelas Maret), Hakimatul Mukaromah (Universitas Sebelas Maret) and Lintang Suminar (Universitas Sebelas Maret).

Abstract

The Covid 19 Pandemic has changed the life of people in all sectors of Development and Planning. Urban Tourism as one sector, which mostly depend on human mobility, safety and health has triggered a 'paradigm shift from a direct visit and tourist experience in the tourist destination area to virtual and augmented tourism. However, most traditional urban kampung tourism has difficulty to adapt and transform into new paradigm shift in urban tourism management system. Apart from that, levels of community resilience in urban kampung tourism remain low, constrained by limited Government efforts in creating innovative programs in building resilience in tourism sector. Furthermore, this has been exacerbated by low leadership capacity of community organisation to manage the tourism assets and activities for exhalating economic condition in the era of Covid 19 Pandemic. This research aims at developing Model of Adaptive Creative Economic Activity for Supporting a Resiliency of Tourism Kampung in the Era of Covid-19 Pandemic. The case study area was located in Jayengan Kampung Permata (JKP) Surakarta City Indonesia, situated in the center of Surakarta City. In 1746, Banjarnese traders arrived as jewelry traders, which offered jewelry to the royal families. In 1910, they built Darussalam Mosque as a center of religion, social activity and formed the Banjarnese community in Jayengan. The research was conducted by mixed method using several data collections, interview survey, observation, Focused-group discussion. The results of analysis were proposing a Model of Adaptive Creative Economic Activity for Supporting a Resiliency of Tourism Kampung in the Era of Covid-19 Pandemic. The model suggests for initiation and integration of eight aspects for creating adaptive economy to support a resiliency of tourism kampung as follows: 1) Health, by arrangement of density, healthy tourism kampung and visitors arrangement; 2) Planning, by creating more innovative planning and pentahelic collaboration 3) Institution, concerns with capacity of CBO for managing tourism kampung and digital shifting; 4) Industry, by developing adaptive creative industry ecosystem; 5) Built Environment and Infrastructure, concern with provision of kampung with digitalization infrastructure and services; 6) Community Empowerment, by Increasing community capacity to adapt the new era of Information technology and digital era 7). Economy by transforming, synergizing and integrating of tourism economic product and 8) Information Technology, by digitalization in all aspects.

Recovery beyond Reconstruction: Lessons across the field(s)

Magdalena Gil (P. Universidad Católica de Chile (UC-Chile) Escuela de Gobierno).

Abstract

Catastrophes triggered by extreme natural events are increasing globally, especially those related to climate change (UNISDR, 2015a). In fact, 90% of disasters occurred between 2005 and 2015 were related to extreme weather, an increase of 14% compared to the previous decade (CRED, 2015). These critical events present important challenges to states and societies, who must adjust both social practices and infrastructure in order to anticipate, resist, absorb, adapt, and recover from progressively frequent and intense disasters. An interdisciplinary approach to disaster is not only desirable but necessary for sustainable development. Disasters are "all-encompassing" occurrences, which means that they involve or intervene on practically all dimensions of human life: environmental, biological, technological, and sociocultural (Oliver-Smith & Hoffman, 1999). However, public policy interventions after disasters tend to focus on repairing and restoring infrastructure, leaving other areas of recovery unattended (Smith & Wenger, 2007; Alesch & Siembied, 2012). Sustainable recovery, in contrast, is a process that involves the economic, cultural and social revitalization of the affected communities, a focus on people's health and wellbeing, and reducing risk in order to avoid another disaster. While there is valuable knowledge about recovery in current literature, this information and expertise is distributed across different disciplines, with limited connections between them. A transdisciplinary perspective is still rare in disaster studies (Fortun & Frickel, 2012; Barrios, 2017) and in public policy, where we found little articulation between reconstruction and the different aspects of recovery. This article develops an interdisciplinary exploration of lessons learn across the different fields that deal with recovery based in the systematic analysis of 1054 academic articles in English and Spanish (from Web of Science and Scopus datasets) that focus on recovery and/or reconstruction.

The Concept Of Public Open Space Capacity During Covid-19 Pandemic (Case Study: Bandung City Hall Park)

Furi Nurwulandari (Departement Of Urban and Regional Planning, Universitas Pasundan), Gerry Rismana (Departement Of Urban and Regional Planning, Universitas Pasundan), Reza Iskandar (Departement Of Urban and Regional Planning, Universitas Pasundan) and Aulia Septiani (Departement Of Urban and Regional Planning, Universitas Pasundan).

Abstract

Covid-19 pandemic has changed the pattern and form of activity in the use of public space. Supporting activities infrastructure and health protocol rules is an important basis for implementing a structured concept as an adaptive solution during a pandemic in social activities in public open spaces. City governments need to manage their public spaces and need to ensure rules that are easy to apply by the whole community when engaging in inclusive public spaces. In this context, the availability of public spaces and supporting infrastructure for activities that ensure safety and comfort is one of the main tools in drafting the concept of public open spaces during a pandemic in accordance with health protocols to reduce the risk of Covid-19 exposure. The purpose of the study was to determine the capacity of public open spaces (in the form of city parks) and the elements that must exist in a city park in accordance with the health protocol approach to prevent Covid-19 exposure. The research method used is a qualitative and quantitative descriptive approach. The expected output in this research is the concept of planning for the capacity of public open spaces based on Covid-19 disaster risk reduction. The results showed that 100% of the visitors had understood the health protocols that must be applied when carrying out activities in public open spaces and ensured that they were in good health without experiencing symptoms of illness such as body temperature less than 37,3°C, fever, cough, flu, throatache, and dyspnea. Determination of the maximum capacity for visitors to the Balaikota Bandung Park adapts the circular letter of the Minister of Trade Number 12 of 2020, which is 30% of the number of normal visitors. This 30% is assumed that visitors have maintained a minimum distance of 1.37 m (Gehl, et al, 2003) to avoid Covid-19 exposure. Under normal conditions, the maximum capacity for attraction zones in the park is 3529 people, which include rhino park, Dewi Sartika park, labyrinth park, water front plaza, flower garden, children's play zone, and plaza. So it can be calculated that the maximum capacity of the Balaikota Bandung Park during the pandemic is 1059 people. All of these visitors continue to apply health protocols during their activities in the Balaikota Bandung Park.

Municipalities in the face of territorial vulnerability: defining profiles of local planning and management capacity in Santiago, Chile

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Abstract

In fragile territories, the COVID-19 pandemic has worsened existing forms of vulnerability. In Chile, a structurally vulnerable country due to exposure to socio-natural disasters, climate change effects and socio-economic inequalities, the pandemic has become an additional risk factor for individuals and institutions, who have different possibilities to face and anticipate its consequences. Under this premise, the paper analyses the levels of territorial vulnerability of the municipalities of the Metropolitan Area of Santiago and their capacity for integrated response to events such as the COVID-19 pandemic and its repercussions. First, through a spatial analysis of census data and risk maps, we elaborate an indicator of territorial vulnerability of the municipalities of the Metropolitan Area of Santiago, considering the environmental and socioeconomic components that determine the vulnerability of the setting. Subsequently, through the analysis of public databases and the review of municipal land use and strategic plans, we elaborate an indicator of institutional capacity for management and planning. The socio-economic and physical-environmental vulnerability maps show a familiar map of the Santiago Metropolitan Area, where the communes belonging to the high-income cone in the eastern sector in general are those with more favourable characteristics than the rest of the city. On the contrary, in relation to the indicator of institutional capacity for management and planning, the communes of the eastern sector of Santiago still have the best results according to the constructed indicator; nonetheless, the analysis also shows the existence of communes that, despite the low availability of financial resources, show good results in the constructed index. Finally, considering both indicators, we identify municipal capacity profiles in the face of territorial vulnerability, showing how the vulnerability of a territory is related to a greater or lesser response capacity of its institutions. The results offer elements to strengthen the resilience of local institutions and their ability to face different dimensions of vulnerability, proposing solutions capable of adapting to the needs of different territories and contributing thus to the construction of "antifragile" territories.

Local variations in urban resilience during the COVID-19: lessons from Seoul, South Korea

Hyunjoo Eom (Ulsan National Institute of Science and Technology), Hongseok Choi (Ulsan National Institute of Science and Technology) and Gi-Hyoung Cho (Ulsan National Institute of Science and Technology).

Abstract

The main objective of the current study is to examine the urban resilience of Seoul, South Korea, during the COVID-19 Pandemic. Using the non-resident inflows, we measure the local variations in the capacity to recover from the disaster shock and investigate socio-environmental characteristics associated with resiliency. We propose social-ecological resilience model to examine the level of resiliency as opposed to engineering resilience model, since the assumptions of the ecological resilience are better suited to explain non-resident inflows. Our study findings show that the impact of COVID-19 on non-resident inflow is greatest among major commercial areas in Seoul. However, the recovery to pre-disaster conditions were closely associated with the business density, land-use mixture, and the shares of retail and food service sectors. This suggests that local areas with more diverse environment saw greater inflow downturn after the COVID-19, but the ability to recover from the shock occurs at a shorter time period. We believe that our approach to examine urban resiliency using social-ecological resilience model proposes a new way to investigate urban resilience, and understanding of local variations in resilience serves as an important lesson for urban planners and policy makers towards building more resilient urban communities against future social disasters.

Change of household energy consumption after COVID-19

Su-Hyun Shin (UNIST) and Gi-Hyoung Cho (UNIST).

Abstract


COVID-19 pandemic has huge impact on almost every sectors. But there was difference with natural disaster that the impacts on society was not equal based on type of industries, region, sectors, demographic classes. Especially, in energy consumption sectors, Overall energy consumption decreased significantly as human activities shrank during the COVID-19 period, but residential energy consumption increased. According to government regulations for control the spread of the infectious disease, lifestyle, as well as time to stay home, was dramatically changed and the importance of socio-ecological resilience in household perspective, such as personal adaptive capacity or transformability against to epidemic disaster was emphasized. However, the resilience study on COVID-19 pandemic is still at the city or national level. Therefore, this study analyzes the residential electricity demand change of apartment complex with more than 1000 households in Seoul in Korea and address the household behavior change during the COVID-19 period. Residential energy consumption is purported as affected by the time and of staying at home and activity. Since the other physical environments are fixed, energy consumption changes can be interpreted as changes in behavior patterns related to energy use. In particular, it is valuable as the only data that can analyze changes in household activities around the COVID-19 period. The degree of influence of energy consumption-related behavior was analyzed by analyzing the change in residential electricity demand in time series depending on disaster risk management stage, mitigation, preparedness, and response. Each high socio-ecological resilience are highly related with socio-demographic characteristic of household and urban environment surrounding it. At this time, the urban environment and form were explained by selecting and verifying factors that can affect individual resilience from a Housing perspective, a Neighborhood/Community perspective, and a City perspective by ANOVA test. For housing level, size of houses, a type of household, built year were selected as variables. land-use mix, transportation, density, park were selected as neighborhood-level variables. Finally, policies related to COVID-19 and industry composition were selected as city-level variables. As a result, it was confirmed that what factors can improve adaptive capacity a social-demographic characteristic of household.

Urban Floods Adaptation of Public Space through Hydrosocial Infrastructure

Zul Azri Abd Aziz (UNIVERSITI TEKNOLOGI MALAYSIA) and Lee Yoke Lai (UNIVERSITI TEKNOLOGI MALAYSIA).

Abstract

The concept of a hydrosocial is modern dualisms between society and nature affect understandings of both what water is and how water fits with society. There is profound, resoundingly social, cultural, and ecological need to understand the urban stormwater system within the tensions present in designing flood resilient cities. Therefore, it is essential to understand how hydrosocial developments have changed the usage of public spaces over time and how these changes reflect the values of urban waterscape and urban floods adaptation. This paper aims to discuss and analyses the past and present perspectives on correlations between hydrosocial cycle and public space networks that benefit water -sensitive



urban design principles. The study was conducted through in-depth literature review and a comparative analysis of two case studies of waterscape impact on public space regarding hydrosocial framework. The findings of this study reveal landscape engineering system that inspired by ecological and social values will benefit the current state of flood adaptation and stormwater management. The comparison on green infrastructure that adapt symbiotic values of society and nature provide opportunity for urban waterscape resilience. In the nutshell, hydrosocial infrastructure pertaining as water sensitive public spaces promote advancement on current framework to include a consideration of people's connections and uses of urban waterscapes, as well as a shift towards urban floods adaptation.

A Study of the Effects of COVID-19 on Urban Vitality Using Big Data : The Case of Seoul

Sunghee Park (Seoul National University) and Jaemin Song (Seoul National University).

Abstract

The global spread of COVID-19 is causing a contraction of the community and a decrease in urban dynamics in various aspects. However, its impacts on cities cannot be assessed in isolation; it is required to comprehend the changes occurring in cities across numerous dimensions and to establish their link to urban features. To corroborate this notion, this study defines and uses urban vitality as a measure to assess city activities prior to and during the COVID-19 pandemic. In light of these considerations, this research will classify Seoul's areas and examine how COVID-19 limits have influenced urban vitality especially through the distinction of urban vitality components. Not only is urban vitality a critical component of a city, but it is also one of the measures used to assess a city's sustainability. Urban vibrancy has social, economic, mobility, virtual, and physical dimensions. Urban vitality is used in this study to refer to a crowded phenomena in which human activities are concentrated. And we define urban vitality as the amount to which economic and social activities and traffic accumulation occur as a result of human activity and the built environment interacting. In this study, we first assess the urban vitality of Seoul's aggregated districts in terms of social, economic, and mobility vitality in this study. We conduct the research using a variety of open-source big data sources, including active population, traffic volume, sales data from commercial districts, and nighttime satellite pictures. Following that, we classify Seoul according to the distinctions between the aspects that contribute to urban life. We compare Seoul's urban vibrancy prior to and during COVID-19. Finally, we examine how the shift in urban vitality reveals disparities in the city's many qualities. This research contributes to our understanding of how urban features are connected to urban crises produced by pandemic catastrophes through its application to COVID-19. As a result, this study is unique in that it assesses the influence of COVID-19 on urban vitality in Seoul using various urban vitality indicators to consider their inter-relationships. Finally, this study makes policy recommendations for promoting urban vitality while taking geographical variation into account in terms of the vitality components of individual cities.

Assessing Vulnerability from Rapid Urbanization: A Case of Central Java - Indonesia

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Abstract

Climate change is strongly impacted on the most vulnerable people who live in prone areas. To some extent, rapid urbanization has been creating particular features of these prone areas. Most urban areas might experience a significant exposure and sensitivity due to the population growth. On the other hand, these rapid growing regions also have good public facilities which increase the capacity to adapt to climate change. This study aims to investigate the vulnerability of urban areas in Central Java which has been growing massively in the last 10 years. The approach used in the vulnerability assessment consists of socioeconomic conditions (e.g. population density, number of poor families, public facilities, etc) associated with three main aspects (i.e. exposure, sensitivity, and adaptive capacity), resulting in Exposure and Sensitivity Index (ESI) and Adaptive Capacity Index (ACI). Scoring and weighting analysis using secondary data in sub-district unit from the Central Bureau of Statistic are applied. The results are further illustrated spatially using overlay analyses by GIS. The result shows there are several types of vulnerability in the urban areas of Central Java influenced by population growth and provision of facilities. The most vulnerable area is the area with ESI score higher than ACI, for instance, Ngemplak Sub-district in Boyolali. On the contrary, less vulnerable areas appear when the ESI score is lower than ACI (e.g. the sub-districts in Surakarta and Salatiga).

Impact of Land Cover and Vegetation Density Change on Flash Flood Disaster in Batu City, East Java

Mohammad Nouval Irfandhia Wahid (Brawijaya University) and Abdul Wahid Hasyim (Brawijaya University).

Abstract

Batu City, East Java, has been known as a “green” City for a long time. There is a need and limited availability of land along with the potential for a strong tourist attraction to Batu City as one of the attractive tourism cities in Indonesia, making urban development very rapid and dense.

According to Yudichandra (2020), the forest area shrinkage in Batu City occurred by 5%, parallel to the 5.2% increase in built-up land from 2006 to 2018 to meet the growing needs of tourist activities. This phenomenon tends to have a negative impact on the environment.

Disasters that often occur in Batu City are landslides and floods (Richa, 2018). The major natural disaster that recently occurred in Batu City was a flash flood on November 4, 2021 at 14:00 local time. There are 5 villages that the Brantas river passes through, so that they were affected by a terrible flash flood that resulted severe damage. This study was conducted to determine changes in the vegetation index and land cover caused by flash flood disasters.

This study observes changes in land cover indicated as the cause of flash flood. Landsat-8 satellite imagery data is used periodically for 5 years. Through the right classification technique using the Google Earth Engine, measurable, fast and accurate results will be obtained. So it helps the analysis process in determining the evacuation area. This research also has the potential to be further investigated in a wider scope, such as analyzing the impact of flash flood on agriculture, settlements, and other facilities in the cities below Batu City level.

Air Pollution Exposure and Green Infrastructure Design - Focusing on a case of linear park covering Suseo Expressway in Bundang area

Kitae Park (Chung-Ang University) and Jeongwoo Lee (Chung-Ang University).

Abstract

Green Infrastructure (GI) is one of potential adaptation strategies against air pollution-related risk in the concept of urban resilience. This paper aims to explore the effect of GI on air quality using the case study analysis focusing on a case of new-established linear park covering Bundang-Suseo Expressway in South Korea. In-situ measurements of pollutants including PM, UFP, BC, and noise were conducted on two different types of GI designs: 1) the site with a park covering expressway; and 2) the site without a park. We compared concentration level between two sites using personal exposure monitors. Furthermore we compared a vertical level of pollution using a drone monitors in the site. Results from the measurements showed that the average of UFP, BC and noise level were lower in the site with a park compared to the site without a park covering expressway. One unanticipated finding was that PM concentration level was higher in the site with a park that is built 6-m higher than the ground level. This was a consistent result with a measurement using a vertical drone-based experiment. We found that an elevated park plays a role as an obstacle that causes the accumulation of fine dust PM. These findings have significant implications for the understanding of how carefully we should design a green infrastructure to reduce pollution-related risk affected by the composition of dynamic urban forms.

Have your cake and eat it too: Delving into the value of urban farming from a gender perspective

Yancili Lozano Torres (Alabama A&M University).

Abstract

Urban farming is an important type of agriculture worldwide. There are many benefits associated with urban farming in terms of the environment, climate and human health, which presents urban agriculture as a promising alternative to tackle multiple of the current problems that societies around the world are trying to address. "Women are more likely than men to operate [this type of] farms" (Burton et al. 2003; Dinis et al. 2015; L pple 2012; Sachs 2006 cited on (Ball, 2020)). Nonetheless, several authors contend that women get less income than men as they get involved in this type of farming. These activities happen of course in urban settings and, as such, it is important to know what urban planning can do to leverage both urban farming and women urban farmers. To advance this goal, this paper conducts a systematic literature review of the benefits that urban agriculture brings to communities. It also analyzes these benefits from a gender perspective, accounting for the value that women urban farmers yield to society. As Tortorello (2014) points out, "the city's farms exist not just to grow okra, but to advance a shopping list of social goals. These include recreation, nutrition, public health, environmental stewardship, ecological services, food access and security, community development, neighborhood cohesion, job training, senior engagement and education." Therefore, it is expected that the results of the proposed review will (1) show how women in urban farming help address societal problems such as food security, climate change, sustainability, and childhood obesity prevention; and (2) outline next steps for quantification, monetization and ultimately compensation for their work.

Long-term prediction of building energy demand in Seoul: Using RCP scenarios and predicted values of socioeconomic factors

Jiyeon Park (Seoul National University), Sujin Lee (Seoul National University) and Steven Jige Quan (Seoul National University).

Abstract


The recent increase in cases of natural disasters and urban system disruptions has resulted in an international consensus to take more proactive measures to tackle climate change. Reliable predictions on long-term building energy demand are essential in constructing an energy supply plan that can ensure a stable and sustainable energy system. To forecast future energy demands in a comprehensive manner, it is important to accommodate today's trends. South Korea is facing gradual changes in environmental and socioeconomic sectors. The most prominent ones are simultaneous temperature rise in both summer and winter, a sharp decrease in total population, a rapid increase in the elderly population, and economic slowdown. The purpose of this study is to investigate the effects of climate change on building energy demand in future Seoul. In this study, the monthly building electricity demand of 25 districts in Seoul is first modeled by SARIMAX (Seasonal Autoregressive Moving Average with exogenous variables) as a function of Cooling Degree Days, Heating Degree Days, total population, elderly ratio, Gross Regional Domestic Product (GRDP) and tariff using data from 2010 to 2018. Then future datasets consisting of climate factors from 4 RCP scenarios and predicted values of socioeconomic factors are used as model inputs to estimate the future demand of each district up to the year 2050. This study can provide the monthly gross electricity demand of the future Seoul under different projections on climate change. With the results, the study can provide insights on how feasible and effective the current mitigation measures taking in place. By estimating the district-scale energy demand it is expected to contribute in establishing energy supply plans for Seoul city.

Impact of High Density Residential Urban Morphology Parameters on Microclimate in Hot Summer and Cold Winter Area in China

Xinyu Liu (Tongji University), Yu Zhuang (Tongji University) and Jinghui Wang (CCTN Architectural Design).

Abstract

Rapid Urbanization process has taken place in China these decades with an urbanization rate of 61.43% till 2020. Moreover, the urbanization rate of metropolitan cities such as Beijing, Shanghai, Tianjin etc. has passed 80%. Consequently, high density urban morphology has become dominant development tendency in metropolitan cities. Massive construction has done remarkable impacts on urban microclimate which may lead to energy consumption growing and health problems. Hot Summer and Cold Winter Area in China has one of the most challenging climatic situations in China, thermal comfort improvement and building energy conservation in summer and winter are valuable subjects for researchers to pursue. This



study investigated correlations between urban morphology parameters and urban microclimate of residential area in Hot Summer and Cold Winter cities. Rhino and grasshopper based simulation tools, Ladybug and Honeybee were selected in this study. This tools were developed by MIT and implemented in several representative research projects. Additionally, field measurements were taken place in Shanghai and Hangzhou, two of the most representative high density cities in Yangtze River Delta, China to verify the reliability of the chosen tools. The results of field measurements and simulations were combined together by statistic analyzing to find out correlations between urban morphology factors and urban microclimate. The results illustrate that, impact of urban geometry type on thermal comfort has surpassed SVF, building height, frontal area index and floor ratio area. For urban morphology with similar building density, the UTCI (Universal Thermal Climate Index) is strongly influenced by urban geometry type, especially in summer. Finding of this study will provide quantitative design guidance on residential area design for designers and relative authorities to provide more sustainable and comfortable living environment for people. Residential area with the same kind of urban geometry, while the floor area ratio increased from 2.0 to 3.5, the UTCI increased significantly in summer and decreased in winter. Findings of this study will provide quantitative design guidance on residential area design for designers and relative authorities to provide more sustainable and comfortable living environment for people.

Relationship Between Built Environment And Urban Health From Planning Theory Perspective

Fitrianty Wardhani (Institut Teknologi Bandung).

Abstract

The early development of planning only focused on art and physical design in residential areas. Then that view changed by looking at planning not only in terms of physical design but also economic, social and political aspects. As planning theory develops, the relationship between health and planning is growing. Urban planning greatly contributes to health and well-being. The current COVID-19 has made planners refocus on the interplay between the built environment, planning, urban planning, and urban health. The purpose of this paper is to prove the role and influence of planning theory in the relationship between the built environment and urban health. As a result, planning theory becomes an umbrella in the relationship between the built environment and urban health through collaborative planning practices that bridge between urban planners and public health professionals to be more communicative. As the challenges of overcoming health become increasingly complex between the built environment and urban health, planning practices have developed by adopting participatory planning that involves the community in planning and advocacy planning in terms of promoting physical health in planning until finally a healthy city emerges that collaborates between planning, urban planning, , built environment and urban health to create healthy cities that aim to significantly reduce communicable and non-communicable diseases and improve health and wellbeing in urban areas.

Mitigation Of Urban Heat Island And Land Surface Temperature, Through Green Infrastructure: Study In Urban Temanggung

Hendra Sumaryana (Universitas Diponegoro), Imam Buchori (Universitas Diponegoro) and Anang Wahyu Sejati (Universitas Diponegoro).

Abstract

The Temanggung Urban Area, Indonesia, with its mountainous topography, is designated as a Fast-Growing Area and a National Tourism Strategic Area (KSPN), and functions as a protected area for the area under it based on Regional Regulation Number 16 of 2019 concerning the RTRW of Central Java Province. It is essential to mitigate the impact of land cover changes due to urban expansion. The city of Temanggung experienced changes in the land cover which increased the surface temperature, followed by the Urban Heat Island (UHI) phenomenon. These problems must be anticipated by providing Green Infrastructure (IH) to ensure thermal comfort for residents. This study examines the existence and effective strategies in IH management for UHI mitigation. Landsat 8 Imagery 2013 and 2020 were used to calculate the LST. Besides, Pleiades level orthophoto imagery from LAPAN was used to obtain the land use information. The selected image is a Pleiades PMS image or a Pansharpened multispectral imagery Pleiades image with a resolution of 0.5 meters consisting of red, green, blue and near-infrared bands. It was found that the area with the opportunity for Urban Heat Island (UHI) with a surface heat temperature of $>30^{\circ}\text{C}$, in 2013, only 31.64 ha, increasing to 116.6 ha (268%). Some areas that have changed the land cover to residential areas have contributed to an increase in surface temperature $>2^{\circ}\text{C}$. The increase in surface temperature in the interval from 0.13°C to 3.38°C in the study area reached 56%, not comparable to the decrease in surface temperature from -0.95°C to -5.28°C by 7.44 % originating from Green Infrastructure ecosystem services. The increase in surface temperature is due to the imbalance of available IH ecosystem services. In some research areas, the decrease in temperature was strongly influenced by land use also the density and type of IH vegetation. Optimizing the density and type of vegetation is pursued through the synergy of the community, the private sector, the media, and the government in

planting trees called the mountain belt and river movement. Namely, a tree-planting program simultaneously involved four components on three mountain slopes: Sindoro, Sumbing and Prahua, and a river on the slopes of the mountain.

Impacts Of City Morphology On The Microclimatic Conditions Of Consolidated Urban Areas In São Paulo During Hot Days

Gabriel Bonansea De Alencar Novaes (FACULDADE DE ARQUITETURA E URBANISMO DA UNIVERSIDADE DE SÃO PAULO (FAU USP)) and Leonardo Marques Monteiro (FACULDADE DE ARQUITETURA E URBANISMO DA UNIVERSIDADE DE SÃO PAULO (FAU USP)).

Abstract

This research carried out an evaluation of the impacts that different morphological compositions of consolidated urban areas can cause on the local microclimate conditions during hot days perceived on the pedestrian scale, based on simulations of the thermal conditions of open urban spaces in the city of São Paulo, using the ENVI-met software, calibrated from empirical measurements of microclimate variables collected in an existing environment of the city.

The five models representing neighborhoods with different morphological aspects in São Paulo were analyzed using the ENVI-met software calibrated from empirical measurements of microclimate variables presented on the site of one of the simulation models representing a real city environment. All models were submitted to the same microclimate data and the analysis compared the main thermal variables results (air temperature, Mean Radiant Temperature, relative humidity, wind speed, direct, reflected and long wave radiation, daily hours of sunshine) over a 24-hour period.

There was a maximum difference of approximately 1.5°C in air temperature between the central points of the models. The models with less verticalization, less constructed volume and higher skyview factors values presented the highest air temperature during daytime, since open spaces are more exposed to direct sunlight, allowing greater surface heating, and the densest model showed the lowest air temperature during the day, due to its urban canyon configuration. At night, the most verticalized and the highest volume model presented the highest air temperature, mainly due to the greater accumulation of heat and to the trapping of heat by the reflection of radiation in the urban canyon.

The studies in this work corroborate results found in researches in the area, since it was found that different morphological models of the city can impact in different ways on the thermal conditions of open urban spaces. The morphological conditions of the urban space can change the amounts of direct, diffuse and reflected radiation, wind speed, Air Temperature, Mean Radiant Temperature and, consequently, the thermal comfort indexes and the demand on the artificial air conditioning of buildings. The models with less verticalization and higher Sky View Factors presented higher Air Temperature during daytime, with a heating that occurs more quickly because the open spaces are more exposed to sunlight and, at night, the denser models showed the highest temperatures, due to the greater accumulation of heat in the built masses and the trapping of heat by the reflection of radiation in the urban canyon.

Action Plan Of Land Use Supervision In Lake Kerinci And Its Vicinity

Umar Mansyur (Master Study Program of Regional and City Department UNPAK Bogor-Indonesia), Janthy Trilusianthy Hidayat (Master Study Program of Regional and City Department UNPAK Bogor-Indonesia) and Arif Wicaksono (Master Study Program of Regional and City Department UNPAK Bogor-Indonesia).

Abstract

The water conservation of Lake Kerinci and its vicinity needs land use supervision tools, both empirically and academically. These supervision tools are intended to improve the water protection practices to be more sustainable, productive, secure, and proper which are needed to be described in more concise form. Therefore, this article aims to formulate land use supervision operational plan, monitoring tools, and action plan in Lake Kerinci and its vicinity. Problems and issues found in land use supervision were identified using AHP and SWOT methods. These strategic issues were superimposed with existing land use map and master plan of Kerinci Regency, to observe which locations needed action plan of monitoring and supervision. Each strategic issue was weighted with consensus among attendants in a focus group discussion (FGD). Several strategic issues are successfully identified in this study, namely water quality degradation, sedimentation, increasing waste, buffer zone use, and high land conversion. Lake Kerinci height is 786.3 above sea level, while its water body has an area of approximately 4,488.42 hectares. Lake Kerinci has also buffer zone area around 161.79 hectare, and buffer protection zone area around 738.21 hectares. Water catchment in Lake Kerinci has an area around 92,258,67 hectares. In total, the area needed for land use supervision operational plan is approximately 101,486 hectares. The operational plan of land use supervision for Lake Kerinci and its vicinity, covers eight sub-districts within Sungai Penuh Municipality and fifteen sub-districts in Kerinci Regency. In addition, action plan to improve land use supervision includes

integrated lake conservation program, national priority in spatial planning, lake ecosystem conservation, improvement of buffer zone and water catchment.

Policy Formulation for the Urban Food System to respond the Food Security in Madiun City

Eko Budi Santoso (Institut Teknologi Sepuluh Nopember), Vely Kukinul Siswanto (Institut Teknologi Sepuluh Nopember), Nida Farikha (Institut Teknologi Sepuluh Nopember) and Naomi Zakina (Institut Teknologi Sepuluh Nopember).

Abstract

Food availability and security are the main issues in urban development related to the management of the food sector to support the sustainable development goals (SDGs). Food availability is a key performance indicator to determine the status of food sufficiency and access. Food availability will affect food prices and inflation. This condition can lead to a social problem in the community. Madiun City is a medium-sized city and has limited agricultural land, so its food production can not meet the food consumption of the city's residents. The purpose of this study is to identify the urban food system, and the need for foodstuffs, especially rice in Madiun City, as well as policies to improve food security. The research method used the survey method with the number of respondents 123 households. The research used a descriptive statistical method to assess food consumption patterns, access to foodstuff, and food safety status in Madiun City. The spatial analysis model is used to analyze the availability and suitability of agricultural land. Policy formulation is carried out through the focus group discussions (FDGs) after identifying the food security condition. The analysis results show that the average food consumption per household in Madiun City is higher compared to the East Java Province. Madiun City has a rice commodity supply chain that involves producers, wholesalers, and small traders (retailers). Most of the households buy rice from grocery stores (55.71%) and traditional markets (20%). Most of the households buy foodstuff near their home, which is less than 500 m far from their home. The community's criteria in choosing a place to shop for foodstuff is following the proximity from home, affordable prices, and product quality. The food security policy is proposed from the production side includes the urban farming practice, utilization of vacant land, and the conserved rice fields. Meanwhile, from the consumption side, it is necessary to control the price and supply of foodstuff to control inflation, diversify non-rice foodstuffs, and periodically the market operation according to food price conditions.

Critical Land Treatment Directions In Water Catchment Area Of Mahakam Cascade With Zoning Regulation Instruments Method

Luhur Bintang Taufan (Institut Teknologi Kalimantan) and Rahmat Aris Pratomo (Institut Teknologi Kalimantan).

Abstract

In the Mahakam Cascade Water Catchment Area, the rapid growth rate of critical land was up to 15.54 % of the critical land area, which amounted to 67,586.53 Ha, from 2013 to 2018. This due to the increasingly complex forms of land use requirements. The situation of land degradation produced by critical land necessitates a treatment that follows the form of land change and the criticality of the land. As a result, an instrument to manage the utilization of space in the handling of crucial land is required. This research intends to create directions for handling critical land in the Mahakam cascade water catchment. The first stage is to identify land coverage of Landsat satellite imagery in 2020. The second analysis is by determining the zoning of critical land based on the classification of the level of land vulnerability in 2020 according to the criteria for determining critical land zoning using the weighted overlay method. The final analysis stage is to formulate directions as an instrument for controlling land use following the concept of zoning regulation with the Delphi analysis method based on key stakeholder interviews. Based on the Classification Results of Supervised Satellite Imagery, Mahakam Cascade has 7 Land Cover Landsat satellites 2020, taking the water area as the core area of the lake. namely (9.38%) with the largest cover area being Swamp (45.39with Overall Accuracy of 87.578%, Then the Critical Land Zoning from the Protected Zoning and Cultivation Zoning is that determine the criticality level. Meanwhile, the direction for handling critical land with the concept of zoning regulation in the Mahakam Cascade Watershed includes land use functions (permitted, limited permitted, conditionally permitted, and prohibited) that are appropriate based on the criticality level of the land and its utilization function as well as conservation and rehabilitation techniques (Civil Engineering and irrigation), vegetative, infiltration wells and drainage) have different settings in zoning the criticality level of critical land, in handling which focuses on vegetative handling minimizes complex and intensive land handling and increases the carrying capacity of land in the direction of handling critical land.

Social acceptance and social behaviour towards renewable energy adoption: A case study of Japan

Upalat Korwatanasakul (United Nations University Institute for the Advanced Study of Sustainability), Masachika Suzuki (Graduate School of Global Environmental Studies, Sophia University) and Akio Takemoto (United Nations University Institute for the Advanced Study of Sustainability).

Abstract

Japan's share of electricity production from renewables in 2020 is relatively low (26%) compared with other countries worldwide. A large body of research has comprehensively examined the social acceptance of renewable energy (RE) in various countries. However, the results are highly country-specific and inconclusive. In the context of Japan, there are a minimal number of studies in this area. Against this backdrop, it is essential to investigate the motivation and behaviour of Japanese people to understand the reasons behind their slow RE adoption. Based on survey data, this study utilises a quantitative approach to investigate the current situation of social acceptance and social behaviour towards RE and assesses the consistency between the acceptance and the behaviour in Japan. The authors conducted a nationwide questionnaire survey covering 2,500 observations in 2020. To the best of the authors' knowledge, this study provides the first analysis based on the large-scale national survey data related to the investigated research questions in Japan. Thus, it significantly contributes to the long-standing policy debates on RE and introduces a new research area concerning the consistency between social acceptance and behaviour towards RE. First, the results reveal a clear pattern between the levels of interest in RE and interest in environmental issues and technical knowledge, such as climate change, the Paris Agreement, and the Sustainable Development Goals. The higher the level of interest and expertise in environmental issues is, the greater the level of RE interest is. Second, regardless of RE interest level, the respondents understand and perceive the risks of climate change and other environmental issues. However, the analysis shows a mixed result when associating the risks to the issues of non-renewable energy. Third, the respondents are pessimistic and uncertain about the progress of Japan to achieve the goals of carbon neutrality and greenhouse gas emission by the targeted amount and year and the issues regarding RE, including benefits, sustainability, stability, installation, and compatibility. For these questions, three-quarters of the respondents indicate "I cannot say either agree or disagree", possibly reflecting the lack of knowledge regarding RE and the relevant issues. The fourth finding supports the third finding as over 95% of the respondents expresses limited RE knowledge. Lastly, the result manifests that the adoption rate of RE is significantly low (one-fifth of the respondents) despite the RE interest level. Therefore, the social acceptance and the social behaviour are inconsistent in the case of Japan.

Analysis of the possibility of Zero Energy in Urban Planning facilities

Younggeun Eom (Seoul National University) and Minkyong Kim (Seoul Institute).

Abstract

Recently, social demands and pressures on the transition to a Carbon-Neutral city and the necessity of Green New Deal policy are increasing. Since 2020, it has become mandatory and expanded to certify Zero Energy building centering on buildings, but the amount of power used in buildings is high and management is not carried out properly. In case, urban planning facilities that can reach carbon neutrality and efficiently realize zero energy in public facilities are large sites and install various renewable energy facilities. Therefore, this study aims to compare and review the electricity consumption used in parks among urban planning facilities in Seoul using the expected annual power generation based on data on public solar installation and the potential renewable energy generation that can be produce by new renewable energy facilities.

Economic inefficiency may arise when new and renewable energy facilities are simply installed without considering the existing power consumption of urban planning facilities. Therefore, this study aims to analyze and investigate the amount of power used in the facility and study what new and renewable energy facilities must be installed or to what extent to implement zero energy.

The data of this study will be analyzed through stratification extraction method and multiple regression analysis. In case of parks, it is difficult to conduct a full survey on energy consumption, so the target site for each park type is selected. According to the stratification extraction method, 37 survey sites are selected for each type, and energy consumption is calculated by multiplying the electricity consumption per area and the total area of 37 target sites (Correlation and multiple regression analysis of electricity consumption based on the area and facilities of 37 parks selected to calculate the total electricity consumption of Seoul Park). The power consumption of the park was calculated based on the area, fountain, botanical garden, outdoor music hall, management office, and toilet as dependent variables, and the area was the highest in correlation analysis. After that we will find out data of the power that can be produced when solar, wind geothermal, fuel cell and air heat.

Through this study, potential renewable energy generation that can be produced in the park can be identified, and whether it is efficient when renewable energy facilities are installed in urban planning facilities can be analyzed.

Post-mining land management. A case study of bauxite post-mining land at Bintan Islands, Riau Islands Province, Indonesia

Reza Muzzamil Jufri (Energy and Mineral Resources Office of Riau Islands Government).

Abstract

Bauxite is one of the abundant ore mineral commodities on Bintan Island. Since the era of regional autonomy in the early 2000s, there have been more than 20 companies carrying out bauxite mining activities on Bintan Island. The end of this mining activity in 2014 was not accompanied by reclamation and post-mining activities, which resulted the non-return of the original function of the environment. According to the Energy and Mineral Resources (ESDM) Office of Riau Islands Government, currently there are at least 10,000 hectares (ten thousand hectares) of ex-bauxite mining land on Bintan Island and the hinterlands (smaller islands around Bintan Island) where post-mining activities have not been carried out. The absence of post-mining activities has resulted the occurrence of critical land that threatens the existence of current ecosystem, and causes reduction and/or loss of ecosystem services then causes a flow of impacts, social impacts. The purpose of this research is the availability of a bauxite post-mining activity plan on Bintan Island in accordance with the principles of Sustainable Development. This research includes discussions on aspects of spatial planning, government law, and socio-culture. Through this research, it hoped can provide suggestions, considerations and recommendations for the Government to solve bauxite post-mining problems on Bintan Island.

The Effect of Residential Environment Satisfaction on Mental Health of Young Adults

Da-Hye Yim (Department of Civil and Environmental Engineering, Seoul National University) and Youngsang Kwon (Department of Civil and Environmental Engineering, Seoul National University).

Abstract

Depressive mood and depressive symptoms are on the rise worldwide. As the mental health problems of Korean young adults become severe, the Korean Government started to support the young adults' situation in a holistic perspective, in residential policy focusing on providing the quantities of housing. There's still a need for caring about the quality of housing and environment because, unlike other mental health problems, depressive moods are affected by the environment. In particular, Korea's land use policy is regulated by using density and facilities at the same time. Due to the commercial area's high-density provision, housing provision for young adults conducted in commercial land use. Meanwhile, each land use permits different facilities, therefore, some residential land use areas are lack of other purpose facilities. In this background, this research purpose is to investigate the pathway between neighborhood environment(which is divided into commerce/residential land use) and mental health in Korean young adults(19-34). The main Hypothesis is the commercialized residential environment affects depressive mood positively through the pleasant feeling, and negatively through the feeling of out of control. In the analytics, we used the Structural Equation Modelling (SEM), and data was collected by online survey and GIS. First, we classified the permitted facilities by land-use type and identified the facilities where young adults relieve and feel stress through the survey. Then, study sites were selected by land-use type among the high-density of young adults. And we measured how much young adults use the facilities, their perception, and depressive mood. The study result shows that in the case of commercial areas, which are large areas, they perceive lose a sense of control because outsiders are more likely to enter through accommodation facilities and pubs, etc. On the other hand, some living in the residential area where there's no café, sports facilities feel a loss of pleasure resulting in a depressive mood. The results mean the necessity of provision of housing with a detailed neighborhood environment plan considering its psychological effect on the resident. In the academic area, this implies that setting the land use(based on Perry's neighborhood theory, Jane Jacobs's Mixed-use land use) could be discussed on its psychological effect. Moreover, It's meaningful as a study conducted in Eastern countries as the theory of urban design and mental health found in western countries.

Reimagining Kharkhai River as Green Linear Network

Bandi Vijaya Diksha (bit mesra, ranchi), Dr. Smriti Mishra (architecture and planning, BIT Mesra, Ranchi, India) and Ar. Anila Smriti Surin (architecture & planning, BIT Mesra, Ranchi, India. Email:).

Abstract

Rivers are the main source of water and also play a major role in shaping the development of city. The Kharkhai river divides the Jamshedpur and Adityapur city. The Kharkhai River is surrounded by forest area as well as residential buildings and the rapid urbanization is causing to destroy the urban fabric of riverside by various forms of pollution. The development of linear park space along the urban river could mitigate urban heat island effect and encourage the physical and mental health of the wellbeing of the city dwellers. The present work consists of a proposed linear park in the Kharkhai River, Adityapur city. The main goal is to introduce an intervention that could help in the recovery and reintegration of this area near Kharkhai River to an urban fabric allowing the city dwellers to use the place for recreational leisure space and prevent the solid waste disposal. For the better understanding of the proposal elaboration of the literature review, spatial statistical analysis and relation with human preferences and choices were studied. Questionnaire survey were used to analyze and know the desire and wants of people in the linear park area. Statistical regression analysis were done between the type of linear park with age, income and education. The study provides a set of planning and design principles that allow residential communities to reclaim the river edges in most ecologically sound and viable manner. This design proposal will help in generating a human connection with nature and stop the pollution and revitalize and reimagining river and bring the sense of beauty for whole riverside area. A design solution is proposed including a safe, pedestrian-friendly link from the downtown area to the riverfront mitigating all the transportation paths such as highway, high speed traffic roads, and railway tracks. The proposed link will give encouragement to local artist and will also aim to boost local businesses by providing sites for museums, exhibitions, art galleries, food courts, and retail shops. This structure will not only improve the accessibility but it will also provide public open spaces where people can gather for various activities and can also enjoy the scenic view of the riverfront. Therefore the overall analysis and results demonstrate the role of green areas and water bodies having an important connection with human. Along with this the recovery and rehabilitation of Kharkhai urban river.

The impact of land development intensity on carbon dioxide emissions: a case study of 5 megacities, China

Jinjing Hu (School of Architecture and Urban Planning, Chongqing University, Chongqing 400045, China) and Yong Huang (School of Architecture and Urban Planning, Chongqing University, Chongqing 400045, China).

Abstract

On March 5, 2021, the government work report of the State Council for 2021 pointed out that China should do a solid job in carbon peaking and carbon neutralization, so as to deal with global warming. A large number of carbon dioxide emissions in cities will lead to the urban heat island effect, and the research shows that carbon dioxide emissions are positively related to the city size to a certain extent. Megacities emit the most carbon dioxide in the process of urbanization. Analyzing the relationship between land urbanization and carbon dioxide emissions in megacities from the perspective of land development intensity can better plan the urban land and spatial development and effectively alleviate the urban heat island. However, the current research focuses on the macro scale, and pays less attention to the land development intensity at the micro scale. Using the data of 2017 and taking five megacities in China as the research object, this study analyzes the spatial distribution of land development intensity in megacities by Nuclear Density Analysis Model and makes a spatial regression analysis on the distribution of carbon dioxide emissions based on the Spatial Autoregression. The results show that: (1) the land development intensity of the five megacities has aggregation characteristics in space, and the average land development intensity of coastal cities is significantly different from inland cities. (2) Carbon dioxide emissions have obvious spatial differential distribution characteristics, and carbon dioxide emissions in different regions are significantly different. (3) There is a positive effect between carbon dioxide emissions and land development intensity, but it is also found that high-intensity land development to a certain extent can reduce carbon dioxide emissions. This conclusion is helpful to explore the relationship between land development intensity and carbon dioxide emission in megacities, and provide suggestions on the spatial layout of urban compact development.

Digging deeper – the process of developing a new spatial imaginary in a post-extractive landscape

Joanne Tippett (The University of Manchester).

Abstract

The multi-functional benefits of urban greening initiatives are amplified when planned at the landscape scale rather than as a collection of smaller sites (Mell 2019). This requires working across administrative boundaries and sectors. Creating new spatial imaginaries, or ways of seeing relationships between space and actors (Hincks et al. 2015), can help forge such connections.

This presentation explores the process of creating a geo-environmental spatial imaginary from a collection of loosely affiliated projects and sites in a peri-urban landscape in the North West of England. The Carbon Landscape is five-year long project (2017-2022) to restore and link up habitats scarred by the coal and peat extraction that fuelled the industrial revolution. Working across 10,700 hectares, three local authorities and 14 delivery organisations, its \$4.3 million (USD equivalent) funding was enabled by its focus on cultural heritage and innovative community engagement. Work with over 1000 volunteers has made ecological enhancements to 335 hectares and led to a potential National Nature Reserve (How and Tippett, 2021). The project has led to a major artistic collaboration and exhibit with the National Trust, and open learning resources for use in schools across the region.

Analysis draws on interviews with 27 public, private and voluntary sector participants undertaken in 2018 and 2021, participant feedback gathered during workshops and field notes from the author (a participant observer).

The heritage sector has been identified as being able to promote action towards sustainability in a wide audience due to its 'future-assembling capacities' (Harrison, 2015, p.27). Creating a new spatial imaginary for the Carbon Landscape involved digging deeper through time, to tell a story of sustainability through landscape and environmental change. Workshops with community groups, school children and multi-sectoral stakeholders, as well as interpretation boards in the landscape, set the local landscape story within the 4.55 billion-year history of the earth, to inspire new ways of thinking and acting towards sustainable futures (Tippett and How, 2017). This narrative has played a catalytic role, constituting "a powerful unifying theme... [which has] broaden[ed] our horizons and our audience... [and] enabled us to join individual sites together" (Government Agency interviewee 2018).

The research contributes to work on spatial imaginaries, which has hitherto largely focused on planning and regeneration, by extending consideration to geo-environmental imaginaries. The presentation will discuss next steps, developing a toolkit for interpreting sustainability within the local landscape story in a wide range of settings internationally.

Sustainable urban airport regions: how do they consider health?

Alana Crimeen (University of New South Wales), Robert Freestone (University of New South Wales) and Evelyne de Leeuw (University of New South Wales).

Abstract

Background, Purpose, and potential contributions: Airport regions have unique considerations for spatial planning and urban policy, due to their function as major transportation hubs as well as the demands of aviation as an industry. Airports are part of city environments and in some cases have even developed their own regional forms, such as airport cities or aerotropoli. The increasingly large footprint of the airport creates greater potential impacts on the human and natural environment. These impacts have negative health consequences for communities living in airport regions. This work evaluates airport planning programs featuring sustainability, green infrastructure and liveability concepts and their alignment with healthy urban planning. Methods: A literature search was conducted to identify accessible documentation of airport planning programs globally. Publications were collected from academic databases, google scholar and the websites of key airport and aviation organisations websites. The search terms used were "green", "environment", "sustainability", "liveability" and "wellbeing". Results: Programs considering the development and management of urban airport regions for the purpose of creating green, environmentally conscious, liveable and sustainable outcomes is occurring globally. The scale ranges from programs involving UN agencies, aviation and airport representative bodies, to projects on individual airports. These programs primarily consider health through a narrow health protection lens, discussing the mitigation and management of airport related harm such as air, noise, soil and water pollution, carbon emissions, losses to biodiversity and disruption of communities. Also considered are liveability aspects including transportation networks, housing quality and local amenity. What these strategies mean for creating environments for healthy populations is often not explicit or specific, but strategies for liveability and green infrastructure within other urban planning practices share goals with healthy urban planning. Conclusion: The planning of urban airport regions faces many challenges for creating healthy environments, given the negative impacts of the aviation industry and associated industries.

Practice exists to improve the quality of these regions, and prioritising a more holistic approach to health would provide an opportunity to broaden these approaches to further community benefit.

Air Pollution and Housing Value Damage in Korea: A Hedonic Analysis Employing Long-range Transboundary Pollution as an Instrument

Kyung-Min Nam (The University of Hong Kong), Yifu Ou (The University of Hong Kong), Euijune Kim (Seoul National University) and Siqi Zheng (Massachusetts Institute of Technology).

Abstract

We estimate the degree and scope of particulate matter (PM_{2.5})-induced negative price shock in Korea's local housing markets, taking a two-stage least squares (2SLS) hedonic approach. For the analysis, we constructed a 5-year panel data set of Korea's 155 city and county level municipalities between 2012 and 2016, and instrumented inverse distance-weighted, wind direction-aligned PM_{2.5} levels in 241 Chinese prefecture-level cities to consider the long-range transport of air pollutants. We find that marginal effects of PM_{2.5} pollution on housing price—when measured in semi-elasticity—were -0.038 for the period analyzed, suggesting that, on average, a unit $\mu\text{g}/\text{m}^3$ PM_{2.5} level increase in a Korean city or county is associated with a 3.7% decline in local residential property value. This translates into an elasticity of -0.90 for a unit-percentage change in PM_{2.5} levels. Long-range transboundary pollution has significant effects on Korea's local PM_{2.5} levels, showing an elasticity of 0.05—a unit % increase in PM_{2.5} levels in China's major cities exacerbates Korea's PM pollution by 0.05%, accounting for a comparable share of the PM-caused negative housing premium. These results can enrich sparse hedonic literature on local air-quality valuation in connection to long-range transboundary pollution in East Asia. Advanced methodological features presented in our 2SLS identification strategy with a novel instrument is another area of our contribution.

Integrating supply and demand of ecosystem services into ecological space networks planning in metropolitan areas

Hui Chen (College of Architecture and Urban Planning, Tongji University), Zihao Li (Tongji University) and Shanlin Wan (Tongji University).

Abstract

The rapid urbanization with consequent loss and fragmentation of ecological space has reduced the supply of ecosystem services (ESs) and exacerbated the imbalance between supply and demand, especially in metropolitan areas. Ecological space network (ESN) is widely regarded as an effective way to meet human demand for ESs, improve human well-being, and support sustainable development. However, most methods of ESN planning are based only on the supply of ESs. Taking the Shanghai metropolitan area as an example, this study aims to propose a new method of ESN planning in consideration of ESs supply and demand. The two most concerned ecosystem services of Shanghai were selected. First, a flood capacity model and an improved two-step floating catchment area model were used to measure the supply and demand of flood regulation and recreational services, respectively. An ESs supply efficiency accumulation curve model was proposed to identify priority areas for ESs supply. Second, to build ESN that enhance flood regulation service, ecological sources were identified with priority areas and high supply-demand balance of the service. And ecological corridors were identified using the Minimum Cumulative Resistance model. Finally, based on the questionnaire survey on residents' recreational preferences for ecological space, ecological corridors that improve the supply of recreational services were built to further optimize the ESN. The ecological sources were concentrated in the west outside the outer ring road, and the demand areas were mainly distributed in the central city within the outer ring road. The ecological corridors were mainly distributed along the outer ring road and the eastern coastal zone, and extended into the central urban area along eight main rivers to form green wedges. ESN cumulatively provided 77% of ESs, occupying about 30% of the total area. The new method proposed in this paper integrates supply and demand of ESs and uses participatory optimization methods, which can be helpful to urban planners and managers in ESN planning.

A Study on Spatial Inequality of Cancer Incidence in S.Korea

Youngsung Lee (Seoul National University) and Yesung Oh (Seoul National University).

Abstract

Prior literature has focused only on individual attributes such as genetics, drinking, food, and exercise habits when exploring the causes of cancer. However, the true cause of cancer may lie beyond personal attributes. This study analyzed the causes of cancer incidence in S.Korea, focusing on various factors in addition to personal characteristics.

The data for this study consists of population factors (population number, number of elderly people), residential environment factors (rate of deteriorated housing, low-rise housing ratio), and socio-economic factors (GRDP, number of workers by industry). The method of this study is multiple regression analysis.

The results are as follows. First, when important variables were controlled, the number of smokers and the obese were not significant. Second, the number of deteriorated housing and elderly people had significant effects on the cancer incidence rate. It is the same as the previous research that the cancer incidence rate increases with aging. Old houses directly affect physical health by emitting harmful substances, noise, and odors, and as a result, it can be interpreted as an increase in the number of cancer patients.

This means that deteriorated residential areas along with the number of the elderly are major factors in cancer incidence. This study is more meaningful because it is a time when the old housing in S.Korea is increasing. The findings demonstrate that spatial inequality of health exists in S.Korea. So, the public should take an interest in this problem and seek a solution from the perspective of urban planning.

Green Buildings in India: Drivers and Barriers

Neeru Bansal (CEPT University), Madhu Bharti (CEPT University), Nirali Shah (CEPT University) and Ipsita Subudhi (CEPT University).

Abstract


Green buildings are enablers of sustainable urban development but are yet to mainstream in the overall urban development in the country. A 'green' building is a building that, in its design, construction or operation, reduces or eliminates negative impacts, and can create positive impacts on climate and natural environment. There are several features which make a building 'green' e.g., efficient use of energy, water, and other resources; use of renewable energy, such as solar energy; pollution and waste reduction measures, and the enabling of re-use and recycling; good indoor environmental air quality; use of materials that are non-toxic, and sustainable consideration of the environment in design, construction and operation, and other such features. Building sector being a major consumer of resources and producer of wastes, green buildings offer multiple benefits that can contribute in a major way towards making the cities and communities sustainable (SDG 11). However, in practice, green buildings developed in the country are still very small in number as compared to overall development taking place. This paper is focused at identifying the critical issues of concern that hinder the development of green buildings in India from the policy perspectives and highlight the concerns of developers and investors (consumers). The methodology would consist of policy analysis, comparative analysis of the different certifications available for green buildings, interviews with key actors and study of a few certified green buildings and others to develop empirical evidence of stated benefits mainly in terms of water efficiency and energy efficiency. The findings from this study would summarise the drivers and barriers for development of green buildings in the country and would inform the relevant stakeholders for framing suitable strategies for mainstreaming green buildings development in the country.

Municipal Capacity, Civil Society, and Climate Change Adaptation of Basic Services: Evidence from Galápagos

Andrea Restrepo-Mieth (University of Pennsylvania).

Abstract

The urban planning and public administration literatures highlight the importance of municipal capacity and civil society in achieving better outcomes for the provision of services tied to climate change in the global South. This paper looks at how municipalities with limited administrative capacity and reduced civil society mobilization address growing needs to plan for climate change adaptation. I use water, sanitation and solid waste management in Galápagos, Ecuador, as lenses to analyze what issues get prioritized in the local climate change adaptation agenda, how the interactions between these services and their wider climate change consequences are conceptualized in plans, who mobilizes for what and their motivations, and



how municipal, provincial and nonstate actors interact (or fail to) in pursuit of climate change adaptation. Fieldwork was conducted in San Cristóbal, Galápagos in June-July 2021 and January 2022 using unstructured interviews with current and former government workers, politicians, naturalist guides, and regular citizens. Interviews were complemented with site visits to water treatment plants, inland water bodies, and the local solid waste processing plant and landfill. The data collected during fieldwork, combined with document analysis, provides initial answers to the questions listed above and contributes to the growing literature on subnational state capacity and civil society mobilization for climate change adaptation.

Visualizing near-term impacts of sea level rise to promote long-term adaptation

Peter Stempel (Penn State University).

Abstract

Coastal communities face increasing risks from storm surge and sea level rise. Issues such as nutrient pollution caused by sewage infrastructure failure and obstruction of roads may cause abandonment before actual inundation takes place. Managing these vulnerabilities and resulting environmental degradation that occur prior to inundation poses unique challenges. This project used a community visualization survey to assess both concerns and possible responses to these issues in two neighborhoods in Portsmouth, Rhode Island, USA. The survey used near-term scenarios that related future threats to current observable environmental signals, such as road flooding and expansion of marsh areas. The responses, together with information gathered from subject area experts and town officials, formed the basis for scenario development using a Geodesign framework. Subsequent work has developed interventions based on the initial scenarios. This work demonstrates the effectiveness of using comparatively low-impact near-term scenarios as a tool to develop meaningful responses. This presentation will discuss the initial visualization survey, scenario development, and subsequent progress based on the outcomes, providing an overview of a three-year project.

Urban Planners: key agents of climate change action across the built environment

Anna Hurlimann (The University of Melbourne), Judy Bush (The University of Melbourne), Sareh Moosavi (Université Libre de Bruxelles), Alan March (The University of Melbourne) and Georgia Warren-Myers (The University of Melbourne).

Abstract

Climate change action in cities will be critical to reach the global goal to limit warming to 1.5oC above preindustrial levels (United Nations 2015). Cities are critical to this goal given they are responsible for over 70% of greenhouse gas emissions associated with energy use (Intergovernmental Panel on Climate Change 2014). Additionally, it is important that cities well adapted to climate change impacts, given they are home to over 50% of the world's population. Our paper describes how urban planners are key agents of climate change action (mitigation of greenhouse gas emissions and adaptation to impacts) across the built environment.

Our presentation will describe the key role that urban planners play in the creation, development and management of the built environment. We will do this through discussion of a built environment process map developed (Hurlimann et al. 2021), which describes the key processes involved in producing the built environment. These processes are mapped across key life stages (change initiation; strategic planning; project consideration; design, costing and approvals, construction, use and ongoing management, renewal /recovery/ decommission), the key sectors involved (planning, property, design and construction); in addition to key actors and activities coordinated between them. This map shows the centrality of urban planners across built environment activities, and thus the potential they have to facilitate climate change action.

The presentation will also discuss results of interviews conducted in 2020 with built environment professionals (including from urban planning, architecture, landscape architecture, urban design, property, construction and sustainability) across Australia. The interviews discuss the built environment professionals' views of the facilitative role that urban planners have across the built environment and the various life stages of its development. Key actions and initiatives of urban planners are showcased and discussed. Suggestions are provided, informing key ways in which urban planners can support climate change action.

Effects of Climate Change on Indigenous Communities in Washington State

Margo Hill (Eastern Washington University), Angelena Campobasso (Healing Lodge of Seven Nations) and Chas Jones (Affiliated Tribes of Northwest Indians).

Abstract

Tribal communities face unique cultural challenges due to climate change. Extreme weather even such as increase frequency of droughts and stronger storms persist and humans continue to add heat-trapping greenhouse gases to the atmosphere (WA State Department of Ecology, 2018). Science tells us that water supply will be affected by an increased precipitation levels rather than snowfall, reducing the overall snowpack levels, and threatening water supply in the state of Washington (WA State Department of Ecology, 2018). Coastal Tribes in Western Washington have had to relocate entire villages with public facilities like tribal schools and elder programs away from shorelines out of tsunami zone. In Eastern Washington inland tribes are experiencing wildfire frequency and severity will be heightened as temperatures increase in the spring and summer, resulting in earlier snowmelt in the spring, resulting in drier soils for a longer duration, increasing the probability of drought & turning forests into kindling (WA State Department of Ecology, 2018). These impacts of Climate Change have direct effects on Tribal mobility and specifically with the Confederated Tribes of Colville Indian Reservation. Tribal communities in Eastern Washington experienced major Fires across the Colville Reservation in 2015, as well as, major wind storms in 2016 and major flooding across the reservation in 2018. These major climate events limited mobility for reservation communities and community members were unable to evacuate. Tribes lack of infrastructure highlighted transportation systems vulnerability of roads and bridges. Policy changes for more funding to be allocated to Tribes for Transportation, transit, emergency-services & shelters, police-power, relocation efforts of tribal communities, lands management for prevention of forest fires, landslides, flooding, & more planning funding for Climate Change. Tribes must partner with local counties to provide education for Preparedness & Prevention with Emergency Services.

Climate Change Adaptation and Resilience of Post Sub-urban Development in Jakarta Metropolitan Area

Aysin Dedekorkut-Howes (Griffith University), Rukuh Setiadi (Diponegoro University) and Santy Paulla Dewi (Diponegoro University).

Abstract

The city of Jakarta is one of the most vulnerable cities to climate-related disasters such as floods, landslides, storm surges, and sea-level rise. At the same time, it is a densely populated and rapidly growing mega city of 30 million people. This rapid pace of partially unplanned development adds to the city's vulnerabilities. This chapter will examine the development of Jakarta over the last decade (2010-2020) which represents the post-suburban era. This period is marked by significant physical development and urban activities which have spilled over in all directions outside of Jakarta City limits to neighbouring local government areas on the fringe. While the causes and analysis of this growth has been one of the important themes in post-suburban studies, the implications of this growth on climate change mitigation and adaptation and urban resilience have not been tackled yet. We seek to address this gap and examine both positive and negative consequences of post sub-urban development in the face of increasing climate change challenges and efforts to build urban resilience.

This study offers an evaluation of post sub-urban development in the Jakarta metropolitan area through an urban adaptation and resilience framework. Thus, the scope of the analysis extends to the neighbouring local governments of Jakarta (e.g. the satellite cities of Bekasi, Tangerang, Tangerang Selatan, and Depok) indicated by previous studies as areas where the post-suburban development has occurred. We will analyse secondary data (published articles, websites etc.) as well as any publicly available policies, strategies and spatial planning documents of the metropolitan area against the evaluation framework. The findings and lessons learned will inform the nature of post-suburban development that should be pursued from a climate change and urban resilience perspective. The paper will recommend ways forward in responding to the challenges post-suburban development of Jakarta is facing.

Defining and implementing transformative climate adaptation

Aysin Dedekorkut-Howes (Griffith University), Michael Howes (Griffith University) and Estefania Arteaga (Griffith University).

Abstract

Climate change will bring about changes in biophysical, social and economic systems. The limited climate change mitigation by governments increases the risk of a more rapidly changing climate with accompanying increases in the nature and severity of impacts. Business-as-usual approaches of conventional incremental change are unlikely to be able to respond effectively. Therefore, policy and planning are increasingly focusing on transformative adaptation to climate change. There is, however, limited agreement on what transformation is and how it should be carried out successfully. This uncertainty in its outcomes leaves sectors and stakeholders unwilling to actually undertake transformative changes to how they plan and operate. This workshop seeks to answer the questions: what does 'transformation' mean in the context of adaptation to climate change? And, more importantly, how do we go about doing it? The workshop will involve:

- A brief overview of the results of a review of transformation in climate adaptation and planning across both theory and practice will be presented by the convenors with the aim of encouraging debate and knowledge sharing about transformation among participants facing the challenge of climate change adaptation.
- The participants will form groups (5-6 people).
- A set of key questions will be provided to each group (definition of transformative adaptation, barriers and drivers, ways of overcoming barriers).
- Each group will be asked to discuss these 3 questions.
- In the second part of the workshop participants will be provided with descriptions, barriers and drivers and suggestions for overcoming them from the literature and will be asked to reflect on these and identify those that they believe are the most significant.
- Each group will present their findings.
- The workshop will conclude with an overall reflection on the definition of transformative adaptation, its barriers and drivers and ways of overcoming them) discussed during the workshop.

Spatial Planning Education for Climate Action Panel

Aysin Dedekorkut-Howes (Griffith University).

Abstract

This panel follows from the successful Urban Thinkers Campus event in November 2021 on Spatial Planning Education in Climate Action organized by UN-HABITAT and the Planners for Climate Action network. A panel of academics from around the world has been brought together to share their experiences of educating planners for climate action and discussing some of the challenges of delivering climate change education. The event seeks to share innovative and effective practices in spatial planning curricula, discuss the current state of play, facilitate collaboration for climate action education across the world, and strengthen the Planners for Climate Action network. The session objective is to review the state of climate change education in the academy and generate and exchange thoughts about how to proceed as a profession into the future in order to better prepare future planners for the challenges ahead. Each panellist will discuss the following overarching questions: (a) How are we teaching climate change in Planning programs? (b) What should be taught? What do Planning students need to know? (c) What are the challenges of delivering climate change education and what can we do to overcome them?

Monitoring the Outcomes of Rehabilitation and Reforestation for Biodiversity Conservation

Rachmat Budiwijaya Suba (Forestry Faculty of Mulawarman University), Chandradewana Boer (Forestry Faculty of Mulawarman University) and Sutedjo Sutedjo (Forestry Faculty of Mulawarman University).

Abstract

Even a well-managed rehabilitation area has been performed, the valuation of its success is a problematic matter. The main goals of rehabilitation and reforestation schemes in Indonesia mainly address the problems of land degradation, environmental recovery, and habitat restoration. However, some projects only reported organizational outcomes, such as area planted and labor-days expanded. There has never been a formal scheme that could be used to monitor the progress of rehabilitated sites that would inform us about progressive changes in land cover and their possible implication for biodiversity. This study is meant to acquire information about the presence of a selected group of fauna species in order to establish a time sequence in understanding habitat development within rehabilitation sites. The occurrence of selected species is their response to vegetative growth (in other words, better land coverage) which provides such complex niches and habitat components required by the species. Information about selected species in this area could function as a baseline for biodiversity data which could be periodically monitored. The study also emphasized the high ecological value of retaining natural land cover patches and the existence of natural forests next to rehabilitation areas. Wildlife observation in forested areas would give information about species present in the area which then could be linked to occupancy

possibility in rehabilitation areas based on the theory of connectivity and colonization. The fauna mostly is omnivores and generalists with a wide range of ecological amplitude. These characteristics seem to be the factors that make them could occupy the rehabilitation sites. However, when they start to occupy the areas is a critical point that indicates their response to habitat change. Most of the birds found are quite common in open habitats, plantations, secondary forests, and forest edges. The presence of hornbills gives a sign that mature secondary growth is still dispersed. Closeness to humans and the existence of illegal activity (logging and hunting) influence the presence of particular species. Some carnivore species, such as Malayan Sun Bear *Helarctos malayanus*, Marbled Cat *Pardofelis marmorata* and Bornean Bay Cat *Pardofelia badia* represent sensitivity to humans and disturbances. Since there is still ongoing illegal logging activity in the Sebulu Site and its surroundings, they are likely avoiding the area and looking for safer habitat.

Environmental and Institutional Challenges of Cross-Border River in Decentralized Indonesia

Paramita Rahayu (Universitas Sebelas Maret), Erna Dyah Kusumawati (Universitas Sebelas Maret) and Albertjan Tollenaar (University of Groningen).

Abstract

Decentralization aims to increase the capacity and involvement of sub-national governments and representativeness of local community in the decision-making, which further may enhance the overall quality of governance system. However, several bottlenecks have emerged, like issue of participation, communication, and cooperation between multi-level of governments, among local governments and community. Such hindrance can be found in river areas that flow cross-border and connects local governments and multiple stakeholders. River Basin Organizations (RBO) is often considered to fail to govern the river-basin region. The Bengawan Solo River can be an example of those challenges. The river lies in Java from the central to the southern part, crossing across 14 cities and districts of Central and East Java Provinces. The study focuses on the upstream region of Bengawan Solo, applying mixed quantitative and qualitative methods with GIS and content analysis as techniques for analysis. The data indicates that, upstream experiences urban expansion and water pollution. The built-up area increased by more than 40 percent from 2000 to 2020. In the same period, the comparison of population to built-up area decreased, from 86 person/Ha to 27 person/Ha, which indicates rapid growth of built-up area with lower population density. Moreover, the upstream river quality has been low. The data from 2007 to 2020 reveals that in general, the water quality decreases from lightly polluted to moderately and heavily polluted. The dominant pollutants are waste from industrial, urban services, and domestic. Based on the interviews and focus group discussion, this study found few causes that trigger the complexity to deal with the upstream problems. These are (1) a complexity of dualism: keeping environmental quality high versus supporting economic development, especially for small economic players; (2) a conflicting level of authority: the mechanism to deal with urban expansion and pollution through land-use control and sanction is in the hands of local governments, while the authority to manage Bengawan Solo is in the hands of the central government; (3) insufficient government's resources and less involved communities. Overall, improved capacities through more intense communication and inter-sectoral cooperation are crucial to be enhanced at the appropriate level. River Basin area is important for the overarching framework of river management, however, a break down organization at the area of sub-river basin with a particular task to deal with the river problems might be necessary for a more intense, practical collaboration, and improved capacities of managing the river.

A Regulatory Framework Assessment on Multispecies Urban Planning in Indonesia: A case study of two Indonesian cities in Java and Borneo

Rukuh Setiadi (Universitas Diponegoro), Salma Nadhiroh (Universitas Diponegoro) and Christoph Rupprecht (Ehime University).

Abstract

Despite benefits for human civilization, urbanization has brought an enormous consequence to non-human species. Multispecies planning is a potential solution in response to increasingly insensitive urban planning to non-human species. This paper aims to understand the link between a national regulatory framework and its outcome in terms of urban spatial plan from multispecies planning point of view using indicators such as from protected forest to natural reserve and from ecological corridors to private yards. It examines whether the existing regulatory framework is an obstacle to the practice and implementation of multispecies planning ideas in a city. We employ a content analysis to assess 18 laws and policies at the national level. We also utilize a case study to test the spatial plan outcome in two areas in Indonesia, namely the city of Semarang (Central Java) and Barito Utara Regency (Central Borneo), in which also involve additional content analysis of 4 local regulations accordingly. The study successfully maps out the extent of relative emphasis of each multispecies urban planning indicators according to Indonesian national regulatory frameworks. The study also reveals that regulatory frameworks at the national level do not really determine multispecies urban planning practices at the local level, nor does

the status of biodiversity assets owned by a city or region. Improving the literacy of planners, planning committee, and other key decision makers in multispecies planning is pivotal and warrants a further investigation.

Renewal Strategy of Public Space in Government Office Area Based on the Improvement of Civil Servants' Physical Quality in Severe Cold Areas

Tianshu Zhao (SA, Harbin Institute of Technology; Key Laboratory of NTSPER in Cold Regions, Ministry of Natural Resources) and Qing Yuan (SA, Harbin Institute of Technology; Key Laboratory of NTSPER in Cold Regions, Ministry of Natural Resources).

Abstract

Having an inactive lifestyle due to busy work schedules is the main cause of health problems among Chinese civil servants, especially those in severe cold places. Few studies show if public spaces near government offices have accommodated their needs for sports. This study surveyed the physical qualities of Harbin civil servants, evaluates the quality of public spaces near government offices, and suggests improvements to existing public spaces. The author conducted a physical fitness test among civil servants of the Harbin municipal government. The test was created in accordance with the standards of the national physical fitness measurement (adult) formulated by the Ministry of sports of China. This study analyzed sports activities that can be performed in existing public spaces and the health benefits of these sports activities. The test results showed that for public spaces provided by the municipal government, indoor spaces adapt to a wider range of sports activities while outdoor spaces accommodate more people. There are great differences between the health benefits of these indoor and outdoor activities. Both indoor and outdoor activities improve cardiopulmonary function and responsiveness and lack the training conditions for flexibility and balance. But the improvement of explosive power can only result from indoor activities. The study suggests that missing sports facilities should be completed according to the needs of sports and the amounts of sports facilities in indoor and outdoor public spaces should be balanced. In cold places, the area of indoor public space needs to be increased, and outdoor public space should be equipped with devices for the maintenance of sports facilities.

Policy Strategy for Seaweed Cultivation Sustainability in Pasikolaga District, Muna Regency (method Preference Rangking Organization Methods for Enrichment Evaluation)

Iksan Yusuf (Post-IPB University students).

Abstract

Muna Regency is an archipelago in Southeast Sulawesi, with a land area of 2,559.4 km and a sea area of 5,625 km, a coastline of 337 km. The main occupation of coastal communities is as aquaculture fisherman, namely seaweed cultivation, so that Muna Regency becomes the center of seaweed production in Southeast Sulawesi, The center of seaweed production in Muna Regency is located in Pasikolaga District. Seaweed production in 2016-2019 in Pasikolaga District was unstable even though the potential for development was very good seen from the coastal area and the level of seaweed fertility. Seaweed production in 2016-2019 in Pasikolaga District was unstable even though the potential for development was very good seen from the coastal area and the level of seaweed fertility. The data used in this study uses primary and secondary data, primary data obtained from the Department of Environment and the Department of Fisheries, while secondary data were obtained from the Central Bureau of Statistics and journals. Data analysis method using Preference Rangking Organization Methods for Enrichment Evaluation (PROMETHEE) is part of Multi Criteria Decision Analysis (MCDA). Based on the recommendation of four policy alternatives, then the results of the PROMETHEE ranking analysis, the best alternative with the highest ranking for the policy strategy of seaweed cultivation in Pasikolaga District is alternative three, namely continuing activities with economic strengthening programs, socio-cultural and environmental with a score of 0.6364, followed by alternative two, namely continuing seaweed cultivation with a sustainable cultivation program taking into account environmental aspects with a score of 0.0909, Alternative four is the development of human resources with a score of -0.1818 and alternative one is to continue seaweed cultivation by strengthening the local economy with a score of -0.5455. Alternatives that occupy a positive position and have a Φ^+ value above zero or close to one are alternative three and alternative two, while alternatives that are in a negative position or have Φ^- below zero are alternatives four and one. The conclusion of this research, alternative policies that can be applied to the sustainability policy strategy of seaweed cultivation in Muna Regency, especially Pasikolaga District, namely by strengthening the economy, socio-cultural and environmental. This policy is able to have the greatest impact on the level of crop production, cultivation income level, the quality of the cultivation environment and potential conflicts of cultivators that can be minimized.

Developing Streetscape-Conscious Greenery and Its Improvement Effects on Urban Thermal Environment in the Context of Heritage Town in South-East Asia

Kei Saito (Faculty of Urban Life Studies, Tokyo City University), Mei Yee Teoh (Faculty of Built Environment & Surveying, Universiti Teknologi Malaysia) and Michihiko Shinozaki (School of Architecture, Shibaura Institute of Technology).

Abstract

Ipoh is the capital of the state of Perak, located about 200 km north of Kuala Lumpur, and is the third largest city in Malaysia with a population of over 700,000. The town flourished in the tin mining industry in the 19th century and is one of the historical scenic cities in Malaysia, where colonial-style buildings still remain in the old town area due to the presence of British companies. The area is popular as a tourist destination with a wealth of historical townscape assets in the old downtown area, attracting many tourists from domestic and overseas. On the other hand, the urban thermal environment is being deteriorated due to the lack of continuous planting space in the inner town. Based on the above, this research explores the neighborhood greening method that can balance the improvement of the surrounding thermal environment while preserving the visible area of historical landscape assets for the pedestrian viewpoint, using CFD microclimate simulations and verifying the effectiveness of the method. In addition to the greening by street trees, we combined greening methods that fit the local context, such as back lane wall greening and greening of pocket spaces, as seen in the Ipoh Historic Landscape Area, to verify the effectiveness of such greening. As a result, we were able to quantitatively identify local greening methods that contribute to improving the surrounding thermal environment while preserving the historical landscape. These are expected to lead to the improvement of walkability in the region in the future.

An Overview of Housing Indicators towards Mental Health

Nur Hanie Irdina Jamaludin (University of Technology Malaysia) and Gobi Krishna (University of Technology Malaysia).

Abstract


Mental health has a significant impact on the built environment. Anxiety and non-psychotic disorder, for example, are strongly linked to socioeconomic individual and neighbourhood variables. The impact of urban structure is probably underestimated. The majority of the world's population now lives in cities, with Malaysians contributing for 77.16 percent of the population. Urban environments play an essential part in determining population health, especially in impoverished communities where poor health is concentrated. This paper summarizes recent studies that link urban environment aspects to mental health and presents a hypothetical model to guide future research. We evaluated the connection between numerous urban environment aspects such as density, accessibility by public transport, accessibility to services, green and public spaces with the population of Kuala Lumpur, Malaysia.

Green infrastructure for flood control: The case of the Bojonagara City Sub Region, Bandung, Indonesia

Hilwati Hindersah (Department of Urban and Regional Planning, Faculty of Engineering, Universitas Islam Bandung), Tonny Judiantono (Department of Urban and Regional Planning, Faculty of Engineering, Universitas Islam Bandung) and Okstaria Poernomo (Department of Urban and Regional Planning, Faculty of Engineering, Universitas Islam Bandung).

Abstract

Climate change is a fundamental factor that causes flooding in various parts of the world. With the phenomenon of high rainfall, a city has a risk of frequent flooding. The city of Bandung, which is surrounded by a beautiful mountainous landscape, experiences this. To overcome the problem of flooding, the concept of green infrastructure, in addition to having multi-functions including its ability to regulate the climate, also has the potential to be applied. However, it is necessary to know the extent to which green infrastructure is able to reduce the risk of flooding in this climate change situation for the city of Bandung which is part of several upstream areas. The purpose of the study is to determine the potential of green infrastructure in controlling floods for the case Bandung as mountain city. This knowledge will contribute to the right solution for the city government and planners in overcoming the flood problem and the development plans for the city of Bandung in the future. The research was conducted using a watershed ecosystem-based approach to a sub-region of Bandung that is often flooded, namely in the Bojonagara City Sub Region. The approach is conducted by the analysis of the capacity of various types of green infrastructure and the suitability of the type of green infrastructure with the required criteria to determine the amount of flood water runoff that can be handled. The analysis requires data on the watershed ecosystem, rainfall, slope, soil hydrology, land use, and road network. The result of the research is the magnitude of the



potential of green infrastructure in reducing flooding in extreme climate condition and reveals important criteria in flood control efforts in Bandung City. In conclusion, the application of green infrastructure to control flooding is one thing that needs to be considered in urban spatial planning, although it will face problems in its implementation. Green infrastructure also offers solutions of climate change impacts, namely reducing city temperatures through the absorption of carbon gas by leaves in the green infrastructure. However, the implementation of green infrastructure requires the awareness of all urban communities to participate in caring its existence.

