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PAPER ABSTRACTS (alphabetical order)
会议论文摘要（按姓氏首字母排序）

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Achieving Sustainable Urbanisation by Empowering Young Women and Men

Almost half of the total global population is under the age of 25 and around 1.8 billion people are between the ages of 18 and 24. The vast majority of these youth live in urbanized areas, especially in the cities of the developing world that account for over 90% of the world's urban growth. With the adoption of the 2030 Agenda for Sustainable Development and the New Urban Agenda, 2019 is the seminal year on the road to achieving sustainable urban development. If sustainable urban development is the foundation for a sustainable future, young people are at the forefront of this collective endeavor. The UN system embraces youth as a positive force for transformative change. Empowering youth to become agents of change within cities has the power to transform youth into a positive and productive driver for the overall national socio-economic development. Ad-hoc strategies and innovative solutions that account for larger youth populations living in and migrating to urban areas are necessary to enhance young people's participation in the creation of sustainable cities. At the same time, addressing socio-economic barriers, reducing social isolation of neighborhoods and communities, and allowing youth to access opportunities can help cities become more inclusive. In order to promote sustainable urban development and address the root causes of poverty and inequality, urban regulations and policies need to be reflective of the realities affecting young people.

Amanibeni, Majid

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**Impacts of Urban Green Space's Composition and Configuration on its Cooling Effect:
A Case Study from Beijing, China**

Urban green space has been considered as an ecological measure to mitigate urban heat islands (UHI) through their cooling effect. However, construction of green spaces is under increased pressure in response to rapid urbanization. Thus, it is necessary to find the optimal strategies to maximize the cooling effect. The current study has focused on both the composition and configuration of green spaces in an urban park and its surrounding area in Beijing, China, using various datasets. Firstly, the impact of green space composition of the park including trees, grass and waterbodies on the microclimate was observed. Secondly, a series of field

measurements were conducted to monitor the spatial patterns of the ambient air temperature (AAT) in the surrounding areas of the same park. Thirdly, the 15 year spatial-temporal changes of both composition and configuration of green space on the cooling effect were studied using remotely sensed data. The results showed that cluster trees with short ground vegetation possessed more remarkable cooling effect than cluster trees with no ground vegetation, single trees, grass and water bodies. Also, it is likely that locating water bodies in the area which have more possible air flow could be effective for increasing the cooling effect. Furthermore, the distance to the park, the green coverage ratio, and connectivity index of green spaces are important variables affecting AAT and LST. The results reveal the importance of green space planning, design and plant selection for maximizing the cooling effect.

Anderson, David

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Informality Meets Formality: Luanda's Urban Transformation

Global urbanization is occurring at an unprecedented rate. While the West is mostly urbanized, the majority of urban growth in the upcoming decades will occur in Africa and Asia. In Sub-Saharan Africa, where 72% of urban dwellers already live in informal settlements, it is crucial that continued urbanization be managed with effective urban planning. In Luanda, Angola - designed for a population of 500 000, home to 6.5 million and set to accommodate 13 million by 2030 - the consequences of rapid, unplanned urban growth are already acute. Over 40 years of conflict have pushed people from rural to urban areas. Most residents of Luanda lack basic services and title to their properties, most of which are self-built, one-story structures. In the absence of effective public transportation, the city is clogged with cars and roads are in awful shape. Informed by a range of local stakeholders, "Informality Meets Formality" offers an architectural response to address Luanda's extensive slums. Focusing on the transition from lower- to middle-class households, prototypes for low-rise, higher-density housing were developed to accommodate the evolving needs of individuals and families (e.g., flexible unit layouts, shared public space, self-building, direct street access, reduced common circulation, etc.) Drawing on case studies, built projects, and failed attempts of social housing in Luanda and elsewhere, the project provides an economically and socially sustainable roadmap for the phased redevelopment of Luanda's Cazenga district.

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Vernacular Re-Urbanization: Morphological Exploration of Redeveloping Informal Settlements in Sub-Saharan Africa

The world is urbanizing at unprecedented rates, fundamentally, due to stark population shifts from rural to urban cities. These cities have become important drivers of development and poverty reduction in both areas, as they concentrate much of the national economic activity, while providing crucial links with rural areas, between cities, and even across international borders. Rapid and unplanned urban growth threatens the world's sustainable development as a result of the necessary infrastructure not being properly developed or policies not being appropriately implemented to ensure that the benefits of city life are equitably shared. Such is the case with many Sub-Saharan African countries, namely Angola. A decade removed from

civil war, Angola is reeling to respond to the growing informal population of Luanda—a city originally planned for half a million —currently hosting. Partnering up with local NGO’s and research teams, extensive research has aided in examining the prospects of slums in areas of Luanda and methods of pursuing a redevelopment strategy. This dissertation addresses the current urban and social issues and what policies must be assimilated to ensure an appropriate re-urbanization proposal to uplift the current living conditions. A consideration for the socio-economic and transformative lifestyle of Angolans has helped cater a design proposal that addresses the hardships typically associated with shifting a population from informal settlements to improved urban conditions.

Aura, Tessy

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Piloting the Human Rights Based Approach in Cambodia and Somalia

The purpose of this publication is to showcase the human rights-based approach as an intervention mechanism through a variety of different projects such as the WASH initiative in Cambodia, which supports the decision-making and performance management in water, sanitation, and hygiene sector while supporting decentralization efforts in the local governments. Projects like the MOSYC also mainstream human rights for youth leaders by ensuring HRBA through trainings of youth in identifying human rights violations and understanding the human rights framework, principles, and its application. This seeks to empower youth and support them by providing tools and access to information and resources to fight for their basic rights. Similarly, there are various projects such as the safe public spaces project in Palestine, that highlight the importance of mainstreaming human rights through the creation of inclusive public spaces which foster and promote international human rights treaties such as the international covenant on civil and political rights by creating public common space for people to gather. Through the implementation of these projects, the goal is to build institution and professional capacities of local communities, empower youth and vulnerable groups to realize and advocate for their basic rights, and to provide adequate housing and living standards for all.

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Industrial Parks, Agro Processing Zones and Urbanization trajectory: The Case of Ethiopia

The aim of this paper is to investigate the implication of industrial parks and agro processing zones on the urbanization trajectory of Ethiopia. Ethiopia is vigorously pursuing an industrial park policy with the aim of becoming a hub of light manufacturing and a lower-middle-income economy by 2025. As a result, it has established public and private industrial parks in major and secondary cities with the objective of promoting FDI, international trade, technological innovation, and employment. There is however limited knowledge on the implication of industrial parks on the urbanization trajectory. A number of linkages can be discerned between industrial parks and urban centers. These involve the provision of infrastructure, services and land; the stimulation of local economy with production and consumption spill over and the

stimulation of region-wide city cluster type development in rural and urban areas. This paper investigates industrial parks and their effects on urban transformation in the country. More specifically it aims to: 1) Examine the design and implementation of industrial parks and agro processing zones in Ethiopia; 2) Identify the development induced by the IPs in the city in the form of demand for housing, creation of commercial activities and direct and indirect employment generation; 3) Assess the extent of coordination and planning between the IPs and the local municipality in order to embed the IPs into the local economy; 4) Examine the prospects of inducing a city-cluster development in the region.

Beaulieu, Antoine

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Rural-to-Urban Migration, a Key Adaptation Strategy in the Face of Globalized Agriculture: The Case of Vietnam

Extreme poverty on a global scale persists, despite the many economic development efforts dedicated to fighting this problem. Agricultural intensification was supposedly encouraged to ensure food security for all, though several studies show its harmful nature in a context deeply marked by the search for growth and competitiveness, capitalism and productivism. Faced with challenges like overproduction and waste, many farmers around the world are struggling to safeguard the continuity of their agricultural production. In such contexts, farmers are showing different ways of coping with the strains of globalized agriculture, for example employment in urban and industrial areas, a fact linked to urban and industrial growth. Such actions enable the multigenerational consolidation of land, a process that can help ensure the endurance of rural income-generating activities capable of absorbing shocks. However, there remains a need to assess the capacity of small-scale agricultural productions, particularly those that have experienced or are currently experiencing accelerated integration into the global agricultural market since the 1990s, such as Vietnam, to adapt to the compression of globalized agriculture. A doctoral study in progress has, among others, an objective of contributing to the verification of the hypothesis according to which migration from agricultural areas to industrial and urban areas, constitutes a new key strategy for Vietnamese farmers to increase their ability to cope with the pressures of global agriculture.

Joe Berridge (Keynote speaker)

Urban Strategies INC, Toronto, Canada

Perfect Cities

Joe Berridge is a partner at Urban Strategies, an international urban planning and design consultancy based in Toronto. His work includes the master planning of city centres, waterfronts, airport cities and universities in Canada, the US, the UK, Europe, Singapore and China. Joe's recent book, *Perfect City*, draws on his experience working on similar challenges in different contexts. Why are some cities more capable and successful than others? What is the perfect mix of vibrant city centres, re-energised waterfronts, dynamic airport districts, effective universities, excellent public schools, parks and libraries? How does one make a "perfect city" happen?

Mr. Berridge will explore the many lessons cities provide with respect to economic development, growth management, transit systems, affordable housing, innovation, cultural

infrastructure and the settling of immigrants. How do the responses to these issues vary between different governments, land ownership patterns, and urban development protocols? How do cities resolve the conflicts between top-down and bottom-up planning? Who does what best and how transferable are the experiences of one city/context to another, e.g., between Canada, China and Africa? Are all cities unique or do they share a common structural logic? Are the extraordinary achievements of many Asian cities replicable elsewhere? And can Toronto, the fastest growing city in the west, provide useful lessons in the biggest challenge facing all cities, namely, following Confucius' prescription to "Make local people happy and attract migrants from afar."

Cain, Allan

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Women's Tenure Rights and Land Reform in Angola

Current Angolan municipalisation reforms present a unique opportunity to affect local practice on how community and individual land-holder tenure is administered and to protect women's equitable rights to land. Angola is a post-war country, with weak land tenure legislation and limited local government management capacity. The post-socialist inheritance has left the State as the formal owner of all land. In practice however there is an active informal land market, large scale-land grabs by urban elites, and increasing conflicts affecting communities, small holders and families, particularly those headed by women. Customary traditions are practiced in the various regions of the country do not respect women's rights of ownership and inheritance. More than 62 percent of the population live in informal settlements with insecure land tenure under the threat of forced evictions. Families living in poor communities affected by the expansion of cities and towns are particularly vulnerable. Of these, families lead by women are the most at risk. Securing rights to land and housing assets are important to livelihoods of women headed households by permitting access to financing that they require to grow their enterprises as well as upgrading their housing. The strategy to support women's rights to land should be linked with institutional capacity building for the new municipal administrations. It is hoped that women's participation in municipal elected decision-making bodies will support efforts to strengthen their tenure rights.

Chen, Yiping

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Breaking the "Small Island Inertia": Promoting Regional Sustainable Development through Synergetic Cooperation

Rapid globalization and urbanization have made cooperation and common development a new normal for regional sustainable development. It is an important issue of regional sustainable development on how to transform the external consumption into the driving force of the internal development. The research focuses on the Xia-Zhang-Quan metropolitan area in Fujian Province, China, and uses a spatial gravity model, location quotient ratio (LQR), regional division of labor index (RD), similarity coefficient (S), and the coordinated development of industrial integration as the entry point. The results show that the isomorphism of industrial

structure in the three cities is serious ($S_{xq}=0.94, S_{xz}=0.96, S_{qz}=0.98$), and the industrial structure convergence of the primary ($0.172 \leq RD \leq 0.415$) and tertiary industry ($0.300 \leq RD \leq 0.414$) is serious, while the second industry has a better division of labor ($1.030 \leq RD \leq 1.273$). The cooperation between Xiamen and Zhangzhou should be realized in the intra-industry and industrial chain division ($LQR_{xz}=1.233$), and further cooperation between Xiamen and Quanzhou should be achieved in the inter-industry division ($LQR_{xq}=0.577$). From the phenomenon analysis to the concrete development path summary, this paper aims to provide a feasible way for the special economic zone of Xiamen to break the "small island inertia", and provides a demonstration for the sustainable development of China's urban agglomerations on small-scale specific controllable research.

