

## (Special issue on Environment Management and Spatial Planning)

著者	Huang Guangwei
journal or publication title	International Review for Spatial Planning and Sustainable Development
volume	5
number	4
page range	1-3
year	2017-10-15
URL	<a href="http://doi.org/10.24517/00053228">http://doi.org/10.24517/00053228</a>

doi: 10.14246/irpspd.5.4\_1

## Editorial introduction

### *Special issue on Environment Management and Spatial Planning*

#### Guest Editor

Guangwei Huang\*

*Graduate School of Global Environmental Studies, Sophia University*

\* Corresponding Author, Email: [huang@genv.sophia.ac.jp](mailto:huang@genv.sophia.ac.jp)

This special issue is a collection of papers presented in the 2017 Workshop on Urban Planning and Management held in Tokyo, Feb. 18-19, 2017. The selected papers are published with IRSPSD International, which can be grouped around two pillars. Namely, Water dimension and Energy dimension in urban studies.

In this workshop, authors touched a variety of issues ranging from water quality index, urban flooding, public-private partnership for urban river management, rural to urban transitions, outdoor space transformation, community development, regional heritage and smart houses. The target areas span from China, Thailand, Bangladesh, Europe and Brazil as well. The research methodologies presented in this issue varied from field survey, data analysis to numerical simulation and software application. These studies contributed to better understanding of spatial planning and sustainable development from various perspectives. New insights gained from these works are significant, and they serve as fuel for further in-depth research in integrative urban planning and sustainable development.

This issue includes papers on the two dimensions, which are water and energy. Sound water management is vital to well-beings of the society. Water quality has been a focal point in river management in recent years. Consequently, evaluating water quality is becoming increasingly important for policy makers, planners, academia, and other stakeholders to achieve sustainable development. In this special issue, [Zhang \(2017\)](#) compared the performance of a number of water quality index at different parts of the Liao River in Liaoning, China. Out of the four methods used, the Comprehensive Water Quality Identification (CWQII) is found to be the most suitable as they combine multiple information in one analysis. Results showed that pollution loading from factories such as petroleum is responsible for the low water quality in certain areas. It indicates that further work of water quality assessment methods needs to be carried out to improve and protect the water quality worldwide. On the other hand, flood disasters have been inflicting on people in many countries and regions, and are getting even more seriously under climate change. [Chanthamas, Anantasuksomsri, and Tontisirin \(2017\)](#) reviewed climate change adaptation with urban planning management to reduce urban floods in Pathumthani Province, Thailand. Based on the Sieve Analysis and Geographic Information Systems techniques, the level of flood risk in Pathumthani was examined under climate change scenario.

Specifically, comprehensive factors, including land cover change, are taken into account, weighed and scored for analysis. Three major high level risk areas in Pathumthani and an overall higher flood risk under climate change scenario are analyzed from the view angle of urbanization and urban sprawl.

Better water management requires the participation of all stakeholders. Along this line of thinking, [Guo \(2017\)](#) tried to illustrate the framework of Public Private Partnership (PPP) for water management through a case study of Chu River in Wuhan as a review paper. In this case, Wuhan government and Wanda Group establish a partnership that manages the Chu River dynamically and achieves a sustainable win-win development mode. The achievement and mistake of the Chu River project was analyzed with the goal of presenting experiences of urban river management that can be applied in similar cases.

This issue also includes the work by [Zhou et al. \(2017\)](#), who investigated the irrigation water consumption, fertilizer utilization and soil quality in both Stevia and maize cultivating fields in order to explore the possibility of adopting Stevia as a new cash crop for sustainable agricultural management in Zhangye Oasis. Furthermore, [den Hartog \(2017\)](#) studied rural to urban transitions at Shanghai's fringes. Chongming Eco-Island was used as a case study to analyze the urban push on Shanghai's rural fringes while utilizing the Layers-Approach technique to see the relationship between the spatial planning and economic potentials. Based on the results, recommendations were made for minimizing the impact of urban development on the existing natural wildlife and residents in that area.

In addition, regarding energy dimension in urban study, energy efficiency and reduction of energy consumption are indispensable for sustainable urban development. [Puteri Fitriaty et al. \(2017\)](#) analyzed Photovoltaic (PV) installation potential on residential building envelope in equatorial region. It proposed a practical method for photovoltaic potential evaluation employing 3D insolation color rendering which can be easily implemented on the building design stage by building designers. It concluded that for optimal PV power generation, a simple roof design and a building form that avoids self-shading potential is highly recommended.

## REFERENCES

- Chanthamas, Y., Anantasuksomsri, S., & Tontisirin, N. (2017). "Review of Urban Flood Impact Reduction due to Climate Change Adaption Driven by Urban Planning Management in Pathumthani Province, Thailand". *International Review for Spatial Planning and Sustainable Development*, 5(4), 42-53. doi: <http://dx.doi.org/10.14246/irspsd.5.4.42>.
- den Hartog, H. (2017). "Rural to Urban Transitions at Shanghai's Fringes: Explaining Spatial Transformation in the Backyard of a Chinese Mega-City with the Help of the Layers-Approach". *International Review for Spatial Planning and Sustainable Development*, 5(4), 54-72. doi: <http://dx.doi.org/10.14246/irspsd.5.4.54>.
- Guo, X. (2017). "Review on Public Private Partnership of Urban River Management in China: A Case Study of Chu River". *International Review for Spatial Planning and Sustainable Development*, 5(4), 32-41. doi: <http://dx.doi.org/10.14246/irspsd.5.4.32>.
- Puteri Fitriaty, Shen, Z., Sugihara, K., Kobayashi, F., & Nishino, T. (2017). "3d Insolation Colour Rendering for Photovoltaic Potential Evaluation on Equatorial Residential Building Envelope ". *International Review for Spatial Planning and Sustainable Development*, 5(4), 73-88. doi: <http://dx.doi.org/10.14246/irspsd.5.4.73>.
- Zhang, L. (2017). "Different Methods for the Evaluation of Surface Water Quality: The Case of the Liao River, Liaoning Province, China". *International Review for Spatial Planning and Sustainable Development*, 5(4), 4-18. doi: <http://dx.doi.org/10.14246/irspsd.5.4.4>.

Zhou, M., Ozaki, A., Kobayashi, K., Kozono, T., & Kanasugi, M. (2017). "Study on Agricultural Management for Sustainable Agriculture in Zhangye Oasis, Middle Reaches of Heihe River Basin: A Case Study in Linze County". *International Review for Spatial Planning and Sustainable Development*, 5(4), 19-31. doi: [http://dx.doi.org/10.14246/irspds.5.4\\_19](http://dx.doi.org/10.14246/irspds.5.4_19).