A normative framework of 20-minute neighbourhood concept in the highly dense city: A case study of Hong Kong

Weipeng Deng (The University of Hong Kong).

Abstract

‘Chrono-urbanism’ has recently raised the attention of practitioners and researchers in urban planning. The buzzwords (e.g., 15-minute city and 20-minute neighbourhood) reflect the ambition to push forward to more user-centred planning rather than satisfied with the a priori planning principles to promote walkability from the traditional ideology (e.g., new urbanism, garden city). Current planning practices of these ‘chrono-urbanism’ concepts are primarily observed in those cities characterising by suburbanisation and relatively low density. It is still rare to see the policy and research in cities abiding by compact development strategy. Moreover, some previous studies have detected a significant heterogeneity of the impact of built environment characteristics on travel patterns in Hong Kong, which indicates that implementing 20-minute neighbourhood concepts in highly dense cities needs proper adaptation and localisation. This research strives to establish a normative framework of the 20-minute neighbourhood concept by redefining the weights of different infrastructure and amenities and the time thresholds to reach them in the Hong Kong context. The weights and time thresholds are set based on questionnaire data collected from the sampled population in Hong Kong. The 3D pedestrian network is applied to calculate the travel time concerning its hilly, dense, and mixed-use urban fabric. Based on the established normative framework of the 20-minute neighbourhood concept, geospatial analysis is conducted to identify the ‘sweet’ and ‘sour’ spots at the Building Group level in Hong Kong. This research further investigates their social and spatial distributions by considering the built environment and socio-economic characteristics. The findings could help policymakers and planners formulate evidence-based policies to achieve a 20-minute neighbourhood while guaranteeing social and spatial justice.

A Comparative Study on the Adaptability of Health Impact Assessment Tools towards Urban Planning

Yuxi Cai (Tongji University), Fangfang Jiang (Tongji University) and Lan Wang (Tongji University).

Abstract

The emergence of COVID-19 pandemic makes public health a topic of worldwide concern. As one of the main bodies of public policies to promote public health, urban planning attaches increasing importance to the health impact of built environment intervention policies. Most of the health impact assessment(HIA) tools originated from public health, environmental science, transportation and other disciplines, thus we taking the comparative study of their adaptability towards urban planning as the starting point of interdisciplinary application. A total of 16 HIA tools have been selected into our comparative study, which includes basic analysis of the tools’ architecture and adaptability analysis towards urban planning. Based on original sources and review topics, we divide the tools into four categories: integrated planning review tools, spatial planning related tools, transportation and physical activity related tools, environmental risks and other general tools. By setting research objectives of summarizing the principles, methods and characteristics of HIA tools and analyzing their applicability for urban planning, accordingly, we develop our comparative framework, which comprises basic and adaptability comparison. We compare the assessment paths, input requirements, built-in data with their associations and evidence bases, impact measurement methods and results as the foundation for adaptability comparison, which includes scope and topics of review, typical spatial scale of application, objectives and orientations, degree of intervention in planning. Followingly we conduct the analysis using comparative study and inductive method. The result shows that the integrated planning review tools and spatial planning related tools developed specially for planning have higher planning applicability while the other two categories originating from other disciplines have more precise consideration on specific planning issues and healthy outcomes but have relatively lower planning applicability, which leads to some problems in practice of planning projects, such as unsystematic use methods and unclear promotion effect of planning proposals. In conclusion, transportation and physical activity related tools, environmental risks and other general tools require further study to enhance planning applicability in comparison with integrated planning review tools and spatial planning related tools. Regarding that the HIA projects were conducted mostly in European and American developed

countries, the background and conditions of Asian developing countries should be taken into account when we further introduce HIA tools into Asian urban planning.

Urban Sprawl and Climate Change Resilience in Kolkata Metropolitan Area, India

Anil Kumar Roy (Faculty of Planning, CEPT University, K.L. Campus, University Road, Navrangpura, Ahmedabad, Gujarat, INDIA- 380009) and Paulami De (Parul University).

Abstract

Urban sprawl commonly gives rise to the urban heat island effect increasing the climate vulnerability of a city. Kolkata is an Indian coastal city where sprawl is evident. The main objectives of this study are to 1) measure the expansion of the built-up area, 2) understand its relationship with the urban heat island effect and 3) assess the initiatives in improving the climate resilience of the city. Using Landsat images, both land surface temperature and the built-up area have shown an increase between 1991 and 2021. The ambient air temperature from IMD for three stations namely Alipore, Dumdum and Uluberia confirms the urban heat island effect in the metropolitan area. Through key stakeholders' consultation, it has been observed that there is a conflict between the Kolkata Metropolitan Development Authority and Urban Local Bodies regarding understanding and implementation processes of climate mitigation initiatives in the city region. This calls for an intervention of policy initiatives at provincial and three-tier urban governance at the local level. A holistic climate resilience plan has been suggested to overcome these issues and challenges.

The pattern of an urban village cluster with an ecological city concept in Bandung City

Enni Lindia Mayona (SAPPK ITB, Doctoral Program; Dept. Urban and Regional Planning, Itenas, Institut Teknologi Nasional Bandung).

Abstract

The growing attention on the urban environment has led to the development of the concept of a sustainable city and urban ecology in formulating urban forms. The Urban form must recognize the needs of the urban community without reducing the availability of natural resources for future generations. The Ecological city (Ecocity) is one concept developed with a historical perspective of urban ecology and the complexity of environmental problems. The concept focuses on a human settlement model with an independent and sustainable natural ecosystem structure and function. They will achieve this by integrating nature and cultural diversity into an integrated design through technology. Four pillars and some indicators have been set globally, such as urban design, Bio-Geophysical Conditions, Socio-Cultural Features, and Ecological Imperatives. So, the purpose of the research is to analyze the patterns of ecocity in Bandung City. Then, based on secondary data of the urban villages, and by factor and cluster analysis, it produces five factors: community capacity and participation in natural resource management, design cultural management, economic conditions, nature carrying capacity, and management of material and energy resources. Furthermore, only two clusters from five clusters show various patterns of ecocity characterized by suburban (11 urban villages) with sufficient natural areas and downtown (6 urban villages) that manage renewable energy sources. Regarding the cluster, we can plan the structure and function of a sustainable city with a hybrid ecosystem to provide ecosystem services and urban infrastructure more effectively.

Green Open Space Provision in Urban Areas as a Form of Adaptation to Climate Change

Soedwihajono (PWK FT UNS), Sunarto (FMIPA, Universitas Sebelas Maret, Surakarta, Indonesia), Maria Theresia Sri Budiastuti (Environmental Science Postgraduate Programme, Universitas Sebelas Maret, Surakarta, Indonesia) and Winny Astuti (Urban and Regional Planning Programme, Faculty of Engineering, Universitas Sebelas Maret, Surakarta, Indonesia).

Abstract

The city as an ecosystem consisting of abiotic, biotic, and culture elements. On the other hand there are conditions of climate change, as well as the provision of green open spaces. In this research, it is understood by the concept of dynamic system. Dynamic system is a method used to describe and simulate a system with all relevant dynamic systems that are constantly changing from time to time; in this case urban space as an ecosystem, in which there is green open space, which is covered by climate change conditions. The analysis that will be used in this research is a qualitative descriptive method, using structured data. Several steps must be taken in conducting an analysis related to the analysis of the provision of green open space as will be carried out in this research. In terms of supply and demand, the provision of green open space must be able to meet the abiotic "needs and desires" in urban areas, and biotic, as well as cultural. Therefore, the provision of green open space in urban areas needs to be conceptualized and patterned in general. Climate change must be a concern

for sustainable urban development. From extensive literature reviews and meta-analyses for the case approach to sustainable urban development, the role of governance in climate change is examined, with a focus on decision-making processes, policies and regulations.

Planning For Climate Change And Environmental Protection: The Case Of The Hotel Owners In Halkidiki, Greece

Alex Deffner (Department of Planning and Regional Development, University of Thessaly, Volos Greece) and Anastasia Michailidou (Department of Planning and Regional Development, University of Thessaly, Volos Greece).

Abstract

Climate change constitutes one of the most significant challenges in the decision-making process of the public policymakers, the voluntary sector, the consumers and the private sector. The latter factor has been relatively understudied in comparison to public policy. Tourism constitutes one of the fields that contributes to a considerable degree to climate change, but it will also be primarily affected by it. In this context, it is essential to know how the private sector is reacting to this problem in the case of tourism. This paper aims to investigate the degree of awareness of hotel owners, i.e. their adaptation to the impacts of climate change, and to identify the actions that have been taken, or should be taken, to mitigate this phenomenon. The purpose of the empirical research in the Halkidiki Area in northern Greece is twofold: a) to discover whether the owners of the 26 hotels that participated in the research are aware of the crucial importance of the issue of climate change and if they think that climate change is affecting, or likely to affect, them, and b) to explore to what extent they contribute to adaptation and mitigation. The analysis of the results (mainly quantitative) shows that climate change is apparent throughout the study area to the extent that it cannot be considered negligible. There are very few hotel owners aware of climate change and are affected by it. Subsequently, various proposals are made to involve a broad range of stakeholders in tourism, namely hotel units, catering services, carriers, and local government, to coordinate and adopt a more environmentally friendly profile to contribute to a more considerable degree of sustainable development. Finally, the actions and directions for adapting Halkidiki's tourism to climate change are analyzed and those related to enhancing the area's tourism.

Urban Trees, Green Space and Social Inequalities in Duque de Caxias- RJ

Ana Lucia Britto (Federal University of Rio de Janeiro), Jorge Fleury (Federal University of Rio de Janeiro) and Thais Costa (Federal University of Rio de Janeiro).

Abstract

functions for cities. Urban trees have always been for beautifying public spaces. However, in addition to the visual attributes, a wooded space can reduce stress by creating calmer environments conducive to physical exercise and active transportation, contributing to the well being and bringing benefits to inhabitants physical and mental health. Furthermore, trees provide thermal control associated with humidity and shade, reduce air pollution and absorb water, thereby reducing the risk of flooding and erosion. Starting from the hypothesis that the existence of urban forest and adequate urban green spaces can be associated with the socioeconomic patterns, the present exploratory research has as its main objective to analyze urban afforestation and green areas, from the perspective of social inequality. The analysis focus on the municipality of Duque de Caxias, located on Metropolitan Region of Rio de Janeiro periphery. The municipality has important protected areas, which contribute to different ecosystem services. However, urbanized areas lack afforestation and municipal urban plans does not adopt a green infrastructure principles. The methodology was based on a literature review on urban afforestation and social inequalities, on a analysis of environmental and socioeconomic data referring to Duque de Caxias and on the technique of photointerpretation, using QGIS software and orthophotos of the region. Maps were made crossing distribution of street trees and income data, considering the census sectors. as a unit and, finally, strategic areas were chosen for comparative analyses It was verified that there is inequality in the distribution of urban trees as well as in the presence of green areas and parks appropriable by users. These inequalities are directly related to inhabitant's income. This reinforces the low level of quality and well-being in the poorest regions of Duque de Caxias It was also found that even in wealthier areas the afforestation index was still below what is indicated in the literature concerning the subject, showing a widening gap between planned green spaces requirements and existing urban green spaces.



Analysis of air pollutant distribution according to land use and street characteristics of new town areas : focusing on Bundang and Mokdong in Korea

Jiwon Han (Chung-Ang University) and Jeongwoo Lee (Chung-Ang University).

Abstract

This study aims to explore the relationship between air pollutant distribution and urban form. Recent evidence suggests that there exists high-concentration pollution areas identified as higher than that measured in the vicinity. Previous studies found that the areas with high pollutant concentration are associated with industrial sites and urban expressway where traffic volume is large. However, there has been no detailed investigation of high pollutant concentration in the context of urban morphology and land use dynamics. This study identified pollutant concentration spots using a mobile personal exposure monitor to collect air pollutants (VOCs, CO, NO₂, PM 2.5, PM 10) in Bundang and Mokdong New Town areas in South Korea. The data collected were visualized and processed using Sniffer4D Mapper and Getis-Ord spatial statistics through geographic information system. The results of study showed that distribution patterns of NO₂ and PM_{2.5} hotspot are associated with urban form characteristics. We found NO₂ hotspots are mainly presented along the arterial roads with high traffic volume, whereas PM_{2.5} hotspots are concentrated in commercial areas where population activities are concentrated. Interestingly, PM hotspots are more apparent in a block with a loop-type road network as well as a horizontally lengthy building. The results of study highlights the air pollutant concentration influenced by spatial morphology and land use. This finding, while preliminary, suggests that urban design strategies could reduce pollutant hotspots, calling for more comprehensive studies exploring the relationship between urban form and air pollution.

Effects of Green Spaces on Individual Park Use and Health

HyeWon Oh (Chung-Ang University) and Jeongwoo Lee (Chung-Ang University).

Abstract

Urban green spaces are known to affect citizens' health. The existing literature mainly focused on the influence of residential park despite the importance of the workplace environment. This study aims to analyze the influence of green spaces on people's park use and mental health focusing on both residential and workplace characteristics. A survey was conducted on 1,073 respondents and spatial information of their residence and workplace was constructed using the ArcGIS program. A subset of variables containing the road-network accessibility to parks and the built environment characteristics at both home and work were collected and used to build a structural equation model (SEM) to evaluate the influence of green spaces on individual health status. Results showed that people who have better access to green spaces are associated with a lower level of stress. However, the influence on their physical activity was not so marked. Remarkably, the effects of green spaces vary demographically, wherein elderly people with better accessibility to residential green spaces are more likely to experience lower stress level. With the same token, it is the people who are in their 20s and 30s that their stress level are effectively influenced by green spaces at work. This finding has important implications for providing access to green spaces at work in enhancing mental health and quality of life. Further research should be undertaken to investigate the effectiveness of green spaces in addressing the health needs.

Colouring Indonesia: A Decision-Making Support System Tool for Smart City Development

Zahratu Shabrina (King's College London), Adiwan Fahlan Aritenang (Institut Teknologi Bandung) and Anjar Dimara Sakti (Institut Teknologi Bandung).

Abstract

Data-driven planning can be regarded as one of the keys to creating a successful smart city development. Colouring Indonesia is a part of Colouring Cities global initiative (see also Colouring London, Colouring Australia, Colouring China, etc.) that aims to create a data-rich knowledge platform for mapping, visualising and simulating building level data. As a case study in the Global South, Bandung is chosen for initial platform development with the possibility to expand to other main cities such as Jakarta and Yogyakarta. The platform can serve as a decision making support system tool that can be used by planners and policymakers by allowing the creation of citizen-generated data and the implementation of advanced urban simulations. A base map of comprehensive building-level data is collated by combining available government dataset that is validated and updated using a secondary dataset from high-resolution remote sensing images, where building delineation is extracted using supervised machine learning classification. Data attributes are then crowdsourced to account for age, typology, current use, heritage, economic and other associated urban features. This type of granular building-level information can be the basis of scenario-based simulation that can support a city to achieve sustainable and climate adaptive urban development. Through our research, we showcase that Colouring Indonesia as a data-driven platform can be a solution to data accessibility and transparency – as an instrument to achieve Sustainable Development Goals (SDGs) 11: Sustainable Cities and Communities (making cities safe, inclusive, resilient, and sustainable).

Digital Negotiations with Geodesignhub

Hrishikesh Ballal (Geodesignhub).

Abstract

As cities continue to grow, climate change adaptations become urgent and new urban mobility practices emerge, urban land use and design often no longer fit with the citizens' demand for higher-quality urban spaces. The wicked nature of complex urban problems requires interventions and practical projects which are collaboratively conceived and selected through a negotiation process between different experts and stakeholders. In this workshop, the participants will see how Geodesign framework and Geodesignhub as a digital technology enable this kind of conception and negotiation process. Most of these cases were presented at International Geodesign Collaboration meetings (<https://www.igc-geodesign.org/>) and described at Geodesignhub blogs (<https://www.geodesignhub.com/>).

Key outcomes: Understand: In this session the participants will understand how digital technologies can enable and support complex land-use negotiations. between different stakeholders.

Learn: The participants will get a flavour of a new type of digital technology using Geodesignhub.com. They will be introduced to a systematic method to create and analyze alternative futures and enable people from different disciplines, trainings and authorities to come together and negotiate over these ideas to develop consensus.


Develop: .As urban problems and challenges increase and become more urgent and complex, it is crucial to find a way to increase management capacity and develop efficient support mechanisms of public administration and planning institutions for finding collaborative solutions and building consensus. The participants will see how Geodesignhub as a new digital technology can support the development of management capacities within their organization.

Technology innovation in spatial planning: the geodesign approach

Michele Campagna (University of Cagliari - DICAAR).

Abstract

Geodesign is a novel methodology approach to spatial planning, design, and decision-making. While geodesign has deep roots in the tradition of environmental planning, thanks to the recent digital technology advances, it provides novel and reliable planning and design techniques and (digital) tools for addressing the complexity of current development sustainability challenges. Relying on multi-scale interactive and user-friendly computational environment, geodesign facilitate collaborative participation in strategic planning, applying system-thinking. Based on the experience of the author in geodesign within the last decade, and supported by several case studies examples in planning research, education and practice developed in Italy and internationally, this contribution aims at discussing the instrumental and substantial adoption of technology innovation in the planning process as well as in its results. In particular, the systematic comparison of two real-world case studies of geodesign application to collaborative strategic planning in Italy show how novel



techniques supported by digital tools enable multi-actor communicative planning processes. Opportunities and benefits for stakeholders' collaboration and public participation are discussed, aiming at enhancing the social dimension of smart cities and developing smart communities. In addition, research experiences by the author within the International Geodesign Collaboration are also presented aiming at showing the impact of the introduction of technology innovation in territorial planning and design.

Planning and the Privacy Challenge of Smart Cities

Feiyang Sun (University of Washington) and Jan Whittington (University of Washington).

Abstract

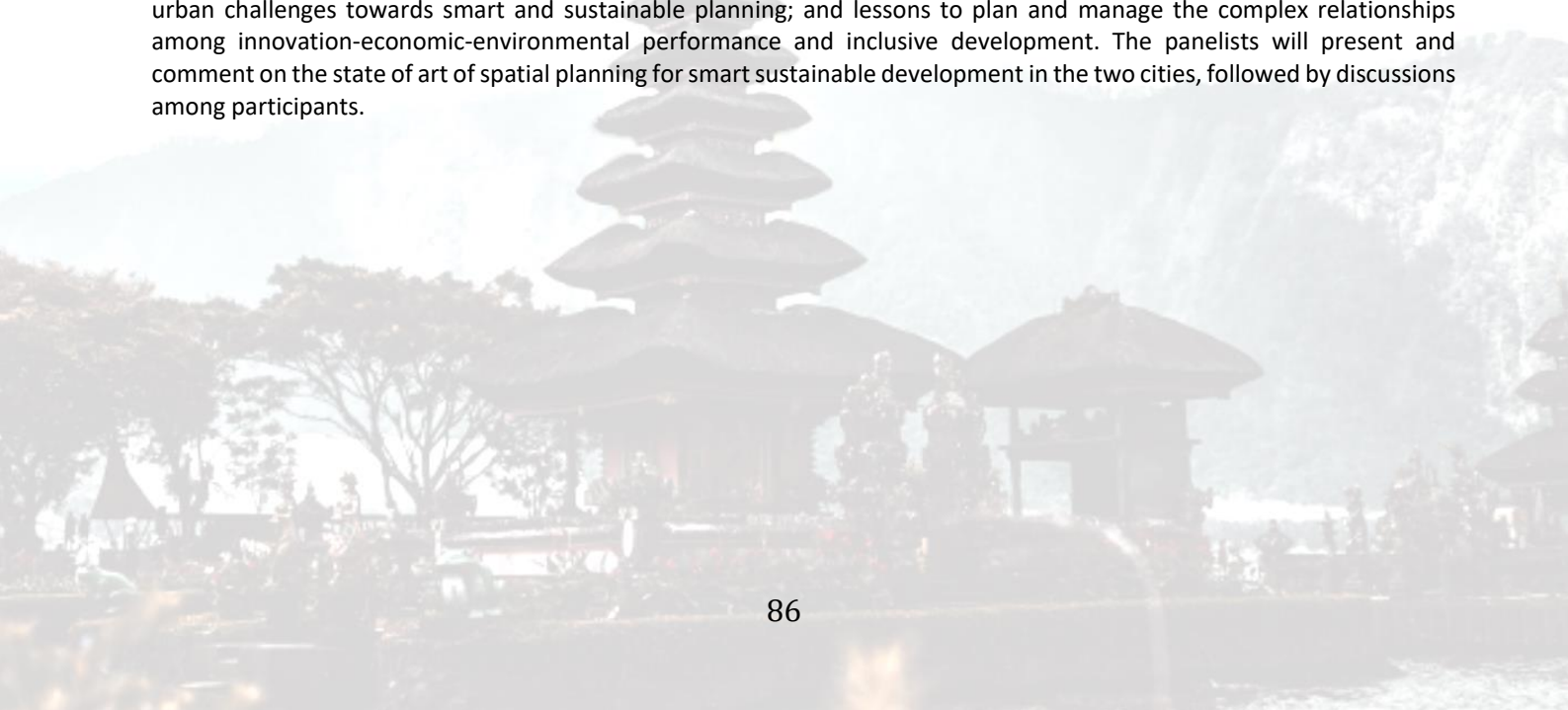
This paper introduces the empirical studies and normative debates surrounding privacy to a planning audience, placing this important discourse within the context of the communication and surveillance technologies rapidly being deployed in smart cities. The paper explains why privacy, for individuals and groups in society, is not only a personal matter but also a public interest and, in particular, a public interest for planners to embrace. Through a review of empirical studies, the paper introduces the fundamental concept of re-identifiability used in the fields of information, computer science, and law. The paper then demonstrated the application of this concept in planning practice by examining the variations in re-identification risks in different urban areas and population segments with a typical mobility trace data used in planning practices. The findings of the analysis highlight the role of the built environment in elevating the risk of re-identification from supposedly anonymized data. The paper introduces three frameworks - contextual integrity, privacy taxonomy, transaction cost economics - to establish a shared understanding of the approaches being engaged, in research and in the practice of cities, to govern data, and location data in particular to address the privacy challenge. The paper concludes with remarks about the implications of privacy as a research agenda for planners.

Spatial planning for smart sustainability in Greater Manchester, U.K. and Shenzhen, China

Mee Kam Ng (The Chinese University of Hong Kong).

Abstract

This roundtable aims to compare and contrast the spatial relationships among socio-economic and environmental challenges, technological advancement and urban planning in the context of Greater Manchester in the United Kingdom and Shenzhen, China. The Greater Manchester model is seen as a new way of delivering unified public services in Britain, whereas Shenzhen is dubbed as China's Silicon Valley. Smart technologies and infrastructure could be constructed to tackle environmental degradation, social exclusion and economic bottleneck only if there are smart policies, legal frameworks and governance structures in place. Planning, as a future-oriented activity, plays a significant role in adopting a spatially integrative approach to deliver smart and sustainable development. In this roundtable, scholars from the University of Manchester and the Chinese University of Hong Kong will share their understanding of smart and sustainable planning in Greater Manchester and Shenzhen. Through robust conceptualisation, contextual understanding, evidence collection and a focus on the research-policy-practice nexus in the two cities, the team will examine drivers of smart sustainable development and their spatial implications; the evolving institutional capacities and constraints in tackling and steering urban challenges towards smart and sustainable planning; and lessons to plan and manage the complex relationships among innovation-economic-environmental performance and inclusive development. The panelists will present and comment on the state of art of spatial planning for smart sustainable development in the two cities, followed by discussions among participants.



Knowledge transition among adolescents during Covid-19 Era Examination of tacit knowledge in offline and online spaces

Yohan Kong (Seoul National University Graduate School of Environmental Studies) and In Kwon Park (Seoul National University Graduate School of Environmental Studies).

Abstract

The uncertainty of COVID-19 has brought many sectors to go either online and offline for safety measures from the virus. For adolescent learning, which is an important part of human development in learning; knowledge transfer was no exception, the alternation between offline and online has allowed to question whether appropriate knowledge transfer has been made. Two types of knowledge—tacit and explicit knowledge—were measured to see how much knowledge transferred among adolescent students on online and offline spaces during COVID-19 using quantitative survey method. Tacit knowledge which is seen as uncodified and exist at an unconscious level. Explicit knowledge which exists at a conscious level are documented and able to be codified. The two types of knowledge deliverance were examined among South Korean adolescent students whom are also experience offline and online learning spaces due to COVID-19 like the rest of the world. The relationship between the frequency and time of their offline and online interactions on the one hand and the degree of their familiarity experience for tacit and explicit knowledge are investigated based on the survey. In addition, the intermediating roles played by urban environment will also be identified. The expected results are as follows: Adolescent students' learning of tacit knowledge is compromised by the reduction in offline interactions due to COVID-19 while their explicit knowledge learning is not much. Urban environment facilitating offline interaction has a positive effect on tacit knowledge learning, which will help foster urban planners identify the ways to improve adolescent students' learning experience in the pandemic age.

Using WiFi sensing technologies to determine the pedestrians' behaviors and trajectories in urban public spaces

Juhyeon Park (Ulsan National Institute of Science and Technology) and Jeongseob Kim (Ulsan National Institute of Science and Technology).

Abstract

Understanding how people walk and interact with their environment is gaining popularity as it enables various applications ranging from urban and transportation planning and geography. Direct observation has traditionally been used to observe people's behaviors as a primary tool; however, due to its high cost, it has only been used for a small sample size at single points in time and place. While WiFi sensing technologies have recently been getting attention by overcoming these data collection limitations, their applications are limited to quantifying people's number and flow rate on the move.

We developed a methodological framework, identifying the pedestrian's behaviors and trajectories through WiFi sensing data for further implications. We collected all anonymous WiFi data on three different urban public spaces with the development of WiFi sensors and GPS, used as ground truth datasets. Our proposed algorithms determined stationary and moving activities of people based on a similarity of consecutive WiFi signal patterns and generated their trajectories by inferring undetected points. The algorithms were applied in more than 10,000 unique individual trajectories to identify their routes and where they stayed. The routes and stay points were clustered by a K-means algorithm to characterize each individual visitor's types and sensing places.

We created a great opportunity to analyze the human mobility patterns with WiFi sensing technologies in the case of real public urban spaces. This work would help planners and policymakers to understand better. It helps establish an appropriate commercial district strategy for vitalization according to the characterized visitor types. Providing longitudinal evidence provides insight into how design elements and amenities make public spaces sticky. Following that, applications on other key aspects of technology (for example, moving together patterns) will increase the technology's value as an evaluative and analytical tool.

Imagining the future of Brazilian cities

Artur Simões Rozestraten (FAU-USP / RITe), Caio Adorno Vassão (RITe) and Gabriel Poli de Figueiredo (FAU-USP / RITe).

Abstract

In this paper we propose discussing the potentials of approaching technology applied to the city through the field of studies of Representations and the Imaginary – with special emphasis in ICTs. Beginning with a brief introduction to the study of the Imaginary – mainly using the works of Aby Warburg, Gaston Bachelard and Gilbert Durand – and its role in understanding technology in the urban environment, we then will present the state-of-the-art research conducted by Brazil's RITe research group (Representations, Imaginary & Technology), followed by examples of practical applications on future urban scenarios, such as the collaborative development of Brazil's Smart City Charter, especially by utilising Metadesign as a fruitful approach to bridge collective imaginary and collaborative processes for the creation of urban public policy. The challenges and benefits of this approach will be discussed, as well as the potentials and risks of applying ICTs and cutting-edge technology to cities in the global south, which face extremely complex social, economic, and territorial challenges.

Spatial Evolution and Growth Mechanism of Innovation in Small Towns in the Yangtze River Delta—Research Based on Patent Application Data

Kewei Xu (Tongji University) and Li Zhang (Tongji University).

Abstract

Small towns in China's Yangtze River Delta are industrial clusters gradually formed in the process of rural urbanization since China's reform and opening up, which perform an important role in China's manufacturing industry. Based on the patent application database of China's Yangtze River Delta region from 1985 to 2020, this paper analyzes the spatial evolution characteristics of the innovation space of small towns in the Yangtze River Delta region, its relationship with the evolution of industrial structure and its innovation cooperation network, and discusses the important influencing factors affecting the industrial innovation and development of small towns. It is found that the innovation space in the Yangtze River Delta has experienced three stages of development: single center agglomeration, continuous diffusion and multi center re agglomeration. At present, it is still in the stage of rapid development. The trend of expanding along important transportation trunk lines is obvious, reflecting a certain degree of independence, and showing the growth of development mode relying on urban edge expansion, axis series and gap filling. Although a certain scale of innovation agglomeration area has been formed, its innovation ability has not been significantly insufficient, an innovation growth pole that can have a wide influence in the Yangtze River Delta has not been formed, and the innovation efficiency is not high. In terms of innovative growth mechanism, the evolution of industrial innovation in small towns is closely related to the division of labor of regional macro industrial structure, and is affected by factors such as traffic level, regional economic strength of the city, and the perfection of facilities.

Research on the Pattern Evolution and Policy Implication of Innovation Space in Shanghai: The Perspective of Patents

Qixuan Wang (Tongji University) and Jie Ren (Tongji University).

Abstract

Urban innovation space is an important functional space in which innovation activities are frequent and innovation subjects are gathered. At present, the research on urban innovation spatial pattern based on patent has been launched, but it still needs to be refined. Based on the patent application database of Shanghai from 1985 to 2019, this paper analyzes the spatial pattern evolution of innovation in Shanghai, discusses the spatial differentiations according to the technical fields of patents, and explores the innovation network connections within the city. The findings are as follows: (1) From the perspective of the evolution of innovation space in different periods, Shanghai's innovation space has experienced three stages of spatial characteristics: single center in urban center, formation of core-periphery structure, and multi-level node system with the urban center as the core; (2) It is found that the spatial distribution of innovation activities in different technology fields has undergone structural changes, and the spatial evolution characteristics between basic and applied innovation agencies are significantly different; (3) From the perspective of patent cooperation, it is found that in terms of agency connections, innovation cooperation is often concentrated between large enterprises and their independent research centers, key universities and companies in related fields, while in terms of spatial expansion, it also radiates to

the Yangtze River Delta region, especially the Shanghai metropolitan area. Finally, this paper discusses the policy implications of the development stage, spatial difference and network construction on innovation space in cities.

Concept of Data Acquisition System for Supporting Smart Aquaphonic in Urban Area in Indonesia

Ahmad Munir (Hasanuddin University) and Juni Astuti (Cokroaminoto University Makassar).

Abstract

The unemployment rate in urban areas based on 2021 data is 8.32% (BPS, 2021). One solution to overcome unemployment in urban areas is the development of smart aquaphonic. In order to implement automation and increase the interest of young people in aquaphonic, then to develop a concept data acquisition system for supporting aquaphonic in urban area. The objective of this research is to introduce an engineering concept of a data acquisition model that can be applied to aquaphonic in urban areas. The methods of the research is development of functional design and testing the performance of the acquisition system. Measurement of water depth on the aquaphonics module can be done with a distance measurement approach, using an ultrasonic sensor coupled with an Arduino ESP-32. Measurement of suspended solids in the aquaponics module can be done by using TDS meter DFRobot which can be interfaced with IOT (internet of think) via Arduino ESP-32 and WiFi module ESP8266-01. Assessment of pH in an aquaponic system can be done by applying the pH meter sensor SKU SEN 0161 which can be interfaced with IOT (internet of think) via Arduino ESP-32 and WiFi module ESP8266-01, by changing the library of DF Robot. It was found that the comparison between the ultrasonic water depth measurement and the actual measurement is not much different, the standard deviation obtained is 0.95 cm. This data acquisition system can be applied in supporting aquaphonic module in urban area in Indonesia.

The Greeness Level of Samarinda City using Google Street View Panoramic Photos

Ali Suhardiman (Faculty of Forestry, University of Mulawarman), Kurnia Fitrotunnisa (Faculty of Forestry, University of Mulawarman) and Yohanes Budi Sulistioadi (PPIIG-LP2M University of Mulawarman).

Abstract


Most of the challenge for urban planning in developing countries such as Indonesia is the limitation of resources especially finance for spending basic infrastructure and technology so that economic growth can be lifted up. The city with low urban-based economy tends to grow more informal and often struggle to maintain the proportion of green space that important for good urban environment. Indonesia's regulation required city government to allocate at least 30% of the area as urban green space which can be formed as natural or planted trees in the main street median. This study aims to calculate the greenness level along side the roads in the city of Samarinda in East Kalimantan by using database of panoramic photos from Google Street View (GSV). This research is expected to provide genuine information related to the greenness level in the urban area of Samarinda City. Greenness level is extracted from photo using stepwise process involving several computer softwares (i.e. GIS software, Corel Draw, etc) including Canopeo (an Android-based application). The greenness values for each street/road segments is used to evaluate the greenness area of sub-district in Samarinda. The greenest area in Samarinda city is located in Palaran sub-district (9.31%) where population density is low compare to the other sub-districts. In contrast, Samarinda Ilir sub-district is the least green area in Samarinda (2.85%). Samarinda Ilir sub-district is known as densely populated area and plays crucial role as the center of economic activities in Samarinda. Therefore, in this sub-district, concrete buildings are dominant with very few and sparse vegetated land. In average, road segments in Samarinda City has approximately 5.50% of greenness. GSV photos showed that almost all road segments in Samarinda City do not have vegetation any longer along the sides. The landscape is dominated by buildings, settlements, shops and open area.

Influence of digital technology on feminist advocacy for women's right to the city

Rewa Marathe (University of Melbourne).

Abstract

Violence against women (VAW) is 'any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women' (Declaration on the Elimination of Violence against Women, 1993a). It is recognised to be the result of "historically unequal power-relations between men and women". The violence takes many forms, creating a 'continuum' that extends from acts of aggression, to attitudes, beliefs, and actions that support it (Kelly, 1987). The consequence of this victimization and its threat for women is a violation of our fundamental rights and freedoms



as a human being (Nussbaum, 2000; Declaration on the Elimination of Violence against Women, 1993b). Within the urban context, it is a violation of women's right to the city. Feminist advocates have been working to address this issue for decades, but more recently, their work has been influenced by the introduction of digital technology.

This doctoral research explores the impact of digital technology on feminist advocacy in the struggle for women's right to the city. It involves a single case study of a feminist social enterprise called Safetipin. Safetipin offers a range of digital data collection tools focused on women's experiences within the city with the goal of supporting inclusive planning practices and improving freedom of mobility for women. It is based on the concept of the women's safety audits which were designed in Canada three decades ago (Whitzman et al., 2009). The purpose of this research is to identify the emergent trends and patterns of change as a result of work done by organisations like Safetipin and to theorize how digital technology is influencing feminist advocacy within the context of the city.

The research uses a qualitative approach, with an examination of twenty-three semi-structured interviews conducted with the various stakeholders involved in Safetipin's work. The analysis is based upon the understanding that the city is a complex adaptive system (CAS) (Allen, 1997; Batty, 2009; Portugali, 2016) and change is non-linear. Findings of this research illustrate the limitations of using digital technology, while also highlighting its enabling potential for resource scarce advocacy groups. The research concludes with a theory of change on how digital technology is affecting feminist advocacy within the urban context, and a set of recommendations for Safetipin and other feminist advocacy interventions working with digital technology.

The use of information and communication technologies to support social participation in the planning, design and maintenance of public spaces in Mexico

Sergio Alvarado Vazquez (University of Twente), Mafalda Madureira (University of Twente), Frank Osterman (University of Twente) and Karin Pfeffer (University of Twente).

Abstract

The use of information and communication technologies to support social participation in the planning, design and maintenance of public spaces in Mexico. This paper discusses the use of Information and Communication Technologies (ICTs) to support social participation in the planning, design and maintenance of public spaces (PS) in Mexico. Recent research indicates that ICTs can support social participation, create more comprehensive knowledge, and facilitate the exchange of points of view between different actors and the engagement between experts and non-experts in the PDMPs. The use of ICTs for the planning, design and maintenance of PS offers opportunities for stakeholders to tap into the needs and aspirations of civil society at large and transform these into tangible outputs. However, there is still unclarity about how ICT can support social participation. This paper analyses how ICTs are used in the planning, design and maintenance of PS in Mexico. We inquire how stakeholders involved in the processes of planning, design and management of PS are using ICTs to increase social participation and what are their current challenges and opportunities when ICTs are used. We use a case study approach, informed by 22 semi-structured interviews with government practitioners, non-governmental organizations working on public space issues, academics, and architecture/urban planning consultancy companies. We find that in Mexico, the use of ICTs is present at different stages of planning, design and maintenance. Also, current laws, policies and regulations aim to create conditions for more inclusive participatory processes and motivate the use of ICTs to support them, so there is an opportunity to expand the use of ICTs to engage with civil society. However, ICTs are not currently used to support social participation, and the paper expands on the reasons for this. The paper discusses how ICTs use is encouraged by local governments and international organizations, but in practice, still presents challenges for their adoption to support participatory processes due to the lack of advanced technical expertise, high implementation costs and the need for technical literacy, lack of support for participatory use from government institutions and the lack of enough available data to be used for the planning, design and maintenance of PS in the Mexican context.

The Importance of the International Geodesign Collaboration Frameworks and Geodesignhub in Producing Alternative Spatial Development Scenarios: Case of the Municipality of Ivanjica, Serbia

Tijana Dabovic (University Of Belgrade Faculty of Geography, Department of Spatial Planning), Bojana Pjanovic (University of Belgrade Faculty of Geography Department of Spatial Planning), Bojana Ivanovic (University of Belgrade Faculty of Geography Department of Spatial Planning) and Dejan Djordjevic (University of Belgrade Faculty of Geography Department of Spatial Planning).

Abstract

In the spring 2021 at the University of Belgrade - Faculty of Geography a group of spatial planning students and educators conducted a voluntary online Geodesign studio and elaborated the International Geodesign Collaboration project: The Ivanjica Municipality - Nursery Garden of Trees and Alternatives. The main goal of the studio was to raise awareness about the negative impacts of the usual national spatial planning practices and interventions in local communities and offer alternative future spatial development scenarios for the Ivanjica Municipality. Generally, the most dominant national planning practices in Serbia are enforced and promoted as an overall-beneficial development activation instruments with poorly elaborated or entirely lacking strategic environmental assessments. These practices and interventions in the Ivanjica Municipality imply construction of the highway, 57 small hydro power plants (SHPPs) and mountain tourism center in one of its natural parks. The knowledge in this project was co-produced by using the literature and web sources review, relevant documents and data about the municipality and its wider area, IGC frameworks and Geodesignhub. The IGC framework embodied: the general assumptions and innovations for the future development for 10 spatial systems (e.g. agriculture, industry, green, energy, water infrastructure), Steinitz's (2012) Geodesign framework for iterative and collaborative scenario elaboration process of six spatial development scenarios (Early adopter 2021, 2035, 2050, Late adopter 2035, 2050 and Non adopter 2050) and their evaluation in the 17 sustainable development goals (SDGs) achievement matrix. Main innovations which were proposed in the Early and Late adopter scenarios were digital and seamless mountain tourism, urban-rural partnerships in agriculture and initiative of Rewilding Europe. The Non adopter 2050 was elaborated as a spatial development scenario resulting from the mentioned national spatial practices and interventions. The use of Geodesignhub, a digital technology able to apply Steinitz's framework was crucial in visualisation, understanding and experimenting with innovations and producing scenarios and their concomitant evaluations. The entire process confirmed the need for a paradigm shift to a more innovative, collaborative, integrated and proactive approach to understanding and addressing local spatial development challenges and opportunities.

Promoting Smart Cities in Regional Australia: An Analysis of Federal Government Initiatives

Isara Khanjanasthiti (University of New England) and Armin Taklif (Byrne Consultants).

Abstract

Several cities worldwide are now establishing themselves as smart cities, a trend also evident in Australia. The recently introduced Smart Cities Plan highlights the federal government's strategic vision for productive and liveable cities. A major federal initiative is the \$50-million Smart Cities and Suburbs Program, under which funding support has been provided to smart city projects throughout the country. Other key federal initiatives to support the creation of smart cities include City Deals and Regional Deals, which involve partnerships between all levels of government.

Whilst the focus on smart cities has been evident across larger metropolitan areas, several regional cities have also illustrated a clear intention to develop into smart cities. A significant proportion of projects funded by the Smart Cities and Suburbs Program are located in regional cities. The Smart Cities Plan also places a strong emphasis on regional cities. As such, this paper aims to explore opportunities and challenges for promoting smart city development throughout regional Australia through federal government initiatives. The paper will identify critical factors for developing regional cities into smart cities through a literature review. Using these factors, the paper will then analyse the federal initiatives to identify opportunities and challenges for promoting smart city development in regional Australia through such initiatives. Lastly, the paper will conclude with key lessons that are potentially applicable to other countries' national governments intending to develop their regional communities into smart cities.

Technoparks as a Collaborative Platform to encourages Knowledge-Based Urban Development in Surakarta City

Anandhika Arifianto (Bandung Institute of Technology), Ridwan Sutriadi (Bandung Institute of Technology) and Muhammad Ihsan Yudanto (Bandung Institute of Technology).

Abstract

Knowledge development has been recognized as a key factor and has become a core element of city development that has led to efforts to integrate different kinds of knowledge and protect local and regional values. Knowledge becomes the main role of the city in improving and building regional competitiveness. However, knowledge, as something intangible, is very hard to measure in advance of a phenomenon that transcends boundaries. In some cities in the West, knowledge-based urban development has been occurring since the 1970s, as they transformed from industrial cities into knowledge-oriented economies. There is an evolving term in urban development that captured knowledge and innovation elements, called KBUD (Knowledge-based urban development), which has a similar understanding of knowledge and innovation as the infamous RIS (Regional Innovation System) theory. The KBUD approach is not only able to explain process-based knowledge processes institutionally but also based on place. Actors' connectivity is important in knowledge-based development, but it is still unknown how actors should interact to achieve a great development based on knowledge. This paper will be captured this gap by explaining the roles and connectivity of actors to encourage the KBUD process. This paper uses a single case study in Surakarta City that has a collaboration platform, namely Solo Technopark which is supported not only by the local and national level governments but also by the industries and universities. By conducting in-depth interviews with the managers of Solo Techno parks and several relevant informants, we explore more about the roles and connectivity within the actors during knowledge creation and diffusion using a knowledge-based urban development approach.

Structuring Smart City Indicator: Smart City Development as Staging Process

Hadiyan Wijaya (University College London).

Abstract

Applying the Smart city developmental concept is often seen as a leaping process by developing countries to tackle urban issues that they are facing. On the other hand, the reapplication of smart city in developing countries has gained some critics as those processes are mainly expensive but rarely tackle the problem effectively and efficiently. The application of smart city is still perceived to be focusing on technological aspects rather than thinking holistically approaching all-around aspects. This is reflected by some indicators that heavily assess the smartness of the city based on some smart technological system that they have achieved with less respect to the context of the city. It also some assessments which smart city indicator's domain should be implemented first prior to other domains or have more weight to achieve sustainability of smart city concept application.

This paper is going to structure some indicators that are already used to assess smart city applications for cities around the world. This process includes giving weight to each indicator and the line of correlation between them to formulate the staging process of smart city development. This study will also identify the requirement for smart city concept to be applied and consider that as the requirement of stages for cities to stage upstaging ladder.

The methodologies that will be used are regression analysis to get the correlation between indicators and city context, cluster analysis to determine groups of smart city development, correlation analysis, multicriteria analysis, and content analysis to formulate smart city development staging and to include the requirement context of smart city to be applied.

A Land Administration System for Sao Paulo

He Nem Kim Seo (International School of Urban Science of University of Seoul).

Abstract

United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) reports Land Administration System (LAS) as an essential infrastructure to promote equity, secure land rights, and alleviate poverty. Historically land cadasters have been responsible for informing land data and developed through time to support urban development and strategic planning processes. However, although the main tool to manage land, land administration theory shows the need to complement cadaster with a more holistic paradigm to solve land problems and issues effectively. São Paulo city's cadaster named TPCL has been historically used as the basis for the urban planning process. As in many cases, the main city's land cadastre focuses only on the regular properties for fiscal matters and does not cover the public lands, informal settlements, and rural lands, for example. Although it has been used to formulate urban policies, other essential information regarding land, like land use or contaminated brownfields, is left aside. Through an extensive official



documental review, this study will show that TPCL has been detached from the territorial development variables making its attribute, like land value, lacking to address the local urban policy. Moreover, several studies show a policy gap (Minarelli, 2019) in land information systems. Despite the recent efforts to develop and upgrade the land information systems, there is no regulation, an effective Local Spatial Data Infrastructure (LSDI) framework, or a GIS master plan, which brings many legal uncertainties for land management. Therefore, the TPCL cannot support urban and territorial planning, and it is necessary to build and update it under a more holistic approach, promoting an effective Land Administration System (LAS). To fulfill TPCL in the direction of a LAS for São Paulo city, the present study will propose its integration with the zoning system of São Paulo, which complies with the attending land development function of a LAS.



A study of an Appropriate Urban Layout Model Based on Transit-Oriented Development - Towards a Tokyo Polycentric Garden City-

Tatsuya Fujii (Civil Engineering Program, Faculty of Engineering, University of the Ryukyus) and Prof. Tetsuya Ando (Civil Engineering Program, Faculty of Engineering, University of the Ryukyus).

Abstract

The number of passengers using railway stations in Metropolitan Tokyo has been decreasing due to changes in commuting means, the aging population, and the impact of the COVID-19 pandemic. The region is also at risk of an earthquake disaster. Therefore, this study proposes a polycentric urban model in which the urban areas are concentrated within a 15-minute walking distance (1km) from the stations, and each periphery is surrounded by a green belt as open space. The desirable width of the green belt is assumed to be 100m at the city center as an evacuation zone and 500m at the suburban area for multipurpose green space. Two models of urban concentration are examined: first is within the framework of the current regulations, and second is through easement of regulations. Three railway stations are selected for the study: Tokyo and Shinjuku Stations in the city center and Takenotsuka Station in the suburban area. First, the total floor area of existing buildings and the net lot area are calculated within each 1km radius. Then the floor-area ratio for each is calculated from the total floor area/net lot area. If there is extra room left in the floor-area ratio by regulation, buildings outside the 1km radius are moved to within the 1km radius. As a result, the fulfillment rate of the floor-area ratio of each station area are; Tokyo 99.4%, Shinjuku 7.1%, and Takenotsuka 51.5%. If extra room within the 1km radius is used by moving buildings from outside to make room for the greenbelt, the width of the greenbelt for each station area would be; Tokyo 1.8m, Shinjuku 47.1m, and Takenotsuka 269.3m. All greenbelts are less than the desired width. Next, a model of easement of regulations is examined. The 1km radius from the station is divided into two areas, 500m, and 500m-1km, and the highest existing floor area ratio by regulation for each area is applied for the whole area. The width of the greenbelts for each station area are; Tokyo 96.3m, Shinjuku 110.5m, and Takenotsuka 325.4m. In the case of Takenotsuka Station, the greenbelt does not reach the desired width. If the maximum floor area ratio is eased to 400% and applied to the entire area of a 1km radius, the width of the greenbelt would be 504.4m. This may be an effective urban relocation model for realizing a compact city, where suburban residences, increasingly depopulated, are reorganized around stations.

Moving from pandemic adaptation to a mainstream method: Lessons from an experiment in remote photovoice in one settlement in Accra, Ghana

Kimberly Noronha (University of Pennsylvania) and Nii Kwartelai Quartey (Independent Researcher).

Abstract

Our research question asks how participants' relationship with the state defines their lived experience of informality. The ideal methodological fit for this was participant observation, obviously impossible during the pandemic. We were forced to adapt from our plan of in-person to a remote method. This paper discusses our experience adapting from participant observation to remote photovoice over the last eighteen months in Ga-Mashie, Accra, Ghana, making the case for adding this to the planners' toolbox post-pandemic.

Our adaptation needed to consider a remote mode, long-term participant engagement, and an exploratory research question. The pandemic forced us to maintain physical distance, which we bridged with smartphones. Travel restrictions did not allow pre-scheduled travel or neatly defined timelines. Other non-pandemic limitations still held: Our research participants are women in communities traditionally distrustful of researchers, often technologically disempowered, and whose participation meant time away from their livelihoods. These limitations and requirements called for adapting the traditional photovoice process to consider limitations of distance, fluid timelines, building trust, and empowering participants technologically while working around their routines. All this needed to be done while getting us as close as possible to the data that participant observation could generate.

First, we looked to photovoice to compensate for the loss of in-person participant observation. Second, we adapted photovoice from an in-person to a remote method using smartphones for both, photography and communication. Our adaptation uses what we call a staccato engagement i.e., curating a long-term dialogue with short bursts of engagement. This was particularly useful when working with women working informally with fluid work timings and different comfort levels with technology. We worked around their schedules, recording life and its pandemic interruptions. We co-developed this process with participants who used their phone's voice recorder to reflect as they took photographs, providing us with rich real-time qualitative observations. This countered our inability to convene in-person reflection interviews.

We see the usefulness of this method to planners looking to engage marginalised voices, particularly in the global south. By its very nature, photovoice allows insurgent voices to emerge in the research process. Acknowledging that photovoice will never serve as a replacement for participant observation, one critical advantage was the privileging of the participants'

perspective rather than just the researcher's. This adaptation is suited to researching people who live informally, making a strong case for remote photovoice as a mainstream planning methodology, particularly in the global south.

Vacant and under-utilized land inventorying in Kochi Municipal Corporation, India

Angelique Chettiparamb (University of Reading), Anil Ravindran (SCMS School of Architecture) and John Kuruvilla (SCMS School of Architecture).

Abstract

This presentation will focus on an urban vacant and under-utilized land inventorying that is currently taking place in Kochi Municipal Corporation, Kerala State, India. (KMC) The project is led by the University of Reading. SCMS School of Architecture and the Centre for Heritage, Environment and Development of KMC are partners. The project is funded by Research England under their Rapid Response for Policy Engagement funding.

The aim of the project is to identify and categorise vacant and under-utilized land within the 74 wards of Kochi Municipal Corporation so as to reveal underlying spatial dynamics. The entire project is carried out using open source platforms (QGIS) and softwares (epicollect5). The steps in the inventorying work consists of preparation of geo-referenced GIS maps; desktop work to identify potential sites on GIS maps in multiple layers; preparation of fieldwork checklist on epicollect5; on-site fieldwork verification using checklist; finalising GIS maps with vacant and under-utilized land marked with attributes.

From the data collection detailed above, extensive analysis will follow to understand underlying spatial dynamics. For this presentation, we will focus on answering the following two research questions: 1. What is the extent and pattern of urban decay and vacancy throughout the city and what spatial dynamics does it point to? 2. How much and what nature of potential brownfield vacant land can be identified and earmarked? The presentation will present the project aims, the methods used, the analysis conducted and the answers to the above two questions.

Analysis of the distribution structure of the number of hospital beds and the capacity of long-term care insurance facilities from the viewpoint of regional characteristics -Using structural equation modelling for secondary medical area throughout Japan-

Takuya Kusunoki (Tokyo Metropolitan University), Tohru Yoshikawa (Tokyo Metropolitan University) and Ryo Sanuki (Tokyo Metropolitan University).

Abstract

The Japanese Government has requested each prefecture to formulate its "regional medical delivery concept" in order to improve the efficiency of medical care provision by reducing the number of excess hospital beds. However, this plan only estimates the number of hospital beds needed in 2025 based on the state of medical care, and lacks the knowledge required for urban and regional planning in terms of the location of long-term care insurance facilities and home support facilities that will replace hospital beds. Considering the above-mentioned background this study aimed at clarifying the correlation structure of the distribution of medical resources, such as existing hospital beds and long-term care insurance facilities, from the perspective of regional characteristics such as population concentration and household structure, and then to consider the impact of the reduction of hospital beds on the region, and to gain points to be considered in urban and regional planning. The data was compiled for the year 2015, when the regional medical delivery concept began to be formulated, and for the year 2020, when the reduction of hospital beds under the concept is underway. Twenty variables related to the distribution of medical resources and regional characteristics were compiled for each secondary medical area (area consisting of multiple municipalities), which is the main standard for determining the number of hospital beds. The research method is as follows. First, the relationship between the data is clarified by factor analysis. Second, a causal model with regional characteristics as the cause and medical resource distribution as the result is assumed and validated by structural equation modeling. Third, from the validated causal model, the study predicts the impact of the reduction of hospital beds on the region, and gain points on what should be considered in urban and regional planning. The results suggest that the distribution of long-term care insurance facilities is thin in urbanized areas. The aging of Japanese population in urban areas will lead to increased demand for long-term care insurance facilities, but high land prices and the inability to secure sites in urban areas are likely to be factors that prevent construction. This suggests that it will be urgently needed to provide medical and long-term care that does not require facilities, such as home care. In response to this, it may be necessary to relax restrictions on the use of buildings by zoning district for long-term care insurance facilities.

We Had to Destroy the Project to Evaluate It”: Randomized Control Trials as Interventions

Jigar Bhatt (Independent).

Abstract

Over the past two decades, Randomized Control Trials (RCTs) have become the most popular development economics research method and the standard by which development evaluations are judged. Through an embedded case study design and mixed methods research approach of randomized evaluations of five farmer training programs across three continents, this study found that RCTs should be understood as parallel projects that are entangled with the programs they aim to evaluate because they do not simply observe—they intervene. RCTs intervene in programs by randomly assigning project participants into treatment and control groups and maintaining the control group throughout the evaluation. Several studies have described randomization as an unwanted intrusion in program design, especially since control group participants are denied program benefits, and the ways participants subvert their control group assignment. This study presents a novel reason for why randomization is opposed—development experts’ alternative rationalities—and describes what happens when the control group is successfully maintained. It found that when economists successfully grafted their research design onto the field, they supplanted implementers’ purpose-driven targeting based on alternative rationalities and expert judgment with random targeting. Maintaining the control group’s status, meanwhile, interfered with how implementers sequenced their activities. The study concludes that RCTs devalued development by reducing program performance all while recording the depressed outcomes with a “gold standard” method. In other words, RCTs gave the impression that the programs “don’t work,” and were thus not worth funding, when it was the project-plus-RCT that was deficient. The study contributes to critical social scientists’ recent efforts to open the black box of RCT implementation while also sharpening the debate over RCT ethics by arguing that critics should concentrate on a hitherto underappreciated issue—epistemic injustice. Feb 27, 15:56 GMT.

Identifying Functional Agglomerations and Urban Centers Using Open-source Data and Machine Learning: Framework, Applications and Planning Implications

Pengyu Zhu (Hong Kong University of Science and Technology).

Abstract


Metropolitan polycentricity has been widely studied. However, most previous work is based on types of data only systematically collected in developed countries, and there is little work applying more widely available non-traditional open data to efficiently identify urban spatial agglomerations. This paper proposes a theoretical framework to identify different urban functional agglomerations and sub-centers using open-source data. We use the K-means method to recognize the geographical patterns of urban function features and the Density-Based Spatial Clustering of Applications with Noise (DBSCAN) method to identify spatial agglomerations and sub-centers with different functions. Importantly, the unsupervised machine learning method (K-means) we use to identify functional agglomerations in urban areas can more effectively reflect spatial distribution characteristics and the agglomeration effects between different urban functions, as compared with traditional clustering analysis. In particular, accessibility-related variables are of great help in identifying different functional agglomerations, and the K-means method enables analysis of the correlation between different urban functions. After proposing the theoretical framework, we conduct an empirical analysis using Points of Interest (POI) data from Guangzhou, China. This empirical application identifies 49 functional agglomerations and 11 urban sub-centers, consistent with Guangzhou’s Urban Development Plan 2018-2035. Our analytical framework is highly generalizable to most cities or countries where such open-source data is available, and thus provides an innovative new methodology for relevant research that can directly inform urban planning and management practices worldwide.

Identification and Pattern Analysis of Urban Vitality Centers from the Perspective of Behavior and Space Fusion

Liyang Rong (shanghai tongji urban planning&design institute) and Hongling Yin (Shandong Jianzhu University).

Abstract

With the acceleration of urbanization in China, the scale of urban space continues to expand, and new urban centers have emerged in urban development areas, making the urban spatial structure change from a single center to a multi-center; at the same time, the quality of urban centers has also been continuously improved. The transformation of the traditional urban commercial center to the CBD (Central Business District), CAZ (Central Activity Zone) and other development models, the functions of the urban center are gradually compounded. In this context, the thesis chooses to study the urban center



and its spatial relationship as the research object. Through a review of relevant research literature, the paper combines the physical space and behavioral space of the city center, and proposes the concept of an urban vitality center. Taking Jinan as an example, the POI data of the AutoNavi map representing the city's functions and the Baidu map heat map data representing the spatial agglomeration of the city's population were selected, and 19 urban vitality centers in Jinan were identified with the help of ArcGIS, UCINET, SPSS and other analysis software. Afterwards, the spatial relationship of 19 urban vitality centers is studied from the two dimensions of scale level and spatial connection. The main conclusions are drawn: First, the overall spatial relationship of Jinan's urban vitality centers presents an obvious "level + network" feature; Second, the scales of different vitality centers in Jinan are significantly different, showing a decreasing circle and core in space. ; Third, the Jinan urban vitality center network has initially formed, but the spatial connection of urban vitality centers is quite different; fourth, compared with the scale level of vitality centers, the hierarchical relationship of vitality centers in the network has changed and the difference is larger.

Mobile Access Hub for Distribution of E-Commerce Parcel in Indonesian Urban Areas

Riharsono Prastyantoro (Program Study of Transportation, ITB Bandung).

Abstract

E-commerce transactions are expected to grow 31.2%, generating transaction value of around IDR 526 trillion in 2022. These transactions are assumed to increase during pandemic since those who live in urban areas prefer to buy goods online rather than offline. Online buyers are known to be very demanding in which they want courier operators to deliver their goods or packages faster at lower prices. This brings courier operators to face a formidable challenge of having a distribution system capable of delivering parcel on time, at an efficient cost, while considering the urban environment. A two-echelon distribution system using a Mobile Access Hub (MAH) with small vehicles such as motorcycles (conventional or electric) is expected to boost efficiency in operational costs and reduce the greenhouse effect level. In accordance with the preset schedule, MAH brings the parcel to a predetermined location in each delivery zone. Using spatial analysis, it is proven that the best MAH location is determined by the density of the parcel, internet quota usage, and the density of online buyers, along with two constraints, namely space availability and traffic density level. As a city with a profile that meets a representation of urban areas in developing countries, Bandung is chosen as a case study of the two-echelon distribution system of e-commercial parcel using MAH. In the scenario of using Grandmax Blindvan fleet with 0.72 tons capacity and conventional motorcycles, this two-echelon system can reduce operational costs by 19.7% and reduce greenhouse gas by 3.4 tons of CO₂ per year.

Spatial Model of Physical and Social Infrastructure of Happiness Index in Gedangan District Malang Regency Indonesia

Ismu Rini Dwi Ari (Brawijaya University), Septiana Hariyani (Brawijaya University) and Budi Soegiarto Waloejo (Brawijaya University).

Abstract

Development is closely related to efforts to improve welfare. Welfare equality is carried out by making programs to increase employment, health, and happiness levels. The happiness index (HI) has a correlation with the challenges and goals of the SDGs. The Central Bureau of Statistics of Indonesia formulates the measurement of happiness that is viewed from the dimensions of feelings, meaning of life, and life satisfaction. The objective of the study was to measure the HI of the community and scrutinize spatial relationships between the HI value with infrastructure accessibility and social capital of the community in the study area. In the research, the HI was applied to understand community welfare at the village level with 319 respondents that were proportionally distributed between 8 villages. The HI results indicated that the district has an index of 50.34, whereby its happiness is at a quite happy level. Sumberejo Village had the highest value of happiness index 55.61 amongst others. One cluster was formed (high – low) at the LISA map, illustrating a high HI village had the nearest physical border with a low HI village. The Spatial Lag Model implied that among 6 variables of physic and social infrastructures, the variable of Rate of Participation of informal institutions had a significant impact to increase the happiness index value.

Urban energy planning and design. Urban morpho-energetic analysis applying the theory of urban relativity on urban data from LabVI of the innovation district and the city of Montreal

Salima Bellili (Territory HeatUp Technology).

Abstract

New analysis technology and urban design for responsible urban planning of our living environments, calculation of urban energy on several forms and strategic planning for adaptation to climate change through massive urbanization. A morphoenergetic analysis of urban planning in the Smart Life Laboratory (LABVI) in the Quartier de l'Innovation (QI), located in the borough of Ville Marie in the heart of downtown Montreal. A morpho-typological analysis that we propose, Analysis of urban data of the city of Montreal by Territory HeatUp technology, which studies the city at the square micrometer (μm^2), our new utopian scale of analysis introduced in the study of the smart urban project of the smart city. Presentation of our results of research and analysis of climate change caused by an urban structure, a first disclosure of the strategy of adaptation of cities to climate change using urban data, according to our new technology based on the theory of relativity urban. The concentration of tropospheric ozone (O₃) and carbon dioxide (CO₂) caused by the heat released from urban structures during high heat, the main cause of mortality and the change in the microclimate in our living environments.

Exploration on machine learning layout generation of residential planning in rural areas of Shanghai

Ni Xie (Tongji University), Yuanxiao Kuang (Shanghai Pudong Plan Architecture design Institute Co.,Ltd.) and Yiru Huang (Tongji University).

Abstract

At present, although the hollowing out of developed urban and rural areas is serious and the land utilization rate is low, the housing demand remains high and the land use value is high, so the land efficiency can be improved through the construction of new settlements in rural areas, and the urban living needs can also be solved. Many rural houses have been overthrown and rebuilt in the process of urbanization, the rural style of existing newly built settlements is missing, and the texture of traditional villages has not been preserved. The purpose of this paper is to solve the problem of how to achieve the planning of new residential areas in rural areas through machine learning methods. This paper uses a summary of the traditional concerns of architects or planners in rural planning projects as a basis for research. Clarify the influencing factors, group boundaries and types of rural settlement planning, extract feasible digital standards from them, and annotate samples under the reference of the standards to establish GANs (Generative Adversarial Networks) model. Through the case study of a rural area in Shanghai, the labeling method was adjusted, various sample augmentation methods were continuously used to increase the sample size, the sample quality was adjusted by screening samples, and multiple trainings were finally generated to meet the needs of the new residential areas planning scheme in the given area. This study finds that machine learning methods have great potential for new settlement planning in rural areas; GANs models are very effective for generating planning schemes; and this research method provides new ideas for rural area planning.

Urban-territorial scales and fabrics in a relational methodological approach. Sondondo Valley, Ayacucho, Peru

Marta Vilela (Pontificia Universidad Católica del Perú).

Abstract

About 2800 small towns (500-5000 inhabitants) are home to 18% of Peru's population. Many of them lay scattered in Andean valleys (2500-3800 m a.s.l.) with significant altitudinal differences over short distances. This creates ecozones that, although historically have been adequately managed by the population in vertical archipelagos, are currently in a state of poverty due to global market logics and centralism. This is the case of the small towns of the Sondondo valley (Ayacucho), an area characterized by emigration of young people and recent urban changes under modernization and development. However, during the 2020-2021 crisis, family and collective dynamics have re-emerged, with a return to the cultivation of local agricultural products in vegetable plots in search of food security, an effort that should be bolstered by local authorities. The challenge is that to plan for the most local a bigger-picture point of view is required: from the territory, considering a culture of common care and welfare.

The territory is structured in networks of water, roads, energy, etc., which form fabrics that extend into the urban fabrics of small towns. The continuity of scales and of the urban-territorial fabric is a spatial component, transversal to territorial

dimensions of greater complexity: the occupation (historical and current), perception (sense of belonging and identity) and construction of the territory (vision of the future).

The interrelation of spatial continuity and territorial dimensions is used to define spatial relationships indicators for the analysis of qualitative data. This data was obtained from local actors in Sondondo—in 2018, 2019 and 2020—, through territorial and urban walkthroughs, semi-structured interviews, working groups and participatory workshops, by students of the Pontificia Universidad Católica del Perú's master's degree in Architecture, Urban Planning and Sustainable Territorial Development. This was complemented with secondary data structured and reorganized according to this methodological approach, regarding inclusion and innovation. These indicators help local planners to assess and appreciate the continuity of urban-territorial fabrics (food security; e.g., vegetable plots), adequate urban-rural interaction (urban centers in their intermediation and support roles; e.g., quality public spaces and services), and the creation of a collective territorial project.

The territorial approach emphasizes relational and qualitative data to shape integrative and operative planning methodologies that can confront management logics that produce public infrastructures that fragment territories. This methodological approach is expected to contribute to local urban management by guaranteeing urban-territorial interconnectivity and re-territorializing management and its urban-architectural investment projects.

Urban Retail Hierarchy Under E-Commerce Explosion

Chairul Maulidi (ITB).

Abstract

The digital platform has driven the e-commerce 'explosion' over the last 10 years. People can search, choose, order, and transact goods/services from home, without having to come to a commercial center. This technology could weaken the magnetic power of CBD as a commercial center. This study looks at patterns of retail distribution which has formed after e-commerce emergence. Data mining procedures are applied to scrap retail data (convenience store, cafe, and restaurant) in Surabaya City. This study analyzes the distribution pattern of retail units descriptively, then tests their correlation with the character of the surrounding area. The results show that the number of café and restaurant units in the CBD and residential centers tend to be high, whereas the number of convenience store units in the CBD area is low. The number of convenience stores is strongly correlated with population. While cafes and restaurants are strongly correlated with the integration level of the street network. Those findings bring a further contribution, regarding additional consideration for central place theories.

A three-step urban growth simulation model in metropolis agglomerations: Study on Suzhou, China

Siyu Miao (tongji university) and Yang Xiao (tongji university).

Abstract

Urban growth has attracted worldwide attention, especially in developing countries. Over the past few decades, China's urban built-up areas have experienced rapid growth. The built-up area increased by 78.3% between 1990 and 2000 and by 85.5% between 2000 and 2010. Urban growth boundary (UGB) was imported into China's urban planning in the early 20s. For now, UGB not only serves to control the spatial expansion of the city but also to guide the future spatial form of the city. Urban agglomeration is the main spatial body for promoting China's new urbanization. How to delineate UGB from the perspective of urban agglomerations is an important issue to be considered in the next stage in China, as well as in other developing countries. This paper took Suzhou, a sub-central city in Yangtze delta metropolis agglomerations, as an example to develop a way for simulating UGB by consideration of multi-scale urban growth driving factors. We proposed a "classification-mechanism-simulation" framework based on urban models. Firstly, the parcels within Suzhou were classified according to their multi-scale spatial, socioeconomic, and natural characteristics by using K-Means and K-Nearest Neighbor (KNN) algorithms. Secondly, the spatial growth mechanisms of every class were explored by using Random Forest (RF) regression. Lastly, Markov Chain and Random Forest-Cellular Automata (RF-CA) model was used to simulate and predict the urban growth of Suzhou, and the Morphological Erosion and Dilation (MED) method was further applied to integrate the fragmented plots. We found 5 main types, and 33 subtypes in Suzhou. The urban growth of all types in Suzhou was significantly affected by the Yangtze delta metropolis agglomerations, especially for the parcels near Shanghai, the core city of the metropolis agglomerations. By sorting out the spatial types of cities, this paper finely explored the mechanisms affecting their spatial expansion and formed municipal principles and guiding schemes for the delineation of UGB for various types of spaces. We highlighted the importance of implementing differentiated functional layouts and spatial planning strategies for different types and promoting refined governance control units in spatial planning.

The satisfaction evaluation of 15-minute community-life circle environment from the perspective of household life behavior: a case study of shanghai

Baoxin Zhai (College of architecture and urban planning, Tongji University) and Wei Zhu (College of architecture and urban planning, Tongji University).

Abstract

Background: As an important planning document in China, the planning guidance of 15-minute community-life circle (hereafter referred to as 15 life-circle) has become an important means to equally allocate public resources and ensure residents' quality of life. This planning guidance emphasizes meeting the residents' basic life behavior needs which not includes working and schooling within a 15 minute walk in the community. However, most of the existing studies study 15 life-circle from the individual perspective, and have not yet investigated the satisfaction of the 15 life-circle environment from the household perspective. Purpose: Facing the application of 15 life-circle planning, this paper constructs a set of methods from understanding the characteristics of household daily life behavior to evaluating the satisfaction of the 15 life-circle environment to meet household life behavior needs (hereafter referred to as the life-circle satisfaction). Methods: This paper defining three household daily life behavior measurement indicators: household daily life travel distance, frequency and life-circle satisfaction, and then using the Gamma regression model and the Quasi-Binomial Logistic model to analysis the relationship between these three measurement indicators and the 15 life-circle environment. Lastly, based on the relationship model result, we evaluate the household life-circle satisfaction and put forwards some optimization suggestions. Results: Combined with the questionnaire survey data of households in Shanghai, the main findings as follows: (1) The average household travel distance is 2.5km, and the average travel frequency is 7.6 times/week; The household travel distance is inversely proportional to the frequency. (2) There are significant differences in household daily life behavior in different life stages; (3) The life-circle satisfaction of shanghai is general low, the average satisfaction is 56.1% which means the 15 life-circle only meets the household's 56.1% daily life needs. (4) The number and service population of supermarkets, shopping malls and parks in the 15 life-circle significantly affect household life behavior and the life-circle satisfaction. (5) The spatial distribution of life-circle satisfaction decreases outward from centers at all levels, and the average satisfaction of the new town center is better than that of the main city and sub centers. Conclusion: Based on the understanding of household daily life behavior, this paper constructs the evaluation method of life-circle satisfaction, which provides accurate and quantitative technical support for helping the community's 15 life-circle planning.

Inequalities in the Accessibility to Schools in the ABC Region, Brazil

Roberta Perez Magalhães (Federal University of the ABC Region, Brazil), Flávia da Fonseca Feitosa (Federal University of the ABC Region, Brazil) and Diego Bogado Tomasiello (Federal University of the ABC Region, Brazil).

Abstract

The concept of accessibility, capable of analyzing jointly land-use and transport system characteristics, has been explored over the past decades in many areas, such as urban planning. Latin American cities are marked by deep inequalities in the distribution of transport infrastructures and residential locations of different social groups, which results in a perverse combination of social exclusion and accessibility inequality throughout the territory. New patterns of land use have emerged as consequence of the growing use of motorized individual transport, with negative impacts on the accessibility of public or non-motorized transport users (pedestrians and cyclists) to different urban opportunities. The present study explores inequalities in the accessibility to schools through walking. Educational opportunities represent a basic right that contribute to development of the current and future societies and walking is an accessible mode of transport, which everyone should have the choice of using to fulfill essential tasks. The ABC Region was chosen as the study area since it represents an economically relevant industrial area in the Metropolitan Region of São Paulo, Brazil, the second largest metropolis in Latin America. The study relies on measures of accessibility that are able to identify areas lacking access to schools and how accessibility may differ among different population groups. Spatial analysis based on the use of such measures can, therefore, subsidize the formulation of public policies for mitigating territorial inequalities. To compute the minimal walking travel time from residential areas to schools, open-source data – such as the most recent Origin and Destination Survey for the São Paulo Metropolitan Area - were used. A cumulative accessibility measure was also computed to analyze school access inequalities between the social groups distributed in those areas. The results indicate that the richest groups have better access to schools in their neighborhood, since they can afford to live in locations with higher density of such equipment. Despite of that, further analysis revealed that the school options for this group are not restricted to their surroundings, which often leads them to travel to more distant schools, considered to be better quality. Still, the poorest groups, which are much more restricted in terms of school choices, present higher travel times to schools. This happens due to the lower level of accessibility to schools in their neighborhoods as well as the limited amount of vacancies in public schools.

Assessing the modified contact perimeter approach for measuring urban compactness in the golden triangle metropolitan region: A case study of Joglosemar, Indonesia

Dimas Damar Dewa (Universitas Diponegoro), Imam Buchori (Universitas Diponegoro), Iwan Rudiarto (Universitas Diponegoro) and Anang Wahyu Sejati (Universitas Diponegoro).

Abstract

Urbanization is a continuous process characterized by built-up area expansion. Significant urbanization occurred in developing countries, especially in Asia, including Indonesia. Indonesia has experienced significant urban growth in the past two decades. Many Indonesian cities, such as Jogjakarta-Solo-Semarang (Joglosemar), are rapidly expanding and will certainly become megacities in the future. To monitor urban sprawl across time and space, we need indices that are not affected by shape or differences in city or grid size. This study measures the urban compactness using the modified contact perimeter approach in the Joglosemar region. This study also compared the modified contact perimeter approach with other urban compactness metrics. This study used Landsat 5 Thematic Mapper (TM) Imagery 2000 and 2005, Landsat 7 Enhanced Thematic Mapper Plus (ETM+) Imagery 2010, and Landsat 8 Operation Land Imager (OLI) Imagery 2015 and 2020. The supervised classification method was employed to obtain the LULC map and extract the built-up area. We discovered that the modified contact perimeter approach is well adapted for grid-related issues and size-invariant on built-up area compactness. The compactness index can provide the same understanding to assess if a city has a compact form or not through a spatial description. This study showed that Joglosemar had experienced significant urban growth in the past two decades, which is becoming increasingly dispersed. Here, small towns are growing as transit cities, connecting the three large cities as growth centres, as part of Joglosemar's growth process. In this case, the Joglosemar region will continue to disperse in the absence of a strategic plan to regulate the region's future coalescence. Therefore, by providing measurable metrics, the index described in this study can aid in developing, implementing, and measuring land-use policies and other programs.

A Geospatial Analysis of Community Conditions and Hospital Access in Rural Pennsylvania

Jongwoong Kim (West Chester University).

Abstract

Access to rural healthcare in America has been the subject of substantial research in a range of domains, including public/health administration, rural studies, and a variety of other social and medical sciences. However, the bulk of these research are undertaken from the standpoint of finance and management (i.e., the perspective of the service provider or supplier), whereas fewer studies are conducted from the perspective of the service receiver/consumer, in part due to the difficulty of obtaining data in rural areas. Even fewer studies have employed geospatial approaches, particularly at a smaller geographic scale (e.g., community/neighborhood) than those analyzing at a larger, city or county, scale, despite the fact that significant variation in socioeconomic, health, and medical access conditions exists at the smaller geographic scale. In this regard, this project aims to develop three GIS (Geographic Information Systems) and geospatial analytic models that can visualize and examine: (1) existing community social, economic, and health conditions by creating a "Community Conditions Index" interactive map; (2) existing community social, economic, and health conditions factored into the local hospital's capacity by creating a "Hospital Priority Index" interactive map; and (3) communities of emergency and/or specialty healthcare need, or "hospital deserts (determined by evaluating existing hospital locations by travel time)," by creating a "Hospital Access Coverage" interactive map, all at the community (census block group) level throughout the state of Pennsylvania. This project includes multiple public policy and planning foci, from: (a) the "Community Conditions Index" map that state-level agencies and local municipalities can utilize as a tool that helps make their program assistance and funding (location) decisions; (b) the "Hospital Priority Index" model that can serve a similar role as (a), with a particular focus/weight on local hospital capacity; and (c) the "Hospital Access Coverage" model that identifies specific communities in the "hospital deserts," which the state-wide programs and regional/local planning initiatives should prioritize to support. Additionally, select neighborhoods with exceptionally low index scores and/or in the "hospital deserts" may be further examined using a case study method.



A Study on the Method to Capture the Amount of Greening Volume -A Case Study of Bise Village, Okinawa-

Satoka Nerome (University of the Ryukyus/ Faculty of Engineering/ Civil Engineering Program.) and Tetsuya Ando (University of the Ryukyus/ Faculty of Engineering/ Civil Engineering Program.).

Abstract

To mitigate environmental problems such as global warming and the heat island effect, many municipalities have implemented a program that requires greening of a certain percentage of the site area. Traditionally, the indicator of greening has been captured by the percentage of green cover. However, the green coverage rate is not enough to provide an accurate indication of the amount of green. Therefore, this study considers the greening volume as an indicator to capture the accurate degree of greening as a volume. As a case study, the greening volume of the Bise Village in Motobu, Okinawa, famous for its premises forests of fukugi trees (*Garcinia subelliptica*) is studied. The method of calculating the greening volume is as follows. First, a planar projection of the trees from satellite photographs is created using GIS. Next, the tree height is measured by field survey. Combining the planar projection and the measured tree heights creates a three-dimensional tree polygon. Finally, the greening volume of fukugi is calculated by multiplying the tree form factor (0.3-0.4 for a single tree, 0.5-0.6 for a series of trees). The tree coefficients of fukugi are calculated by determining the sufficiency ratio: the fukugi volume is obtained from the image of fukugi using 3D CAD, and the ratio to the volume of the columnar solid is obtained by multiplying the plane projection by the height. As a result, the greening volume of fukugi in Bise Village was approximately 300,000 square meters. If divided by the village's total area, the height of the volume is approximately 1.27 meters. Bise Village is a place where one can feel a lush green space. These results quantify the term "lush greenery" for the first time for Bise, traditionally perceived in a sensory sense. This greening volume is a visual greening volume containing internal voids. If this is to be used as an environmental indicator, it is necessary to calculate the net volume with the voids removed. In addition, since the tree-form factor varies by tree species, it needs to be calculated for other tree species. Further study is necessary on the relationship between the greening volume and the evaluation scale of green perceived in a sensory sense.

Do the sensory experiences of visitors lead to the revitalization of commercial streets?

Jeongseob Kim (Ulsan National Institute of Science and Technology), Juhyeon Park (Ulsan National Institute of Science and Technology) and Ji Woong Jeong (Ulsan National Institute of Science and Technology).