快速全球化和城市化发展已使合作与共同发展成为区域可持续发展新常态。如何转化城市外部消耗为大区域内部发展动力是区域可持续发展重要议题。本文运用空间引力模型、区位商比值（LQR）、区域分工指数（RD）、产业结构相似性系数（S）等方法，以产业一体化协同发展作为切入点，以中国福建省西南部经济协作区为案例展开研究。结果显示：厦门、泉州、漳州三个城市产业结构同构化现象严重（ $S_{xq}=0.94, S_{xz}=0.96, S_{qz}=0.98$ ），在具体行业上，第一产业（ $0.172 \leq RD \leq 0.415$ ）和第三产业（ $0.300 \leq RD \leq 0.414$ ）的行业结构趋同性现象严重，而第二产业行业结构分工较好（ $1.030 \leq RD \leq 1.273$ ）；厦门与漳州之间应在产业内和产业链分工上实现协作（ $LQR_{xz}=1.233$ ），厦门与泉州之间则还应在产业间分工上实现进一步协作（ $LQR_{xq}=0.577$ ）。从现象分析到具体发展路径总结，研究旨在为厦门经济特区打破“小岛惯性”，为中国城市群可持续发展在小尺度经济协作区、都市经济圈的具体可控研究上提供示范作用。

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The Inspiration Effect of the Policies and Regulations of Jiangsu Industrial Park on the Development of Ethiopian Industrial Park

In the development process of industrial parks, policies and regulations play an important role in promoting their development, and also function as important factors for the success of the industrial parks in China. As one of the first provinces in China to establish a national-level development zone in the earliest stage, Jiangsu has always been in a nationwide leading position in terms of the development of industrial parks, and consequently the "Jiangsu Model" featuring the unique integration of investment, planning, management and innovation. In Ethiopia, the rapid maturity of the parks are promoted by various laws and regulations on construction and investment. However, the parks have also encountered several problems. This paper conducts an analysis on the development of the industrial parks from the types, themes and function of the regulations. Based on this, a comparable study would be performed on the background on the environment and development stage of China's and Ethiopia's parks to explore the reference effect of the "Jiangsu Model" on the "Ethiopia Model". Furthermore, suggestions for the innovation and improvement of the management system of the Ethiopian industrial parks would be suggested from the aspects of legislation of parks, management systems and platform construction. [Foundation]: Research on Development Model and Planning Guidance Mechanism of Jiangsu Overseas International Cooperation Parks (No. 17EYA001)

在工业园区发展的进程中，法规政策起到规范和调整工业园区规划、保障和促进工业园区发展的作用，也是中国工业园区成功的重要因素。江苏省作为中国最早设立国家级开发区的省之一，其园区及相关法规的发展一直处于国内领先地位，形成了具有特色的投资、规划、管理、创新合一的“江苏模式”。埃塞俄比亚作为非洲国家中较早重视工业化的国家，在全国范围内规划布局了 21 个不同类型的产业园区，并出台了《工业园区法案》等多部法规，对园区投资、建设等多方面进行了规范要求。园区的发展带动了其国家工业体系的快速建立，改善了国家整体投资环境并创造了大量就业，但也面临着管理体制粗放、平台建设不完善、产业发展不协调等问题。本文从江苏园区政策法规的类型、主题、功能进行梳理总结，并从中埃园区的背景环境、发展阶段进行对比研究，探讨“江苏模式”对“埃塞模式”的借鉴意义，从园区的立法、管理体制、平台建设三方面提出对埃塞产业园区管理体系创新与完善的建议。致谢：本文由江苏省社科基金：江苏境外国际合作园区发展模式与规划引导机制研究（编号：17EYA001）支持。

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Participatory Development in Rural Urbanisation in Cameroon

A major challenge of rapid urbanization in Africa is that besides planned urbanism, African cities also experience rapid, spontaneous, unplanned chaotic settlements that defy norms of smart cities and favour exponential growth from rural-urban migrations resulting in myriads of serious health, social and economic problems. One viable solution to avoid potentially explosive social tensions in urban centres is the urbanisation of rural communities by planned development and provision of basic amenities and job opportunities in rural communities to stem rural exodus. This paper examines rural urbanization efforts in rural municipalities in Cameroon under the 2004 law on decentralization with a focus on the implementation of the participatory development. It is shown that mobilization of the rural populations for inclusive participatory development faces enormous challenge of language of communication in the development enterprise, because the official languages (English and French) are not mastered by the masses of the rural population who (like most of Africa) speak mainly local languages. This leads to proposing a development communication paradigm for African rural urbanization based on the appropriation model (Chumbow, 2013) that guarantees the development and use of local languages in partnership with official languages to ensure appropriation of knowledge and technologies relevant to rural urbanization development. The paradigm guarantees the democratization of access to knowledge, thus ensuring inclusiveness.

Covo, David

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Urban Rehabilitation in Shanghai

This paper describes an exercise in urban rehabilitation in Shanghai that started in June 2018 with a collaboration between 3 parties: the McGill Global Studio (11 students and 2 professors from the Peter Guo-hua Fu School of Architecture, McGill University), an architect (KFS Architects, Shanghai) and a developer (Shenya Development Group, Shanghai). The site is a residential neighborhood in Shanghai's Yu Yuan Road district, an area characterized by a dense

mix of residential typologies (including 4 Shikumen houses, an early 1930's block and a concentration of other 2-4 storey heritage buildings) along with a few light commercial and institutional occupancies. In an intense 15-day charrette that started with site surveys and meetings with the developer and district regulators, students developed a detailed conceptual proposal calling for restoration of the original pedestrian and vehicular pathways, strategic renovation of the heritage buildings, and replacement of unlicensed interventions and other structures with a thoughtful insertion of higher density residential projects and new commercial, recreational and cultural facilities. A major objective was to assist the architect and developer by exploring strategies that challenged, without ignoring, elements of the regulatory framework in order to identify innovative and sustainable models for development. The work begun in China was completed in Montreal by students working under the supervision of Professor Howard Davies.

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Research on Land Intensive Use Evaluation in Xiong'an New Area

At present, the construction of Xiong'an New Area is a millennium plan. National events and high-quality connotation development are the inherent requirements for the development and construction of new area. According to the land use situation and development plan of the new area, it is necessary to evaluate its intensive land use. This paper establishes an evaluation index system from the four criteria of land use degree, land use economic benefit, land use ecological benefit and land use sustainable level to comprehensively evaluate the intensive land use level of Xiong'an New Area. The evaluation results show that the overall level of land intensive use in Xiong'an New Area is not high, and the intensive use scores of Rongcheng County, Xiongxian County and Anxin County are respectively 0.6273, 0.4984, and 0.3181, which can tap huge potential. According to the land use situation and characteristics of the counties in Xiong'an New Area, the development countermeasures and suggestions for the future are pointed out in a targeted manner, which provides a reference for the construction and development of Xiong'an New Area.

当前，雄安新区建设是千年大计，国家大事，高质量内涵式发展是新区开发建设的内在要求。依据新区土地利用情况与发展规划，对其进行土地集约利用评价十分必要。本文从土地利用程度、土地利用经济效益、土地利用生态效益、土地利用可持续水平四个准则层面建立评价指标体系，综合评价雄安新区土地集约利用水平。评价结果表明：雄安新区土地集约利用整体水平不高，容城县、雄县、安新县土地集约利用分值分别为 0.6273、0.4984、0.3181，可挖掘潜力巨大。依据新区各县土地利用情况与特点，有针对性地提出今后发展对策与建议，为雄安新区建设与发展提供参考依据。

Danja, Isah Ibrahim

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The Role of Special Economic Zones in Nigeria's Urban Transformation

According to the United Nations (UN) projections, developing countries in Africa and Asia will have a majority of urban residents in the next 20-30 years. This brings a challenge to developing countries like Nigeria. In 2009, consultation was carried out between the Ministry of Commerce of China (MOFCOM), the World Bank Group (WBG) and the governments of Nigeria, Ethiopia, and Mauritius on learning from the Chinese experience on Special Economic Zones (SEZs) initiatives as well as exploring the prospect of Tripartite collaborations. It was agreed that all three stakeholders share similar objectives in promoting the development of SEZs to support Africa's industrial development and export growth by manufacturing and other investments from China as well as from domestic and other foreign investors. Since its introduction in 2009, the development of the SEZs in Nigeria has faced many challenges in the areas of Legal and Institutional Framework, Resettlement, Infrastructure (on-site and off-site), environmental, Management and Operational Know-how experience, and Government ownership and continuity. The paper shall aim to examine the role of Special Economic Zones (SEZs) in Nigeria's urban transformation. Reviewed literature will be used to identify and discuss some of the existing SEZs in Nigeria and the roles they will play in Nigeria's quest for urban and economic development. The result highlights some of the challenges and constraints faced by the SEZs in Nigeria.

Bojie Fu (Keynote speaker)

Member of Chinese Academy of Science

Distinguished professor at the State key Lab of Urban and Regional Ecology, Chinese Academy of Sciences

Eco-environmental Effects of Urbanization in China and the Exploration of “New Urbanization”

Urbanization is a key component of the social development of civilizations. In the throes of rapid urbanization, China is currently at a critical stage in its development. With some 656 recognized cities, China's urban population now exceeds 700 million with an urbanization level of only 52%. By 2030, China will have established 23 urban agglomerations with different functions.

Among the severe challenges facing Chinese cities during this ongoing process of urbanization are significant ecological and environmental degradation, disorganized patterns of urban expansion, and the inefficient use and distribution of infrastructure. Environmental problems are driven not only by the lack of capacity of urban infrastructure, but also the high volume of pollutants released into the environment. This study analyzes the so-called “new urbanization” and its difference from traditional models. The characteristics of New Urbanization include urban-rural integration, people-oriented design, production-city integration, economic intensity, ecological livability, and coordinated development. It is poised to play a strategic role in managing China's rapid urbanization.

Gianni, Benjamin

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Registration Code: QGAE5

Towers on the Horizon: Transitional Housing and the Build-Out of Chinese Cities

This paper addresses two issues: the current blueprint for new residential neighborhoods in China and the concept of “transitional” housing for rural-to-urban migrants. In both cases it

engages the form of communities and their longer-term sustainability as urban fabric. Urban expansion and transitional housing are related inasmuch as the bulk of those moving into cities in China in the next several decades will be unskilled rural migrants. As the physical framework in which social networks are formed, these new peri-urban neighborhoods are key to both the successful integration of rural-to-urban migrants and their longer-term social mobility. In most parts of the world, rapid urbanization results in slums. China is different inasmuch as it stays largely ahead of the curve. Famous for its ghost cities, China is renowned for building housing in advance of new residents. This reflects one of the more positive legacies of a command economy coupled with a proactive, top-down approach on behalf of municipalities. It also reflects China's ability to manage the inflow of migrants through its Hukou system. Focused on the form of communities - and by extension the way space is distributed around buildings - the paper explores the suitability of high - rise ensembles to the demographic that many are built to serve. It also engages the question of cultural resonance and the imposition of architectural modernity, both for its symbolic value and for its expediency.

Gidado Dalibi, Salisu

HoHai University, Nanjing, China

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Project Professionals Perspectives on Effective Delivery of Belt and Road Infrastructural Projects in Nigeria's Built Environment

Nigeria's recent inclusion in the belt and road initiative (BRI) is welcome within Nigeria's construction industry. Each BRI participating country has its priorities and Nigeria's purposes include bridging its infrastructural deficit as its population is growing rapidly. Such infrastructural development projects (IDPs) includes roads, railways lines, bridges, tunnels, ports, dams and water projects, power generation plants and distribution grids, information, and communication technology (ICT), etc. However, delivering such IDPs have not been smooth; they come with challenges from within and outside the project; frequent delays and abandonment thereby affecting all the stakeholders involved. Hence, the study aims to identify and assess the factors that impact and affect the effective delivery of IDPs in Nigeria's Built Environment from the project professionals' views and perspectives. The study adopts secondary and primary sources of data by putting more emphasis on Nigeria's cases. The results outline the impacts of various internal, external and project related factors that will have significant impacts on effective delivery of BRI infrastructural projects within Nigeria's built environment and the strategies that are needed to solve and overcome hindrance factors to ensure effective delivery of such projects. Key Words: BRI, Built environment, Development, Factors, Hindrances, Infrastructure, Nigeria, Project Professionals.

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Evaluation on Urban Renewal Public Policy Based on S-CAD Method: Taking the Illegal Buildings Governance Implementing Regulations in the Urban Village of Shenzhen as an Example

The game between multi-stakeholders is an important problem that plagues current urban planning and development. Especially in the urban renewal areas where the confrontation of interests is more acute, public policy will touch on deeper interest patterns and often lead to strong social reactions. Therefore, it is of great significance to explore the use of appropriate decision analysis tools to pre-dissolve social risks in policy making. For this purpose, this study uses the S-CAD (Subjectivity-Consistency, Adequacy, Dependency) approach proposed by Canadian scholar Hok-Lin Leung, which has a clear rational logic and is easy to optimize and balance the demands of all stakeholders, to evaluate the new policy of illegal construction governance for the urban villages of Shenzhen. During the policy evaluation, S-CAD method is applied to consider the implementation effect (consistency), efficiency (adequacy) and feasibility (dependency) of the policy from the dominant viewpoint and related viewpoints. The contradictions and games between the multi-stakeholders such as the government, illegal building owners, and village collectives have been analyzed. The results and impacts of the implementation of the policy have been predicted, as well as the suggestions for modification and improvement. This research is expected to bring useful insights into scientific decisions about urban public policy.

