Editorial introduction: Green City Challenge and Strategies

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Editorial introduction

Green City Challenge and Strategies

Guest Editors

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The Green City concept is a concept usually associated with the safety of the environment and puts the environment as an essential aspect in achieving sustainable development. The concept is delivered through different layers of planning and design, covering the micro, meso and macro scales of the city (Shen & Fitriaty, 2018). In response to the tantalising challenges, scholars and practitioners put every effort into creating possible solutions and strategies for obtaining an ideal Green City to be implemented at different city levels. In an attempt to realise such a city, adapted to the green concept, the five articles in this special issue present challenges and strategies across various scales and components of the city and discuss different points of view.

In realising a green city and sustainable development, the commitment of a country to protect and restore the environment is very important. By this commitment, a policy that supports the green city concept with climate change awareness to reduce greenhouse gases is expected to be more integrated and comprehensive. Dash and Gim Dash and Gim (2019) conducted an interesting study on motivating factors behind Nationally Determined Contribution (NDC) submitted by a country for climate change mitigation purposes to fulfill its requirement of the Paris Agreement in 2015. The potential drivers are identified and used in assessing NDCs for each case study such as economic factors, energy mix or upgrading technology, civil society, politicians' points of view, pre-existing legislation, ethics, international negotiations and international image, and vulnerability. The study was conducted in several developing countries such as Argentina, Gambia, and other developing countries. These countries can suggest mitigation measures or contribute data. The most important drivers for increasing mitigation target ambitions are international factors. These factors can improve the national image of a country in order to obtain a higher level of international assistance.

The environmental factor is one of the crucial elements in succeeding with the green city. The city living needs to be supported by the natural and built environments which function to provide ecosystem services (Haase et al., 2017). Thus, the availability of ecosystem services undoubtedly plays an important consideration in achieving a Green City. Lee et al. (2019) discuss the ecosystem services and spatial boundary useful in creating

microenvironmental spatial plans referring to Seocheon in Central South Korea as a case study. A cell-based ecosystem service map is built by employing factor analysis for identifying the spatial types and boundaries of the ecosystem services and combining different indicators into one map. The results of the study can be used to maximise the function of each ecosystem service for spatial planning purposes.

The remaining three papers portray the Green City challenges and strategies in different scales of the city in Indonesia. Subadyo, Tutuko, and Jati (2019) conducted a study on the macro level of the city by analysing the implementation of the Green City concept in Malang. Eight attributes of Green City are used in the analysis: green planning and design, green open space, green building, green waste, green transportation, green water, green energy and green community. A gap analysis was adopted to compare the actual condition of Malang city with the ideal requirement of a Green City. The challenge exists in the implementation of Green Buildings, where the achievement is 0% of the ideal condition, while the green open space reaches the highest realisation of green city attributes, at 50%.

Anindito et al. (2019) researched the mesoscale of the Green City, equivalent to an urban community. The study aims at generating a comprehensive definition of *Kampung Kota* (urban kampong) by identifying its key variables which may distinguish *Kampung Kota* from other informal settlements. A case study was conducted at *Kelurahan* Tamansari in Bandung City. The study has created a basic model of how *Kampung Kota* will manifest in an urban perspective of Indonesia by utilising two-step cluster analysis and hotspot analysis. The study underlines that economic ability, infrastructure and building conditions, and social interaction could help to define *Kampung Kota*.

On the microscale, Fitriaty, Shen, and Achsan (2019) discuss the green strategy for energy efficiency in lighting at the building level. The strategy is adapted from vernacular houses in the tropical coastal area of Donggala, Central Sulawesi Province. The strategies are focused on daylighting design by considering the prevention of solar radiation heat gains to the building interior. Employing a field study using a purpose-based sampling method, three houses were measured for their daylighting performance. Useful recommendations are made in daylighting design related to materials and size of the window - opening to wall ratio (OWR), opening to floor ratio (OFR), internal and external shading elements, and interior reflectance.

Some papers included in this special issue were presented at the biannual International Conference on Spatial Planning and Sustainable Development held at Seoul National University, South Korea, during August 18-20, 2017. We would like to thank researchers who joined the conference and submitted their works to our journal. We would also like to extend our gratitude to reviewers for constructive criticisms and suggestions for improvement. A number of other individuals provided assistance, and we are grateful for their interest and help. We do hope our effort will enhance knowledge and practices of the Green City around the world.

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