Abstract

The vitality and function of the commercial districts have been threatened with the decline due to the growth of online commerce. This trend is deepening in many commercial streets through the COVID-19 pandemic. As a key factor for the revitalization of commercial areas, this study focuses on sensory experiences, which are difficult to replace in online commerce. Five senses, such as sight, hearing, touch, smell, and taste, can be directly experienced in offline commercial streets or stores, and unique and enjoyable sensory experiences can lead to the vitalization of commercial streets. In this sense, this study explores the role of sensory experiences of visitors in commercial streets based on three research questions: (1) Do positive sensory experiences result in higher satisfaction of visitors? (2) To which sensory elements are visitors more sensitive in terms of their satisfaction? and (3) Do more stores with positive sensory experiences on the commercial street attract more visitors? To answer these questions this study analyzes the google review data in Seoul between 2017 and 2021. By applying text-mining techniques, this study develops sensory experience indexes in the units of stores, blocks, and streets. The sensory experience for each sense is quantified through the sensory score evaluation for each sentence of the google review based on the sensory dictionary and the sentiment analysis of the corresponding sentences. The feasibility of the proposed sensory experience index is validated by examining the connections between the sensory experience index and performance measures of commercial districts (satisfaction, number of visitors, etc.). Spatial analysis with an emphasis on the sensory experience index is applied to analyze the process for the transition of commercial districts. The development of sensory experience indexes for various spatial units could provide a new perspective in understanding and interpreting the characteristics of urban commercial districts.

Multidimensional analysis of residential segregation in the Metropolitan Region of São Paulo, Brazil

Mariana Pasqueto (UFABC - Federal University of ABC), Flavia Feitosa (UFABC - Federal University of ABC) and Flavia Lisboa (UFABC - Federal University of ABC).

Abstract

Residential segregation is a persistent feature of Brazilian cities. Segregation patterns observed in these cities have been often reported as “dual” or concentric radial, represented by a rich and well-equipped city center that contrasts with poor outskirts. Nevertheless, the social and economic transformations in the country since the redemocratization in the 1980’s culminated in changes in this spatial pattern, which became more complex. Factors like the growing and bettering of social policies and the greater participation of the State in the poorer and less central neighborhoods have increased the access to public services. The most recent analyzes on segregation standards, however, were conducted with data from the 2010 Demographic Census, the last available in the country. This is due to delays in the next census, whose will be conducted in 2022 and have its first results released in 2023. This study aims to analyze recent segregation patterns in the Metropolitan Region of São Paulo, Brazil, through the use of the 2017 Origin and Destination Survey conducted for the region. It also aims to analyze how these patterns may change according to the social dimension considered in the analysis and how they relate to different aspects of urban quality. For that, this study considers three social dimensions for the analysis: social class, education level and income, all related to the head of the household. To quantify the segregation and depict its spatial patterns, the study adopted global and local indices of isolation and exposure, which measure the ability of members belonging to different groups to meet. To explore the nexus between segregation patterns and urban quality, the study analyzes the correlation between the level of isolation or exposure among groups and the access to urban infrastructure and amenities. Preliminary results point to a more significant segregation of the higher classes. It also indicates lower levels of segregation between members of different social classes and incomes, in comparison with higher levels between members of different education levels.

An Analysis of Economic Responses by Seoul Living Population Trend Changes after COVID-19 Outbreak

Na Ye Kim (Seoul National University) and Young Sung Lee (Seoul National University).

Abstract

Since the outbreak, COVID-19 has been affecting our society in various ways. As we face a prolonged crisis, people have gradually adapted to the ‘new’ way of life and thus it will change the social and spatial structure of cities in the long run. Therefore, we need to understand the impact of socioeconomic changes due to the spread of COVID-19 and to reorganize urban space accordingly. The study purports to analyze the socioeconomic characteristics of areas susceptible to COVID-19 by linking the differences in the economic response of each region in Seoul to the change in urban space use and the structural characteristics of it due to COVID-19.

The living population data of Seoul (Year 2019, 2020) was used as an index to understand the changes in urban space use patterns due to COVID-19 and was divided into three age groups :20-39 years old, 40-59 years old, 60 years old and over. As an analysis method, changes in urban space use patterns according to the time of COVID-19 were identified through k-Shape cluster analysis and intervention analysis, and types were classified according to the similarity of the patterns. Then, One-Way ANOVA analysis was performed using regional characteristics to confirm the urban spatial structural characteristics of each cluster. Then, difference in the economic response of each cluster in Seoul is analyzed using a linear regression analysis including income and consumption variables.

Three cluster types were derived: Sensitive type, Maintenance type, and Adaptive type. The sensitive group was the type that responded sensitively to COVID-19, the insensitive type reacted most insensitively to the outbreak of COVID-19, and the adaptive group was the type that gradually adapted to the prolonged COVID-19. With One-Way ANOVA test the urban spatial structural characteristics of each cluster were also different. As a result of linear regression analysis, the income level was insignificant, but the consumption level showed significant change. In the maintenance type, the largest age group was the middle-aged, and its urban spatial characteristics included a high ratio of single-person households and high commercial-to-residential area ratio.

The study empirically confirms the effect of COVID-19 on urban space use and analyzes the socioeconomic characteristics of those areas. The findings are expected to help in establishing pre-emptive measures and in suggesting the direction of urban spatial planning toward building safer cities in post-COVID era.

Visual landscape Comfort Evaluation of Shanghai's Huangpu River and Suzhou Creek Based on Streetscape Analysis

Mengkun Song (Tongji University) and Yang Xiao (Tongji University).

Abstract

The quality improvement of urban waterfront areas is of great significance to Shanghai's development as a global city, but the existing quality evaluation studies are mainly based on the perspective of urban vitality, while the evaluation of visual landscape comfort has not been carried out systematically. Therefore, based on streetscape analysis technology, this study conducts a coupled evaluation of visual landscape comfort and urban vitality along Shanghai's One River and One River waterfront to deeply identify spatial mismatches and potential areas for improvement. The results show that there is spatial heterogeneity in the visual landscape comfort along the riverside, with little continuity. Overall, the areas along the Huangpu River are generally more comfortable but less active, while the areas along the Suzhou River are generally more active but less comfortable. The areas with high comfort and high vibrancy are concentrated in Lujiazui and OCT, the areas with low comfort and low vibrancy are concentrated in the Bund and the Jinxiuli community, and the areas with high comfort but low vibrancy are distributed along the Suzhou River. Based on the results of this study, it is suggested that the areas along the river can be divided into quality maintenance areas, continuous optimization areas and priority improvement areas for upgrading and optimization in a hierarchical manner. The research methodology provides technical ideas for high-quality urban development and refined control.

Study on multi-dimensional urban layer system in urban design of Beijing's waterfront

Lulu Chen (School of Architecture, Harbin Institute of Technology) and Suning Xu (School of Architecture, Harbin Institute of Technology).

Abstract


Beijing is the capital of China, and its exuberant waterfront should be an important part of the city's charm. However, with urban development and population growth, different waterfront segments in Beijing face various problems, and Beijing's waterfront needs a comprehensive study and urban design. This study proposes an urban layer system as a research method of waterfront urban design, trying to sort out and integrate relevant urban elements by establishing an urban layer system and analyze how urban elements affect the spatial form of the city through the superposition of urban layers. Firstly, this paper proposes the concept of urban layer system in urban design, defines its characteristics and contents. The urban layer system includes various elements and layers affecting urban spatial form involved in urban design and various relationships between them. It is an open system composed of multiple urban layers through interaction and superposition based on the relationships between them. It contains horizontal dimension and longitudinal dimension, temporal dimension and symbolic dimension. Secondly, this study establishes and visualizes the urban layer system of Beijing's waterfront through remote sensing image analysis, field survey and questionnaire analysis of 54 waterfront segments (26 riverfronts and 9 lakefronts). Six urban layer subsystems are analyzed: ecological subsystem, spatial subsystem, demand subsystem, economic subsystem, aesthetic subsystem, and historical subsystem. A series of maps were generated to visualize the assessment results. Finally, this study analyzes and describes the characteristics of six urban layer subsystems and different waterfront segments. It provides strategies for the master urban design of Beijing's waterfront. In addition, the urban layer system and results of this study can provide insights related to the urban design of waterfronts.

Why is the grass cooler on the other side of the fence? City scale high-resolution heat exposure modelling for policy and outcome research

Bryan Boruff (The University of Western Australia), John Duncan (The University of Western Australia) and Alex Saunders (The University of Western Australia).

Abstract

Exposure to extreme heat is a fundamental concern for the health and wellbeing of our city's residents and a policy challenge for our planners and politicians. As our urban environments continue to grow and expand, and heatwaves increase in frequency, the risks to residents of our temperate and tropical cities are magnified. Importantly, the built form can amplify these extreme events resulting in differential exposure across the urban environment. Satellite-derived land surface temperatures provide a pervasive approach to mapping and monitoring urban heat islands yet, the 2D measure only accounts for a portion of human exposure. Alternatively, radiant temperature is more reflective of human thermal comfort and heat exposure within a 3D urban context, yet is challenging to implement at a city scale. Here, we present the



result of 3D high-resolution thermal comfort modeling across the Perth Metropolitan Region, Australia. We posit that the application of such modeling provides new ways for examining the impact of the built form on individual and community heat exposure as well as a tool for designing effective planning and policy interventions. Consequently, we highlight the need for employing alternative measures of heat exposure in and across urban environments while providing solutions for enhancing policy and outcome research.

A comparison of high-resolution urban vegetation datasets for city-scale monitoring and analytics

John Duncan (The University of Western Australia), Bryan Boruff (The University of Western Australia) and Alex Saunders (The University of Western Australia).

Abstract

Urban vegetation mapping and monitoring has focused primarily on the where, what, and how much? However, insights from spatial ecology remind us that the spatial patterns of urban vegetation are also important, as the effects of fragmentation on key ecosystem and socio-economic outcomes can be pervasive. Advancements in remote sensing, computer processing, and algorithms enable city-wide monitoring of vegetation at high-resolutions for analytics that relate vegetation patterns to outcomes. However, there is a paucity of research assessing how urban vegetation dataset choice can affect representation of vegetation patterns and subsequent monitoring and decision making. This analysis presents a technique and metric to characterise and compare spatial patterns of urban vegetation across time and geographic areas; using this technique, three high-resolution urban vegetation data products (Geoscape, Urban Monitor, and Nearmap AI) are compared in monitoring, change detection, and modelling tasks. Each of these datasets are used in operational monitoring activities and are generated at different spatial resolutions and with different input data and classification approaches. Specifically, the results derived from using each dataset are compared when i) characterising the spatial pattern of urban vegetation at a point in time; ii) detecting changes in spatial patterns of vegetation over time; iii) developing machine learning workflows that relate spatial patterns of vegetation to heat exposure; and iv) measuring the response of vegetation patterns to disturbance and urban development. The results inform the matching of high-resolution vegetation datasets with specific contexts and tasks and provide practical insights for analytics reliant on accurate representations of urban vegetation.

The effect of urban network structure on the achieved floor area ratio(A-FAR) of individual parcels

Kwang Sik Jeong (Seoul National University) and Youngsang Kwon (Seoul National University).

Abstract

Many metropolitan cities have already undergone major development stages and are now facing the task of sustainable development in terms of smart growth. Although the term "smart growth" has emerged since the 1990s, growth control strategies and techniques as urban planning and design practices are still being discussed widely nowadays. Among many components of growth control, urban development density management is a crucial part; yet current zoning regulations have limitations in reflecting detailed local characteristics and functions, leading to a uniform urban environment.

The purpose of this study is to elucidate the effect of urban spatial structure on urban development density, ultimately providing urban design implications to efficiently achieve the target development density within a given land use regulation and policy implications to complement the current use zoning regulations by discriminating development and conservation factors.

The study looks into the case of Seoul, for the city is a major metropolitan area where development pressure is assumed to be higher than that of any other area. For the analysis, a multilevel linear model is utilized along with space syntax and urban network analysis indicators.

The expected results of the study are that areas of high spatial integration in residential areas will lead to low achieved floor area ratio(A-FAR), for residents tend to prefer a pleasant neighborhood over a highly dense area with high street network accessibility. On the other hand, high spatial integration in commercial areas will lead to high A-FAR, for essential economic activities will take place in areas of high street network accessibility and thus increasing development demands. These general tendencies will be further differentiated depending on spatial hierarchy.

The results derived from this study will elucidate urban spatial structure factors that affect development density within Seoul, ultimately suggesting a metropolitan model regarding development density. The findings will further aid in complementing the current zoning regulations in managing development density.

Towards City of Open Communities in China: A Spatial Assessment Framework of Urban Blocks to Strategically Opening Gated-communities in Changsha

Can Wang (Yangtze Delta International Institute for AI-Assisted Planning) and Ni Li (Department of Urban Planning, School of Architecture and Art, Central South University).

Abstract

Gated communities usually appear in the suburbs in western countries, however, there are also many gated communities (represented by unit courtyards, new workers' villages, and old communities, etc.) in the central urban areas of Chinese cities. The large urban blocks formed by the combination of multiple gated communities may cause traffic jams, lack of urban space vitality, the low efficiency of land use, and many other problems. Taking western urban construction experience and domestic urban development transformation needs into consideration, China has implemented pilot projects of open communities with the strategy of "small block with dense road network" in several cities since 2016. This research reviews the practical cases and the effectiveness of this policy in the past five years, paying particular attention to the practical difficulties of opening communities. Instead of delving into the social dimension of opening gated communities, this research endeavors to establish a spatial assessment framework to of urban blocks strategically prioritize the opening of gated-communities, based on their potential socio-economic resistance of open communities, their impact on surrounding urban areas. Taking Changsha as an example, the assessment unit of this research involves a total of 691 Gated-communities-dominated Urban Block (GUB, in which gated-communities is accounted for more than 70% of the total block area) in Changsha. The assessment indexes cover the four aspects of urban traffic jam, urban vitality stimulation, residential space form complexity, and socio-economic coordination costs. Preliminary results show that:1) The average size of GUB in Changsha had reached 16.2hm². The physical scale of GUB is about 400m by 400m, which greatly reduces the density of branch road network in Changsha (branch roads are usually set at 150-250 meters in Chinese urban transportation planning) ; 2) The size of the GUB, surrounding traffic jam and POI density within GUB are the three most prominent indicators affecting the suitability of opening gated communities; 3) The GUB in Changsha with high spatial suitability of gated-communities opening generally have the characteristics of the diverse internal composition, complex boundary, highly isolated surrounding communities and so on. Finally, the authors also offer discussion on the pros and cons of the spatial assessment framework, providing enlightenment for other cities wishing to strategically prioritize the opening of gated-communities.

Rural Habitats Optimizing in Fast Urbanization of China

Lijuan Wang (Shanghai Tongji Urban Planning&Design Institute Co.,L TD.), Li Zhang (Tongji University) and Kewei Xu (Tongji University).

Abstract

In the process of fast urbanization, the contradiction between supply and demand of urban and rural construction land in China has gradually intensified, which has attracted extensive attention. On the one hand, the index of urban construction land is tight and the degree of land guarantee is low, and the scale of construction land in many mega cities is close to the limit. On the other hand, rural residential land does not decrease with the outflow of rural population, but there is an increasing phenomenon of rural hollowing out, and some problems such as inefficient utilization of idle and waste homestead are prominent. Therefore, local governments promoted the reduction of rural construction land as a comprehensive way to solve the above problems. Through the research on the reduction policies and models of village construction land in different regions of China, combined with the reduction practice of Shanghai, through land reduction and reclamation, we should not only solve the problems of people's livelihood and improve the rural living environment, but also optimize the rural habitats, gradually reduce sporadic natural villages and promote the orderly concentration of villagers. Then we established a village construction land optimization model which focused on reduction implementation of expressway, high-speed railway, high-voltage power corridor (commonly known as "three highs"), regional facilities, disaster protection, agricultural protection, ecological protection, historical protection, environmental governance and social governance, and further designed and formed a program that can be loaded into ArcGIS. This program can identify the reduction objects of village habitats according to the planning conditions of different cities or regions. And it has been applied to the rural spatial layout and construction land optimization of land and space planning in Jinan, which provided a scientific support for the optimization of rural habitats and the intensive and economical utilization of construction land in Jinan.

The Alteration of Protected Area Space and Economic Growth

Irland Fardani (Faculty Of Engineering , Bandung Islamic University), Ina Agustina (Faculty Of Engineering , Bandung Islamic University) and Riswandha Risang Aji (Faculty Of Engineering , Bandung Islamic University).

Abstract

Coffee is a beverage that has become a "trend" at this time, and yet due to increased demand for coffee commodities, coffee plantations have expanded into protected areas. This phenomenon occurred in the village of Lebakmuncang, Ciwidey District, Bandung Regency, West Java Province. The Bandung Regency Spatial Program stipulates a protected area of 54% of the total area of Lebakmuncang Village, but the total area has been reduced because it has been converted into a coffee plantation. The purpose of this research is to describe the spatial changes in Lebakmuncang Village's protected area in Ciwidey District. The data is gathered through surveys, interviews, and field observations. The following analysis employs a purposive sampling technique to interview up to 30 coffee farmers. The results indicate that coffee farmers' incomes are more stable than those of other commodities. The demand for coffee continues to grow. Expansive spatial changes occur because coffee has the parameters of productive growth in a place with a height that happens to fall under the protected area category. Coffee farmers expressed the increase in welfare due to increased demand. The conclusion is that there is a violation of the protective function of coffee production activities but has implications for the economy of coffee farmers.

Parking area optimizing and simulating based on queuing theory

Xiangyu Li (Universiti Teknologi Malaysia), Gobi Krishna Sinniah (UNIVERSITI TEKNOLOGI MALAYSIA) and Minghao Liu (UNIVERSITI TEKNOLOGI MALAYSIA).

Abstract


The parking of the hospital is one of the infrastructures of the hospital system, which is closely related to the staff, patients and emergency department of the hospital. Too much setting will cause a waste of land resources, and too little will affect the efficiency of normal delivery. As well the space design is also important for the parking area operation due it will affect the ingress and egress convenience. How scientifically and reasonably set the number of parking spaces and their spatial structure plays an important role in the hospital's architectural design. Therefore, this paper will apply the theory and method of queuing theory to solve the reasonable demand of vehicles under the waiting for parking space as well as its space design to recognize the current supply and demand situation. Then, this paper will establish a simulating model to compare before and after optimizing the situation with the parking area. As to this, we could tangibly understand the supply and demand of hospital parking areas, and the validity of this optimizing model. The research results have certain theoretical guidance and reference significance for future hospital planning and construction. The reasonable setting of parking spaces is not only conducive to controlling the floor area of the hospital, reducing unnecessary waste, but also conducive to improving the utilization rate of each parking space. It further provides a specific hospital parking design scenario to the designer.

The classification of rural areas in China: An exploration of a typology using Neural Network Method

Wenqi Li (Tongji University), Li Zhang (Tongji University) and Weifeng Zhang (Tongji University).

Abstract

Conventionally, the main method of rural typological classification has been experience-based qualitative analysis. Nevertheless, at the national level, when faced with extensive geographical scope and a massive number of villages in China, the complexity of classification would increase dramatically, rendering qualitative methods inadequate. This has led to the development of quantitative methods for rural typological classification. In existing researches, European scholars have earlier applied the neural network method in rural typology studies in United Kingdom, Italy and other EU countries. It raises the question whether the neural network method can be applied in China's rural classification research, considering the dramatic differences of rural between European and China. Therefore, this paper aims to develop a new analytical framework using neural network method for rural classification nationwide and discuss the applicability of the method in China's rural typology, based on the national statistics of 530,000 villages in China. First, recent studies of rural classification are reviewed, elaborating representative cases from China and European countries. Second, the processes of methodology are fully illustrated, including the basic principle and procedure of Self-Organizing Map (SOM) neural network and BP (Back Propagation) neural network, the establishment of indicator system and data source, the rules for classifications, and model training and validation. The research results are then in-depth described and critically appraised. Preliminary study shows



that the huge difference of research scale determines that there are significant differences in the application of neural network methods in rural typology in China and European countries. In further, it suggests that the neural network method is applicable under certain conditions: ① Adequate and balanced training samples are prerequisite for the full training of model, in order to ensure the accuracy of neural network model; ② Representative indicators are vital for identifying rural typology. In general, a successfully trained neural network model can provide efficient technical support for large-scale rural classification research at the macro level. However, more in-depth researches are encouraged to continuously improve the accuracy of the method.

One Spatial Planning Policy, How it's Works ?

Ratih Rantini (Urban and Regional Planning Departement, Universitas Pasundan).

Abstract

Indonesia as a country with the majority of its territory in the form of the sea has a complexity in carrying out spatial planning. The positive law that has been applies so far indicates that spatial planning is still oriented towards spatial planning on land. The RZWP3K (Coastal Zone and Small Islands Zoning Plan) only works as one part of the marine spatial planning document as mandated by UU 32 of 2014 about Kelautan, and has not become a reference in the marine spatial plan. To deal with this, the government bring off policy breakthrough related to spatial planning, the integration of land and sea spatial planning in one spatial planning product through the enactment of PP 21 of 2021 about Penyelenggaraan Penataan Ruang. However, considering the regional development policies in Indonesia which have tended to obviate the role of the marine environment where the sea is still seen as a barrier rather than a potential in regional development, of course one spatial planning policy will not be easy to implement. Thus, it is necessary to study what factors will affect the success of the implementation of the policy. The research locations are eight provinces that are included in the islands category, that is the Provinces of the Bangka Belitung Islands, Riau Islands, West Nusa Tenggara, East Nusa Tenggara, North Sulawesi, Southeast Sulawesi, Maluku, and North Maluku. The research method using structural analysis with the MICMAC method to identify influential variables and analyze the relationship between variables and the weighting of these relationships based on the degree of mobility and dependence between variables. This research identifies factors that influence the successful implementation of one map spatial policy from the perspective of spatial planning and regional development, which are expected to be able to encourage the creation of integrated and sustainable policies in land and sea spatial planning.

Adoption of Nature-based Solutions (NbS) for Flood Mitigation in Krukut Watershed

Yudhistira Satya Pribadi (WRI Indonesia) and Dominika Wara Christiana (WRI Indonesia).

Abstract

The Nature-based Solutions (NbS) is currently gaining popularity to support flood mitigation strategy because of its ability to harness the natural capacity of lands managing excess water and their added co-benefits for social and city's resiliency against climate change. This paper presents an example of the planned adoption of three different NbS approaches for flood mitigation: landscape restoration, retention pool, and multifunction open green space. The research objective is to evaluate the suitability of adopting NbS based on various physical, social, and economic factors in Krukut watershed, Jakarta. This study utilizes Multi Criteria Decision Analysis (MCDA) method to combine different factors which contributed to the alteration of area suitable for NbS adoption while specifying the degree of relationships between them to support its decision-making process. The case study in Krukut watershed reveals different patterns of suitable areas for adopting NbS. Landscape restoration tends to be more suitable in the upstream area associated with the existing forests and agriculture zones. Retention pool is closely related to the river floodplain, while multifunction open green space is identified mostly within the highly urbanized area. It is also found that land availability highly affects the suitability to adopt NbS in the study area. NbS adoption for flood mitigation depends substantially on the spatial context of multiple factors within the objected area. Chances to find a suitable location for NbS adoption increase in conditions where sufficient spaces are available, especially in a highly urbanized area. Therefore, adopting different types of NbS approaches could improve the success of NbS adoption for mitigating floods.

An organizational ecology approach to café agglomeration in Seoul

Donghyun Kim (Hanyang University) and Jina Park (Hanyang University).

Abstract

Cafés rise and fall according to urban dynamics. New cafés can open, and existing cafés can be closed. Even though globalization and technological revolution have threatened the survival of many local businesses, small cafés in the neighborhood have continued to play an important role in the community as the "third place" of the city. Analyzing the rise and fall of these cafés can help explore urban change and evaluate urban policies. Like all retail businesses, the location is a very important factor in success of cafés. There is a kind of gravity between consumers and retailers. Good location is the point where gravity is strongest. Therefore, retail agglomeration appears in a good location and so do cafés. However, competition and commercial gentrification prevent café agglomeration from growing excessively. It seems like a natural economic phenomenon, but it is difficult to provide practical advice to retailers and urban policy makers due to the lack of a systematic theoretical framework. In this paper, we integrate urban retail agglomeration theories and organizational ecological perspective and examine how small independent cafés have developed and their spatial patterns since the 2000s when café began to take root in Seoul. Based on the business demography data and quinquennial census data, we argue that there is a nonlinear relationship between the number of existing cafés and the opening of new cafés. Our results show that there is inverted U-shape relationship between the emergence of new individual cafés in the neighborhood and number of existing cafés. In other words, according to the density-dependent theory of organizational ecology, the number of new cafés increases as the number of existing cafés increases (which is called "constitutive legitimation"), but when it reaches threshold (which is called "environmental capacity") or higher, the emergence decreases (which is called "competition"). The value of our works is that we explain why cafés cluster in neighborhoods and limitations of competitive cluster through organizational population beyond the individual café by controlling socioeconomic conditions and built environment of neighborhoods. The results of existing research on café agglomeration in Western cities may be different from scenarios in developing countries. Our case study in Seoul can help fill the gap.

The Future of Food Security: A Challenge from Rebana Super Economic Zone Development in Eastern West Java, Indonesia

Uly Faoziyah (University of Melbourne).

Abstract


West Java Province has a strategic role in achieving national food security because of its position as one of the most massive food barns in Indonesia. With a low level of technology, food security is very dependent on agricultural land. Still, it has received serious threats from the rapid development of the industrial activity. Currently, 54% of the industrial estate is located in the province, and the number continues to increase significantly. In the future, the West Java Provincial Government plans to move the dense industrial concentration around the Greater Jakarta Metropolitan Area to the eastern side through the development of Rebana, a Super Special Economic Zone, which connects Patimban Port, Kertajati Airport, and Cirebon City. The policy is counterproductive to the existing conditions where the region is located in agricultural areas with high food production, so the acquisition will become a serious issue that threatens food security. However, no studies identify how significantly this policy will eliminate agricultural lands and affect food security. This paper is intended to predict the land use conversion due to Rebana development, then analyze the impact of the changes to food security in the future. Cellular automata are used to simulate the dynamics of land use growth by considering the policy and supporting infrastructure. The analysis found that Rebana would transform into a new industrial growth center in West Java Province, creating the industrial corridors between Greater Jakarta and the Greater Cirebon Metropolitan Areas and encouraging the significant expansion of settlements around the new industry. The development is predicted to eliminate 14.43% of productive agricultural lands and reduce the region's ability to produce food production by 14.01%. It is a severe challenge for the West Java Provincial Government to accelerate arranging an integrated and comprehensive food security strategy.

Evaluation Of The Need For Green Open Space Based On The Temperature Humidity Index In City Of Surabaya

Bima Juananda (Brawijaya University), Abdul Hasyim (Brawijaya University) and Kartika Sari (Brawijaya University).

Abstract

Surabaya City is directed as a National Activity Center and will be developed to become a city that has an international service scale in order to support the spatial planning vision of Surabaya as a city of international trade and services with



intelligent, humane, and ecologically based local character (RTRW Kota Surabaya Tahun 2014-2034). With the result is that development occurs in line with population growth and the existing economic rate and causes a reduction in the area of green open space. The availability of green open space can affect the temperature and humidity of the air so that it also affects the comfort level of the microclimate or commonly referred to as the Temperature Humidity Index (THI) (Zubair, 2017). The meaning of THI itself is thermal comfort in an area that has a comfort range of 21°C-26°C (Emmanuel, 2005). This study aims to evaluate the need for green open space in the city of Surabaya based on THI by using multiple linear regression analysis in order to obtain a model to idealize THI in the city of Surabaya. The approach taken is to use remote sensing utilizing Landsat imagery in 2020. The data processing process goes through several stages of NDVI processing, land cover classification processing, surface temperature processing, THI processing, and using multiple linear regression analysis. After going through these stages, it was found that land cover in the form of water bodies, built-up land, and high vegetation had an influence on THI. The regression model obtained is $Y = 27,275 - 28,756X_5 - 14,030X_1 + 1,642X_3$. With a record Y (average THI), X1 (body of water), X3 (built-up land), and X5 (high density vegetation). The model has a coefficient of determination of 82.0%. After the regression model is obtained, it can be seen that the need for green open space (in the form of high vegetation) to idealize the THI value in the city of Surabaya is 22.42% of the total area of the city of Surabaya and is divided into all sub-districts.

Understanding the Development Potential of Urban Centers for Infrastructure Planning and Balanced Development in the Philippines

Hisako Kobayashi (Oriental Consultants Global) and Hiroaki Ohashi (Ritsumeikan Asia Pacific University).

Abstract


The purpose of this study is to understand the specificities of metropolitan, regional, and sub-regional urban centers in the Philippines in order to plan infrastructure for balanced and sustainable development. Urban centers play an important role in development, leading the regional economy as centers of economic activities, innovation, and employment; providing access to social and public services; and serving as political, administrative, and cultural centers. In particular, understanding the current status and development potential of urban centers is essential for planning of critical infrastructure that contributes to balanced development and elimination of regional disparities throughout the country. In this study, urban centers in the Philippines were analyzed by statistical analysis of their development status and potential to plan the national high standard highway (HSH) network, and identify investment priorities. Guided by the “concentration” and “connectivity” strategies, the National Spatial Strategy and the Physical Development Framework Plans proposed a settlement hierarchy divided into three levels: metropolitan centers (MCs), regional centers (RCs), and sub-regional centers (SRCs) with specific functions and characteristics. The urban centers are expected to be linked by an efficient network to strengthen integration of urban-rural areas and address inequalities. This research analyzed one hundred fifty-eight urban centers in the three-tiered system with the use of Principal Component Analysis and Cluster Analysis, considering four analytical dimensions: 1) public administration, 2) demography, 3) industry, and 4) accessibility to logistics centers. As a result, the analysis identified five typical types of centers: metropolitan centers, two types of regional centers (RC-I (strong) and RC-II (weak)), and two types of sub-regional centers (SRC-I (strong) and SRC-II (weak)). The research revealed the importance of understanding of the characteristics of urban centers and the effectiveness of their categorization in infrastructure planning including the investment decision. The main findings include: the necessity of effective use of settlement hierarchy for infrastructure planning, metropolitan centers and balanced regional development, the existence of regional centers and sub-regional centers, with weak growth/development potential, and the necessity of strategic allocation of SEZs. Meanwhile, given the understood importance of connectivity of urban centers to promote even development, it is recommended to ensure that weak regional centers are connected to HSH so that they can truly become regional centers for the surrounding urban cluster. The original analysis was conducted in 2019 as part of the study for High Standard Highway Network Development Masterplan Phase 2 by the Japan International Cooperation Agency.

Predicting air pollution and seasonal variation using random forest model: The case study of Seoul, Korea

Jeongwoo Lee (Chung-Ang University) and Caryl Anne Barquilla (Chung-Ang University).

Abstract

Exposure to particulate matter (PM) has become a vital environmental issue that raises public health concerns. High concentrations of fine particulate matter with diameter less than 2.5 μm (PM 2.5) and 10 μm (PM 10) causes respiratory, cardiovascular, and metabolic diseases. Thus, there is a need for accurate real-time air quality prediction so as to warn individuals at risk and take measures ahead of time. Granting attempts have been done to forecast PM concentration,



factors influencing the seasonal variation of PM prediction have not been systematically investigated. In this study, a high-performance machine learning model was generated directly at hourly level to predict PM 2.5 and PM 10 levels in Seoul, South Korea. We developed a random forest model that integrates 849 air quality sensor data across the city, with PM 2.5 and PM 10 measurements from April 2020 to March 2022, urban form factors such as transportation, land use, density, and other geographical features. A spatially and temporally varying predictors were included in the random forest model to predict the concentration of fine particles. Our model was able to predict seasonal spatial patterns in PM 2.5 and PM 10 that were more apparent in winter and autumn seasons than in spring and summer. The results show that seasonal variation in PM was significantly influenced by emission sources such as highway and traffic volume. Additionally, various urban forms influence dispersion of PM showing that high building density was associated with poor air quality. This was more apparent for winter and autumn seasons whereas spatial lag term and meteorological conditions related to the site elevation determined PM concentration for spring and summer seasons. The present study makes contributions on two fronts. First, this study demonstrates the advantage of using machine learning algorithms to predict air quality seasonally. Second, the typology developed from this study can help identify different strategies by season to reduce PM concentration in Seoul.

Agglomeration to City Center of Knowledge-based Industry: with Employment Density Curve on Seoul Metropolitan Area

Hyunmoo Lee (Student at Doctoral Program, Graduate School of Environmental Studies, Seoul National University) and Youngsung Lee (Professor, Graduate School of Environmental Studies, Seoul National University).

Abstract

For several decades, the gradient of the employment density curve tends to decline, which means employment in city center tends to spread out. It seemed to be not refutable. Recently, in contrast to traditional belief, agglomeration is now considered as an engine of economic growth, especially in knowledge-based industry. The cities who leads 4th industrial revolution are suffering new type of urban agglomeration, since innovative companies move closer to city center and absorbs talented employee. This study discovers if there has been agglomeration on Seoul Metropolitan Area, Republic of Korea. To figure out employment distribution, this study analyzed employment density curve change among 2000, 2010, 2019, of three main business district: City-hall(CBD), Gangnam(GBD), Yeouido(YBD). For almost all industry, as usual, the gradient of the employment density curve has declined on every main business district. However, for three industries, the gradient of the curve has inclined after 2000, at every main business district: the industry of Information, the industry of Professional scientific and technical services, and the industry of Finance and insurance, which are all knowledge-based industries. The gradient of employment density conceptually means the employment decrease when going far from the city center, refers to relative agglomeration index of city center to whole region. For these industries, the benefit to agglomerate outperforms the benefit of disperse. The unprecedented pattern implicates the re-agglomeration to city center in knowledge-based industry, also the spatial distribution of industries has restructured. As 4th industrial revolution progresses, knowledge-based industries move closer to city center, hire more employees, produce more values, and would likely strengthen agglomeration. It means cities leading 4th IR will suffer new urban problems caused by spatial reorganization, such as traffic congestion, housing shortage and spatial income gap. Regional government should recognize the spatial effect of industrial restructuring, and prepare for the expected urban issues. City planners should find solution for sustainable city, which encourage economic growth from the agglomeration, while handling new urban issues from the agglomeration.

Experimental governance and housing: new methods of policy production in Australia

Laura Goh (The University of Sydney).

Abstract

Recent housing experiments in Australia reveal a shift towards integrating experimental governance practices into state government operations. The use of demonstration models, pilot programs and design competitions as way to find innovative solutions to housing problems is not a new practice but what sets the recent proliferation experiments apart from previous programs is that these projects more clearly articulate a formalised link between government led experiments and policy reform. The rejection of traditional policy making methods in related urban policy areas, namely sustainability and smart cities, is well documented but under reported in the housing space. Government led housing experiments are studied for their potential to produce innovative housing outcomes. However, this unique experimental approach to policy production that governments are utilising when they embark on such projects is often overlooked.

McGurik et al (2021, p4) reflects that the COVID-19 pandemic has accelerated the “experimental mood” of governments and so the initial purpose of this paper is to demonstrate that experimentation is becoming increasingly popular as a method of policy creation in the housing sector in Australia. Housing policy analysis reveals increasing references and instances of experimentation in Australia housing policy, indicating that many governments are so enamoured with the promise of innovation that comes from an experimental governance approach, they are making space to allow experimentation to disrupt their own planning systems. The second purpose of the paper will be to explore some of the unexpected issues related to introducing this form of governance into the housing space. Comparative analysis of case studies reveals the unexpected barriers to experimental policy reform including intergovernmental tensions, unclear experiment pathways, stakeholder confusion and project timelines that far exceed standard planning practice.

The results of the policy analysis reveal that experiments are featured in the actions of four of the seven housing strategies analysed from Australia, indicating that the use of experimentation as a policy production method is gaining popularity in Australia. However, through the examination of case studies, it is revealed that difficulties in the methods and pathways of experimentation are obstructing the scalability of such programs, potentially hindering the potential of experimental approaches, and ultimately raising questions about longevity of experimental governance in the sector.

Enabling Creative Cities Concept in Indonesia: From Organic Process to Prescriptive Policies

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Abstract

The creative city concept has been emerging as the strategic factor to achieve sustainable urban development. The concept is aligned with the mainstream of the creative economy era. By implementing the concept, cities place creativity and cultural industries at the heart of their development plans at the local level. In Indonesia, the development of creative cities relies on the existing local governance setting in facilitating economic transition from conventional to creative economy sectors. The local government takes a prominent role regarding its position to regulate or produce policy at the local level. This study takes place in three cities with distinctive leading sectors, i.e., Bandung, Depok, and Tangerang Selatan. This study aims to analyze the city's prescriptive policies in implementing the creative city concept. The study combined quantitative data analysis and content analysis of official documents, including spatial plans, sectoral development plans, and other public archives. Actually, the initial campaign of creative city development in these cities came from organic process among the local creative enthusiast groups, which later was formalized by the declaration of their status as creative cities through Penilaian Mandiri Kota/Kabupaten Kreatif Indonesia (Self-Assessment on the Indonesian Creative Municipalities/Regencies) administered by Badan Ekonomi Kreatif (Creative Economy Agency) in 2018. The research found that the prescriptive policies on creative city development have little enabling effects in reality. Most creative city indicators were not fulfilled in the local development performance. Rather, the so-called creative policies were implanted in the business-as-usual policymaking process. To make the concept work, the building of inclusive and collaborative governance is necessary to accommodate two-way initiatives from all participating stakeholders.

Comparing the Governance Model of Greenbelt in China's Mega-cities : The Case of Shanghai Outer Ring Greenbelt

Yilei Xu (Shanghai Pudong Exploration(Group)Co.,Ltd.) and Chen Chen (Department of Urban Planning, College of Architecture and Urban Planning, Tongji University.).

Abstract

Abstract: In recent years, accompanying the rise of "Ecological Civilization" (sheng tai wen ming) national strategy and "Park City" movement (gong yuan cheng shi), China's megacities are paying increasingly more attention to green space, especially the greenbelt at the urban -rural interface. The greenbelt in China's megacities is not just a management tool for urban growth or public health concerns, but also an ecological, recreational and industrial space for the public. It is featured by its complexity in physical form, social network and diverse stakeholders, raising a series of new problems and challenges in urban spatial governance. This research is structured as follows. Applying the analytical framework of "subject-tool-mechanism-content" in a cross-national investigation on 7 countries (England, United States, Korea, German, Australia, Canada and China) , the authors argue that the practice of greenbelt governance at home and abroad has gradually developed into three dominant models: top-down, bottom-up and public-private partnership. Furthermore, this research delves into the governance model of Shanghai Outer Ring Greenbelt for more nuanced understanding of how the governance model works in contemporary China. The Shanghai Outer Ring Greenbelt has been developing since 1994 with a total length of 98 kilometers and a planned area about 6204 hectares. By 2017, the built up area of the Outer Ring Greenbelt accounted for nearly 75% of the planned area. In recent years, with the concept of "Park City", Shanghai Outer Ring greenbelt will be upgraded and evolved into an "Ecological Park Belt (EPB)". Using mixed research methods including site investigation, literature review, face-to-face interview, questionnaire and remote sensing techniques, this research investigates the historical development, local government policy differences and spatial effects of the governance model on Shanghai Outer Ring Greenbelt in four different time periods (2005, 2010, 2015, 2020). Preliminary findings reveal that the governance model of Shanghai Outer Ring Greenbelt has been changing from the "top-down" model to the "bottom-up" model, and then to the "public-private partnership (PPP)" model. Finally, this research discusses the benefits and limits of the different models mentioned, proposing a "networked" framework in which core stakeholders, secondary core stakeholders and peripheral stakeholders cooperate with different models in different development stages. The findings in this research may provide policy implications for the governance of greenbelts in other megacities.

Social Equity and Climate Justice: The role of job creation

Chin-Wei Chen (Urban Design & Planning Interdisciplinary Ph.D. at the University of Washington) and Jan Whittington (Department of Urban Design and Planning, University of Washington).

Abstract

Though cities are increasingly rising to the challenge of the climate crisis by creating action plans and greenhouse gas inventories, the means to improve social equity or at the very least avoid worsening inequities in the transition to clean energy and more resilient infrastructure are not as well-defined. For clean energy, US policymakers appeal to a wide audience by considering the role of job creation. The burgeoning literature on climate justice in planning, especially with regard to climate adaptation, appears focused on exposure, sensitivity, and the capacity to adapt to changes brought about by climate impacts and their proposed remedies. And yet, in order to realize the twin goals of global carbon neutrality (i.e., CO₂e) and adaptation to climate change, all manner of infrastructure investments require modification in their design, materials, and technologies, and with those choices come questions of climate justice.

The purpose of this research is to examine methods for integrating social equity, in the form of workforce participation for underrepresented minorities, within a climate-smart approach to capital investment planning cities. This paper is a case study research, exploring the public utility planning process using data collected from San Francisco's stormwater projects. The method presented simulates job creation to forecast the difference in social equity considerations between conventional and climate-friendly scenarios. We hypothesize that projects designed for improved alignment with climate targets improve social equity from job creation when compared to conventional project designs. Also, this research highlights gaps and dimensions that local governments could take to fulfill climate justice through job creation in the infrastructure planning process. We close by proposing a research agenda to further understand the relationship between climate justice and social equity through the lens of job creation in the capital planning process, using multiple regression analysis statistical techniques.

City Capital Planning for Climate Finance

Jan Whittington (University of Washington), Adrienne Greve (California Polytechnic State University, San Luis Obispo, USA) and Giovanni Migliaccio (University of Washington).

Abstract

In the US and abroad, financial markets are increasingly interested in serving the need to transition away from greenhouse gas emissions and provide urban infrastructure that is fit for a changing climate. Whether labeled as 'green', ESG, or specifically for climate, these approaches to capital finance signal to cities the need to prepare pipelines of investments in infrastructure suited to a carbon neutral and resilient urban environment. And for market regulators and advisors, such as credit rating agencies, US Securities and Exchange Commission, the MSRB, and the GFOA, the claim that any given capital project or portfolio is designed to meet climate targets is, however desirable, a claim worth scrutinizing. These movements place cities, as sources of a majority of the world's greenhouse gas generating activities and a majority of populations vulnerable to catastrophic climate impacts, under increasing pressure to integrate climate directly within capital planning and budgeting processes.

This paper presents climate-smart capital investment planning and examines the ways in which this emerging practice serves the increasing demands of the climate finance marketplace. Climate-smart, or climate aligned capital planning involves the application of a model used to evaluate, prioritize, and budget for capital, supplemented with a set of databases that support timely assessment of lifecycle costs, energy efficiency, emissions, sequestration, and exposure, losses, and potential savings from avoiding or protecting against extreme events. One of these datasets includes the energy efficiency, capital cost, operating cost, maintenance cost, and emissions, of families of technologies common to capital projects (e.g., buildings, transportation, energy, water, wastewater, solid waste). To see the exposure of capital projects to growing impacts from natural hazards (e.g., flood, fire, drought, severe storm) the model applies downscale results from global climate models to produce a full set of forecasts of the impact of extreme events across the jurisdiction and within the context of contributing areas, such as watersheds for floods. This paper explains the organization of the model and discusses the results of field testing the model in East Africa, India, and the US, in relation to extant opportunities for climate finance in these regions of the world.

Bulangta: The long journey of collaboration for tourism planning in Indonesia

Muhammad Taufiq (Universitas Sumatera Utara & Langkat Regency), Rina Wahyuni Marpaung (Langkat Regency) and Satia Negara Lubis (Universitas Sumatera Utara).

Abstract


This article focuses on the collaboration process in gaining tourism planning involving the provincial and district governments. Both sides' units accommodate the process consisting of meetings in many moments involving the public, policymakers, government planners, bureaucrats, academics, and tourism activists. From October 2021 until February 2022, primary data were collected from observation of various meetings of tourism planning of Bukit Lawang and Tangkahan (Bulangta), Langkat district, North Sumatra province, Indonesia. The North Sumatra provincial government and the local government of Langkat regency are trying to increase development for the two adjacent tourist areas through various forms of ambitious deliberation arenas. Also, comparative studies were conducted to support these efforts. The researchers were part of the process. Secondary data, such as research reports, scientific literature, and internet sources, were also used. It shows a long process of mapping existing conditions, development priorities, and physical and non-physical projects supported by both sides. It contributes to solid practical knowledge where collaborative planning emerges from various forms of deliberation organized by various parties. Leadership and the resilience of actors ensure that this process continues even though it creates a boredom effect for those involved. Also, the deliberative bureaucrats play an essential role in growing cooperation both horizontally and vertically.

Why planning approaches in developing countries do not evolve? An analysis of the Peruvian planning approach from the policy values, problem-setting and learning perspectives

Jessica Pineda-Zumaran (Saint Augustine National University and URBESLAB).

Abstract

Several voices from academia and the international policy circles emphasize the need to rebuild the epistemic that fund the many political projects of Latin American countries, which so far, have been unable to decrease poverty and build more equal societies. Considering that cities are the places where most of these aspirations would be concretized, and from the planning perspective, this entails interrogating the conceptual foundations of the planning approaches that are currently



applied in the region as well as the policy values they endorse. Although some research has raised concerns regarding the maintenance of exported and outdated planning approaches at the core of many Latin American planning systems, pointing to their influence in planning failure, there is not much research that can explain why these approaches find difficult to evolve, even in the face of failure, discontent and pressure, as the ongoing COVID-19 pandemic has shown. Recognizing that planning is embedded within issues of power and conflict, this paper examines the role of policy values, problem-setting and policy learning in contributing to the fixity of planning approaches. Drawing from policy change and continuity, problem-setting and policy learning theories, it develops a framework to analyze the relationship between the policy values funding the planning system, the orientation of policy problems that planning aims to address and the mechanisms that are proposed to these ends. It applies it to analyze the conceptual foundations of the Peruvian planning system, using archival research and the documentary analysis method. Some results point to the process of technification and depoliticization that is at the core of the Peruvian planning system, as it is founded on values of control, authority, homogenization and penalty. As a result, routine planning takes precedence over strategic planning, which is not enough to consolidate robust learning processes within policy and planning that can guide the evolution of planning approaches. The paper concludes with a reflection regarding what it might entail to changing fundamental societal and political beliefs regarding what planning is, what are its goals and purpose and who should benefit from it in the light of societal claims for just, livable and beautiful cities.

Governance of Guerilla Gardening – A case of public food gardens in Australia

Kristina Ulm (University Of New South Wales).

Abstract

Guerrilla gardeners across Australia started something unimaginable for most users of a street: growing edible plants - like lemon and parsley - in bare patches along the roadside. These public food gardens can act as small-scale community gardens, improving community and individual health. Moreover, greening the streets improves planetary health, for example by cooling the urban climate and increasing biodiversity. Thus, public food gardens can contribute to inclusive, healthy and sustainable cities. However, gardening in public space – sometimes without permission – can create risks and challenges that require innovative collaborative approaches from government and civil society. Increasingly, recent research examines politics and governance around various forms of urban gardening. Most studies are on established forms of urban gardens, like community gardens or allotments. There is a lack of governance studies on public food gardens, an emerging, less formalised type of urban gardening. This research aims to address this gap by asking following questions. What are collaborative governance alternatives for public gardening? And how do they function? To answer these questions, this case study research explores the various governance systems for public gardens across local governments in Greater Sydney, Australia. While some local governments tolerate public gardening without an official policy, others create policy instruments to formalize this contested practice. These policy instruments vary from enabling guidance to restrictive permit fees. Through qualitative data collection, like document analysis, interviews and participatory systems diagrams the various governance systems are studied from the viewpoints of the diverse actors. Preliminary results of this ongoing study suggest that the governance system around public gardens is conceptualised differently by different actors. Underlying values and perceptions inform governance participants' actions. Public food gardens raise awareness for systemic health, social and ecological issues in urban areas. They are at the interface between public and private, between top-down and bottom-up. Thus, the governance of public gardening is a case where different forms of collaboration and sharing responsibility between government and communities can be tested. This research contributes to the wider planning and built environment field by illustrating alternatives to some traditional planning tools: policies for small-scale, citizen-led, and multifunctional public gardening instead of large-scale, master planned, and monofunctional precincts. Further understanding of these emerging bottom-up policy innovations is required to empower communities in co-creating inclusive, healthy, and sustainable urban neighbourhoods.

The development planning and the Sustainable Development Goals: Progress and trends in governance and partnerships

Mahesti Okitasari (United Nations University Institute for the Advanced Study of Sustainability) and Richa Kandpal (United Nations University Institute for the Advanced Study of Sustainability).

Abstract

Implementing global goals is a core aspect of global governance and raises the question of through which mechanisms development at the international level can influence domestic policymaking processes. But, as yet, not many studies have emphasised the role of domestic political institutions in localising the SDGs. Equally, insufficient attention has been given to the potential steering effect of the SDGs in shaping domestic development practices. This study explores governance

setting and multi-stakeholder engagement through three analytical perspectives: legitimacy, responsibility and accountability. Based on an analysis of 238 Voluntary National Reviews (VNRs) from 171 countries submitted between 2016 and 2021, this study analyses changes in the ways governance and partnerships are operationalised to localise the SDGs and identify their implications for the national and local development planning institutions and processes. Deploying a qualitative analysis, this study demonstrates how cross-national imitation and learning matter as a mechanism of localising the global goals and how these practices interact with domestic planning processes, are more institutionalised, and form new architecture and agency for domestic actors. Evidence suggests that the interaction between the SDGs and the development planning process is inconsistent across countries; it depends on political preferences, existing governance, domestic priorities, and context-specific challenges. This study contributes to the literature on the steering impacts of global goals in shaping governance and partnerships for domestic development planning processes.

The Impact of COVID-19 to Local Government Budget, Education Policy and Outcome

Tengku Munawar Chalil (SAPPK ITB), Fika Novitasari (SAPPK ITB) and Lisna Rahayu (SAPPK ITB).

Abstract

This paper investigates the impact COVID-19 containment policy on local government budget spending patterns, education policy to switch from offline to online classes, and the impact of containment policy on education achievement. The paper consists of two parts. We explore the pattern of Indonesian local government spending during COVID-19 countermeasures in the first part. Then, we describe the educational policy of local government and the school from home policy on early child development. We assessed the treated effect of the school from home children that participated in early child education as treatment group via difference-in-difference estimation. We found that the early child development index for the in-class learning children is 0.89 points greater than the school from home children. Therefore, the swift shift of learning environments due to COVID-19 outbreak deteriorates early child development.

Reimagining Regional Planning and Governance for Resilient Complex Systems

Derek Kaunckis (Desert Research Institute), Sandra Pinel (US DHS Cybersecurity and Infrastructure Security Agency) and Natallia Diessner (Cybersecurity and Infrastructure Security Agency, DHS US Gov).

Abstract

Decades of an emphasis on decentralization and participatory planning policy and programs have shown both the value and limitations of localized approaches to enhance the resilience communities. Given the likelihood of escalating hazards and increasingly complex and interconnected physical, communications, and economic systems how do the forms of regional planning and cross-sectoral governance institutions need to adapt to these new challenges? The need for new approaches to regional and spatial planning is especially evident in the case of major infrastructure systems, which cross political and natural boundaries, provide essential services, and creating new hazards and vulnerabilities. Current regulatory systems we not created for the array of future conditions and threats infrastructure is likely to face. Additionally, rigid regulatory systems are known to be maladaptive and may not only prevent effective resilience but create new vulnerabilities. What then are the characteristics of novel regional planning and governance institutions that can bridge this complexity to enable decisions that enhance long-term resilience?

This paper begins with a quick review of common themes emerging in the approaches of socio-ecological systems and collaborative planning, such as inclusive and networked systems of knowledge sharing and decision-making, cross-boundary connectivity, and social capital and levels of trust. The paper then turns to gaps in our knowledge of the role higher level governance structures can play in facilitating innovation. Literature has concluded that voluntary and collaborative approaches require some level of state support to be effective, but less is known about how government can enable innovation and institutional development for adaptive capacity. The authors draw from US and international professional practice and case studies to highlight emergent challenges for governing watersheds and infrastructure systems to focus attention to the capacity of local governments to scale up, down, and horizontally to govern complex watersheds. The paper concludes by suggesting the parameters for adaptive regional governance and argues for expanding forms of regional governance. Implications include a stronger focus by policy makers and multi-lateral funding agencies on sub-state capacity building, support for local innovation and diffusion, and increased support for adaptive management.

Brains of the operation: Role of Integrated Command and Control Centres for Improving Urban Governance

Surajit Chakravarty (Indian Institute of Technology Delhi) and Riby Mathew (CEPT University, Ahmedabad).

Abstract

The Smart Cities Mission (SCM), initiated in 2015, has been a pioneering initiative to create a conducive environment for city transformation through digital technologies. 100 Smart City proposals have been funded under the mission, and projects are currently under way. The establishment of an Integrated Command and Control Centre (IC3) had been a key component of the mission, and one that is being implemented in each of the 100 cities. According to government statements, the IC3 is envisaged as the 'brain' of the city. It is expected to monitor all the activities from a central system, and issue commands as required. Further the IC3 is expected to provide real-time information to decision makers to enable responsive governance. According to a statement issued in June 2020, 45 cities have already established IC3s.

The dynamics of the design and implementation of the Smart Cities Mission is a relatively unexplored area. Several scholars have published critical readings of the SCM, but existing literature is sparse on fieldwork. In this context, this study collects primary data from four smart cities, to examine the conceptualization and implementation of IC3s in each case. The study is concerned, in particular, with the institutional framework of smart governance through IC3s. In the first stage an institutional survey is used to gather factual data about existing policies and regulations related to (i) the actors involved, (ii) IC3 functions, (iii) decision-making and performance, (iv) operations and management, and (v) data privacy. In the second stage, 20 semi-structured interviews are conducted with professionals who are familiar with the Smart Cities mission (including employees of local government agencies, Smart City SPVs, and Consultants).

The project is currently in progress. It is expected that the study will reveal the various models of planning and operation of the IC3s, along with strengths and weaknesses of the institutional structures governing them. In particular, we will be able to gauge the robustness of the rules and regulations that underpin this advanced infrastructure installation, which also invokes multiple politically sensitive issues such as a governance through data, governance of data, privacy, surveillance, transparency, and accountability.

The Local Reaction to Return Migration in the Context of a Pandemics: Implications on Development Policies in Lampung Province, Indonesia

Helmia Adita Fitra (Geographisches Institut, Humboldt-Universität zu Berlin) and Henning Nuißl (Geographisches Institut, Humboldt-Universität zu Berlin).

Abstract


The sudden health crisis and the concomitant economic recession caused by the emerging pandemic Covid-19 has urged urban dwellers in Indonesia to opt for the safest decision: return to the places they once left in order to live in a city. As consequence, return migration has been rising during the pandemic, with some substantial consequences, especially for the sending areas. On the one hand, the returnees could be seen as an asset for the local development of their places of origin to which they bring (back) their human, financial, and social capital. On the other hand, however, returnees are often seen as virus transmitters, harming the local inhabitants. This paper illustrates the local reaction to return migration during the pandemic Covid-19 and aims to examine its implication on local development policy, taking Lampung Province as the study area. By conducting qualitative analysis, this study employs semi-structured interviews. It finds that regardless of the pandemic situation, local communities still have expectations of the returnees. They expect the returnee to share their capital (tangible or intangible), to re-mingle with the local community, acting as an economic driver, and to become an agent of change for better governance in whatever sector they work. This paper also proves the importance of return migration for policymakers because of the substantial impact of returning migrants can have on the development of their place of origin, particularly in rural areas, by contributing their knowledge, skills, and leadership.

Urban governance and resilient city planning facing the challenges of climate change _ toward climate-resilient and inclusive cities, case of Morocco

Mariame Chahbi (Center for global studies_ UIR).

Abstract

Over the past decades, the world has become aware of the impact of climate change on our cities, threatening them. Being in a rapid and continuous expansion, urban agglomerations in developing countries are strongly confronted with this change, facing alarming risks: heat waves, floods, pollution, drought, etc. They are also highly threatened due to their high density, lack of adequate drainage canals, concentration of liquid and solid waste, informal settlements and urban expansion on sites at risk. Regardless of the intensity and frequency of these risks, without an effective action by local governments, the situation could only get worse. Today, researchers are increasingly using cities as experimental spaces to create and test new forms of urban infrastructure that are more adapted, flexible and more resilient. This research aims



first, to identify the theoretical and practical points of urban resilience, taking into account its complexity and its interdisciplinarity. It also aims to explore climate-related risk management in the Moroccan urban context and especially to highlight the concept of planned and independent adaptation due to strengthening resilience to environmental change. This research studies the role that Moroccan urban governance plays in order to achieve adequate external control adapted to the Moroccan context. An analytical framework will be carried out on the basis of the literature review on urban governance and on the basis of empirical data collected by analyzing five Moroccan cities, and defining key parameters (decentralization and autonomy, inclusion, participation, flexibility) that will allow us to assess and estimate the degree of climate resilience due to strengthening it and reducing territorial vulnerability to environmental issues as much as possible. The discussion will focus on this resulting analytical framework assessing the resilience of the Moroccan cities and thus facilitating the future planning of more flexible and climate-resilient cities.

Evaluation Of Collaborative Water Governance In The Cinambo Sub-Watershed, Bandung City (Case Study: Wetland Park Cisurupan)

Naimah Putri Kamila (Bandung Institute of Technology) and Iwan Kustiwan (Bandung Institute of Technology).

Abstract

The "Wetland Park Cisurupan" Retention Area development program is one of the multi-stakeholder collaboration programs in the Cinambo Sub-watershed initiated by Bandung City Public Works Agency. This retention area is expected to become a rainwater parking lot in order to reduce water runoff to Gedebage Sub-Region. Collaborative governance efforts carried out at Wetland Park Cisurupan need to be evaluated to serve as lessons for stakeholders and as follow-up recommendations. Therefore, this study aims to evaluate the extent to which the Wetland Park Cisurupan development program in the context of the Cinambo sub-watershed has implemented the principles of collaborative water governance.

To achieve this goal, this research uses descriptive qualitative methods. Data processing uses data sourced from primary data, namely observation, interview, collecting big data from social media in the form of WhatsApp chat groups "Cisurupan Temporer", "Strategic plan Cisurupan", and "Cisurupan 4 oktober" as well as Instagram posts with hashtag #wetlandparkcisurupan, interviews, then secondary data from government agencies and internet.


Based on the measurement of 23 indicators of collaborative water governance in the sub-watershed, it can be concluded that the Wetland Park Cisurupan program is sufficient to meet the principles of collaborative water governance in the sub-watershed. From the results of the study, it was also found that programs carried out with limited finance and human resources, could be overcome through collaboration. Communication between stakeholders in this collaboration, which is seen from WhatsApp and Instagram, is considered effective for coordination, increasing public participation, and avoiding latent conflicts becoming manifest by being open to the collaboration process. Facilitative leadership is one of the key to consistency in collaborative governance.

Changing Urban Growth: stronger regulation and new patterns of segregation in a predominant right-wing metropolis of Global South

Guilherme Minarelli (University of São Paulo).

Abstract

Large cities in poor and middle-income countries have been seen by the literature as ungovernable, at the same time as they are responsible for delivering a wide range of goods and services, especially in the Brazilian case, due to decentralized federalism. São Paulo, the largest city in the country, despite the challenges, has been governed daily and has delivered policies that, according to criteria of different qualities, regularities, and levels of coverage, have contributed to the reduction of inequalities, the increase of bureaucratic capacities, even than in a conflicting, slow process with an incremental trajectory. Regarding planning policies, São Paulo is the pioneer city in Brazil in land value capture policies and large renewal projects with public-private partnerships, whose figures reached billions of reais (R\$) in annual collection in the last 20 years and are evidence of a longer institutional learning process. In political terms, even though there is a predominance of right-wing governments, the alternation of power meant that left-wing governments were able to implement policies with prolonged effects of increasing the progressiveness of the tax burden and gaining regulatory capacities in directing the urban growth. Preliminary results from the spatial analysis of the last 20 years of public property tax collection records, real estate market releases and census data show that the city has changed its growth dynamics. The city started to grow less horizontally and more vertically, starting to have more apartments than houses, and going from a predominance of low horizontal standards to medium vertical ones and with a strong growth of high standard properties. The smear of the upper and higher income classes' housing area has expanded to new regions on the periphery and made the city also more exclusive and segregated. The analysis of the effects of large urban projects points to a



concentrating effect on income and benefits, even though there is unrealized redistributive potential in spending on infrastructure and affordable housing. We can see the transition from a pattern of growth with predominance of irregular horizontal self-built subdivisions for a more formalized vertical market, the dynamics of regulation with greater formalization and control of land use, the need for more revenue, and the changes in the spatial direction of growth in the city. Despite political disputes that resulted in more progressive and redistributive fiscal policies and in more capacity to regulate different patterns of urban growth, the changes still producing segregation effects.

How do Actors Cooperate in the Successful Assets-Based Community Development in China? A Case from Shanghai

Miao Hu (Tongji University).

Abstract

Many historic residential buildings in Shanghai are owned by the state and often in lack of public funds to maintain. Could the government, enterprises, residents, and social organizations cooperate to use the advantageous “assets” of the community (including material, manpower, social, economic, environmental, political, and cultural assets), thus producing collective benefit to maintain the houses and the environment of the community? This promising solution is also known as Assets-Based Community Development (ABCD). Based on the author’s field research of a successful ABCD case in Shanghai, this paper concludes three steps of its cooperation: a) Organization and preparation: Establish a co-governance committee and lobby the Committee of House-owners to set up a co-governance fund. b) Cultivate social capital: Introduce the social organization to design a series of public activities with the “public hut” as the anchor place to enhance community cohesion. c) Bring the external resources into the community: Encourage community members to propose ideas and plans about the regeneration of the community and partly finance them, so that they would bring the economic and intellectual resources and human connections into the community. This paper tries to answer several questions: a) How was the cooperative structure established in the case? (By using actor-network theory) b) Why were those actors willing to participate, and what considerations do they have when taking action? (About the motivations) c) What difficulties did the participants meet in the cooperation, how do they wish to improve the cooperative structure? And how to facilitate it through resource supply and policy adjustment? (About the incentives). This paper focuses on the cooperation of actors and provides ABCD with empirical evidence from Shanghai, China. It also puts forward a promising solution to many historic houses in lack of public funds of maintenance in Shanghai.

From a green city to a just city? Discourses around sustainability planning in Seoul

Yoonhee Jung (Asia Research Institute, National University of Singapore).


Abstract

While cities across the world are adopting urban sustainability plans and pursuing “sustainable development,” the question of how these urban sustainability plans have made our cities indeed sustainable—economically, environmentally, and socially—is still a subject of debate. The dominant discourses by the existing economic-political structures oftentimes hinder sustainable city innovations. This paper examines the discourses of urban politics around the decision-making processes and the implementations of two sustainability projects in Seoul—the Cheonggyecheon Restoration Project and Remaking Sewoon Project. Using an archival analysis, it investigates how the recent rapid socio-economic transformations in Korea have affected the discourses around the urban politics of sustainable policies in Seoul. “Green” has become a new paradigm for urban redevelopment in Korea since the early 2000s and this study finds that the Seoul Metropolitan Government (SMG) uses sustainability plans as a “sustainability fix” heavily focused on pro-growth development to win support for its restoration projects among citizens and for global approval. However, with increased democratization and the growing role of civic groups in urban politics, we see a move towards a more just sustainability in urban sustainability planning in Korea. This study calls for more studies on just sustainability with a focus on the social aspects of sustainability in other Asian cities in the future.

Broken developmental promises?: the role of national-local government coordination in FDI-led local economic development in the case of Songdo, South Korea

Namji Jung (Seoul National University).

Abstract



Foreign Direct Investment (FDI) through multinational enterprises (MNEs) has become an important source of local economic development. More countries are adopting policies to attract FDIs with industrial targeting and special economic zones. However, evidence that MNE (FDI) has delivered continued and sustainable economic development to localities is surprisingly scarce. Even where zones have successfully generated investment, the benefits to the hosting locality have often been hard to detect. Existing studies account for such cases by placing the emphasis on the lack of MNE-local linkage development. This study looks at what hampers the MNE-local linkage development by focusing on the role of government particularly the importance of national-local government coordination. This article investigates such aspect by using the case of Songdo, a free economic zone in the City of Incheon in Korea. Methodologically, it adopts a mixed- method to examine multi-faceted nature of FDI-led local economic development. The descriptive data analysis shows that Songdo succeeded in hosting FDIs. However, the evaluations of Songdo's performance have been critical as it lacks the MNE-local linkage development. Results from archival data analysis and in-depth interviews with MNEs in Songdo reveal that although the national government empowered localities to implement their own Free Economic Zones, it also directly and indirectly imposed its own interests through the legal systems and upper-level national plans. A telling piece of evidence is that, while industry sectors such as biotechnology and IT which did not have an existing technological, human resources, or industrial base able to benefit from MNEs struggled, locally specialized industry sectors such as the electronics and auto industries benefited from active collaboration between MNEs and local firms. This strongly suggests that to ensure sustainable local gains from MNE-local linkage development, national-local government coordination is crucial and should be well-coordinated.

Institutional Change in Megaproject Planning : A Historical Institutional Perspective

Aulia Arfida Paramita (Institut Teknologi Bandung), Haryo Winarso (Institut Teknologi Bandung), Delik Hudalah (Institut Teknologi Bandung) and Ibnu Syabri (Institut Teknologi Bandung).

Abstract

In the last decades, megaproject has become a strategic approach in planning for many countries. Some literatures have acknowledged that megaproject becomes a means to create and change institutional frameworks, that later will create new development pathways on a larger spatial scale and longer temporal scale. However, the nature of megaproject as a contested political arena between different actors often leads to institutional complexity. Various actors attempt to exploit some advantages of the institution based on their interests. Besides, the long-term planning and development process of megaproject often faces uncertainty from exogenous changes that subsequently requires institutional change in order to adapt with the changing conditions. Hence, in order to disentangle how development path is affected by certain decision-making in institutional creation, it is important to identify whether institutional change is caused by an active exercise of power from an interested actors or it is to respond the broader changing socio economic condition. This research aims to explain the dialectical process of institutional change between internal power dynamics and external forces in megaproject development. We utilized historical institutionalism as a conceptual framework to understand power relation dynamics behind the institutional change overtime. This research employs qualitative approach by analyzing interview transcripts and secondary historical data. As a case study, we selected Jakarta Bay Reclamation project due to its long-term development process and its position as a political flagship megaproject. This research generated several findings. First, the political nature of megaproject can be seen as a result of path-dependent development bounded by institutional creation during critical junctures where power is highly contested. Furthermore, small institutional changes during the critical junctures after the exogenous changes can significantly bring impacts to the development on a larger spatial scale. Second, institutional settings in an early stage of planning cannot fully direct the development, as actors' interests are fluid and some of them can change the institution that benefits them. Third, there is a latent power related to idea shaping that affects the belief system and limits the choice of the disadvantaged to act against the prevailing institution. Finally, by conceptualizing institution and power, this research can enrich the discussion about relationship between structure and agency in megaproject planning.



Exploring the Impact of Bike Infrastructure on Mode Choice: Simulation- based, route-level impact analysis

Uijeong Hwang (Georgia Institute of Technology) and Subhro Guhathakurta (Georgia Institute of Technology).

Abstract

Many U.S. cities are investing in making a more bike-friendly environment in hopes of reducing auto-dependency. Studies have shown that improving bike infrastructure enhances bike users' perceived safety and comfort, but whether it also shifts mode choice towards more biking remains largely unaddressed. This study proposes a model to examine whether and how bike infrastructure shifts the mode choice towards various non-automobile modes. Better bike infrastructure is expected to enhance the safety and comfort of bike users and to encourage more people to ride a bike. Many earlier studies have examined people's stated preferences and supported the hypothesis that better bike infrastructure is associated with more willingness to ride a bike (Akar et al., 2008; Aldred et al., 2016; Clark et al., 2019; Dill et al., 2007; Garrard et al., 2007; Moudon et al., 2005). However, we know far less about whether better bike infrastructure has influenced people's actual travel behavior and increased the number of bike users (Aziz et al., 2018; Buehler et al., 2012; Dill et al., 2007; Krizet et al., 2009; Moudon et al., 2005; NACTO, 2016; Pedroso et al., 2016; Schoner et al. 2014; Zahabi et al., 2016). Most previous studies have used cross-sectional analyses to show correlations between biking and bike infrastructure, but cannot guarantee the direction of causality. For example, do people ride a bike more because there are bike lanes in their neighborhood? or does the city build more bike lanes in a neighborhood where people already choose to ride more? This study uses more than 100,000 sample trips from three U.S. metropolitan regions – Atlanta, Minneapolis, and Chicago – to generate hypothetical bike routes and the level of bike-friendliness of each route. A mode choice model with four modes – walking, biking, driving, and transit – is developed using this data. The model results suggest that bike infrastructure significantly increases not only biking trips but also walking and public transit trips. When the data are segmented by poverty level, model results show that the mode choice of the low-income population is as significantly affected by bike infrastructure as the general population. In addition, the study results indicate that frequent transit users can greatly benefit from bike infrastructure since walking, biking, and public transit trips are closely associated with each other.

Mobility Justice and Platform Technologies in the Southern City: Harnessing Informal Innovation

Luis Hernando Lozano-Paredes (University of Technology Sydney).

Abstract

Ride-sharing and ride-hailing platforms are becoming integral elements of urban transport systems worldwide. However, for all the debates on the impacts of platform mobilities on institutions, social interest and the urban form (Monahan 2020, Stehlin et al. 2020, Wong et al. 2020), not enough attention is paid to the social benefits of platforms enhancing mobility justice. 'Mobility justice' relates to the need for security (including economic security), accessibility, and dignified conditions addressed comprehensively with historically marginalised populations. In this article, I focus my interest on such populations, mainly lower-middle and lower-income people in Bogotá, Colombia. Bogotá is a meaningful case study on platforms and mobility justice because it's a metropolis with more than ten million people without a high capacity mass transit system and increased proliferation of many types of mobility platforms. Therefore, to contribute to the conversation this article focuses on how mobility platforms created by informal entrepreneurs innovation can enhance mobility justice and how policymakers can harness this. In this article, I study platforms, entrepreneurship and collective action with a socially embedded perspective. Qualitative methods such as online semi-structured interviews and document analysis were applied. These focused on 'Drivers Club Bogotá', the most used of alternate 'creole' platforms and a case to understand how informal entrepreneurs use their 'creole' creation to manage the risk of being a platform driver and enhance the physical and economic security of their work. This article shows that the informal entrepreneurs have created an affordable and, most importantly, accessible and flexible transport system that has also enhanced the security both physical and economical for drivers and passengers of this platform. Although focused on Bogotá, this research also has implications for Global North contexts, particularly for cities with low transport accessibility, low-income clusters and high cultural diversity regions. This article connects with these 'northern' implications by concluding what issues to consider in the design of true Mobility as a Service (MaaS) policies and mechanisms that can help achieve mobility justice goals even for 'northern' cities. Moreover, what can the case of this 'creole' platform tell us about transportation policy design sensible to drivers and users' diversity and their yearning for security, accessibility and dignified transportation. In other words, their desire for mobility justice.



Changes in Road User Behaviors After the Installation of Smart Crosswalks using Vision-based Tracking

Jae-Hong Kwon (Ulsan National Institute of Science and Technology) and Gi-Hyoug Cho (Ulsan National Institute of Science and Technology).

Abstract

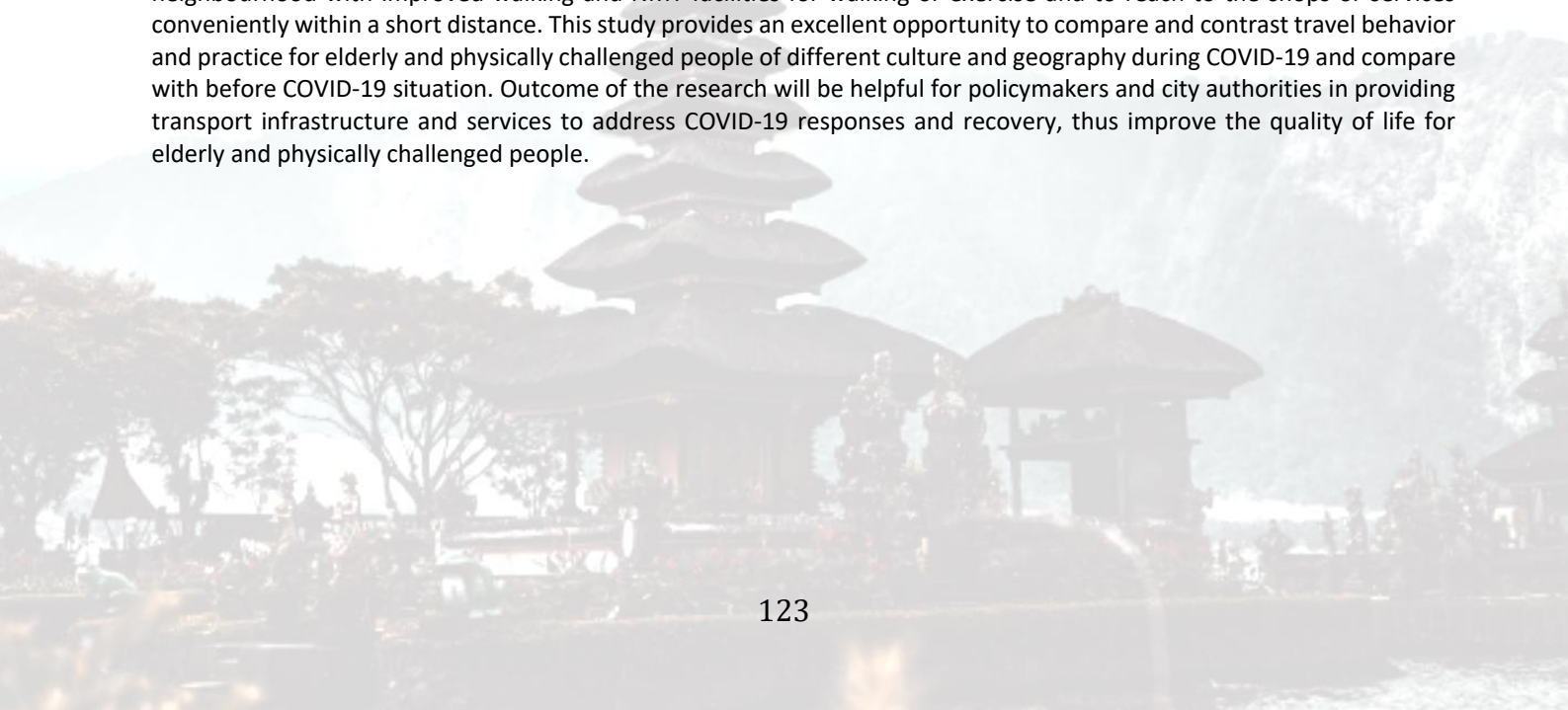
Urban transportation planning has nowadays implemented smart crosswalk system as a reaction to the continuous emerging crash accident of pedestrians, which is an integration of preventing, detecting, and rescuing pedestrian in crosswalk. The projects embedded in-pavement LED signal lights and varied sensors such as a laser-receiver, infrared sensors, short-range radar and/or closed-circuit television (CCTV). This study proposed to apply promising computer vision technology to evaluate the effectiveness of smart crosswalk system in city of Seoul, Korea. Specifically, an observational before-after study was conducted to explore the impact of the smart crosswalk on changing in behavior of vulnerable road user and their safety. Behavioral indicators related to drivers (i.e., behavior speed and acceleration), pedestrians (i.e., waiting time, reaction time, and crossing speed) and conflicts (i.e., post encroachment time, and time to collisions) were extracted from trajectories of road users using YOLO-v5 and DeepSORT algorithm. The results demonstrated that environmental attributes related to smart crosswalk system were significantly associated with the vehicle, pedestrians, and further risk of conflict, but the influences varied by the street contexts. In addition, the proposed methodological framework describes the changes in the spatial distributions of those behavioral indicators after the installation of smart crosswalks at street-level. This research contributes to introduce a comprehensive analytical model with the validated vision-based algorithm and can help us understand effectiveness of pedestrian-friendly improvement project.

Impacts of COVID-19 on Mobility of Elderly and Physically Challenged People in Low Income Countries (LICs)

M. Shafiq-Ur Rahman (Jahangirnagar University).

Abstract

The number of elderly and physically challenged people are increasing in every country. Transport and mobility options for elderly and individuals with physical challenges who need assistance are very limited in Low Income Countries (LICs). The COVID-19 pandemic has worsened the situation by many folds. This research mainly focuses the travel behavior issues of such individual elderly, and people having mobility challenges; to know their coping strategies, to contribute in the knowledge base and raise the concerned issues in governance and policy spheres. Case studies were conducted in eight major cities from Asia and Africa (Bangladesh, Pakistan, Tanzania, Zambia). Questionnaire survey of more than 1600 respondents were conducted from the households in November 2020. It was found that travel behavior for a large portion of the respondents has changed due to COVID-19; reduced travel frequency and increased trip cost but family income dropped. During lockdown, a large portion of the respondents avoided traveling and those who travelled were with a very low travel frequency, mainly for medical or grocery/shopping purpose within a short/walking distance. During post-lockdown travel frequency is almost similar to the before-COVID situation but the proportion of trips on NMT or paratransit and personal vehicles have been increased. The respondents prioritised for planning and development of the neighbourhood with improved walking and NMT facilities for walking or exercise and to reach to the shops or services conveniently within a short distance. This study provides an excellent opportunity to compare and contrast travel behavior and practice for elderly and physically challenged people of different culture and geography during COVID-19 and compare with before COVID-19 situation. Outcome of the research will be helpful for policymakers and city authorities in providing transport infrastructure and services to address COVID-19 responses and recovery, thus improve the quality of life for elderly and physically challenged people.



The Rebalance of Hub Area Multi-functions under the Background of the Integrated Regional Development: A case study of Shanghai Hongqiao Hub Area

Chunhui Ge (College of Architecture and Urban Planning, Tongji University / China Academy of Urban Planning & Design, Shanghai.) and Ziyue Li (College of Architecture and Urban Planning, Tongji University).