多元利益主体的博弈是困扰当前城市规划与发展的重要难题，特别是在城市更新这类利益对峙较为尖锐的领域，触动深层次利益格局的公共政策往往会引发强烈的社会反应，因此探索采用合适的决策分析工具去预先化解其中的社会风险具有重要意义。为此本研究运用加拿大学者梁鹤年提出的主体观点决策评估方法（S-CAD方法），发挥其具有鲜明理性逻辑以及便于优化平衡各方诉求的特点，对深圳市新近出台的城中村历史违建治理政策进行了评估，从主导观点和相关观点的不同立场对该政策的实施效应（一致性）、效率（充要性）和可行性（依赖性）等方面进行考量，分析了政府、非法建筑权利人、村集体等多元主体之间的矛盾与博弈，并预测了其实施的效果，进而为决策部门提供了修改完善的建议。该方法预期将对有关城市公共政策的科学决策带来有益的启示。

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Spatiotemporal Patterns and Characteristics of Construction Land Change in China during 2009-2017

The construction land scale and pattern change is not only an important theme of urbanization and industrialization, but also a key factor affecting the sustainable development of cities. By using the data of the 2nd National Land Use Survey in 2009 and its updated database from 2010 to 2017, this study analyzed the spatiotemporal patterns and characteristics of construction land during 2009-2017. The results indicated that: (1) in 2017, the construction land area in China was 39.57 million hectares; with 81.19% of it being urban, village, industrial and mining land. The transportation area accounted for 9.69%. (2) Between 2009-2017, the total amount of construction land expanded continually with the average annual increase of 0.51 million hectares. The increasing construction land mainly comes from cultivated land, forest land and grassland, with the proportion of 50.79%, 14.94% and 11.58 respectively. However, the increasing rate slowed down these years. (3) The construction land was mainly distributed in eastern and central areas. Between 2009-2017, the construction area in eastern and middle

provinces increased rapidly, while the increasing rate was higher in western areas than other regions. (4) As to the internal structure changes of construction land in different provinces, the increased urban and village land area were mainly distributed in eastern and middle areas. The increased town area was mainly in the middle and western areas. The mining area was mainly increased in the middle, western and northeast areas.

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Land Misallocation and Productivity Differences between Manufacturing and Services in High-tech Industry

In this paper, land misallocation and productivity differences are explored between manufacturing and services in high-tech industry by using the Cobb-Douglas production function model. The purpose of the study is to provide theoretical reference for optimizing land allocation in high-tech industries and providing differentiated allocation strategies of industrial resource elements. The results show that: 1) different sectors of high-tech industries depend on different investment of resource elements, and there are differences in TFP among different sectors. In general, the manufacturing industry mainly depends on capital investment and land investment, while the service industry mainly depends on labor investment. However, the TFP of the service industry is significantly higher than that of the manufacturing industry. 2) The land allocation between manufacturing and services in high-tech industries is insufficient and unbalanced, and there is land misallocation between manufacturing and services in high-tech industry. 3) Land misallocation has different effects between manufacturing and services in high-tech industry. The study concludes that the key to rectify the land misallocation of high-tech industry lies in how to balance the allocation of land among industries. It is suggested that the government should adjust the orientation of industrial structure, resource allocation among industries, scientific land use planning, and layout adjustment for high-tech industries.

本文采用 Cobb-Douglas 生产函数模型方法，探索高技术产业中制造业和服务业不同类型产业的用地错配程度及其影响效应，为优化高技术产业用地配置和提供差别化的产业资源要素配置策略提供理论参考。研究表明：（1）不同类型高技术产业对投入资源要素依赖不同，行业间全要素生产率存在差异性。总体上制造业主要依赖于资本要素和土地要素的投入，而服务业主要依赖于劳动力要素投入，但是服务业的全要素生产率明显高于制造业的全要素生产率。

（2）不同类型高技术产业用地配置不充分与不均衡，行业间用地存在错配问题。（3）不同类型高技术产业用地错配的影响效应不同。研究结论：纠偏高技术产业用地错配问题关键在于如何平衡产业间的用地配置问题。建议调整产业结构和资源要素在产业间配置方向，科学合理进行高技术产业用地规划与布局调整等。

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Urban Sprawl from Another Perspective: Interpreting Seattle's 3D Landscape with Lidar

Landscape models have been widely used to study urban landscape patterns and urban dynamics. However, studies have been limited to surficial aspects to examine urban development patterns, and a vertical view of the urban landscape is often overlooked due to lack of data or a systematic quantitative model to depict the 3D dynamics. By incorporating a DTM model from Lidar data of Seattle, this paper develops a 3D Landscape Model to evaluate the urban growth of the region in both 2D and 3D perspectives. Socioeconomic variables are included in the model to interpret the surficial and vertical urban dynamics in the metropolitan area.

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To Get Rich, Build a Road First? Infrastructure and Urban Development in Africa

China contributes to a large proportion of the infrastructure development in Africa. Yet behind the headlines there is still little research on who drives these projects forward, what their temporal horizons are, and how they reshape the territories and communities around them. It is very clear that an infrastructure-led development model is being transmitted through the engagement of competitive Chinese contractors in African infrastructure projects, but whether the model will work in the new context remains a question. Most importantly, the form of such a model is rarely explored in existing literature, leaving a huge gap between different understandings towards China's investment and efforts in Africa's infrastructure development. In this paper three projects in Uganda and Ethiopia are studied at both urban and regional level: the Light Rail Transit in Addis Ababa, the Djibouti-Addis SGR, and the expressway linking Kampala to Entebbe airport. These projects are highly significant because they showcased the missing links between the Chinese model of infrastructure-led urban development and the practices in Africa. The profit-seeking Chinese contractors themselves play a key role in driving infrastructural modalities, engaging opportunistically with African national governments whose agendas are inconsistent and malleable. The infrastructure-based local financial platform and the ownership of land as a government asset, key elements at play in the Chinese urban development model, are absent in the African context.

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Youth Entrepreneurship and the Promise of Inclusive Urban Development in Ethiopia

Ethiopia is one of rapidly urbanizing countries of the world. Rural-urban migration of the youth is a major force in the urbanization process. The capacity of urban centers to house the massive influx of migrants by providing employment opportunities is however limited. Consequently, the youth are pushed into self-employment in the informal sector. Though Ethiopia has witnessed rapid economic growth, the challenges posed by the growing population has increased urban inequality making the youth most vulnerable. To reverse this problem, the promotion of youth entrepreneurship programs has become an important policy agenda item. Entrepreneurship programs are however unable to reach a significant portion of unemployed youth and those working in the informal sector. This paper explores barriers that deter the youth from starting and running businesses. It has used a qualitative research approach. Data was collected using key-informant interviews and focus group discussions from four cities. The

findings show that bottlenecks including lack of understanding the nature and demands of the youth; weaknesses in business organization and developing markets; institutional malaise and resource constraints; priority business areas set by the government; the involvement of many institutions; low levels of service capacity; business registration and licensing fees and taxes; corruption and socio-cultural constraints hinder the success of youth entrepreneurship programs and attaining inclusive urban development in Ethiopia.

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An Assessment on Management of Capital City Relocation and Rehabilitation: The Case Study of the Capital City of Tanzania

Tanzania has recently moved its capital city from Dar-es-salaam to Dodoma. Looking at this problem from a global perspective; countries have relocated their capital cities whereby major policy considerations for justification have been centrality, national cohesion, avoiding congestion of large cities and planning anew. Such projects have been creating a special purpose vehicle to steer the planning, financing and building. Laws have also been put in place. The purpose for this study is to understand and assess full operations of the capital systems, function analysis, rehabilitation approach and the management of all policies, planning, implementation, monitoring and compliance of the project. The general objective of this study is to develop knowledge that involves capital city relocation and rehabilitation and to ensure that the best model is used to make this process effective and efficient. The main problem discussed is the inconsistency of the whole process and how projects like these should follow a “one-systematic engineering approach” that means following specific steps in order to make sure that all important areas were covered. The methodology used will be non-probability sampling (Interviews, questionnaires and focus groups will be used to results from the “selected” stakeholders). Finally, the plan is to come up with a constructive practical model and develop a theory analysis framework to be adapted by others in order to ensure a “full run system” is generated to help Governments and any other stakeholder.

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The Future African Market: A Mall in Yaoundé between Legacy, Trend and Modernity

The theme « A mall in Yaoundé between legacy, trend and modernity » is an area of research on the future of African markets, regarding to the rapid population growth. The main objective was to understand which development models were to be adopted for urban markets. The answer to this question implies that one should take into consideration the different logics of existing designs and modern trends in order to generate the most adapted modern trade form for our future market areas. The mall is a consistent set of trade and leisure. It is designed to make the purchasing pleasant by guaranteeing the best possible conditions of security, hygiene and comfort that traditional markets nowadays can barely afford to offer. Integrating the concept of markets in a mall helped us to experiment the concept of flexibility in the project, which avoids the freezing of the usage by giving the possibility to later modify it. Other principles, notably the sustainability and the monumentality have been used as a basis for a real integration of the project in its urban context. The project of the mall so far presented reflects a

capital city able to emphasize and promote the Cameroonian economy. Key words: mall, legacy, trend, modernity, market, trade, flexibility, sustainability, monumentality.

Le thème intitulé « un mall à Yaoundé entre héritage, tendance et modernité » est un pan de recherche sur le devenir des marchés africains face à la croissance démographique galopante. Une question principale a porté notre réflexion, celle de savoir : quel modèle d'aménagement pour les marchés urbains ? La réponse à cette question a induit la prise en compte des logiques d'aménagement existants ainsi que les celles des tendances modernes afin de ressortir la forme de commerce moderne adaptée pour nos lieux de marchés futurs. Le mall, ensemble cohérent de commerce et de loisir. Il est conçu pour rendre agréable l'acte d'achat en offrant les conditions de sécurité, d'hygiène et de confort que les marchés traditionnels au jour d'aujourd'hui peine à offrir. Intégrer le concept de marché dans un mall, nous a permis d'expérimenter dans le projet le concept de flexibilité, qui évite de figer l'usage en permettant un possible changement. D'autres principes, celui de la durabilité et celui de la monumentalité ont été les bases d'une intégration réelle du projet dans son contexte urbain. Le projet de mall ainsi proposé est le reflet d'une cité capitale plus à même de rehausser et de promouvoir l'économie camerounaise.

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Sustainable Energy Transition in Cities

As the world struggles to address today's challenges of rapid urbanisation, increased poverty and the devastating effects of climate change, global efforts are required to enact the transition to sustainable energy and resources. Cities represent more than 70 per cent of global energy demand which also contributes to greenhouse gas emissions. Cities hold the solution to most of the challenges of the 21st Century, starting from adopting and implementing the sustainable energy agenda. The current global share of renewable energy supply is 11 per cent. The diversity of renewable energy resources is vast, and research indicates a potential contribution of renewable energy to reach 60 per cent of total world energy supply by 2050, if the current trend of adopting renewables continues. For cities to become sustainable, the transition towards sustainable energy use will require major interventions in the following sectors: 1- Urban planning, designing and implementation of densely, compact and accessible cities with plenty of green areas; 2- Designing clean, efficient and affordable public transportation options; 3- Designing new buildings with green building and resource efficient principles and retrofitting old buildings; 4- Generating energy from local clean energy sources; 5- Adopting efficient municipal waste management system with resource recovery; and 6- Promoting efficiency in the use of resources (energy and water) in commercial and industrial sectors as well as in the generation and transportation of energy.

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Deep Shanghai Project: A Resilient Strategy for Infrastructure Integration

Shanghai, as the most populated megacity, is facing challenges due to more frequent flooding occurrences, a five-times higher freight transport growth than rail transit passenger growth, and the controversial waste management issue. While shallow underground space in Shanghai city has been approaching its saturation degree, the use of Deep Underground Space (DUS) is under a forward-thinking planning initiative from 2016, aiming to scale up its infrastructure stock to meet future demand. Exploring deep infrastructure functions will also help to deal with industrial land scarcity and to generate consolidation effects with an infrastructure integration strategy. Emphasizing three priorities “Security, Resiliency and Ecology”, this article will start from addressing a “Depth-scape” planning concept based on vertical zoning and a development potential evaluation process, followed by discussing three functional schemes below 50 meters deep. Three categories of DUS spatial networks are presented, indicating benefits on service performance enhancement.

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Research on Urban Functional Area and Mixing Degree Recognition Based on POI: Taking Chongqing as an Example

With the continuous advancement of global urbanization, urban development has entered a new era. The rapid development of information technology has made cities more intelligent, dynamic and efficient. Based on this background, the era of big data came into being, and urban development and planning disciplines are paying more and more attention to the application and research of emerging data technologies. The widely distributed POI data in urban space has important reference significance for urban spatial analysis due to its massive and accurate characteristics, and also provides a new perspective for urban land use and functional identification evaluation. This paper uses Baidu map POI big data to take the core city of Chongqing as the research object. Based on the screening and classification of POI data, the "space-influence" binary weight calculation model is constructed to quantify the POI attribute. Combined with the street data, the area is divided to identify the main functions of each block. The functional mixture degree is calculated at the refined grid scale, and the analysis results are compared with the current situation. The feasibility of the research method is demonstrated, which has certain theoretical and practical value for urban spatial planning and policy formulation.