Abstract

Since the integrated regional development in the Yangtze River Delta (YRD) region became a national strategy in 2018, the integrated regional development of urban agglomerations has become a contemporary hotspot of spatial development in China. With the deepening of the YRD regional integration, Shanghai Hongqiao hub area became a new prototype – the regional hub area. It not only carries complex transportation functions such as aviation, high-speed rail, intercity and urban public transportation, urban functions such as business, residence and public service, but also further gives play to strategic regional functions such as international or regional enterprise headquarters, trade exhibition, advanced medical center and e-commerce center. The research takes Shanghai Hongqiao hub area as an example to look into the development of hub areas in general under the background of the regional integration in China. This paper discusses the potential dynamics behind, its challenges and countermeasures, and further seeks to renovate the node-place model for better analysis. We track the development process of Shanghai Hongqiao hub area and extract the core issue of “the rebalance of hub area multi-functions”. Then, we conclude four challenges and strategies of transportation, region, city and zoning. Finally, we propose the “node-place-network” extended model evaluation framework, and make a preliminary assessment for nearly 20 hub areas in the YRD region. The research is based on primary and secondary open-source materials, and with some own experiences and reflections as the author worked professionally in the planning of Shanghai Hongqiao major city unit between 2018-20. Main conclusions are as follows: (1) The evolution of the regional hub area mainly rely on the plans and policies at regional level, and is accompanied by the agglomeration of advanced regional functions. (2) Its core problem is how the limited spatial resource could match the uncertain regional functions, multi-layered transportation and urban development in the future, and with the constraints brought by different zonings. (3) Following strategies might be useful: preserving redundant transportation space, prioritizing regional strategic space, optimizing urban functional space and developing regional exclusive standards. (4) The assessment results are basically consistent with current common senses. Shanghai Hongqiao hub area is a typical case for the evolving urban strategic space under the background of integrated regional development. The research helps to understand the trend of regional integration and the prospects of hub areas within cities in China, and tries to improve the classical “node place” research model.

Model Of Pedestrian And Vehicle Movement Due To Land Use Function : A Case In Taman Mini Light Rail Transit Station Area

Jumardi Jumardi (Hasanuddin University, Makassar), Muhammad Yamin Jinca (Hasanuddin University, Makassar) and Venny Veronica Natalia (Hasanuddin University, Makassar).

Abstract

Jakarta is the largest city in Indonesia, with increasingly massive congestion and minimal use of public transport. This condition corresponds to the spatial pattern. This is a phenomenon that occurs in the Jakarta Metropolitan Area which consists of several cities, including Jakarta (the capital city of Indonesia), Bogor, Depok, Tangerang, and Bekasi. The city of Jakarta itself is considered as one of the most densely populated cities in the world. Severe congestion that occurs every working day resulting in high traffic congestion, greenhouse gas emissions, and travel time. One of the main reasons is the round trip from Bogor, Depok, Tangerang and Bekasi to Jakarta or vice versa to carry out various activities between going to school and working. Interestingly, the Provincial Government of DKI Jakarta and the Central Government are trying to overcome these challenges. The public transport system has been developed gradually and will continue to do so over the next few years. Public transportation modes such as Bus Rapid Transit (BRT) are not able to overcome urban sprawl. Moreover, the pattern of land use and public transportation are not yet well-organized in most areas. This paper aims to develop a model of the movement of people and vehicles on land use functions in the area. The research was conducted around the Taman Mini Light Rapid Transit (LRT) node, Jakarta. The area is an area with land functions that are dominated by residential areas, but there are several centers of various activities such as tourist areas, malls, hospitals, and airports. The research method used is to state preferences with a sample of 100 respondents. The hypothesis obtained in this study is to describe the model of regional movement that often faces congestion, inadequate public transport service coverage, and intermodal transportation that has not been integrated and the integration of transportation modes with activity centers.

Dealing with Service Disruption: Exploring Passenger Adaptive Behaviour Towards Public Transport Service Disruption

Irma Yusufida (1 Planning Bureau-Ministry of Transportation; 2 School of Architecture, Planning and Policy Development, ITB), Ibnu Syabri (School of Architecture, Planning and Policy Development, Institut Teknologi Bandung), Puspita Dirgahayani (School of Architecture, Planning and Policy Development, Institut Teknologi Bandung) and Benedictus Kombaitan (School of Architecture, Planning and Policy Development, Institut Teknologi Bandung).

Abstract

Public transport has vital role for commuters. It able to accommodate comuters travelling in high capacity with efficient travel time. However, public transport is prone to disruption ranging from mild to severe. Disruption can be caused either by natural or man-made (whether it with intention or without intention). Rail-based public transport is more vulnerable to disruption rather than road-based public transport. The limitation of rail-based public transport network forced users to modify their trip. Users will choose the most efficient modes available based on user segmentation, degree of rail-based public transport dependency, user experience, and user perception. Therefore, understanding adaptive behavior of rail-based public transport users can be useful as an effort to enhance resilience and mitigate future disruption in the urban transportation especially rail-base transport system. This study aims to understand adaptive behavior towards service disruption based on user segmentation, perceived severity levels of disruption and service quality perception. The research approach uses quantitative approaches using a questionnaire to passengers with a revealed preference method based on experience combined with stated preference. The method using K means clustering and multivariate regression.

Most research on public transport disruption tends to consider commuter behavior as uniform in their modeling, while in real life commuter behavior may vary depends on conditions. This research proposed a critical argument that public transport dependency is based on user segmentation (captive and choice) as a key to segregate behavior and understanding the motives behind adaptive behavior. Research that integrated user segmentation, disruption and understanding personal motives behind adaptive behavior (unobserved variables) are still limited because most of the previous research focuses only on measured variables. Furthermore, the majority of previous research was discussed in developed countries (Europe and America) with resilience and integrated transport systems, while this research will discuss rail-based public transport in Southeast Asia (Indonesia), where public transport is less resilient. This research argue that captive users are more tolerant of disruption; they tend to continue using transit services even after severe disruption. Otherwise, choice user is very sensitive to all type of service disruptions. When disruption occurs, it will be easy for them to switch to another mode. Long-term disruption presumably cause permanent adaptive behavior for the commuter while short-term disruption apparently makes temporary adaptive behavior.

Transportation As A Main Driven Sector Centers For The Region's Social And Economic Growth In Banggai District

Lutpi Samaduri (Doctoral Program in Urban and Regional Planning, Postgraduate, Program Universitas Bosowa, Makassar, South Sulawesi), Murshal Manaf (Urban and Regional Planning Study Program, Postgraduate Program, Universitas Bosowa, Makassar, South Sulawesi) and Muh. Natsir Abduh (Civil Engineering Study Program, Engineering Faculty, Universitas Bosowa, Makassar, South Sulawesi).

Abstract

A good and efficient transportation system plays an important role in advancing social and economic growth and development in the region and between regions. Likewise, Banggai Regency is supported by relatively adequate transportation facilities, such as land transportation terminals, ports and even airports that serve the daily movement of people and goods in Luwuk City and its surroundings. As the district capital, Luwuk City experiences social and economic interactions with various surrounding areas. This article aims to determine the areas that are the center of growth and how the interaction between regions in the Banggai Regency area. Using the quantitative method of the Gravity model by utilizing data on movement systems, activity systems, inter-regional network systems and transportation policies in the study area. The results of the study are able to determine and explain the relationship between the system of regional growth centers and the pattern of interaction between regions as well as between spatial activities and the potential for movement that connects the growth center system of the sub-district area with the district capital. The implications can be used in formulating strategic directions and policies for the role of transportation in spurring growth in this region.

Sustainability Analysis Of Integrated Terminal Development In Gorontalo Province

Eriyanto Lihawa (Hasanuddin University), M. Yamin Jinca (Hasanudin University), Baharuddin Hamzah (Hasanuddin University) and Edward Syarif (Hasanuddin University).

Abstract

The integration between transportation modes in the Sistranas is one form of the integration of services, service networks, and transportation infrastructure networks. The unorganized transportation system in Gorontalo makes the competitiveness and role of public transportation low. Isimu terminal has huge potential to become a gateway for access to various modes of mass public transportation serving the province of Gorontalo. This area is a meeting point between modes, namely: the Planned Train Station, Djalaludin Airport and Isimu Terminal. The purpose of this study is to analyze the sustainability of the Isimu terminal by producing the concept of an integrated intermodal terminal that is integrated through the principle of Transit Oriented Development. This study uses a descriptive-qualitative method which includes the formulation of problem identification, data collection, as well as analysis and synthesis, the results of which are used as an integrated terminal development concept. The results of the study show that the Isimu terminal area is a strategic economic area and is worthy of being an integrated intermodal transit area according to the principles of Transit Oriented Development. The implementation of a sustainable design strategy in the design was chosen as a concern for the sustainability of the environment and the socio-economic environment of the surrounding community.

Transport Equity: Everyday travel experiences immigrant communities in Auckland, New Zealand

Imran Muhammad (Massey University).

Abstract

There are limited academic literature and policy papers engaging justice, equity and inclusiveness in transport planning. The inclusive transport system is achieved when all people can participate in society through access to social and economic opportunities. Making the transport system inclusive is a fundamental challenge in Auckland, where population and ethnic diversity is rapidly growing. Transport planning policies can benefit from Mobilities theories which focus on subjective factors (everyday experiences, cultural values, the structure of feelings, perceptions and biases) that are the basis for travel by the ethnic population in Auckland. This paper investigates immigrants' perceptions and the need for public transport in Auckland. The objectives of this research are twofold: (1) identify new factors that would increase public transport patronage in Auckland, and (2) examine the extent to which public transport usage is contingent upon socio-cultural values. This paper particularly explores and compare the everyday experiences of public transport in Auckland by immigrants originally from China, the Middle East and the Indian sub-continent. Adopting a qualitative approach, community groups from these ethnicities were approached for detailed interviews and focus group discussion. The perspective of Chinese communities was obtained through Chinese social media analysis. The key findings reveal that all three communities want better convenience and reliability of public transport on off-peak travel. However, they have differences in the status of people using public transport and the status of trains over buses. The findings highlight opportunities to incorporate immigrants' aspirations of affordable fares, greater time savings, improved convenience and a positive image of the public transport in Auckland. Research suggests that public transport infrastructure and service design must recognise a people-centred approach and cultural sensitivities relative to a particular community. Overall, this research comments on the need for public transport planning to recognise how different ethnic groups respond to specific modes of transportation in distinctive socially determined ways.

Understanding difference in the '20 Minute City'

Iain White (University of Waikato), Katherine Edwards (University of Waikato), Xinyu Fu (University of Waikato), Juliana Junqueira (University of Waikato), Kate Mackness (University of Waikato) and Silvia Serrao-Neumann (University of Waikato).

Abstract

While there is much discussion of the 15/20 Minute City/Neighbourhood concept as a means to reduce carbon emissions, increase liveability, or make local economies more resilient, there is a challenge in translating this agenda from a top-down expert technical exercise to one that recognises difference and equity.

This talk will reveal the findings from a national survey conducted in Aotearoa New Zealand in 2020 aiming to provide evidence on these issues of nuance and difference and so help bring the 20 Minute City idea closer to reality. The paper

will discuss various data from the national survey, such as relating to which amenities people prefer to live closer to, how the time people will allocate to travel for various amenities differs, how this may differ between walking, cycling or micro-mobility, how this may differ between a population, and how this may differ between time of day.

In doing so it provides potential interest to those interested in how planning could provide a positive vision of a future urban environment that can achieve national objectives on emission reduction and changing travel behaviour. It also provides insights to those focused on the city scale, in particular city/regional infrastructure investment strategies or how to manage the difficult local politics involved with urban change.

Preference of Public in Provision of Transport Infrastructure During and After the COVID-19 Pandemic

Maya Safira (Bandung Institute of Technology) and Haryo Winarso (Bandung Institute of Technology).

Abstract

Since the beginning of 2020, the spread of the COVID-19 has been remarkable in terms of pace, scale, and economic and social impact. COVID-19 has emphasized the relevance of various infrastructure systems and services in preserving economic and social activity and enabling responses to unforeseen threats and challenges while also being a potential source of vulnerability. Transport has played a significant role in people's daily lives and the spread of the virus. Consecutive global lockdowns have resulted in a dramatic drop in global demand and supply of goods and services. Global lockdowns compelled all non-essential workers to work from home virtually almost overnight and schools to switch to e-learning. With these behavioural changes, the provision of public transportation may not be the same as before the pandemic. Several aspects need to be considered to provide such services and goods for the public nowadays. The true transportation infrastructure needs due to the reduced dead during and after a pandemic is still a big question in the urban and transportation study field. However, most studies focus on the impact of COVID-19 on the aggregate number of ridership or the overall impact on the flow of transport, while they do not consider the users' preference for the provision of public transport itself. In this study, we aim to explore the user's preferences for transport infrastructure during and after a pandemic. This study focuses on a situation in Jakarta, Indonesia, where more than 48.6% of users said that COVID did not affect the frequency of their public transportation usage (Moovit, 2021). We attempt to develop a survey for the public transport users and model their preferences by using a multinomial logit model to comprehensively understand the impacts of COVID-19 on users' preference of public transport provision, especially in Indonesia. Although this is still an ongoing study, we believe that it is important to share the importance of users' preferences in providing transport infrastructure during and after the pandemic so that it will be resilient, sustainable, and socially equitable in the future.

Comparing Ridership & Financial Disruption in European and Indonesian Transport Systems During COVID-19: Structural Causes and Solutions for Future Crises

David P. Weinreich (Technion Israel Institute of Technology, Faculty of Architecture and Town Planning, Haifa, Israel) and Harya S. Dillon (Indonesian Transportation Society).

Abstract

The Covid-19 pandemic has taken a toll on public transport systems' ridership and financial stability. This paper examines how disruptions to ridership and finances impacted operators' ability to run services. We compare the situation in several European countries with that in Indonesia, where informal transit is still a major component in many cities. This work uses a combination of surveys, annual reports, as well as contact with informal operators at 17 agencies in Europe plus formal and informal operators in Indonesia to provide information about how they were affected by the pandemic and how they were/were not able to continue operating. We compare the role of government subsidies (or lack thereof) before/during the pandemic, the degree to which the operator is government-owned, regulated, or tendered, and by which level of government. We examine how these factors affected the operator's ability to continue providing service, draw connections between the governance and finance system, and changes to route, mode, or frequency that may have resulted. Finally, we identify a range of solutions for both formal and informal transit that could help optimize their ability to weather future crises.

A study on risk assessment and street environment improvement for shared mobility driving safety

Minkyong Cho (Seoul National University) and Youngsang Kwon (Seoul National University).

Abstract

Since the introduction of shared mobility, related traffic accidents have gradually increased. Since there is not enough driving environment to accommodate the platform of shared mobility, negative perception is spreading faster than improvement of the street environment, facing limitations in activating use. In order to derive improvements to reduce traffic accidents, it is a priority to identify risk sections. However, the current risk assessment consists of a car-centered assessment. The purpose of this study is to evaluate the risk through traffic accidents in order to derive a road environment improvement plan. EPDO ('Equivalent property damage only') is criterion used for risk assessment. The data used for risk assessment analyzes accident data of the traffic accident analysis system provided by the Korea Highway Traffic Authority. The reasons for selecting EPDO as the selection criteria are as follows. Simple methods based on the number of traffic accidents or accident rates do not reflect the traffic characteristics of the road. EPDO calculates the accident severity coefficient by weighing it for each accident severity according to the type of damage. This method is not only easy to select risk sections, but is also appropriate in evaluating improvements for street environment according to the recent increase in mobility accidents and damage levels. In addition, the accident severity coefficient is visualized as GIS to select a risk section and to compare the car accident. Through the results, the physical accident factors are categorized by comparative analysis based on the cases of the top five mobility accident risk sections. Improvements are derived by classifying accident factors into cross-sectional facilities and road facilities. Through the results of analysis, the priority of improving the street environment by case site is evaluated. In conclusion for mobility accidents is visualized to determine the risk section, and physical accident factors are classified through the characteristics of each case site. In order to create a safe mobility driving environment, it is used to identify accident-causing factors in the street environment and derive improvements. Ultimately, it contributes to revitalizing the use of shared mobility by reducing mobility accidents.

Rural Public Service Facilities Planning in Hilly Region from the Perspective of Territorial Spatial Planning — A Case Study in Southern Sichuan Province

Lu Liu (Tongji University).

Abstract


Improving the rural public service system is a key measure to retain rural people and improve villagers' happiness, as well as an important way to realize rural revitalization and county urbanization. Because of the special hilly terrain, the distribution of village settlements in southern Sichuan Province presents the form of scattered settlements, which is not conducive to the effective allocation of public service facilities. Based on a full understanding of the mandates of the territorial spatial planning reform and the rural revitalization strategy, the case study in hilly region of southern Sichuan is conducted to find the way to achieve equal access to basic public services between urban and rural areas. This paper points out the current situation and problems of rural public service facilities in hilly areas by questionnaire and interview. The result shows that compared to other facilities, the villagers need more facilities for elderly, fitness and sewage nearby and they prefer to travel longer to the central towns or the county towns for education, medical care and business service. In order to balance the efficiency and equity of public service, it is suggested that the three types of facilities for elderly, fitness and sewage should be built in the village level and other types of facilities for education, health and business should be built with higher quality in the central or the county towns to serve those villages nearby to satisfy the villagers demand of public services. At the same time, through the proper centralized configuration of facilities, the villagers will be guided to live in towns to realize the local urbanization of villagers at county level in Southwest China.

Examine spatial accessibility to COVID-19 vaccine sites in Oregon

Ruru Jia (Faculty of Innovation and Design, City University of Macau) and Huajie Yang (Faculty of Innovation and Design, City University of Macau).

Abstract

Massive and rapid vaccination is expected to play a vital role in containing the spread of COVID-19, while the majority of existing studies focus on lockdown policies or testing sites, and rare studies investigate the spatial accessibility to COVID-19 vaccine sites (Hu et al., 2020; Huang & Li, 2022; Spotswood et al., 2021). This study attempts to address this gap by investigating the spatial accessibility to vaccine sites and exploring whether the access to and uptake of vaccines is adequate



the equitable in Oregon. Using the 2-step floating catchment area method that integrates both driving and walking modes coupled with 2014–2018 American Census Survey 5-year estimates, this study first measured the spatial accessibility to vaccine sites in Oregon at the census tract level at the end of June 2020 and examined its distribution across regions and different groups of people. Results indicate that accessibility scores were heterogeneous across regions and groups. The accessibility to vaccine sites in rural areas is much lower compared to urbanized areas. Though people in urbanized areas had higher accessibility to vaccine sites compared to the average accessibility score in the whole area, many people still did not have adequate accessibility because of limited vaccination capacity and other social and spatial factors. Especially, vulnerable groups of people, such as people without private vehicles and the elderly had limited accessibility to vaccine sites. Results of our analysis provide empirical evidence for the spatial accessibility to vaccine sites and explore its difference across different regions and groups of people, which will help policymakers to develop an effective policy response for the vulnerable people to avoid the risk of deepening inequalities.

Evaluation of Economic Performance of Transport Policy Based on DID Model and Its Impact on Planning System—A Case Study from the UK

Xindan Cao (Shanghai Tongji Urban Planning & Design Institute Co., Ltd.), Yidong Yu (Shanghai Tongji Urban Planning & Design Institute Co., Ltd.) and Xiji Jiang (College of architecture and urban planning, Tongji University).

Abstract

The results of planning policy evaluations usually affect the existing planning affairs in the British planning system—by changing or setting up new plans to optimize the planning system. The planning of transport and its promoting effect in growth have always been the prioritizing part occurring in the UK planning, and the effectiveness of planning and the economic development could be affected by the quality of transport policies directly. However, evaluating the economic performance of transport policies and the impact on planning is relatively complex, and the qualitative analysis producing measurable and attributable results could never be simply brought to a conclusion. Therefore, how to deal with the evaluation of policies and improve the evaluation system in a proper way has largely become the key to building greater support for the planning system. In this context, this research employs the difference-in-difference (DID) model to evaluate the economic effect before and after the implementation of Sheffield's transport policy, and its impact on the planning system. The model constructs the growth-oriented policies in Sheffield's transport policy from 2010 to 2020 as the evaluation object, including regional railways, innovation corridors, public transport, and other policies that would promote economic growth; and set up the implemented growth-oriented transport policy as the treatment group, and set up the growth-oriented transportation policy which is not implemented as the control group; then compare the economic indicators between before and after the implementation of the transport policy, such as Gross Domestic Product (GDP), Gross value added (GVA), and other indicators. The research found that: (1) The affairs of transport policy of the economic growth-oriented has a promoting effect on the economic growth, and could foster other economic activities, additionally, promoting the connectivity of enterprise and the development of manufacturing, etc. However, the effects vary significantly: it is possible for the transport policies to enable business operations to generate greater profits and promote employment, which is crucial to economic growth. (2) Transport policies have a profound impact on the planning system: transport policies would influence the change of local planning, neighborhood planning, and regional traffic policies, as well as the content of practical guidance in the planning system. In summary, the research provides an analysis method of the policy effectiveness to evaluate Sheffield's transport policy and planning practice and policymaking by constructing a DID model, which they significance under the present planning system.

A Methodology to Prioritise Service Quality Attributes for Bus Services- A Case Study of Kolkata

Tiyali Bose (XIM University Bhubaneswar) and Debapratim Pandit (Indian Institute of Technology, Kharagpur).

Abstract

Improving bus transit service quality based on customer expectations is a key element in retaining existing customers and attracting future users. This has led to increased focus on user's perception in assessment of service quality and undertaking priority decisions based on customer feedback. In transportation studies, one of the essential perspectives is based on assessment of importance of an attribute, where importance is determined based on either the stated importance approach or the derived importance approach. However, both these approaches have major drawbacks. This, study thus uses a combination of stated and derived importance approach to understand the degree of criticality of bus service attributes to users for prioritising provisioning of bus service attributes in Kolkata. The degree of criticality of service quality attributes is determined using a combination of stated and derived importance methodologies. The users' stated

importance is analysed using RIDIT analysis to obtain RIDIT scores(ρ), and attributes with $\rho \geq 0.5$ are identified to be of higher importance. The derived importance is analysed using ordinal logistic regression(OLR) where OLR is applied on the users' perceived level of satisfaction, to identify the significant($p < 0.05$) and insignificant($p > 0.05$) attributes where the satisfaction for individual attributes are the independent variables, while overall satisfaction is the dependent variable. Attributes observed to be significant are identified to be of high importance. A ranking system is then developed for the significant service quality attributes using relative weights obtained from partial loglikelihood(PLL) of the significant attributes. Finally, based on the RIDIT score, and OLR significance, a novel criticality categorisation is developed to identify the importance of an attribute. The attributes are categorised into four degrees of criticality namely, critical($\rho \geq 0.5$, and $p < 0.05$), high($\rho < 0.5$, and $p < 0.05$), moderate($\rho \geq 0.5$, and $p > 0.05$), and low($\rho < 0.5$, and $p > 0.05$). Critical and high importance attributes are further ranked based on their relative weights obtained from PLL, and those of moderate and low importance, are ranked based on their RIDIT ranks. A user importance and satisfaction survey for various quantitative and qualitative bus service attributes were conducted for WBTC bus users of Kolkata. The results obtained confirmed the existence of differences between user's stated and derived importance. For example, 'fare amount' though perceived to be one of the least important attributes in RIDIT analysis, it had the highest relative effect. Thus, it is one of the highest ranked attribute among the attributes identified to be of 'high' importance.

How does Bus Rapid Transit Infrastructure Type influence Transit Ridership? Evidence from Cities Worldwide

Dwayne Baker (Queens College, City University of New York).

Abstract

Researchers and planners have viewed BRT as a viable rapid transit option that generally increases transit ridership. However, a number of differences between BRT systems especially in terms of BRT infrastructure exist (Hess, et al., 2005; ITDP, 2022). Some cities opt for exclusive, grade separated bus-only lanes; others implement segregated bus lanes on the same roadway as auto traffic; while others create bus lanes within mixed-traffic.

Whether there is a difference in how these different types of BRT influence bus ridership is unknown. In quantitatively analyzing how BRT impacts transit ridership, research has incorporated different components of BRT – like bus frequency or stop spacing, for instance (Currie & Delbosc, 2014). However, gaps remain in existing research. First, limited research compares BRTs across different cities or regions. Doing so could provide a broader understanding of BRT's impacts. Second, existing research largely does not differentiate the types of BRT infrastructure when examining BRT's influence on transit ridership.

This study thus asks: How do different forms of BRT influence transit ridership? This study uses spatial regressions to answer this question. Approximately 20 cities worldwide with BRT were selected with opening dates beginning in, or within 1-2 years of, 2010. Analyses were conducted at the corridor level where dummy variables were assigned to the different types of BRT infrastructure implemented: fully exclusive BRT lanes, segregated BRT lanes, and bus-only BRT lanes in mixed traffic. Preliminary results suggest that fully exclusive BRT lanes and segregated BRT lanes are related to increases in transit ridership, while bus-only BRT lanes in mixed traffic show no significant relationship with transit ridership.

Growing urban spaces are continuously adapting their transit systems to meet their populations' ever-increasing mobility needs. BRT can provide a cost-effective and potentially more inclusive form of rapid transit (due BRT's flexibility allowing buses to go on and off the actual BRT infrastructure and service different areas). Understanding the impacts of different forms of BRT can therefore assist cities in determining the best form of BRT to adopt.

Evaluation of Economic Performance of Transport Policy Based on DID Model and Its Impact on Planning System—A Case Study from the UK

Xindan Cao (Shanghai Tongji Urban Planning & Design Institute Co., Ltd.), Yidong Yu (Shanghai Tongji Urban Planning & Design Institute Co., Ltd.) and Xiji Jiang (College of architecture and urban planning, Tongji University).

Abstract

The results of planning policy evaluations usually affect the existing planning affairs in the British planning system—by changing or setting up new plans to optimize the planning system. The planning of transport and its promoting effect in growth have always been the prioritizing part occurring in the UK planning, and the effectiveness of planning and the economic development could be affected by the quality of transport policies directly. However, evaluating the economic performance of transport policies and the impact on planning is relatively complex, and the qualitative analysis producing measurable and attributable results could never be simply brought to a conclusion. Therefore, how to deal with the evaluation of policies and improve the evaluation system in a proper way has largely become the key to building greater

support for the planning system. In this context, this research employs the difference-in-difference (DID) model to evaluate the economic effect before and after the implementation of Sheffield's transport policy, and its impact on the planning system. The model constructs the growth-oriented policies in Sheffield's transport policy from 2010 to 2020 as the evaluation object, including regional railways, innovation corridors, public transport, and other policies that would promote economic growth; and set up the implemented growth-oriented transport policy as the treatment group, and set up the growth-oriented transportation policy which is not implemented as the control group; then compare the economic indicators between before and after the implementation of the transport policy, such as Gross Domestic Product (GDP), Gross value added (GVA), and other indicators. The research found that: (1) The affairs of transport policy of the economic growth-oriented has a promoting effect on the economic growth, and could foster other economic activities, additionally, promoting the connectivity of enterprise and the development of manufacturing, etc. However, the effects vary significantly: it is possible for the transport policies to enable business operations to generate greater profits and promote employment, which is crucial to economic growth. (2) Transport policies have a profound impact on the planning system: transport policies would influence the change of local planning, neighborhood planning, and regional traffic policies, as well as the content of practical guidance in the planning system. In summary, the research provides an analysis method of the policy effectiveness to evaluate Sheffield's transport policy and planning practice and policymaking by constructing a DID model, which they significance under the present planning system.

Cross Border Tourism: A Systematic Literature Review On Current Issues And Challenges In Indonesia

Elvis Salouw (Universitas Gadjah Mada) and Bakti Setiawan (Universitas Gadjah Mada).

Abstract

The discourse on cross-border tourism (CBT) has become an interesting topic for researchers in the last few decades. Indonesia, as an archipelagic country, has very promising cross-border tourism potential. However, there is not much literature on cross-border tourism in Indonesia. Therefore, this study aims to describe qualitatively the development of tourism research in Indonesia related to cross-border tourism. In addition, this study also seeks to identify articles, chapter books, and conference papers related to CBT in Indonesia and then analyze them to produce a systematic literature review and draw theoretical implications. The method used in this study is a systematic literature review on CBT in Indonesia. The databases used in this research are Scopus, Web of Science and Google Scholar. The data collection in this study using PoP software, organizing data using Mendeley software, analyzing data using NVIVO software, and visualizing data using VosViewers. Through these methods, current issues and challenges of CBT in Indonesia would be presented and discussed.

Indonesia Transport Loan Projects: Development Outcome Attributions (DOA) on Unemployment, Growth and Poverty

Muhammad A Ingratubun (IPB University), To Be Added To Be Added (To be added), To Be Added To Be Added (To be added) and To Be Added To Be Added (To be added).

Abstract

Background Transport infrastructure plays a critical role in regional development that affects the level of disparities among them (Baum-Snow et al. 2020; Koster et al. 2021). Transportation has always been the foundations of human civilization and modern society and often measured by how advanced are their transportation systems.

Both Asian Development Bank (ADB) and the World Bank shared a common mission as regional development banks borne from regional development initiatives. Their main missions among other, is to fight and reduce poverty. Both banks have provided transport loans about 0.16% of Indonesia's 2020 current GDP since the 1970s.

Purpose Our study is on Indonesia's borrowing for its transport investment from the ADB and the World Bank and their impacts on unemployment, growth, and poverty. Additionally, on capital deformation or capital flights, also known as spill-over effect because of foreign currency loans.

Potential Contribution 1. Significantly reducing borrowing in foreign currency. 2. Revisit the theory and policy on the need for external borrowing in foreign currency for national development financing given ample of contradictory evidence not only exhibited by our study but also by others, such as Werner (2014, 2015, 2016a) and Hudson (2019).

Data and Methodology We utilized publically available data from both ADB and the World Bank.

We begin with elaboration on basic theories and our hypothesis, followed by a literature review and our lucubration. We expound on our quantitative non-econometric method before presenting our findings and analysis. We present our study's implications and recommendations before we reached our conclusion.

We applied the triangulations and attribution (expressed as % of GDP) techniques in evaluating the effectiveness and impacts of Indonesia's borrowing.

Results After triangulating the results, we discovered that both ADB and World Bank's loans, despite having some positive and negative impacts on both unemployment and growth, are significantly worsening poverty by over 200% and cause capital flights of more than \$26 per \$1 loan. Their loans are only 50% effective in achieving their statement missions. The fundamental problem our paper tackles is the effectiveness of ADB and World Bank transport loans, their disbursement delays and their impacts, which is generic in all MDBs. In comparison, commercial banking disburses loan funds within one day, whereas the MDBs, including the ADB and World Bank, on average are over 5-year.

Conclusions At best, is to avoid borrowing in foreign currency as it signifies negative impacts and national capital deformation.

The potential impacts of micromobility on urban transport: adaptation of land use and transport model of Vienna, Austria

Shahnaz Nabila Fuady (University of Natural Resources and Life Sciences Vienna).

Abstract

Micromobility has rapidly gained popularity in the past few years. The concept of micromobility is nothing new. Decades later, people have re-discovered micromobility by upgrading bicycles, kick scooters, and skateboards to their electronic version today. The benefits of micromobility remain the same. The only difference then and now is its impact on cities and people. In this research we modeled the possible impact of micromobility, predict the effect of urban land use and transport system, and discuss the policy implication. We consider the literature on the range of attributes of micromobility which might be affect transport and land use pattern, and suggest potential outcome for each of them. These include the proportion of micromobility trip, whether privately owned or publicly shared, the impact on network capacity, the potential reduction in the value on in-vehicle time and general cost of modes. We represent these attributes in an expanded causal link diagram of the urban land use and transport system and import those causal link into the MARS system dynamics model. We determine from the literature a level for each attribute, and test the impacts in a set of scenarios using an updated MARS model of Vienna. This research use some assumptions as input to the model. The results show how the share mode changes from year to year until 2050. This has an impact not only on the transports system through changes in network capacity which has an impact on reducing traffic congestion, but also has an impact on environmental aspects through decreasing CO2 emissions, and increasing accessibility to land use.

Risky Driving Behavior of Motorcyclist: The Influences of Psychological, Spatial, and Law Enforcement in Sumenep Regency

Arbi Ali Farmadi (Bandung Institute of Technology), Shafira Prameswari (Bandung Institute of Technology) and I Gusti Ayu Andani (Bandung Institute of Technology).

Abstract

Traffic accidents are one of the biggest causes of death in the world. Risky driving behavior contributed significantly to the incident. Many internal and external factors have been investigated, such as individual character, psychological factors, and the conditions of the built environment. However, few studies link it with law enforcement, especially with the use of technology, while that has implications for the behavior of motorcyclists. Sumenep Regency has the third-highest level of risky driving behavior, especially not wearing a helmet in East Java Province. This study aims to identify the factors that influence risky driving behavior based on spatial, law enforcement, and psychological perspectives, especially in Sumenep Urban, which includes Sumenep City District and Kalianget District. The objects of risky driving behavior in this study namely driving against traffic flow, turning vehicles without warning, using gadgets when driving, not wearing helmets, red-lights running, speeding, overtaking carelessly, and a combination of these risky driving behaviors. The research approaches are qualitative and quantitative with the structural equation modeling analysis method using SmartPLS 3.3.1. The results show that 49.9% of respondents are doing a combination of risky driving behavior. Not wearing a helmet is the most risky driving behavior carried out by respondents, 42.9%. The highest travel purpose when doing risky driving behavior is socializing, 37%. The biggest reason or motivation for drivers to carry out risky driving behavior is traffic conditions that allow (67.95%). In comparison, the biggest reason for not engaging in risky driving behavior is the presence of traffic officers (88.67%). The research model shows that the three aspects have a direct influence. However, the psychological aspect, especially perceived behavioral control, has a more significant influence on the incidence of risky driving behavior. The spatial and law enforcement aspects that have a significant influence are the characteristics of the intersection -the presence of CCTV cameras and Traffic Lights- and the lack of vigilance in supervision and disobedience to the law. However, each factor does

not have the same direct influence -both magnitude and direction- on all types of risky driving behavior. In addition to direct influence, psychological aspects and law enforcement have indirect effects or act as intervening variables. Specifically, risky driving behavior through red-lights running, and driving against traffic flow can be explained more clearly through law enforcement aspects than spatial or psychological aspects.

Analysis on dynamic public transit accessibility under recurring and non-recurring congestion

Jaewoong Sim (Ulsan National Institute of Science and Technology(UNIST)) and Gi Hyoug Cho (Ulsan National Institute of Science and Technology(UNIST)).

Abstract

Travel-time based public transit accessibility measure has open up an opportunity to analyze temporal variability on public transit accessibility by considering public transit network factors such as vehicle headway and transit time. Variability on public transit accessibility in actual traffic conditions is caused by recurring congestion such as traffic congestion at commuting time but also non-recurring congestion such as adverse weather conditions or traffic accident. However, it is difficult to analyze the factors of temporal accessibility variability because recurring and non-recurring congestion can be simultaneously occurred. Prior studies about variability on public transit accessibility have failed to appraise actual variation of traffic condition because they calculate travel time by using not actual operation data of public transit service but planned schedule of transit operator. However, if public transit accessibility is calculated based actual operation data, it can be expected that clarifies the variability caused by recurring and non-recurring congestion. The main purpose of this study is to suggest an analysis methodology that identifies dynamic public transit accessibility based on actual public transportation operation data. In addition, this study analyzes the variability on public transit accessibility by dividing recurring congestion and non-recurring congestion as factors that cause the variability. This study calculated travel time through actual operation data accumulated by Bus Information Management System(BIMS) and calculated integrated accessibility by space-time point using the cumulative opportunity measurement methodology. In addition, this study suggests a Normalized Integral Accessibility Index to indicate variability on accessibility caused by Recurring congestion, and a Rate of Integral Accessibility Change Index to indicate variability on accessibility caused by non-recurring congestion. This study identified the difference on public transit accessibility between space-time points depending on the geographical location and public transportation network through Integral accessibility. And Normalized Integral Accessibility was shown that temporal and spatial range of variability on public transit accessibility caused by recurring congestion, Rate of Integral Accessibility change controlled recurring congestion factors to clarifies variability on public transit accessibility caused by non-recurring congestion. The methodology for dynamic public transit accessibility suggested in this study enable real-time monitoring about variability on public transit accessibility caused by recurring congestion and non-recurring congestion distinctly. And it expected to be used to identify vulnerable points of public transit service in Recurring and Non-Recurring congestion condition and to develop countermeasures.

Commute or relocate? The effect of the built environment

Han-na Park (Seoul National University) and Jaemin Song (Seoul National University).

Abstract

Globally, the importance of carbon neutrality has grown in recent years to resolve the climate change crisis. Because urban spatial structures are inextricably linked to transportation energy use, spatial planning is a critical strategy for carbon emission reduction. A compact city concept has been considered as a sustainable urban form, characterized by high density and proximity, mixed land uses, and heavy dependence on public transport. However, the Seoul Metropolitan Area in South Korea exhibits a significant spatial jobs-housing mismatch, resulting in lengthy commutes, despite its physical qualities of a compact metropolis. Migration and commuting choices have been explored, with an emphasis on the economic theory model based on the supply and demand mechanisms of the housing and labor markets. However, because the economic theory model neglects geographical considerations, it cannot capture actual migration and commuting patterns. In the spatial planning discipline, the gravity and radiation models are popularly used to estimate population traffic based on the population density in each region and the distance between regions. However, these models have drawbacks in that they do not take into account the city's socioeconomic features. Recently, machine learning algorithms have been used to develop models for forecasting population mobility and floating population, which employ city-level characteristics and population movement or traffic data to forecast commuting behavior across cities. Against this backdrop, this study aims to examine the effect of workplace and housing neighborhood characteristics and distance on commuting behavior in Seoul using the XGBoost Regression model among machine learning algorithms. By estimating the urban qualities of the workplace and residential neighborhood that are critical for commuting traffic, we will discover essential urban characteristics for migration and traffic and give policy implications for implementing employment proximity. The

preliminary findings indicate that significant factors affecting migration patterns vary according to commuting distances; in particular, public transportation networks are critical in determining migration and commuting choices.

The CG Evaluation for Street Design and Mobility considering Traffic Density of Cars and Pedestrians

Yuki Shinoda (Meijo University Science and Technology Department of Civil Engineering) and Kazuki Nakamura (Meijo University Department of Civil Engineering).

Abstract

In recent years, street design improvements have been required for both functions of transport links and activity places. The transport function is expected to provide more street spaces for small, slow and shared mobility for feeder transport around stations. In the place function, more attention is paid to street buffer areas between driveways and sidewalks to provide activity spaces (e.g. parklet). These functions may be demanded more in streets with higher transport density, but the demand may differ by street users, particularly cars and pedestrians. Under the constraint of street spaces, it is necessary to find preferable street-space reallocation depending on traffic conditions. However, as it is difficult to find such comparable street environments in terms of mobility, spatial design, and traffic conditions in the real environments, it is useful to utilize Computer Graphics (CG) tools as the virtual environments. Accordingly, the aim of this study is to analyze the impacts of traffic density, including cars and pedestrians, on the evaluation for streetscapes, including diversified spatial design and mobility, using the CG tools. First, in the four traffic scenarios differentiating pedestrian density in each of the peak and off-peak traffic volumes, the virtual street environments were produced for different patterns of street buffer design and small mobility with the CG tools of Unity, SketchUp and CityEngine. Then, a questionnaire survey was conducted to evaluate the CG videos in terms of spatial needs, such as safety, comfort and enjoyment, assuming the situation to walk to the mobility around a station. Finally, regression models were constructed to account for the impacts of traffic density, street design, and mobility on the evaluations. As a result, while street buffer design is most influential for the evaluation, traffic densities of cars and pedestrians respectively influence safety and enjoyment. As for safety, traffic volume has the negative impact, but pedestrian volume has the positive impact. Moreover, street buffer design and small mobility have the significant positive impacts on safety. On the other hand, pedestrian volume improves not only safety but also enjoyment, the impact of which is comparably significant to street buffer design. These results suggest that it could be effective to introduce street buffer design and small mobility to improve safety on streets with higher car densities and to introduce street buffer design to enhance enjoyment on streets with higher pedestrian densities.

Efficiency Of Passenger Car Units In Analysing Urban Road Congestion. A Case Study Of Karu Urban Area, Nasarawa State, Nigeria

Adamiu Musa Eya (Universiti Teknologi Malaysia), Gobi Krishna Sinniah (Universiti Teknologi Malaysia), Abdullahi Hashim (Federal Polytechnic Mubi, Adamawa State, Nigeria) and Nabihah Kamarudin (Universiti Teknologi Malaysia).

Abstract

Traffic congestion is a phenomenon that is a challenge leading to undesirable consequences in most cities of the world. Passenger car unit (PCU) or equivalent was developed for different countries across the globe but the application determines its uniqueness and how systematic, measured, accurate, reliable, and technically feature in a real-life situation. For numerous reasons due to uniqueness and natural sittings of economic characteristics and requirements of mobility in addition to the normal urban road congestion, Karu faced a typical road congestion problem that warrants this research. The study based its finding on two locations, Masaka and Maraba junction. The paper aimed to analyse the efficiency of passenger Car units or equivalent in an urban road congestion study. The objectives of this research are two-fold. First, reviewed relevant literature related to the study and their output suitability. Secondly, assess the intensities of road congestion and the level of services (LOS). Inadequacy of road connectivity was also observed as one of the major setbacks in Masaka junction. The study notes that, 15% - 20% of route diversion from the high-level congestion road lesser or minor road at evening peak period. The study revealed a significant relationship between the intensity of road congestion and the level of services at the Maraba junction.

Infrastructural interconnectivity in the Age of the Tropics: a study of the trans-scalar impacts of the Belt and Road Initiative in Brazil and Latin America

Gabriela Bitencourt (School of Architecture in the Federal University of Minas Gerais (UFMG)) and Natacha Rena (School of Architecture in the Federal University of Minas Gerais (UFMG)).

Abstract

Through unprecedented infrastructural investment, China inaugurates a scenario of physical-digital integration that anticipates the future of global interconnectivity for the 21st century (OMA, CAFA, 2020). While China invested around 9% of its GDP in infrastructure in the 1990s-2000s, most emerging economies invested around 2 and 5% (ABDENUR et al., 2021). As a result, China leads the expansion and global production of high-speed-trains with sophisticated technological innovation (GALA; FERREIRA, 2021; XIONG, 2016), revealing the railway model as a central instrument of its territorial development. Such a strategy already has effects on the emergence of a new economic and social formation (JABBOUR; VADELL, 2021), promotion of rural revitalization (ZHANG et al., 2021) and the awakening of new sustainability standards. On an international scale, China promotes the Belt and Road Initiative (BRI), which aims to finance transnational land, maritime and digital connectivity projects all over the world, advocating shared development and intensifying new geopolitical arrangements. On the other side of the world, Brazil deals with the problem of integration in mobility, the imbalance in logistics matrices, in addition to low public investment in the infrastructure sector (PIRES, 2018). Therefore, this study comparatively addresses the territorial and infrastructural development process taking place in China and Brazil, considering the potentials and challenges for both countries in formulating territorial planning guidelines and endogenous development (FURTADO, 1978) sensitive to the context of countries in the Tropics. Despite the disparities between China and Brazil, new development vectors are emerging due to BRI's expansion in the Global South (MAIA, RENA, 2021). Today, 21 Latin American countries are linked to the BRI, a fact that could stimulate financing strategies to meet the infrastructural and developmental needs of third-world economies, and specifically, Brazil's needs. Hence, we believe that a disruptive effect from this level of physical and digital connectivity can lead to an increase in assertive multilateral cooperation and the real establishment of a new multipolar world order. Thus, this article proposes a review and an adaptation of the Indisciplinary Cartographic Method (LOPES; RENA; SÁ, 2019) in order to present through historical and geopolitical perspectives the territorial planning strategies, institutional platforms and infrastructure projects, recently arisen in Brazil, with the aim of promoting physical and economic integration of Latin America. Finally, the study brings an overview of the current trends for infrastructural and territorial development shaped by the territorialization of Chinese investments in Brazil and Latin America.

Integrated trans-national planning as a tool for harmonizing the interest between ecosystem protection, social and economic development and infrastructure development in Europe

Maros Finka (AESOP / SPECTRA CE EU at STU in Bratislava), Lubomir Jamecny (SPECTRA CE EU at STU in Bratislava), Vladimir Ondrejicka (SPECTRA CE EU at STU in Bratislava) and Milan Husar (AESOP YA, SPECTRA CE EU at STU in Bratislava).

Abstract

The elimination of social and economic disparities in Europe is possible only via balanced social, economic and environmental development supported by the development of proper infrastructure. To identify and to develop good solutions to safeguard dynamic but sustainable development means to maximize efficient use of territorial capital and at the same time to minimize negative impacts on nature and wildlife. Both is possible only looking across the borders of national states. Carpathian Mountains create ecological backbone of Central Europe with valuable ecosystems and cultural landscape including very rich diversity of fauna and flora confronted with the pressure of rush economic and social development, urban sprawl, construction of the social, transport and technical infrastructure. Multiple development activities contribute to the fragmentation of valuable landscape ecosystems, creation of barriers for wild animals' migration or even destruction of their natural habitats. Joint transnational approach to the safeguarding and sustainable development of the Carpathian microregion is framed by the Carpathian Convention (2018) stressing importance of comprehensive integrative management. The developed conceptual framework for such approach is based on outputs form several international projects supported by the European Union addressing the challenges and problems in harmonizing all 3 pillars of sustainability. The common denominator of proposed approaches, methods and tools is the logic of priorities given by the hierarchy: Avoidance - Mitigation – Compensation. This logic determined the hierarchy from strategic comprehensive planning and decision-making, via designing, up to the construction, use and maintenance, not forgetting the phase of up grading and re-development as important parts of life cycle of settlement and infrastructural elements. This paper demonstrates especially one of their outputs – international handbook on spatial planning processes and tools of integrative management of eco-corridors, addressing all phases from scoping, via planning up to operational



management and monitoring. The guidelines included in this handbook are supplemented by the list of tools integrated in spatial planning and management, overview of spatial planning systems in individual countries and passport of the tools integrated in spatial planning and management processes. This international handbook is capitalizing accumulated knowledge and experience from international cooperation of academia, non-governmental organizations, self-governmental and governmental authorities awarded in the competition of Regio Star, IENE award and listed in the UNEP Annual Report as the best practice example. This contribution is the result of the project SafeGREEN supported by the Danube Transnational Programme co-financed by the European Regional Development Fund.



Reclaiming our reclaimed land and aspirations for a good community on the South Coast of Korea

Heejin Choi (Graduate School of Environmental Studies, Seoul National University).

Abstract

Under the rapid urbanization and industrialization on the coast of Korea, some coastlines have been filled with soil, sand, stones, and other artificial objects in the light of acquiring lands for housing and industrial complexes. This reclaimed land has led to numerous disputes and disagreements about industrial complexes in rural fishing communities. This ethnographic and action research focuses on a process of community rebuilding in Sujeong of Changwon city, where the community has been suffering from a site of the reclaimed land of around 231,000 m² planned and established by the city government and STX shipping corporation without the residents' agreement. Since some residents including Trappist nuns and the aged women protested against exclusive procedures for setting up shipping manufacturing by problematizing environmental issues causing contaminated matters such as iron dust, effluent, loud noise, and so on, the shipping corporation decided to withdraw in 2011. The divided community still has been stamped as unbearable neighbors because the environmental protest was blamed for impeding the economic growth of the city. Recently, the third community committee has been organized as intertwining with the local government, the local college, youth/civic organizations, etc. in order to dissolve its conflict and move on to the next step. As becoming a community planner, feminist scholar and activist, I participate in activities of the third community committee since last year and engage in community education, revitalization projects, visiting programs for local youth, festivals, and so forth. They put continuous efforts into rebuilding its community with the people as well as local resources such as Participatory Budgeting. Unfortunately, in the short term, those efforts could not bring easy reconciliation and concrete results. Participants have aspirations for a good community in common through dialogues, discussions, and preparations for the festival. This research, however, shows that their aspirations for a good community are disparate and selective conditions under a posture and position of themselves. Furthermore, the reclaimed land, which plays a critical role in their aspirations, can be represented as obstacles for the community and hopes toward commons at the same time.

Effects of changing snowfall pattern on the traditional livelihoods in high mountain villages of Ladakh, India- challenges and local innovations

Tusharkanti Kumar (Laboratory of Regional Planning, Graduate School of Global Environmental Studies, Kyoto University) and Izuru Saizen (Laboratory of Regional Planning, Graduate School of Global Environmental Studies, Kyoto University).

Abstract

Ladakh region in India is a high altitude cold-desert mountainous region. Extreme climatic conditions and scarce resources present a challenge for human habitation. With their traditional livelihood practices revolving around subsistence agriculture the people of Ladakh have thrived in the region for centuries. Water is one of the most crucial and scarce resources and its efficient management is extremely important for the agricultural practices in the region. The villages are dependent on glacial meltwater and the availability of this meltwater varies with location and time. The traditional water management practices evolved over time to create unique networks of physical and social relationships that supported the livelihood practices in the region for centuries. But recent changes in the weather pattern, especially irregularities and reduction in the snowfall during the winter months have pushed these traditional water management techniques to their limits. The aim of this study is to analyze the effects of reducing and irregular snowfall on the traditional agricultural practices in the region and also to highlight some of the new local innovations in the form of artificial glaciers and ice stupas that provides contemporary solutions to water scarcity in the region. Primary surveys show increasing local perception regarding decreasing winter snowfall as a major reason for water scarcity in the region. But lack of meteorological data of this remote mountainous region makes it difficult to ascertain. This research utilizes remote sensing data and GIS to determine the changes in snow cover in the region to clarify its impact on the water availability in the villages. Results from the study show how the changing snowfall pattern creates irregularities in water supply in the villages. The potential of community-based innovations in addressing this climate-change-induced water scarcity in the region is also elaborated upon. With a constant increase in the water demands induced by changing lifestyles and tourism, the management of water is extremely significant for the future of Ladakh. The conclusions from this study will inform a sustainable water management model for the region.

Research on the regional differences and collaboration optimization paths of rural development in urban and town intensive area

Genwei Hong (College of Architecture and Urban Planning, Tongji University; Suzhou University of Science and Technology), Zhiqiang Liu (School of Architecture and Urban Planning, Suzhou University of Science and Technology) and Manfei Wu (East China Survey, Planning and Design Institute, National Forestry and Grassland Administration).

Abstract

Rural areas constantly shrink under urbanization in Chinese urban and town intensive region. Because of the environmental climate issues and food issues, the importance and necessity of rural areas has been paid attention to. With the further advancement of the national strategy for regional urbanization and rural revitalization, optimizing the urban-rural regional collaboration path to promote better development of rural areas will become an important content. The relevant research is lacking. The purpose of this research is to transform the fragmentation of rural areas caused by regional urbanization, and to put forward suggestions that the regional urbanization development should conducive to regional collaboration of rural. It will help alleviate the not shrewd shrinkage of rural population structure imbalance and the agricultural production crisis of fragmented land resources caused by urbanization in this region. The research takes the rural areas within the jurisdiction of 15 cities in the core area of the Yangtze River Delta as an example. Firstly, it builds a comprehensive level measurement system of rural development combined with the impact of population and land resource urbanization. This system focuses on the agricultural production functions related to national food security, the population related to the survival of rural areas and social life that reflect people's living standards. Secondly, by the entropy method and the spatial autocorrelation analysis method, it researches the spatial and temporal differences of the rural development in this region. The research shows that: (1) The overall development level of rural lags behind. The low level of agricultural development and the large fluctuation of rural population are the main reasons; (2) The development level of rural social life is optimal; (3) It presents significant spatial polarization differentiation characteristics. The level and mode of urbanization, the characteristics of natural geographical resources, etc. are the main influencing factors. Finally, the research proposes optimization suggestions, the main contents include: (1) the characteristics of natural geographical resources should become the main basis for the division of agricultural regional collaborative space units; (2) The regional urbanization spatial distribution needs to meet the requirement of agricultural regional cooperation and scale development of rural. The research aims to the dilemma of regional collaboration in rural areas, and redefines the mutual aid relationship between urbanization and rural development in region. The research on the dynamic mechanism of regional cooperation in rural areas is still insufficient, and more in-depth empirical research is necessary.

“Characteristic Small Town” Model: The Practice of Sustainable Urbanization of Rural Areas in China

Shuai Li (Tongji University).

Abstract

Ignoring the sustainable urbanization of rural areas in China has long been a major problem for the Chinese government, with the blind pursue of the urbanization rate which has been witnessed rising from 17.44% in 1979 to 63.89% in 2020. Under this rapid trend, the traditional urbanization pattern of rural areas was driven by resources and labour, paying little attention to the innovation of the industry and the protection of the environment, which got in the way of the sustainable urbanization of rural areas. Therefore, in 2016, the Chinese government promulgated the "new urbanization strategy" and adopted the new model of "characteristic small town" for urbanization in rural areas, which takes the "town stage" as an important period of the transition from rural to urban. This model guides rural urbanization, based on local resources, culture and environment, to create featured industries, paying more attention to the development quality, including industries, environment, and culture. While the "characteristic small town" model works as a new engine for the sustainable urbanization of rural areas in China, two questions are meaningful to be researched: (i) What is the specific connotation of "characteristic small town"? (ii) What are the driving factors of "characteristic small town". Through paper access, on-site research, and some specific case studies, this paper aims to answer these questions. As for the specific connotation, the core of this new model lies in the world "characteristic" which refers to the characteristic industry and characteristic rural planning. It guides the urbanization of rural areas to integrate local advantageous industrial foundation, culture and natural resources to cultivate characteristic industries, which can be divided into tourism type, manufacturing type, trade logistics type and so on. With the help of these industries, it can offer the job opportunities and help to influence the rural planning. As for the driving factors of "characteristic small town", technology innovation, industrial resources, culture, ecology and infrastructure play an important role to form the "explore characteristic—evaluate characteristic—agglomerate characteristic" as the cultivation mechanism, which would be conducive to the transformation for the sustainable urbanization of rural area in China.

Development route of hydraulic society villages in the Pearl River Delta in the process of modernization: take Xiqiao Town, Foshan City, China as an example

Yue Zeng (School of Architecture, South China University of Technology) and Qifeng Yuan (School of Architecture, South China University of Technology).

Abstract


Background : The Pearl River Delta (PRD) of China is one of the most dynamic economies and has the fastest urbanization rate in the world. Due to the complexity of hydrological environment, the history of PRD is also a history of water conservancy, and a corresponding hydraulic society was formed. Located in the heart of PRD, sandwiched by two big rivers and as an important sericulture and fishing base in Ming and Qing Dynasties, Xiqiao Town is an epitome of the rural areas in PRD. Methods: This paper uses ENVI and GIS software to identify multi-source remote sensing images from 1986 to 2020, shows the evolution of land use in Xiqiao Town, summarizes its development history and driving forces behind through ancient annals, yearbooks and related literature, and evaluates industrial and agricultural lands in terms of geographical features, degree of fragmentation, land value, policies, etc. to identify areas of high transformation feasibility and high rehabilitation value. Results: The current market operation way of government delegation and village collective corporations as players is in fact a modern version of the flood control mechanism with government arbitration and direct management of clans in old times. The way of participating in the modernization process by village collective corporations has enabled Xiqiao Town to develop at a high speed while still retaining large areas of landscapes from the agricultural era. It was ranked 25 among towns in China in 2019, while its polder embankment system was awarded World Heritage Irrigation Structures in 2020 and almost all villages in town have historical buildings remains. But meanwhile, due to the disadvantages in attracting investment, village collective corporations are inevitably short-sighted in the competition over market resources. In the process of transforming land from agricultural means of production to operating property, Xiqiao Town was also shaped in a fragmented spatial pattern of mingled factories, villages and fields. Village industrial parks are everywhere, and are mostly located at boundaries of villages, featuring obvious beggar-thy-neighbor effect. Conclusion: This paper proposes that to break the dilemma, it is necessary to evaluate the effectiveness of town-wide land use, attract high-quality enterprises with town-level and above platforms, promote the concentration of inefficient village industrial parks to industrial clusters, improve the unit output of industrial land, share incremental benefits with village collective corporations on the basis of not disturbing the existing interest structure, and proposes a town-wide land consolidation and a spatial planning.

An Implementation of the safety management of Traditional Shipping Vessel in the Underdeveloped, Remote, Outermost and Border areas of Indonesia

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Abstract

The Traditional Shipping vessel fleet is identical to traditional transportation which is Indonesia's maritime cultural heritage. Every year, the number of Traditional Shipping fleets decreases because it is unable to compete with conventional vessels in the distribution of logistics due to limited capacity, speed, cost, and safety. Most of the Traditional Shipping vessels serving underdeveloped, remote, outermost, and border (UROaB) areas, have a low load characteristic with high waves. In the UROaB area, there are quite a number of cases of Traditional Shipping vessel accidents, especially ship sizes < 150 GT. In order to reduce the number of accidents, the Government has implemented a ship safety management system (including Traditional Shipping), by enforcing the rules regarding the Indonesian Flag Non-Conventional Vessel Standard. This study aims to analyze the implementation of the Traditional Shipping vessel's safety management system. The output of this research will be used to develop an evaluation model for ship safety management so that it is hoped that there will be the efficiency of Traditional Shipping fleet services in the UROaB area. This type of research is descriptive qualitative using Delphi analysis. Identification was carried out through literature studies and in-depth interviews which were validated by 15 experts (NTSC, BKI, marine inspectors, ship captains, academics, and harbour master). The results showed that the implementation of the Traditional Shipping Vessel safety management system was considered ineffective. This was caused by various things, including technical and non-technical factors. Technical factors include aspects of ship construction and stability, while non-technical factors include crew competence, company commitment, understanding of crew duties and responsibilities, ship maintenance systems, and initial competence in the field of safety. Each factor has a different influence in determining the effectiveness of the implementation of the Traditional Shipping Vessel safety management



system. This research contributes to the development of policies on the implementation of a non-convention vessel standard (NCVS) ship safety system that has special characteristics such as the Traditional Shipping vessel, and can practically accelerate the reduction of the ship accident rate towards zero accident.

Sustainable transformation on a small island? A hybrid view of community capacity building, social innovation and bargaining power on Pahawang Island, Indonesia

Isye Susana Nurhasanah (Institut Teknologi Sumatera, Indonesia; KU Leuven, Belgium) and Pieter Van den Broeck (KU Leuven, Belgium).

Abstract


Purpose: This study investigates the extent to which indigenous inhabitants undertook a transformation process, institutional innovation, and planning practices. It examines how they created the power to act on ecological concerns for Pahawang Island, Indonesia—aiming to interrogate capacity building through local initiatives, enabling empowerment mechanisms, increased bargaining power, and multi-scale collaboration in transforming the island into a tourist island. This paper considered changes on Pahawang Island between the years 1997-2018. **Design/methodology/approach:** A qualitative case study involving semi-structured interviews was mobilised to collect data from the indigenous inhabitants, multiscalar government officers, NGO and private sector. Interviewed stakeholders were the ones who acknowledged the island's transformation from agriculture to tourism in the early stage. Data were analysed using a combination of literature on social innovation, capacity building, and bargaining power as the framework, highlighting the emergence of bottom-linked governance. **Result & conclusion:** Initially, the indigenous islanders on Pahawang island paid no attention to the environment and the maintenance of the island's biodiversity until outsiders shared knowledge on environment preservation. We argue that Pahawang Island's transformation cannot be separated from the indigenous islanders' ecological and social change. The process started with shared learning through continuous capacity building. Moving from shared knowledge to shared action, the capacity building empowered the locals to be more concerned about their environment. Bottom-up institutional initiatives were implemented slowly and gradually to a point where the indigenous islanders managed through dialogue to resolve the difference between those who wanted a transformation and those who resisted. The socio-spatial shift in Pahawang Island and its islanders reflects the nature, degree of involvement, and participation of multiple stakeholders in fulfilling their basic needs, building environmental awareness, attaining emancipatory goals, and bargaining their political position against the policymakers. This process became the preparation stage for a better transformation in ecology, social economy, and politics. Capacity building, socially innovative initiation and communicative planning have encouraged bottom-linked governance, stimulated empowerment, and changed the power balance in governance and policymaking. They became the keys to driving changes for inclusive governance and expanding the multi-actor networking needed to guide an immense upcoming transformation towards a sustainable tourism.

Rural Experiential Bookstores as a Strategy for Linking Urban and Rural in China

Ying-Ju Zhang (Department of Tourism Science, Tokyo Metropolitan University) and Yu Okamura (Department of Tourism Science, Tokyo Metropolitan University).

Abstract

Physical bookstore is a major component in retail and leisure systems of many urban regions that serves as cultural and public space for both locals and travelers. In recent years, it has been faced crucial challenges from the rapid development of online shopping and e-reading. To survive, it started being transformed into multi-functional spaces where providing not only traditional services but also experiential values. Furthermore, this new type of experiential bookstore has ventured into China's countrysides that presumably could facilitate local tourism and rural development. Previous studies have been frequently discussed in the field of rural tourism and revitalization through various approaches, however, there has very little research related to rural experiential bookstores as driving force for developing rural tourism and linking urban and rural in China, where the urban-rural gap is widening due to the rapid urbanization and the decay of countrysides. Thus, this research aims to build a theoretical framework which could clarify the characteristics of rural experiential bookstores in remaking rurality for local community and creating tourism experience for urban visitors, furthermore, to explore how it plays an alternative role in establishing urban-rural connections. To address the problem, this research presents a case study analysis of four rural experiential bookstores that selected from representative countrysides in China: (a) Chen-jia-pu Civilian Bookstore in Zhe-jiang province; (b) Xia-di Paddy Field Bookstore in Fujian province; (c) Sha-xi Bai Ethnicity Bookstore in Yu-nan province; (d) Qing-long-wu Capsule Hostel & Bookstore in Zhe-jiang province. Meanwhile, this study adopts qualitative methods of document analysis, field observations and in-depth interviews with key person from each bookstore and respective villages. The findings are expected to show how rural experiential bookstores provide a channel



that supports both urban and rural demands, whilst being utilized by urban creative class who collaborates with locals to facilitate rural revitalization and urban-rural connections. Potentially, this research contributes to building theoretical knowledge in the field of rural tourism and urban-rural connections through experiential bookstores in the countryside, meanwhile, it also provides practical suggestions for creative practitioners and rural participants in the practice of rural revitalization.

Displacees or beneficiaries? The unstable status of local villagers in rural gentrification in Shanghai

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Abstract


In classical rural gentrification literature, villagers often face multiple types of displacement risk and thus suffer from various negative physical, mental and social impacts. At the same time, many studies in China find that villagers actually benefit from rural gentrification. Is the situation in China entirely alien to the classical findings in the West? Based on the case of a gentrifying village in Shanghai, we explore the dynamic status of local villagers in rural gentrification and what factors contribute to the status change by looking at the changing social relations. In general, we find the status of local villagers is not static, but can transition from the beneficiaries to displacees when gentrification evolves. In the early stage of rural gentrification, villagers did benefit from the gentrification which brought income increase, social and cultural modernisation, ecological and environmental enhancement. This was different from the situation in which villagers in gentrifying rural areas generally face the risk of displacement in the West. In Western villages, land and house transactions can take place due to the private land ownership. Nevertheless, due to the collective land ownership in rural China, transactions of land and houses – with external members outside the rural collective – are strictly prohibited, which provides villagers with a protective shield against risk of displacement from the external market. Therefore, villagers were not displaced but could usually benefit from the rental income in the initial stage of rural gentrification. However, the status of local villagers may change when local gentrification intensifies, which marks the diversification of different types of gentrifiers with difference values and lifestyles. Especially the incoming of second-generation of gentrifiers, whose behaviours were rather entrepreneurial, has induced conflicts with the first gentrifiers who came here to enjoy the rural lifestyles and lived on a long-term basis. However, the contributions to the local village by first and second generations of gentrifiers were different. The second-generation gentrifiers were mainly the free riders of the efforts of the first-generation gentrifiers who have contributed to maintain an authentic natural environment. However, due to the rising conflicts, the first-generation gentrifiers started to retreat from the village. Local villagers' income will decrease substantially and even face the risk of displacement. To realise the sustainable rural development, it is necessary to coordinate the relations between multiple stakeholders and prevent the conflicts which might cease the rural gentrification.

A Study on Village Planning Supporting Touristic Development: The Case of Lvmeng Village

Helin Zhang (Tsinghua University) and Jian Liu (Tsinghua University).

Abstract

With the development of China's urban and rural construction, rural tourism has come to attention by researchers. Rural areas attract numerous urban residents for the reason of their ecological environment, pleasant views and honest folkways. Rural tourism, as an important part of rural industry, can promote not only economic development through industrial revitalization, but also cultural inheritance through tourism activities. At present, many Chinese villages have launched the exploration and planning of rural tourism. However, the gradation and complexity of China's planning system leads to the disconnection between village planning and tourism planning, and between superior planning and inferior planning. The current village planning system cannot fully meet the needs of rural tourism. A qualified village planning is conducive to further uncovering village characteristics, building better platforms for rural tourism and reducing obstacles for tourism project construction. A village planning method supporting rural tourism can help villages better tap their own potential and realize village development, and also provide reference for China's rural development during the transition period. This study tries to explore a planning method for tourism villages within the framework of China's spatial planning system, taking Lvmeng Village of Weishan Island Town as example. By studying the changes, contents and needs of China's tourism planning system and village planning system, the blank spaces and key focuses will be identified. This study tries to establish a planning method covering "collaborative planning, space control, industrial development and project implementation" for tourism-oriented villages, which will be tested and optimized by the planning practice at Lvmeng Village. According to



the study, village planning and tourism planning are two different systems that emphasize spatial and economic attributes from different viewpoints respectively and they should coordinate with each other. Rural tourism development is not a simple task that can be completed by village planning itself. It calls for coordination and cooperation of multi-party and multi-level planning. To better improve village planning, attention should be paid to collaborative planning, space control, industrial development and project implementation.

A study on the rural development path based on industrial renewal and integration: the exploration in LvTao village, Yunnan Province, China

Yaowu Li (School of Architecture, Tsinghua University), Dong Su (School of Architecture, Tsinghua University) and Jian Liu (School of Architecture, Tsinghua University).

Abstract

In recent years, the development of many Chinese villages has gradually fallen into a dilemma, even though they all have strong development potential. This has become an incomprehensible phenomenon. In order to have a good understanding of the dilemma and help these villages find a path to develop, this study chooses LvTao village as a case, which is located in Yunnan Province, China and faces the same dilemma. There are many traditional buildings in LvTao village. Most of them have a long history. Besides, most villagers in LvTao village are Bai people and they have their own unique lifestyle, which becomes an important factor for LvTao village to attract foreign tourists. However, LvTao village is difficult to develop now. Because there is no stable and reasonable industrial structure and most villagers have low income, so they have to leave the village to make a living in another place. This leads to lots of buildings and farmland be unused. To help LvTao village get out of the dilemma, the author makes a deep investigation on LvTao village by the methods of field observation, interview with villagers and literature research. Through the investigation, it is found that there are many factors which lead to the development dilemma of LvTao village. Due to the ecological protection action, the stone mining on the mountain is prohibited, resulting in the closure of the stone processing industry. At the same time, in order to protect the quality of water in Erhai Lake, most crops are not allowed to be planted, because they need a lot of chemical fertilizer, which is unhelpful for the protection of Erhai Lake. In addition, the low efficiency of traditional agriculture is also a factor which leads to the decline of LvTao village. In order to get out of this dilemma, the paper believes that LvTao village should make full use of its location advantages and cultural resources to build a new industrial structure, so as to enhance the vitality of economic development. Specifically, LvTao village could develop ecological agriculture and rural leisure tourism. In other words, industrial renewal and industrial integration should become the path to develop for the LvTao village. It also could become the path of other villages which facing the same dilemma.

Scheduling and Route optimization of The Ships in Sea Highway Program for Togean Archipelago Development in Indonesia

Irwan Prasetyo (Krisnadwipayana University), Reny Savitri (Krisnadwipayana University) and Ester Fransiska (Krisnadwipayana University).

Abstract

Sea Highway Program is a program initiated by Government of Republic of Indonesia. Its aim is to reduce price disparity between the main islands and smaller isolated islands, especially those in the Eastern part. The program was launched in 2015 and consists of the construction of new container ports in smaller regions and regularly schedule highly subsidized ship routes, from main ports of Indonesia to smaller and more isolated ports. The Togean Islands is a remote archipelago in Central Sulawesi Province, consists of six islands namely Una-una, Batudaka, Togean, Talatako, Walea Kepulauan, Walea Besar. The islands is administered by six districts given by their names, and they have speciality in agriculture and farming such as Una-una has the highest number of beef cattle among the islands, while Batudaka has the highest crops of coconut and cloves, Togean for both number of chicken and coconut, and Tatalako for chicken. There is very limited electricity in the islands so it is not adequate to have industrial processing there. These islands are connected with four Ships routes respectively by Ship no 59, no 38, no 102, and Tomini Ferry, to carry goods and passengers. The ships connect the archipelago with the six mainland ports of Gorontalo, Bitung, Ampana, Poso, Parigi, Pagimana. The ships provide linkage between the raw material, processing and the market place. The ships depart from each port to certain islands and make a return back accordingly to the original port. One trip could take 7 to 14 days, after that the ships stay in docking station for 7 to 14 days, before starting the trip again. However, there are still underutilization and inefficiencies of the ships because on the way back, the load factor of the ships are lower than 50%. Improvement of scheduling and route needs to be implemented. Using transportation modelling, the improved schedule and route are recommended. The variables include the type of agriculture products, the size and time of crops from the islands, the capacity of ships, the length and

frequency of trips. As a result an improved scheduling and route of the ships are proposed, by reducing the redundant route of Ship no 102, and providing more frequent trips for ships no 39, higher utilization and efficiency can be achieved of load factor 75% round trip. With comprehensive schedule and route planning, better utilization of ships can be achieved.

Planning for climate resilient post-agricultural landscapes - an Australian example

Andrew Butt (RMIT University)

Abstract

Contemporary Australian agriculture has proven unsuited to climatic conditions in many regions. Climate change has exacerbated this experience. Concurrently, Australian agriculture has largely bifurcated into a hyper-productivist, export focused model and an emerging local systems. A range of residual farming systems, and landscapes remain. Many of these exhibit declining returns to agriculture and under-utilised land, especially in areas beyond coasts and peri-urban regions. Australian planning systems are striking in their failure to differentiate the nature and land use characteristics of varied agricultural systems. This all occurs in a political context of competitive, unsubsidised farming, unlike many comparable nations.

This paper addresses these issues through consideration of pathways for post-agricultural land systems in South Eastern Australia, and the requirement of land use planning approaches to support these, including regulatory frameworks to address scenarios for land use change to support; population retention, renewable energy production, low-intensity food and fibre systems and revegetation for production and environmental services.

Planning Control over Rural Land Development: Zoning Enforcement in Hong Kong

Xin Li (City University of Hong Kong) and Jingmin Liang (City University of Hong Kong).

Abstract

Urbanization has led to the expansive conversion of farmland to non-agricultural human settlements. Over the past decades, the New Territories in Hong Kong, predominantly agricultural land, have experienced significant land use land cover changes where agricultural land has become sites for industrial operations. In Hong Kong agricultural land parcels that are occupied for industry-related operations are considered brownfields, many of which appear to be unauthorized development. Planners often rely on land use regulations, such as zoning, to control the misuse of land by private parties. However, rural land may not be subject to land-use regulations in the absence of zoning plans, or even such a plan exists, landowners may simply ignore it if the enforcement is weak. This is the case in the rural New Territories of Hong Kong, evidenced by the increasing volume of brownfields over the past two decades.


By revealing land-use change patterns based on historical remote sensing data from 2000 to 2020, this study aims to identify the temporal and spatial distribution patterns of different operational types of brownfields, such as logistics and open storage. This study adopts support vector machine (SVM), a supervised machine learning model, to classify remote sensing images, and to measure transition probability and spatial concentration level of different brownfields. The result suggests that the transition pattern was characterized by an increased expansion in scale and a rising level of decentralization and fragmentation. This pattern was not simply driven by the morphological and geographical constraints of parcels, but by the long-lasting and loose planning control over rural land development.

Study of Kutai Kartanegara Potential Sectors as IKN Supporting Area

Nadia Ayu Rahma Lestari (Universitas Tarumanagara), Regina Suryadjaja (Universitas Tarumanagara) and Suryono Herlambang (Universitas Tarumanagara).

Abstract

Law of the Republic of Indonesia 3/2022 on The Nation's Capital (Ibu Kota Negara/IKN) has been inaugurated by President Joko Widodo as the first step to ensure the process of relocating Indonesia's capital to Kalimantan. In the document, it is determined that IKN's territory covers parts of the Penajam Paser Utara and Kutai Kartanegara Regencies. However, the law only regulates general matters related to the basic principles of IKN development and development stage plan in general. Although the detailed masterplan of IKN core area is being prepared, there has been no specific discussion on the relationship and impact of IKN to bordering areas, including the rest of Kutai Kartanegara. Learning from the Jabodetabek area, same negative impacts, disparities in regional development on economic, social, and physical aspects, will happen in



IKN's surrounding area if the planning process does not consider the surrounding area. In order to prevent this disparity, the surrounding region must be able to anticipate changes that may occur as a result of the development of IKN. The purpose of this study is to identify the potentials of Kutai Kartanegara's economic sector as a form of anticipation so that they can support the development of IKN instead. This paper also tries to look at the regency's long-term development program where it will coincide with IKN development stage until 2024. Descriptive quantitative and qualitative analysis methods are used with data sourced from the relevant local government, such as the Central Statistical Agency (BPS) and the Regional Planning Agency. As this research is still in progress, temporary results are shown that there is great potential for Kutai Kartanegara to become the largest food supplier for IKN, as the contribution of the agricultural sector in the regency is considered large. The final result of this paper hopefully can be used as a reference for local governments to determine the policy steps that need to be taken to face the planning dynamics due to the development of IKN.

Identifying Areas of Weakness in County Urbanization

Chengwei Wang (Tongji University) and Li Zhang (Tongji University).

Abstract

Background Moving with the times, the counties in China are gradually divided into two main categories: county-level cities, and counties in general. Meanwhile, county-level urbanization carriers also have two types: counties and towns. After 2000, the trend of differentiation is becoming more and more significant. However, most discussions on county urbanization do not make these two distinctions, leading to the long-term neglect of counties that are agricultural and rural-based, and make the research can't go deep.

Purpose In order to solve the above-mentioned problems, this paper takes counties in a narrow sense as the research object, and uses Henan province as the case area to carry out discussions on two levels: county town and town, hoping to identify the areas of weakness of in county urbanization after 2000 in a more systematic and in-depth way.

Potential contributions This study is helpful to establish a qualitative-quantitative framework for the study of county urbanization, and has practical significance for the formulation of county urbanization policy.

Data and methodology Through the integration of multi-source data and the comprehensive use of spatial analysis, literature survey as well as field survey, the weakness of urbanization county towns and towns is extracted in six aspects, including population development, industrial evolution, livelihood, town system, town construction and public service.

Results The study found that the county towns have defects in transportation network, industrial foundation, facility scale, spatial organization, financing channels, etc. , towns have shortcomings in in the construction quality, service level and policy environment.


Conclusion The urbanization policy, which is devoted to making up the short slab, can make the county meet the challenge of population return and industrial structure adjustment better, which is of great significance to the future development of the county.

Planning for climate-neutral small island development

Themistoklis Pellas (National Technical University of Athens).

Abstract

Article 174 of the Treaty on the Functioning of the European Union recognises that certain type of territories, such as islands, face specific challenges due to their natural characteristics. BRIDGES – Territories with Geographical Specificities, a project under the ESPON (European Observation Network for Territorial Development and Cohesion) 2020 Programme, while underlining challenges are not uniform across a territorial type and should be understood in conjunction with other objective factors of constraint (lack of critical mass, remoteness, low potential accessibility, insularity, vulnerability and low resilience) from a functional perspective (for example part of a labour market shared between an island and the mainland), suggests reframing Cohesion policy tools (Integrated Territorial Investment and Community-led Local Development) to the geographic specificity of territories to foster their uptake. In Greece, planning has been conditioned by the Economic Adjustment Programmes under the Greek Loan Facility (2010–2011), the European Financial Stability Fund (2012–2015) and the European Stability Mechanism (2015–2018), the European Semester and the enhanced surveillance framework since 2018, and the Recovery and Resiliency Facility (2021–2026). Regarding small islands with a permanent population of less than 3.000 residents, Greco Islands is an initiative of the Territorial Just Transition Plan for the North and South Aegean and Crete, centred around physical disconnection from mainland energy networks, and programmed under the Greek Partnership Agreement (2021–2027). Its programming links to that of policies, regulations and mechanisms having relevance to land-sea interactions and Blue Growth; notably, the recent Integrated Maritime Policy for the island-maritime area of the Ionian, Aegean, and Eastern Mediterranean seas of Law 4770/2021 and the upcoming National Spatial Strategy



for Maritime Space and the Maritime Spatial Frameworks, spatial plans at the local level (Local Urban Plans and Local Special Plans) and the spatial frameworks at the national level (Special Spatial Frameworks for renewable energy sources, industry, tourism, and aquaculture). This paper attends to small island development in Greece and, postulating a capital-land approach, it delineates property development conditions with respect to climate neutrality, through a policy and legal analysis highlighting the link between new and old planning provisions.

The Changing Pattern and Driving Forces of Administrative Division Adjustment at the township level in Rapidly Urbanizing China (1985-2020): The Case of Shanghai Metropolitan Region

Haixiao Wang (Department of Urban Planning, College of Architecture and Urban Planning, Tongji University), Wenjie Wu (Department of Urban Planning, College of Architecture and Urban Planning, Tongji University) and Zhijie Chen (Shanghai Urban Planning and Design Institute, Co, Ltd).

Abstract

Since the reform and opening-up in 1978, China has launched a rapid urbanization process with the transition of planned economy to market economy. For over 40 years, the mismatch between bottom-up urban economic development and the top-down administrative division of urban system have led to plenty of administrative division adjustments. This phenomenon is particularly prevalent in the developed regions of China, while extant researches in English literature mainly focus on the city level, few have been discussed at the township level in China's developed areas. Applying an analytical framework of "subject-content-mechanism-tool" on rural governance, this research investigates on the changing pattern of administrative division adjustment in Shanghai metropolitan area (in this case, we're including Shanghai, Suzhou, Jiaying, Huzhou) at the township level between 1985 and 2020, paying particular attention to driving forces including population growth, industrial development, environmental policy, access to highway, etc. A mixed research methods of GIS spatial analysis and qualitative interview were employed to investigate on the adjustment of administrative divisions and the underpinning driving forces. Spatial data maps of township-level administrative divisions in four cities since 1985, semi-structured interviews with ten key figures (2-3 in each city), and official statistical data such as local government economic and social reports are collected as the main datasets. Preliminary findings reveal that: 1) In terms of total size, the number of township administrative units in the four cities has changed from 615 (an estimate) since 1985, to 468 in 2000, to 273 in 2010, and finally to 246 in 2021; 2) For the pattern of administrative division adjustment, the four cities exhibit significantly different pattern from one another due to their disparities in natural resources, local governance culture, distance to Shanghai, population density, etc. Taking Suzhou as an example: the changing pattern of township upgrading, township merging, and governance innovation beyond spatial adjustment have dominated the different periods of 1985 to 1995, 1995 to 2005, and 2005 till now, respectively. 3) The driving forces for the administrative division adjustments in the case cities include mismatch of governments' ability of social management and the economic development at the township level, the local governments' administrative innovation to win in the political campaign, and large scale development projects, etc. Finally, this research also discusses policy implications for good governance in rural areas in other rapidly urbanizing economies.

Innovation in indigenous entrepreneurship and wellbeing in Indonesia: a capability approach

Medina Savira (Institut Teknologi Bandung) and Fikri Zul Fahmi (Institut Teknologi Bandung).

Abstract

This study uses the wellbeing perspective to examine how the practice and outcomes of innovation in indigenous entrepreneurship in the context of Indonesia, a country in the Global South. Indigenous entrepreneurs are not only oriented in seeking entrepreneurial opportunities, creating new values, and responding to the markets, but often they prioritize the preservation of tradition and other non-economic orientations. Studies have shown that innovation possibly occurs in indigenous entrepreneurship despite various limitations. In achieving our study objective, we argue that the capabilities approach by Amartya Sen can make a valuable framework given the distinct characteristics of indigenous people. The capability approach is expected to capture the economic activity with unique features, such as indigenous entrepreneurship. In this research, we use qualitative comparative case studies as a well-established approach to understanding how indigenous entrepreneurship values innovation. We conducted in-depth interviews with the leader of the community and the entrepreneurs in three case studies; Pringgasela, Lepo Lorun and Watubo. The three of them have been running entrepreneurship in traditional weaving as a part of cultural practice for decades. A comparison of three results reveals that entrepreneurs have different valuations towards innovation, affecting their wellbeing. The evidence from this study suggests that innovation in indigenous entrepreneurship is considered a new way to attract people to

preserve culture. Moreover, innovation in indigenous entrepreneurship such as organization and marketing increases their happiness because they can preserve the culture and fulfil their daily needs by selling improved quality products in a more accessible way.

Developing Rural In Conservation Area As A Tourism Village: Is It Appropriate Policy?

Utari Vipriyanti (Universitas Mahasaraswati Denpasar), Ketut Sumantra (Universitas Mahasaraswati Denpasar) and Ni Putu Yuliani (Universitas Mahasaraswati Denpasar).

Abstract

Bali has beaches, mountains, terraces and a very diverse culture in each district and city. Therefore, the establishment of a tourism village development policy is considered the right policy to increase village income. However, the development of this tourist village must be based on an in-depth study of each potential so as not to cause excessive negative impacts. The formulation of the right strategy will accelerate economic growth, strengthen social capital while preserving nature and culture. This research was conducted in Bangli Village, Baturiti District, Tabanan Regency. Bangli Village has a strategic position because it is close to Candi Kuning Village which is a famous tourist destination for Ulun Danu Temple and Tamblingan Lake. The difference is, Bangli Village has highland agricultural potential which is cultivated organically and Hindu culture is still strong. The study aims to analyze the socio-economic and ecological determinants in the development of new tourism villages based on local wisdom. The data were analyzed using the Rapid Impact Assessment Matrix (RIAM) method. The results showed that the economic and ecological aspects had a strong positive impact, while the social and cultural aspects had a mild positive impact. Therefore, the development process of tourism villages must optimize the implementation of the economy without disturbing the biological and ecological existence. Sociological and cultural developments can be delayed in advance because the impacts and benefits that may occur are not as large and important as the other two aspects.

SDG's in Ciwidey District Village, Bandung Regency

Gina Puspitasari Rochman (Faculty Of Engineering , Bandung Islamic University), Ina Agustina (Faculty Of Engineering , Bandung Islamic University), Astri Mutia Ekasari (Faculty Of Engineering , Bandung Islamic University) and Verry Damayanti (Faculty Of Engineering , Bandung Islamic University).

Abstract


In the effort of sustainable development in Indonesia, Presidential Regulation (Perpres) Number 59 of 2017 was stipulated regarding the national sustainable development goals. The regulation sets out 17 national sustainable development goals. Meanwhile, the Village SDGs add a new target. Thus, the Village SDGs have 18 village sustainable development goals. Ciwidey District, located in West Java Province, is a rural area where the poverty severity index has risen from 0.20 percent in 2016 to 0.20 percent in 2021 and now stands at 0.34 percent. The purpose of this study is to describe the SDGs of villages in the Ciwidey District. Data is gathered through surveys, observations, and interviews with each village representative. The analysis technique used is village classification based on the SDG Village indicators. The analysis technique used is village classification based on the SDG Village indicators. The research results include the classification of villages in the Ciwidey District as well as the direction of improvement programs to achieve long-term village development. The conclusion is that the villages in Ciwidey District show various indications of SDG's numbers and even have far range numbers. As a result, in determining the development program, the Village Consultative Body must refer to the Village SDGs. The SDGs for the Village must also be stated in the Village Middle-Term Development Plan (RPJMDES).

Indonesian Village Law: A Programmatic Policy Evaluation of Its Implementation

Mochamad Nurhestitunggal (Griffith University).

Abstract

Following current trends in the transfer of powers and responsibilities to sub-national governments, Indonesia has extended its decentralization policy to the village level utilizing the 2014 Village Law. The law, as the basis for Indonesia's "development from the periphery" strategy, is intended to transform the rural areas for more effective governance, efficient development implementation, in addition to community development, and community empowerment. Despite the extensive research on the Village Law, few studies, if any, have evaluated the implementation of the law in comparison to its initial objectives. Serving as a policy evaluation study, this research examines the application of Village Law, nearly two decades after its enactment, and provides a state-of-the-art assessment of the law from the programmatic point of



view. Marsh and McConnell's Framework for policy evaluation is applied to assess the operational, outcome, resource, and beneficiary indicators of the law, involving the analysis of literature, internal documents, and media reports. The findings indicate that Indonesia has undertaken considerable endeavours to enhance the operational variable of the policy implementation to achieve its expected outcomes. Regardless of the debates on the efficiency of the allocated resources, Village Law is considered beneficial for the accelerated development of rural areas and rural communities. This study provides essential updates on the Indonesian Village Law and a starting point for more comprehensive or detailed policy evaluation research of its implementation.

Exploring the Leading Role of Rural Land Policy on Land Use Change Based on SLEUTH Model: A case study of Bowang District, Ma'anshan City, China

Shuang Qian (School of Architecture and Urban Planning, Nanjing University) and Xiaolong Luo (School of Architecture and Urban Planning, Nanjing University).

Abstract

In the past 40 years of reform and opening up, the evolution of China's rural land system has played a leading role in the change of rural land use. Exploring the impact of various stages of policy on rural land use change can provide experience for future rural land consolidation policy formulation. This study takes Bowang District of Ma'anshan City as an example. Based on the significant nodes of rural land system reform since China's reform and opening up, the research period is divided into four periods: 1978-1992, 1993-2007, 2008-2012, 2013-2020, to explore the influence of dominant land policy on rural land use change in each period. Based on the SLEUTH model, the study uses scenario analysis to simulate the change of rural land use by collecting remote sensing data. The study compares the differences between the simulated evolution of rural land use and the actual land use changes and summarizes the impact of policies on the rural land use changes in each period. The result shows that national policies have a guiding effect on the evolution of rural land use and can inhibit the possible negative benefits of spontaneous changes in rural land use. The rural land system with high quality, strong specification and in line with demand can guide the scientific and sustainable development of rural land reform. China's rural land reform needs to adhere to in-depth exploration in the future.

Reframing Healthy Food Access Research and Policy

John Accordino (Virginia Commonwealth University) and Annie Weidhaas (Virginia Commonwealth University).

Abstract

Background Scholars and policy makers have devoted considerable attention to understanding and addressing the lack of access to healthy foods suffered by low-wealth persons in the US, especially in rural areas and in low-wealth communities of color in all areas.

Many scholars argue that the problem lies mostly on the supply side of the market, where growing concentration and globalization in the food industry, coupled with population movement away from rural areas, have led to the demise of independent grocers, leaving communities bereft of full-line grocery stores. These same areas have witnessed a dramatic increase in "dollar stores" – small-format stores that sell low-cost items, including packaged foods that are low in nutrition. Some scholars have found that dollar stores' low prices force the closure of the few full-line grocers that remain in low-wealth markets. Policy solutions include alternative food sourcing systems, support for independent grocers, "healthy corner store" assistance initiatives, and government regulations limiting the number of dollar stores. Although these efforts have enjoyed some success, the problem continues. Meanwhile, dollar stores have proliferated rapidly, especially in rural areas, growing to more than 35,000 units in the US as of 2021.

Purpose This paper suggests using the massive infrastructure, operations and business acumen of dollar stores as part of potential solutions to the food access issue; not just part of the problem.

Data and Methodology We mine the literatures on food access deprivation and policy solutions, and we discuss theories of the public use of private interest and public-private partnerships, as well as critical analyses and lessons learned from these approaches. We describe two cases in which local governments are partnering with dollar stores to address food access issues. We use literature reviews and case study research consisting of interviews and analysis of government and company documents.

Results We find it is possible to reframe the food access issue using a "glass half full" public-private partnership lens, we show how pragmatic local governments are already attempting to move the needle on this issue, we identify lessons learned from these experiences, and we suggest directions for future policy-oriented research and practice.

Potential Contributions Reframing the food access issue opens up new ideas and approaches that can stimulate policy innovations that may be able to bring dollar stores to the table as part of scalable solutions.

Mechanism, process and characteristics of rural evolution since China's reform and opening up

Junbo Wu (School of Architecture and Urban Planning, Nanjing University).

Abstract

In the process of China's rapid urbanization in the past 40 years, China's countryside has been continuously evolving, and it is no longer a countryside solely engaged in agricultural production. With the development of society, people's choice of urbanization is determined by the adaptation of diversified citizens' demand and different competitive spaces between urban and rural. The geographical location and resource endowment in the characteristics of rural ontology are the core factors affecting the direction of rural evolution. People's urbanization choice and rural ontological characteristics constitute the mechanism of China's rural evolution, which makes China's rural continuously change in three aspects: population composition, function and spatial characteristics. On the basis of reviewing the rural evolution process of China's reform and opening up, this paper points out that the countryside has experienced three evolution stages: rural industrialization in local urbanization, rural contraction and alienation in remote urbanization, and rural multi-dimensional reconstruction in high-frequency flow urbanization. It reveals the fundamental law of rural evolution: the healthy and sustainable development and evolution of the countryside can only be achieved if it can meet the diversified needs of the developing citizens.

Spatio-Temporal Patterns of Rural - Urban Transformation in Central Java, Indonesia: Trend of Density and Land Demand

Tia Dianing Insani (Diponegoro University), Iwan Rudiarto (Diponegoro University), Wiwandari Handayani (Diponegoro University) and Holi Bina Wijaya (Diponegoro University).

Abstract

The relation between rural and urban has been contributing to rural-urban transition and transformation in most developing countries including Indonesia. Further, this discourse has led to bring together rural and urban, agriculture and industry, and ultimately economic growth and equity in harmony as an integrated package of development. The intention to integrate those companions in the development policy is to achieve a balanced development between rural and urban region. Current development policies are likely to treat rural and urban areas in an entirely different manner which disregard the fact that outcomes of a policy would become a single set of dynamic process affecting rural and urban areas as an interdependent system. Therefore, rural-urban transformation should be taken into account as two important terminologies in relation to the discussion of rural-urban regions.

Rural changes to urban in nature as physical characteristics and lifestyle. In economic term, development could also be understood as agricultural movement to industrial activities. In other words, development implies a process to achieve improved situation. The identification and analysis of rural-urban transformation subsequently contributes to regional development policy in a region. This research is purposed to elaborate physical rural-urban transformation through the trend of density and land demand within a spatio-temporal approach in Central Java Province. To achieve that purpose, physical analysis is carried out using satellite image and population data of year 2000, 2010, and 2019 from both primary and secondary sources.

In this research, land use cover analysis is employed to analyze land use change and development in the area. Then density analysis is implemented in order to find the spatial pattern of built-up area density within the study area. To find this spatial pattern, kernel density method is applied. Lastly, to predict the land demand of the study area we use spatial autocorrelation as part of spatial statistical analysis in GIS to detect the spatial patterns from the distribution points.

The result of this research portrays the pattern of built-up density in Central Java as well as calculate the potential of land demand in the area. It shows that the development and rural-urban transformation in Central Java still heavily concentrate in Yogyakarta-Solo-Semarang (Joglosemar) corridor. From the results, eventually, this research may contribute to regional development policy in Central Java to achieve a balanced development among regions.

Analysis of Factors for Agglomeration of Knowledge-based Service Industry in China

Hodong Chae (Department of Environmental Planning, Seoul National University) and Young-Sung Lee (Department of Environmental Planning, Seoul National University).

Abstract

Existing studies on Special Economic Zones (SEZs) have been mainly focused on manufacturing. However, in recent years, the main industry that leads the global economy is changing into Knowledge-based Service(KBS) industries based on knowledge labor in accordance with the flow of the Fourth Industrial Revolution. Therefore, it is difficult to determine whether SEZs will continue to be as effective in the KBS industry as in the manufacturing industry with existing studies. Therefore, this study examined the effects of SEZs on the KBS industry through the case of China, which has been actively using SEZs since the economic reform period.

The scope of the data was Di-Level Cities, where urbanization had progressed to some extent, and special administrative districts such as Hong Kong were not included in the study according to China's official statistical classification. For the time range, time series data by city were used from 2010 to 2018, when mobile devices such as smartphones began to spread in earnest.

As a result of panel analysis that can observe the dynamic effect over time, The presence or absence of SEZs did not have much influence on knowledge-based service industry agglomeration compared to the specialization of the service industry and whether it was a mega city or not, but it was found to have a greater influence than strengthening regional characteristics such as technology investment or foreign direct investment. Therefore, SEZs can be a positive way for the growth of KBS industries, and providing benefits through SEZs can be a good way to enhance the competitiveness of provincial cities rather than increasing investment in the region.

Role of Policymakers in the Sustainability of Island Destination: A Case Study of Pangkor Island, Perak

Nur Ain Noor Azman (UNIVERSITI TEKNOLOGI MALAYSIA).

Abstract


Pulau Pangkor is one of the seven main tourist destinations in Malaysia located at the Straits of Malacca in Perak state, which is not only an eye-catching tropical island, but had also marked some significant history of the country. In January 2020, the island was officiated as another duty-free island in Malaysia as an effort to boost its tourism sector. With the increasing number of visitors to the 2200-hectares island, Pulau Pangkor is at risk in term of sustainable tourism development. This hence leads to this research with the purpose of exploring the role of policymakers in the sustainability of island destination, where we take Pulau Pangkor as the case study. This study is not only potentially contributed to the identification of policymakers' roles for sustainability of Pulau Pangkor, but the positive outcomes may also act as benchmark for good governance in other island destinations. Qualitative approach has been adopted for this paper which involves content analysis method, focus group discussion, interviews, and observation. Hence, primary data and secondary data collection were carried out throughout the study. As per analysis done on all the input received, four main issues were discussed in the results comprised of actions taken by the government, policy and legislation, perception of visitors, and sustainability of Pangkor Island. Overall discussion has concluded that the government, especially local authority is highly involved in the tourism development of Pulau Pangkor, however better policy and guidelines need to be developed for the sustainability purpose and not focusing on physical and economic development alone.

Resiliency of Tobacco Farming in Kemloko, Temanggung - Indonesia: Adaptive Strategies to Promote Rural Development

Ulfa Mutiara Fitri (Alumni of Universitas Diponegoro), Wiwandari Handayani (Universitas Diponegoro) and Iwan Rudiarto (Universitas Diponegoro).

Abstract

A dualism of rural development in the agriculturally based economy becomes a contradictive issue between the welfare of rural communities and the role of rural in supporting industry as it is strongly related to agricultural development as a critical part of the livelihood component. Multiple shocks from internal and external factors at the stage of seeding, planting, and harvesting to post-harvest processing significantly contribute to crop failures, placing the farmers in a "lock in trap" poverty situation since tobacco becomes the leading commodity in Temanggung Regency, especially in Kemloko (a village located at slopy area of Sumbing Mountain). This study aims to elaborate disturbances and responses of tobacco



farming actors based on household typologies in Kemloko village, Temanggung Regency. This research applies a mixed-method approach by combining a descriptive qualitative-quantitative analysis to determine the division of household's labour, key factors of tobacco farming resilience, and their adaptation strategies in the past fifty years using Adaptive Cycle of Panarchy Theory. The results indicated there are four household typologies of tobacco farming business actors in Kemloko including the landowners and farmers, nganjang workers, rajang workers, and tobacco collectors. Each tobacco farming actor experienced various types of disturbances and responses depending on their household typology classified by its socio-economic characteristic. In tobacco farming activities, there are essential points of inevitable threats and shocks that come from uncertainty of weather and tobacco market price that massively contribute to crop failure from 1970 to 2020. Tobacco has become a mainstay product for more than fifty years led by three key factors such as natural, human, and financial capital support that make people survive even though they currently do not get prosperity in tobacco farming economic activity. The ups and downs of tobacco farming conditions in the adaptive cycle represent the fluctuations faced by the community. From the perspective of adaptation, such conditions have gradually shifted into various innovations and commodities diversification to optimize tobacco farmer's income in the last five years. In the context of resilience, Kemloko has the ability to maintain its identity and existence as a centre for tobacco production in Temanggung Regency. Moreover in the rural development strategies context, Kemloko should be developed without neglecting tobacco which has taken root and is deeply entrenched as a significant capital component of the community's economy.

The effect of village fund for community empowerment program on community economy

Hasnah Hasnah (Universitas Andalas), Ira Wahyuni Syarfi (Universitas Andalas) and Wulan Bedi Pratama (Universitas Andalas).

Abstract

Village funds are funds intended for villages sourced from the State Budget and prioritized for the implementation of development and community empowerment. The use of village funds should have an impact on improving the quality of human life; improving the welfare of rural communities; and alleviation of poverty. This program has been implemented since 2015 using participative approach. This study aims to analyze the impact of the use of village funds for community empowerment programs on the community economy from the perspective of the beneficiary community in two categories of villages: developing and developed village. This study was located in Pasaman Regency, West Sumatra Province. Seventy respondents were involved in this study. The Partial Least Square of Structural Equation Modeling (PLS-SEM) was employed to evaluate the effect of awareness of community about the program, community participation in the program, and the independence of community on community economy. The study revealed that there is a positive and significant interconnection among awareness on participation and participation on community independence, to improve community economy through community independence variable. There is no difference impact of the program between the two village categories. This result is expected to provide the evidence for program evaluation.

Regional higher education institutions – panacea for rural innovation and resilience?

Garri Raagmaa (University of Tartu).

Abstract

This paper analyses rural resilience in the framework of a knowledge economy and one of its infrastructural elements – regional higher education institutions (RHEI). The paper contributes to the rural innovation and smart specialisation debate by arguing that to be successful regional higher education institutions have to act not only as educators but also as proactive institutional entrepreneurs, shaping regional strategies and institutional development. On the other hand, national innovation policies shall consider and improve systematically regional R&D and innovation capacity. The paper provides a theoretical background about the potential role of regional higher educational institutions in rural locations, gives some examples from the Nordic countries, describes shortly the Estonian RHEIs based on the earlier Estonian Science and Innovation Policy Evaluation report sub-study and reflects the main findings from the recent report “Evaluation of the effectiveness of entrepreneurship and innovation support in the Operational Programme for Cohesion Policy Funds 2014-2020”. It concludes that the EU structural funds supported innovation policies have been rather increasing regional differences. The outputs and impact of the policy measures are not clearly and logically interlinked as they are initiated from different ministerial silos. The existing potential of RHEIs has been modestly utilised, the successful rural restructuring, introduction of new industries and bottom-up discoveries as the key to the smart specialisation depends mainly on local leadership and agency.

Rural Gentrification in a Post-Pandemic Era

Arief Rahman (Center for Regional System, Analysis, Planning and Development (CRESTPENT/ P4W), IPB University) and Alfin Murtadho (Center for Regional System, Analysis, Planning and Development (CRESTPENT/ P4W), IPB University).

Abstract

It is a common phenomenon, both at the regional and global level, that the proportion of the population living in the urban area keeps increasing while the rural population continues to decrease. The pandemic has reversed the course of many social aspects, including the migration of the people from the cities to their home villages due to pandemic-triggered economic disruption in the urban area. This phenomenon may be seen only by highlighting the push factors from urban areas rather than the potential pull factors exerted by rural areas. However, rural areas have demonstrated their potential as a haven that provides a social safety net and job creation for people forced to migrate from the cities. It is shown by the positive economic growth of the agricultural sector while most of the other sectors have suffered a severe contraction during 2020. Hence, we need to see the phenomenon differently and realize the attractiveness of rural areas that may keep this trend in a post-pandemic era. This potential shift brings us a significant challenge, namely rural gentrification, which can change local communities' socio-economic conditions, especially on land ownership and livelihood. Those transformations can in turn alienate its communities from the local resources. In most social and welfare statistics, rural areas are mostly falling behind their urban counterpart. Those lags may result from incorrect perspectives in developing the rural area, such as urban bias that puts urban as far more important, and urban phobia, a view that sees rural areas as incompatible with any modern sectors and suitable only for on-farm activities and natural resources extraction. Those situations require external actors, i.e., the government, to have more affirmative policies and exercise a new paradigm toward rural development. Alongside those, rural communities need to strengthen themselves to cope with rural gentrification issues in a post-pandemic era. This strengthening of rural areas should be based on local resources. Still, it would not be enough if the resources themselves were fragmented. Therefore, local resources need to be consolidated. Consolidation can cover many objects such as capital consolidation, farmers' consolidation, land consolidation, and management consolidation. Some of Indonesia's government-launched programs corresponded suitably through programs such as Kawasan Perdesaan (or Joint Villages) and Korporasi Petani (or Farmer Corporation) as forms of human, land, and management consolidation, but lack in concept and practice still hinder its best potentials.

The Role Of Social Capital In The Development Of Village Chicken For Community Economic Improvement

Meldy Eka Putra (Universitas Andalas), Helmi Helmi (Universitas Andalas) and Hasnah Hasnah (Universitas Andalas).

Abstract

Village (kampung) chicken businesses developed significantly in the last decade in South Solok Regency, in line with the change in ranch practices from traditional to semi-intensive and intensive systems. The population of village chickens increased double from 86,773 life birds in 2019 to 173,980 life birds in 2020. This business development responds to an increase in demand for village chicken coming from local restaurants and hotels. The village chicken business is commonly managed independently by farmers. The existence of the P4S Laskar Andalas (Pusat Pelatihan Pertanian dan Pedesaan Swadaya (P4S) = Independent Agriculture and Rural Training Center) play a significant role to support farmers to develop their business. This local institution was established by the local community that enables farmers to help each other grow their businesses. The study objectives are: (1) describe the profile of the institution/individual as well as the function and role in the development of chicken villages; (2) describe the role of social capital in the development of village chickens for the economic improvement of the community. The research was conducted in South Solok Regency using a case study. Data collection used an in-depth interview approach involving key informants along the supply chain, consisting of P4S Laskar Andalas management, KUB PM Koto Parik, farmers, restaurants, traders, consumers, and the local government. The results showed that individuals could be classified based on their roles or functions. P4S Laskar Andalas provides training for farmers and produces DOC of village chicken. KUB PM Koto Parik is an institution involved in producing hatching eggs. Breeders play a role in raising domestic chickens. Restaurants, traders, and consumers play a role in post-harvesting village chicken, and the government plays a role in regulation. Social capital plays a role in the development of village chicken to perform cooperation and division of roles/functions in developing village chicken businesses in the South Solok regency.

Megaproject-based Development: Towards A New Spatial Planning Approach in Indonesia

Isnu Pratama (Bandung Institute of Technology) and Haryo Winarso (Bandung Institute of Technology).

Abstract

In the last decade, Indonesia has incorporated megaprojects or large-scale projects in the national spatial planning framework as a strategic policy to increase national economic growth. In 2018, the state established 222 National Strategic Projects as a priority of development programs, including transportation infrastructure, energy infrastructure, industrial estates, etc. Two years later, a total of 103 megaprojects have been completed with an investment value of 602 trillion rupiah. Simultaneously, various countries in the world have experienced similar tendencies by experimenting with the spatial planning policy of large-scale projects such as new growth poles and economic corridors to foster their economic growth and competitiveness. We view that these initiatives provide a new direction for spatial planning both practically and theoretically. This article intends to explore the critical influence of the megaproject approach in changing Indonesia's spatial planning paradigm in the past three decades. For the analytical process, we reviewed documents (including regulations, government reports, and newspapers) and conducted interviews with relevant stakeholders. We highlight two initial findings by scrutinizing several megaprojects in Indonesia as study cases. First, the megaproject becomes a state's spatial tool to integrate metropolitan cities, frontier/hinterland industrial estate, and international distribution nodes which previously was developed through a fragmented approach. Second, spatial planning strategies were employed to translate the state vision and guide the comprehensive framework of megaproject development. As a political decision, megaproject often depends on exceptional regulations and practices that revise existing statutory planning institutions to accommodate development plans and achieve efficient realization. Furthermore, the state has transformed into dominant actors in directing and financing various megaprojects since the former approach of private-led development was underperformed and the local government has limited resources. However, this changing landscape of spatial planning institutions has triggered the production of "new state spatiality". Under the national decentralization agenda, this practice poses challenges for the planning institutions to balance the forces between the constant pressure of the state and the aspirations of local agencies. Thus, the emergence of a contested, negotiated or articulated form of spatial planning based on megaproject institutions and governances is worthy of discussion.

Localwashing in Communities

Huston Gibson (Kansas State University), Craig Talmage (Hobart and William Smith Colleges) and Corrie Wright (City of Topeka, Kansas).

Abstract

Background, purpose, and potential contributions Our paper presentation focuses on the idea of "localwashing" in communities. Like the better-known term "greenwashing," where companies market products as more environmentally friendly or sustainable than perhaps they are, to appeal to a conscious consumer base, localwashing is a term we posture which describes when the construct of localism is undiscerningly preferable in community development planning. While the authors certainly advocate supporting local businesses, we explore the notion that local ownership may not always be as community friendly as perhaps it is spun to be, hence the term localwashing. For example, what about a local slumlord who extracts from the community via incentive grants, tax abatements, and code-compliance permit waivers only to exploit tenants from lower quality living conditions while hoarding the profits? Because they are local does this make them preferable (from a community development lens) to a larger upscale for-profit company from outside of the area, one which owns several building locations, yet in turn uses portions of the profits to philanthropically support (sponsor) local youth sports programs?

Data and methodology; Results We are not suggesting that either is perfectly desirable, nor that all businesses come in such extremes, rather we pose there is an array of nuances to consider and introduce the concept of localwashing into our community development planning vernacular. In this presentation we explore our constructed matrix of "local sharers" to "external extractors," discussing the impacts, challenges, and opportunities each brings to a community.

Conclusion We are particularly interested in this track's interest of bridging theory to practice and tapping into the discourse on how the rapid development of technology and the ICT revolution potentially disrupts local businesses and affects the idea of localism, and localwashing.

Neighborhood Segregation and School Segregation: How Neighborhood Planning was used to Keep Schools Segregated in the Post-Brown v. Board of Education Era

Rebecca Retzlaff (Auburn University).

Abstract

Purpose: The research question addressed in this paper is: how was neighborhood planning used by urban planners in Alabama to keep schools segregated in the post-Brown v. Board of Education Era?

Potential Contributions: The research provides new insight on the relationship between school segregation and planning in the South during the civil rights era, which has implications for current planning practice because many schools in Alabama and throughout the U.S. are still segregated.

Background: In 1954 the U.S. Supreme Court issued their ruling in Brown v. Board of Education of Topeka, unanimously determining that racial segregation of children in public schools was unconstitutional. In response, many cities in Alabama began to rely on planning to keep schools segregated, adopting neighborhood plans that maintained segregation. The Neighborhood Unit theory, developed by Clarence Perry in the early 20th century, is a framework for planning where schools are at the center of neighborhoods. Southern city officials sought to keep schools segregated by maintaining neighborhood segregation and planning for schools at the center of neighborhoods.

Data and Methodology: The methods used in this research is content analysis, archival data analysis, and analysis of legal cases. Using content analysis, I analyze plans from 1954 to 1970 from the twenty largest cities in Alabama to determine how they used neighborhood planning, and how those neighborhood boundaries influenced school segregation. I also analyze legal cases to determine if and how Southern city officials claimed that school segregation was the result of residential location patterns.

Results: The research finds a connection between neighborhood planning and school desegregation in Alabama. Birmingham, Montgomery, Opelika, Union Springs, and several other cities adopted neighborhood plans to avoid desegregating schools. Cities planned neighborhoods along racial lines, and adopted policies for neighborhood schools, assuring that schools would be segregated. In court cases, attorneys for the school boards argued that school segregation was due to personal preferences that resulted in neighborhood segregation – not school segregation policies.

Conclusion: There was a close relationship between planning and school segregation in Alabama, and many plans used neighborhood planning to keep schools segregated after the Brown v. Board of Education decision.

Planning and Economic Development in the Global North and South: Institutional and Transaction Cost Perspectives

Dian Prasetyawati (The Urban Design & Planning Interdisciplinary Ph.D. at the University of Washington), Jan Whittington (Urban Design and Planning Department, University of Washington) and Feiyang Sun (Urban Design and Planning Department, University of Washington).

Abstract

Research in planning commonly borrows from economic theory to explain urban growth and its connection with economic development in a given region. Because literature about planning is primarily produced in the Global North, much of this research tradition takes the Euro-centric approach. Preliminary investigation shows how theories about planning and economic development in the Global North emphasize on creating an atmosphere for a healthy market to thrive within the boundary of a city or rural areas and assume a free market society. In contrast, many studies in the Global South borrow theories from development economics and approach planning as a centralized government role, as most developing countries historically rely on exogenous funding and depend on world trade to sustain their post-colonial growth. Thus, neoclassical economic theory assumptions such as democratic governance and a free-market economy may not be compatible with conditions in the Global South, and comparative studies in planning and infrastructure development are in need of a shift in theory and methodology. This study is a meta-analysis set to clarify how current research in the Global North and South investigate the impact of institutional arrangements in planning practice. The analysis consists of 820 articles published in the last five years, systematically collected from the Web of Science with queries of 'comparative study' and 'infrastructure,' 'planning,' 'economics,' and 'development studies.' This research review asks: what are the similarities and differences between the perspectives and theories brought to scholarship about planning in the Global North and South? Our results show that inward perspectives from both regions capture the role of the state in planning arrangements, affecting not only how the state addresses planning as means of development that strengthen capitalization of the formal economy, but also how it discriminates in the supply of services for the informal market. The lack of support in the form of institutional security in both the Global North and South limits planning intervention, as planning is fundamentally part of state action. Outward-looking findings suggest that most studies of institutions are theorized based

on the experiences of specific regions and rarely transferable across political economies, which implies that current use of theory in planning may not sufficiently control for institutional differences. Collectively, these findings show how scholarship is improved when applying economic perspectives indicative of institutional economics, because it accounts for both institutional effects and transaction cost from planning and development arrangement.

Political Ecology and Resiliency toward the Concurrent Flooding Events in Jakarta Metropolitan Area

Priza Marendraputra (University of Wisconsin-Madison) and Deffany Rosa Firstina (Ministry of Agrarian and Spatial Planning, Indonesia).

Abstract

Jakarta has been prone to concurring flooding events ever since the pre-colonial era and has caused massive damages to urban physical and community. As the fastest and continually growing city in Indonesia, there are prominent environmental, physical, and infrastructure gaps around the city, with about 10 million residents in its municipality and 30 million within the Jakarta Metropolitan Area. The higher income and luxurious group of people experience the flooding free privileges. On the other hand, the lower-income and urban slums encounter extreme flooding events, in which they had to develop their resiliency to survive throughout the generations. This study explored the dynamic timeline of the decades of the Jakarta flood mitigation attempts from various governors (Zainuddin, 2013) and their impacts on the corresponding community.


The study narrowed the focus into West Jakarta and Karawang Region as a case study for flooding events of the Jakarta Metropolitan Area. Carrying the lens of the Political Ecology that analyzes the history, power relation, and environmental governance within the community (Robbins, 2012), this study reflects the improvements of the community's resiliency to mitigate the concurring flooding events from time to time, including during the devastating COVID19 pandemic of 2020 and 2021. This study scrutinized the vulnerability of the different generations within the community to cope and cohabit with these distinct (either constructive or backlash) attempts accompanied by the qualitative and descriptive quantitative methods, geospatial approach, as well as content and scoring analysis. By looking at the history of several generations to cope with flood disasters, including the government viewpoint through policies, decision-making, and community perspectives, this study arrives as a noteworthy example of how flood management practices affect the resilience of cosmopolitan urban communities.

Form-Based Code (FBC) Planning Approach in a Rapidly Urbanizing Region: Case of South Conurbation Corridor of Jakarta-Bandung Mega-Urban Region

Anoraga Jatayu (IPB University), Ernan Rustiadi (IPB University), Didit Okta Pribadi (National Research and Innovation Agency (BRIN)) and Bambang Juanda (IPB University).

Abstract

Urban form, in its conceptual view, can be described as the spatial pattern of human activities. Often it is the physical characteristics that make up the physical configuration of a city, including the shape, size, density, and configuration of settlements. Urban form can be considered at different scales, from region to neighborhood, each carrying a different focus. Urban form-based planning approach has been initiated in the form-based code (FBC) planning approach which seeks to change the paradigm of the traditional zoning approach. It is a zoning approach that aims for a zoning unit to achieve a certain characteristic urban form. In this case, urban form-based planning has been adapted to various regions, with adjustments to the rules and planning instruments in each region and the specific characteristics of the region, to achieve an area that is more sustainable from an urban perspective. forms. Jakarta-Bandung Mega-Urban Region (JBMUR) have 2 distinctive conurbation corridor, with one of them being the southern corridor that serves as the environmental buffer area for the region, meaning that the balance between its function as an environmental buffer area and the destination of urban growth needs to be planned carefully. This research aims to explore the dynamics in JBMUR's south corridor urban form using Landscape Dynamic Typology (LDT) Tools, formulate the zoning using Rustiadi's Quantitative Zoning Method, and then employ some recommendation based on the form. The result shows that the southern conurbation corridor (Middle Bogor – North Cianjur – West Bandung) has evolved into a polycentric region with more than one urban zone in each municipality, with peri-urban zones along the main transportation network, and rural zone in the outskirts. Urban form trends show a sprawling built-up pattern outside urban zones, and a compacted trend in urban zones due to expansion from the Jakarta and Bandung Metropolitan Area forming a ribbon development pattern in the southern corridor. Compactness, connectivity and contiguity seems to be the main issues to be tackled in the planning directives and that the enactment of a more restricted zoning regulation outside of urban and its adjacent peri-urban zones will be needed



to contain urban expansion into the designated urban areas. Also, not forget to mention that there's a need for an integrated planning instrument for the whole mega-urban region to be able to function properly and maintain its regional sustainability.

The Promise of Planning? Global Aspirations and South African Experience since 2008

Philip Harrison (University of the Witwatersrand) and Alison Todes (University of the Witwatersrand).

Abstract

Internationally, planning has re-emerged as a putative means for achieving developmental goals (as indicated, for example, in the New Urban Agenda). However, the return of planning is happening in an inauspicious context, with economic fragilities, technological shifts, political populism, institutional complexities, and more, threatening to upturn the 'new promise of planning'. Planning has also become more complex and there are significant differences across contexts. Planning in South Africa since 1994 is perhaps exemplary in terms of these contradictions – it has aspired to be play key developmental roles in post-apartheid transformation, and it has been lauded internationally for some of its innovations, but its ability to contribute to positive change has been questioned, especially in recent years.

The paper explores the South African experience since 2008, a period characterised by both governance and economic crises, but in which planning has consolidated, with serious attempts at national level to increase its effectiveness. The paper considers 'If planning is still mainly an instrument of the state, what happens to planning if the state is dysfunctional or in a process of endemic decline?' And what happens when planning occurs within a highly constrained economic context. It assesses the apparent advances in planning, considering areas of innovation and some of the limits of state-led approaches (for instance the ambivalence towards informality), as well as the effects of institutional corrosion, corruption, political factionalism, incoherent state policies, institutional short-termism in governance horizons, and uneven governance capacity across the country. It considers the prospects for change, the roles of other actors and of emergent practices in reshaping cities and regions, and the potentials for more developmental planning.

The paper draws from research towards a book with the same title, which builds on an earlier book written with the late Vanessa Watson, which examined the first ten years of post-apartheid planning (Planning and Transformation: Learning from the Post-Apartheid Experience, 2008). The current research is based on reviews of available academic publications, grey literature, plans and other documents and over 60 key informant interviews with senior planners and related practitioners in academia, NGOs, the private sector, and all spheres of government across the country.

The Ontological Turn in Cross-cultural Study of Immigrant's Architecture

Jing Luo (School of Architecture, Central Academy of Fine Arts).

Abstract

This research examines the archetype and the socio-spatial process of immigrant's architecture, theorizes architectural practices of the immigrant community in a cross-cultural situation. Referring to the Ontological Turn in Anthropology, this paper takes Architecture as an actor that, together with the people, the society and the environment, shapes an integrated worldview of specific place. The core spaces of immigrant society – temples, ancestral halls, family associations, Chinese consolidated benevolent associations, etc. - are used to illustrate the constant interaction and negotiation of immigrants and the locals. These spaces play essential roles in organizing traditional Chinese communities, and they continue to re-shape the forms that the immigrant communities take, while constantly being re-shaped in turn. Aiming for a comparative study, the research analyzes cases in Boston, Penang and Taiwan respectively. The origins of the immigrants in these three cases are all in Fujian and Guangdong Provinces in China, however, the architectural forms, as reification of the dynamics among actors (social, spatial, environmental), are entirely different. Two aspects of the cases are scrutinized in the study: one is to analyze the hybrid architectural forms via quantitative study, in which linear function normalization is used to establish the derivation coordinates of each case; the other is the qualitative study of the architectural strategies and actions in the interaction of original history, local society and immigrant community. These two aspects draw the outline of how the same Architectural origins develop in different cross-cultural situations, and they further lead us to the discussion of place and space, local and international. The conclusion calls for an object-oriented ontology in the study of place, and contributes to the archetypal study of Architecture with perception of ontology. The tension between openness and expertise of Architecture discipline is also revealed in such discussion.

On the Eugenic Legacy of Patrick Geddes and Decolonizing Regional Planning

Leon Morenas (School of Planning and Architecture, Delhi).

Abstract

Sir Patrick Geddes (1854-1932) is considered a pioneer of urban and regional planning, having theorized the concept of the region. Part of the current political moment, where the values guiding the vision and work of many icons is being revisited using a lens of gender, post-colonial and racial critique, this paper explores the eugenic moorings of Geddes' thought and planning interventions. This paper is about waves of influence: I first describe Geddes' ideological influences, including naturalist Jean-Baptiste Lamarck, philosopher Herbert Spencer, sociologist Frederic Le Play, positivist Auguste Comte, geographer Elisée Reclus and art critic John Ruskin. Their ideas influenced Geddes' thinking on the role of women in society, his characterization of civics as applied sociology, his understanding of technology using an evolutionary lens, and the notion that the region was a "natural" evolutionary unit of civilization and eugenic intervention. In the next section, I focus on the American historian and philosopher of technology, Lewis Mumford and the British planner and urban theoretician Jacqueline Tyrwhitt, two people responsible for mainstreaming the evolutionary- functionalist model of urban development minus the eugenic anchoring. I conclude by inviting reflection, based on this revisionist history, of the consequences of Geddesian eugenics on planning and space.

From pop-up to permanent: temporary and tactical urbanism as an emerging mode of strategic open-space planning

Quentin Stevens (RMIT University) and Kim Dovey (The University of Melbourne).

Abstract

Background, purpose, and potential contributions:

Tactical urbanism is a new form of bottom-up planning that pursues 'short-term action for long term change'. It seeks to quickly, unofficially transform urban spaces to better meet local needs, and to also incrementally transform the processes and actors that shape urban spaces. This paper explores the evolving relationship between these kinds of short-term, informal urban transformations and larger-scale, longer-term strategic urban planning and development projects. It examines how temporary urban design interventions have recently been deployed by local government planning departments as strategic tools for planning, evaluating and producing future, long-lasting urban space outcomes. The paper contributes to our understanding of the complex alignments of actors, interests, processes and materials that shape urban space.

Data and methodology:

The paper examines four different new public open space developments in suburban activity centres in three large Australian cities where street segments were initially transformed into temporary parks before decisions were made on permanently closing the street segments and redesigning them as permanent parks. The paper charts the developmental trajectories of these four projects, drawing on analysis of local planning studies and policies, interviews with key actors, and government and media reports on how the pop-up parks performed. The paper also analyses the changing context of built form and activity in and around the four sites, including the temporary and permanent space transformations themselves and the surrounding building uses and densities, building frontage conditions, existing public open spaces, street and transit networks, and traffic flows along them. These analytical frames are brought together to explore the dynamic relationships between the activity patterns and the material spatial conditions of these sites and their surroundings.

Results:

The paper shows how the locations, designs, and target users and uses of these four temporary open space interventions were prefigured by local governments' wider analysis of local planning trends, problems and needs; how the projects were facilitated and validated by government planners, placemaking consultants and community actors; how the temporary interventions were translated into more permanent forms; and how the new open spaces have in turn helped to facilitate wider strategic urban development outcomes.

Conclusion:

The paper's analysis shows an alignment and co-opting of tactical methods into formal planning processes and programs. It also shows how temporary interventions have enhanced experimentation, user feedback and the engagement and support of local communities in open space planning processes.

Unveiling Trends in Global Urban Studies and Planning Research from 1991 to 2020

Sam K.S. Ho (The University of Hong Kong) and Tianren Yang (The University of Hong Kong).

Abstract

The global impact of the COVID-19 pandemic, the rapid development of cutting-edge technologies in light of the big data era, and the call for sustainable urban development and conservation are the global urban issues in which new theoretical and practical foundations need to be identified. This is because the real-world research and practice regimes differ from time to time and are subject to contextual diversity. This study, therefore, aims to examine historical records of global urban studies and planning research in order to identify how the actual research trends and practices differ according to time and place. Using the Web of Science database, we performed a bibliometric analysis of urban studies and planning research from 1991 to 2020 that was published in the top 30 journals in the field. Our analysis reveals the scientific outputs and prominent research themes by exploring the temporal trends in the titles and keywords of urban studies and planning research, which may be considered a potential guide for future research. China, housing, urban planning, urbanization, governance, sustainability and land use were the most frequently used terms. The US was the largest contributor to global urban studies and planning research as they produced the most independent papers, second in collaborative papers and possesses an established environment that allows for collaboration between research institutes and professional practices. The US, the UK, and China were hotspots, with China's contributions increasing drastically in recent years, which confirms the significant position of Chinese urban research and reveals the country's keen interest in housing and sustainability issues in urban studies and planning research. The results were compared with the research themes summarised by various professional planning institutes around the globe, with commonalities and differences being found between the latest research themes in research and practices. This is the first study to quantify global research trends in the overall urban studies and planning research landscape. Our study serves as an alternative means of identifying the trends in global urban studies and planning research, and it pinpoints the need for further alignment of research focuses between the academic, public and private sectors in order to strengthen the connection between theory and practice.

Planning Transport Megaprojects In The Perspectives Of Complexity Theory

Susanti Widiastuti (ITB), Haryo Winarso (ITB), Petrus Natalivan Indradjati (ITB) and Puspita Dirgahayani (ITB).

Abstract


The low success rate of megaprojects has been acknowledged and discussed in a decade. The dynamics and fast-changing situation are a significant challenge to a country's resources and capacity to handle long-term projects in unpredictable situations, especially for a developing country. Indonesia has recently been experiencing an era of infrastructure acceleration to improve regional economic and social development. This study exercised the significant transport projects in Indonesia that are still going on. Building an understanding of the intricate problems in transport megaprojects needs a new perspective, not just as business as usual that will lead to the failure in benefit for communities. The planning approaches applied in megaprojects are considered limited to linear and technocratic. This paper discussed the planning of Transport Megaprojects in complexity theory. It focuses on the actors responding to techniques, organization, social, and environmental aspects that influence the planning and implementation process. This study used qualitative analysis and a case study method with the interview to study the theoretical perspectives on the practical world. This study shows that complexity theory can help explain the complex phenomenon in megaproject cultures. It will fill the gaps between bounded rationality and inclusiveness of a non-linear process in a complex project. It will develop an understanding of the possibility of the tasks to be robust and adaptive with its dynamics and uncertainty situation.

Flexibility in Planning and Unequal Geography of Zoning Reliefs in Tehran Metropolitan area

Mojgan Taheri Tafti (The University of Tehran, School of urban planning).

Abstract

Zoning reliefs play a critical role in contemporary planning as they offer flexibility to, and guarantee the political and legal survival of, zoning plans. While a reasonable amount of discretionary measures enable planning systems to respond to changing socio-economic circumstances, they present a number of challenges to the planning systems and urban residents, including the inconsistency in the implementation of the law; creating long-lasting cumulative negative impacts; and making the planning systems vulnerable to elite capture. Despite their prevalence in different planning systems, zoning relief mechanisms have been less examined in the literature. To address this gap, this paper presents an analysis of the decisions made through such mechanisms in the Tehran metropolitan area in 2009-2019. For this purpose, and at the first step, I assembled a database of all 642 submitted relief applications in this period, those granted zoning reliefs, and the



type of relief they were granted. These parcels were geolocated in order to identify the spatial patterns of these applications and those granted zoning reliefs. Furthermore, the data on all building permissions of these parcels was scrapped from Tehran Municipality Site. The analysis shows a clear pattern of sanctioned reliefs' concentration in areas with the highest market price in the city. At the second step, I illustrate the cumulative impact of these decisions, in particular in terms of the loss of urban green spaces, public services, and amenities. At the third step and drawing on semi-structured qualitative interviews with officials, I discuss how dynamic informal networks between major developers, banks, parastatal institutions, and officials influenced zoning relief sanctions. Two findings are discussed; First, drawing from rent gap theory, I argue how this mechanism has significantly widened the differences between actual and potential ground rents, which emboldened the speculative practices of the well-connected individuals or institutions; and second, this extraction and distribution of value from urban development served the political as well as the economic interests of the actors involved. Therefore, the mechanism that was first established to address uncertainties has become an effective tool for deliberate departures from plans that were detrimental to the public. The paper emphasizes the necessity of a critical perspective on how zoning relief mechanisms can play a role in value creation and distribution in urban development while considering the ways in which they can be appropriated and employed for more progressive and inclusive ends.

Spatial justice and planning standards and guidelines in Hong Kong

Mee Kam Ng (The Chinese University of Hong Kong) and Hilary Wong (The Chinese University of Hong Kong).

Abstract

Spatial planning, including planning standards and guidelines, plays a very important role in 'distributive justice'. It can be an instrument of oppression and domination, but if done right, it can help boost people's spatial competence. In order to ensure spatial justice, it is necessary to have recognition justice of relevant stakeholders so that their needs and identities can be respected. Then, we need to practise procedural justice to engage them in an informed, fair, transparent and meaningful planning process, allowing them to share the decision-making power. Based on this framework, this paper examines the origin, formulation and review, as well as contents of the Hong Kong Planning Standards and Guidelines, an important document for strategic spatial as well as district level site planning in Hong Kong. Besides revisiting the procedural and institutional aspects in the unique contexts of Hong Kong, we will also examine the implications of the planning standards and guidelines in terms of distributive or spatial justice. We argue that the Hong Kong Planning Standards and Guidelines fall short of recognition, procedural and distributive justice. To remedy the situation, it is important to recognise a wider range of stakeholders in urban development in the city, and practise procedural justice in the review of the more than 40 years old documents. Only then, we argue, more spatial justice can be observed in the urban planning and development process.

Rethought but not remade: How did 'participatory' digital mapping lose its way?


Aubrey Toldi (Politecnico di Milano).

Abstract

As digital spaces and tools are on the rise, we need to understand their implications in our practice. The digital map has become ubiquitous to our planning efforts, yet despite the number of times it has been 'rethought', 'reimagined', or 'reconsidered', the ways in which planners map has not drastically changed. Why? In the past three decades, our understanding of the nature of maps has shifted from the map as a product ('how maps are') to mapping as a process ('how maps become'). This has directed much attention to and called for better understandings of spatial discourses, recognizing that maps are not simply containers of meaning but rather continually emergent processes. Despite this re-understanding, planners continue to employ digital mapping as a linear, conventional process of inventory, analysis, and legitimization within practice.

Although urban academics and professionals have enlarged their classification of map forms (now considering alternative maps previously deemed 'unorthodox') and have ignited new conversations about space (such as the social and cultural significance of place), the forementioned mapping process has not been critically transformed. By and large, the mapping debate remains centered on the socio-cultural critique of normative maps, primarily focusing on the data mapped (the final product and its production) rather than recognizing the change that the mapping process can bring (arising actions). This, in part, highlights why participatory digital mapping initiatives have been widely criticized as facilitating symbolic and extractive experiences. 'Participation' must fit into our linear production process at predefined points and in predetermined ways. How can planners begin to reflect on this blatant disconnect between the theoretical re-understanding of maps and urban mapping practices that seek to be more democratic and inclusive?

By unpacking how the digital medium is a unique form of spatial representation, we can begin to reshape our conversations around some of digital mappings' widely debated dimensions, namely its (spatial) discourses and (post-)political concerns.



The aim is to illustrate how multi-dimensional digital mapping is when approached as an integrated, emergent process by (1) recognizing how the digital medium creates distinctive boundaries (where it enables and constrains) that give shape to mapping and (2) linking these findings with practical examples of community digital mapping processes that counter planning's linear one. By further understanding 'how digital maps become', planners can begin to challenge both the conventional ways in which we map and the normative idea of participation that has accompanied it.

Bulldozing Your Way Back to a Paradise Lost? The Controversy over the Ecological Restoration of Los Angeles' Last Wetland

Deike Peters (Soka University of America).

Abstract

The UN declared 2021-2030 to be the 'Decade of Ecosystem Restoration' -- and the ecological restoration of urban greenspaces has been hailed as a key path to achieving sustainability and climate resilience (e.g. Klaus and Kiehl, 2021). But in highly degraded urban environments, a serious question exists as to what kind of nature could and should be restored. My paper tells the fascinating story of the highly contested 'restoration' efforts currently under way along the Los Angeles coastline. About 95% of California's coastal wetlands have either been destroyed or are highly degraded due to agricultural and urban development. The remaining 200,000 acres still fulfill important functions for threatened species, flood control, water filtration and carbon sequestration. In LA, 600 of the originally 2000-acre Ballona Wetlands remain as a much degraded yet ecologically and recreationally important open space. In late 2019, the state published a so-called 'restoration plan' that would remove millions of yards of infill and concrete levees from the channeled creek to create a new tidal wetland while also providing many new miles of elevated multi-use paths. Taking a discourse analytical approach that evaluates multiple stakeholders' perspectives via document analysis and interviews, I reveal strongly contested notions over the sustainability, scientific value and the 'correctness' of the state's eco-engineering-oriented efforts -- an approach which has been deemed successful for several other areas along the coast but which may end up creating a new landscape that in fact differs from what was historically present at this site, thus questioning the very notion of ecological "restoration". Local environmental activists are pitted against scientists, policy makers and other environmental experts, arguing that vulnerable species would be endangered and that current freshwater functions should be preserved instead. Yet others argue for 'multispecies justice' (Heise and Christensen 2020).

Reviewing the definitions of public spaces from the lense of developing nations

Shraddha Kumar (XIM University) and Kajri Misra (XIM University).

Abstract

Public spaces as a 'space in the plan' have been discussed extensively in the literature. The concept and its definition have, however, taken interesting turns over time. Understanding these shifts in perception and positioning is important for better planning and management of public spaces. This paper studies the transformations in the concept and definitions of public spaces in the literature over the last 80 years. The shifts mirror changes in the functional, physical, social, cultural and technological face of cities globally. Applying Zhang's epistemological approach (Zhang 2020), this study maps the changing interpretations with changes in the contexts and emerging opportunities. In the early literature, public spaces were conceptualized metamorphically, beyond its physicality; public space positioned as a political concept rather than a mere physical location, a place where both agency and freedom are gained (Arendt,1958; Habermas,1989). The literature of the 80s, 90s and early 2000s however, turned to its materiality, defining public spaces by its legal and physical features, with a focus on identifying attributes that would make a "good" public space. The discussions revolved around the accessibility, ownership, inclusivity, openness and in general, the attributes that contributed to the degree of freedom (Oldenburg,1989; Tibbalds,1992; Klein,2003). Literature of late 90s and early 2000s worked around the idea of differentiating public spaces by categorizing on various bases, - design features, social and cultural behavior, political-economic characteristics etc. (Kohn,2004; Carmona,2010). More recent literature has moved to define public spaces multi-dimensionally (Neal,2010; Tiesdell,2010), positing these dimensions to mark the "publicness" of a public space. This last turn offers the opportunity to develop a definition for decision makers working on public spaces, in medium size cities of a developing nation; a framework to determine the characteristics and identify existing shortfalls of that public space based on its publicness.



The Amazon Proof of Concept: Steps toward Negotiated Multi-jurisdictional Planning

Brian Orland (The Pennsylvania State University and University of Illinois at Urbana-Champaign) and Paulo Renato Mesquita Pellegrino (Universidade de São Paulo).

Abstract

The Amazon Basin, the world's largest rainforest and river system, is a vital ecosystem for the planet and irreplaceable heritage for all humanity. However, resource-intensive development has massively destroyed the forest, and degraded its ecosystems, as well as having led to rampant inequity and poverty. In response, the Sustainable Development Solutions Network (SDSN), convened a Science Panel for the Amazon (SPA) of scientists who study the region. Their 2021 report offers practical solutions for sustainable development, prioritizing the long-term wellbeing of the region's ecosystem and people.

The International Geodesign Collaboration (IGC) (<https://www.igc-geodesign.org/>) has investigated the feasibility of a geodesign approach to plan the region based on the SPA report. GIS-based geodesign integrates spatial-temporal policies and projects with impact simulations to assess, evaluate, and locate sites for best accommodating land protection, restoration, and development. The SPA report identified 89 such projects and policies. Geodesign projects consider environmental values and decision-making processes, enabling projection, assessment, and monitoring of future changes.

We assembled teams to represent four significant geographic regions of the Amazon Basin for a three-day geodesign workshop via Zoom in October 2021. The final design demonstrated the ability to project and negotiate the implications of the SPA ideas. The complexity of the final design necessitated focusing mostly on the highest priority of the 89 policies and projects but enabled all to remain in the design, but with lesser weighting and priority determined by workshop participants. The next phase of this work will engage policy-makers and scientists representing every country in the Amazon Basin with IGC partners to identify solution pathways that can moderate current and future pressures for change and reverse the losses to past degradation. The tools and approaches are available for us to turn aspirations to designs, and designs to meaningful change.

Planning Policy, Flooding and Urban Form in Jakarta: Utilising the City's Water Infrastructure to Understand Impacts on the Urban Morphological Development of the City

David Wallace Mathewson (University of Westminster).

Abstract

This paper explores historic institutional responses to flooding and the influences of such planning policies on the physical and spatial development of Jakarta, as well as its social development at the strategic scale. This is set within a context of pressures from severe flooding and rapid urban development set against a background of recent institutional change from the national to the local level. This study focuses on the strategic scale, considering recent changes to patterns of urban spatial development across Jakarta as new flood defences have been constructed or existing systems renovated, part of a city-wide network of flood mitigation infrastructure currently being implemented by local and national government. Using the city's network of flood mitigation and water drainage infrastructure, a number of sites are analysed using urban morphology with GIS-based mapping and satellite imagery to understand the link between flood policy and changes in urban form as a result of decisions made by planning authorities. Using document analysis, literature review, newspaper articles and interviews with local stakeholders: NGOs, government officials and local academics involved in relevant projects, a historic institutionalist approach is used to reflect on the policy context and decision-making processes involved with the practical realisation of flood-resiliency in the city, their impacts on urban fabric of the city and the consequences of the resulting spatial changes on local residents and their communities. This paper reveals a number of side-effects from recent institutional responses to flooding in Jakarta, including displacement of local residents, problems of land tenure, access to affordable housing, severance of social networks and interruption of local livelihoods, as well as the utilisation of land formally allocated for flood mitigation instead for profit-driven urban development.

Grounding global (urban) policy models within different geographical contexts: Looking closer at Indonesia

Galuh Syahbana Indraprahasta (National Research and Innovation Agency (BRIN)).

Abstract

Over at least the past two decades, we have witnessed that the unfolding of globalization has opened up ample space for facilitating varying urban ideas and models to travel between countries in a much larger scale. Cities across the globe have been, therefore, transformed, either actively or passively, by policy ideas or catchwords imported from elsewhere. While such (urban) policy mobility and practices of worlding cities have become an increasingly popular practices of urbanization, there is need to better understand how these different global ideas have been contextually grounded. Our main proposition has been that there is no such thing such as one-size-fits-all urban model. To situate our proposition, we look closer at the adoption of three urban policy labels in Indonesia: creative city, green city, and smart city. The materials used in our discussion were mainly obtained from years of research conducted by us. We have been largely inspired by the post-colonial critiques in questioning the theoretical underpinning of urban theory that is argued to entail Western bias and the engaged-pluralism proposal as a strategy to bridging these urban theory debates. Using these particular approaches to discuss our cases, we hope to not only enrich the empirical understanding of Indonesian cities (and regions) amid the varying global urban labels, but also to reflect the case of Indonesia to the broader urban theoretical discussion.

Implementing the 2014 Strategic Master Plan for the City of São Paulo, Brazil: the challenges, possibilities and limits of planning a Global South city

Eduardo Nobre (University of São Paulo), Maria Lucia Refinetti Rodrigues Martins (University of São Paulo), Marina Pinheiro Marques (University of São Paulo), Patrícia Cezário Silva (Federal University of ABC), He Nem Kim Seo (International School of Urban Science of University of Seoul) and Igor Borges (Federal University of ABC).

Abstract

Spatial planning of Global South cities presents enormous challenges. Due to the historical process of development of the countries in which they are located, these cities are characterized by immense socio-spatial disparities between the richest areas, endowed with infrastructure and employment, and vast areas of precarious settlements, with deficits in jobs, infrastructure and public facilities for the poorest strata. The City of São Paulo, Brazil, is a typical example of a Global South metropolis, as approximately 30% of its population lives in precarious settlements (favelas, illegal allotments and slum tenements). It is precisely in this context that the city hall has been implementing the 2014 Strategic Master Plan (PDE 2014), with the stated objectives of reducing these disparities and promoting the right to the city. The objective of this panel is to evaluate the implementation of this plan after seven years, checking if the results met these objectives. In order to do so, firstly, an evaluation of the application of the instruments so far will be carried out, with emphasis on access to urbanized land for social housing and the financing for urban intervention projects, especially related to mobility and public services. To reach this goal, the panel will invite experts to discuss three main urban planning tools proposed by the new master plan: the current situation of the Additional Building Rights Levy and its impacts in bringing effect to the city development fund; the Social Interest Special Zones (ZEIS) and its relationship with the real estate performance; the effectiveness of the "Solidarity Share," a new instrument brought by the plan. Finally, it will be necessary to understand the recent development on the revision of this plan conducted by the local government in the current pandemic situation.


Smart cities as vehicles of accumulation

Cuz Potter (Korea University).

Abstract

This paper builds on Arrighi's analysis of systemic cycles of accumulation to position smart cities within the emerging cycle. He originally posited that the evolution of the world capitalist system on an ever wider geographical base has passed through four systemic cycles of accumulation in which capitalist and territorialist actors organized and reorganized themselves to overcome the limitations of the previous cycle. While capitalists employ territory only to the extent that it increases capital accumulation, territorialists employ capital only as a means to expanding territory. He also demonstrates that historic phases of world capitalism have alternated through extensive phases in which the territory encompassed by the system was expanded and intensive phases in which the system became deeper and more intricately structured.

Drawing on Zuboff (2020), this paper claims that the emerging systemic cycle of accumulation centers on surveillance capitalism, a strategy of capital accumulation that relies on maximal extraction of behavioral surplus to generate and exploit



predictive behavior and typified by the large internet platform firms (e.g., Meta and Alphabet). The paper first argues that these firms have built on the transnational strategies of the US-led phase of accumulation to supersede the US regime through a new fusion of the territorial and capitalist logics of power. In keeping with Arrighi's implication that the new systemic cycle of accumulation will be extensive, the firms of surveillance capitalism strive to expand their access to new territory on the global scale to maximize behavioral surplus and thus capital accumulation: our inner lives and behaviors.

The paper's second argument is that the platform firms' territorial expansion is taking increasing physical form, specifically urban form. The insistent drive to capture ever more behavioral surplus has induced platform firms to continuously encroach upon and stitch together our physical spaces by collecting data from cell phone sensors, virtual reality goggles, and smart TV scans of our living spaces, by building spatial and behavioral maps with home security systems, and ultimately by constructing smart cities designed to capture our every move and gesture. Smart cities are a territorial gold mine for surveillance capitalists, as their systems of management allow for both the extraction of behavioral surplus and the management of consumer behavior. As this nearly closes the loop between information and control, smart cities internalize governance or state-making costs, enabling platform firms to supersede the US cycle of accumulation.

Urban and Territorial Plans in Latin America: Linking Theory and Practice

Juan Demerutis-Arenas (Universidad de Guadalajara - CUAAD) and Magdalena Vicuna (Pontificia Universidad Católica de Chile - IEUT).

Abstract

Since the origins of urban and territorial planning in Latin America –first half of 20th century, the regulatory plan has been an instrument with specific goals: to mediate between private and public interests, to control the negative externalities and environmental impacts of nuisance activities, to resolve incompatibilities, to reserve land for streets, as well as facilities and public spaces, and to define the limits for urban growth. In fact, plans of a rationalist / traditional essence. Despite having different denominations in each country, the plans focused on the physical features of the city: buildings shape (height, density), land uses, green areas, right of ways for streets. However, this traditional essence has been changing, as instances of participation in planning processes throughout the region have been introduced. These agencies have an influence on decision-making in both the formulation and implementation of a plan. In addition, some mechanisms for land value capture have been also enacted innovating urban land management. In order to frame the current status of planning practice, this article aims at proposing a classification about the urban planning approaches in Latin America by reviewing current plans of cities such as: Buenos Aires, Santiago, Mexico, Guadalajara, Bogotá, Medellín, Sao Paulo. The analysis includes content, multiscale consistency, as well as the processes that are followed for its implementation mandated by the framework of national and subnational contexts. Finally, a reflection is made about the theoretical frameworks which shaped the main features of these plans and how they contribute to the planning discipline.

Pluralistic Concepts of Urbanism

Hiroki Nakajima (the University of Tokyo).

Abstract

Urbanism is extremely pluralistic concepts related to urban realities and norms, and it is difficult to get a bird's-eye view of the concept as a whole. Therefore, this study analyzed more than 20,000 articles on urbanism through citation network analysis and natural language processing. As a result, the study was able to organize the aspects of recent research on the diversified concepts of urbanism. In each cluster, 31 concepts of urbanism were extracted as urbanism that are modified by nouns or adjectives among keywords. In addition, focusing on papers with high order of magnitude in each cluster, data on what scales they are primarily concerned with were summarized. In doing so, it identified areas that should be explored as planning theories and the fact that there are conflicting understandings of the same phenomenon among the concepts. For example, while tactical urbanism sees urban regeneration starting with small-scale projects at the district scale as a positive initiative that gives social entrepreneurs the opportunity to participate in urban regeneration, the concept of austerity urbanism sees it as a further development of neoliberal urban regeneration and is seen as a risk that may promote gentrification and social exclusion. Thus, there are both positive and negative aspects to the pluralistic concepts of urbanism, and this study suggests directions for future research to understand and overcome these multiple aspects of urbanism.



The Conditions Of Participatory Planning In Post-Colonial South The Emergence, Modes Of Governing And A Continuum

Prathiwi Putri (University of Kassel) and Uwe Altrock (University of Kassel).

Abstract

Participation in planning is never an outdated topic within planning theory. While inclusivity in planning has become a shared goal, participation is the norm in practice, to navigate ways with which rooms for community aspirations and collective actions are secured. In its role to balance the dominant role of the state and private sector, participatory planning has been theorized by referring to both the Global North and South, as well as to their relations. Participatory planning is theorized in diverse concepts, among others, communicative, collaborative, or radical and insurgent. Discussions and debates have been flourishing in viewing the specificity of each concept, its geographical and contextual emergence as well as its renewed relevance in facing contemporary spatial planning processes that are saturated with contestation and dissent.

This paper seeks to account for the conditions of possibilities for diverse forms of participatory planning to emerge and endure. It aims at drawing some empirical lessons from planning literature about participation especially within the tradition of communicative, collaborative and radical/ insurgent planning within the context of post-colonial South; the term post-colonial is consciously used not only to refer to the period following the colonial era but also to account for people struggles in refusing any contemporary model of colonizing space and resources. The gap in the literature is highlighted: the mode of governing (including the planning instruments and methods in use) has not been systematically discussed in relation to the role of the state in its effect on the emergence and endurance of participatory planning. The authors seek to contribute in planning theory for informing transformative planning practices, by highlighting the possibilities for planners inhabiting existing formal procedures and institutions, and nurture them for community collective actions and efforts to sustain their livelihoods.



Planning in Indigenous Australia: an ongoing challenge for planning educators

Paul Burton (Cities Research Institute, Griffith University).

Abstract

Planning in Australia takes place on land that has been occupied and cared for by Aboriginal and Torres Strait Island people for at least 60,000 years. Planning in contemporary Australia is a product inter alia of various settler-colonial assumptions and ideologies and there is considerable debate at present about planning's historical role in processes of colonisation and its capacity now to decolonise its practices, by recognising and properly incorporating Indigenous concerns and principles into planning policy and practice. The Planning Institute of Australia accredits university degree programs that prepare students for careers as professional planners and in 2017 introduced a revised policy on what is expected of accredited programs and those who graduate from them. This review introduced a strengthened requirement for programs to introduce planning students to Indigenous cultures, knowledge systems and world views; to increase their competency in engaging appropriately with Aboriginal and Torres Strait Island people in planning, and understanding relevant legislation such as the Native Title Act 1993. This paper reviews the progress made in improving their programs in these ways by Australian university planning programs with PIA accreditation. It explores some of the theoretical and political debates about post-colonial and decolonising practices, the practical ways in which programs have changed and the challenges they have faced in trying to do so. It concludes with a set of broader reflections on the ways in which university-based professional education programs combine the development of practical skills and competencies with ethical and political principles. Note: I have served as a member of the PIA National Education Committee since 2015 and since 2020 have chaired the Education Sub-Committee of the Queensland Division of PIA. I have taught into Griffith University's accredited planning programs since 2007.

Intercultural teaching and learning: In-person and Online

Andrea Frank (University of Birmingham), Christopher Silver (University of Florida), Ova Candra Dewi (University of Indonesia), Kemas Ridwan Kurniawan (University of Indonesia) and Andrew Flynn (Cardiff University).

Abstract

International projects or workshops with students from different countries meeting in teams over a period of time have emerged as a classical pedagogy to support widening students' perspectives, comparative analysis and intercultural skills development amongst other things. Typically, this involves staff and student cohorts travelling to an international destination and being hosted at a partner institution and working locally. Teaching students from different backgrounds is both a challenge and an opportunity for those staff members involved. However, over time and with repetition, learning and teaching routines can develop - building the capacities and intercultural knowledge and understanding amongst staff and administrators who are supporting such teaching ventures. The in-person experiences of such exchanges and activities were always deemed essential part of the experientially based deep learning. Individuals from different cultural backgrounds interpret local situations differently than those accustomed to it – be it the transport patterns, informality or domestic arrangements. These different lenses are instructive for both students and facilitators.

The global pandemic disrupted such learning experiences as practically all international student fieldtrips ceased, although in some cases virtual activities were developed to substitute for them as was done for the International Joint Workshop and Seminar held annually from 2016 with students and staff from University of Indonesia, University of Florida, Cardiff University and occasional others participating. Wondering in how far such virtual activity can replace the in person field trip - the authors of this contribution drawing on - 5 in-person and 2 virtual workshops - reflect on the differences in teaching and learning in these two modes, in person and online, in respect to skills development and knowledge development. Paired self-reflection and interviews with teaching assistants, and educators and select students involved in the workshops in the past provide interesting insights of benefits and drawbacks for both modes of interactions. Some thoughts are developed for future blended and new styles of pedagogies that might address shortcomings of either mode in terms of deep learning, achieving learning outcomes and considering the sustainability of HE practices.

Tactical Urbanism: Training Course for Multipliers Local Agents

Adriana Sansão Fontes (UFRJ) and Rodrigo Rinaldi de Mattos (UFRJ).

Abstract

This work presents a extension course to develop skills for participants to become multipliers of solutions for adapting public spaces in different contexts, using Tactical Urbanism as a methodology. Tactical Urbanism is an approach to building/activating neighborhoods that uses short-term, low-cost, and scalable interventions that allow the immediate

recovery or redesign of public space, aiming future transformations. We believe that the creation of a network of local agents is essential to build agile and replicable responses to the new urban demands. Thus, we propose the concept of “multiplication of knowledge”, considering: (1) the community of learners; (2) the need to master processes; and (3) the reciprocity. The first idea resides in the formation of multidisciplinary groups in search of knowledge that enables the safe use of public spaces; the second is based on the dissemination of tools for citizens to become transforming agents; the third refers to feedback: knowing how to reevaluate solutions. The course offers contemporary content that allows participants to reflect on the road paradigm of Brazilian cities and to propose changes in the everyday city focused on people. It is organized on three levels: the proposing multidisciplinary team contributes to the training of tutors (technicians from public agencies, architects, urban planners, students, NGOs, residents' associations), who interact with local agents (citizens), promoting capillarity so that tactical urbanism actions take place. The course is organized into 2 lines: (1) Pilot edition: aimed at testing the university-civil society articulation, containing 3 stages: Pre-production, Course and Post-production. The course is structured in 3 modules: (A) Discover (case presentations and theoretical content); (B) Design (development of solutions); and (C) Prototyping (consolidation of proposals). (2) Production of recorded lessons: aims to allow multiplication, through the participation of speakers who offer recorded content for future replication. The pilot edition (1) brought design results and (2) impacted the training of local agents. (1) Six solutions were developed for school environments in peripheral neighborhoods of Rio de Janeiro. As the proposals aimed at improving school surroundings, if implemented, these projects will have a direct impact on them, reducing road accidents, improving environmental quality, encouraging walking and cycling, among other indirect benefits. (2) Participants from seven Brazilian states were trained, with a participant from Aveiro, Portugal. The course brought together students, architects and urban planners from the private sector and technicians from the public sector, empowering and emancipating the individual in the process of urban transformation.

Genders, sexualities, cities and planning education and pedagogy

Alan Mabin (University of the Witwatersrand, Johannesburg) and Tamara Shefer (University of the Western Cape, Cape Town).

Abstract


‘[T]here has been a rather “poor” development, if any, of the concepts of gender(s) and sexuality(ies) within the “spatial” disciplines’ (Lada 2009 p. 5). This paper addresses consequences for misapprehension of city lives and contexts, and planning in those situations, drawing on work by authors such as Beebeejaun, Chant, Doan, Hubbard, McIlwaine, Peake, and Visakha. We draw further on a small study with key stakeholders in planning education – in South Africa, other African countries, parts of the global south and more generally. Reading the contemporary literature on gender and sexuality in planning and planning education together with the subjective perspectives of a group of planning educators, a number of concerns about gender and sexuality in planning curricula and pedagogical practices are evident, including: 1) A gendered analysis is frequently marginal in planning curriculum, and often presented as an add on – seen as an area of specialisation, rather than a key component of how we think about material spaces and ways of living; 2) Sexuality as part of a lens for planning is often missing or conflated with gender; 3) Gender and sexuality are viewed primarily as a ‘problem’ that planning should address: i.e. gender based violence is widespread and the imperative to make safer spaces. A more holistic engagement with gender, sexuality, desire and pleasure tends to be obfuscated by overwhelming emphasis on violence related to normative gender; 4) Gender and sexuality are taught in a didactic way which distances from everyday embodied experience and students’ own agencies in making a difference; 5) Gender in planning tends to be taught in an isolated way that disregards the intersectionality of gender with sexuality, race, class, age, and ability. How gender is bound up with ecological challenges is also a pressing intersectional concern in thinking about planning in contemporary contexts.

We propose working with more participatory, active, embodied, affective pedagogies and engaging with examples of the entanglement of gender and sexuality in human settlements that disrupt normative thinking about ways of living and that also open up our relationality with ecological concerns.

Urban explorations sustainable territory. Implementation experience of an urban sustainability course through an active learning approach in three Chilean universities

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Abstract



The course on Urban Explorations: Sustainable Territory, taught at the Pontificia Universidad Católica de Chile, since 2015, corresponds to an undergraduate course on urban sustainability, classified as general training (in which students from different careers attend), which has been characterized by the implementation of various strategies for active learning during classes, among which the field visits, the creation of graphic and didactic material, and the discussion for the resolution of interdisciplinary problems stand out.

This course has been affected by the social outbreak in 2019 and by the COVID-19 pandemic in 2020, which caused the development of face-to-face classes to go online. In 2021, the project was systematizing and evaluating teaching methodology, considering face-to-face lessons between 2015-2019 and online lessons between 2019-2020, and the edition of a manual for its implementation in other universities in the country.

The methodology considered an online survey of former students of the course with a focus on investigating the face-to-face/online differences, but also the didactics and themes of urban sustainability, and on the other hand, the application of the manual at the University of Concepción, in the Catholic University of Temuco and by another professor at the same Pontificia Universidad Católica de Chile.

The main results of the survey show that the students are dissatisfied with the online classes; they value the grounds and the teachers the most. Additionally, the course manual was created, which explains both face-to-face and remote teaching methodologies for urban sustainability, validated from the experts' review in the subjects and applied with great success during the second semester of 2021 in the indicated universities.

As a conclusion of the project, in the first place, the importance of research in urban planning teaching is detected, which allows improving the quality and depth of learning for students. Additionally, there is a demand from students, as well as from other universities, to deliver knowledge in these subjects, especially in the context of general training, that is, not necessarily linked to the education of urban planners, but rather to the teaching of these subjects as part of citizenship education.

Collage narrative and consultative design as means, the planning education for junior students

Wenjian Zhu (School of Architecture and Urban Planning, Shenzhen University) and Wei Luo (School of Architecture and Urban Planning, Shenzhen University).

Abstract

Most urban planning majors in China originated from architecture. The planning and design courses for the junior students in planning colleges are mainly about the enlightenment of architectural design, lack of suitable enlightenment and design practice of urban planning. Traditional planning education and pedagogy (architecture training) face difficulties in the current situation. Taking the School of Architecture and Urban Planning of Shenzhen University as an example, this paper introduces the teaching means ("collage narrative" and "consultative design") of training urban planning and design for the junior students. Through the training of "collage narrative," the instructors guide the students to study the site, environment, and city and discover the design source. "Consultative design" as the means of intervention trains students' coordination, negotiation, and group design ability and recognizes the collaborative characteristics of planning and design. Compared with traditional design methods such as starting from function, Shenzhen Universities' cases show some successful transition of planning education for junior students from architecture to cross design. The students tried to begin thinking about the design from the site, environment, and city perspective. However, the urban cognition brought by collage is fragmented, and there are often significant differences and no correlation among the fragments. It is still challenging to use clues to bond/connect/combine fragmented collages into design clues. The consultative design tests students' coordination and negotiation ability. Nevertheless, under the heavy design workload, all kinds of beautiful urban ideas discussed in the group are often simplified.

Towards a Competency Model for Local Planning: The Case of the City and Municipal Planners in Two Philippine Provinces

Remsce Pasahol (University of the Philippines Diliman) and Kristine Aspiras (University of the Philippines Diliman).

Abstract

The growing complexity and variety of urban and rural problems in the Philippines translate to a resounding demand for competent planners at the local level. With this, there should be a continuous pursuit of identifying the competencies that local planners should have in order to survive and thrive in their challenging and dynamic work environment.

This study intends to address the limited published studies on the identification, consolidation, and ranking of planning-related competencies in developing countries like the Philippines. Through its exploratory sequential design, this study developed and validated a competency model detailing the knowledge, skills, and personal characteristics (KSPs) aligned with local planning work in the Philippine context.

From an intensive literature review and interviews with select local planners and subject matter experts from the academe, national government agencies, and professional organizations, this study has identified eight major competency areas: (1) understanding the underpinning planning principles; (2) information and knowledge management; (3) comprehensive and multi-sectoral planning; (4) program, project, and activity development and management; (5) policy research; (6) zoning administration and development regulation; (7) monitoring and evaluation; and (8) effective communication. In addition, this study has also identified twenty-five knowledge items, fifty-four skills, and eighteen personal characteristics related to these competency areas. Most importantly, this study has identified which of them were considered highly relevant in local planning practice through a validation survey with ninety-one more city and municipal planners from two Philippine provinces – Cavite and Quezon.