大数据时代的来临，使得城市发展也越来越关注新技术应用与研究，城市空间中广泛分布的 POI 数据（point of interest）由于其海量且精确的特性，对城市空间分析具有重要参考意义，也为城市土地利用和功能识别评价提供了新的视角。本文采用百度地图 POI，以重庆市核心城区为研究对象，对 POI 数据进行筛选与分类的基础上，构建“空间——影响力”二元权重计算模型以量化 POI 属性，再结合街道数据对区域进行划分，识别各街区主体功能，并在精细化网格尺度下对功能混合度进行计算，将分析结果与现状进行对比评价，论证研究方法的可行性，对城市空间规划与政策制定具有一定的理论和实践价值。

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New Features of the Urbanization Trends in China

New Features of the Urbanization Trends in China: 1) the overall urbanization is slowing down, and farmers disfavor moving to the city with their whole families; 2) the urbanization rate in the central and western regions is higher than that in the eastern regions, with a significant back flow of people, who moved from the central and western regions, and decrease of population inflow to the eastern regions; 3) the new urban population flows into the counties (cities), while the population growth in megacities is significantly reduced; 4) the newly-employed people in the country are dominated by college graduates instead of by migrant workers as in the past; 5) the employment and living mode for a large number of rural households in plains areas tends to be featured by “working in agriculture and industry concurrently”, “living in both urban and rural areas” and “commuting between commuting”; 6) the middle-income population grew rapidly, introducing new demands for urban space supply, and thus the more cases of “living in two cities” occurred. To cope with changes during urbanization, the status of space resources supply needs to be changed. 1) Follow the differences in supply and demand between the central, western and eastern regions and between the northern and southern regions. 2) Focus on a more equitable supply of resources for large, medium and small cities and county-level units. 3) Highlight a refined supply of space resources to guide the improvement of the stock spatial structure, and satisfy new demands of quality life. 4) Transform the model of urban development depending on land and finance to allocate fairly and reasonably lands for living, production and ecological purposes.

中国城镇化进程出现了以下特征: 1) 城镇化增速放慢, 农民举家迁城的愿望不高。2) 中西部地区城镇化速度高于东部、中西部流出人口回流现象明显, 东部流入人口减少。3) 新增城镇人口流入县(市)单元, 特大城市人口增长明显减少。4) 全国新增就业人群已经从农民工为主转向以大学生为主。5) 平原地区农村家庭大量出现“工农兼业”, “城乡双栖”、“城乡通勤”的就业、生活方式。6) 中层收入群体的快速成长, 对城市空间供给推出新的要求, “双城居住”增多。为了应对城镇化进程的变化, 空间资源供给应该改变。关注中西部与东部、北方与南方区域性的供需差异。2) 关于大中小城市与县级单元之间更加公平的资源供给。3) 关注空间资源供给的精细化, 引导存量空间结构优化, 满足高品质生活的新需求。4) 改变土地财政依赖的城市发展模式, 更加公平、合理的配置生活、生产、生态用地。

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Urban Resilience: A Critical Nexus between Climate Change and Rapid Urbanization

Humans are facing high risks in terms of extreme climate events and rapid urbanization, especially in coastal regions worldwide. Improving the urban resilience is one of the critical mechanisms to help people better adapt to climate change and rapid urbanization. This study proposes a critical nexus between climate change and rapid urbanization to enhance the urban ecological resilience in the coastal area. Our group explored the resilience mechanism of the coupled human-environment systems in some coastal regions; and we also applied the concept of land-water-biodiversity nexus in Xiamen to explore the resilience mechanism in the typical coastal city. Most of the previous works focused on the urban-ecological system and did not combine climate change with rapid urbanization in the nexus perspective to realize the land-sea connection. A new framework of “climate change-rapid urbanization” nexus is established in this study highlighting the resilience by systematically integrating the water, land (soil), air (climate), biodiversity, and human components in the coastal rapid urbanization regions of

China. Simultaneously, we apply the spatial systematics dynamics method to detect the complex multi-factor, multi-process and multi-scale nexus of the coupled human-earth system and to achieve sustainable development goals. The future study provides a scientific basis for enhancing the resilience and land-sea connection in the integrated coastal landscape (watershed, coast and offshore marine area) of China.

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Research on the Present Situation and Social Effects of Ethiopia's Industrial Park Construction

Since the establishment of the first industrial park in Ethiopia in 2007, more than 20 industrial parks have been planned and constructed in the whole country up to 2018, including the Eastern Industrial Park, Bole Lemi Industrial Park, Huajian International Light Industrial Park and the Hawassa Industrial Park. Due to the rapid development of industrial parks, Ethiopia's economy has developed rapidly, and the average growth rate of GDP has remained above 10%, far higher than the average growth rate of Africa in the same period, and the per capita GDP has also risen from \$184 in 2006 to \$754 in 2017; the industrial structure has been continuously upgraded and optimized, and the proportion of secondary industry in GDP has increased from 10.4% to 24.0%; Foreign direct investment also increased from \$100 million in 2008 to \$3 billion in 2016. At the same time, the construction of industrial parks has also promoted the progress of industrial technology and the increase of skilled workers. From the perspective of the garment and textile industry, which is the dominant industry in most industrial parks, Ethiopia's exports to the European Union and the United States totaled about \$5 million worth of clothing in 2007. In 2016, this figure has increased to more than \$70 million.

埃塞俄比亚自 2007 年设立第一个工业园区以来，截至 2018 年全国规划建设工业园区已累计超过 20 个，其中包含东方工业园、博莱莱米工业园、华坚国际轻工业城、哈瓦萨工业园等大型工业园区均投入运营。得益于产业园区的快速发展，埃塞俄比亚经济快速发展，GDP 平均增速一直保持在 10% 以上，远高于同期非洲的平均增长率，人均 GDP 也由 2006 年的 184 美元上涨至 2017 年的 754 美元；产业结构不断升级优化，第二产业占 GDP 比重则由 10.4% 上升至 24.0%；外国直接投资也由 2008 年的 1 亿美元增加至 2016 年的 30 亿美元；同时工业园区的建设也促进了工业技术的进步和技术工人的增加，从大多数工业园区的主导产业服装纺织业来看，2007 年，埃塞俄比亚的出口到欧盟和美国的服装总额约为 500 万美元，2016 年，这一数字已增加至 7000 万美元以上。

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Cities without Slums? China's Land Regime and Dual-track Urbanization

Since the 1990s, China's urbanization has entered a channel of rapid development. The urbanization rate of resident population has increased from 26.41% in 1990 to 57.35% in 2016, with an average annual increase of 3.03%. Under the dualistic land system, China's urbanization shows obvious double-track characteristics: one track is that the government relies on

compulsory low-cost land acquisition and dominance by the primary land market, which solves the capital source in the urbanization process and the provision of public goods, but has also led to urban sprawl, inefficiency, structural imbalances, government finances and bank financial risks. On the other track, peasants spontaneously gather at the "urban-rural integration" or "village in the city," and collective organizations of peasants provide public services. This track leads to the spread of extra-legal places, the lack of basic public service provisions, unequal rights of foreigners and locals, and other problems of urban governance such as the concentration of public security incidents. Combined with China's dualistic system, this paper analyzes the characteristics and problems of government-led urbanization and peasants' spontaneous urbanization and puts forward some policy suggestions on how to reform the land system to achieve urbanization.

上世纪九十年代开始，中国城市化进入快速发展通道，常住人口城镇化率从 1990 年的 26.41% 增长到 2016 年的 57.35%，年均增长 3.03%。在二元土地制度下，中国的城市化呈现明显的双轨特征：一条轨道是政府依靠强制低价征收和土地一级市场垄断主导的城市化，解决了城市化进程中的资本来源和公共品提供，也导致城市蔓延、效率低下、结构失衡、政府财政和银行金融风险；另一轨道是农民自发在“城乡结合部”或“城中村”聚集的城市化，农民集体组织提供公共服务，也造成法外之地蔓延、基本公共服务提供能力不足、外地人与本地人的权利不平等、以及治安事件集中发生等城市治理问题。本文分析了二元制度导致双轨城市化的机制，政府主导城市化和农民自发城市化的特征和问题，提出了改革土地制度实现城市化并轨的政策建议。

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Analysis on Land Ecological Status of Yangtze River Delta Urban Agglomeration

Land ecological status is an important aspect of sustainable utilization of land resources. With the continuous advancement of the construction of ecological civilization, the overall ecological environment in China is generally stable and good, but the ecological problems in some areas still exist. Land ecology has attracted the attention of government and scientific researchers. Based on the data of multi-source remote sensing images, the second national land survey and land use change survey, this study used statistical analysis and mathematical models to analyze the changes of land ecological status in the Yangtze River Delta urban agglomeration from 2010 to 2016. The results showed that the area of water and vegetation increased, bare land decreased, and vegetation coverage increased in the built-up area. In the entire Yangtze River Delta urban agglomeration, the area of ecological land decreased, while the area of construction land, traffic land and other land increased, the leaf area index decreased, also the net primary productivity of agricultural land decreased. The rapid development of cities has affected the land ecological condition to some extent. Therefore, in the process of urbanization, we should optimize the pattern of land spatial development, pay more attention to the monitoring and evaluation of land ecological status, and strengthen the protection and restoration of land ecosystems.

本研究基于多源遥感影像、全国第二次土地调查、土地利用变更调查等数据，采用统计分析和数学模型等方法，分析了 2010-2016 年长三角城市群土地生态状况变化。结果表明，建成区水

体和植被面积增加，裸地面积减少；植被覆盖度增加。长三角城市群生态用地面积减少，建设用地、交通过地、其他用地面积增加；叶面积指数降低，农用地净初级生产力减少。城市快速发展在一定程度上影响了土地生态状况。因此在城市化进程中，要优化国土空间开发格局，加强土地生态状况监测与评估，以及土地生态系统的保护与修复。

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Local Traditional Knowledge and its Urban Context: A Case Study of Bai Ethnic Minority in Dali, China

In the rapidly urbanizing China, local traditional knowledge (LTK) has been brought to the public's attention as a significant feature of cultural identity and inclusiveness. Especially in the ethnic minority areas, LTK may be marginalized as urban planners employ Western scientific thoughts extensively during the urbanization processes. However, it is important to respect the LTK, so that the cultural identity and social cohesion of ethnic minorities can be transmitted in the trend of modernization. The objective of this research is to explore the role of LTK in urban development in China's ethnic minority regions from the perspective of local residents within the City of Dali. In order to examine how the Bai's LTK is impacting the urban landscape in Dali, this study will employ a mix-mode methodology: a questionnaire survey, focus group discussion and participatory mapping task. The study results will shed light on the interplay of the Bai LTK and the urban landscape in Dali, and assert a better understanding of Bai LTK from the perspective of Bai people in Dali.

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Intensive Planning of Land Value Increment and Urban Growth Space along Pan-Asia Railway (Laos Section)

The construction of Pan-Asia Railway Network has brought economic growth to the development of countries along the route. Starting from the relationship between the change in land price and urban growth, this report studies the growing and changing processes of the cities around the newly constructed Mowan railway section in Laos. The result shows that the development of Laotian cities has a corresponding and comparative relationship with the different levels of cities in Yunnan, China. A reference system can be established through the corresponding process of historical stage to simulate the future expectation. Remote sensing analysis can be used to find the variables of urban premature movement caused by psychological expectation. Since there are more mountains and less plains along the route, and the urban expansion space is limited, this paper puts forward some suggestions of intensive planning and utilization for the future regional space development.

泛亚铁路的修建，给沿线国家的发展带来了经济增长动力。城市地价上涨，也导致沿线节点城市进入快速增长阶段。本报告从地价变化和城市发展过程协调性关系入手，研究老挝新建磨万铁路节点城市的成长空间和变化过程。研究发现老挝城市的开发与我国云南不同级别的城市有对应比较关系，可以通过历史阶段相应过程建立参照系，对未来预期进行模拟。通过遥感分析可以寻找由于心理预期而引发的城市早动变量。针对沿线山地多，平原少，城市扩展空间局促的现实，对未来区域空间发展提出集约规划利用的建议。

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The Effects of Trade Globalization on China's Urbanization and Carbon-Dioxide Emission

This paper examines changes in per capita carbon dioxide emissions in China after China joined the World Trade Organization (WTO) on December 21st in 2001. Synthetic Control Method generates a synthetic control group that accurately reproduces per capita carbon dioxide emissions in China before China became a WTO member. A common trend in per capita carbon dioxide emissions in China and the weighted average emissions in the synthetic control group confirms that a Difference-in-Differences regression of China and the synthetic control group estimates a causal effect of joining the WTO on per capita carbon dioxide emissions in China. Becoming a WTO member increased per capita carbon dioxide emissions in China by 2.61 metric tons. The result supports the hypothesis of the pollution haven model. As a result, this paper concludes that the environment in China suffered from trade liberalization.

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An Analysis of Urban Land Use/ Land Cover Change Using Remote Sensing Data in Blantyre City, Southern Malawi

The aim of this study is to analyze urban land use/land cover (LULC) change in Blantyre city, southern Malawi using Geographic Information Systems (GIS) and Remote Sensing (RS) in order to support sustainable urban planning. Landsat Thematic Mapper™ satellite imagery of 1994 and Landsat Operational Land Imager (OLI) satellite imagery for 2018 were used to create two LULC classification maps. The two maps were compared to produce a transition matrix with the goal of identifying dominant signals of change in the landscape. The classification maps were generated with overall accuracy of 90 and 86 percent for 1994 and 2018, respectively. Our results show that built-up class increased from 8.10% (19.28 km²) in 1994 to 18.75% (44.61 km²) in 2018. Bare land decreased from 78.51% (186.75 km²) in 1994 to 70.87% (166.84 km²) in 2018 and vegetation class decreased from 13.24% (31.49 km²) in 1994 to 10.14% (26.08 km²) in 2018. The post-classification result revealed a systematic transition of vegetation to bare land (8.07%) and bare land to built-up (12%) during the study period. The information generated in this study revealed the pressure of human activities and urban developments on land. Therefore, future land use policies need to consider such prominent signals of LULC change in order to plan an integrated approach to safeguard the fragile landscapes and ecosystems in the city.