On knowledge items, local planners valued the mastery of comprehensive land use and development planning processes and familiarity of the basic concepts related to the five development sectors, especially the social, infrastructure/physical, and environmental sectors. Among the highly valued skills are related to primary data collection, basic computer operations, listening, technical writing, vision and goal setting, presenting ideas, and interpreting and applying planning policies. Of the identified personal characteristics, most local planners considered being a team player, flexibility, integrity, strategic thinking, future orientation, timeliness, creative thinking, and humility as very important. This study has also identified the characteristics of the planner, the planning organization, and the locality that are associated with the valuation of competencies.

With these findings, this study advances actionable insights that can help in reviewing curricula for undergraduate and graduate planning programs, designing learning and development interventions, and managing local planning offices.

Geodesign as a teaching method – Lessons from a multiple case study

Olaf Schroth (Weihenstephan-Triesdorf University of Applied Sciences).

Abstract

This study is analysing the geodesign workshop (Campagna 2014) as a method for teaching group work methods in the context of geoinformation systems (GIS). In order to assess the learning outcome, four workshops with international landscape architecture students at master level were conducted over a period of four years (2018-2022) and compared in a multiple-case study. The titles of the workshops were 1) Munich Parkmiles, 2) Regional Garden Festival Stuttgart, 3) Heidelberg Green Belt and 4) International Building Exhibition Munich Region. Learning goals did not solely focus on GIS but more on regional planning across diverse stakeholders (Warren-Kretzschmar, Lincoln & Ballal 2016). In this context, students were assigned different stakeholder roles, in which they had to brainstorm spatial policies and plans from different perspectives and negotiate a consensus based on their individual stakeholder roles. The workshops were part of the International Geodesign Collaboration IGC, a collaborative project of more than 120 universities, research institutions and public / private stakeholders across the world (Flint Ashery & Steinlauf-Millo 2021). In order to facilitate research into geodesign, the collaboration provides a template, which was used to prepare the workshops and ensure their comparability. All workshops used the www.geodesignhub.com online platform to facilitate group work. After the first two workshops had been conducted in person though, the third and fourth workshop were conducted online due to covid restrictions. The results show that the learning goals were achieved, that new ideas were created and stakeholder expectations reflected and challenged. The quality of the actual planning outcomes might vary though depending on the quality of the underlying evaluation and constraints maps. In conclusion, geodesign workshops are recommended not only as a method for teaching GIS but also for teaching group work methods such as brainstorming, consensus building and stakeholder-roleplay. In times of covid and the need for remote workshop methods, the geodesign workshops were also well suited for online learning and teaching.

Urban planning education and practice in Nigeria: gender diversity challenge, curriculum perception, and post-graduation trajectories

Damilola Odekunle (University of Lagos), Kemi-Hamdat Olugbodi (Bayero University) and Taibat Lawanson (University of Lagos).

Abstract

In Nigeria, urban planning is not a discipline of first choice for many, while many planning graduates also do not end up practising the profession. Why is this so? This chapter attempts to establish empirically the reasons behind the decision to study urban planning among undergraduate students at Nigerian universities and their post-graduation career trajectories. Findings reveal the urgency to acquire a university education is the key influencing factor driving students into planning schools, and that the high attrition rate of graduates is due to lack of job opportunities in the field and the poor remuneration of those employed. The chapter concludes by advancing strategies for making the profession more attractive as a career choice.

Spatial Development Scenarios for Slovenia: Pedagogy of exploring national and local with regard to the known regional perspectives

Davorin Gazvoda (University of Ljubljana, Biotechnical Faculty) and Nejc Florjanc (University of Ljubljana, Biotechnical Faculty).

Abstract


Despite the fact that Slovenia is a small country, its spatial planning is divided into three levels: national, regional (12 regions) and local (at the level of 212 municipalities). While planning at the state level is often fairly general, local spatial planning is too fragmented and often somehow not directly connected to national strategies. One of the main pedagogical goals of the planning studio in the first year of MSC LA program is that students learn how to connect all three levels of spatial planning and that they look for appropriate solutions to detected problems. Relatively small size of regions is in this case an advantage. Conceptualization of regional plans enable the concretization of national planning goals with clear starting points on how to solve individual spatial problems at the municipal level. The Geodesign Collaboration (IGC) approach enables students to develop zoning maps with predicted major spatial changes following their scenarios and »adopters«. In their final designs in scales 1:5.000 to 1:500 (depending on the size of the problem and available space) they are looking, for example, how landscape may change due to the installation of new solar or wind power plants, plantations of fast-growing trees for the use of biomass in energy production. And further, what changes of agricultural areas, industrial development, new housing areas etc. will realization of plans bring to the space. Selected examples from studio projects will be presented in the paper with an emphasis on most problematic steps in planning process as seen by the students. Final design solutions may at first glance be less potent from design (or aesthetic) perspective, but they are more correct, as they are supported by prior considerations on national and regional level. In this way, students not only learn how strategic decisions can change the detailed physical reality of the landscape, but also actively cooperate with their proposals in determining the most acceptable changes.

Scenario design and evaluation as educational tool: national and regional perspectives

Mojca Golobič (University of Ljubljana Biotechnical Faculty, Department of Landscape Architecture) and Tadej Bevk (University of Ljubljana Biotechnical Faculty, Department of Landscape Architecture).

Abstract

The world faces a critical and contentious challenge in fundamentally uncertain conditions: how to organize and conduct strategic stages of designing for long-term changes within complex systems? We present an example of the approach developed by International Geodesign Collaboration (IGC) as applied by University of Ljubljana's landscape architecture programme to teach students how to deal with the above question. The course is taught in two semester studio, the first semester focusses on small-scale, large area planning, and second focuses on larger-scale, small area design based on previous planning decisions. The pedagogic aim is to teach the student how to use scenario development and evaluation as a reference and argumentation for planning proposals. The scenarios are designed for two time frames (2035 and 2050) and assuming different level of response to a set of identified driving forces such as climate and demographic change. The business as usual (non-adopter) scenario is used to explore the effects of these driving forces on spatial potentials and natural resources, and active response (early-adopter) scenario is used to set the targets. The scenarios explore spatial consequences of giving different priorities to environmental, societal, and economic goals. They are evaluated in reference to UN's sustainable development goals and locally defined objectives to understand their global and local performance. This exercise exposes various conflicts in different strategies of achieving global and local goals (e.g., global reforestation effort vs. national food-security) and offers a unique perspective to optimize scenarios. The evaluation exercise allows the students to directly compare effectiveness of different strategies/goal definitions in space and time and to use this knowledge to introduce improvements to scenarios. The application of this education approach will be demonstrated by selected examples comparing planning proposals for the same area in three different spatial contexts – as a part of national



spatial development strategy (20.000 sq km), regional plan for Posočje region (2.325 sq km) and plan for cross border Slovenia-Italy region (375 sq km), focusing on how each scale (and planning aim) produces different problem formulation, goals and spatial solutions. In the course students learn to deal with complex problems, by understanding rather than “just” learning to respond to the driving forces and produce flexible proposals (instead of “fixed” solutions) to these problems.

How to introduce zero-carbon city concepts, knowledge and methods into urban planning and design teaching

Hua Yang (Shenzhen University), Yiyong Chen (Shenzhen University) and Zhihang Luo (Shenzhen University).

Abstract

Facing the challenge of global warming situation, carbon peak and carbon neutrality have become the key mission of all countries and industries. As the main place of carbon emissions, zero-carbon city has naturally become a core topic of the current urban planning discipline. However, zero-carbon city is different from green city that planning teachers and students used to be familiar, it is a complex knowledge system and it also includes a lot of professional technology. How to make students understand the concept of zero-carbon city, master the basic technical points and apply it in teaching subject design? This is a very important and necessary issue of planning teaching. This paper will study the teaching process and method how to guide students to master the relevant knowledge of zero-carbon city step by step and apply it to the graduation design through five of steps: concept introduction, strategy cognition, toolbox construction, case analysis and design attempt. This paper will help to promote the popularization of the concept and knowledge of zero-carbon city among teachers and students majoring in planning and design, to push more new generations of urban planning to master the ideas and methods of zero-carbon city, finally, to accelerate the realization of carbon peak and carbon neutrality in the whole society.

Innovative responses in planning and urban design education: enabling an online learning experience for the future generation of planners and urban designers

Gabriela Quintana Vigiola (University of Technology Sydney), Johanna Brugman Alvarez (University of Technology Sydney), Juanee Cilliers (University of Technology Sydney), Riki Mey (University of Technology Sydney) and Mukesh Ray (University of Technology Sydney).

Abstract

Online education began well before the COVID-19 pandemic took the world by surprise. It was already booming with platforms such as Edx and Coursera. Although these platforms deliver courses supported by major universities, they do not provide the wholesome experience of a collaborative and interactive model for which universities are known. These generic online courses also lack the fundamental context-driven approaches to teaching and learning, which hampers students' job readiness in their region and country. This calls for new methods of constructive, collaborative and technology-centric online learning environments to emulate classroom-based courses.

In the light of these gaps and the intensification of COVID-19-driven online teaching in tertiary education, this paper discusses the approaches adopted by the Urban Planning and Design Programs at the University of Technology Sydney (UTS) in delivering online interactive masters programs. The use of innovative technology as an opportunity to generate genuine and meaningful learning experiences for the new generations of urban planners and designers is discussed. We also explain the effectiveness of teaching methods that guarantee hands-on teaching focused on practical skills graduates need in the workplace. The paper is based on an evaluation of the chosen methods by analysing the university's official Student Feedback Survey and unsolicited communications with students. Also, feedback from the COVID 19-driven remote response of our on-campus (face-to-face) programs informed our online programs and this paper.

Examples discussed in the paper include using the platform called Canvas, which acts as a control centre where the course content and critical information are located. Methods such as site visits through 360 videos, podcasts, 5-10-min lecture videos, reading materials and text written by lecturers comprise the subjects' content. Live sessions take place throughout the subjects to engage with students regarding the content, provide feedback and foment student interaction and small-group discussion. Studio-like sessions in urban design and planning subjects allow for live peer and lecture feedback, both fundamental in the design process. Additionally, asynchronous feedback is facilitated through other online platforms like Miro.

The online Master of Urban Planning at UTS is the third of its kind in Australia, and the Master of Urban Design is the first, leading the path for other hands-on and studio-based disciplines. This paper contributes new knowledge on how

technology proves to be an effective approach to engaging with students and creating meaningful learning experiences that are shaping a new generation of urban planners and designers in Australia.

Collaborative workshop: Invigorating virtual international urban design/ urban planning during a covid-19 pandemic

Hwajin Lim (Tokyo City University, Faculty of Urban Life Studies), Fumihiko Okiura (Tokyo City University, Faculty of Urban Life Studies), Kei Saito (Tokyo City University, Faculty of Urban Life Studies), Yoke Lai Lee (Universiti Teknologi Malaysia (UTM)) and Anh Trần Mai (University of Architecture of Ho Chi Minh city).

Abstract

The international Collaboration program is an advocacy student-centered learning tool in adaptation to urban planning education. Hence, this paper describes an urban planning international workshop had conducted with partner universities from Japan, Vietnam and Malaysia over the last two/three years. The collaborative workshop aim is to exchange international learning experiences in pervasive urban planning education. The theme of the international workshop was an urban planning-related theme, taking into the current issue of the COVID-19 pandemic and the impact of post-pandemic, which had caused the decline of urban issues in three case study countries. In the first year, UDX was incorporated as "Strategies for Integrated urban development with TOD in the New Normal (COVID-19) using UDX and new technologies for the citizens. Subsequently, the adopted "Urban Design with/after COVID-19 Pandemic" was chosen as the workshop theme for the second workshop, which further emphasized urban design. In which mixed working groups were formed to organize, discuss and synthesize group proposals. Throughout the workshop session, online input lecture, brainstorming and facilitation session had formulated findings. Seemingly, the impacts of the workshop imbue the benefits of integrating multidisciplinary learning, problem solving exercises, and exchange ideas without physical field work. In short, this paper provides a potential collaborative workshop via online distance learning (ODL) to substitute innovative pedagogy in urban planning education.

Educating Planners and urban practitioners for urban uncertainty: International learning

Gilbert Siame (Norwegian University of Science and Technology), Laura Nkula-Wenz (African Centre for Cities (ACC), University of Cape Town), Priscila Izar (Ardhi University, and Centre for Urbanism and Built Environment Studies, University of the Witwatersrand), Elinorata Mbuya (Institute of Human Settlements Studies, Ardhi University), Rolee Aranya (Norwegian University of Science and Technology) and Peter Andreas Gotsch (Norwegian University of Science and Technology).

Abstract

Round Table Forum

The urban space is undergoing rapid change and is increasingly vulnerable to major urban disruptions. The drivers for these changes and disruptions are highly complex and interlinked. They include global pandemics, climate change, changing urban governance and politics, growing urban informality, among others. Urban planning and practice have over the years been charged with the task of managing change and facilitating development in the build environment. However, urban change drivers and processes are increasingly unpredictable, making it difficult for urban interventions to drive predictable change and development process. To remain relevant, planning education and urban studies need to empower current and future planners and urban practitioners with skills and knowledge to address complex urban issues in rapidly changing social, cultural, political and environmental contexts. This session will bring together planning education and urban studies innovators from the global North and South in a round table forum to present and discuss their innovations and pathways for better trained and well equipped urban managers and thinkers. The forum presenters and discussants have been drawn from planning schools and urban studies programmes in the global North and South to critically reflect on curricular content, pedagogy and impact pathways of their programmes. The following programmes will be used as case studies to enable participants critically reflect on existing and potential innovations in their programmes.

1. Master of Urban Ecological Planning (UEP) Programme at the Norwegian University of Science and Technology, Norway
2. Master of Philosophy (MPhil) in Southern Urbanism at the African Center for Cities, University of Cape Town, South Africa
3. Master of Science in Spatial Planning at the University of Zambia, Zambia
4. Uncertainty in housing and urban development policies in Southern African and Latin American cities, Dar es Salaam City Laboratory- Institute of Human Settlements Studies (IHSS), Ardhi University in Dar es Salaam, Tanzania

Format: 1. Each participant will provide a case-based reflection for 10 minutes. 2. First round of questions: The facilitator will ask each presenter a question based on the presentation 3. Second round of questions: Each participant will be given



an opportunity to ask another participant a question or to reflect on each other's presentation 4. Third round of questions: Audience will ask questions to the presenters 5. Final reflection: A discussant will use last 10 minutes to present key points from the round able and outline the next steps on this work.



The Success and the impending of the middle-middle class families on owning their first home in Greater Jakarta, Indonesia

Temí Indriati Miranda ((Indonesia) National Research and Innovation Agency), Sonia Roitman (University of Queensland) and Neil Sipe (University of Queensland).

Abstract

Urban middle-middle class families in Greater Jakarta deal with problems in regards to housing as well as access to services and infrastructure. One of the problems is the difficulty in becoming a homeowner for the first time due to the high price of properties. This is a problem that is not only faced by Jakarta's residents, but also most urban middle-middle class families who live in big cities in Indonesia. This issue is significant and has been widely discussed by the national media over the last five years. Since this group has not been able to gain access to either the subsidized housing from the public sector nor the affordable housing developed by the private sector. As a result, the middle-middle class families need to come up with strategies to overcome the obstacles and be homeowners. This study is an exploratory, an explanatory, and a comparative study, using a qualitative research methodology. In depth interviews were the tool for the collection of primary data. The research successfully interviewed 35 middle-middle class families living in Greater Jakarta as participants. Families were divided in two groups: homeowners (MH group: 21 families) and families who do not own a house yet but were in the process of becoming homeowners (MNH group:14 families). Participants were selected through the snowballing and purposive sampling. Some middle-middle class families came up with strategies in order to own a house since they had to deal with trades-off concerning their preferences as well as deal with obstacles. In addition, all of the interviewees dealt with obstacles to own a house. Some families still could not own a house due to these hurdles. This study aims to compare both groups (homeowners and not yet homeowners) to examine the reasons why even though both groups belong to the same socio-economic group with similar demographic backgrounds, they had different outcomes in regard to homeownership. This research found that aside from income, the stability of a job also played an important role in becoming homeowners. Social capital (extended families, networking) that delivered sold information also helped the middle-middle class families decide to be homeowners.

Factors of gender difference in the spatial distribution of single youth households -Focusing on the types of local labor markets-

Kyuwon Jo (Seoul National University) and Hyunjoo Jung (Seoul National University).

Abstract

The proportion of single-person households in Korea is expected to reach about 30% in 2018 and close to 40% in 2047. Single-person households are no longer special households, but have become a universal form that constitutes our society, so it is necessary to understand their distribution characteristics and establish customized policies. Looking at the national distribution of single-person households, it can be seen that the regions that are intensively distributed by gender and within the same gender are different by age. Excluding the metropolitan area, female single-person households have a negative relationship between those in their 20s and 30s and those in their 60s and older. However, since the number of single male households in their 70s or older is absolutely small, the proportion of elderly people living in their 20s and 30s nationwide is low, and not only in the metropolitan area but also nationwide. In other words, areas with a high proportion of single young male households living are spread across the country, while areas with a high proportion of single young female households are relatively small. In this study, we will focus on single youth households to identify their distribution characteristics and examine the factors affecting this characteristic. Considering that the main cause of the increase in single youth households is the migration to cities where education and employment opportunities are concentrated, it can be inferred that the distribution of single youth households is related to jobs. Therefore, in order for single young female households to live in areas with narrower labor market ranges, such as non-metropolitan metropolitan areas, it was hypothesized that whether they could work in professional groups in the area would have an effect. It is expected that employment opportunities limited to women rather than men will eventually limit stable jobs to professional jobs for women and show that they are creating gender differences in the distribution of single-person youth households.

Thermal Condition of Tropic Single House Design, Study Case Bogor, Indonesia

Rizky Uno Ananda (University of the Ryukyus), Ryo Nakamatsu (University of the Ryukyus) and Jun-Ichiro Tsutsumi (University of the Ryukyus).

Abstract

Indonesia is a tropical country with 22oC to 33oC average daily temperature. This hot humid climate prompted architects to consider the building's cooling system. This study aims to investigate the thermal condition of single house design at Bogor, Indonesia. The measurement was air temperature, surface wall temperature, humidity, and solar radiation. The data were taken from 2 houses between July – August 2019, the peak of summer. Study Case 1 as a natural ventilated house design and Case 2 as an air-conditioned house design. The result revealed Case 1 has a suitable design as a natural ventilated house. The air has good circulations, the inside temperature and outside temperature has about 2oC different. Case 2 design is not suitable for several rooms. As it is designed to be air-conditioned, only the bedroom has it. The rest of the room was insulated by the wall with less air circulation, the temperature difference between outside and inside was about 1oC. Indonesian mostly think the hottest side is east and west because we live on the equator. This study shows during the dry season the north wall is the most affected by solar radiation. Therefore, the north side can not be pushed aside when we want to cool the house. The two layers of the east wall on Case 1 could be one alternative to reduce heat gain by wall convection, in this study it has up to 3oC lower temperature on the second wall during the peak time.

Dualism in Land Management and Its Impact to Equal Access to Land: The Case of Yogyakarta Sultanate Land, Yogyakarta, Indonesia

Widyasari Her Nugrahandika (Universitas Gadjah Mada), Bakti Setiawan (Universitas Gadjah Mada) and Retno Widodo Dwi Pramono (Universitas Gadjah Mada).

Abstract

Land is an essential component in the production of housing. The increasing price due to capitalization of land in urban area creates problems in providing housing for the poor.

As a province with a special status due to its historical role and the existence of the Sultanate and its institutions which are still functioning today, there is a dualism in land management in the Special Region of Yogyakarta. This dualism occurs where the management of land in this area involves both the local government and the Sultanate. As a special province, with the existence of the Sultanate and its land assets, of course, it is hoped that in this province, access to land, especially for the social interests and welfare of its citizens, is guaranteed. The slogan 'throne for the people' also underlies that the Kraton and the king must be oriented to ensure access to land for citizens in need, especially for housing as one of the basic human needs. Just because the king as the ruler of the Kraton is also the Governor who leads the Special Region of Yogyakarta. Furthermore, Perdas No. 2 of 2017 article 3 emphasizes that the management of the Kraton lands in this area must be primarily aimed at cultural, social, and community welfare interests. Despite these normative assumptions, there are indications that access to affordable land in this area is not always guaranteed. Even more so when looking at the fact that Daerah Istimewa Yogyakarta as a city of culture, education, and tourism attracts a lot of attention from outsiders to live. This causes land prices in urban Yogyakarta to rise sharply and make it increasingly difficult for people to access land for living.


With a dualism theory perspective, this paper argues that dualism in land management in DIY has not fully guaranteed fair access to land for all. With a qualitative descriptive approach, this paper shows the facts that the dualism system in land management in this area is still not optimal. This causes cases of illegal land grabbing to continue and has led to the growth of illegal housing estates that have questioned the security of their settlements. Meanwhile, the provision of public housing by the government is also not optimal and takes advantage of the opportunities that are open from dualism in land management in this area.

Public participation in urban development projects: the role of 'socialisation'

Sonia Roitman (The University of Queensland) and Rusli Cahyadi (Research Center for Population, National Research and Innovation Agency (BRIN)).

Abstract

Since Reformasi, public participation has been encouraged in urban planning processes in Indonesia. The aim is to make the process more democratic and transparent, and provide all residents with the opportunity to raising their voices. In bottom-up development those who are going to be affected by new development projects should be able to make



collective decisions (Kenny, 2013). ‘Socialisation’ (Human Rights Watch, 2002; Gibbings, 2017; Dhiksawan et al, 2018) is one instrument that aims to facilitate the participation of communities when new large scale projects are built. It is part of the Environmental Impact Assessment (AMDAL) (Kandi, 2017). Local residents can discuss the benefits of the new projects and negotiate a process to minimise the negative impacts of the new development. This instrument is usually implemented when large scale gated communities are built. This type of housing has dominated the private sector housing supply in recent decades in Indonesian cities (Leisch, 2002; Winarso, Hudalah and Firman, 2015; Roitman and Recio, 2020). We analyse the implementation of ‘socialisation’ in relation to the construction of new gated communities in Jakarta and Yogyakarta. We examine how socialisation is conducted, what the challenges and opportunities are when implementing this process and to what extent this instrument can foster more democratic and transparent processes of decision-making in urban planning projects. We use primary data from 70 in-depth interviews conducted in these two cities. We conclude that the current ‘socialisation’ process faces several implementation process that jeopardises its original purpose of fostering public participation.

Homelessness and Housing Supply

Casey Dawkins (University of Maryland at College Park).

Abstract

The number of US residents experiencing homelessness has risen for the third year in a row, following a six-year decline, at the same time that rental housing prices have risen faster than inflation. Most empirical research into the causes of US homelessness ignores the influence of intercity differences in local housing market conditions. This paper fills this research void, paying particular attention to the linkages between US homelessness rates and metropolitan housing supply constraints. Economic theory suggests that geographic or policy-induced constraints on the supply of land available for housing should increase homelessness by inflating housing prices, particularly in cities experiencing a rise in housing demand. These constraints are not imposed in a vacuum, however. Local political preferences for land use policies that restrict housing supply may be correlated with other types of local policies, such as nuisance laws or public spending on homeless shelter assistance, that influence the rate of homelessness without directly altering housing prices. Moreover, homeless persons valuing proximity to mountains, rivers, ocean views, and other natural amenities may migrate to high-amenity areas even if housing options are limited in those areas. This paper explores these linkages. I pair recently available time-series, cross-sectional data from the US Department of Housing and Urban Development’s Continuum of Care point-in-time counts of US homelessness with data from the US Census Bureau and other sources to explore the direct and indirect impacts of housing supply elasticity, geographic constraints on developable land, restrictive land use regulations, and urban growth boundaries on adult homelessness rates, controlling for a variety of local factors that have been shown to be associated with homelessness. In several random effects regression models, I find that a one standard deviation increase in the severity of local housing supply constraints increases the adult homelessness rate by between 10 to 32 percent, depending on the type of constraint. These estimated effects are uniformly smaller in magnitude than those which assume that constraints on housing supply influence homelessness indirectly through increased rents. These findings suggest that local factors unrelated to housing price inflation offset the housing price-induced increase in local homelessness due to housing supply constraints. The pattern of results suggests that these local factors have more to do with local policy preferences than with the location choices of homeless persons.

Large Scale Land Development of Landed Housing and Apartement Based on Developer Networking in Jabodetabek

Ruhkhis Muhtadin (Urban Planning and Design Research Group ITB) and Haryo Winarso (Urban Planning and Design Research Group ITB).

Abstract

The immense development of residential land in Jabodetabek and unreasonable property prices indicate an uncompetitive housing market. The latest precedent argues that the phenomenon of oligopolistic market condition, either in property or land market, is bridled by a minority of developers. This fact is reinforced by the emergence of a network formed among the development firms. The approach in providing housing has been much debated – particularly on the platform for delivering housing - private market-led or more public provision (see for instance: Kievani and Werna, 2001; Huchzermeyer and Misselwitz 2016). This research is expected to provide an overview of the land development process and practice in actor-based housing network in the post-reform period. Practically, it will use as a consideration for stakeholders in evaluating the climate of property business competition and its hookup to urban planning domain. In order to identify project distribution and land tenure, we incorporated institutional land development study approach, market structure and business competition theory. Subsequently, the analysis of social networks among large-scale housing developers will

be explained. This is a descriptively study, utilizing both quantitative and qualitative approach, and analyzed using content, spatial and social network analysis. Most of the data obtained is secondary, however, we also conducted interviews with several developer actors. This study revealed out that 123 landed housing and 45 apartments in large-scale projects were developed by 86 and 38 different developers respectively. The development of residential land was found to lead into a more competitive climate with monopolistic competitive market type. Four investigations : multiple positions; stock ownership; consortium; and kinship, were selected to divulge a large-scale housing developer networks that are formed either directly or indirectly. The network created a semi-oligopolistic type of land domination. PT Intiland Development and PT Jababeka became the dominant actors through landed housing developer network, meanwhile the apartment developer network is dominated by PT Ciputra Property. This study revealed that residential developers who owns a holding company have a tendency to network with other developers. However, the emergence of this network phenomenon is indicated by poor regulations and the weak role of KPPU. Moreover, policies regarding spatial planning and business competition have not been integrated yet.

A Study on the Implementation of Government's Housing Policy and its Influence on Market-Based Middle-Income Housing Provision in Developing Countries: The Case Study of Phnom Penh, Cambodia

Sothea Roth Phou (Toyo University) and Norihisa Shima (Toyo University).

Abstract


To address the demand for housing during urbanization, the government generally has established incentive programs for low-income families aiming to ensure access to adequate housing and the private sectors have developed private projects targeting higher-income families while the middle-class families tend to be left behind. In the case study of Phnom Penh, Cambodia, the housing policy has been initiated along with several incentive programs intended to tackle low- and middle-income families' housing issues. However, some incentive programs have failed to reach the targeted families. The objectives of this paper are 1) to clarify the existing incentive programs and implementation processes of government housing policy and 2) to evaluate the implementation effectiveness of housing policy. Based on findings, this paper will discuss the influence of housing policy on the market-based middle-income provision. The methodology is the qualitative research method by reviewing the relevant housing policy documents and interviewing with the government official who is responsible for housing policy implementation. According to the policy documents review, it is clear that the implementation of the housing policy is separated into 2 phases. At present, only the first phase of housing policy is implemented which the government's incentive programs allow developers to request incentives on public investment, taxation, and regulation while the second phase will be focused on housing construction under the public-private partnership and purchasing loan. From the interview results, it is found that the developers of the case studies have partly requested incentive programs provided by the government. Furthermore, the price of houses in some projects is higher than the price set in the policy which is not affordable for low- and middle-income families. In contrast, the affordable one is purchased by the majority of middle-income families, not low-income families. It is assumed that the implementation of customers' purchasing criteria is a challenge for the government and developers to deliver the houses to the right targets. It is believed that the weakness of the housing policy implementation might influence market-based middle-income housing provision including 1) Market-based developers hardly provide affordable prices to the middle-income families because of incentive inequality, 2) Middle-class families are most likely to purchase project development under housing policy which is cheaper than the market-based housings, 3) The market-based developers will attempt to build low-quality houses to lower the prices for the demand of the middle-income families.

O Parque": analysis of the incorporation of nature to property appreciation in high-income real estate projects aligned with sustainable narratives.

Luisa Akemi Bernardino Kanzato (Federal University of ABC) and Luciana Nicolau Ferrara (Federal University of ABC).

Abstract

The production of urban space in the municipality of São Paulo, a city located in Brazil, is articulated to the functioning of the real estate dynamics, which has been presenting in its market high-income projects articulated to a sustainable narrative by incorporating natural landscapes in recent residential projects. Such construction proposals lead to significant urban reorganizations in terms of real estate valuation, spoliation and spatial production, in addition to raising a critical debate about the understanding that is built about sustainability and the reproduction of nature. Concomitantly with this process, there is also a growing concern for social and environmental responsibility, reflected in the environmental, social,



and governance agendas that permeate the financial market and participate in the green financing of real estate products. Based on the analysis of real estate productions in the dynamics of the urban order, and the incorporation of financialization processes in the spatial production of the city, this research evaluates from a critical perspective the incorporation of nature in high-income projects, associated with sustainable narratives and finance oriented by environmental agendas, with a case study of the project "O Parque", located in the municipality of São Paulo. A documentary research is conducted about the real estate production in Brazilian urban spaces, the process of incorporation and reproduction of nature, and a literature review on the topics of sustainable finance, in particular the ESG agenda and how it is incorporated into the real estate market. An analysis of the mentioned project is also made using the information available on the website of the company responsible for the construction project. Despite the strong emphasis on sustainability, and the growing socio-environmental concerns, the preliminary results show that the real estate projects focus mostly on solutions restricted to the technical aspect, such as the choice of construction materials, use of technologies that reduce consumption of resources like water and energy, creation of common green areas, among others. Furthermore, in terms of the ESG agenda, the Brazilian real estate market has shown little adherence to the practices, visible, for example, by the low representativeness of the sector in the composition of the S&P Brazil ESG index, created by B3, the country's stock exchange, to assess the performance of securities complying with sustainable criteria.

The involvement of state-led enterprise and the reshuffling of 'government-villager' power relationship amidst a demolition and relocation project: The case of X village in Guiyang, China

Liangwei Li (Department of Architecture, Shanghai Academy of Fine Arts, Shanghai University), Jinwei Hao (Department of Architecture, Shanghai Academy of Fine Arts, Shanghai University) and Jin Zhu (Faculty of Architecture, The University of Hong Kong).

Abstract

Villagers are normally perceived as the somewhat weak party when confronting the government-led land acquisition and housing demolition, as seen in the existing literature. State-led enterprises are often delegated by the government to deal with the tough task. Nevertheless, our case study of a village in Guiyang, China, found the opposite situation where the traditional "weak villagers and strong government" power relationship has been reshuffled as the state-led enterprise became rather submissive in the process of land acquisition. Drawing upon in-depth interviews with multiple stakeholders, our research aims to explore the internal mechanism of the reshuffling of "weak villagers and strong government" power relationship through the lens of state retreat and consolidated rights consciousness. The situation can be explained as follows. Firstly, the embarrassing situation of the state-led enterprise is largely caused by the incompatibility between governments of different levels. While the state-owned enterprise primarily stood for the interests for the provincial government, local town and township governments did not cooperate with the land acquisition initiated by the state-owned enterprise and even partially retreated from the process. Secondly, due to local patriarchal relations, there existed a strong social network between local villagers. Meanwhile, government cadres of lower levels also connected closely with local villagers. Thanks to the unique patriarchal relations in the mountainous area of Guiyang, the rights consciousness of villagers had been enhanced, and meanwhile, the local government cadres even supported the local villagers' bargaining behaviours. Therefore, the enterprise, as the agency of higher-level governments, found it hard to manoeuvre the land acquisition process. Thirdly, in the context of local state retreat and the growing rights consciousness of villagers, state-owned enterprises were not backed with local government support and turned out to be submissive in the direct negotiation process with local villagers due to information asymmetry. This increased the transaction cost of the land acquisition process substantially. In addition to labour and time costs of the enterprises, the amount of compensation was far beyond the reasonable amount as seen in other similar cases. This study re-examines the power relationship between parties involved in the land acquisition process. When the new form of enterprises are involved in the demolition and relocation process, its role and power should be carefully examined in different contexts, especially the intergovernmental relations and local social capital accumulation.

Alternative Futures For Traditional Zaria City Nigeria

Maimuna Saleh-Bala (Ahmadu Bello University).

Abstract

Zaria also known as Zazzau is a seat of tradition and culture established in 1536. The ancient walled city of Zazzau was one of the original seven Hausa City-states in Nigeria. It has a population of 955,522 with 95% living in approximately 18 km² of the walled city. The historic landscape has six main features, one of which is the wards (Anguwanni). The greatest

challenge over the decades lies in the increasing built up areas in the wards. The present land configuration affects the overall quality of life, livelihood and environment. The landscape configuration in Zaria City is dictated by the cultural practices of communal living and support. The initial small clusters of houses have grown organically into big neighbourhoods as a result of increase in population. The once spatial structure of three administrative Wards (Anguwanni) have grown into larger ones hence losing individual physical boundaries as well as decrease in the green spaces. The absence of development control which is typical of traditional settlement has made Zaria city to acquire the characteristics of an urban sprawl. Thus, losing agricultural land, spaces for cultural features and activities as well as vegetation to housing. The existing settlement is adversely affected by climate change, low standards in liveability and on sustainability of the community and these need to be addressed. The research set out to identify challenges of the present landscape configuration from the community and through transect walks, and to propose alternative futures collaboratively and thereafter appraise how the alternative futures address the sustainable development goals (UN-SDGs) for the settlement. UN-SDG is a universal call to transform the world and could provide an approach to evaluating alternative futures. The potential contributions of the research are in the planning interventions as well as in how innovations through projects and policies are identified to address SDGs in the settlement. The research uses eight systems from the International Geodesign Collaborations (IGC) to build three scenarios through negotiations depicting non adopters (2050), late adopters (2030) and early adopters who begin interventions in 2020. The findings suggest that in the early adopters' scenario many of the SDGs were significantly addressed hence improving quality of life and environment. Whereas in the non-adopter's scenario where the thinking is of business as usual, the SDGs were not adequately addressed impacting negatively on the environment and the living conditions.

Resuscitating design for livability: affordable housing lessons from Surabaya

Ashok Das (University of Hawai'i at Mānoa).

Abstract

Brisk urbanization and inadequate planning are exacerbating inequality and vulnerability in Asian cities, and being deprived of decent shelter and adequate services marginalizes millions. For over a half-century now, John F.C. Turner's call for user control over housing and Sherry Arnstein's critique of participation have helped infuse, to varying degrees, elements of self-help, incremental development, and participation by poor citizens and other non-state advocates in shelter policies. Nonetheless, affordable and culturally appropriate housing for the poor in developing countries continues to be largely elusive and, in fact, is disappearing fast. Surabaya, Indonesia, was a global pioneer of participatory and incremental pro-poor shelter efforts, such as the highly recommended intervention of in situ participatory slum upgrading, which influenced shelter policy nationwide and internationally. For ameliorating the housing crisis, also recommended alongside is more mass housing, and more localized policymaking, planning, and housing initiatives from decentralization. This paper argues that, instead, decentralization challenges and neoliberal shifts have made housing volume the overriding priority in the Global South, whereas quality affordable housing that lets lives and livelihoods flourish remains elusive. By discussing Surabaya's shelter approaches of the last fifty years, it calls for resuscitating a vital ingredient of good housing—design. Shelter policy has drifted afar from Turner's vision of housing as a verb—whereby good design enhances housing's socio-cultural relevance. Despite decentralization, local potential, and precedence, the paper finds that the designing of rusunawa (vertical rental housing) in Surabaya today is neither local nor participatory, thereby diminishing their spatial, sociocultural, and economic relevance for the occupants. For Surabaya and other cities with similar challenges and potentials, it recommends rekindling participatory design involving multiple stakeholders for catalyzing a local ecosystem of designers and facilitators toward enhancing the livability of affordable housing.


Effects of Land and Property Transaction Tax Reduction on House Sales Conversion

Tengku Munawar Chalil (SAPPK ITB), I Gusti Ayu Andani (SAPPK ITB) and Diaz Ekaputra (SAPPK ITB).

Abstract

Introduction: As a response to sluggish demand in the property market post-Chinese stock market bubble burst at the end of 2015, the government of Indonesia took the initiative via increasing their tax expenditures. The government decided to discount the land and property transaction tax (PPH Final atas pengalihan bumi dan bangunan) by 50% in the middle of 2016. The policy's purpose is to stimulate the property market and increase the demand for property. We question the policy's effectivity by investigating the causal impact of tax reduction on property conversion.

Novelty: Earlier relevant studies on this topic observe the causal effect of tax reduction on property sales volume and price, but none of them investigates the policy impacts on property conversion. We utilize a randomized selected one-million ads from a famous Indonesian online property marketplace during the implementation of tax expenditures and employ differences-in-differences methodology to answer the causal inference of the effects of land and property transaction tax reduction on house sales conversion.



Research methods: We withdrawn a million of property ads from 1st week of 2016 to 56th week of 2016 and estimate the house conversion rates using Random Forest algorithm, a machine learning approach, then we estimate the impact of the implementation of land and property transaction tax reduction on property sales conversion by utilizing Differences-in-Differences methodology. We seek the differences of conversion rates before and after the implementation of tax reduction (in the week 36th of 2016) and differences of special discount rates for eligible property.

Findings/Results: Random Forest has an accuracy of 96% to predict house conversion rates, then we estimate the effect of transaction tax reduction policy on house sales conversion rate. We find that transaction tax reduction increases 4.83 percent probability of house sales conversion. Furthermore, the effects are larger about 0.62 percent for the property that receive higher discount rates. However, we do not find the impact of transaction tax reduction for land sales and apartment sales. Conclusion and Policy Implication: Our results should contribute to evaluate the effectiveness of 2016 tax expenditures policy and tax amnesty packages in general. Our result suggests that the reduction of land and property transaction tax had increased the property market demand, which is expected from the policy goal; however, the actual impacts are not as large as expected.

Recent Issues Regarding Narrow Streets in Urban Development -A Case Study of the Kawaragi District in Nishinomiya City, Hyogo Prefecture-

Reina Kobayashi (Osaka Institute of Technology) and Yukikazu Yamaguchi (Osaka Institute of Technology).

Abstract

Although there is a close relationship between the formation process of urban areas and the formation process of narrow streets, the streets allowed by Article 42-2 in the Building Standards Law remain a problem. The streets allowed by Article 42-2 in the Building Standards Law is a road with a width of less than 4 m, and according to the law, it must be widened as soon as possible. In addition, many of the streets allowed by Article 42-1-5 in the Building Standards Law are roads with a width of less than 5 m, and in this case, there are disadvantages such as difficulties for emergency vehicles to pass. The purpose of this study is to understand the recent problems regarding narrow streets and to collect information to consider measures to deal with the problem from the perspective of improving the living environment. This study was conducted in the Kawaragi district of Nishinomiya City, Hyogo Prefecture, which is a residential area where the demand for housing is high. We analyzed the changes in the formation of narrow streets between 1990 and 2020. As a result, it was found that unlike the districts where land readjustment projects were implemented before the urbanization process, the districts where they were not implemented had an increase in the number of streets allowed by Article 42-1-5 in the Building Standard Law due to mini-development ahead of the section 2 streets.

Housing career in Urban Socio-Economy Dynamics

Tetty Harahap (Institut Teknologi Bandung; Institut Teknologi Sumatera), Haryo Winarso (Institut Teknologi Bandung) and Fikri Zul Fahmi (Institut Teknologi Bandung).

Abstract

Housing career is a part of the discussion about urban housing. In the broad discussion of housing in terms of demand and supply, housing can also be seen from the social and economic aspects of the city residents. A housing career shows how changes in a person's life stages change his needs and his decision to move. Residential mobility is the movement of a person to move within the intra-urban in order to adjust to the needs in the phase of life that are being lived either for school, work, or having a household and even divorce. Residential mobility does not cause long distances but tends to be close, but really requires anticipation in meeting the needs of new housing. This paper is a review of previous studies on housing careers in the context of urban planning. The location of the case study literature is very diverse but focused on America, Europe, and Australia. The results of this literature review are studies on housing careers in urban planning, the urgency of housing career studies, and opportunities for further studies, especially in the Indonesian context.

Quality Evaluation, Classification and Causes of Human Settlements in Large Industrial Towns: Case Studies on the Survey of 20 Towns in the Yangtze River Delta and the Pearl River Delta

Xueqi Zhao (Tongji University) and Li Zhang (Tongji University).

Abstract

A town is a special unit in the process of urbanization in China, with a population and economic scale between cities and villages. However, in the process of rapid urbanization in China, some small towns have rapidly grown into large towns with a population of more than 100,000. This is because the dual urban-rural land system with Chinese characteristics has a distinct effect on these large towns, and has had a huge impact on the evolution of their spatial structure and landscape features. These large towns are mainly distributed in economically developed regions such as the Yangtze River Delta and the Pearl River Delta in China. They are dominated by labor-intensive industries and have a high degree of production specialization. However, the low-end industry and the urban-rural dual system have brought about problems of human settlements such as fragmented land, mixed urban-rural landscape, and environmental pollution. In the context of new globalization and high-quality development, the low quality of human settlements restricts the transformation and sustainable development of these large industrial towns. This paper takes 20 large industrial towns in the Yangtze River Delta and the Pearl River Delta as the research objects, and constructs an evaluation index system for the quality of human settlements in large industrial towns, which consists of five subsystems: eco-environment, Industrial space, social environment, living conditions and supporting facilities. According to the evaluation results, the general characteristics and differences of human settlements in industrial towns are summarized. 1) The results show that large industrial towns generally have a high level of quality in supporting facilities system, and have great differences in eco-environment and social environment systems. 2) Using the method of systematic clustering, according to the quality evaluation results, large industrial towns can be divided into three types, namely, the industry-city mixed towns, the industry-city separated towns and the industry-city integrated towns. In the last part of this paper, causes of the differences in the types of human settlements in large industrial towns are discussed, starting from the actions and effects of the three main bodies of human settlements construction, government, society and rural communities, and targeted improvement strategies for human settlements are put forward.

Analysis of changes in the Korean residential landscape using VR and 360-degree cameras - after the introduction of the Special Architectural District system

Hyojeong Kim (Seoul National University) and Youngsang Kwon (Seoul National University).

Abstract

In October 2007, the Ministry of Land, Infrastructure and Transport of the Republic of Korea recognized the need to change the legal system for creative design creation. It promulgated the special Architectural District system through the revision of the Building Act. Unlike the existing related laws and systems that control design through regulation, the Special Architectural District excludes and relaxes the same regulations so that the creative ideas of designers can be fully displayed. Since the introduction of the system, most of the Special Architectural District have been designated mainly for apartment complexes. In particular, experts have criticized that Korean apartments produce a uniform landscape due to the same legal system, so the effectiveness of the Special Architectural District system is receiving more attention. In this background, the purpose of this study is to reveal the effect of the apartment plan in the Special Architectural District that excludes or eases regulations on the creation of urban landscape through landscape perception analysis. The main hypothesis of this study is that the change in the number of floors of an apartment building through special application only affects landscape satisfaction under a specific size. In addition, people are more satisfied with the landscape design elements such as balcony design created by regulation rather than changing the number of floors. To do this, we first classified the apartments in the Special Architectural District by type through cluster analysis. Second, we photographed a representative apartment complex with a 360-degree camera and conducted a survey to experience and answer the captured photos through HMD (Head Mounted Displays). Third, we analyzed the correlation between apartment landscape design elements and landscape perception through regression analysis based on the survey contents. The results mean that the application and exclusion of regulations must work together to improve the design of apartment complexes in terms of the urban landscape. It can be said to be meaningful as a study conducted in a country changing from quantitative housing development to qualitative housing development as a regulatory and design theory.

Housing Development in Transportation Infrastructure Network Area

Meyriana Kesuma (Universitas Tarumanagara) and Regina Suryadjaja (Universitas Tarumanagara).

Abstract

Indonesia is currently still experiencing a housing backlog, where the national housing problem is very complicated because it relates to several things, one of which is land supply. Land is one of the main variables in housing development, where the land quantity is increasingly limited, especially in urban areas. The limited land supply, especially land for affordable housing, can actually be overcome by developing vertical housing. Another strategy is the development of affordable housing on land along the transportation infrastructure development area which is usually built by State-Owned Enterprises (BUMN). The transportation infrastructure development is part of the Transit Oriented Development (TOD) which has the potential to increase the supply of affordable housing. But in reality, residential developments carried out along mass transportation routes are mostly commercial housing developments. Indeed, there is no system that regulates housing along mass transportation routes that were built with the goal of developing TOD and there is no policy that properly regulates the development of affordable housing, especially on BUMN lands. This paper aims to identify developments on mass transportation routes such as MRT, LRT and also KRL which are predicted to be TOD developments and their offerings for increasing the supply of affordable supplies. With qualitative and spatial methods, this paper is expected to be able to provide an overview of how the development that occurs in mass transportation routes that should be able to increase the supply of affordable housing but in practice has not yet been implemented.

Investigating the relationship between capital and spatial segregation: The bias of opportunities to choose better quality of life

Hyungjoon An (Seoul National University) and Youngsung Lee (Seoul National University).

Abstract


This study aims to analyze how the dynamics of inequality that Piketty had articulated intensify the spatial segregation. Piketty asserts that accumulated wealth grows faster than wages and productions (Piketty, 2014). This work analyzes spatial segregation in perspective of the influence of capital, which is measured by the agglomeration of education, medical, and cultural services. The reciprocal influence between capital and the self-reinforcing of aforementioned services is analyzed using SOM (Self-Organizing Map) and K-Means, an unsupervised machine learning method. Two types of clusters are derived. One is the tax cluster that refers to the relative ratio between gift and estate tax and earned income tax. The other is an industrial cluster of the aforementioned services. The analysis units consist of Seoul's 25 administrative districts and statistics provided by the Korean government are used. Results show that spatial segregation can be inferred through the relationship between gift and estate tax and agglomeration of aforementioned services. Also, the variance to distinguish each cluster has increased. This means that the inequality of opportunities to choose a better life is getting biased towards wealthy neighborhoods. This study has a limitation of not being able to use long-term data as Piketty used. Further research is needed to clarify the long-term temporal relationship between capital and spatial segregation.

An analysis on employee's housing choice using structural equation model : A case study of two first-tier cities in China

Xuan Cui (Tsinghua University) and Chen Zhiyu (Tsinghua University).

Abstract

Employees' housing choice has always been an important issue for the regional economy and housing policy making. Recently in China, with the establishment and improvement of the housing system of 'multi sources supply, multi channels support, and both purchase and renting encourage', many new housing providers and residential products have emerged, and the housing rental market in the first-tier cities have been vigorously developed. Employees now have some new choices. However, the new characteristics and changed influencing factors of the employees' housing choices still remains to be studied and revealed. This study proposes a Structural Equation Model (SEM) based on the life course theory. Data were gathered from a survey issued in Beijing and Shanghai in 2021, 2664 surveys were returned with proper answers. We extracted five latent criteria which affect employees' housing choice: Housing space-related, Housing asset-related, Life course aspect, Job aspect, and Macro-contextual aspect. The results show that, in addition to the traditional factors such as Hukou, income, education, marital status and children's age, one institutional factor - the employee's Danwei or enterprise - has returned to a position that has an important impact on the employee's housing choice. Also, through semi-structured interviews of employees and employers, we've learned how Danwei played their role in the process of employee



accessing to housing, In the final part, we conducted a preliminary discussion of recent housing policies for first-tier cities' employees.

Revisiting Economic Benefits of Walkable Environments to Surrounding Property Values: A Big Data Approach with Google Street View and Deep Learning Technique

Ayoung Woo (Hanyang University), Jaewon Han (Hanyang University), Hyung-sup Shin (Hanyang University) and Sugie Lee (Hanyang University).

Abstract

Walkable built environments primarily affect the individual quality of life. Walkable design features encouraging pedestrian walking behavior may provide multifaceted advantages, particularly regarding social, environmental, and public health benefits for residents in neighborhoods. Residents in walkable neighborhoods are significantly related to more physical activity, lower transportation costs, better public health, and higher social capital, whereas those in auto-oriented settings are associated with unhealthier physical and social conditions. As such benefits in walkable environments may be capitalized into neighboring property values, many previous studies have examined the associations between walkable environments and surrounding property values.

Despite many studies addressing the economic impacts of walkable environments, we still have a limited understanding of how walkable environments may be empirically measured in multiple disciplines. Elements of the 3Ds (i.e., density, diversity, and design) and the Street Smart Walk Score represented by walking accessibility to neighborhood amenities have often been essential components to empirically identify neighborhood walkability. However, such measures of neighborhood walkability focusing on two-dimensional indicators (i.e., macroscale environments) may not account for pedestrians' visual attention to the surrounding built environments that may affect the individual perception of walkability at the street level. Our research addresses this gap by empirically estimating specific walkable design features along the street at the eye-level (i.e., mesoscale environments) that affect surrounding property values based on the deep learning approach.

This study explored the impacts of walkable environments on single-family property values in Seoul, Korea. Based on single-family housing transaction data from 2017 to 2019, we used a hedonic price method to examine the associations between walkable environments and neighboring housing prices. This study also specified street walkability at the eye-level by employing deep learning approaches based on Google Street View (GSV) and semantic segmentation. Based on 20-meter interval points along street networks within the neighborhoods, GSV 360° panorama images for each point through the GSV metadata Application Programming Interface (API) are obtained to analyze mesoscale walkability around each property. Additionally, our analyses took account of housing submarkets to explore how spatial impacts of walkable environments differ across neighborhoods stratified by household income levels. We found that both macroscale and mesoscale walkability are significantly associated with nearby property values. Also, the impacts of walkable environments varied across neighborhoods' income heterogeneity. Our findings inform planners and policymakers on how to improve walkable environments across neighborhood heterogeneity and maximize the economic benefits of neighborhood walkability.

The Planning Tool of Inclusionary Zoning & Its Implementation in Malaysia's My Selangor Housing (RSKU) Program

Huay Ying Ong (Tsinghua University), Jian Liu (Tsinghua University) and Ahmad Nazri Muhamad Ludin (Universiti Teknologi Malaysia).

Abstract

Inclusionary zoning, as a kind of urban planning tool to increase affordable housing, has been adopted and implemented by Malaysian government since 1982, which is pioneering among Asian countries. However, there is few literatures on its evolution and effectiveness. This paper looks into Malaysia's efforts to increase affordable housing through the practice of inclusionary zoning. The objective of this paper is to explore the evolution of inclusionary zoning practice in Malaysia, particularly in My Selangor Housing (RSKU) program since 2000. The research is conducted through content analysis on past and current RSKU program for understanding the policy evolution by identifying planning issues to be resolved, significant government's initiatives and policy achievement. The paper indicates that clearer and stricter RSKU program guidelines have formed over time to increase the homeownership of low- and middle-income groups by ensuring housings at affordable price and in decent condition. The RSKU program has improved the effectiveness of inclusionary zoning in terms of housing planning and development control, as well as the process of housing provision to eligible applicants. The paper concludes that RSKU program has greatly helped to overcome affordable housing shortage problem in Selangor

state. The paper also provides justifications of the role of the private developers who have been involved actively in affordable housing provision in Selangor state through RSKU program in line with inclusionary zoning.

Housing Affordability Crisis: Property Tax as a Policy Tool

Hsuan Lo (Harvard University).

Abstract

Since the housing affordability crisis has been breaking the major cities worldwide, U.S. governments have utilized property tax limits to cap the tax payable and relieve homeowners' cost burden. California Proposition 13, for instance, is an archetypal case that restricts the maximum combined ad valorem taxes to 1% of the full cash value of such property and assessed values to 2% or the inflation rate. The initiatives have various unintended effects and consequences on local government fiscal conditions, public services, and residential mobility. However, very little academic attention was paid to housing markets even if property tax and housing value are considered negatively associated, starting from Tiebout (1956) and Oates (1969). Therefore, it is reasonable to hypothesize that property tax limits, which are widely used in the U.S., can cause price increases or negatively impact the real estate boom.

In contrast, Asian governments have raised property taxes to address housing affordability issues. The traditional mindset of "along with real estate comes wealth" urges people to own, invest in, and hoard real properties, particularly in countries that are influenced by Chinese culture. For example, 61.15% of homeowners in Taipei have more than two properties, and Taipei's vacancy rate reached 7.41% in 2019. To cope with the unrestrained property hoarding climate, Taipei enacted a "hoarding tax," progressive home tax rates punishing people who own more than an owner-occupied house, to curb excessive investment and speculative demand and try to cool off housing prices. Similarly, the effects of Taipei's hoarding tax are academically understudied.

The dissertation consists of two separate Difference-in-Difference (DID) studies for New York and Taipei's cases. Westchester in New York, which passed a constitutional limit on property tax in 2013, will be compared with Stamford in Connecticut, which has no actual tax cap in place; Taipei will be compared with other municipalities in Taiwan, which do not have hoarding tax or additional tax increments. Through this comparative study, we will gain a clearer picture of the relationship between property tax policies and housing affordability and how the divergencies in culture, history, market characteristics, and government's attitude toward property taxes shape the respective property tax policies. The conclusion can also provide a sense of whether property taxes can be practical tools in controlling housing markets.

A Study on Promotion of Cooperative Behavior by Recalling Place Memory

Ziying Li (TOHOKU University), Toshiaki Aoki (TOHOKU University) and Siyi An (TOHOKU University).

Abstract

In recent years, cooperative behavior becomes more important than before because of social changes such as population decrease and population aging. However, cooperative behavior, which requires people to sacrifice part of their self-interest, is difficult to occur naturally, because people tend to seek their own interest. In order to improve such situation, this study aims to find the way to encourage people's cooperative behaviors, focusing on recalling of place memory based on rational choice theory and the theory of place attachment. In this study, 594 residents (301 urban residents and 293 rural residents) in Japan participated in an online survey in which they were asked to recall a place memory and rate it on measures of place attachment, autobiographical memory, public service motivation, self-interest and cooperative behaviors. Participants were aged between 25 and 80 years ($m=50.42$, $SD=14.77$). 48 Percent were female. For the content of place memory, we have prepared three instructions (positive memory, neutral memory and negative memory) at the beginning of questionnaire, and randomly showed one of the three instructions to each participant. For those who couldn't recall any place memory, we resigned them to "no memory" group. So, there are four levels of place memory (positive, neutral, negative and none) and two level of residential area (urban and rural) in this study. The results of two-way ANOVA reveal that residents who recalled positive place memory show great levels of place attachment and intention of cooperative behavior than residents who recalled negative place memory and residents who cannot recall any memory. And there are significant differences between urban and rural residents in terms of cooperative behavior and willingness to settle in current place of residence. Urban residents show greater levels of willingness to settle in current place of residence and less levels of intention of cooperative behavior than rural residents. However, the interactions between place memory and residential area are not significant. Structural equation modeling was employed to confirm the fitness of the collected data for the model. It reveals that residents' sense self-interest and public service motivation impact their cooperative behaviors positively. And the emotional valence of place memory, which represent how positive this memory is, impacts sense of self-interest and public service motivation positively. Several practical implications were derived from the findings, which contributes to the policy of urban planning and overcoming population decline.

The Persistence and Morphology of Informal Settlement on E. 12th Street, Oakland, California

Gordon Douglas (San José State University).

Abstract

Building on four years of immersive research with unhoused communities in Oakland, California, this study considers the physical and social character of informal settlement there over time and in comparison to established understandings of informal settlement elsewhere. In particular, it takes as its subject a series of “encampments” and other settlement forms that have existed along a single 1.5 mile (2.4 km) stretch of Oakland’s E. 12th St. between 2017 and 2022. The area has held three major settlements during this time, with semi-persistent communities of nearly 100 people, ranging from tents and tree houses to semi-detached, terraced, and multi-story structures, established common areas and services, and officially sanctioned experiments with “tiny home” shelters, city services, and co-governance models. Through an analysis of site diagrams, ethnographic interviews and observations, and hundreds of photographs, the evolving characteristics of the site(s) are interpreted in terms of: Architecture, Settlement Form, Political Organization, Community Tenure, and a scale of Common Definitional Variables from the development literature. Photographs and diagrams provide a detailed look at the nature and evolution of settlement morphology at a level detail and across a length of time not previously studied in Oakland encampments, as do the ethnographically-informed data for the understanding of community life there. The findings are ultimately compared to recognized informal human settlements in Central America, Southeast Asia, and the American Southwest as well. By merging sociological, land use, and development research perspectives, this study demonstrates that California’s largest urban “encampments” have much in common with urban habitation forms in the Global South and elsewhere, but also shows the ways suggest a distinctive form of informal settlement.

Housing the Poor: Revisiting Walk-up Flat Dwelling Policy for Low-Income People in Indonesia

Deva Fosterharoldas Swasto (Universitas Gadjah Mada).

Abstract

It has been almost 20 years since the walk-up flat housing policy was made a national program in Indonesia starting in the mid 2000s. In its development, various evaluations have been carried out related to its implementation, such as assessment of physical quality, occupancy process, adaptation of residents, response of the surrounding community, and so on. However, the question remains whether this type of building is the right solution as a policy to housing low-income people? This paper intends to look at the development process of low-cost apartment and the factors that influence it. It is hoped that an assessment of the overall conditions that occur in the field can be a lesson for the sustainability of housing for people in need. This study also wants to include and summarize various phenomena and studies in various locations and cities in Indonesia that have existed before. The method used is a combination of content analysis from various articles about flats in the media and research publications related to them. The findings show that the policy for walk-up flat housing in Indonesia is basically a good approach but not ideal in its implementation. There are issues with regards to the shifting target of the low-income occupants, difficulties during occupancy, length and cost of renting, and so on. However, the dwellers and surrounding communities are generally accepted these conditions. It was concluded that some improvements were still needed as an effort to improve in the future.

Gentrification in Beijing Historical Areas: Routes and Challenges

Bingjun Xu (Tsinghua University), Zhiyu Chen (Tsinghua University) and Xuan Cui (Tsinghua University).

Abstract

The inner city area of Beijing has underwent a series of urban renewal progress in the last few decades. In 2018, the municipal authority announced to promote a special “application-based vacating policy” in the historical and cultural districts of Core Zone Beijing. Different from previous policies, the new one involves no large scale demolition, and is based on voluntary application. Local residents are offered to relocate themselves in the periphery, while the partially vacated traditional courtyard houses are redeveloped for mixed-use, old and new architectures, residents and cultures are tended to be brought together. As the pilot project, Caixi Area was the first one to go through the cycle with nearly 40% residents moved out and new tenants moved in successively. The purpose of this article is to figure out the mechanism, characteristics and challenges of this innovative gentrification process, and hoping to give advices to more sustainable methods. This article takes Caixi Area project as case study, and conducts social investigation including field research and semi-structured interviews. It finds out that the core resistance of the local residents towards relocation is their deep reliance on public service resources (especially education and medical facilities) among inner city. Meanwhile, based on basic economic calculation and related policy studies, this article argues that what holds back the enterprises from

investment is mainly the ambiguity of profit model and administrative procedures. As a result, this article suggests that the government should: (1) promote supporting facilities and public services in the periphery; (2) offer tax break and low-interest loan to implementing subject; (3) clarify related land, planning, construction, industry and commerce regulations.

Government-Subsidized Rental Housing in China: Policy Paradigm and Quantitative Evaluation

Zhiyu Chen (Tsinghua University), Bingjun Xu (Tsinghua University), Xuan Cui (Tsinghua University) and Lei Shao (Tsinghua University).

Abstract

Government-subsidized rental housing is a housing benefit for new citizens, young people and other groups with housing difficulties, and it is a representative of housing policies with Chinese characteristics. Since the State Council of China issued the "Opinions on Accelerating the Development of Government-subsidized Rental Housing" in July 2021, provincial and municipal governments have issued quantities of regulations to explore the implementation of government-subsidized rental housing in terms of land policies, taxation policies, and financial policies. This paper studies 52 policies related to government-subsidized rental housing issued by the central government and various regions, and uses text analysis and content analysis to compare their goals, means and strengths. On this basis, a PMS index model is constructed to quantitatively evaluate the internal consistency and completeness of the government-subsidized rental housing policy. This study will provide a reference for the improvement of China's housing policy.

Informal housing and tenures in three Australian cities

Nicole Gurrán (University of Sydney), Zahra Nasreen (University of Sydney) and Pranita Shrestha (School of Architecture, Design and Planning, The University of Sydney).

Abstract

Informal housing was once viewed as a solely Global South phenomenon. In recent years however, a growing number of scholars have drawn attention to informal housing practices across the globe – from inadequate, improvised or illegal dwellings to precarious and unregulated rental tenures, and various forms of sharing. Not confined to the urban poor, these loosely termed 'informal' practices are performed by those across the income spectrum – reflecting inability or unwillingness to comply with building or tenancy regulations; and often facilitated by the new markets enabled by online platforms. These platforms both conceal (from regulators) and reveal to researchers the range of housing practices emerging across Global North cities where regulations relating to construction and rental activities are traditionally enforced. In this paper, we examine these informal housing practices in three Australian cities, using GIS-based analysis of housing listings advertised on different digital platforms in August 2021 (N=19,389). The paper provides both methodological and empirical contributions in determining the characteristics, scale, and forms of informal housing in Australia and other Global North contexts, with potential extension to the Global South. The findings highlight that online listings are valuable as real-time 'big' data, in the absence of official data sources, to understand informal rental practices. These listings show diverse forms of informal housing in Australia, including self-constructed (secondary) dwellings on owner-occupied land, private rental tenancies, shared housing, boarding houses, short-term tourist accommodations and temporal living spaces. In revealing the nature and scale of informal rental markets, the study demonstrates that, as in the Global South, informality is emerging in Global North cities as a consequence of deepening socio-economic inequalities and states' failures to provide sufficient affordable housing.

Research on the spatial distribution of affordable housing in Beijing

Siqi Wang (Tsinghua University).

Abstract

Since the 1990s, China began to build affordable housing, after more than two decades of practice, affordable housing has become one of the main means to solve the housing problems of low- and middle-income families. However, doubts about the spatial distribution of affordable housing have always existed. Based on the spatial analysis of the spatial distribution characteristics of the affordable housing built from 1998 to 2018 in Beijing, the problems and causes of the existing affordable housing spatial pattern are discussed. This study reveals the general law of the spatial development of affordable housing in Beijing, and provides a reference for future planning, construction and management of affordable housing.

Displacement as violence: out of place processes in low-income communities in Shanghai and Caracas

Gabriela Quintana Vigiola (University of Technology Sydney) and Paula Morais (University College London).

Abstract

Since World War II, the world has experienced the biggest displacement of people, reaching its highest in 2020 with 40.5 million new displacements (World Economic Forum 2016, 2021). However, global movements are just one type of displacement that does not account for all the internal changes that citizens experience within their countries and urban areas. Within this context, this paper explores urban villages in Shanghai and informal settlements in Caracas. Both host low-income communities that have suffered different forms of displacement on three primary levels: displacement from rural to urban areas, from the inner-city to planned peripheries (China) or barrios (Caracas), and within the neighbourhood out of the public space. The first two levels are widely discussed in academic literature. However, the last level of displacement is yet to be investigated. Therefore, the contribution of this paper focuses on this previous level of displacement within the neighbourhood out of the public space by assessing how criminal violence and urban renewal act as displacement drivers and by discussing the underpinning role of institutions in this process.

It is informed by empirical case-study investigations carried out in Caracas and Shanghai with a qualitative methods approach. The main data collection techniques were on-site observations and in-depth interviews with residents, supplemented by spatial analysis to contextualise the prior. The data was interpreted through qualitative content analysis, where interviews and field notes were coded by themes arising from the participants' accounts. These demonstrated their complex relationship with place, often having strong ties and a sense of place mediated by community and family bonds. Simultaneously, residents also experience externalities such as criminal violence in the case of Caracas and government interventions in the case of Shanghai, which negatively impact people's relationships with their public spaces, leading to exclusion. Consequently, this third level of displacement within the neighbourhood out of the public space is experienced by residents.

In conclusion, these three levels of displacement are mainly driven by macroeconomic and political influences, both through direct action as in the case of Shanghai and by lack of action as in the case of Caracas. Governments' approaches to the issues at hand are not effective, to say the least, as they create further displacement of these populations that may be deemed as vulnerable. In both cases, these displacement processes are a form of violence themselves as power structures continue to force people out of their place.

Evaluation of Successful Use of Space Patterns on Spatial Plans, Aimas District of Sorong Regency

Slamet Widodo (Doctoral Student Bosowa University), Murshal Manaf (Bosowa University), Hendrik S Suriandjo (Nusantara Manado University) and Moch M Syachroni (Muhammadiyah Sorong University).

Abstract

Aimas District has the potential for rapid growth in urban development, economic growth and trade which will later affect other sectors. This results in the emergence of land use towards the outskirts of the city which has an impact on land use changes. The impact that arises is the problem of changing land use, one of which changes in land use occurs because of a high population density. In this study, the main concern is the change in the use of spatial patterns in the Aimas District area caused by an increase in physical development (development of population service facilities and infrastructure) as well as by an increase in the socioeconomic population (settlement, trade, education, industry and places of activity). or other endeavors). The purpose of this study was to determine the spatial conditions in 2020 and evaluate the suitability of the spatial pattern to the regional spatial plan in the Aimas district, Sorong district. The data analysis used is Descriptive Analysis, Spatial Analysis, Evaluation of Space Utilization and Image Classification. Changes in land use or spatial conditions in 2020 are dominated by settlements of 19.18 hectares. This happens because population growth increases every year so that the need for land for settlements or businesses increases. Based on the suitability assessment of spatial use, namely according to the 301.1 Ha regional spatial plan and not according to the 345.1 Ha regional spatial plan. There is a discrepancy that definitely changes its function, that is, this is not appropriate, such as the use of agricultural land, green open spaces, river boundaries into built up land in the form of settlements and trade and services. There are 30 programs in the 2015-2020 regional spatial plan for the Aimas District, which are divided into 19 programs for realizing spatial structures and 11 programs for realizing spatial patterns. Based on the results of the assessment of the level of land suitability that is 33.29%. This means that the level of suitability is moderate or the use of space is still not fully in accordance with the spatial plan. This is due to the lack of supervision of the program.

Slum Quality Improvement in Orang Kayo Hitam District, Jambi City

Nadya Maharani Irawan (Brawijaya University), I Nyoman Suluh Wijaya (Brawijaya University) and Abdul Wahid Hasyim (Brawijaya University).

Abstract

Along with the rapid population growth in the city, the need for space to accommodate population activities also increases. The city's unpreparedness in dealing with this phenomenon can trigger the development of residential centers that are outside the plan and does not meets technical requirements. As the result, extreme slum settlement grows in Orang Kayo Hitam District of Jambi City. As one of the activity centers, it is crucial to improve the quality of slum, to provide safe, healthy, livable and sustainable environment. Improving the quality of the slum environment is actually part of KOTAKU program. However, the program only focuses on the physical aspects, while overlooking the non-physical aspects including social and economic. This condition occurs because the government still does not know which aspects to prioritize.

This research will identify the variables that works on improving the quality of the slum environment in Orang Kayo Hitam District. This study maps the distribution of slum levels in each neighborhood. The neighborhood that identified as slums are the target areas for identifaction of the influential variable and the linkages between variables that become priority in improving the quality of the slum environment by using Decision Making Trial and Evaluation Laboratory (DEMATEL). This research also determine the strategy on improving the quality of the slum environment in Orang Kayo Hitam District using Analytic Network Process (ANP) analysis.

This research found that there were 3 neighbourhods which were categorized as heavy slums. The cause of the slums is due to the condition of buildings, environmental roads, water supply, drainage, waste water management, and waste management that are not in accordance with technical standards. In addition, non-physical variables such as land legality, population, law, availability of open space, as well as social, economic, and cultural conditions lead to the formation of slum settlements. From the results of the DEMATEL analysis, the building variable has the highest relationship with other variables in shaping slum conditions. And from ANP analysis, the on-site upgrading strategy is the chosen strategy in improving the quality of the slum environment. This strategy was chosen because it can overcome the problem of slum environment both in terms of physical and non-physical aspects. Comprehensive and integrated planning is needed to improve the quality of slum settlements in Orang Kayo Hitam District based on the results of the analysis obtained in this study.

São Paulo's Master Plan: current situation and possibilities of Social Housing provision on Special Zones of Social Interest

Marina Pinheiro Marques (University of São Paulo).

Abstract

Urban planning in western countries has historically been based mainly in master plans and zoning laws, which regulate urban growth and shape cities. The Brazilian Federal Constitution established the local government as responsible for urban development regulation, and the Municipal Master Plan as its main instrument. The present study proposes an analysis of one of the instruments present in the Master Plan of São Paulo: the establishment of perimeters of ZEIS (Special Zones of Social Interest). The research intended to analyze in what measure the changes in course after the newest city's Master Plan contributed or not for the instrument's effectiveness in providing land and social housing for low-income populations. The research was developed based on the manipulation of data from the approval and execution permits published by the Municipality of São Paulo, which consists on tabular information and georeferenced files containing the real estate production inside and outside of ZEIS. From separating data according to the nature of the promoting agent and the income category of the resulting unit, it was possible to develop some conclusions. Preliminary findings revealed low production of HIS 1 (Social Housing category for the population that receives zero to three minimum wages) by the private sector, in contrast to an expressive production of HIS 2 (three to six minimum wages) and other housing categories outside ZEIS by this same sector. Interviews with stakeholders of the real estate market revealed private sector difficulty to produce HIS 1 while maintaining its standard rate of profit. Therefore, due to the instrument's structure, it appears that the production of HIS 1 has become almost an exclusive responsibility of the public power - and remains insufficient, since the city's housing deficit is concentrated in this lower income category. São Paulo's Master Plan is expected to be revised in 2022. This presents an opportunity to use this current research and its findings to subside changes in the implementation of ZEIS and other zones. Finally, the research will provide important information so that the instrument fully achieves its social and territorial objectives.

The Impact Of State-Based Resettlement For The Poor On Improving Livelihood Assets

Akhmad Gunawan (Institut Teknologi Bandung), Haryo Winarso (Institut Teknologi Bandung), Teti Armiaati Argo (Institut Teknologi Bandung) and Tubagus Furqon Sofhani (Institut Teknologi Bandung).

Abstract

Participatory approaches is believed to be one of the key factors underpinning successful squatter settlements upgrading. Slum or squatter settlements upgrading however, very few if any literature shows the level of success from the point of view of cost, resources and the poverty alleviation. In recent years, to overcome the squatter problem, the Jakarta Provincial Government has relocated squatter with little participation since beginning but supported by various facilities such as integrated free transportation, health, education and others. With the relocation firstly, the security of tenure will increase and the five assets of livelihood will improve so that the residents of rental low-cost apartments will have more identity and dignity. With better housing and livelihood conditions, the level of participation of rental low-cost apartments residents increase in the implementation of economic empowerment programs that allow for increased income and out of poverty. Against the above background, this paper discusses the advantage of the approach and arguing that participatory approach after resettlement have improve five assets of the poor. This paper explains further the impact of relocation on changes in livelihood, poor people's dignity and prestige before and after relocation. The study was conducted using qualitative and quantitative methods by conducting document studies, archival records and reports, in-depth interviews and direct observation. Respondents in the study were low-income people who life in squatter settlements and relocate to rental low-cost apartments in: Jakarta, Bandung and Yogyakarta. This research uses quantitative and qualitative methods and sustainable urban livelihood approach analysis. The method used in selecting and determining the number of respondents is stratified probably sampling. Most of the residents felt the improvement of quality of life after living in low-cost apartment. Resettlement the poor from squatter settlement rental low-cost apartments with free proper support facilities have improve five assets of the poor: human capital; physical capital; natural capital; financial capital; social capital.

Cracks in the compact city: international lessons from new research on building defects in multi-owned housing in Sydney, Australia

Laura Crommelin (UNSW Sydney).

Abstract

Building defects in apartment buildings have become a high-profile issue in Australia in recent years after a number of apartment towers were evacuated due to structural cracking. Despite the media and political attention on the issue, however, detailed data on the extent and severity of defective residential building work has been lacking. This presentation reports on the findings of a two-year research project examining the extent and drivers of building defects in multi-owned residential buildings in Sydney, Australia. The project involved collecting industry and government data about a sample of 635 buildings across Sydney, as well as undertaking interviews with 66 key stakeholders and experts. The research findings demonstrate that defects are commonplace, and highlight the need for regulatory reform to improve the quality of higher-density housing in Australia's largest city. At the same time, the research findings also highlight a number of broader lessons of relevance to densifying cities around the world. These lessons include the role of split incentives in shaping quality outcomes; the potential for build-to-rent models to improve rental housing quality; the negative impact of information asymmetry on housing markets; and the potential for technological solutions to underpin regulatory responses. The paper will provide a brief overview of the research findings before considering these internationally-relevant lessons in more detail.

Initial Smart Inclusive Neighborhood Programme in Sidoarjo, East Java.

Rohadatul Aisyi, Sawitri Retno Hadiati and Tuti Budirahayu (Peduli Kasih Anak Berkebutuhan Khusus Foundation).

Abstract

Efforts to occur social inclusion or community empowerment was the main things for special needs / disabilities to be equal, other than parents support group. These has been done by Yayasan Peduli Kasih Anak Berkebutuhan Khusus (YPKABK) for almost 10 years in Surabaya. YPKABK has just received a home grant in Sidoarjo which will be used as SLB (special school) and at the same time as LPK (job training). Previous activities of YPKABK was in Surabaya, located in contracts and moving houses, so that this new area will be used as a base for smart and special child-friendly neighborhood. The purpose of this study explores the social capital of RW XI Tambakrejo village and together with all the parties improve the system that has been working in several subdistrict (cities) Surabaya to be an example of smart inclusion neighborhood (village) which located in the border of Surabaya - Sidoarjo. With social capital mapping, the creation of canva business models, networking and experience of YPKABK during activities in Surabaya, expected that this research would be



contribute to the formation of a neatly organized neighborhood, healthy and friendly habitation for anyone, cultured by public service-oriented government. Data mapping the potential of 4 RT se RW tsb, namely population density, socioeconomic level, citizens' perception of special child / disability and monitoring of special child/ disability conditions and their mobility both from this neighborhood itself and from learners. Data before after parenting, special child handling and productivity / creativity training would be carried out by online and hybrid (in the form of mentoring and internship). Digital cooperatives were formed to serve the needs of citizens (electricity payments, water, gas, pulses, food needs and learning tools, means of production) and the sale of curated special child and citizen works, so that profits were made for further programs and joint welfare such as waste management program. Together with the mosque takmir was also carried out the management of Zakat, infaq and shodaqoh (ZIS). Together with the involvement of citizens, pamong and community leaders managed funding from ZIS, CSR and social business, This initial assistance would be lasted for 3 years, with benchmarks: changes in the quality of life abk / disability both from learners, and from citizens. Increased knowledge, attitudes and practices of parenting knowledge and prevention of abk, increased productivity together, a civil society and neighborhood environment for everyone.



SPECIAL SESSION - Global, Regional, And National Perspectives On National Capital City Planning And Development

Maya Safira (Bandung Institute of Technology)

Abstract

In August 2019, Indonesia's president, Joko Widodo, announced that his government would relocate the nation's capital from Jakarta on the island of Java to Kalimantan. In announcing the new capital, the government has highlighted many reasons for the move. While the relocation of the capital might benefit the nation and its people, past efforts to create new capital cities for countries around the world have demonstrated that this process is also likely to come with many significant challenges. The promise and challenges of Indonesia's capital relocation initiative create opportunities for building lasting institutional connections, generating path-breaking research on urbanization and regional development, and informing crucial policy and planning debates that can impact the lives of millions of Indonesian citizens. Against this background, we propose sessions and invite scholars, academicians, and practitioners from whatever experience to share their knowledge and experience in relocating a national capital city. The objectives of this sessions are (1) to share theoretical knowledge of Capital City relocation as well as its motivation and key processes, (2) to transfer international best practices and lessons learned of capital city relocation, and (3) to discuss key important issues, as well as potential and challenges of Capital City relocation. We believe that opening a special session discussing the new capital city will be very beneficial for the relocation of the capital city and urban and regional planning, not only for Indonesia but also for global discourses.

Special Session - Creative Industries And Informality: Relationships, Conflicts, And Impacts

Ana Mafalda Madureira (University of Twente)

Abstract

Creative Industries are often defined as existing in the convergence between creative arts and cultural industries (Hartley, 2005). The concept originally emerged in the Global North, but quickly spread across the Global South supported by organizations such as the United Nations Conference for Trade and Development (UNCTAD 2008). It translated into policies and policy networks, encouraged by the perceived value of these industries for development of local and national economies.

Critical research has pointed to the inadequacy of the term for Global South realities, and the need for it to be adjusted to local contexts and existing cultural and creative economies (De Beukelaer, 2014, 2017; Fahmi and Koster, 2017b; Sternberg, 2017, Alacovska and Gill 2019; Lobato 2010). Existing research has also called attention to the need to recognize how informality shapes the way Creative Industries emerge and development, how informality is recognized, operationalized and included by existing Creative Industries-oriented policies, and how it is accounted for, by official reports of Creative Industries development. Another gap concerns understanding the impacts that the promotion of Creative Industries and districts have on Global Souths socio-spatial and economic contexts (Gregory 2016, 2019).

This Special Session invites contributions that critically discuss the relationship between Creative Industries and Informality, to contribute to research on Creative Industries development in a Global South context.

Invited contributions will focus on:

1. Operationalizing these concepts to understand how they mutually influence each other.
2. Creative Industries and Informality relationships, analysed from a spatial, socio-economic, or policy-formulation perspective.
3. Methods to identify, trace, analyse the relationships between these two concepts, and its spatial, socio-economic, or policies implications.
4. Ethical challenges of research in urban settlements where these two concepts frequently meet/ interact with each other
5. Case studies that explore this relationship, and its spatial, socio-economic and/ or policy implications.

Special Session - **Book Launch: Routledge Handbook Of Urban Indonesia**

Deden Rukmana (Alabama A&M University)

Abstract

The purpose of the session is to launch an edited book titled: Routledge Handbook of Urban Indonesia, edited by Sonia Roitman and Deden Rukmana.

This book is the collective effort of 64 contributing authors including academics, planners, architects, researchers, local planning officials and community activists, who address the current trends and challenges of planning and urban development in Indonesian cities. The cases described by the authors are organised into five main themes: 1. Indonesian planning context; 2. informality, insurgency and social inclusion; 3. design, spatial and economic practices; 4. creative and innovative practices; and, 5. urban sustainability and resilience. This is the first book to address urban planning and development in cities of various sizes in Indonesia.

This book discusses and compiles the planning practices in 19 Indonesian cities including one megacity of over ten million people (Jakarta), seven cities of one to ten million people (Surabaya, Bandung, Yogyakarta, Semarang, Makassar, Palembang, and Bogor), two cities of between 500,000 and one million people (Malang and Solo), seven cities of 100,000 to 500,000 people (Ambon, Banda Aceh, Mataram, Pontianak, Cirebon, Salatiga, and Ternate) and two small cities of less than 100,000 people (Jepara and Wonosobo).

Structure of the session: Overview of the book: Sonia Roitman and Deden Rukmana Five co-authors will present a summary of their chapter. Each of these presentations will represent each of the five sections/themes of the book: Part 1: Planning Context: Chris Silver Part 2: Informality, insurgency and social inclusion: andri Supriatna and Redento Recio Part 3: Design, spatial and economic practices: TBC Part 4: Creative and innovative practices: Dhimas Bayu Anindito Part 5: Urban sustainability and resilience: Anthony Kent Discussants: Prof Delik Hudalah and TBC.

Special Session - **Towards Socially Integrative Cities Through Participative Inner-City Revitalization In Europe And China**

Bernhard Mueller (Technische Universitaet Dresden)

Abstract


In the actual 14th Five-Year-Plan, the Chinese government emphasizes the continuing need for new approaches towards urban development. Urban renewal and the renovation of old urban residential neighborhoods are especially mentioned. This is a field of research and knowledge exchange in which European countries have a long standing expertise. During the past decade, it has also been a focal point of cooperation between urban planners from Europe and China, for example in the EU Horizon 2020 Research and Innovation Action TRANS-URBAN-EU-CHINA (see website URL below). Based on this cooperation, the session discusses how participative inner-city revitalization can contribute to making cities more socially integrative. In the first presentation, the concept of socially integrative cities is discussed. The second presentation deals with participative planning approaches in China and their growing relevance in urban renewal projects. The third presentation contributes an innovative example from Beijing. The fourth presentation looks at new participation tools and their role in making urban revitalization more socially integrative. The fifth presentation looks at the changing Chinese approach from massive rapid redevelopment to small-scale stepwise urban revitalization. All presentations refer to practical experiences from Europe and China and discuss to what extent they can be regarded as good practice examples in a global context. One of the conclusions is that participative inner-city revitalization strategies and projects are an important means to make cities more socially integrative and sustainable. However, this depends on how urban revitalization is understood, designed and managed, and how the inhabitants of urban revitalization areas engage and are encouraged to participate. The topic of the session is relevant for the track as it discusses strategies of socially integrative inner-city revitalization within the framework of mega-urbanization (in China), on the one hand, and poly-centered and networked urban development (in Europe), on the other hand.

Special Session - **Water-Sensitive Transformation Of Secondary And Tertiary Cities In South East Asia**

Ania Wilk-Pham (Habitat Unit, Technical University of Berlin)

Abstract

Secondary and tertiary cities in Southeast Asia are increasingly becoming hubs of comprehensive economic, social and ecological transformation. City governments are generally confronted with urban growth driven by dynamic economic development and a real estate sector that is often poorly guided by urban planning. The decentralisation efforts undertaken



in the countries require concrete implementation at the local level, sufficient funding and capacity development. In view of the comprehensive provision of municipal services of general interest in the sense of the SDGs, especially in the context of climate change, the management of urban water resources as a cross-cutting task reflects the challenges of urban development. For water-relevant resilience of cities, integrated approaches are needed that bring together urban planning, infrastructure development and urban water resource management according to the current and expected capacities of these cities. Water-sensitive development can help cities to proactively use the spatial and regulatory options they still have today. By this means, water supply, wastewater management, storm water and flood management, waste management and the development of grey, green, blue infrastructure may be improved. The session will make strong references to the global discussion and practical experiences on the development of water-sensitive secondary and tertiary cities, reflecting concrete project results from Indonesia, Cambodia, Laos, Thailand and Vietnam. Approaches to the analysis of urban planning and water management challenges and the corresponding governance structures and concrete strategies and options for action derived from them will be presented for discussion and exchange. In the course of this discussion, the concept of resilience will be concretised in a prominent field of urban development and, above all, recommendations for action and opportunities for cooperation for practitioners, academia, international institutions, etc. will be identified, which also go beyond the Southeast Asian region.

Special Session - *Sustainable Urban Expansion And The Role Of Private Cities In Southeast Asia*

Eddy Yusuf (Universitas Pembangunan Jaya)

Abstract

Over the past decades, many Southeast Asian countries have seen rapid development of peri-urbanization with the formation of extensive metropolitan areas with multiple millions of residents. Mega Urban Regions (MURs) of Manila, Jakarta, Bangkok, Kuala Lumpur, Hanoi, and Yangon represent the above phenomenon. The availability of cheap land for housing and industrial development in the fringe of such cities makes land-use conversion rather attractive at a multi-level scale, from small gated residential compounds to sizeable industrial and residential areas. In addition, local and international private developers invest in the development of new large-scale townships to grasp investment opportunities. They do not only develop but also manage such new towns after their completion. Residents enter into contractual relations with them, and the delivery of essential services and infrastructure within such areas is arranged through the private developer rather than through the municipal government. Thus they create what might best be described as a form of private government. The phenomenon of 'Private Cities' around big cities like Jakarta becomes the main topic of this session. Private city development has become a powerful force in shaping the ongoing urban transition in many developing countries. The session explores the features of private cities based on literature review and practical experiences, including results of focus group discussions with private developers, academicians, governments, and non-government organizations. The session aims at contributing answers to the question whether and to what extent private cities can be regarded as a model for sustainable urban expansion in Southeast Asia in the future. With this objective and the proposed presentations, the session perfectly fits to the overall track description.

Special Session - *Governance Of Urban Flood Resilience*

Sander Meijerink (Radboud University)

Abstract

Both impacts of climate change, such as sea level rise, increasing variability of river discharges, and more intense precipitation, and urbanization in flood prone areas have exacerbated flood risks in many urban areas across the globe. Therefore, an important task for urban planners is to enhance urban flood resilience. This session will critically discuss (1) the relevance of various resilience concepts, such as engineering, ecological and evolutionary resilience, (2) various governance challenges, such as the coordination between levels of government, policy sectors, and public and private parties, and (3) related normative issues, such as inclusiveness, fairness and justice. The session presents case studies of the governance of urban flood resilience in Italy, Thailand, Vietnam and Indonesia, thus allowing for a discussion on the relevance of case specific conditions, such as socio-economic conditions and the institutional setting, for understanding the main governance challenges. Special attention will be paid to the specific role of donor agencies in enhancing flood resilience.



Special Session - *Who Are We – Planning Academics -, What Are We Doing, And What Difference Does It Make?*

Ernest Alexander (University of Wisconsin-Milwaukee / APD alexander planning & design)

Abstract

Who Are We – Planning Academics -, What Are We Doing, and What Difference does it Make? What is the planning we research, teach, and our graduates practice? Today there aren't any good answers to these questions. Perhaps Tim Chapin's Planning is a funny field is the best answer so far. Another approach may give us better answers: relating planning to practice. Planning theorists, educators and planners have always recognized planning as a practice. Sociology of knowledge definitions of practice imply three kinds of planning practices: 1) Generic planning - planning that everyone does and anyone can do; 2) Recognized knowledge-centered planning practices: something (e.g. spatial, environmental or transportation) planning; 3) Real planning in specific contexts, e.g. metro-regional planning for Jakarta, European TEN transportation planning, informal planning for Soweto (South Africa), or insurgent planning in Rio favelas (Brazil). Planning theories are linked to different practices: generic planning theories and something (e.g. urban or Southern) planning theories. Researching real planning practices produces planning theories. Planning, then, is not a practice, but a set of diverse practices in a multiscale hierarchy linking different kinds of practices to different levels of planning theories.

Understanding planning as diverse planning practices offers answers to these questions. Who are we – planning academics? asks about planning: is it a field, discipline or profession? The only arena that unites the various practices is planning as a discipline: engaging academics, students and practitioners of generic planning and specialized (urban, environmental, or development planning) alike. What are we doing? asks about planning education. Planning programs can prepare students for their diverse practices by recognizing their specializations as their graduates' planning practices, with core curricula providing the essential competences for planning practice. What is the planning our graduates practice? They are not planners transforming societies, but professional planners engaged in city-, environmental- or development planning, contributing their expert knowledge to the collective development of better communities and a sustainable global environment.

Special Session - *The Roles Of Geodesign And The International Geodesign Collaboration In Planning Education And Pedagogy*

Tijana Dabovic (University of Belgrade - Faculty of Geography, Department of Spatial Planning)

Abstract

Our Global Village faces complex challenges. To address those challenges and anticipate their different impacts, we must collaborate. To accomplish this, planning education needs to accommodate pedagogies and frameworks advancing mutual understanding, learning and knowledge co-creation, designed to teach teachers and practitioners who will pass their knowledge to the next and future generations of planners and designers. Geodesign (design at geographic scale) is a structured approach to planning integrating multiple areas of knowledge and using GIS-based analytic and design tools to explore alternative future scenarios responding to global challenges. Since 2018, members of the International Geodesign Collaboration (IGC) have been using common analytical and reporting frameworks to make, assess and present scenario-driven projects for globally dispersed study areas. By doing so, IGC has enabled direct comparisons among projects and mutual learning between teams from more than 60 universities working in different contexts. The IGC is a growing organization and welcomes interested schools to join.

This session first explores the rationale behind Geodesign and IGC frameworks inspired and rooted in nearly sixty years of active academic engagement between scholars at some of the world's leading universities. The story parallels the development and application of advanced tools for planning including GIS and visualization technologies. Second, a team from the University of Ljubljana will demonstrate the application of the geodesign framework used at different scales to explore the interdependence of national, regional and local perspectives on spatial development scenarios for Slovenia. Finally, we will share the workflow and results of a preliminary geodesign workshop toward a sustainable and resilient plan for the Amazon basin that embraces the competing pressures of conservation, social, and economic development with local, national, and global consequences.

After highlighting the benefits of common frameworks in planning education we will open the floor for discussion, mutual learning, and knowledge co-creation.

Special Session - **Planning For Heritage In Cities: Rhetoric, Discourse, And (In)/Action**

Kiran Shinde (La Trobe University)

Abstract

Globalisation is not new, but its pace has accelerated in last few decades and its imprint is now evident in hundreds of cities and towns as they experience rapid urban growth. On one hand, the new wave of technology-driven urbanisation is leading to emergence of new spaces of working and living, and of production and consumption. On the other, cities are witnessing rapid decline in historic attributes, cultural richness of traditions, multiple and diverse identities – all that contribute to living heritage. While cities struggle to balance the expectations of new developments and infrastructure, there are increasing calls for sensitisation towards the multi-layered histories and heritages that constitute the core of the cities and towns. Many planning instruments including policies and projects are developed for the preservation and conservation of heritage and its various components. For example, at global level, UNESCO has continued to widen its listing of heritage – just in last five years, several cities were declared as “cities with living heritage” but the real impact of such declarations remains to be seen. Similarly, several cities have enacted their own listing of heritage structures in their jurisdictions and applied restricted development policies. In this session, we invite planning professionals and scholars to debate around the rhetoric and discourses that are built around the official and formal listing and status of heritage for management against the real work on ground. Moreover, in these discourses, it is likely that the informal heritage, the folk heritage in built and non-built environment is missed out. In some Asian cities, it might be the case of too much heritage. How can planning help in addressing some of the complex and real issues around heritage management versus the development agenda – this is the core question to be dwelled on in this session. A tentative list of topics includes (but not limited to):

- Heritage planning for future
 - Lessons from the past for the emerging built environment
 - Beyond listing: Incorporating heritage in all-round socio-economic development
 - Heritage for reinforcing / retracing cultural identity of place and people
 - Historic cities and heritage tourism
 - Heritage in Planning legislation
 - Institutional governance for heritage management
- The participants can think of developing research publications and policy papers from this session.

Special Session - **Infrastructures Of Development: Multi-Scalar Politics Beyond The Megacity In Southeast Asia**

Dorothy Tang (National University of Singapore)

Abstract

Economic development strategies are manifest in spatial products and “bundled” infrastructures that consist of capital flow, knowledge and expertise, physical infrastructures, policies, and subject to a variety of stakeholders. This session explores the following questions: What are the spatial implications of economic development strategies in Southeast Asia? What are the infrastructural and land-use challenges of contemporary economic development policy? and what are the contemporary and historical experiences of the urban periphery, as well as small and medium-sized cities, in the intersection of economic development and urban planning strategies today?

This interdisciplinary panel draws on perspectives from anthropology, geography, architecture and planning to explore the socio-spatial implications of economic development planning in Southeast Asia. We are particularly interested in looking beyond the region’s megacities to consider emergent patterns of urban economic development. The four paper presentations focus on issues of economic development in Southeast Asia, ranging from Jakarta’s peri-urban fringe, small and medium-sized cities across the Philippine Archipelago, a mid-sized city in northeast Thailand, and a coastal town in southern Myanmar. By centering such geographies, we are able to observe nuanced and unconventional interactions amongst state and non-state actors and gain insight into the multi-scalar politics at play.

Special Session - **Urbanization, Innovation And Industrial Regulations: Craft Manufacturing Trajectories In Australia And Indonesia**

Carl Grodach (Monash University)

Abstract

This proposed session aims to explore the economic geography of craft manufacturing and the relationships to urban and industry change across time and space. Drawing on case studies in Greater Melbourne, Australia and Java, Indonesia, the papers focus on how urbanization and peri-urbanization shape and are shaped by industrial activity; how planning for industrial land impacts craft manufacturing growth and change; and the innovation processes of informal craft and creative enterprises. The papers shed light on the historical and contemporary roles of both formal planning and informal economic development actors and contrast experiences in two divergent contexts.

Special Session - **Collaborating For A Healthier City: Different Ways Of Interpreting Urban Health**

Kristina Ulm (University Of New South Wales)

Abstract

Planning for urban health outcomes is complex. Stakeholders from wide range of disciplines are involved in the processes of creating health environments. Different understandings and approaches to urban health are reflected across disciplinary languages and terminologies, but also in what the foundational beliefs and ideas about the concept of urban health is, the priority issues that require attention, the underlying causes and causal pathways of these issues, preferred methodologies to investigate and produce evidence, and appropriate solutions. Lack of clarity around the underlying ideas and beliefs of the different actors involved can be a barrier to successful collaboration. In this session participants will learn to recognize different understandings in order to facilitate their practice as transdisciplinary urban health practitioners.

This workshop introduces participants to a framework to differentiate between the different belief systems, or urban health paradigms, based on conceptual, theoretical, methodological and instrumental dimensions.

This workshop will run virtually (or, in a hybrid mode, if possible) for 70 minutes. The workshop will utilise an external online platform such as Google Jamboard to facilitate interaction and discussion between participants. The workshop will be composed of a mix of presentations by the workshop coordinators and group discussions with the workshop participants on the following topics:

- Why is it important to understand paradigms for transdisciplinary approach to urban health?
- What are the types of urban health paradigms?
- How can we apply the urban health paradigms framework in research, practice and policy?
- What are some actions that would facilitate transdisciplinary urban health approaches?

Urban health is a complex but also crucial agenda item, featuring highly in many current urban governance and politics debates. By increasing their awareness of different urban health paradigms, collaborators can better align their processes and practices to find transdisciplinary solutions..

Special Session - **Urban Growth And Shrinkage Within Megacity Regions: Zero-Sum Or Win-Win?**

Tianren Yang (The University of Hong Kong)

Abstract

The development of megacity regions is a trending topic across the globe. Whilst most researchers focus on the hot spots of economic and population boom, little attention has been paid to the lagging-behind and shrinking areas adjoining or close to the local hot spots. In this context, it remains controversial whether the development of megacity regions will end up with a zero-sum game, where the core cities grow at the expense of the surrounding cities.

This session will offer an integrated perspective to understand both urban growth and shrinkage within megacity regions. Topics include but are limited to:

- (1) Geographic patterns of growth and shrinkage in different dimensions (e.g., population, economy and the quality of the built environment),
- (2) Driving forces of urban growth and shrinkage (e.g., economic structure)
- (3) Impacts of urban growth and shrinkage (e.g., quality of life)

(4) Policy response and interventions (e.g., urban renewal)

The insights derived from the idea exchanges in this session will help fill the knowledge gap in deciphering urban growth and shrinkage in an interactive and dynamic manner, thereby shaping win-win strategies for the prosperous and equitable development of megacity regions.

Special Session - *Coworking Or Co-Existing? Empirical Study Of Coworking Space In Shanghai And Shenzhen*

Yumeng Fu (City University of Hong Kong)

Abstract

The rising popularity of the sharing economy, characterized by coordinated consumption through sharing, exchanging, and leasing resources, has been witnessed in many advanced and emerging economies over the past decade. Coworking spaces (CWS), a flexible open-plan office environment that provides inexpensive office alternatives, are believed to encourage coworkers' subconscious and informal information and knowledge exchange, thus helping them build social and business relationships with like-minded people. Such advantages of coworking spaces have been documented in some empirical studies about western cities where a large number of individual workers or self-employees are engaged in art or creative industries.

However, few empirical studies are about how coworking spaces have played out in metropolises in emerging economies such as China, nor has much work investigated the location characteristics of coworking spaces themselves and how space users engage in the industrial clusters they belong. As an increasingly popular workplace between the third place and the traditional standard office space, how has coworking spaces proliferated in Chinese cities? Can the sharing environment lead to knowledge spillover and promote entrepreneurship, as commonly observed in western countries?

This paper empirically investigates the spatial distribution pattern of coworking spaces in Shanghai and Shenzhen, two megacities with active coworking space markets, through data collected from China's two largest CWS platforms (Haozuwang and Mashangbangong). Furthermore, we conducted a questionnaire survey and in-person interviews with CWS tenants in both cities in January 2021 to understand user perception and behavior: what attracts tenants to these coworking spaces?; to what degree coworking spaces create a work environment that encourages social interaction among users?; and does the open, shared work environment facilitate collaboration among users?

We found that CWS tenants are dominated by small- and medium-sized enterprises, rather than by self-employed entrepreneurs found in Western cities. Results from geocoded locational data reveal that, similar to traditional office spaces, coworking spaces in Chinese cities appear in the city's existing central business districts or established industrial clusters (e.g., industrial parks). Our principal factor analysis of the survey data partially confirms our expectation that CWS users appreciate the flexible interior space utilization and support services offered by space proprietors. However, they are skeptical about the contribution of the shared work environment to the growth of entrepreneurship.

Special Session - *Integrated Planning And Development; Water Sensitive Analytical Perspectives And Models For The Sustainable Development Of Urban Regions*


Kai Michael Dietrich (Technische Hochschule Lübeck / University of Applied Sciences)

Abstract

Implementing research for sustainability and resilience is the core task of the funding priority SURE »Sustainable Development of Urban Regions« sponsored by the BMBF. Within the SURE framework, ten collaborative projects with partners from Germany, Southeast Asia, and China cooperate closely with actors from politics, public administration, civil society, and business. The projects aim to develop concepts and test locally implementable solution strategies for sustainable transformation of fast-growing urban regions in Southeast Asia and China. Three collaborative projects (implementing in China, Laos, Indonesia, and Vietnam) and the SURE Facilitation and Synthesis Research project will present their findings related to water sensitive planning and synthesis approaches for trans- and interdisciplinary projects.

The FloodAdaptVN project provides insights derived from the spatiotemporal coastline dynamics analysis that can be used to understand the current flood risk in Central Vietnam. This insight will provide the base for scenario development that will serve as input for future flood risk modelling.

The second contribution is from the IMECOGIP project, presenting the state of development of a toolbox that makes selected ES assessment methods available for urban planners. With a particular focus on water-related ecosystem services: water-flow regulation, groundwater recharge, transpirative cooling. The project will discuss how they embed these assessments into the overarching toolbox and how they can foster sustainable development in urban areas.



In the third presentation, approaches and methodologies for assessing and monitoring urban water resources will be discussed by the PolyUrbanWaters project. In particular, the ground realities and the context of secondary and tertiary southeast Asian cities and their challenges and experiences from the field.

In closure, the SURE Facilitation and Synthesis Research project will present project-related reference and reflection framework methods and discuss cross-sectional analysis approaches through digital tools for synthesis research in trans and inter-disciplinary projects

Special Session - *Better Urban-Rural Integration In A Global Context: Changes, Challenges, And Planning Innovation.*

Wenqi Li (Tongji University)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote urban-rural integration, policies include modernizing rural infrastructures, fully developing rural characteristics, encouraging social investment and government finance in rural areas and other agricultural policies have been introduced. The concept of urban-rural integration has also currently become an important principle for developing countries to systematically improve urban-rural development.

Nowadays, with the advancement of information and communication technologies, the development of urban-rural relationship is faced with new opportunities and challenges. Modern technology has innovated traditional production in rural area; transformation of transportation has greatly improved the connectivity between urban and rural areas; IT technology redefines the function of rural and provide the possibility of living a modern lifestyle in the countryside; in the post-epidemic era, peoples pursuit of a healthy lifestyle has re-emerged the need for the rural area to provide more contact between people and nature. Under the ongoing changes, the value of rural needs to be re-recognized, as well as the meanings and approaches of urban-rural integration.

To achieve better understanding of urban-rural integration, this session would like to invite scholars from European and Asian countries, sharing opinions and local practice focusing on following questions.


- 1) What are the new trends of urban-rural relationship? How do modernization and technology innovations affect or accelerate urban-rural integration?
- 2) What are the challenges for promoting better urban-rural integration?
- 3) How is the urban-rural integration presented spatially? What spatial elements contribute to urban-rural integration?
- 4) How can planning react to the transformation of urban-rural relationship and promote better urban-rural integration? What are the innovative planning tools?
- 5) During different period of urbanization in each country, what specific strategic policies have been introduced? What policy should be provided to meet the future demands of better urban-rural integration?

Special Session - *Improving Collaboration And Knowledge Sharing On Spatial Planning System And Practices Among South-East Asian Countries To Achieve Sustainable Development.*

Datuk Ary Samsura (Radboud University)

Abstract

This session contributes to further debate on the potential of finding the interconnected forces and collaborative effort to unravel the complexity in the spatial planning process while also allowing for comparative analysis among the South-East Asian (SEA) countries. Across the SEA countries, there are vast variations in spatial planning systems, policies and governance mechanisms. Political differences, cultures, norms, geographical conditions, and demographic issues might have contributed to why a country chooses a particular spatial planning system, policy, and instruments. Such differences may be a result of the country's development path and can have a significant impact on the countries' ability to achieve their sustainable development objectives both individually and collectively in the future. Given these understandings, it is



therefore important to explore whether political, social, economical, or even historical forces are generating similar spatial planning responses throughout SEA countries. The increasingly global nature of the interconnection and the expansion of competition within the region also creates a new context for spatial planning. At the urban level, new alliances and forms of government are evolving to generate and implement a range of economic, social, and environmental policies.

Special Session - *Imagining the future of cities.*

Gabriel Poli de Figueiredo (FAU-USP)

Abstract

In this session we propose discussing the potentials of approaching technology applied to the city through the field of studies of Representations and the Imaginary – with special emphasis in ICTs. Beginning with a brief introduction to the study of the Imaginary – mainly using the works of Aby Warburg, Gaston Bachelard and Gilbert Durand – and its role in understanding technology in the urban environment, we then will present the state-of-the-art research conducted by Brazil's RITe research group (Representations, Imaginary & Technology), followed by examples of practical applications on future urban scenarios, such as the collaborative development of Brazil's Smart City Charter, especially by utilising Metadesign as a fruitful approach to bridge collective imaginary and collaborative processes for the creation of urban public policy. The challenges and benefits of this approach will be discussed, as well as the potentials and risks of applying ICTs and cutting-edge technology to cities in the global south, which face extremely complex social, economic, and territorial challenges.

Special Session - *Hands-on learning grounded in place: innovations that won the 2021 Association of European Schools of Planning Teaching Excellence Award.*

Joanne Tippett (The University of Manchester)

Abstract

Social anxiety and the struggle to get started with assignments are perennial problems faced by incoming students, and were exacerbated during the pandemic. This interactive workshop will introduce pandemic-inspired innovations that won the 2021 Association of European Schools of Planning Teaching Excellence Award.

The workshop will introduce a novel approach to tactile and visual learning that develops study skills and critical thinking. It will explore how developing professional planning skills (understanding sense of place and facilitating effective dialogue) can help build a learning community. Participants will learn how the digital tool Padlet was integrated with physical sense of place exercises and use of Ketso Connect, an individual, hands-on learning aid. Launched during the pandemic and already used with over 3,500 students in 10 universities in the UK, USA and Nigeria, Ketso Connect is a potentially disruptive innovation. It makes an inclusive and active learning approach, developed in planning education, available for any subject area and educational setting (self-directed study; remote, hybrid and face-to-face teaching).

A case study outlining the Designing Sustainable Futures module will briefly introduce the innovations. This is a core module for undergraduate Planning and Environmental Management students at The University of Manchester. It is designed to encourage students to reflect on the role of built environment professions in delivering sustainable futures. Core soft skills that are integral to the planning profession are developed through active learning, guided peer discussion, and group work. So too, is reflective practice and self-evaluation. Workshops introducing and practicing the fundamentals of critical thinking, referencing, essay and report writing are built into the module so as to enable scaffolded learning and give formative feedback on assignments. Workshop participants will have a practical experience of these innovations, as they discuss the lessons learned and how they may be adapted to their own teaching contexts.

Special Session - *Toward Happy Digital Cities of Sustainability.*

Jenny Zhang (Tsinghua University)

Abstract

The United Nations estimates that 68% of the world's population will be living in urban areas by 2050. At the same time, cities face unprecedented challenges brought on by the rapid digital revolution and dynamic, fast-evolving crises such as climate change and pandemics. This requires urban planners and decision makers to equip themselves not only with the conventional tools for designing cities, but also the tools and skills for understanding complexities and the mastery of data as the 21st century asset for a timely response to these existential challenges of our time. This session plans to invite experts

to discuss how systems thinking, data mastery, and cutting-edge ICT can elevate the field of urban planning and city management to improve the health and happiness of citizens, better social equity, and restore ecological harmony with the planet.

Special Session - *Spatial Planning Education For Climate Action Panel.*

Aysin Dedekorkut-Howes (Griffith University)

Abstract

This panel follows from the successful Urban Thinkers Campus event in November 2021 on Spatial Planning Education in Climate Action organized by UN-HABITAT and the Planners for Climate Action network. A panel of academics from around the world has been brought together to share their experiences of educating planners for climate action and discussing some of the challenges of delivering climate change education. The event seeks to share innovative and effective practices in spatial planning curricula, discuss the current state of play, facilitate collaboration for climate action education across the world, and strengthen the Planners for Climate Action network. The session objective is to review the state of climate change education in the academy and generate and exchange thoughts about how to proceed as a profession into the future in order to better prepare future planners for the challenges ahead. Each panellist will discuss the following overarching questions:

- (a) How are we teaching climate change in Planning programs?
- (b) What should be taught? What do Planning students need to know?
- (c) What are the challenges of delivering climate change education and what can we do to overcome them?

Special Session - *Theorizing Informality As An Expression Of Institutional Change Using 4 Cases From Dar Es Salaam, Tanzania, And Kampala, Uganda.*

Ryan Thomas (Cornell University)

Abstract

Research on urban informality has gained traction in debates about how to develop a global version of urban studies, even as scholars often find the concept limited. Informal urban processes have been identified in contexts of the global North and South, across policy sectors, in encounters between organizations and individuals, to name a few. Some scholars argue that attempts to cleanly separate informal and formal practices results in an over-simplification that misses key aspects of urban processes more broadly. The search is on for alternatives to this form of intellectual governmentality (McFarlane 2019) of the informal-formal dualism.

This pre-organized session will contribute to the ongoing debate about the utility of the informality within urban theory. The contributions all examine informality as a set of fluid practices for operating through and around urban regulations. Each contribution uses the formal-informal binary as an entry point, and then quickly move on to trouble the concept by showing how particular urban processes occur through hybrid institutions, planning, governance, knowledge production, and ecologies. More importantly, the contributions each acknowledge institutional change as a driver of informality by documenting how adaptive actions—through climate change, social learning, and dodging state regulations—results in what would conventionally be called informality. The papers argue that, rather than questioning informality as such, each of the papers address the following question: How do interactions between organizations, communities, and the state shape social action and produce material outcomes in cities? The papers approach this question by comparing policies and practices on building codes, solid waste management, flood risk reduction, and water services. Together, the papers in this session develop approaches to discussing urban informality as a phase of institutional change.

Special Session - *Managing During The Disruptive Era: Online Planning Education And Capacity Building In The Global Village.*

C B Pennink (Institute for Housing and Urban Development Studies, Erasmus University Rotterdam)

Abstract

Covid-19 has brought a lot of changes to planning education and capacity building. During lockdown, most planning schools and capacity building institutions moved to online provision and learning processes. This required understanding of the provision of online education, redesign of curriculum (while trying to preserve the quality of methods), along with investments in people and IT. With the relaxation of lockdown, institutions are now reverting back to face-to-face or rather

hybrid approaches. All of these has meant continuous adjustments and experimentation for planning schools and capacity building institutions in delivering educational material.

So, to consider: What were the experiences with this process? What were key challenges, costs and benefits? One argument often given, is that online learning will be able to reach more people, so it will allow institutions to scale up and hence, to be more inclusive. Is this true? Have we managed this? What kind of practices do we need to adopt to ensure this? What kinds of innovations have institutions used to overcome the digital divide?

This session will provide lessons learnt from the (urban) planning schools, particularly in transitioning from offline to online learning process, and combining hybrid approaches in navigating planning education and capacity building through the pandemic.

Special Session - *Megaprojects Driving Urban Transformation In The Asia Pacific Region: Innovation, Inclusion And Disruption.*

Bakti Setiawan (Department of Architecture and Planning, Faculty of Engineering, Gadjah Mada University)

Abstract

There is an ongoing urban transformation of cities worldwide with the development of megaprojects, ranging from massive upmarket 'global' building and infrastructure projects such as mixed use hotel complexes, casinos and airports, to more locally focussed projects involving urban regeneration or suburban redevelopment. Multiple global and national stakeholders are often involved as part of the urban growth coalition of public and private sectors to attract transnational investments to shape the city's future development with long-term impacts on economy, society and environment. Often special legislation and governance mechanisms are put in place to attract investment to develop megaprojects to drive urban development, redevelopment or regeneration.

While megaprojects may introduce opportunity, innovation and production efficiency, the long gestation periods of megaprojects often expose them to the vagaries of cost overruns, community opposition and unexpected completion delays. Innovation built into a project, meanwhile could amplify risks and uncertainties, posing difficulties for governments to justify private partnership initiatives to citizens. An increasing reliance on public-private partnership to deliver public interest projects may also overshadow longer term metropolitan strategies. Prioritising commercially viable major projects to bring about desirable urban transformation can make it difficult to realise integrated and unified metropolitan plans. Equity concerns may also arise as private sector partners could favour investing in certain types of projects that serve the interests of some demographics over others, leading to exclusion of citizenry and social and economic disruption.

This proposed session will bring together case studies of how megaprojects have contributed to the urban transformation of the Asia Pacific region both positively and negatively in terms of innovation, inclusion and disruption - and highlight the lessons we can draw from these large-scale projects influencing metropolitan planning. Urban scholars from Australia and Indonesia will present their ideas on the following topics.

Special Session - *Sustainable Regional Development Corridors: The Case Of Eastern Kalimantan And The New Indonesian Capital.*

Bakti Setiawan (Department of Architecture and Planning, Faculty of Engineering, Gadjah Mada University)

Abstract

Two years ago, president Jokowi has stated clearly that Indonesia will move her capital from Jakarta to Kalimantan. Earlier this year, 2022, the law on the new capital of the Republic of Indonesia has been approved by the House of Representatives. This means that the idea of a new capital that has actually been conveyed by Indonesias first president, Sukarno, at the beginning of independence of this republic, will soon be realized. President Jokowi even targeted that the Presidential Palace and several ministries have to move to the new capital in 2024.

The legal basis over the countrys new capital must certainly be accompanied by a critical review of the possible impacts and opportunities of the development of the new countrys capital, especially to the Kalimantan region. The development of this new capital will form a regional corridor development that connects the city of Balikpapan, the new capital, and Samarinda, in a setting of environmentally sensitive area of Kalimantan. Some questions arise and require rational answers, among others: how does the development of the new capital city relate to regional planning in Kalimantan? What is the possibility of significant impacts which may occur, both negative and positive? What are the experience of other countries in ensuring sustainable development in new capitals with regional development? What are the local perspectives toward this plan? and, What are the roles of spatial planning in ensuring sustainable regional corridor development?

This roundtable discussion will try to answer some of the questions above, involving several relevant speakers. It is expected that this roundtable discussion will produce a useful policy brief to help realize the development of the new capital within the framework of sustainable regional development.

Special Session - *The Greenness Level Of Samarinda City Using Google Street View Panoramic Photos*

Ali Suhardiman (Faculty of Forestry, University of Mulawarman)

Abstract

Most of the challenge for urban planning in developing countries such as Indonesia is the limitation of resources especially finance for spending basic infrastructure and technology so that economic growth can be lifted up. The city with low urban-based economy tends to grow more informal and often struggle to maintain the proportion of green space that important for good urban environment. Indonesia's regulation required city government to allocate at least 30% of the area as urban green space which can be formed as natural or planted trees in the main street median. This study aims to calculate the greenness level along side the roads in the city of Samarinda in East Kalimantan by using database of panoramic photos from Google Street View (GSV). This research is expected to provide genuine information related to the greenness level in the urban area of Samarinda City. Greenness level is extracted from photo using stepwise process involving several computer softwares (i.e. GIS software, Corel Draw, etc) including Canopeo (an Android-based application). The greenness values for each street/road segments is used to evaluate the greenness area of sub-district in Samarinda. The greenest area in Samarinda city is located in Palaran sub-district (9.31%) where population density is low compare to the other sub-districts. In contrast, Samarinda Ilir sub-district is the least green area in Samarinda (2.85%). Samarinda Ilir sub-district is known as densely populated area and plays crucial role as the center of economic activities in Samarinda. Therefore, in this sub-district, concrete buildings are dominant with very few and sparse vegetated land. In average, road segments in Samarinda City has approximately 5.50% of greenness. GSV photos showed that almost all road segments in Samarinda City do not have vegetation any longer along the sides. The landscape is dominated by buildings, settlements, shops and open area.

Special Session - *Land-Based Finance For Urban Climate Adaptation*

Erwin Van der Krabben (Radboud University)

Abstract

There is increasing global awareness that, despite efforts to reduce greenhouse gas emissions, adaptation to climate change is necessary. Additional stresses related to climate change, including rises in sea level, river flooding, urban heat islands and extreme rainfall and drought, present an emerging challenge for public urban infrastructure. Local governments are required to facilitate additional investments in climate-proof public infrastructure strategies, such as permeable pavements, separation of storm water and sewage, strategic application of greenspace and trees, water storage and retention, and improved draining and grading plans. In times of fiscal stress, however, any new infrastructural investment poses a substantial financial challenge for municipalities. Though there is quite some evidence of the positive impact of climate change adaptation on property values, which undoubtedly benefits real estate developers' business cases, not much is known yet about real estate developers' willingness to contribute to these public infrastructure investments and how cities can facilitate this. This session aims to discuss that gap, by focusing on:

1. the current role of land value capture (LVC) and real estate developer contributions in inclusive urban climate adaptation strategies, and
2. the prospective role LVC may play, if favorable conditions for developers to contribute can be established.

We will address these topics by providing evidence from a variety of countries, including the UK, the US, China and the Netherlands.


This special session is designed as a panel (discussion).

Special Session - *Implementing and Localizing SDGs in Indonesia: Commitments, Leaderships, and Innovations*

Bakti Setiawan (Gadjah Mada University)

Abstract

As a member of the United Nations, Indonesia has always involved and committed to ensuring the achievement of the Sustainable Development Goals/SDGs. This commitment is realized by the establishment of the SDGs secretariat in the central government, as well as the integration of the SDGs in the existing five-year development plan cycle /RPJM, both at the central and regional levels. Periodically, the central government, especially the SDGs secretariat coordinated by the National Development Agency /Bappenas, also conducts monitoring and evaluation of its implementation, as input for the next policy improvement process. After more than 6 years of implementation, the achievements of SDGs in various regions in Indonesia tend to vary. Despite the progress, there is also no guarantee that the entire SDGs target can be achieved by the end of 2030. From several studies and information so far, there are three important factors that determine the achievement of the SDGs, especially in the region. The three factors are: 1) commitment, 2) leadership, and innovation.



This session is aimed at discussing the issue of achieving the SDGs in Indonesia, especially in various regions. In the form of roundtable discussions, some cases of implementation of SDGs in some areas will be presented and discussed, especially to understand how important the three factors above, namely: commitment, leadership and inclusion. Through this discussion, it is expected that some important lessons, could be formulated to further ensure and accelerate the achievement of the SDGs indicators in 2030.

Special Session - *Urban Resilience In Morocco: Review, Approaches, Prospects And Beyond*

Nawal Benabdallah (Center for Global Studies)

Abstract

Worldwide, urban population is increasing in a fast pace. With climate change, growing population and increasing risks, the concept of resilience has gained a huge prominence on the international scale. Cities worldwide are vulnerable to the consequences of a set of issues that can be either natural or caused by human activities disrupting urban space and threatening inhabitants' health. Reshaping cities and territories to face risks is also a social and economic challenge as vulnerable and poor populations are likely to be hit the hardest with not enough resources to recover. For instance, The spread of covid-19 has revealed the vulnerability of city health systems worldwide and demonstrated its ability to deal with this pandemic in order to reduce the massive human, economic and social impacts. Therefore, several developing countries, like Morocco, are experimenting with practical approaches to build their urban resilience. In fact, Urban Resilience is nowadays a priority for Morocco, given its high vulnerability to climate change and natural disasters, especially in the coastal cities and the arid zones that are facing several risks such as flood, drought and earthquakes. The urban growth also generates several urban issues to which Moroccan cities must adapt (urban congestion, pollution, mobility issues, etc.). These cities are more vulnerable to natural, health and industrial risks, in particular, because of territorial disparities. This local awareness is reflected on the ground by several actions taken to strengthen the resilience of the urban territories. This session focuses on the Moroccan context presenting progressive strategies, actions and perspectives to increase local urban resilience. It also aims to explore how spatial planning and digital development can attempt to reduce the consequences of natural and anthropic risks on different urban fabrics in Morocco via significant case studies. Given the multiples challenges facing the Moroccan territory, urban and digital development must be considered in a linked way in order to regenerate the living environments of citizens, reducing risks and thus, increasing urban and community resilience in Moroccan cities.

Special Session - *Introducing IUSA (Indonesian Urban Studies Association): A Global Planning Association To Foster The Growth Of Indonesian Urban Development*

Priza Marendraputra (University of Wisconsin-Madison)

Abstract

Urban development is expanding rapidly in both the Global North and South. It is expected that 70% of the world's population will reside in urban areas by 2050 (UN, 2018). Urban expansion comes with tremendous responsibility, notably speaking of the three pillars: Economy, Equity, and Environment (Douglas and James, 2015). As most of the Global North are already moving towards Sustainability and Green Urbanism, the cities in Global South are still grasping toward a sustainable future. Indonesia, in particular, given the high casualties and damage from the years of the COVID 19 pandemic, is prioritizing the attempts to stimulate economic recovery. Nevertheless, a lesson learned from the recent pandemic and the growing concerns of the extreme cases of climate change as seen in many parts of the world urges urban development in the Indonesian context to develop more sustainably. Accordingly, the future and expected sustainability should also encourage economic stability and improve social welfare and well-being. It is no longer an option to promote one and overlook the two others between economic, environmental, and sustainability. It should be possible and feasible to reinforce the three aspects for future Indonesian urban development through continuous advancements in science and knowledge, capacity building, human resources development, and the shared vision to form effective, productive, and conducive governance. This is where the IUSA (Indonesian Urban Studies Association) will fit in to gather the resources and knowledge from the global perspective to suggest and promote future significant changes toward better Indonesian urban development. IUSA will bring forth constructive suggestions from multi aspects, interdisciplinary, and different perspectives, accompanied by the precedent of the world's best cases toward the contextual solution that fits, is feasible, and applicable to Indonesian urban development.

Special Session - *Informal Services In Asian Cities: Lessons For Urban Planning And Management From The Covid-19 Pandemic*

Aimee Hampel-Milagrosa (Asian Development Bank)

Abstract

The proposed panel session will launch and discuss an edited book on 'Informal Services in Asian cities and the COVID-19 pandemic' jointly produced by ADB and the Asian Development Bank Institute (ADBI). The book, edited by the session chairpersons listed above, draws on contributions from development practitioners as well as researchers and academics. As is widely recognized, the high incidence of informality is a major challenge for sustainable and inclusive development. Over a billion people in developing Asia live and work in the informal sector, characterized by low-paid and low-skilled jobs often in informal enterprises, lack of social protection, and inadequate access to basic urban infrastructure and services. In 2020, COVID-19 pandemic exacerbated the vulnerabilities of the urban poor by disrupting their livelihood and further limiting access to essential urban services. Against this backdrop, based on academic research and primary data including from ADB projects and initiatives, the book advances our understanding of how informality operates within key urban sectors (including transport, water supply, sanitation, housing, financial services) especially in the context of additional challenges created by COVID-19. It offers lessons for better urban planning and management such as the importance of multisector approaches that focus on both physical and social infrastructure, technological innovations that can improve service delivery and augment the impacts of intervention, and the transformative potential of digital technologies to empower informal sector workers and enterprises.

Special Session - Accelerated Urbanization And The Implication In Building Urban Planning Pedagogy

Wiwandari Handayani (Department of Urban and Regional Planning, Diponegoro University)

Abstract

Planners in cities of poor and rich countries alike are beset by the expanding and/or evolving nature of urbanization. With accelerated urbanization, cities experience significant spatial (densification, sprawl, peri-urbanization), economic (poverty, precarity of jobs), political (space and resource contestations), social (groups, values, practices), and cultural (heritage and lifestyle) changes. It is essential to deepen and refine our understanding, in context-specific ways, of why and how cities expand, how they function, and how different societal institutions can contribute toward more effective urban governance and planning. Participants will critically reflect on extant theoretical/conceptual frames, and/or the lack thereof, to better appreciate the diversity of contemporary urbanization processes and dynamics in the global South, especially in Indonesia, and how such awareness can enrich the teaching, learning, and practice of managing and stewarding cities. The session will explore how looking closely and critically at local practice can lead to growing an apt theoretical base for planning and policy education.

Special Session - Beyond Informality: Towards Sustainable Urban Settlements

Ninik Suhartini (Institut Teknologi Bandung)

Abstract

The session furthers global discussion regarding urban and regional planning theories and practice relevant to the contexts of cities which are dealing with issues of informality, segregation, racism and exclusion. The session provides an opportunity for scholars, policy makers and related stakeholders to enrich discourse towards inclusive and sustainable cities, with a focus on integrating informal settlements. Selected papers will be published on IOP Proceedings. Participants of main Track 2 Session are encouraged to submit their papers. Paper submission deadline: 30 June 2022.

Special Session - Informality, Inclusion And Participation: A Global Perspective

Ninik Suhartini (Institut Teknologi Bandung)

Abstract

The session expands discourse regarding urban informality both in theory and practice by bringing different geographical and academic perspectives, from Asia, Africa and Latin America. This session will involve academia, government, NGOs and community leaders to share lessons learned from research and practices in topics of urban informality and its relation to inclusion and participation. The session comprises 3 parts: (a) presentation by academia, (b) Case Studies from 3 continents and (c) panel discussion.

Special Session - **Heritage Gentrification Under Space Of Flow**

Punto Wijayanto (FTSP Universitas Trisakti)

Abstract

Although ubiquitous in cities around the world, gentrification takes forms determined by different circumstances. Gentrification often is a direct effect of heritage conservation initiatives, but this correlation has an additional, potentially contested, layer in the context of a postcolonial urban area like Kota Tua in Jakarta, Kota Lama in Semarang, or other historical inner cities throughout Indonesia. Their distinct colonial urban fabric defines their current characters and even draws attention, crowds and investments.

During this session, we attempt to get a better understanding of the correlation between gentrification and heritage conservation in Indonesian heritage cities. The session will also give an attention on the current use of former colonial/heritage areas in Indonesian cities, with questions such as how are those areas used, by whom, etc. Several Indonesian cities are discussed, brought forward by several experts. Specific local conditions and characteristics are distinguished, as well as those that seem common to the different cities.

Special Session - **Beyond The Informal: Understanding The Self Organised Cities**

Ninik Suhartini (Institut Teknologi Bandung)

Abstract

There has been much debate that cities in the Global South tend to be chaotic, disordered and dysfunctional given the myriad types of urban development emerging from informal governance arrangements, poverty and unequal access to resources. The book gives consideration to understanding the nature of self-organized housing and bottom-up urban renewal especially when such activities both individually and collectively are characterized as being informal. At its essence, the self-organized city is an expression of urban culture and social norms and values of residents and groups that are part of a larger complex system that self-organize. When we interact and connect with towns and cities at myriad scales and activities, we experience everyday urbanism, including the built form characteristics as expressed through its people and their practices to meet housing and related needs. These physical and social expressions inform us of how people live, their needs and the systems they use to go about their daily lives.

Special Session - **Planocosmo 6: Healthy And Livable Spaces**

Bagas Putra (Institut Teknologi Bandung)

Abstract

The negative externalities of massive urbanization significantly impact human health and well-being. The combination of poverty, exclusions, inadequate social support, and exposure to risks for disease contribute to high levels of stress, poor mental health, and physical threat among the vulnerable populations. Furthermore, the emergence of the Covid-19 Pandemic triggers a new potential threat for quick transmission of disease between humans in broader spaces. While some cities have become national epicenters of the pandemic, the nature of Covid-19 disease amplifies the spread and transmission of infection beyond the city boundaries (i.e., regional and global scale) through their connectivity. The Covid-19 crisis has generated a massive loss of employment and income, exacerbating food insecurity. Health services have been partially or completely disrupted worldwide, and many measures have had adverse impacts on mental and physical health. Thus, negative health impacts of COVID-19 are unequally being felt by populations living in vulnerable circumstances, widening and exacerbating existing health inequalities. In responding to the pandemic situation, city and regional governments have to react rapidly and innovatively to address these health issues and challenges in the future. This session will discuss an integrated perspective for revisiting our city and regional planning principles and approaches to respond Covid-19 pandemic crisis. These insights will help fill the knowledge gap in imagining, planning, shaping, and practicing new resilient for our future healthy and livable space after the Covid-19 pandemic.

Special Session - **Cities International Conference 2022 Future Challenges Of The System Of Cities 1**

Vely Kukinul Siswanto (Institute Technology Sepuluh Nopember)

Abstract

Cities do not function in isolation, but a city is a system that has very strong interdependencies between a large region, a nation, a continent, or even on a global scale (Pumain, 2011). It is this relationship that needs to be discussed in depth so as not to let the relationship that is expected to create a trickle-down effect turn into a backwash effect. Systems of cities can also be explained as to why production and consumption activities are concentrated in a number of urban areas of different sizes and industrial compositions rather than uniformly distributed in space (Rahman, 2004). This system will affect increasing returns in national and global economies, the factors that determine skill distribution and income disparity between cities, the impacts of income disparity on welfare, and how resources should be allocated efficiently in a system of cities (Rahman, 2004). Seeing the importance of this topic regarding the city system, the CITIES 2022 international conference was prepared to be a forum for stakeholders from academics, researchers, practitioners, and government to exchange ideas about the direction of the System of Cities development in the future.

Special Session - **Cities International Conference 2022 Future Challenges Of The System Of Cities 2**

Vely Kukinul Siswanto (Institute Technology Sepuluh Nopember)

Abstract

CITIES International Conference 2022 will bring the theme FUTURE CHALLENGES OF THE SYSTEM OF CITIES. Cities do not function in isolation, but a city is a system that has very strong interdependencies between a large region, a nation, a continent or even on a global scale (Pumain, 2011). It is this relationship that needs to be discussed in depth so as not to let the relationship that is expected to create a trickle-down effect turn into a backwash effect.

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Seeing the importance of this topic regarding the city system, the CITIES 2022 international conference was prepared to be a forum for stakeholders from academics, researchers, practitioners, and government to exchange ideas about the direction of the System of Cities development in the future.

Special Session - **Policies To Support Community Resilience In Informal Settlements.**

Jan Fransen (IHS Erasmus University Rotterdam)

Abstract

Informal settlements are vulnerable to shocks such as flooding, pandemics and loss of employment or housing. However, resilience theory is not easily applicable to the context of informal settlements. It therefore remains unclear how to develop resilient informal settlements.

This session discusses policies to support community resilience in informal settlements, defined as the ability of communities to cope with shocks. Community resilience is often not fully recognized by (local) governments. Even if governments support community resilience, this may be bureaucratic or take over community initiatives.

This session is structured around four questions, which will be introduced by a short paper and discussed by a panel representing government, university, and civil society.

(1) How can we raise awareness and strengthen resilience of community living in informal settlements? This section discusses how decision-support tools enable collaborative planning processes for transformative adaptation to climate change.

(2) How can policy makers and planners support street-level community development? Communities in informal settlements develop informal practices to survive hardships and improve livelihoods. Using the street as an entry point, this section discusses how everyday practices in transforming and managing the street unleash coping capacities.

(3) How can (digital) technologies enable community resilience? Digital apps may enable household resilience, but also lead to new inequalities. This section discusses if and how digital services within informal settlements can support community resilience.

(4) What skills do adaptive planners possess? Adaptive planners develop innovative and flexible solutions at the border of formal rules and informal possibilities during shocks and uncertainty. They function as institutional entrepreneurs, pushing for institutional change. This section discusses the skills that adaptive planners require.

Special Session - *Breakfast with monsters: how to use the pathways toolkit for urban & regional resilience*

Joe Ravetz (University of Manchester)

Abstract

Resilience is a universal goal, but highly problematic – resilience to what, for who, where and when? This is not only a technical question, but one of social, economic and political ‘deeper threat multipliers’. One example is the ‘peri-cene’ concept (peri-eco-urban anthropocene) (<http://peri-cene.net>), showing a host of direct problems (flood, fire, storm), along with structural challenges such as inequality and corruption.

‘Synergistics’ – the science and art of working with synergies – has been developed for such challenges. It works in policies / programs, organizations / institutions, business / enterprise models, networks or communities. Synergistics is focused on the potential for collective intelligence, the capacity for communication, learning, innovation and collaboration between all stakeholders involved.

This thinking has been applied for the Pathways Toolkit, as a catalyst for creative thinking, via the practical mapping of cognitive systems, and the potential synergies for transformation:

- ‘Wider’ synergies between stakeholders, mapping the relations of power and exchange around the table.
- ‘Deeper’ synergies between value systems, social, technical, economic, ecological, political and cultural.
- ‘Further’ synergies between upstream causes, (literally up-river as for flooding), and downstream effects.

This interactive hybrid workshop includes:

- quick tour of some current workspaces using the synergistic approach and Pathways toolkit,
- overview of ‘collective urban intelligence’ and ‘collective climatic intelligence’, theory and practice,
- hands-on interactive training with the synergistic approach and Pathways toolkit,
- sample applications in urban / environment planning and management

Participants in this session will be enabled for mapping, and equipped for managing the most profound disruptions and transformations ahead, and for building resilience in cities, regions and ecosystems. The source text is Deeper City (<https://tinyurl.com/2p9xknj4>), and the synergistic laboratory / development hub is on www.manchester.ac.uk/synergistics. Participants can also join this global development community for advancing the state of the art in theory and practice..

Special Session - *Fire & Flood In The ‘Peri-Eco-Urban Anthropocene’: Exploring The Potential Of ‘Transformative Adaptive Pathways’*

Joe Ravetz (University of Manchester)

Abstract

From the project Peri-cene (‘peri-eco-urban anthropocene’), we find the peri-urban is more than a spread-out urban: new kinds of ‘metro-scapes’ are emerging – distributed / bypassed communities, networked economies, displaced ecosystems. Likewise, climate change risk at the city-region level is more than a variation on known hazards: more a new kind of regime with new challenges – technical, social, economic and political.

Broadly, the interactions of peri-urbanization with climate risk involve a host of direct problems (flood, fire, storm, rising seas). They also involve many indirect and structural challenges (inequality, fragmentation, corruption & exploitation).

In response we need to explore technical solutions, e.g. for flood defence, alongside a more strategic ‘transformative adaptation’ of the peri-urban system itself (ongoing and/or intentional), with all the stresses of the society around it.

In our case studies (covering 10% of the global urban population), the lower income megacities (e.g. Chennai, Dhaka) show this directly: but also the apparently safer places (Manchester, San Diego) show deeper layers of vulnerability and myopia. This points to the socio-climatic interface, where most case studies show little consensus or evidence on climate change, rather combinations of power games, hijack, displacement, inertia and myopia.

As for transformative adaptation, the Peri-cene contributes some essential insights. The first is to reframe the problem, as not all about climate change – more about finding common opportunities and pathways, in which climate adaptation is an added ‘co-benefit’. Another is to look for adaptation pathways, not as one-off solutions, more as extended processes of collaboration, which can mobilize the seeds of positive change: e.g. in urban design, real estate markets, landscape

diversity, community development. In the light of current events it also seems essential to explore the 'big bad world' effects of 'what could possibly go wrong', along with possible responses.

Overall this paper draws on a new global evidence base, both technical and societal, to highlight 3 very topical agendas:

- The meaning of 'transformative adaptation', as an emergent interaction in contested complex systems;
- The anatomy of 'adaptive pathways', as societally-led combinations of evidence, value, discourse, strategy and action.
- The overall concept of 'collective peri-eco-urban intelligence' and its applications in urban and climate research / policy.

Special Session - Landscape Approach On Forest Cover Adequacy Based On Strengthened Planning And Management: Connectivity From National, Province, District, To Village

Ruandha Agung Sugardiman (Directorate General of Forest Planning and Environment Management)

Abstract

The Ministry of Environment and Forestry in collaboration with UNDP and GEF seeks to address various causes of environmental damage, to prevent further deforestation and forest degradation through planning, management and monitoring of forests in Non-Forest Area (APL) through the Project "Strengthening Forest Area Planning and Management in Kalimantan (KalFor)".

As a country with the third largest forest area in the world, Indonesia needs to create a better balance of forest management, which fulfils social, economic and ecosystem aspects. One of the efforts being implemented is to strengthen allocation planning and more effective management of forest land, particularly in other land uses that are still forested with high biodiversity and ecosystem services as well as high carbon stock.

Article 4 of Law 41 on 1999 at Forestry, among other states that the Government has the authority to regulate and manage any aspect related to forest, forest areas and forest products and to establish legal relationships between people and forests. Government regulation PP 23/2021 on the Implementation of Forestry article 41 states Regional Governments regulate forest cover outside state forest areas to optimize environmental, social, economic, and cultural benefits, as part of maintaining adequate forest area and forest cover. Provision of these regulations strengthen the alignment of national, provincial, and district policies that further promote an improved practice at village level on non-state forest protection.

Optimization of land use for forest cover adequacy in the landscape to obtain environmental, social, economic, and cultural benefits, is achieved by a land use planning. The implementation of the planning technically resembles forest use planning in forest areas which requires information from field geophysical inventory activities such as slopes, soil types, rainfall, forest vegetation cover, animals and their habitats; environmental impact control. As for landscape use planning, it is necessary to add other important information such as ownership, use, land tenure and regional development plans.

The KalFor project is another effort by the government with UNDP support through activities aimed at (i) mainstreaming forest ecosystem services and biodiversity considerations into national and provincial policies and decision-making processes for forest planning and management outside forest areas, (ii) develop and demonstrate strategies for integrating forest management and conservation planning with other use areas and/or plantation lands in 4 (four) districts in Kalimantan, (iii) test/demonstrate innovative incentive mechanisms to reduce deforestation and (iv) conduct knowledge management and monitoring evaluation.

Special Session - Cities International Conference 2022 Future Challenges Of The System Of Cities 3.

Vely Kukinul Siswanto (Institute Technology Sepuluh Nopember)

Abstract

Cities do not function in isolation, but a city is a system that has very strong interdependencies between a large region, a nation, a continent, or even on a global scale (Pumain, 2011). It is this relationship that needs to be discussed in depth so as not to let the relationship that is expected to create a trickle-down effect turn into a backwash effect.

Systems of cities can also be explained as why production and consumption activities are concentrated in a number of urban areas of different sizes and industrial compositions rather than uniformly distributed in space (Rahman, 2004).

This system will affect increasing returns in national and global economies, the factors that determine skill distribution and income disparity between cities, the impacts of income disparity on welfare, and how resources should be allocated efficiently in a system of cities (Rahman, 2004).

Seeing the importance of this topic regarding the city system, the CITIES 2022 international conference was prepared to be a forum for stakeholders from academics, researchers, practitioners, and government to exchange ideas about the direction of the System of Cities development in the future.

Special Session - **Cities International Conference 2022 Future Challenges Of The System Of Cities 4.**

Vely Kukinul Siswanto (Institute Technology Sepuluh Nopember)

Abstract

CITIES International Conference 2022 will bring the theme FUTURE CHALLENGES OF THE SYSTEM OF CITIES. Cities do not function in isolation, but a city is a system that has very strong interdependencies between a large region, a nation, a continent or even on a global scale (Pumain, 2011). It is this relationship that needs to be discussed in depth so as not to let the relationship that is expected to create a trickle-down effect turn into a backwash effect.

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Special Session - **Cities International Conference 2022 Future Challenges Of The System Of Cities 5.**

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Special Session - **The Collaborative Discussion On The New Capital City Of Indonesia.**

Haryo Winarso (Bandung Institute of Technology)

Abstract

In August 2019, Indonesia's president, Joko Widodo, announced that his government would relocate the nation's capital from Jakarta on the island of Java to Kalimantan. In announcing the new capital, the government has highlighted many reasons for the move. While the relocation of the capital might benefit the nation and its people, past efforts to create new capital cities for countries around the world have demonstrated that this process is also likely to come with many significant challenges. The promise and challenges of Indonesia's capital relocation initiative create opportunities for building lasting institutional connections, generating path-breaking research on urbanization and regional development, and informing crucial policy and planning debates that can impact the lives of millions of Indonesian citizens. Against this

background, we propose sessions and invite scholars, academicians, and practitioners from whatever experience to share their knowledge and experience in relocating a national capital city. The objectives of this sessions are (1) to share theoretical knowledge of Capital City relocation as well as its motivation and key processes, (2) to transfer international best practices and lessons learned of capital city relocation, and (3) to discuss key important issues, as well as potential and challenges of Capital City relocation. We believe that opening a special session discussing the new capital city will be very beneficial for the relocation of the capital city and urban and regional planning, not only for Indonesia but also for global discourses



Special Session - *Greening the Street Verge – Understanding Community Perceptions Towards Informal Green Space.*

Mohammad Swapan (Curtin University)

Abstract

Urban green space within Perth Metropolitan Area (Western Australia) has significantly reduced over the last 20 years due to the increasing trend of urban infill. As the population grows and urbanisation continues to occur, increasing pressure is placed on formal green spaces to provide ecosystem services to a larger group of people. Some scholars say these formal spaces alone will not be able to provide citizens with the access to nature needed in day-to-day life. Researchers and policy makers are increasingly turning to informal green space, including urban street verges, as a creative way to re-introduce urban green space back into urban areas. This study attempts to understand the different factors affecting the perception of urban street verges within the City of Bayswater in Perth and attempts to understand what factors may lead to the non-adoption of verge gardens. Initially, a content analysis was carried out to contextualise the verge planting practice amongst local councils within Perth. This was followed by a survey administered to the non-adopters in the City of Bayswater, which attempted to identify what they perceive the benefits of verge planting to be, what are the barriers which influences their decision to non-adopt and understand their perception of the cost of verge planting. Amongst the residents who own/mortgage their own home, the most frequently mentioned factor was the fear of the garden being either vandalised or damaged. Verge planting in Perth has largely been identified as providing numerous benefits to the community, although significant barriers influence non-adoption. Verges still receive heavy restrictions by local councils due to the competing interests involved with the verge space. Streetscape design has also been identified as a factor influencing the adoption of verge gardening, which can re-introduce green space back into urban areas.

Special Session - *Investigating the change of heritage meanings in the context of urban landscape. Case study: the city core of Yogyakarta, Indonesia.*

Johannes Parlindungan (University of Twente)

Abstract

The historic city of Yogyakarta is a well-recognized center of Javanese culture in Indonesia. This city's urban form and architecture are representations of traditional Javanese philosophy and colonial architecture. Today, new development brings modernity by introducing contemporary buildings, activities and images. Therefore, the application of heritage principles in managing old districts plays an essential role in producing new meanings and preserving ancient symbols. Along with the implementation of heritage conservation programs and tourism, the current urbanization brings a potential for altering the cultural identity of heritage. A few heritage impact assessment notions have offered a tool for assessing the impacts of development on individual heritage object. Then, how to deal with the issue in an urban landscape? This study tried to answer the gap by proposing a socio-semiotic approach to gauge the influence of urbanization on the cultural meaning of heritage. The investigation used data regarding urban morphology and interviews. The study found that the participants' perceived heritage is inseparable from its landscape context. The physical objects of urban morphology expressed the interwoven meanings of the past and modernity. The presence of monumental heritage buildings was not enough to highlight the area's history and local culture as a dominating theme. Moreover, the symbols of globalization through modern buildings, international brands and tourism have brought new meanings that, unfortunately, compete with Yogyakarta's locality. Therefore, the conservation of individual heritage objects was not enough to maintain the overall cultural and historical discourses in the urban landscape context. Finally, the study offers a new approach to gauging cultural meanings in the context of the historic urban landscape.

Special Session - *GPEAN: The first 20 years, and the next 20 years.*

Bruce STIFTEL (GPEAN)

Abstract



Special Session - *Reshaping suburbia through redevelopment: The quest for next generation model suburbs by Yokohama City, Japan.*

Shahed Khan (-)

Abstract

There is an ongoing urban transformation of cities worldwide with the development of megaprojects, ranging from massive upmarket 'global' building and infrastructure projects such as mixed use hotel complexes, casinos and airports, to more locally focussed projects involving urban regeneration or suburban redevelopment. Multiple global and national stakeholders are often involved as part of the urban growth coalition of public and private sectors to attract transnational investments to shape the city's future development with long-term impacts on economy, society and environment. Often special legislation and governance mechanisms are put in place to attract investment to develop megaprojects to drive urban development, redevelopment or regeneration.

While megaprojects may introduce opportunity, innovation and production efficiency, the long gestation periods of megaprojects often expose them to the vagaries of cost overruns, community opposition and unexpected completion delays. Innovation built into a project, meanwhile could amplify risks and uncertainties, posing difficulties for governments to justify private partnership initiatives to citizens. An increasing reliance on public-private partnership to deliver public interest projects may also overshadow longer term metropolitan strategies. Prioritising commercially viable major projects to bring about desirable urban transformation can make it difficult to realise integrated and unified metropolitan plans. Equity concerns may also arise as private sector partners could favour investing in certain types of projects that serve the interests of some demographics over others, leading to exclusion of citizenry and social and economic disruption.

This proposed session will bring together case studies of how megaprojects have contributed to the urban transformation of the Asia Pacific region both positively and negatively in terms of innovation, inclusion and disruption - and highlight the lessons we can draw from these large-scale projects influencing metropolitan planning. Urban scholars from Australia and Indonesia will present their ideas on the following topics.

Special Session - *Urban regeneration in Heritage City of Yogyakarta.*

Bakti Setiawan (-)

Abstract

There is an ongoing urban transformation of cities worldwide with the development of megaprojects, ranging from massive upmarket 'global' building and infrastructure projects such as mixed use hotel complexes, casinos and airports, to more locally focussed projects involving urban regeneration or suburban redevelopment. Multiple global and national stakeholders are often involved as part of the urban growth coalition of public and private sectors to attract transnational investments to shape the city's future development with long-term impacts on economy, society and environment. Often special legislation and governance mechanisms are put in place to attract investment to develop megaprojects to drive urban development, redevelopment or regeneration.

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Special Session - *Innovation, inclusion and disruption with megaprojects: A case study of the Queen's Wharf Brisbane.*

Bhishna Bajracharya (-)

Abstract

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Special Session - *Megaprojects and urban transformation: Impacts of the Sydney 2000 Olympics Games on Sydney, Australia.*

Awais Piracha (-)

Abstract

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Special Session - **Establishing the City's global status: Waterfront Development in Perth, Australia.**

Mohammad Swapan (-)

Abstract

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Special Session - **Presentation: Four urban health paradigms.**

Jinhee Kim (-)

Abstract

Background

Planning for urban health outcomes is complex. Stakeholders from wide range of disciplines are involved in the processes of creating health environments. Different understandings and approaches to urban health are reflected across disciplinary languages and terminologies, but also in what the foundational beliefs and ideas about the concept of urban health is, the priority issues that require attention, the underlying causes and causal pathways of these issues, preferred methodologies to investigate and produce evidence, and appropriate solutions. Lack of clarity around the underlying ideas and beliefs of the different actors involved can be a barrier to successful collaboration. In this session participants will learn to recognize different understandings in order to facilitate their practice as transdisciplinary urban health practitioners.

Content

This workshop introduces participants to a framework to differentiate between the different belief systems, or urban health paradigms, based on conceptual, theoretical, methodological and instrumental dimensions.

This workshop will run virtually (or, in a hybrid mode, if possible) for 70 minutes. The workshop will utilise an external online platform such as Google Jamboard to facilitate interaction and discussion between participants. The workshop will be composed of a mix of presentations by the workshop coordinators and group discussions with the workshop participants on the following topics:

- Why is it important to understand paradigms for transdisciplinary approach to urban health?
- What are the types of urban health paradigms?
- How can we apply the urban health paradigms framework in research, practice and policy?
- What are some actions that would facilitate transdisciplinary urban health approaches?

Conclusion Urban health is a complex but also crucial agenda item, featuring highly in many current urban governance and politics debates. By increasing their awareness of different urban health paradigms, collaborators can better align their processes and practices to find transdisciplinary solutions.

Special Session - **Activity: Identifying participants paradigm positioning.**

Alana Crimeen (University of New South Wales)

Abstract

Background

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Special Session - **Presentation: Urban health paradigms in Western Sydney**

Jinhee Kim (-)

Abstract

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Special Session - **Activity: Case Study applying the paradigms in a transdisciplinary planning activity**

Kristina Ulm (University Of New South Wales)

Abstract

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Special Session - **Annual dynamics of Viet Nam's coastline derived from 35 years of Earth observation data**

Felix Bachofer (-)

Abstract

Implementing research for sustainability and resilience is the core task of the funding priority SURE »Sustainable Development of Urban Regions« sponsored by the BMBF. Within the SURE framework, ten collaborative projects with partners from Germany, Southeast Asia, and China cooperate closely with actors from politics, public administration, civil society, and business. The projects aim to develop concepts and test locally implementable solution strategies for sustainable transformation of fast-growing urban regions in Southeast Asia and China. Three collaborative projects (implementing in China, Laos, Indonesia, and Vietnam) and the SURE Facilitation and Synthesis Research project will present their findings related to water sensitive planning and synthesis approaches for trans- and interdisciplinary projects.

The FloodAdaptVN project provides insights derived from the spatiotemporal coastline dynamics analysis that can be used to understand the current flood risk in Central Vietnam. This insight will provide the base for scenario development that will serve as input for future flood risk modelling.

The second contribution is from the IMECOGIP project, presenting the state of development of a toolbox that makes selected ES assessment methods available for urban planners. With a particular focus on water-related ecosystem services: water-flow regulation, groundwater recharge, transpirative cooling. The project will discuss how they embed these assessments into the overarching toolbox and how they can foster sustainable development in urban areas.

In the third presentation, approaches and methodologies for assessing and monitoring urban water resources will be discussed by the PolyUrbanWaters project. In particular, the ground realities and the context of secondary and tertiary southeast Asian cities and their challenges and experiences from the field.

In closure, the SURE Facilitation and Synthesis Research project will present project-related reference and reflection framework methods and discuss cross-sectional analysis approaches through digital tools for synthesis research in trans and inter-disciplinary projects

Special Session - **Assessment of water-related ecosystem services in a comprehensive toolbox for planners**

Harald Zepp (-)

Abstract

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Special Session - **Urban water resources assessment and monitoring. The bridge between theory and practice. Experiences from the field. Case study: Sam Neua, Laos; Sleman, Indonesia**

Xhesika Hoxha (-)

Abstract

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Special Session - *Residing with flood risk in informal settlements in Dar es Salaam: Choices and compromises*

Emmanuel Fares Kemwita (-)

Abstract

Research on urban informality has gained traction in debates about how to develop a global version of urban studies, even as scholars often find the concept limited. Informal urban processes have been identified in contexts of the global North and South, across policy sectors, in encounters between organizations and individuals, to name a few. Some scholars argue that attempts to cleanly separate informal and formal practices results in an over-simplification that misses key aspects of urban processes more broadly. The search is on for alternatives to this form of intellectual governmentality (McFarlane 2019) of the informal-formal dualism.

This pre-organized session will contribute to the ongoing debate about the utility of the informality within urban theory. The contributions all examine informality as a set of fluid practices for operating through and around urban regulations. Each contribution uses the formal-informal binary as an entry point, and then quickly move on to trouble the concept by showing how particular urban processes occur through hybrid institutions, planning, governance, knowledge production, and ecologies. More importantly, the contributions each acknowledge institutional change as a driver of informality by documenting how adaptive actions—through climate change, social learning, and dodging state regulations—results in what would conventionally be called informality. The papers argue that, rather than questioning informality as such, each of the papers address the following question: How do interactions between organizations, communities, and the state shape social action and produce material outcomes in cities? The papers approach this question by comparing policies and practices on building codes, solid waste management, flood risk reduction, and water services. Together, the papers in this session develop approaches to discussing urban informality as a phase of institutional change.

Special Session - *Solid waste collection in the informal settlements of Cities in Africa: A manifestation of regulatory dilemma for actor's participation and collaboration in Kampala*

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Abstract

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Special Session -

Ryan Thomas (Cornell University)

Abstract

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Special Session - “Urban villages in global South cities” Geographies, production, and the growth of informal settlements in urban Tanzania

Francis Dakyaga (-)

Abstract

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Special Session - Private cities at the crossroads of sustainable urbanization

Bernhard Mueller (Technische Universitaet Dresden)

Abstract

Over the past decades, many Southeast Asian countries have seen rapid development of peri-urbanization with the formation of extensive metropolitan areas with multiple millions of residents. Mega Urban Regions (MURs) of Manila, Jakarta, Bangkok, Kuala Lumpur, Hanoi, and Yangon represent the above phenomenon. The availability of cheap land for housing and industrial development in the fringe of such cities makes land-use conversion rather attractive at a multi-level scale, from small gated residential compounds to sizeable industrial and residential areas. In addition, local and international private developers invest in the development of new large-scale townships to grasp investment opportunities. They do not only develop but also manage such new towns after their completion. Residents enter into contractual relations with them, and the delivery of essential services and infrastructure within such areas is arranged through the private developer rather than through the municipal government. Thus they create what might best be described as a form of private government. The phenomenon of ‘Private Cities’ around big cities like Jakarta becomes the main topic of this session. Private city development has become a powerful force in shaping the ongoing urban transition in many developing countries. The session explores the features of private cities based on literature review and practical experiences, including results of focus group discussions with private developers, academicians, governments, and non-government organizations. The session aims at contributing answers to the question whether and to what extent private cities can be regarded as a model for sustainable urban expansion in Southeast Asia in the future. With this objective and the proposed presentations, the session perfectly fits to the overall track description.

Special Session - ***Sustainable urban expansion – lessons from a controversial discussion in Europe***

Paulina Schiappacasse (Technische Universitaet Dresden)

Abstract

Over the past decades, many Southeast Asian countries have seen rapid development of peri-urbanization with the formation of extensive metropolitan areas with multiple millions of residents. Mega Urban Regions (MURs) of Manila, Jakarta, Bangkok, Kuala Lumpur, Hanoi, and Yangon represent the above phenomenon. The availability of cheap land for housing and industrial development in the fringe of such cities makes land-use conversion rather attractive at a multi-level scale, from small gated residential compounds to sizeable industrial and residential areas. In addition, local and international private developers invest in the development of new large-scale townships to grasp investment opportunities. They do not only develop but also manage such new towns after their completion. Residents enter into contractual relations with them, and the delivery of essential services and infrastructure within such areas is arranged through the private developer rather than through the municipal government. Thus they create what might best be described as a form of private government. The phenomenon of 'Private Cities' around big cities like Jakarta becomes the main topic of this session. Private city development has become a powerful force in shaping the ongoing urban transition in many developing countries. The session explores the features of private cities based on literature review and practical experiences, including results of focus group discussions with private developers, academicians, governments, and non-government organizations. The session aims at contributing answers to the question whether and to what extent private cities can be regarded as a model for sustainable urban expansion in Southeast Asia in the future. With this objective and the proposed presentations, the session perfectly fits to the overall track description.

Special Session - ***Urban expansion in Jakarta Metropolitan Region: Analysis of the rapid emergence of Indonesian private cities***

Eka Permanasari (Universitas Pembangunan Jaya)

Abstract


Over the past decades, many Southeast Asian countries have seen rapid development of peri-urbanization with the formation of extensive metropolitan areas with multiple millions of residents. Mega Urban Regions (MURs) of Manila, Jakarta, Bangkok, Kuala Lumpur, Hanoi, and Yangon represent the above phenomenon. The availability of cheap land for housing and industrial development in the fringe of such cities makes land-use conversion rather attractive at a multi-level scale, from small gated residential compounds to sizeable industrial and residential areas. In addition, local and international private developers invest in the development of new large-scale townships to grasp investment opportunities. They do not only develop but also manage such new towns after their completion. Residents enter into contractual relations with them, and the delivery of essential services and infrastructure within such areas is arranged through the private developer rather than through the municipal government. Thus they create what might best be described as a form of private government. The phenomenon of 'Private Cities' around big cities like Jakarta becomes the main topic of this session. Private city development has become a powerful force in shaping the ongoing urban transition in many developing countries. The session explores the features of private cities based on literature review and practical experiences, including results of focus group discussions with private developers, academicians, governments, and non-government organizations. The session aims at contributing answers to the question whether and to what extent private cities can be regarded as a model for sustainable urban expansion in Southeast Asia in the future. With this objective and the proposed presentations, the session perfectly fits to the overall track description.

Special Session - ***The Paradox of Social Inclusivity and Private Cities***

Muhammad Zaly Shah (Universitas Pembangunan Jaya)

Abstract

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Special Session - *Private Cities and Consumption: Urban Development Patterns in Southeast Asia*

Surya Gunanta Tarigan (-)

Abstract

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Special Session - *Spatial planning for smart sustainability in Shenzhen, China's 'Silicon Valley'*

Mee Kam Nga (-)

Abstract

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Special Session - *Spatial planning for smart sustainability in Greater Manchester, U.K*

Cecilia Wong (-)

Abstract

-

Special Session - *How Data May Help Build Sustainable Cities*

Ying Long (-)

Abstract

The United Nations estimates that 68% of the world's population will be living in urban areas by 2050. At the same time, cities face unprecedented challenges brought on by the rapid digital revolution and dynamic, fast-evolving crises such as climate change and pandemics. This requires urban planners and decision makers to equip themselves not only with the conventional tools for designing cities, but also the tools and skills for understanding complexities and the mastery of data as the 21st century asset for a timely response to these existential challenges of our time. This session plans to invite experts to discuss how systems thinking, data mastery, and cutting-edge ICT can elevate the field of urban planning and city management to improve the health and happiness of citizens, better social equity, and restore ecological harmony with the planet.



Special Session - **Digital Building & Sustainability**

Xu Weiguo (-)

Abstract

The United Nations estimates that 68% of the world's population will be living in urban areas by 2050. At the same time, cities face unprecedented challenges brought on by the rapid digital revolution and dynamic, fast-evolving crises such as climate change and pandemics. This requires urban planners and decision makers to equip themselves not only with the conventional tools for designing cities, but also the tools and skills for understanding complexities and the mastery of data as the 21st century asset for a timely response to these existential challenges of our time. This session plans to invite experts to discuss how systems thinking, data mastery, and cutting-edge ICT can elevate the field of urban planning and city management to improve the health and happiness of citizens, better social equity, and restore ecological harmony with the planet.

Special Session - **Rethinking Urban Informal Settlements: Opportunities and Challenges of Urban Design in Creating Happy Digital Cities of the Future**

Sumila Gulyani (-)

Abstract

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Special Session - **How computation will save architecture and our happiness**

Peter Russell (-)

Abstract

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Special Session - **Use of ICT in Planning Walkable Built Environments with Informal Settlements**

Anes Sevtsuk (-)

Abstract

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Special Session - Who Are We – Planning Academics -, What Are We Doing, and What Difference does it make? What is the "planning" we research, teach, and our graduates practice?

Yancili Lozano-Torres Asst. essor (-)

Abstract

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Who Are We – Planning Academics -, What Are We Doing, and What Difference does it Make? What is the planning we research, teach, and our graduates practice?

Today there arent any good answers to these questions. Perhaps Tim Chapins Planning is a funny field is the best answer so far. Another approach may give us better answers: relating planning to practice.

Planning theorists, educators and planners have always recognized planning as a practice. Sociology of knowledge definitions of practice imply three kinds of planning practices: 1) Generic planning - planning that everyone does and anyone can do; 2) Recognized knowledge-centered planning practices: something (e.g. spatial, environmental or transportation) planning; 3) Real planning in specific contexts, e.g. metro-regional planning for Jakarta, European TEN transportation planning, informal planning for Soweto (South Africa), or insurgent planning in Rio favelas (Brazil). Planning theories are linked to different practices: generic planning theories and something (e.g. urban or Southern) planning theories. Researching real planning practices produces planning theories. Planning, then, is not a practice, but a set of diverse practices in a multiscale hierarchy linking different kinds of practices to different levels of planning theories.