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To Build Smart Cities: What Tools for Sub-Saharan Africa? Answers Based on the Ngaoundéré GIS Data Base, Cameroon

The global population is growing rapidly: from 2.5 billion in 1950 to 7.3 billion in 2015. The average growth was about 83 million in 2017. The urban population increased from 30% of the total population in 1950 to 54% in 2016. This strong growth in the urban population results from natural population growth, migration flows and rural exodus. It is accompanied by a strong demand for urban needs in various fields. Spaces that fulfill urban functions must adapt to meet the multiple needs of the population and is why the concept was created in the 1980s. Dupuy (1982) stated that "a smart city is one that is connected to the ICT network". For the majority of authors, it is the one that uses and inserts new information and communication technologies into its various management processes in order to optimize the use of existing infrastructures on the basis of intelligent governance. Smart city governance aims to solve the current situation in a city that remains very opaque, both in terms of geolocation of infrastructure and interrelations between stakeholders. With the support of the World Bank, we have begun to transform Ngaoundere into an open and intelligent city (<http://acager.org/portalgis/> or [https://www.openstreetmap.org/search?query=Ngaoundere#map = 15 / 7.3550 / 13.5743](https://www.openstreetmap.org/search?query=Ngaoundere#map=15/7.3550/13.5743)) with free tools such as Essential GPS, Qfield, Google Earth, Earth Explorer, QGIS, Qfield, Essential GPS, JOSM. We would like to share this experience with ICCCASU3 participants.

La population mondiale augmente rapidement: de 2,5 milliards en 1950 à 7,3 milliards en 2015. La croissance moyenne était d'environ 83 millions en 2017. La population urbaine est passée de 30% de la population totale en 1950 à 54% en 2016. Cette forte croissance de la population urbaine résulte de la croissance démographique naturelle, des flux migratoires et de l'exode rural. Elle s'accompagne d'une forte demande de besoins urbains dans divers domaines. Les espaces qui remplissent les fonctions urbaines doivent s'adapter pour répondre aux multiples besoins de cette population. C'est pourquoi le concept a été créé dans les années 1980. Dupuy (1982) a déclaré qu'«une ville intelligente est celle qui est connectée au réseau des TIC». Pour la majorité des auteurs, c'est celle qui utilise et insère les nouvelles technologies de l'information et de la communication dans ses différents processus de gestion afin d'optimiser l'utilisation des infrastructures existantes sur la base d'une gouvernance intelligente. Une gouvernance de ville intelligente a pour objectif de résoudre la situation actuelle dans une ville qui reste très opaque, à la fois en termes de géolocalisation des infrastructures et d'interrelations entre les parties prenantes. Avec le soutien de la Banque mondiale, nous avons commencé à transformer Ngaoundéré en une ville ouverte et intelligente (<http://acager.org/portalgis/> ou [https://www.openstreetmap.org/search?query=Ngaoundéré#map = 15 / 7.3550 / 13.5743](https://www.openstreetmap.org/search?query=Ngaoundéré#map=15/7.3550/13.5743)) avec des outils gratuits tels que GPS Essential, Qfield, G.

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Access to Land in Urban and Rural Areas of Botswana: The Issue of Inclusivity

It is commonly assumed that Botswana's land resources (amounting to over 500,000 km² with a population of just over 2million today) are abundant. Over the years it has become evident that some definite limits will be widely experienced quite soon. It is apparent, that the increasing shortage of land manifests itself both in the rural and urban areas. In the rural areas there are households, both female headed, male-headed and even youth headed, are experiencing problems accessing land; pasture land is deteriorating and access to arable land has also become seriously limited in several areas. In the urban areas too, in spite of many strategies that have been adopted over the years, access to land for housing and commerce is a major challenge, with the main issue being affordability and lack of finance. In this paper we cover the main issues related to accessibility to land including: legislative aspects; past and present land management aspects; the major ways of accessing land in both urban and rural areas; and challenges faced in striving for equity and inclusiveness. The paper concludes by putting forward possible strategies to make land available to all groups of society in Botswana.

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Urban Transformation and Smart City: A Path-Dependent Analysis

Making cities smart has been a challenge for the contemporary cities. This phenomenon gets more complicated when there is a pressing need to adopt smart city principles against the backdrop of visible and invisible factors that are causing urban transformation on a varying magnitude. One such 'visibly-invisible' factor is e-commerce and its expanding operation, causing changes to the city's conventional spatial structure. Yet, very limited research exists about the momentum and its magnitude of impacts. Current literature predominantly focuses on the relationship and effect of e-commerce on transport study, notably the influence of e-commerce on the direction and volume of traffic flow, changing dynamics of logistics, and operational strategies. How e-commerce has been and is going to influence the city's conventional spatial structure, defined by the interwoven relationship between the city cores, fringe and rural areas, and whether it could be fed as a 'transitory' variable into building smart cities is unclear. Thus, this paper attempts to understand the changing dynamics of cities' spatial structure while focusing on e-commerce induced landscape change of the retail stores. Specifically, it aims to theoretically gauge the nature of this change by division, re-location, and fragmentation of the retail stores while conceptually capturing the scenarios through big data analytics. This stems the need for a 'path-dependency' analysis to capture the complex relationship between e-commerce induced spatial shift and smart city principles.

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Hasten Sustainable Urban Development in Africa: The Inclusive Urban Renewal Approach

Africa is the region of the world with the fastest urbanization growth; the continent accounted for 11.3% of the global urban population in 2010. With its extremely high annual growth rate compared to the world's 2.0%, Africa is expected to account for 20.2% of the global urban

population by the year 2050. The continent's urban centers are characterized by low inclusiveness with high rates of unemployment among the youth, women and the disabled leading to precarious living conditions. While urban centers play a key role in the structural transformation of national economies, creation of decent jobs, and thus maintain the economic growth of the continent; they are mostly marginalized and underdeveloped, with obsolete urban infrastructures and poorly managed and inappropriate access to basic services. The mushrooming of unplanned peri-urban areas, the use of deleterious lands and the existence of dangerous structures has led to urban unsafety, health hazards and exclusion from formal economic development opportunities. The solution as per the New Urban Agenda is to promote inclusive, innovative and integrated urban development which includes urban renewal projects. These projects will create new opportunities to improve livelihoods, living conditions, tourism and economic well-being of the continent's urban population, while preserving urban identity, environment and culture of urban centers, as well as improving access to basic services. Urban renewal will thus promote sustainable urban redevelopment across the continent.

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Municipal Governance and Innovation: Case Study to Improve the Citizen Experience in Quebec, Canada

The smart city relies on information and communication technologies (ICT), as well as data collection and management mechanisms, favorable to its urban, economic, urbanistic, tourist and security development and social (UN, 2008, Goin, 2017, and UMQ, 2018). This procedure, which aims at the efficiency and optimization of urban services, requires commitments and participation from the different actors that are: public service, private partners and citizens (Goin, 2017). According to the Union of Quebec Municipalities (UMQ, 2018), a smart city seeks to increase its attractiveness by reducing its ecological footprint and offering a better quality of life through the fluidity of its services and shared governance. Some cities in Quebec, Canada, have put in place strategies to rethink the service offer in a more coherent, more integrated way and better adapted to the priorities of the citizens and businesses of its territory. As part of this communication, we will present the approach and steps to take into consideration to make a city smart.

La ville intelligente s'appuie sur les technologies de l'information et de la communication (T.I.C.), ainsi que les mécanismes de collecte et de gestion de données, favorables à son développement urbain, économique, urbanistique, touristique, sécuritaire et social (UN, 2008; Goin, 2017, et UMQ, 2018). Cette procédure, qui vise l'efficacité et l'optimisation des services urbains, nécessite des engagements et une participation des différents acteurs qui sont : le service public, les partenaires privés et les citoyens (Goin, 2017). Selon l'Union des municipalités du Québec (UMQ, 2018), une ville intelligente cherche à augmenter son attractivité en réduisant son empreinte écologique et en offrant une meilleure qualité de vie à travers la fluidité de ses services et une gouvernance partagée. Certaines villes du Québec au Canada, ont mis en place des stratégies visant à repenser l'offre de services de manière plus cohérente, plus intégrée et mieux adaptée aux priorités des citoyens et entreprises de son territoire. Dans le cadre de cette communication, nous présenterons la démarche et les étapes prendre en considération pour rendre une ville intelligente.

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Analysis of Social Capital in the Municipality of Inhambane

Social capital has the capacity to foster the development of regions through networks. Social capital can create networks of trust and mutual aid relationships between individuals that would otherwise not be achieved, by increasing synergies and productivity in the activities in which people are involved. The objective of this article is to analyze the level of social capital in the Municipality of Inhambane (MI) and identify the indicators that may further promote social capital. To reach this goal, the index of social capital was calculated in 11 neighborhoods of MI using seven main indicators. The Mann-Whitney U and Kruskal-Wallis test were then applied to compare if the characteristics such as the individual's sex, educational level and age would have some weight in the variation. As a result, it is concluded that although there are associations of networks in the MI, the index of social capital is average and consequently, there is no effective participation of the interviewees in the programs that could benefit them. There is a weak incentive for communities to associate themselves to common goals. Strengthening the existing social structure (greater participation in associations or networks, greater participation in common activities) may in some way stimulate activities such as agriculture and tourism, provided that the interventions have a main target of strengthening of social capital.

O capital social tem a capacidade de fomentar o desenvolvimento das regiões através das redes. O capital social pode criar redes de confiança, relação de ajuda mútua entre os indivíduos que de outra forma não seria possível alcançar aumentando sinergias e produtividade nas actividades em que as pessoas estão envolvidas. O objectivo do presente artigo é analisar o nível de capital social no Município de Inhambane (MI) e identificar os indicadores que poderão fomentar mais o capital social. Para o alcance deste objectivo fez-se o cálculo do índice do capital social em 11 bairros do MI usando sete indicadores principais. Em seguida aplicou-se o teste de Mann-Whitney U e Kruskal – Wallis test para comparar se as características como sexo do indivíduo, nível de escolaridade e idade teriam algum peso na variação de alguns. E como resultado, conclui-se que apesar de existirem associações, redes no MI, o índice de capital social é médio e consequentemente, não existe participação efectiva dos entrevistados nos programas que de alguma forma poderiam os beneficiar. Há um fraco incentivo para as comunidade associarem-se para objectivos comun O fortalecimento da estrutura social existente (maior participação em associações ou redes, maior participação em actividade comuns), poderá de alguma forma dinamizar actividades tais como a agricultura e o turismo, desde que as intervenções feitas tenham como alvo principal o fortalecimento do capital social.

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City-Airport Transport Corridors in Africa; Bridging the Nexus between Aviation and Urbanization for Sustainable Development

The world is rapidly urbanizing with more than half the global population now living in urban areas. The trend is predicted to persist, with Africa and Asia projected to record high growth rates on urbanization up to 2030. In a rapidly urbanizing world, the need for fast and efficient mobility has seen the growth of airports and air transport services. Airports are key urban infrastructures for intercity, intra country and international mobility. However, in most countries, cities and airports are planned, managed and governed independently, leading to uncoordinated growth, traffic congestion, conflicts between airports and urban authorities and missed opportunities. This paper will unpack the twin development trends in airport and city development in sub-Saharan Africa, with a goal to elaborate how aviation and airport authorities have attempted to bridge the missing link between airports and cities. Drawing the parallel between urbanization and airport facilities in Africa, the paper will outline socio, economic and environmental benefits and opportunities that airports and cities could harness. The paper highlights how improved land uses along the transport corridors could yield mobility and socioeconomic benefits for both urban and airport authorities. The paper also reviews the trends in new airports and highways (re)development in Africa, particularly by Chinese companies. The paper also proposes possible avenues for promoting cooperation between China, Canada and Africa through airports and cities cooperation.

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A New Approach to Human Settlements Development in South Africa: Mixed Income Housing Development Framework

The debate on informal settlements is gradually shifting from that of ‘bad image’ of the city landscape to places of residence and socio-economic activities, in which the inhabitants pursue a variety of livelihood strategies. This paper looks at an attempt by the City of Johannesburg Metropolitan Municipality and eThekweni Metropolitan Municipality to coopt residents of informal settlement into formal neighborhood through mixed income residential development strategy. Although the term ‘mixed-income housing development (inclusionary housing)’ is becoming widely used and increasingly popular, there remains certain gaps and many unanswered questions that will require additional research on how best to respond and what the expected outcomes are, as well as how it can improve the quality of life and prospects of low-income families. Despite the importance and popularity of the concept of mixed-income housing in national housing policy circles, it is noted that very few studies have attempted to evaluate the conditions under which programs have succeeded or failed and the implications for future programs. This calls for an investigation. The research methodology will be Delphi approach. Conclusions drawn from this research shows that for mixed-income to be sustainable and meet the current urban development agenda there is a need for Public-Private Partnerships and intersectoral cooperation. The debate around the implementation strategy and the nature of “mix” in any given housing development project is still open for further investigation.