Understanding planning as diverse planning practices offers answers to these questions. Who are we – planning academics? asks about planning: is it a field, discipline or profession? The only arena that unites the various practices is planning as a discipline: engaging academics, students and practitioners of generic planning and specialized (urban, environmental, or development planning) alike. What are we doing? asks about planning education. Planning programs can prepare students for their diverse practices by recognizing their specializations as their graduates planning practices, with core curricula providing the essential competences for planning practice. What is the planning our graduates practice? They are not planners transforming societies, but professional planners engaged in city-, environmental- or development planning, contributing their expert knowledge to the collective development of better communities and a sustainable global environment.

Special Session - Who Are We – Planning Academics -, What Are We Doing, and What Difference does it make? What is the "planning" we research, teach, and our graduates practice?

Catherine L. Ross Regents essor (-)

Abstract


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Special Session - *Who Are We – Planning Academics -, What Are We Doing, and What Difference does it make? What is the "planning" we research, teach, and our graduates practice?*

Niraj Verma essor (-)

Abstract

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Special Session - *Beyond Informality: Towards Sustainable Urban Settlements*

Narimah Samat (-)

Abstract

The session furthers global discussion regarding urban and regional planning theories and practice relevant to the contexts of cities which are dealing with issues of informality, segregation, racism and exclusion. The session provides an opportunity for scholars, policy makers and related stakeholders to enrich discourse towards inclusive and sustainable cities, with a focus on integrating informal settlements. Selected papers will be published on IOP Proceedings. Participants of main Track 2 Session are encouraged to submit their papers. Paper submission deadline: 30 June 2022.

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Saswat Bandyopadhyay (-)

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Special Session - ***Planning for urban flood resilience: the institutional analysis of multiple flood risk management policies in Italy***

Corinne Vitale (-)

Abstract


Both impacts of climate change, such as sea level rise, increasing variability of river discharges, and more intense precipitation, and urbanization in flood prone areas have exacerbated flood risks in many urban areas across the globe. Therefore, an important task for urban planners is to enhance urban flood resilience. This session will critically discuss (1) the relevance of various resilience concepts, such as engineering, ecological and evolutionary resilience, (2) various governance challenges, such as the coordination between levels of government, policy sectors, and public and private parties, and (3) related normative issues, such as inclusiveness, fairness and justice. The session presents case studies of the governance of urban flood resilience in Italy, Thailand, Vietnam and Indonesia, thus allowing for a discussion on the relevance of case specific conditions, such as socio-economic conditions and the institutional setting, for understanding the main governance challenges. Special attention will be paid to the specific role of donor agencies in enhancing flood resilience..

Special Session - ***Institutional transformation for inclusive flood resilience planning: main findings and suggestions for future cities***

Naim Laeni (-)

Abstract

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Special Session - *Cross-scale interactions in flood resilience planning: A study from Central Java*

Intan Hapsari Surya Putri (-)

Abstract

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Special Session - *Speculating on Plans: Multi-scalar politics of infrastructure development in southern Myanmar*

Dorothy Tang (National University of Singapore)

Abstract

Economic development strategies are manifest in spatial products and “bundled” infrastructures that consist of capital flow, knowledge and expertise, physical infrastructures, policies, and subject to a variety of stakeholders. This session explores the following questions: What are the spatial implications of economic development strategies in Southeast Asia? What are the infrastructural and land-use challenges of contemporary economic development policy? and what are the contemporary and historical experiences of the urban periphery, as well as small and medium-sized cities, in the intersection of economic development and urban planning strategies today?


This interdisciplinary panel draws on perspectives from anthropology, geography, architecture and planning to explore the socio-spatial implications of economic development planning in Southeast Asia. We are particularly interested in looking beyond the region’s megacities to consider emergent patterns of urban economic development. The four paper presentations focus on issues of economic development in Southeast Asia, ranging from Jakarta’s peri-urban fringe, small and medium-sized cities across the Philippine Archipelago, a mid-sized city in northeast Thailand, and a coastal town in southern Myanmar. By centering such geographies, we are able to observe nuanced and unconventional interactions amongst state and non-state actors and gain insight into the multi-scalar politics at play.

Special Session - *Speculating on Plans: Multi-scalar politics of infrastructure development in southern Myanmar*

Justin D. Stern (-)

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Miya Irawati (-)

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Special Session - *Speculating on Plans: Multi-scalar politics of infrastructure development in southern Myanmar*

Trude Renwick ()

Abstract

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Special Session - *Indonesia Commitment on SDGs*

National Secretariat of SDGs/Bappenas ()

Abstract

As a member of the United Nations, Indonesia has always involved and committed to ensuring the achievement of the Sustainable Development Goals/SDGs. This commitment is realized by the establishment of the SDGs secretariat in the central government, as well as the integration of the SDGs in the existing five-year development plan cycle /RPJM, both at the central and regional levels. Periodically, the central government, especially the SDGs secretariat coordinated by the National Development Agency /Bappenas, also conducts monitoring and evaluation of its implementation, as input for the next policy improvement process. After more than 6 years of implementation, the achievements of SDGs in various regions



in Indonesia tend to vary. Despite the progress, there is also no guarantee that the entire SDGs target can be achieved by the end of 2030. From several studies and information so far, there are three important factors that determine the achievement of the SDGs, especially in the region. The three factors are: 1) commitment, 2) leadership, and innovation.

This session is aimed at discussing the issue of achieving the SDGs in Indonesia, especially in various regions. In the form of roundtable discussions, some cases of implementation of SDGs in some areas will be presented and discussed, especially to understand how important the three factors above, namely: commitment, leadership and invasion. Through this discussion, it is expected that some important lessons, could be formulated to further ensure and accelerate the achievement of the SDGs indicators in 2030..

Special Session - Case 1: Yogyakarta Province

Beny Suharsono MSC ()

Abstract

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Special Session - Case 2: East Kalimantan Province

Case 2: Eka Rahayu Normasari ST. ()

Abstract

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Special Session - Case 3: Denpasar City

Wisnu ()

Abstract

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Special Session - Assessing universal accessibility of cultural heritage attractions in Prayagraj city, India

Kakoli Saha ()

Abstract

Globalisation is not new, but its pace has accelerated in last few decades and its imprint is now evident in hundreds of cities and towns as they experience rapid urban growth. On one hand, the new wave of technology-driven urbanisation is leading to emergence of new spaces of working and living, and of production and consumption. On the other, cities are witnessing rapid decline in historic attributes, cultural richness of traditions, multiple and diverse identities – all that contribute to living heritage. While cities struggle to balance the expectations of new developments and infrastructure, there are increasing calls for sensitisation towards the multi-layered histories and heritages that constitute the core of the cities and towns. Many planning instruments including policies and projects are developed for the preservation and conservation of heritage and its various components. For example, at global level, UNESCO has continued to widen its listing of heritage – just in last five years, several cities were declared as “cities with living heritage” but the real impact of such declarations remains to be seen. Similarly, several cities have enacted their own listing of heritage structures in their jurisdictions and applied restricted development policies. In this session, we invite planning professionals and scholars to debate around the rhetoric and discourses that are built around the official and formal listing and status of heritage for management against the real work on ground. Moreover, in these discourses, it is likely that the informal heritage, the folk heritage in built and non-built environment is missed out. In some Asian cities, it might be the case of too much heritage. How can planning help in addressing some of the complex and real issues around heritage management versus the development agenda – this is the core question to be dwelled on in this session. A tentative list of topics includes (but not limited to):


- Heritage planning for future
 - Lessons from the past for the emerging built environment
 - Beyond listing: Incorporating heritage in all-round socio-economic development
 - Heritage for reinforcing / retracing cultural identity of place and people
 - Historic cities and heritage tourism
 - Heritage in Planning legislation
 - Institutional governance for heritage management
- The participants can think of developing research publications and policy papers from this session.

Special Session - Reinforcing the Cultural Identity of Kurukshetra

Bharat Dahiya ()

Abstract

Globalisation is not new, but its pace has accelerated in last few decades and its imprint is now evident in hundreds of cities and towns as they experience rapid urban growth. On one hand, the new wave of technology-driven urbanisation is leading to emergence of new spaces of working and living, and of production and consumption. On the other, cities are witnessing rapid decline in historic attributes, cultural richness of traditions, multiple and diverse identities – all that contribute to living heritage. While cities struggle to balance the expectations of new developments and infrastructure, there are increasing calls for sensitisation towards the multi-layered histories and heritages that constitute the core of the cities and towns. Many planning instruments including policies and projects are developed for the preservation and conservation of heritage and its various components. For example, at global level, UNESCO has continued to widen its listing of heritage – just in last five years, several cities were declared as “cities with living heritage” but the real impact of such declarations remains to be seen. Similarly, several cities have enacted their own listing of heritage structures in their jurisdictions and



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Special Session - ***Sacral Waters and the Jewel Mountain: Reclaiming Kunds in Ayodhya, India***

Amita Sinha ()

Abstract

Globalisation is not new, but its pace has accelerated in last few decades and its imprint is now evident in hundreds of cities and towns as they experience rapid urban growth. On one hand, the new wave of technology-driven urbanisation is leading to emergence of new spaces of working and living, and of production and consumption. On the other, cities are witnessing rapid decline in historic attributes, cultural richness of traditions, multiple and diverse identities – all that contribute to living heritage. While cities struggle to balance the expectations of new developments and infrastructure, there are increasing calls for sensitisation towards the multi-layered histories and heritages that constitute the core of the cities and towns. Many planning instruments including policies and projects are developed for the preservation and conservation of heritage and its various components. For example, at global level, UNESCO has continued to widen its listing of heritage – just in last five years, several cities were declared as “cities with living heritage” but the real impact of such declarations remains to be seen. Similarly, several cities have enacted their own listing of heritage structures in their jurisdictions and applied restricted development policies. In this session, we invite planning professionals and scholars to debate around the rhetoric and discourses that are built around the official and formal listing and status of heritage for management against the real work on ground. Moreover, in these discourses, it is likely that the informal heritage, the folk herniate in built and non-build environment is missed out. In some Asian cities, it might be the case of too much heritage. How can planning help in addressing some of the complex and real issues around heritage management versus the development agenda – this is the core question to be dwelled on in this session. A tentative list of topics includes (but not limited to):


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Special Session - ***Vulnerable heritage and risky development: Examining the UNESCO World Heritage City of Ahmedabad, India***

Pratima Singh ()

Abstract

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Special Session - ***Searching for People’s Heritage: CapAsia Experience in Sukhothai***

Nihal Perera ()

Abstract

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Special Session - ***Informality, Inclusion And Participation: A Global Perspective***

Camila D’Ottaviano ()

Abstract

The session expands discourse regarding urban informality both in theory and practice by bringing different geographical and academic perspectives, from Asia, Africa and Latin America. This session will involve academia, government, NGOs and



community leaders to share lessons learned from research and practices in topics of urban informality and its relation to inclusion and participation. The session comprises 3 parts: (a) presentation by academia, (b) Case Studies from 3 continents and (c) panel discussion.

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Gilbert Siame (Norwegian University of Science and Technology)

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Special Session - ***Land-based finance for climate adaptation: evidence from the Netherlands***

Erwin van der Krabben (Radboud University)

Abstract

Focus areas of this special session

- Exploration of alternative, sustainable models of land-based revenue generation that promote climate adaptation and equitable local development;
- Comparative studies of different types of adaptation strategies and municipal finance implications;
- Private developers' willingness to contribute to climate proof urban infrastructures;
- Suitability of LVC instruments for Global South countries

Abstract

There is increasing global awareness that, despite efforts to reduce greenhouse gas emissions, adaptation to climate change is necessary. Additional stresses related to climate change, including rises in sea level, river flooding, urban heat islands and extreme rainfall and drought, present an emerging challenge for public urban infrastructure. Local governments are required to facilitate additional investments in climate-proof public infrastructure strategies, such as permeable pavements, separation of storm water and sewage, strategic application of greenspace and trees, water storage and retention, and improved draining and grading plans. In times of fiscal stress, however, any new infrastructural investment poses a substantial financial challenge for municipalities. Though there is quite some evidence of the positive impact of climate change adaptation on property values, which undoubtedly benefits real estate developers' business cases, not much is known yet about real estate developers' willingness to contribute to these public infrastructure investments and how cities can facilitate this. This session aims to discuss that gap, by focusing on:

1. the current role of land value capture (LVC) and real estate developer contributions in inclusive urban climate adaptation strategies, and
2. the prospective role LVC may play, if favorable conditions for developers to contribute can be established.

We will address these topics by providing evidence from a variety of countries, including the UK, the US, China and the Netherlands.

Special Session - ***Land-based finance for climate adaptation: evidence from the United Kingdom***


Alex Lord (-)

Abstract

Focus areas of this special session

- Exploration of alternative, sustainable models of land-based revenue generation that promote climate adaptation and equitable local development;
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Special Session - ***Land-based finance for climate adaptation: evidence from the United States***

James H. Spencer (-)

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Special Session - ***Land-based finance: global compendium; do's and don'ts***


Enrique Silva (-)

Abstract

Focus areas of this special session

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Special Session - ***Suitability of land-based finance for Indonesia***

Ary Samsura (Radboud University)

Abstract

Focus areas of this special session

- Exploration of alternative, sustainable models of land-based revenue generation that promote climate adaptation and equitable local development;
- Comparative studies of different types of adaptation strategies and municipal finance implications;
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Special Session - ***Collaborative planning and decision-support tools for strengthening community resilience in Jakarta, How do digital technologies enable community resilience in informal settlements in Nairobi? Resilience through everyday practices: Lessons from the street. The skills of adaptive planners***

Tri Mulyani Sunarharum (-)

Abstract

Informal settlements are vulnerable to shocks such as flooding, pandemics and loss of employment or housing. However, resilience theory is not easily applicable to the context of informal settlements. It therefore remains unclear how to develop resilient informal settlements.



This session discusses policies to support community resilience in informal settlements, defined as the ability of communities to cope with shocks. Community resilience is often not fully recognized by (local) governments. Even if governments support community resilience, this may be bureaucratic or take over community initiatives.

This session is structured around four questions, which will be introduced by a short paper and discussed by a panel representing government, university, and civil society.

(1) How can we raise awareness and strengthen resilience of community living in informal settlements? This section discusses how decision-support tools enable collaborative planning processes for transformative adaptation to climate change.

(2) How can policy makers and planners support street-level community development? Communities in informal settlements develop informal practices to survive hardships and improve livelihoods. Using the street as an entry point, this section discusses how everyday practices in transforming and managing the street unleash coping capacities.

(3) How can (digital) technologies enable community resilience? Digital apps may enable household resilience, but also lead to new inequalities. This section discusses if and how digital services within informal settlements can support community resilience.

(4) What skills do adaptive planners possess? Adaptive planners develop innovative and flexible solutions at the border of formal rules and informal possibilities during shocks and uncertainty. They function as institutional entrepreneurs, pushing for institutional change. This section discusses the skills that adaptive planners require.

Special Session - *How do digital technologies enable community resilience in informal settlements in Nairobi?*

Jan Fransen (IHS Erasmus University Rotterdam)

Abstract

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Special Session - *Resilience through everyday practices: Lessons from the street*

Jimly Al Faraby (-)

Abstract

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Special Session - *The skills of adaptive planners*

Alexander Jachnow (-)

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Special Session - *Gentrification and Urban Development Strategy: International Perspectives* *Gentrification in Colonial Heritage District: The Case of Kota Baru Yogyakarta; Case of Kota Tua Jakarta; Case of Surabaya; Case of Denpasar*

Remco Vermalen (-)

Abstract

Although ubiquitous in cities around the world, gentrification takes forms determined by different circumstances. Gentrification often is a direct effect of heritage conservation initiatives, but this correlation has an additional, potentially contested, layer in the context of a postcolonial urban area like Kota Tua in Jakarta, Kota Lama in Semarang, or other historical inner cities throughout Indonesia. Their distinct colonial urban fabric defines their current characters and even draws attention, crowds and investments.

During this session, we attempt to get a better understanding of the correlation between gentrification and heritage conservation in Indonesian heritage cities. The session will also give an attention on the current use of former colonial/heritage areas in Indonesian cities, with questions such as how are those areas used, by whom, etc. Several

Indonesian cities are discussed, brought forward by several experts. Specific local conditions and characteristics are distinguished, as well as those that seem common to the different cities.

Special Session - **Gentrification in Colonial Heritage District: The Case of Kota Baru Yogyakarta**

Muhammad Sani Roychansyah (-)

Abstract

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Special Session - **Case of Kota Tua Jakarta**

Punto Wijayanto (FTSP Universitas Trisakti)

Abstract

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Special Session - **Case of Surabaya**

Maulidi Chairul (-)

Abstract

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Special Session - **Case of Denpasar**

Diah Kardinal (-)

Abstract

Although ubiquitous in cities around the world, gentrification takes forms determined by different circumstances. Gentrification often is a direct effect of heritage conservation initiatives, but this correlation has an additional, potentially



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Special Session - **Planocosmo 6: Healthy And Livable Spaces**

Carl Grodach (Monash University)

Abstract

The negative externalities of massive urbanization significantly impact human health and well-being. The combination of poverty, exclusions, inadequate social support, and exposure to risks for disease contribute to high levels of stress, poor mental health, and physical threat among the vulnerable populations. Furthermore, the emergence of the Covid-19 Pandemic triggers a new potential threat for quick transmission of disease between humans in broader spaces. While some cities have become national epicenters of the pandemic, the nature of Covid-19 disease amplifies the spread and transmission of infection beyond the city boundaries (i.e., regional and global scale) through their connectivity. The Covid-19 crisis has generated a massive loss of employment and income, exacerbating food insecurity. Health services have been partially or completely disrupted worldwide, and many measures have had adverse impacts on mental and physical health. Thus, negative health impacts of COVID-19 are unequally being felt by populations living in vulnerable circumstances, widening and exacerbating existing health inequalities. In responding to the pandemic situation, city and regional governments have to react rapidly and innovatively to address these health issues and challenges in the future. This session will discuss an integrated perspective for revisiting our city and regional planning principles and approaches to respond Covid-19 pandemic crisis. These insights will help fill the knowledge gap in imagining, planning, shaping, and practicing new resilient for our future healthy and livable space after the Covid-19 pandemic.

Special Session - **Planocosmo 6: Healthy And Livable Spaces**

Ridwan Sutriadi (Institute Technology of Bandung)

Abstract


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Special Session - **Planocosmo 6: Healthy And Livable Spaces**

Jeongseob Kim (Ulsan National Institute of Science and Technology)

Abstract

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Special Session - *Planocosmo 6: Healthy And Livable Spaces*

Ninik Suhartini (Institute Technology of Bandung)

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Special Session - *Planocosmo 6: Healthy And Livable Spaces*

Redento Recio (The University of Melbourne)

Abstract


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Special Session - *Improving practice: the significance of history, theory, criticism, and experiential learning relevant in planning education*

Ashok K Das (-)

Abstract

Planners in cities of poor and rich countries alike are beset by the expanding and/or evolving nature of urbanization. With accelerated urbanization, cities experience significant spatial (densification, sprawl, peri-urbanization), economic (poverty, precarity of jobs), political (space and resource contestations), social (groups, values, practices), and cultural (heritage and lifestyle) changes. It is essential to deepen and refine our understanding, in context-specific ways, of why and how cities expand, how they function, and how different societal institutions can contribute toward more effective urban governance



and planning. Participants will critically reflect on extant theoretical/conceptual frames, and/or the lack thereof, to better appreciate the diversity of contemporary urbanization processes and dynamics in the global South, especially in Indonesia, and how such awareness can enrich the teaching, learning, and practice of managing and stewarding cities. The session will explore how looking closely and critically at local practice can lead to growing an apt theoretical base for planning and policy education.

Special Session - *Learning urbanization and informality – planning practice through studio class*

Bakti Setiawan (Universitas Gadjah Mada)

Abstract

Planners in cities of poor and rich countries alike are beset by the expanding and/or evolving nature of urbanization. With accelerated urbanization, cities experience significant spatial (densification, sprawl, peri-urbanization), economic (poverty, precarity of jobs), political (space and resource contestations), social (groups, values, practices), and cultural (heritage and lifestyle) changes. It is essential to deepen and refine our understanding, in context-specific ways, of why and how cities expand, how they function, and how different societal institutions can contribute toward more effective urban governance and planning. Participants will critically reflect on extant theoretical/conceptual frames, and/or the lack thereof, to better appreciate the diversity of contemporary urbanization processes and dynamics in the global South, especially in Indonesia, and how such awareness can enrich the teaching, learning, and practice of managing and stewarding cities. The session will explore how looking closely and critically at local practice can lead to growing an apt theoretical base for planning and policy education.

Special Session - *Urban Planning at Local Practices and Challenges for the Implementation of Outcome Based Education*

Prihadi Nugroho (Department of Urban and Regional Planning, Universitas Diponegoro)

Abstract

Planners in cities of poor and rich countries alike are beset by the expanding and/or evolving nature of urbanization. With accelerated urbanization, cities experience significant spatial (densification, sprawl, peri-urbanization), economic (poverty, precarity of jobs), political (space and resource contestations), social (groups, values, practices), and cultural (heritage and lifestyle) changes. It is essential to deepen and refine our understanding, in context-specific ways, of why and how cities expand, how they function, and how different societal institutions can contribute toward more effective urban governance and planning. Participants will critically reflect on extant theoretical/conceptual frames, and/or the lack thereof, to better appreciate the diversity of contemporary urbanization processes and dynamics in the global South, especially in Indonesia, and how such awareness can enrich the teaching, learning, and practice of managing and stewarding cities. The session will explore how looking closely and critically at local practice can lead to growing an apt theoretical base for planning and policy education.


Special Session - *Exploring the framework for collaboration in Spatial Planning research across SEA Countries*

Ary Samsura (-)

Abstract

This session contributes to further debate on the potential of finding the interconnected forces and collaborative effort to unravel the complexity in the spatial planning process while also allowing for comparative analysis among the South-East Asian (SEA) countries. Across the SEA countries, there are vast variations in spatial planning systems, policies and governance mechanisms. Political differences, cultures, norms, geographical conditions, and demographic issues might have contributed to why a country chooses a particular spatial planning system, policy, and instruments. Such differences may be a result of the country's development path and can have a significant impact on the countries' ability to achieve their sustainable development objectives both individually and collectively in the future. Given these understandings, it is therefore important to explore whether political, social, economical, or even historical forces are generating similar spatial planning responses throughout SEA countries. The increasingly global nature of the interconnection and the expansion of competition within the region also creates a new context for spatial planning. At the urban level, new alliances and forms of government are evolving to generate and implement a range of economic, social, and environmental policies.

This special session is designed as a roundtable forum (discussion) to facilitate constructive debate to compare the diversities and also similarities of urban and regional planning across SEA countries to promote a wider collaboration among them to improve spatial planning systems and practices in the countries. Specifically, it would explore in detail the many



forces influencing spatial planning throughout SEA countries and provide a framework for understanding the similarities and differences in their responses concerning community resilience issues due to, for instance, climate change and the current or future pandemics threats to achieve sustainable development. It would also identify the possibilities to improve knowledge-sharing initiatives within contemporary systems and practices both concerning policy ideas and the way the instruments or mechanisms related to spatial planning are developed and utilised among the SEA countries to deal with those issues. This session is expected to trigger new collaboration across SEA countries, allowing researchers and also practitioners from those countries to learn from each other which might be more practical and beneficial than only thriving for knowledge transfer from the western countries or the global north.

Special Session - *Climate Resilience and Spatial Planning in Thailand*

Naim Laeni (-)

Abstract

This session contributes to further debate on the potential of finding the interconnected forces and collaborative effort to unravel the complexity in the spatial planning process while also allowing for comparative analysis among the South-East Asian (SEA) countries. Across the SEA countries, there are vast variations in spatial planning systems, policies and governance mechanisms. Political differences, cultures, norms, geographical conditions, and demographic issues might have contributed to why a country chooses a particular spatial planning system, policy, and instruments. Such differences may be a result of the country's development path and can have a significant impact on the countries' ability to achieve their sustainable development objectives both individually and collectively in the future. Given these understandings, it is therefore important to explore whether political, social, economical, or even historical forces are generating similar spatial planning responses throughout SEA countries. The increasingly global nature of the interconnection and the expansion of competition within the region also creates a new context for spatial planning. At the urban level, new alliances and forms of government are evolving to generate and implement a range of economic, social, and environmental policies.

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Special Session - *Building local government resilience through Spatial Planning in the Philippines*

Kris Berse (-)

Abstract

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Special Session - *Responding to Climate Change through Spatial Planning: The Current Approach in Malaysia*

Yusfida Ayu Abdullah (-)

Abstract

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Special Session - *The role of Spatial Planning in Supporting Climate Adaptation and Mitigation through the provision of Public Space in Vietnam*

Thanh Bao Nguyen (-)

Abstract

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Special Session - *Spaces of Work, Encounter, and Representation of, and for Creative Industries in Indonesia*

Ana Mafalda Madureira (-)

Abstract

Creative Industries are often defined as existing in the convergence between creative arts and cultural industries (Hartley, 2005). The concept originally emerged in the Global North, but quickly spread across the Global South supported by organizations such as the United Nations Conference for Trade and Development (UNCTAD 2008). It translated into policies and policy networks, encouraged by the perceived value of these industries for development of local and national economies.

Critical research has pointed to the inadequacy of the term for Global South realities, and the need for it to be adjusted to local contexts and existing cultural and creative economies (De Beukelaer, 2014, 2017; Fahmi and Koster, 2017b; Sternberg, 2017, Alacovska and Gill 2019; Lobato 2010). Existing research has also called attention to the need to recognize how informality shapes the way Creative Industries emerge and development, how informality is recognized, operationalized and included by existing Creative Industries-oriented policies, and how it is accounted for, by official reports of Creative Industries development. Another gap concerns understanding the impacts that the promotion of Creative Industries and districts have on Global Souths socio-spatial and economic contexts (Gregory 2016, 2019).

This Special Session invites contributions that critically discuss the relationship between Creative Industries and Informality, to contribute to research on Creative Industries development in a Global South context.

Invited contributions will focus on:

1. Operationalizing these concepts to understand how they mutually influence each other.
2. Creative Industries and Informality relationships, analysed from a spatial, socio-economic, or policy-formulation perspective.
3. Methods to identify, trace, analyse the relationships between these two concepts, and its spatial, socio-economic, or policies implications.
4. Ethical challenges of research in urban settlements where these two concepts frequently meet/ interact with each other
5. Case studies that explore this relationship, and its spatial, socio-economic and/ or policy implications.

Special Session - *Innovation in Informal Creative Industries: The case of Indonesia's Creative Kampongs*

Adiwan F. Aritenanga (-)

Abstract


Creative Industries are often defined as existing in the convergence between creative arts and cultural industries (Hartley, 2005). The concept originally emerged in the Global North, but quickly spread across the Global South supported by organizations such as the United Nations Conference for Trade and Development (UNCTAD 2008). It translated into policies and policy networks, encouraged by the perceived value of these industries for development of local and national economies.

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This Special Session invites contributions that critically discuss the relationship between Creative Industries and Informality, to contribute to research on Creative Industries development in a Global South context.

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Special Session - *Harmonization between land-use regulations and sectoral strategies for creative industries development: The Case in Bandung Creative Kampongs*

Adiwan F. Aritenanga (-)

Abstract

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Special Session - *Spaces of Work, Encounter, and Representation of, and for Creative Industries in Indonesia*


Ana Maria Bustamante Duarte (-)

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Special Session - *The Role of Urban Industrial Districts in Shaping Urbanization and Economic Clustering Patterns in Melbourne, Australia*

Carl Grodach (-)

Abstract

This proposed session aims to explore the economic geography of craft manufacturing and the relationships to urban and industry change across time and space. Drawing on case studies in Greater Melbourne, Australia and Java, Indonesia, the papers focus on how urbanization and peri-urbanization shape and are shaped by industrial activity; how planning for industrial land impacts craft manufacturing growth and change; and the innovation processes of informal craft and creative enterprises. The papers shed light on the historical and contemporary roles of both formal planning and informal economic development actors and contrast experiences in two divergent contexts.

Special Session - *Rural industrialization and urbanization in Temanggung regency, Indonesia.*

Holi Bina Wijaya (-)

Abstract

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Special Session - *The Nature and Extent of Innovation Among Informal Businesses in Indonesia. Case Study: Urban Kampongs in Kota Bandung, Indonesia*

Adiwan Aritenang (-)

Abstract


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Special Session - *Charting the relationship between industrial zoning and craft industries: a case study of Melbourne 1920-2020*

Joe Hurley (-)

Abstract

This proposed session aims to explore the economic geography of craft manufacturing and the relationships to urban and industry change across time and space. Drawing on case studies in Greater Melbourne, Australia and Java, Indonesia, the



papers focus on how urbanization and peri-urbanization shape and are shaped by industrial activity; how planning for industrial land impacts craft manufacturing growth and change; and the innovation processes of informal craft and creative enterprises. The papers shed light on the historical and contemporary roles of both formal planning and informal economic development actors and contrast experiences in two divergent contexts.

Special Session - *Disruptive Era, Pandemic, and Online Education: An Overview*

Carley Pennink (-)

Abstract

Covid-19 has brought a lot of changes to planning education and capacity building. During lockdown, most planning schools and capacity building institutions moved to online provision and learning processes. This required understanding of the provision of online education, redesign of curriculum (while trying to preserve the quality of methods), along with investments in people and IT.

With the relaxation of lockdown, institutions are now reverting back to face-to-face or rather hybrid approaches. All of these has meant continuous adjustments and experimentation for planning schools and capacity building institutions in delivering educational material.

So, to consider:

What were the experiences with this process? What were key challenges, costs and benefits? One argument often given, is that online learning will be able to reach more people, so it will allow institutions to scale up and hence, to be more inclusive. Is this true? Have we managed this? What kind of practices do we need to adopt to ensure this? What kinds of innovations have institutions used to overcome the digital divide?

This session will provide lessons learnt from the (urban) planning schools, particularly in transitioning from offline to online learning process, and combining hybrid approaches in navigating planning education and capacity building through the pandemic..

Special Session - *Online Education during the Pandemic: A Challenge for Urban and Regional Planning Education in Indonesia*

Yori Herwangi (-)

Abstract

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Special Session - *Online Learning Engagement: Lessons from BURP and MURP Programme UGM*

Tri Mulyani Sunarharum (-)

Abstract

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Special Session - *Planning Students Behaviours during Online Learning Process*

Dhimas Bayu Anindito (-)

Abstract

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Special Session - *The Challenges of the Planning Capacity Building Online Training for the Government Officers*

Wignyo Adiyoso (-)

Abstract

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Special Session - *Spatial Planning Education For Climate Action Panel*



Sanjukta Bhaduri (-)

Abstract

This panel follows from the successful Urban Thinkers Campus event in November 2021 on Spatial Planning Education in Climate Action organized by UN-HABITAT and the Planners for Climate Action network. A panel of academics from around the world has been brought together to share their experiences of educating planners for climate action and discussing some of the challenges of delivering climate change education. The event seeks to share innovative and effective practices in spatial planning curricula, discuss the current state of play, facilitate collaboration for climate action education across the world, and strengthen the Planners for Climate Action network. The session objective is to review the state of climate change education in the academy and generate and exchange thoughts about how to proceed as a profession into the future in order to better prepare future planners for the challenges ahead. Each panellist will discuss the following overarching questions:

- (a) How are we teaching climate change in Planning programs?
- (b) What should be taught? What do Planning students need to know?
- (c) What are the challenges of delivering climate change education and what can we do to overcome them?

Special Session - *Spatial Planning Education For Climate Action Panel*

Jing Gan (-)

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Mario Delos Reyes (-)

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Special Session - ***Spatial Planning Education For Climate Action Panel***

Rukuh Setiadi (-)

Abstract

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Richard Sliuzas (-)

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Special Session - *Beyond The Informal: Understanding The Self Organised Cities*

Ninik Suhartini (Institut Teknologi Bandung)

Abstract

There has been much debate that cities in the Global South tend to be chaotic, disordered and dysfunctional given the myriad types of urban development emerging from informal governance arrangements, poverty and unequal access to resources. The book gives consideration to understanding the nature of self-organized housing and bottom-up urban renewal especially when such activities both individually and collectively are characterized as being informal. At its essence, the self-organized city is an expression of urban culture and social norms and values of residents and groups that are part of a larger complex system that self-organize. When we interact and connect with towns and cities at myriad scales and activities, we experience everyday urbanism, including the built form characteristics as expressed through its people and their practices to meet housing and related needs. These physical and social expressions inform us of how people live, their needs and the systems they use to go about their daily lives.

Special Session - *Beyond The Informal: Understanding The Self Organised Cities*

Paul Jones (-)

Abstract

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Special Session - *Beyond The Informal: Understanding The Self Organised Cities*

Ridwan Sutriadi (Bandung Institute of Technology)

Abstract


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Special Session - *Beyond The Informal: Understanding The Self Organised Cities*

Ibnu Syabri (School of Architecture, Planning and Policy Development, Institut Teknologi Bandung)

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their practices to meet housing and related needs. These physical and social expressions inform us of how people live, their needs and the systems they use to go about their daily lives.

Special Session - Book Launch: Routledge Handbook Of Urban Indonesia

Christopher Silver (-)

Abstract

The purpose of the session is to launch an edited book titled: Routledge Handbook of Urban Indonesia, edited by Sonia Roitman and Deden Rukmana.

This book is the collective effort of 64 contributing authors including academics, planners, architects, researchers, local planning officials and community activists, who address the current trends and challenges of planning and urban development in Indonesian cities. The cases described by the authors are organised into five main themes: 1. Indonesian planning context; 2. informality, insurgency and social inclusion; 3. design, spatial and economic practices; 4. creative and innovative practices; and, 5. urban sustainability and resilience. This is the first book to address urban planning and development in cities of various sizes in Indonesia.

This book discusses and compiles the planning practices in 19 Indonesian cities including one megacity of over ten million people (Jakarta), seven cities of one to ten million people (Surabaya, Bandung, Yogyakarta, Semarang, Makassar, Palembang, and Bogor), two cities of between 500,000 and one million people (Malang and Solo), seven cities of 100,000 to 500,000 people (Ambon, Banda Aceh, Mataram, Pontianak, Cirebon, Salatiga, and Ternate) and two small cities of less than 100,000 people (Jepara and Wonosobo).

Structure of the session: Overview of the book: Sonia Roitman and Deden Rukmana Five co-authors will present a summary of their chapter. Each of these presentations will represent each of the five sections/themes of the book: Part 1: Planning Context: Chris Silver Part 2: Informality, insurgency and social inclusion: andri Supriatna and Redento Recio Part 3: Design, spatial and economic practices: TBC Part 4: Creative and innovative practices: Dhimas Bayu Anindito Part 5: Urban sustainability and resilience: Anthony Kent Discussants: Prof Delik Hudalah and TBC

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Ani Supriatna (-)

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Anthony Kent (-)

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Special Session - **Book Launch: Routledge Handbook Of Urban Indonesia**

Redento Recio (-)

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Dhimas Bayu Anindito (-)

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Special Session - **Book Launch: Routledge Handbook Of Urban Indonesia**

Delik Hudalah (ITB)

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Special Session - **Overview of Geodesign and IGC and their role in global academic collaboration**

Carl Steinitz (-)

Abstract

Our Global Village faces complex challenges. To address those challenges and anticipate their different impacts, we must collaborate. To accomplish this, planning education needs to accommodate pedagogies and frameworks advancing mutual understanding, learning and knowledge co-creation, designed to teach teachers and practitioners who will pass their knowledge to the next and future generations of planners and designers. Geodesign (design at geographic scale) is a structured approach to planning integrating multiple areas of knowledge and using GIS-based analytic and design tools to explore alternative future scenarios responding to global challenges. Since 2018, members of the International Geodesign Collaboration (IGC) have been using common analytical and reporting frameworks to make, assess and present scenario-driven projects for globally dispersed study areas. By doing so, IGC has enabled direct comparisons among projects and mutual learning between teams from more than 60 universities working in different contexts. The IGC is a growing organization and welcomes interested schools to join.

This session first explores the rationale behind Geodesign and IGC frameworks inspired and rooted in nearly sixty years of active academic engagement between scholars at some of the world's leading universities. The story parallels the development and application of advanced tools for planning including GIS and visualization technologies. Second, a team from the University of Ljubljana will demonstrate the application of the geodesign framework used at different scales to explore the interdependence of national, regional and local perspectives on spatial development scenarios for Slovenia. Finally, we will share the workflow and results of a preliminary geodesign workshop toward a sustainable and resilient plan



for the Amazon basin that embraces the competing pressures of conservation, social, and economic development with local, national, and global consequences.

After highlighting the benefits of common frameworks in planning education we will open the floor for discussion, mutual learning, and knowledge co-creation.

Special Session - *Spatial Development Scenarios for Slovenia: Pedagogy of exploring the regional perspectives*

Mojca Golobič (University of Ljubljana Biotechnical Faculty, Department of Landscape Architecture)

Abstract

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Special Session - *Spatial Development Scenarios for Slovenia: Pedagogy of exploring national and local with regard to the known regional perspectives*


Davorin Gazvoda (University of Ljubljana, Biotechnical Faculty)

Abstract

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Special Session - *The Amazon Proof of Concept and continuing – Framework for transnational knowledge co-creation*

Brian Orland (The Pennsylvania State University and University of Illinois at Urbana-Champaign)

Abstract

Our Global Village faces complex challenges. To address those challenges and anticipate their different impacts, we must collaborate. To accomplish this, planning education needs to accommodate pedagogies and frameworks advancing mutual understanding, learning and knowledge co-creation, designed to teach teachers and practitioners who will pass their knowledge to the next and future generations of planners and designers. Geodesign (design at geographic scale) is a structured approach to planning integrating multiple areas of knowledge and using GIS-based analytic and design tools to explore alternative future scenarios responding to global challenges. Since 2018, members of the International Geodesign Collaboration (IGC) have been using common analytical and reporting frameworks to make, assess and present scenario-driven projects for globally dispersed study areas. By doing so, IGC has enabled direct comparisons among projects and mutual learning between teams from more than 60 universities working in different contexts. The IGC is a growing organization and welcomes interested schools to join.

This session first explores the rationale behind Geodesign and IGC frameworks inspired and rooted in nearly sixty years of active academic engagement between scholars at some of the world's leading universities. The story parallels the development and application of advanced tools for planning including GIS and visualization technologies. Second, a team from the University of Ljubljana will demonstrate the application of the geodesign framework used at different scales to explore the interdependence of national, regional and local perspectives on spatial development scenarios for Slovenia. Finally, we will share the workflow and results of a preliminary geodesign workshop toward a sustainable and resilient plan for the Amazon basin that embraces the competing pressures of conservation, social, and economic development with local, national, and global consequences.

After highlighting the benefits of common frameworks in planning education we will open the floor for discussion, mutual learning, and knowledge co-creation.

Special Session - *The Amazon Proof of Concept and continuing – Outcomes of enabled knowledge co-creation*

Paulo Renato Mesquita Pellegrino (Universidade de São Paulo)

Abstract

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After highlighting the benefits of common frameworks in planning education we will open the floor for discussion, mutual learning, and knowledge co-creation.



Special Session - **Lecturer in Spatial Planning**

Joanne Tippett (The University of Manchester)

Abstract

Social anxiety and the struggle to get started with assignments are perennial problems faced by incoming students, and were exacerbated during the pandemic. This interactive workshop will introduce pandemic-inspired innovations that won the 2021 Association of European Schools of Planning Teaching Excellence Award.

The workshop will introduce a novel approach to tactile and visual learning that develops study skills and critical thinking. It will explore how developing professional planning skills (understanding sense of place and facilitating effective dialogue) can help build a learning community. Participants will learn how the digital tool Padlet was integrated with physical sense of place exercises and use of Ketso Connect, an individual, hands-on learning aid. Launched during the pandemic and already used with over 3,500 students in 10 universities in the UK, USA and Nigeria, Ketso Connect is a potentially disruptive innovation. It makes an inclusive and active learning approach, developed in planning education, available for any subject area and educational setting (self-directed study; remote, hybrid and face-to-face teaching).

A case study outlining the Designing Sustainable Futures module will briefly introduce the innovations. This is a core module for undergraduate Planning and Environmental Management students at The University of Manchester. It is designed to encourage students to reflect on the role of built environment professions in delivering sustainable futures. Core soft skills that are integral to the planning profession are developed through active learning, guided peer discussion, and group work. So too, is reflective practice and self-evaluation. Workshops introducing and practicing the fundamentals of critical thinking, referencing, essay and report writing are built into the module so as to enable scaffolded learning and give formative feedback on assignments.

Workshop participants will have a practical experience of these innovations, as they discuss the lessons learned and how they may be adapted to their own teaching contexts.

Special Session - **Senior Tutor**

Bertie Dockerill (-)

Abstract

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Special Session - **Graduate Teaching Assistant and PhD Researcher**

Matt Sanderson (-)

Abstract

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Special Session - **Socially integrative cities – concept and practical lessons from Europe and China**

Paulina Schiappacasse (-)

Abstract

The purpose of the session is to launch an edited book titled: Routledge Handbook of Urban Indonesia, edited by Sonia Roitman and Deden Rukmana.

This book is the collective effort of 64 contributing authors including academics, planners, architects, researchers, local planning officials and community activists, who address the current trends and challenges of planning and urban development in Indonesian cities. The cases described by the authors are organised into five main themes: 1. Indonesian planning context; 2. informality, insurgency and social inclusion; 3. design, spatial and economic practices; 4. creative and innovative practices; and, 5. urban sustainability and resilience. This is the first book to address urban planning and development in cities of various sizes in Indonesia.

This book discusses and compiles the planning practices in 19 Indonesian cities including one megacity of over ten million people (Jakarta), seven cities of one to ten million people (Surabaya, Bandung, Yogyakarta, Semarang, Makassar, Palembang, and Bogor), two cities of between 500,000 and one million people (Malang and Solo), seven cities of 100,000 to 500,000 people (Ambon, Banda Aceh, Mataram, Pontianak, Cirebon, Salatiga, and Ternate) and two small cities of less than 100,000 people (Jepara and Wonosobo).

Structure of the session: Overview of the book: Sonia Roitman and Deden Rukmana Five co-authors will present a summary of their chapter. Each of these presentations will represent each of the five sections/themes of the book: Part 1: Planning Context: Chris Silver Part 2: Informality, insurgency and social inclusion: andri Supriatna and Redento Recio Part 3: Design, spatial and economic practices: TBC Part 4: Creative and innovative practices: Dhimas Bayu Anindito Part 5: Urban sustainability and resilience: Anthony Kent Discussants: Prof Delik Hudalah and TBC


Special Session - **Public participation and social integration in urban renewal in China**

LIU Jian (-)

Abstract

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Special Session - *Innovation and practice of the social planner system in Beijing*

LIU Jiayan (-)

Abstract

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Special Session - *Visual stories as a tool to enhance public participation in urban revitalization – lessons from Europe*

Michele Bonino (-)

Abstract

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Special Session - *From massive rapid redevelopment to small-scale stepwise urban revitalization: Lessons from Wuhan, China*

JIANG Mengfan (-)

Abstract

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Special Session - *Polycentric approach to management of urban waters. Experiences from the case studies in Cambodia, Indonesia and Laos*

Ania Wilk-Pham (Habitat Unit, Technical University of Berlin)

Abstract

Secondary and tertiary cities in Southeast Asia are increasingly becoming hubs of comprehensive economic, social and ecological transformation. City governments are generally confronted with urban growth driven by dynamic economic development and a real estate sector that is often poorly guided by urban planning. The decentralisation efforts undertaken in the countries require concrete implementation at the local level, sufficient funding and capacity development. In view of the comprehensive provision of municipal services of general interest in the sense of the SDGs, especially in the context of climate change, the management of urban water resources as a cross-cutting task reflects the challenges of urban development. For water-relevant resilience of cities, integrated approaches are needed that bring together urban planning, infrastructure development and urban water resource management according to the current and expected capacities of these cities. Water-sensitive development can help cities to proactively use the spatial and regulatory options they still have today. By this means, water supply, wastewater management, storm water and flood management, waste management and the development of grey, green, blue infrastructure may be improved. The session will make strong references to the global discussion and practical experiences on the development of water-sensitive secondary and tertiary cities, reflecting concrete project results from Indonesia, Cambodia, Laos, Thailand and Vietnam. Approaches to the analysis of urban planning and water management challenges and the corresponding governance structures and concrete strategies and options for action derived from them will be presented for discussion and exchange. In the course of this discussion, the concept of resilience will be concretised in a prominent field of urban development and, above all, recommendations for action and opportunities for cooperation for practitioners, academia, international institutions, etc. will be identified, which also go beyond the Southeast Asian region.

Special Session - **Opportunities and Challenges for Water-Sensitive Planning in Indonesia**

Bakti Setiawan (Universitas Gadjah Mada)

Abstract

Secondary and tertiary cities in Southeast Asia are increasingly becoming hubs of comprehensive economic, social and ecological transformation. City governments are generally confronted with urban growth driven by dynamic economic development and a real estate sector that is often poorly guided by urban planning. The decentralisation efforts undertaken in the countries require concrete implementation at the local level, sufficient funding and capacity development. In view of the comprehensive provision of municipal services of general interest in the sense of the SDGs, especially in the context of climate change, the management of urban water resources as a cross-cutting task reflects the challenges of urban development. For water-relevant resilience of cities, integrated approaches are needed that bring together urban planning, infrastructure development and urban water resource management according to the current and expected capacities of these cities. Water-sensitive development can help cities to proactively use the spatial and regulatory options they still have today. By this means, water supply, wastewater management, storm water and flood management, waste management and the development of grey, green, blue infrastructure may be improved. The session will make strong references to the global discussion and practical experiences on the development of water-sensitive secondary and tertiary cities, reflecting concrete project results from Indonesia, Cambodia, Laos, Thailand and Vietnam. Approaches to the analysis of urban planning and water management challenges and the corresponding governance structures and concrete strategies and options for action derived from them will be presented for discussion and exchange. In the course of this discussion, the concept of resilience will be concretised in a prominent field of urban development and, above all, recommendations for action and opportunities for cooperation for practitioners, academia, international institutions, etc. will be identified, which also go beyond the Southeast Asian region.

Special Session - **Water-Sensitive Community**

Hasanatul Nisa Thamrin (-)

Abstract


Secondary and tertiary cities in Southeast Asia are increasingly becoming hubs of comprehensive economic, social and ecological transformation. City governments are generally confronted with urban growth driven by dynamic economic development and a real estate sector that is often poorly guided by urban planning. The decentralisation efforts undertaken in the countries require concrete implementation at the local level, sufficient funding and capacity development. In view of the comprehensive provision of municipal services of general interest in the sense of the SDGs, especially in the context of climate change, the management of urban water resources as a cross-cutting task reflects the challenges of urban development. For water-relevant resilience of cities, integrated approaches are needed that bring together urban planning, infrastructure development and urban water resource management according to the current and expected capacities of these cities. Water-sensitive development can help cities to proactively use the spatial and regulatory options they still have today. By this means, water supply, wastewater management, storm water and flood management, waste management and the development of grey, green, blue infrastructure may be improved. The session will make strong references to the global discussion and practical experiences on the development of water-sensitive secondary and tertiary cities, reflecting concrete project results from Indonesia, Cambodia, Laos, Thailand and Vietnam. Approaches to the analysis of urban planning and water management challenges and the corresponding governance structures and concrete strategies and options for action derived from them will be presented for discussion and exchange. In the course of this discussion, the concept of resilience will be concretised in a prominent field of urban development and, above all, recommendations for action and opportunities for cooperation for practitioners, academia, international institutions, etc. will be identified, which also go beyond the Southeast Asian region.

Special Session - **Decentralized Sanitation Planning toward Climate Adaptation**

Thammarat Koottatep (-)

Abstract

Secondary and tertiary cities in Southeast Asia are increasingly becoming hubs of comprehensive economic, social and ecological transformation. City governments are generally confronted with urban growth driven by dynamic economic development and a real estate sector that is often poorly guided by urban planning. The decentralisation efforts undertaken in the countries require concrete implementation at the local level, sufficient funding and capacity development. In view of the comprehensive provision of municipal services of general interest in the sense of the SDGs, especially in the context of climate change, the management of urban water resources as a cross-cutting task reflects the challenges of urban development. For water-relevant resilience of cities, integrated approaches are needed that bring together urban planning,



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Special Session - -

Xhesika Hoxha (-)

Abstract

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Special Session - ***Smart city approach: a transition towards a sustainable and resilient urban model of Moroccan cities- Case of Casablanca***

Youssef Ganadi (-)

Abstract

Secondary and tertiary cities in Southeast Asia are increasingly becoming hubs of comprehensive economic, social and ecological transformation. City governments are generally confronted with urban growth driven by dynamic economic development and a real estate sector that is often poorly guided by urban planning. The decentralisation efforts undertaken in the countries require concrete implementation at the local level, sufficient funding and capacity development. In view of the comprehensive provision of municipal services of general interest in the sense of the SDGs, especially in the context of climate change, the management of urban water resources as a cross-cutting task reflects the challenges of urban development. For water-relevant resilience of cities, integrated approaches are needed that bring together urban planning, infrastructure development and urban water resource management according to the current and expected capacities of these cities. Water-sensitive development can help cities to proactively use the spatial and regulatory options they still have today. By this means, water supply, wastewater management, storm water and flood management, waste management and the development of grey, green, blue infrastructure may be improved. The session will make strong references to the global discussion and practical experiences on the development of water-sensitive secondary and tertiary cities, reflecting concrete project results from Indonesia, Cambodia, Laos, Thailand and Vietnam. Approaches to the analysis of urban planning and water management challenges and the corresponding governance structures and concrete strategies and options for action derived from them will be presented for discussion and exchange. In the course of this discussion, the concept of resilience will be concretised in a prominent field of urban development and, above all, recommendations for action and opportunities for cooperation for practitioners, academia, international institutions, etc. will be identified, which also go beyond the Southeast Asian region.



Special Session - *Adaptive roofs for adaptive cities: Comparative study between vernacular and formal reappropriation of the space of roofs in Morocco*

Zinab Himeur (-)

Abstract

Secondary and tertiary cities in Southeast Asia are increasingly becoming hubs of comprehensive economic, social and ecological transformation. City governments are generally confronted with urban growth driven by dynamic economic development and a real estate sector that is often poorly guided by urban planning. The decentralisation efforts undertaken in the countries require concrete implementation at the local level, sufficient funding and capacity development. In view of the comprehensive provision of municipal services of general interest in the sense of the SDGs, especially in the context of climate change, the management of urban water resources as a cross-cutting task reflects the challenges of urban development. For water-relevant resilience of cities, integrated approaches are needed that bring together urban planning, infrastructure development and urban water resource management according to the current and expected capacities of these cities. Water-sensitive development can help cities to proactively use the spatial and regulatory options they still have today. By this means, water supply, wastewater management, storm water and flood management, waste management and the development of grey, green, blue infrastructure may be improved. The session will make strong references to the global discussion and practical experiences on the development of water-sensitive secondary and tertiary cities, reflecting concrete project results from Indonesia, Cambodia, Laos, Thailand and Vietnam. Approaches to the analysis of urban planning and water management challenges and the corresponding governance structures and concrete strategies and options for action derived from them will be presented for discussion and exchange. In the course of this discussion, the concept of resilience will be concretised in a prominent field of urban development and, above all, recommendations for action and opportunities for cooperation for practitioners, academia, international institutions, etc. will be identified, which also go beyond the Southeast Asian region.

Special Session - *Natural risk management in the Moroccan vernacular fabrics: Case studies of the Ksours and Kasbahs in the Middle Atlas*

Salsabila Benamar (-)

Abstract


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Special Session - *The resilience of traditional and vernacular architecture in Morocco: Between ancestral knowledge and modes of adaptation - Case of the medina of Salé*

Hind Roidi (-)

Abstract

Worldwide, urban population is increasing in a fast pace. With climate change, growing population and increasing risks, the concept of resilience has gained a huge prominence on the international scale. Cities worldwide are vulnerable to the consequences of a set of issues that can be either natural or caused by human activities disrupting urban space and



threatening inhabitants' health. Reshaping cities and territories to face risks is also a social and economic challenge as vulnerable and poor populations are likely to be hit the hardest with not enough resources to recover. For instance, The spread of covid-19 has revealed the vulnerability of city health systems worldwide and demonstrated its ability to deal with this pandemic in order to reduce the massive human, economic and social impacts. Therefore, several developing countries, like Morocco, are experimenting with practical approaches to build their urban resilience. In fact, Urban Resilience is nowadays a priority for Morocco, given its high vulnerability to climate change and natural disasters, especially in the coastal cities and the arid zones that are facing several risks such as flood, drought and earthquakes. The urban growth also generates several urban issues to which Moroccan cities must adapt (urban congestion, pollution, mobility issues, etc.). These cities are more vulnerable to natural, health and industrial risks, in particular, because of territorial disparities. This local awareness is reflected on the ground by several actions taken to strengthen the resilience of the urban territories. This session focuses on the Moroccan context presenting progressive strategies, actions and perspectives to increase local urban resilience. It also aims to explore how spatial planning and digital development can attempt to reduce the consequences of natural and anthropic risks on different urban fabrics in Morocco via significant case studies. Given the multiples challenges facing the Moroccan territory, urban and digital development must be considered in a linked way in order to regenerate the living environments of citizens, reducing risks and thus, increasing urban and community resilience in Moroccan cities.

Special Session - *Smart City-Technology-Society, Transition-Spatial, Globalization-Network-Urban, Urban Sustainability, Post-Colonial.*

Galuh Syahbana Inaprahasta (-)

Abstract


Urban development is expanding rapidly in both the Global North and South. It is expected that 70% of the world's population will reside in urban areas by 2050 (UN, 2018). Urban expansion comes with tremendous responsibility, notably speaking of the three pillars: Economy, Equity, and Environment (Douglas and James, 2015). As most of the Global North are already moving towards Sustainability and Green Urbanism, the cities in Global South are still grasping toward a sustainable future. Indonesia, in particular, given the high casualties and damage from the years of the COVID 19 pandemic, is prioritizing the attempts to stimulate economic recovery. Nevertheless, a lesson learned from the recent pandemic and the growing concerns of the extreme cases of climate change as seen in many parts of the world urges urban development in the Indonesian context to develop more sustainably. Accordingly, the future and expected sustainability should also encourage economic stability and improve social welfare and well-being. It is no longer an option to promote one and overlook the two others between economic, environmental, and sustainability. It should be possible and feasible to reinforce the three aspects for future Indonesian urban development through continuous advancements in science and knowledge, capacity building, human resources development, and the shared vision to form effective, productive, and conducive governance. This is where the IUSA (Indonesian Urban Studies Association) will fit in to gather the resources and knowledge from the global perspective to suggest and promote future significant changes toward better Indonesian urban development. IUSA will bring forth constructive suggestions from multi aspects, interdisciplinary, and different perspectives, accompanied by the precedent of the world's best cases toward the contextual solution that fits, is feasible, and applicable to Indonesian urban development.

Special Session - *Water, Sanitation, Informality, Social Innovation and Social Movement, Critical Perspective of Spatial Planning.*

Prathiwi W. Putri (-)

Abstract

Urban development is expanding rapidly in both the Global North and South. It is expected that 70% of the world's population will reside in urban areas by 2050 (UN, 2018). Urban expansion comes with tremendous responsibility, notably speaking of the three pillars: Economy, Equity, and Environment (Douglas and James, 2015). As most of the Global North are already moving towards Sustainability and Green Urbanism, the cities in Global South are still grasping toward a sustainable future. Indonesia, in particular, given the high casualties and damage from the years of the COVID 19 pandemic, is prioritizing the attempts to stimulate economic recovery. Nevertheless, a lesson learned from the recent pandemic and the growing concerns of the extreme cases of climate change as seen in many parts of the world urges urban development in the Indonesian context to develop more sustainably. Accordingly, the future and expected sustainability should also encourage economic stability and improve social welfare and well-being. It is no longer an option to promote one and overlook the two others between economic, environmental, and sustainability. It should be possible and feasible to reinforce the three aspects for future Indonesian urban development through continuous advancements in science and knowledge, capacity building, human resources development, and the shared vision to form effective, productive, and conducive governance. This is where the IUSA (Indonesian Urban Studies Association) will fit in to gather the resources and



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Special Session - *Community Participation and Empowerment, Slum Upgrading, Decentralization and Local Governance, Role of Civil Society in Fostering Equitable Development and Inclusive Urbanization.*

Ashok Das (University of Hawai'i at Mānoa)


Abstract

Urban development is expanding rapidly in both the Global North and South. It is expected that 70% of the worlds population will reside in urban areas by 2050 (UN, 2018). Urban expansion comes with tremendous responsibility, notably speaking of the three pillars: Economy, Equity, and Environment (Douglas and James, 2015). As most of the Global North are already moving towards Sustainability and Green Urbanism, the cities in Global South are still grasping toward a sustainable future. Indonesia, in particular, given the high casualties and damage from the years of the COVID 19 pandemic, is prioritizing the attempts to stimulate economic recovery. Nevertheless, a lesson learned from the recent pandemic and the growing concerns of the extreme cases of climate change as seen in many parts of the world urges urban development in the Indonesian context to develop more sustainably. Accordingly, the future and expected sustainability should also encourage economic stability and improve social welfare and well-being. It is no longer an option to promote one and overlook the two others between economic, environmental, and sustainability. It should be possible and feasible to reinforce the three aspects for future Indonesian urban development through continuous advancements in science and knowledge, capacity building, human resources development, and the shared vision to form effective, productive, and conducive governance. This is where the IUSA (Indonesian Urban Studies Association) will fit in to gather the resources and knowledge from the global perspective to suggest and promote future significant changes toward better Indonesian urban development. IUSA will bring forth constructive suggestions from multi aspects, interdisciplinary, and different perspectives, accompanied by the precedent of the worlds best cases toward the contextual solution that fits, is feasible, and applicable to Indonesian urban development.

Special Session - *Knowledge Utilization, Science Policy Interface, Climate Adaptation and Resilience Planning, Disaster Management..*

Jiwnath Ghimire (-)

Abstract



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Special Session - *Spatial Composition in Extended Urban Regions, the Production of Everyday Life for Urban Majorities in the Global South, Infrastructural Imaginaries, Collective Affect, Global Blackness, and Histories of the Present for Muslim working classes.*

Abdoulmalique Simone (-)

Abstract

Urban development is expanding rapidly in both the Global North and South. It is expected that 70% of the world's population will reside in urban areas by 2050 (UN, 2018). Urban expansion comes with tremendous responsibility, notably speaking of the three pillars: Economy, Equity, and Environment (Douglas and James, 2015). As most of the Global North are already moving towards Sustainability and Green Urbanism, the cities in Global South are still grasping toward a sustainable future. Indonesia, in particular, given the high casualties and damage from the years of the COVID 19 pandemic, is prioritizing the attempts to stimulate economic recovery. Nevertheless, a lesson learned from the recent pandemic and the growing concerns of the extreme cases of climate change as seen in many parts of the world urges urban development in the Indonesian context to develop more sustainably. Accordingly, the future and expected sustainability should also encourage economic stability and improve social welfare and well-being. It is no longer an option to promote one and overlook the two others between economic, environmental, and sustainability. It should be possible and feasible to reinforce the three aspects for future Indonesian urban development through continuous advancements in science and knowledge, capacity building, human resources development, and the shared vision to form effective, productive, and conducive governance. This is where the IUSA (Indonesian Urban Studies Association) will fit in to gather the resources and knowledge from the global perspective to suggest and promote future significant changes toward better Indonesian urban development. IUSA will bring forth constructive suggestions from multi aspects, interdisciplinary, and different perspectives, accompanied by the precedent of the world's best cases toward the contextual solution that fits, is feasible, and applicable to Indonesian urban development.

Special Session - *Sustainable Regional Development Corridors: The Case Of Eastern Kalimantan And The New Indonesian Capital.*

Prof. Bish Sanyal (-)

Abstract

Two years ago, president Jokowi has stated clearly that Indonesia will move her capital from Jakarta to Kalimantan. Earlier this year, 2022, the law on the new capital of the Republic of Indonesia has been approved by the House of Representatives. This means that the idea of a new capital that has actually been conveyed by Indonesia's first president, Sukarno, at the beginning of independence of this republic, will soon be realized. President Jokowi even targeted that the Presidential Palace and several ministries have to move to the new capital in 2024.

The legal basis over the country's new capital must certainly be accompanied by a critical review of the possible impacts and opportunities of the development of the new country's capital, especially to the Kalimantan region. The development of this new capital will form a regional corridor development that connects the city of Balikpapan, the new capital, and Samarinda, in a setting of environmentally sensitive area of Kalimantan. Some questions arise and require rational answers, among others: how does the development of the new capital city relate to regional planning in Kalimantan? What is the possibility of significant impacts which may occur, both negative and positive? What are the experience of other countries in ensuring sustainable development in new capitals with regional development? What are the local perspectives toward this plan? and, What are the roles of spatial planning in ensuring sustainable regional corridor development?


This roundtable discussion will try to answer some of the questions above, involving several relevant speakers. It is expected that this roundtable discussion will produce a useful policy brief to help realize the development of the new capital within the framework of sustainable regional development.

Special Session - *Sustainable Regional Development Corridors: The Case Of Eastern Kalimantan And The New Indonesian Capital.*

Prof. Haryo Winarso (-)

Abstract

Two years ago, president Jokowi has stated clearly that Indonesia will move her capital from Jakarta to Kalimantan. Earlier this year, 2022, the law on the new capital of the Republic of Indonesia has been approved by the House of Representatives. This means that the idea of a new capital that has actually been conveyed by Indonesia's first president, Sukarno, at the



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Special Session - Sustainable Regional Development Corridors: The Case Of Eastern Kalimantan And The New Indonesian Capital.

Prof. Andres Sevtsuk (-)

Abstract

Two years ago, president Jokowi has stated clearly that Indonesia will move her capital from Jakarta to Kalimantan. Earlier this year, 2022, the law on the new capital of the Republic of Indonesia has been approved by the House of Representatives. This means that the idea of a new capital that has actually been conveyed by Indonesias first president, Sukarno, at the beginning of independence of this republic, will soon be realized. President Jokowi even targeted that the Presidential Palace and several ministries have to move to the new capital in 2024.

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Special Session - Sustainable Regional Development Corridors: The Case Of Eastern Kalimantan And The New Indonesian Capital.

Dr. Eng. Puspita Dirgahayani (-)

Abstract

Two years ago, president Jokowi has stated clearly that Indonesia will move her capital from Jakarta to Kalimantan. Earlier this year, 2022, the law on the new capital of the Republic of Indonesia has been approved by the House of Representatives. This means that the idea of a new capital that has actually been conveyed by Indonesias first president, Sukarno, at the beginning of independence of this republic, will soon be realized. President Jokowi even targeted that the Presidential Palace and several ministries have to move to the new capital in 2024.

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Special Session - Keynote Speech: National Policy on Forest Planning and Management in Indonesia

Ruandha Agung Sugardiman (-)

Abstract

Most of the challenge for urban planning in developing countries such as Indonesia is the limitation of resources especially finance for spending basic infrastructure and technology so that economic growth can be lifted up. The city with low urban-based economy tends to grow more informal and often struggle to maintain the proportion of green space that important for good urban environment. Indonesia's regulation required city government to allocate at least 30% of the area as urban green space which can be formed as natural or planted trees in the main street median. This study aims to calculate the greenness level along side the roads in the city of Samarinda in East Kalimantan by using database of panoramic photos from Google Street View (GSV). This research is expected to provide genuine information related to the greenness level in the urban area of Samarinda City. Greenness level is extracted from photo using stepwise process involving several computer softwares (i.e. GIS software, Corel Draw, etc) including Canopeo (an Android-based application). The greenness values for each street/road segments is used to evaluate the greenness area of sub-district in Samarinda. The greenest area in Samarinda city is located in Palaran sub-district (9.31%) where population density is low compare to the other sub-districts. In contrast, Samarinda Ilir sub-district is the least green area in Samarinda (2.85%). Samarinda Ilir sub-district is known as densely populated area and plays crucial role as the center of economic activities in Samarinda. Therefore, in this sub-district, concrete buildings are dominant with very few and sparse vegetated land. In average, road segments in Samarinda City has approximately 5.50% of greenness. GSV photos showed that almost all road segments in Samarinda City do not have vegetation any longer along the sides. The landscape is dominated by buildings, settlements, shops and open area.

Special Session - Robust Forest Monitoring System for Indonesia's FOLU Net Sink 2030

Belinda Arunarwati Margono (-)

Abstract


Most of the challenge for urban planning in developing countries such as Indonesia is the limitation of resources especially finance for spending basic infrastructure and technology so that economic growth can be lifted up. The city with low urban-based economy tends to grow more informal and often struggle to maintain the proportion of green space that important for good urban environment. Indonesia's regulation required city government to allocate at least 30% of the area as urban green space which can be formed as natural or planted trees in the main street median. This study aims to calculate the greenness level along side the roads in the city of Samarinda in East Kalimantan by using database of panoramic photos from Google Street View (GSV). This research is expected to provide genuine information related to the greenness level in the urban area of Samarinda City. Greenness level is extracted from photo using stepwise process involving several computer softwares (i.e. GIS software, Corel Draw, etc) including Canopeo (an Android-based application). The greenness values for each street/road segments is used to evaluate the greenness area of sub-district in Samarinda. The greenest area in Samarinda city is located in Palaran sub-district (9.31%) where population density is low compare to the other sub-districts. In contrast, Samarinda Ilir sub-district is the least green area in Samarinda (2.85%). Samarinda Ilir sub-district is known as densely populated area and plays crucial role as the center of economic activities in Samarinda. Therefore, in this sub-district, concrete buildings are dominant with very few and sparse vegetated land. In average, road segments in Samarinda City has approximately 5.50% of greenness. GSV photos showed that almost all road segments in Samarinda City do not have vegetation any longer along the sides. The landscape is dominated by buildings, settlements, shops and open area.

Special Session - The Roles of Research and Education for Forest Planning and Management in Indonesia

Rudianto Amirta (-)

Abstract

Most of the challenge for urban planning in developing countries such as Indonesia is the limitation of resources especially finance for spending basic infrastructure and technology so that economic growth can be lifted up. The city with low urban-based economy tends to grow more informal and often struggle to maintain the proportion of green space that important for good urban environment. Indonesia's regulation required city government to allocate at least 30% of the area as urban



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Special Session - *The Roles of Local Government in Forest Planning and Management in Indonesia*

Jarot Winarno (-)

Abstract

Most of the challenge for urban planning in developing countries such as Indonesia is the limitation of resources especially finance for spending basic infrastructure and technology so that economic growth can be lifted up. The city with low urban-based economy tends to grow more informal and often struggle to maintain the proportion of green space that important for good urban environment. Indonesia's regulation required city government to allocate at least 30% of the area as urban green space which can be formed as natural or planted trees in the main street median. This study aims to calculate the greenness level along side the roads in the city of Samarinda in East Kalimantan by using database of panoramic photos from Google Street View (GSV). This research is expected to provide genuine information related to the greenness level in the urban area of Samarinda City. Greenness level is extracted from photo using stepwise process involving several computer softwares (i.e. GIS software, Corel Draw, etc) including Canopeo (an Android-based application). The greenness values for each street/road segments is used to evaluate the greenness area of sub-district in Samarinda. The greenest area in Samarinda city is located in Palaran sub-district (9.31%) where population density is low compare to the other sub-districts. In contrast, Samarinda Ilir sub-district is the least green area in Samarinda (2.85%). Samarinda Ilir sub-district is known as densely populated area and plays crucial role as the center of economic activities in Samarinda. Therefore, in this sub-district, concrete buildings are dominant with very few and sparse vegetated land. In average, road segments in Samarinda City has approximately 5.50% of greenness. GSV photos showed that almost all road segments in Samarinda City do not have vegetation any longer along the sides. The landscape is dominated by buildings, settlements, shops and open area.

Special Session - *Institutional and Legal Frameworks for Forest Planning and Management in Indonesia*

Adi Yani (-)

Abstract

Most of the challenge for urban planning in developing countries such as Indonesia is the limitation of resources especially finance for spending basic infrastructure and technology so that economic growth can be lifted up. The city with low urban-based economy tends to grow more informal and often struggle to maintain the proportion of green space that important for good urban environment. Indonesia's regulation required city government to allocate at least 30% of the area as urban green space which can be formed as natural or planted trees in the main street median. This study aims to calculate the greenness level along side the roads in the city of Samarinda in East Kalimantan by using database of panoramic photos from Google Street View (GSV). This research is expected to provide genuine information related to the greenness level in the urban area of Samarinda City. Greenness level is extracted from photo using stepwise process involving several computer softwares (i.e. GIS software, Corel Draw, etc) including Canopeo (an Android-based application). The greenness values for each street/road segments is used to evaluate the greenness area of sub-district in Samarinda. The greenest area in Samarinda city is located in Palaran sub-district (9.31%) where population density is low compare to the other sub-districts. In contrast, Samarinda Ilir sub-district is the least green area in Samarinda (2.85%). Samarinda Ilir sub-district is known as densely populated area and plays crucial role as the center of economic activities in Samarinda. Therefore, in this sub-district, concrete buildings are dominant with very few and sparse vegetated land. In average, road segments in Samarinda City has approximately 5.50% of greenness. GSV photos showed that almost all road segments in Samarinda City do not have vegetation any longer along the sides. The landscape is dominated by buildings, settlements, shops and open area.

Special Session - *Urban-rural relationship and development in America*

Hohon Leung (-)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote urban-rural integration, policies include modernizing rural infrastructures, fully developing rural characteristics, encouraging social investment and government finance in rural areas and other agricultural policies have been introduced. The concept of urban-rural integration has also currently become an important principle for developing countries to systematically improve urban-rural development.

Nowadays, with the advancement of information and communication technologies, the development of urban-rural relationship is faced with new opportunities and challenges. Modern technology has innovated traditional production in rural area; transformation of transportation has greatly improved the connectivity between urban and rural areas; IT technology redefines the function of rural and provide the possibility of living a modern lifestyle in the countryside; in the post-epidemic era, peoples pursuit of a healthy lifestyle has re-emerged the need for the rural area to provide more contact between people and nature. Under the ongoing changes, the value of rural needs to be re-recognized, as well as the meanings and approaches of urban-rural integration.

To achieve better understanding of urban-rural integration, this session would like to invite scholars from European and Asian countries, sharing opinions and local practice focusing on following questions.

- 1) What are the new trends of urban-rural relationship? How do modernization and technology innovations affect or accelerate urban-rural integration?
- 2) What are the challenges for promoting better urban-rural integration?
- 3) How is the urban-rural integration presented spatially? What spatial elements contribute to urban-rural integration?
- 4) How can planning react to the transformation of urban-rural relationship and promote better urban-rural integration? What are the innovative planning tools?
- 5) During different period of urbanization in each country, what specific strategic policies have been introduced? What policy should be provided to meet the future demands of better urban-rural integration?


Special Session - *Urban-rural relationship and development in Britain*

Giulio Verdini (-)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote urban-rural integration, policies include modernizing rural infrastructures, fully developing rural characteristics, encouraging social investment and government finance in rural areas and other agricultural policies have been introduced. The concept of urban-rural integration has also currently become an important principle for developing countries to systematically improve urban-rural development.

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Special Session - *Urban-rural relationship and development in Korea*

Lee Inhee (-)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote urban-rural integration, policies include modernizing rural infrastructures, fully developing rural characteristics, encouraging social investment and government finance in rural areas and other agricultural policies have been introduced. The concept of urban-rural integration has also currently become an important principle for developing countries to systematically improve urban-rural development.

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- 5) During different period of urbanization in each country, what specific strategic policies have been introduced? What policy should be provided to meet the future demands of better urban-rural integration?

Special Session - *Features of urban-rural development in Taiwan*

Kung Shiannfar (-)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote



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Special Session - ***Urban-rural relationship and development in Indonesia***

Delik Hudalah (-)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote urban-rural integration, policies include modernizing rural infrastructures, fully developing rural characteristics, encouraging social investment and government finance in rural areas and other agricultural policies have been introduced. The concept of urban-rural integration has also currently become an important principle for developing countries to systematically improve urban-rural development.

Nowadays, with the advancement of information and communication technologies, the development of urban-rural relationship is faced with new opportunities and challenges. Modern technology has innovated traditional production in rural area; transformation of transportation has greatly improved the connectivity between urban and rural areas; IT technology redefines the function of rural and provide the possibility of living a modern lifestyle in the countryside; in the post-epidemic era, peoples pursuit of a healthy lifestyle has re-emerged the need for the rural area to provide more contact between people and nature. Under the ongoing changes, the value of rural needs to be re-recognized, as well as the meanings and approaches of urban-rural integration.

To achieve better understanding of urban-rural integration, this session would like to invite scholars from European and Asian countries, sharing opinions and local practice focusing on following questions.

- 1) What are the new trends of urban-rural relationship? How do modernization and technology innovations affect or accelerate urban-rural integration?
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Special Session - **Urban-rural relationship and development in Japan**

Tomoya Kaji (-)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote urban-rural integration, policies include modernizing rural infrastructures, fully developing rural characteristics, encouraging social investment and government finance in rural areas and other agricultural policies have been introduced. The concept of urban-rural integration has also currently become an important principle for developing countries to systematically improve urban-rural development.

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Special Session - **Features of urban-rural development in India**

Nikhil Ranjan Mandal (-)

Abstract

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Special Session - **Features of urban-rural development in Viet Nam**

Ngo Le Minh (-)

Abstract

The rapid process of urbanization and modernization has greatly and continuously influenced the urban-rural relationship, which is a global phenomenon. Urban-rural relationship used to be regarded in terms of urban's capacities to provide rural areas with goods and services; in this urban-biased context, it is considered that the growth of rural depends on the sprawling urbanization and industrialization. Since the late 1980s, growing urban issues has prompted a rethinking of the urban-rural relationship. Developed countries represented by Japan and Germany have successively put forward the concept of urban and rural equivalence, which means to eliminate the differences in production and life quality between urban and rural areas, allocate urban and rural public resources equally, and strengthen urban-rural linkages. To promote urban-rural integration, policies include modernizing rural infrastructures, fully developing rural characteristics, encouraging social investment and government finance in rural areas and other agricultural policies have been introduced. The concept of urban-rural integration has also currently become an important principle for developing countries to systematically improve urban-rural development.

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Special Session - **Urban-rural relationships and integration in China**

LI Wenqi (-)

Abstract

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Special Session - **Urban Informality and Covid-19**

Ashok Das (University of Hawai'i at Mānoa)

Abstract


The proposed panel session will launch and discuss an edited book on 'Informal Services in Asian cities and the COVID-19 pandemic' jointly produced by ADB and the Asian Development Bank Institute (ADBI). The book, edited by the session chairpersons listed above, draws on contributions from development practitioners as well as researchers and academics. As is widely recognized, the high incidence of informality is a major challenge for sustainable and inclusive development. Over a billion people in developing Asia live and work in the informal sector, characterized by low-paid and low-skilled jobs often in informal enterprises, lack of social protection, and inadequate access to basic urban infrastructure and services. In 2020, COVID-19 pandemic exacerbated the vulnerabilities of the urban poor by disrupting their livelihood and further limiting access to essential urban services. Against this backdrop, based on academic research and primary data including from ADB projects and initiatives, the book advances our understanding of how informality operates within key urban sectors (including transport, water supply, sanitation, housing, financial services) especially in the context of additional challenges created by COVID-19. It offers lessons for better urban planning and management such as the importance of multisector approaches that focus on both physical and social infrastructure, technological innovations that can improve service delivery and augment the impacts of intervention, and the transformative potential of digital technologies to empower informal sector workers and enterprises.

Special Session - **Shelter services for the urban poor: slum upgrading in Indonesia**

Joris Van Etten (-)

Abstract

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Special Session - Meeting the demand for water and sanitation services in Asia's informal urban areas

Christian Walder (-)

Abstract

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Special Session - Fintech and informal household businesses in ASEAN economies during the pandemic

Peter Morgan (-)

Abstract


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Special Session - Nourishment at the Margins of a Megacity: How the Poor Eat in Dhaka, Bangladesh

John Taylor (-)

Abstract

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Special Session - *Enabling Urban Resilience: Basic Services, Informality, and Livelihoods*

Priyam Das (-)

Abstract

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Special Session - *Water as Leverage and the potential of international collaboration for building resilient cities: working towards innovative, integral and implementable interventions in the city landscape, through an inclusive process*

Robert Proo (Department for International Cooperation and Development – Government of the Netherlands)

Abstract

Both impacts of climate change, such as sea level rise, increasing variability of river discharges, and more intense precipitation, and urbanization in flood prone areas have exacerbated flood risks in many urban areas across the globe. Therefore, an important task for urban planners is to enhance urban flood resilience. This session will critically discuss (1) the relevance of various resilience concepts, such as engineering, ecological and evolutionary resilience, (2) various governance challenges, such as the coordination between levels of government, policy sectors, and public and private parties, and (3) related normative issues, such as inclusiveness, fairness and justice. The session presents case studies of the governance of urban flood resilience in Italy, Thailand, Vietnam and Indonesia, thus allowing for a discussion on the relevance of case specific conditions, such as socio-economic conditions and the institutional setting, for understanding the main governance challenges. Special attention will be paid to the specific role of donor agencies in enhancing flood resilience.

Special Session - *The Development of the New Capital City of Indonesia form the viewpoint of regional planning, connectivity, and enviromental aspect of planning*

Prof. Lawrence Vale (-)

Abstract

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Special Session - *The Development of the New Capital City of Indonesia form the viewpoint of regional planning, connectivity, and enviromental aspect of planning*

Prof. Dr. Ron Holzhakcer (-)

Abstract



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Prof. Bakti Setiawan, MA, Ph.D (-)

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Special Session - *The Development of the New Capital City of Indonesia form the viewpoint of regional planning, connectivity, and enviromental aspect of planning*

Prof. Delik Hudalah (-)

Abstract

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