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Measuring Local Development to Ensure Equality, Inclusivity and Development

In the bid to address the issue related to an efficient orientation of funds to local councils, Cameroonian Ministry of decentralization and FEICOM (Special Council Support Fund for Mutual Assistance) designed a tool that can help optimize the allocation of resources to local councils in accordance with their real needs while respecting the solidarity principle, prized by the government. The Local Development Index (LDI) which tends to be the unique and progressive measure of the wellbeing of a territory's population, is calculated through the measurement of the existence of basic needs and services provided by local authorities and their appropriation by the population. The process of elaboration starts from the definition of the concept of local development to the identification of aggregated indicators into an Index (Boulanger Method). The next steps are based on a field diagnosis that has permitted the gathering of perception actors of local development and allowed for a keen selection and ranking of domains and indicators, prior to aggregating them. LDI has been tested in four local councils, it ranks from 0 for a valueless to 1 for an achieved level of development. It enables every local council to evaluate their own development level and also permits a clear view per sector. Concretely, LDI can be used in operations such as resource allocation between local councils, town and development planning, promotion of democracy and local governance.

En vue de répondre à la préoccupation majeure d'orientation efficace des financements vers les collectivités locales, le ministère camerounais en charge de la décentralisation et le FEICOM, se sont engagés dans l'élaboration d'un outil permettant d'optimiser l'allocation des ressources aux collectivités, en veillant à respecter le principe de solidarité, cher au gouvernement. L'Indice de Développement Local (IDL) se veut être la mesure unique et évolutive du bien-être de la population d'un territoire donné, obtenue à partir de la mesure synthétique de l'existence de certains biens et services fournis dans le cadre de l'exercice des compétences transférées et de leur appropriation par la population. La méthodologie d'élaboration part de la définition du concept de développement local à l'identification d'indicateurs agrégés en un indice (méthode de Boulanger). S'appuyant sur un diagnostic de terrain qui a permis de recueillir la perception locale de développement local, l'élaboration de l'IDL a consisté à sélectionner et hiérarchiser les domaines et les indicateurs avant de les agréger. L'indice élaboré qui va de 0 à 1 permet pour chaque collectivité locale d'évaluer le niveau de développement, et de donner la situation par secteur. Il a été testé dans quatre collectivités locales. Dans sa phase opérationnelle, l'IDL pourra servir d'instrument de répartition des ressources entre les collectivités locales, d'aménagement du territoire, de planification du développement, et de promotion de démocratie et de gouvernance locale.

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The Revolution of Wetland Landscape Disturbance in Jiaozhou Gulf from 1980 to 2017

As an important ecosystem, wetlands are being affected by human activities. The trend of area reduction and functional degradation is more severe. Its landscape pattern and ecological environment can respond quickly to external disturbances. The zone of Jiaozhou gulf was selected as the study area. Anthropogenic disturbance index and landscape transformation methods were used to analyze the evolution of wetland disturbance in Jiaozhou Bay from 1980 to 2017. The type of disturbance dynamic change was identified. The results show that the conversion mode of landscape disturbance types was different, wetland landscape patterns

present fragmentation trends, because of the divisions of artificial wetlands and other land. Human disturbance landscapes continues to increase, the landscapes of man-made non-recycling type increase more than that of man-made recycling type. The river estuary is the most active region of strong disturbance. The conversion rate with the area of 96.22km² is highest between 1990 and 2000. With the method of K-Means clustering algorithm, the change tendencies of transition coefficient were grouped into four categories: enhance and then weaken, overall weakening, weaken and then enhance and overall stable. The area with deteriorating trends accounts for 88.77% of the total area of the entire area. Based on the natural geography condition, the wetland of Jiaozhou gulf is susceptible to human disturbances, industrial policy, and economic development enhanced this process.

湿地作为重要的生态系统，受到人类活动的影响，面积减少、功能退化等趋势较为严峻，其景观格局及生态环境可对外界扰动做出迅速响应。本文选取胶州湾为研究区域，利用人机交互遥感解译，提取胶州湾海岸线 30km 范围内湿地信息，运用人类扰动指数和景观转换方法对 1980—2017 年胶州湾湿地景观扰动演变情景分析，对胶州湾湿地的景观干扰类型的数量和空间变化进行分析，并对这种变化进行了聚类归并，总结研究区的干扰动态变化类型。结果表明：不同时段湿地干扰类型转换模式不同，自然湿地景观被越来越多的人工湿地和其他土地分割，湿地景观格局呈现破碎化趋势；扰动景观类型中人为再生利用和人为非再生利用景观持续增加，特别是人为非再生利用类型面积增加最多，说明人类扰动持续增强，其中，河流入海口是人类干扰最为活跃的区域；干扰转换幅度随时间变化明显，转换幅度在 1990—2000 年间最高，达到 96.22km²；根据干扰转换幅度的变动趋势，利用 K-Means 聚类算法把干扰转换的动态特征分为先增强后减弱型、总体减弱型、先减弱后增强型和总体稳定型四类，其中干扰呈现增强趋势的面积占到全域总面积的 88.77%；优越的自然地理条件，使得胶州湾湿地更容易受到人类活动的干扰，与此同时国家级产业政策及经济社会发展等也起着加剧干扰的作用。

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Changes in Spatiotemporal Patterns of Urban Forest and its above-ground Carbon Storage: Implication for Urban CO₂ Emissions Mitigation under China's Rapid Urban Expansion and Greening

Urban forests (UF, >0.5ha) in China experienced a dramatic change due to urbanization. Understanding spatiotemporal dynamics of UF and its above-ground carbon storage (CS) is important for mitigating urban CO₂ emissions in planning of UF space. The objective was to explore temporal changes in the spatial pattern of CS by UF and the role of CS changes in mitigating the urban CO₂ emissions. This research used statistical models to evaluate spatiotemporal changes of CS by UF from 1984 to 2014. We estimated spatiotemporal changes in CS by combining multi-temporal Landsat TM imagery with field survey data of the city of Changchun, China. Normalized difference vegetation index (NDVI) data obtained from TM image and CS derived from field-based surveys were amalgamated to develop a regression model to predict spatiotemporal patterns of CS. NDVI correction model was established by normalizing previous imagery (1984, 1995, and 2005) to 2014 image data. Both UF area and its CS increased gradually from 1984 to 2014, especially in outer rings of the city. CS showed a definite decreasing trend from outer rings to downtown. Due to urban greening policies, landscape patches of UF or CS by UF recently became larger and more aggregated. It was

estimated that the average annual increase of CS by UF could offset 3.9% of the average annual increase in urban carbon emissions. Our study proposes that spatiotemporal changes in UF patterns dramatically affected the amount of CS and carbon capture.

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Gamification of Mobile Application in Raising Eco-Awareness amongst Youth in China

Ecological problems are widespread and exceptionally severe in China. Despite ongoing efforts with various platforms in spreading ecological awareness (eco-awareness) worldwide, there is still space to improve youth's familiarity and understanding of sustainable behaviours, especially using elements of technology, which in this case uses the gamification principles as a tool for mediation in the country where 98% of youth are using smartphones in their daily life. This concept paper will investigate whether applying gamification principles in a mobile application to encourage sustainable behaviour towards recycling, would aid to behavioural change in raising eco-awareness amongst youth in China. This study will be conducted by involving measures to capture deep understanding through unstructured interviews, questionnaires and experiments to investigate the occurrences from the youth's point of view. Results from the findings will give the base of understanding for the current situation amongst youth in China. The research results are valuable to various stakeholders in China, empowering them to utilise gamification to educate youth users on the ecological risk and further create a society with sustainable behaviours.

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Green Urban Spaces in Shanghai and the Role of ICT's in User Behaviour

A key issue in architectural and landscape design research is to understand how to engage users with the designed object. In the case of open public spaces, many researchers have been conducting behavioural studies about the relationship between space affordances and users in order to improve design effectiveness and space appropriation. Another issue to consider is the social morphology of our current society, where the overall activities are organized around information networks. In this sense, everyday life is intertwined with all sort of ubiquitous systems or combined into smart gadgets. We can consider that, if the previous spatial experience was defined by topological attributes of a given space, now, under the rise of urban computing, it is established by a hybrid space where Information and Communication Technologies (ICT's) mediates the gap between the user and the physical space. The main objective of this paper will be to present results from of an ongoing pilot test being conducted in urban green areas in Shanghai, China. We aim to highlight the role of ICT's in the process of user engagement within a defined number of settings within three urban parks in the downtown area. Behaviour mapping, a technique used to conduct systematic observation that follows user's behaviour within the built environment is being applied to collect and demonstrate how daily use of ICT's

in open public spaces are related to the design of such spaces and how we can establish the use pattern of hybrid spaces in Chinese urban green areas.

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The Paradox of Security Planning in Sub-Saharan Africa: Challenges and Perspectives of the Implementation of Smart Technology Systems

Most studies highlighting the link between the urban environment and safety have focused on vacant spaces in urban areas, Petherick, A., Fraser, R., (1992), Tom McKay (1994). Thus, by concluding that the absence of activity and people in space makes it potentially dangerous, these studies implicitly state that the presence of activities and people in space makes it more secure. However, is this reciprocal still true? The objective of our communication proposal is to highlight the paradox of security planning principles in the context of sub-Saharan Africa. More specifically, it is a question of establishing the causal relationship between traffic congestion and overcrowding in terms of activities and people and the safety of intersections. This work is an emerging research project based on exploratory hypotheses. The example of downtown Yaounde is used to show how a space that meets the principles of security planning, such as visibility (see and be seen), traffic (hear and be heard) and formal surveillance and access to assistance (escape and rescue), remains highly exposed to the risks of insecurity. By drawing a parallel between the introduction of video surveillance in this environment and the persistence of the insecurity phenomenon, we wish to contribute to a better understanding of the insecurity phenomenon in urban areas at a time when the continent is increasingly tending towards the creation of smart cities. This also allows us to offer applications that can be adapted to the local context.

La plupart des études mettant en exergue le lien entre l'environnement urbain et la sécurité ont porté sur des espaces vacants en milieu urbain, Petherick, A., Fraser, R., (1992), Tom McKay (1994). Ainsi en concluant que l'absence d'activité et des personnes dans un espace le rend potentiellement dangereux, ces études affirment de façon implicite que la présence des activités et des personnes dans un espace le rend plus sécurisant. Cependant cette réciproque est-elle toujours vraie ? L'objectif de notre proposition de communication est de mettre en exergue le paradoxe des principes d'aménagement sécuritaire dans le contexte d'Afrique subsaharienne. Il s'agit plus spécifiquement d'établir la relation de causalité qui existe entre les phénomènes d'embouteillage et de surpeuplement en termes d'activités et des personnes et la sécurité des carrefours. Ce travail est un projet de recherche naissant qui se base sur des hypothèses exploratoires. L'exemple du centre de la ville de Yaoundé est pris pour montrer comment un espace répondant aux principes d'aménagement sécuritaire, demeure fortement exposées aux risques d'insécurité. En faisant un parallèle entre l'introduction de la vidéo surveillance dans ce milieu et la persistance du phénomène d'insécurité, nous souhaitons contribuer à une meilleure compréhension du phénomène d'insécurité en milieu urbain au moment où le continent tend vers la création des villes intelligentes. Aussi, ceci nous permet de proposer des applications pouvant être adaptées au contexte local.

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The Stakes of a Transformed Colonial Heritage in Yaoundé

In the aftermath of independence, African countries face a dilemma. On one hand, they show the desire to get rid of colonial rule in symbols of the nation-state building process, on the other hand want to keep certain symbols (monuments, buildings, streets, etc.). This article aims to revisit the issues of some changes made to the German, the British and the French colonial heritage in Yaoundé, the capital city of Cameroon. In a multidisciplinary approach, this article intends to identify first, symbols of German and French colonization in Yaoundé, then understand their importance in the colonial context using the historical method, then show the political and ideological issues in their postcolonial transformations.

Au lendemain des indépendances, les pays africains sont confrontés à un dilemme. D'une part, ils manifestent le désir de se débarrasser de la domination coloniale et ses symboles dans un processus de construction de l'État-nation, d'autre part, ils souhaitent conserver certains éléments de leur passé (monuments, bâtiments, rues, etc.). Cet article a pour objectif de revenir sur les changements apportés au patrimoine colonial à Yaoundé, au Cameroun. Dans une approche pluridisciplinaire, cet article vise à identifier les premiers symboles de la colonisation allemande, et française à Yaoundé, puis à comprendre leur importance dans le contexte colonial à l'aide de la méthode historique, puis à montrer les enjeux politiques et idéologiques de leurs transformations postcoloniales.

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Research and Transformation of Slow System Nodes in Qingdao Historical and Cultural Streets under the Background of Big Data

Under the background of rapid development of urban motor vehicle traffic, serious problems have arisen in slow system planning. In this paper, the research on the slow system nodes of 13 historical and cultural blocks in Qingdao is conducted. The pedestrian traffic micro-simulation technology is used to study the street type and the flow distribution through UNA and IOP software. The historical block slow-moving system is described in detail. The existing problems of the nodes propose three types of historical and cultural blocks slow-moving system node transformation plan that meets the urban positioning of Qingdao, and summarize some new ideas and new ideas of the transformation plan.

在城市机动车交通快速发展的大背景下，慢行系统规划出现了各种严重问题。本文对青岛现有13个历史文化街区慢行系统节点进行研究，利用行人交通微观仿真技术，通过UNA、IOP两种软件对街道类型和人流分配进行数据研究，详细地阐述了历史街区慢行系统节点现有问题，提出符合青岛城市定位的三种类型的历史文化街区慢行系统节点改造方案，并总结了改造方案的一些新理念和新思路，具有一定的借鉴作用。

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Toward More Sustainable High-Rise Building: A Case of Shanghai Center

With the aim at investing in infrastructure far across the distant spaces in continents, the One Belt, One Road (OBOR) initiative has the potential to transform urbanization, architecture, and technology from East Asia to North America, Africa and beyond. Greening the OBOR is China's response to the 2030 Sustainable Development New Agenda set by the United Nations. Now, China is moving towards the way of ecological civilization with the basic national policy to control greenhouse gas emissions, conserve resources and protect the environment. Taking Shanghai Center as an example, this paper discusses its innovative practice of sustainable development in architectural energy-saving design, intelligence system and humanistic care. Firstly, Shanghai Center has adopted a series of energy-saving measures, such as heat recovery and utilization technology, rainwater collection, treatment and reuse technology, the glass curtain wall and indoor air garden. Secondly, the building intelligent system of Shanghai Center concerns intelligent lighting technology, multi-energy management system, and lean management based on BIM technology. Thirdly, its human care is reflected from the building structure, nine vertical communities, "a sky lobby" for recreation, and other multi-functions. In 2015, Shanghai Center won the LEED platinum award, showing its outstanding responsibility in environmental value, economic value and social value. As the highest green building in the world, Shanghai Center acts as a fantastic model for its construction.

“一带一路”倡议的目标是在各大洲进行远距离空间的基础设施投资，这一倡议具有将城市化、建筑和技术从东亚转移到北美、非洲和其他地区的潜力。“绿化一带一路”是中国对联合国 2030 年可持续发展新议程的回应。现在，中国正以控制温室气体排放、节约资源和保护环境为基本国策，在生态文明的道路上阔步前进。本文以上海中心为例，探讨其在建筑节能设计、智能系统、人文关怀等方面的可持续发展创新实践。首先，上海中心采取了热回收利用技术、雨水收集、处理再利用技术、玻璃幕墙、室内空中花园等一系列节能措施。其次，上海中心建筑智能系统涵盖了智能照明技术，多能源管理系统，以及基于 BIM 技术的精益管理。第三，上海中心的人文关怀体现在建筑结构、九个垂直社区、“空中走廊”等其他多功能方面。2015 年，上海中心荣获 LEED 白金大奖，体现了其在环境价值、经济价值和社会价值方面卓越的责任贡献。作为世界上最高的绿色建筑，上海中心大厦为“一带一路”沿线国家的建筑行业树立了一个极好的典范，这些国家的人民在气候变化时代将受益于节能减排、环境改善和社会进步。

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Correlation between Block Layout and Wind Environment

With rapid urbanization in China, the high-density new urban-center districts have already begun to change the microclimate in the city. The construction of new commercial pedestrian streets which have emerged, massively contributes to an increase in the number of pedestrians. The comfort of the pedestrians in the commercial streets of the new urban-center districts requires more attention. Different spatial layout of the streets will change the wind environment and then influence pedestrian comfort. We take the Xi'an area as an example, using

computational fluid dynamics (CFD) models to study the correlation between the street layout and wind environment, under the simulation with relevant weather conditions. The results show that the wind speed in the city streets is inversely proportional to the block layout, and the north-south street temperature is lower than the East-West Street. The conclusion will provide an evaluation basis for urban planners and architects at the beginning stage of the design to effectively avoid the potential poor physical environment.

在中国快速城市化，高密度的城市新中心区已经在改变城市的小气候变化。由于城市商业步行街的大量使用，使得大量的行人出现在街道上，城市中心区商业街的行人舒适度需要更多的关注。不同的街道空间布局会改变街道的风环境，进而影响步行者的舒适度。利用计算流体力学（CFD）模型，以西安地区为典型，研究了在相关天气条件下，街区的空间布局与风环境的相关性。结果表明，城市街道风速与街道纵横比成反比，且南北走向街道温度低于东西走向街道。这一结论将为城市规划师和建筑师在设计初期阶段提供有效的评估依据，有效地避免潜在的恶劣的物理环境。

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From Collective to Community: Farmers-Turned-Citizens as Community Builders in Peri-Urban Chengdu

Informality is often considered a hallmark of peri-urban development in the cities of the Global South. But informality hardly seems to characterize China's recent national urbanization policy, which has ushered in a new era of state-led, infrastructure-driven growth. In the western Chinese city of Chengdu, social infrastructure and community-building policies are playing an equally large but under examined role in urbanization planning. Drawing on ethnographic fieldwork and interviews, this paper traces the policy rationales, genealogy, and activities of a new "model" community centre in Chengdu's urban fringe. While it is possible to read the activities carried out in the centre as top-down initiatives aimed at managing a now surplus population of former farmers and cultivating patriotic, "civilized" urban residents, I argue that a bottom-up analysis—foregrounding the key role of former village institutions, residents, and leaders in managing the new community—helps reveal the persistent influence of the rural in shaping new forms of the urban in suburban Chengdu. Though far from informal, such attempts to stake a claim on village territory and identity might be thought of as improvisational reworkings of both current state-provided infrastructure and earlier collective institutions.

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Book Launch: Net Zero Carbon Village Planning Guidelines for the Yangtze River Delta Region in China

In recent years, the Yangtze River Delta (YRD) region in eastern China has faced unprecedented risks to its natural and urban environments. The inherent vulnerability of this highly valued eco-system and agricultural area due to the large concentration of neighbouring metropolitan areas, economically strategic position along major shipping lanes and manufacturing hubs, as well as the interlinked conflict between social and economic

development and environmental conservation, needs to be addressed. Net Zero Carbon Village Planning Guidelines for the Yangtze River Delta Region in China proposes 10 principles for village planning which aim to support government and planning authorities to plan, design, and implement practices that help close the energy loop in rural communities. Although carbon neutrality is a widely discussed topic in dense urban areas, the Guidelines are innovative in capturing strategies that maintain carbon sinks and limit GHG emissions in otherwise neglected communities, helping mitigate carbon emissions regionally, setting a gold standard for urban-rural linkages worldwide, and improving livelihoods by directly addressing SDGs 6-13. The intent of the publication is twofold: to encourage the adoption and replication of net zero carbon planning and design principles which support sustainable development and behavioural practices in rural areas; and to positively influence ecological policy and social changes in urban areas.

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Study of Urbanization, Ecosystem Services Alteration and Human Wellbeing in the Great Rift Valley Region of Eastern Africa; a Perspective from Land Use/Land Cover Dynamics

Land use is one of the most closely associated links between humans and nature. The relationship between urbanization, ecosystem services and human wellbeing from the perspectives of land use changes is an important cross topic in research concerning natural, socioeconomics and biophysical environment to sustain regional development. It is apparent that urbanization alters the structure and function of both natural and agro-ecosystems with subsequent deterioration of the services they provide to the society causing livelihood crisis. The current global and regional trend of urbanization shows a massive expansion of urban areas, this growth being actually generated by the numerical population growth and migration. Obviously, urban development determines changes regarding the organization of places, economic and social changes but these effects exceed the territorial barriers and generate a broad impact. Urban growth in Ethiopia has both positive and negative impacts. When the growth is unplanned and unregulated, the impacts would inflict serious damages such as loss of biodiversity, social and economic crisis. This study aims to emphasize on the analysis of the effects of both urban and rural land use dynamics on major aspects of ecosystem services pertaining to human well-being, particularly in terms of livelihood and food security in the Great Rift Valley area of the eastern Africa. The results may provide new insights into achieving regional sustainability with adaptive land use usage and protection.

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Social Sustainability of Urban Regeneration in Historic Community: Case of Suzhou Pingjiang Road

The sustainable community has been advocated as a remedy to cure the negative impacts of urban regeneration on historic communities. Pingjiang Road regeneration project in Suzhou old

town (covers 116 hectares area) which was carried out 15 years ago has been widely studied by scholars on historic building conservation and local tourism development. However, its social impacts on local communities were generally ignored. This study applied the connotation of social sustainability from a sustainable community perspective to explore the social sustainability of this regeneration activity and its social impacts on local historic communities. To achieve the research aim, four aspects of the social sustainable community, namely, social cohesion, social justice, community empowerment, and culture vitality were surveyed in the local communities. 80 participants from local communities, including residents, businessmen, and tourists, participated in the questionnaires and interviews. It is found that this regeneration project actively promoted culture vitality, which means the traditional cultures and local cultural characteristics have been strongly protected. However, it failed on social cohesion, social justice, and community empowerment aspects. The conflicts between residents and businessmen increased, economic benefits generated by the regeneration activities were unfairly shared between residents and businessmen, and the community members were nearly excluded from the decision making of community affairs. Suggestions were finally proposed.

历史街区的更新往往会给当地社区带来一系列社会问题，“社会可持续性社区”的提出则为解决这些问题提供了新的思路。本文以苏州平江路历史街区更新为例，通过引入“社会可持续性社区”的概念，从社会融合、社会公正性、公众赋权、和文化活力四个方面探讨平江路更新的社会可持续性，以及给社区带来的社会影响。通过对当地社区居民、商家、和游客的实地访谈及调研，研究认为这一更新活动在社会融合、社会公正性、和公众赋权方面缺乏可持续性，但却促进了文化活力的再造。文章最后提出了增强历史街区更新的社会可持续性的建议。

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On Spatial Formation Mechanism and Development of Tibetan Commercial District of Chengdu City

Chengdu has been an important center of economic and cultural exchanges between Tibetan areas and the interior areas since ancient times. It is also an important urban space for ethnic communication, interaction and integration. Especially since 2000, with the development of the social economy and the closer social exchanges between ethnic groups, the commercial exchanges of the Tibetan migrant population in Chengdu have become more frequent, and the number of Tibetan migrant population with a variety of social needs has also increased. At present, a relatively mature and large-scale Tibetan commodity district as well as a Tibetan residential area is formed in Chengdu. Due to the formation of Tibetan commercial district, the urban settlement space of the ethnic migrant population in Chengdu has some new characteristics in the new era. On the other hand, it has also made Chengdu a historical and cultural city with more urban inclusiveness and cultural diversity. Thus this paper will focus on the spatial formation mechanism and the development status of Tibetan commercial district in Chengdu city, and reveal the industrial support and development tendency of the urban settlement space of the ethnic migrant population. The research of this paper will be beneficial to promote the rational migration of the urban ethnic minority population, enhance its social adaptability in the city, and also benefit the spatial planning, in order to promote the sustainable urban development.

成都自古以来就是藏区和内地之间经济文化交往的重要中心，也是民族交流交往交融的重要城市空间。特别是 2000 年以来，随着社会经济的发展和民族社会交往的进一步密切，成都市藏族流动人口的商品经营活动日益频繁，有着多种社会需求的藏族流动人口数量也不断增多。目前，成都市武侯祠周边一带已形成了相对成熟且颇具规模和特点的藏族商品经营街区，这种商业街区同时也是藏族城市流动人口较为集中的聚居区。藏族商业街区的形成一方面赋予了新时期成都少数民族流动人口聚居空间新的特点，另一方面也使得成都这座历史文化名城更具城市包容性和文化多元性。为此，本文将重点探讨成都市藏族商品经营街区的空间形成机理与发展现状，揭示城市少数民族流动人口聚居街区发展的产业依托及其发展趋势。论文研究将有益于促进中国城市少数民族人口的合理流动和城市少数民族商品经济的发展，也将有益于城市少数民族聚居区的空间规划和城市服务管理，以期促进城市的可持续发展。

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Cooperation or Capital? Sino-African Special Economic Zones as both Government Programmes and Business Investments

These overseas SEZs are, according to MOFCOM guideline, supposed to be run by enterprises based on business principles aiming at facilitating the win-win relationship. Therefore, decisions in Sino-African SEZs should be made by enterprises given the market, investment environment, and policies in the holding countries. By establishing such kind of cooperation zones, the holding countries will be able to attract more firms and investment which would increase the employment, tax revenue, exports, and foreign exchange. Chinese overseas SEZs are both capital investment (as they are company-led which means they are supposed to be profitable) and development cooperation (as they are government-initiated which means they are supposed to produce positive effects beyond profits or even without profits like the current situation in most overseas SEZs cases). Understanding this dual-character is important when assessing whether these SEZs are successful or not, as the government willingness sometimes might not be completely consistent with business profits.[Foundation: The National Key R&D Program of China (No. 2016YFE0201000) Research Cooperation and Exemplary Application in Planning of Overseas Industrial Parks][Foundation: Research on Development Model and Planning Guidance Mechanism of Jiangsu Overseas International Cooperation Parks (No. 17EYA001)]

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An Analysis on the Environment Renovation of the Villages Street in City from the Perspective of Cultural Memory: Take Yangming Lane, An'ning District, Lanzhou City as an Example

Urban renewal has become the driving force and main form of urban construction in the new era, among which the renovation of shantytowns and villages in the city is gradually becoming the prominent problems. In the context of the revival of traditional culture being national policy, contributing a mechanism that takes cultural memory space creation as a mean of urban renewal

so as to promote both villages in the city and urban renovation, and then finally realizing the purpose of reshaping the sense of social groups' identity and belonging as well as continuing local cultures and contexts. This paper takes Yangming lane in An'ning district of Lanzhou district as the research object, explores the connotation of cultural memory in local areas. Also this paper analyzes the strategies and measures of street environment renovation, studies the theory and methods of comprehensive improvement of villages street environments in the city from the perspective of cultural memory.

城市更新已经成为新时期城市建设的驱动力与主要形式，其中城中村与棚户区改造日益成为当下城市更新的突出难题。在传统文化复兴的国策背景下，构建以文化记忆空间营造作为城市更新手段的机制，来推进城市修补和城中村改造工作，从而实现重塑社会群体的身份感与归属感、延续地方文脉的目的。本文选取兰州市安宁区阳明巷作为研究对象，深入挖掘地方文化记忆内涵，具体分析街巷空间环境改造的策略与措施，探索在文化记忆视角下城中村街巷环境综合整治的理论与方法。

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Research on the Spatial and Temporal Differentiation of Industrial Agglomeration and Urbanization Coupled Coordination in Africa

By using data of industrial output, manufacturing output, mining output and the population urbanization rate of 53 African countries (regions) in 2009 and 2016 to evaluate coupled coordination features and geographical changes. The conclusions are as follows: The degree of coupled coordination of countries (regions) with a high degree of manufactural agglomeration is generally sounder than countries (regions) dominated by mining industry; The coupled degree of industrial agglomeration and urbanization in most countries (regions) is gradually increasing; The correlation between industrial agglomeration and urbanization is relatively low in African countries (regions), and the phenomenon of informal employment is prominent in some countries. Acknowledgment: This research is supported by the National Key R&D Program of China (No. 2016YFE0201000): Research Cooperation and Exemplary Application in Planning of Overseas Industrial Parks.

采用 2009 年和 2016 年非洲 53 个国家（地区）的工业部门产值、制造业产值、采矿业产值和人口城镇化率等指标评价非洲国家（地区）两个年份的产业集聚与城镇化的耦合协调特征和变化情况。结果表明：制造业集聚程度较高的国家（地区）的耦合协调程度普遍较制采矿业的主要集聚国家更加良性；多数国家（地区）产业集聚与城镇化的耦合协调度逐步提高；非洲国家（地区）产业集聚与城镇化进程的相关性较低，非正规就业现象在部分国家比较突出。

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Urbanization and National Development Planning

As a growing share of Africa's population becomes urbanized, the fight against poverty and inequality through structural transformation is to be won or lost in cities. The ability of African economies to achieve structural transformation and broad-based economic growth depends on their capacity to create high productivity jobs, which are located largely in urban areas. Both historical and empirical evidence confirm the link between urban agglomerations and economic growth. Yet, many African cities are not realising their productive potential, due to a myriad of constraints, including infrastructure gaps, inefficient land use, disconnected sprawling development, and mobility barriers. At the same time, however, cities contribute more than 50% of national GDP in many African countries. Despite this enormous economic weight, cities are often an afterthought in national economic planning in Africa. African national development plans do not set a strategic, cross-sectoral vision of urbanization as a necessary driver of economic growth. National development planning rarely prioritize urban jobs, a prerequisite of structural transformation. Agriculture is prioritised over urban economic productivity, even in countries with more than 50% urban population, and cities drive GDP growth. This results in urban underinvestment, with significant consequences for the economy in the long term. This paper presents a unique model to integrate urbanization in national development planning so that cities drive structural transformation.

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Monitoring Urban Land Sprawl for China Mega-Cities and Policy Implication

Since the mid-20th century, urban sprawl has been a prevalent problem across the cities of North America and has attracted particular interests. Urban sprawl has often been criticized because of its negative impacts on open spaces, energy consumption, air quality, ecosystem services, physical health, poverty and inequity, and intergenerational mobility. Understanding the forms and processes of the urban sprawl has significant implications to land policies and urban management. We developed a China urban sprawl index from population density, spatial form and economic efficiency dimensions and measured the urban sprawl for over 100 Chinese mega-cities. We established a government-leading, land-based capital accumulation framework to explain the special driving forces on China's urban sprawl. Finally, from the perspective of land policy, we discussed the relevant policy implication.

20 世纪中叶以来，城市蔓延已经成为北美城市化的普遍现象，引起广泛关注。城市蔓延因为对开敞空间、能源消费、空气质量、生态服务、身体健康、贫困与不平等，以及代际流动性等都具有显著的负面影响，因此广受批评。深入理解城市蔓延的形式、过程对于土地政策制定与城市管理都具有重要的启示意义。本研究首先从人口密度、经济效率、空间形态等三个维度开发了一个城市蔓延指数，对中国 100 多个大城市蔓延现状进行了定量表达；然后，建立了一个政府主导、以土地收益为中心的资本累积的框架，以解释中国城市蔓延的内在驱动机制；最后，从土地管理的角度讨论了相关的政策涵义。

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Urban Development Outcomes of High-Speed Rail Development

This paper is an analysis of multiple, separately reported development outcomes of high-speed rail (HSR) development as revealed in recent published papers. A review was undertaken of 232 papers published in SCI or SSCI with empirical contribution to the link between high-speed rail infrastructure and increased investment in urban development. Of these, 18 offer specific insights into the development effects of high-speed rail at intra-urban, inter-urban and long-distance scales. The papers draw on a growing international literature on HSR in China, but also with findings from Europe and Japan. It is clear that HSR supports higher levels of local economic investment, including urban development in cities served by HSR. City-pair linkages via HSR take a number of different forms, in accordance with city strengths, proximity and linkage with other transport modes. At the macro-scale, disparities can be reduced through HSR implementation. At the regional scale, disparities may increase between the rail transport node areas and peripheral zones increasingly dependent on road infrastructure. Local integration also has proven important in generating synergies that raise ridership and increase local investment. A track record of land development associated with HSR provides the evidence for general guidance on optimizing urban development outcomes while building up HSR. This presentation ends with a summary of what we know about rail system development thus far that is most associated with favourable urban development outcomes.

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Design and Development of Field Survey and Verification System Based on Internet+

Land field surveys and verification is an important means to understand the status quo of land, and the basis and necessary links of land management. How to realize the technological progress of land survey and verification and meet the need of land management is an urgent problem that needs to be addressed in current land management. In this paper, we used the integration technology of mobile Internet, cloud services and 3S technologies to design and develop the field survey and verification system based on Internet+, and introduced practical examples.

外业调查与核实是了解掌握土地实地现状的重要手段，是土地管理的基础和必要环节。在原国土资源部每年一次组织开展的全国土地遥感监测、土地变更调查和土地执法检查等土地管理工作中，组织了大量的人力物力进行土地外业调查与核查工作，如何实现土地调查和核实的技术进步，满足土地管理的需要是当前土地管理需要迫切解决的问题。本文讨论了集成移动互联网、云服务和 3S 一体化技术，设计开发互联网+外业调查及核查系统并开展实际应用实例。

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Research on the Influence of Emission Trading System on the Green Innovation Efficiency of Enterprises: An Empirical Analysis Based on Double Difference Method

In order to effectively solve the environmental pollution problem, the government introduced a market mechanism to conduct trials of emissions trading policies in some regions, and hoped to achieve emission reduction targets at lower costs, encourage industrial enterprises to innovate, and push for green production technology advancement. However, research on the impact of

this policy implementation on the efficiency of green innovation in industrial enterprises is relatively lacking. Therefore, this article takes China's emission trading policy as an example. Based on the provincial panel data from 2004 to 2012, SBM-DDF was first used to calculate the green innovation efficiency, and then the double difference method was used to empirically test the mechanism of the implementation between the policy implementation and the green innovation efficiency of industrial enterprises. The research finds that (a) the efficiency of green innovation in industrial enterprises shows an upward trend year by year;(b) the implementation of this policy significantly improves the efficiency of green innovation in industrial enterprises;(c) industrial scale, economic development level, and human capital can promote green innovation efficiency, while foreign direct investment and government financial support hinder the efficiency of green innovation. The research in this paper provides reference for the institutionalization, standardization and promotion of China's emissions trading policy.

为有效解决环境污染问题，政府引入市场机制，对部分地区进行排污权交易政策试行，以期用较低成本完成减排目标、激励工业企业进行创新、倒逼绿色生产技术进步。然而，关于该政策实施对工业企业绿色创新效率的影响研究却相对欠缺。故本文以中国排污权交易政策为例，基于 2004—2012 年的省际面板数据，首先采用 SBM-DDF 计算绿色创新效率，再利用双重差分法实证检验该政策实施与工业企业绿色创新效率间的作用机理。研究发现（1）工业企业绿色创新效率呈现出逐年上升趋势；（2）该政策实施显著提高工业企业绿色创新效率；（3）工业规模、经济发展水平、人力资本能促进绿色创新效率，而外商直接投资、政府财政支持则阻碍绿色创新效率。本文的研究对中国排污权交易政策的制度化、规范化以及在全国范围内进行推广提供了借鉴和参考。

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Research on Urban Resilience Planning System Based on Risk Assessment and Resilience Evaluation: A Case Study of Beijing

Urban resilient planning is an important means to deal with uncertain risks and ensure urban security. In this study, a theoretical system of urban resilient planning integrating "risk - vulnerability - resilience" is constructed. Taking the mega-city Beijing as an example, a risk database was established; the comprehensive risk assessment of "total factors, total space and the whole process" was carried out, and a comprehensive risk map of the whole city and the central city was drawn. On this basis, the paper further clarifies the goal and path of Beijing's resilience urban planning, and puts forward countermeasures and suggestions for improving resilience, such as urban scale control, spatial layout optimization, infrastructure guarantee and response capacity improvement.

韧性城市规划是应对城市风险，保障城市安全的重要手段。本研究构建了集“风险-脆弱性-韧性”为一体的韧性城市规划理论体系。以特大城市北京为例，建立风险数据库，开展“全要素、全空间、全过程”的综合风险评估，绘制全市及中心城综合风险地图。为有效评价和科学量化城市韧性，从城市系统和韧性管理 2 个维度出发，构建了包含 12 个方面、83 个绩效指标的韧性城市评价指标体系，并利用韧性度指数对北京市现状及总规实施后的规划韧性水平进行测算。在此基础上，进一步明确了北京韧性城市规划的目标和路径，提出韧性提升的对策建议。

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Reflections from Industrial Perspective on the Transformation of Urban Villages in China: An Empirical Study of Jiangwanying in Hefei City

The urban villages are the product of urbanization processes. Its formation can be attributed to the expansion of urban space and the attribute conversion of rural settlement surrounded by the urbanized area, and thus has the characteristics of urban and rural duality. The function of China's urban villages is now mainly to carry the living of local & non-local populations and various informal economies. The urban villages gradually marginalized in the urbanization were not only driven by external forces from government, commercial projects, etc., but also because the space format and value were no longer adapt to the rapid urbanization. Promoting the transformation of urban villages with industrial development is a rational path to realize spatial value-added and escape from decline. The industrial development of urban villages in China faces problems such as weak foundation, lack of characteristics, poor environment and insufficient transformational motivation. Based on the problems, this paper proposes four development principles "converting driving force, adapting to local conditions, regional integration, and gradual progress" to strengthen the industrial foundation, highlight the characteristics and optimize the environment. Taking Jiangwanying in Hefei City as empirical case, the research believes that the industrial revitalization and self-sustainability could be achieved by promoting informal economy specialization, developing local historical resources rationally and optimizing the community's living environment.

城中村是城镇化发展进程中的产物，其形成归因于城市空间的不断蔓延以及被城市化区域包围的乡村聚落空间的属性转换，兼有城乡二元的特征与属性。当前中国城中村的功能以承载本地和外来人口的居住生活以及各种非正式经济为主。城中村在城镇化进程中被边缘化，不只受政府、商业开发项目等外力推动，也是由于其自身空间形式及价值难以适应快速发展的城镇化。以产业发展推动城中村转型是其实现空间增值、逃离衰败宿命的可行路径，回顾中国城中村发展现状，其产业发展面临发展基础薄弱、发展特色缺乏、发展环境不优、转型动力不足等问题。基于城中村产业发展问题与困境，研究提出“转换动能、因地制宜、区域融合、循序渐进”四大发展原则，以强化产业发展基础，凸显产业发展特色，优化产业发展环境，保障产业发展动力。以合肥市姜万郢进行实证分析，研究认为可通过推动非正式经济专业化、合理开发地方历史文化资源、优化社区居业环境，促进产业振兴并推动姜万郢实现自生性发展。

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Bike-Sharing in the Smart City Era: Post-Automobility in Canada and China

The Smart City has since the 2010s been described as a new favorable and ambitious urban imaginary, with a wide variety of Smart projects being premised on promoting a healthier and more socially and ecologically sustainable urban future. Yet many critics have noted that the

Smart City, despite its utopian vision, is dominated by private for-profit companies that benefit from the uncommoning of the urban spaces via smart technologies across the world. This paper explores the rollout of urban smartness in Canada and China with a comparative study on a newer generation of bike-sharing schemes in the Canadian city of Calgary and the Chinese city of Wuhan. Bike-sharing as a Smart mobility technology has offered the promise of post-automobile centric urbanism for both cities, but posed different challenges to socio-spatial equality in these two cities.