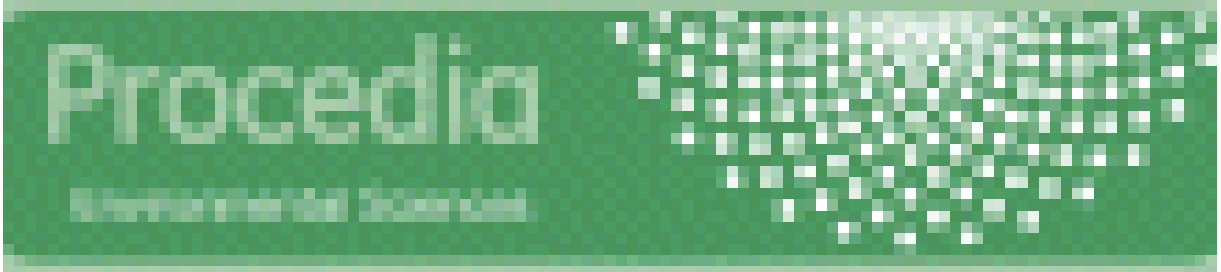
Volume 11 (2012)



Procedia

Environmental Sciences

Procedia Environmental Sciences
Volume 17, 2013, Pages 401-407

Towards Sustainable Urban Growth: The Unaffected Fisherman Settlement Setting (with Case Study Semarang Coastal Area) ☆

Bambang Setioko, Edward Endrianto Pandelaki, Titien Woro Murtini

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https://doi.org/10.1016/j.proenv.2013.02.053

Abstract

This paper mainly focused on fisherman settlement setting's analysis and explored why the tidal flood did not change the settlement setting. This research was conducted in fisherman settlement named Kelurahan Tambak Mulyo which is located at the coastal area of Semarang - the capital of Central Java Province. The fisherman settlement located in coastal areas and river estuaries has long existed in Semarang. In recent decades these areas are frequently flooded by heavy tidal flood. Day by day the tidal flood's mean surface level becomes higher and inundation area expands. The activity system of the inhabitants gradually changes from the previous pattern. The changes in system of activity of the inhabitants usually affect its urban setting. However, the reality indicates that the fisherman settlement setting does not change significantly.

A series of analysis of the physical setting and the spatial setting has successfully revealed the phenomenon of the unaffected urban setting in the fisherman settlements of Semarang coastal area. Tidal flood that frequently hit this area did not alter the spatial structu Inhabitant's trip pattern was changed only during the tidal flood time. However the trip patterns of people activities beyond the tidal flood time seem are not changed. As far as the spatial structure does n change, the physical setting is not affected.

The results of this study can be used as input for urban planning and urban design of Semarang's coastal areas. The policy of Semarang's growth should be synchronized with sustainability issues in its effort to establish a sustainable city.

Keywords

Settlement Setting; Spatial; Tidal Flood; Trip Pattern; Coastal

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* Selection and peer-review under responsibility of SUSTAIN conference's committee and supported by Kyoto University; (OPIR), (GCOE-ES), (GCOE-HSE), (CSEAS), (RISH), (GCOE-ARS) and (GSS) as co-hosts.

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Procedia Environmental Sciences

The 3rd International Conference on Sustainable Future for Human Security SUSTAIN 2012

Editorial

The 3rd International Conference on a Sustainable Future for Human Security (SUSTAIN 2012) was held at Kyoto University (Japan) on 3-5 November, 2012. The conference was organized by the Indonesian Students Associations of Kyoto and Kansai, with the support of the Organization for the Promotion of International Relations (OPIR) Kyoto University, Graduate School Energy Science (ES), Global Center for Education and Research on Human Security Engineering (HSE), Center for Southeast Asian Studies (CSEAS), Research Institute for Sustainable Humanosphere (RISH), Global COE Program for Sustainability/Survivability Science for a Resilient Society Adaptable to Extreme Weather Conditions (GCOE-ARS) and the Inter-Graduate School Program for Sustainable Development and Survivable Societies(GSS).

The conference is originated from the need to provide an inter-disciplinary forum where the most serious problems affecting a sustainable future for human security can be discussed, in recognition of the fact that many future problems cannot be solved by a *siloed* approach. The emphasis on sustainable futures is in response to the general awareness of the need to solve numerous human-related problems resulting from the rapid growth of modern society.

The topic of sustainable futures for human security needs to be discussed in an integrated way, in accordance with the principles of sustainability, considering energy and materials supply, economies and trade, technology, cities, agriculture, social and environmental aspects. To continue providing adequate technology to cope with the thirst of human comfort requires intensive research and development with multidisciplinary perspective. The research development in solving the future human security should be done by using the sustainability perspectives, where the development will negatively impact the environment and inefficient use of natural reserves, which result in natural damages, increasing unnecessary emissions, releasing the untreated hazardous substances and eventually-jeopardizing human health and sometimes causing death.

The conference covered a wide range of issues with the aim of highlighting potential issues and paths towards a sustainable future. The conference attracted a high level of attendance from countries of the global North and South, with a wide geographical coverage. Overall, 160 participants were involved, with 120 presentations over the course of the conference. The quality of papers received was a testament to the reputation that the conference has been building over the past 3 years.

Papers presented at SUSTAIN 2012 were divided into six thematic areas: (1) Energy and Environment (EnE); (2) Sustainable Agriculture (A); (3) Sustainable Built Environment in Tropical Hemisphere Countries (BE); (4) Environmentally Friendly and Efficient Technology (FT); (5) Hydrology and Disaster Prevention (HnD); (6) Social Science (S). Under these broad areas, a wide-ranging series of presentations

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doi:10.1016/j.proenv.2013.02.004

was given, which elaborated on current research across Asia and the world. Being held in Kyoto, a city of great cultural heritage, the participants also took part in a tour of some of the main sights and experiences that link modern and ancient Japan. Furthermore, due to the strong involvement of the Indonesian Students Associations, a mixture of broader Asian cultural performances was also a highlight.

The two programmed days of the conference each commenced with keynote presentations which, like the conference itself, were wide-ranging. In the first session, Professor Jun Honna (Ritsumeikan University) introduced the historical origins and development of the concept of Human Security – a key concept of the conference. He was followed by Professor Yohannes Surya (Surya Institute), who covered a variety of aspects of renewable energy as well as a discussion of science education in Indonesia. Professor Kaoru Takara (Kyoto University) then discussed the prevalence and impact of extreme weather events and strategies for decreasing the risks associated with them, in the development of "survivable societies". The second day's plenaries were presented by Professor Josse De Baerdemaeker (University of Leven), Professor Tsuyoshi Yoshimura (RISH) and Mr Muhammad Lutfi (Ambassador of the Republic of Indonesia for Japan and Micronesia). They covered the topics of sustainable agricultural practices, pest management and Indonesia as the next world's economy respectively.

Later in the conference a workshop for early career researcher was also run, introducing tips and troubles in the academic writing process. This capacity building exercise attracted 25 young researchers and engaged them in an intensive workshop process to develop their skills and understanding.

The organizers appreciate the support and assistance of the co-operating organizations, the participants, presenters and staff. The next SUSTAIN conference is highly anticipated by all the attendees of SUSTAIN 2012 and the committee expect to further build on the success of this year's event.

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doi:10.1016/S1878-0296(13)00129-1

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The 3rd International Conference on Sustainable Future for Human Security
SUSTAIN 2012

Discussion on sustainable land use allocation toward the sustainable city—A practice on Linco New Town

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Abstract

This article aims at the discussion on sustainable development as the response to current trend of sustainable city. Under the issues of climate change and limited resources, a good land use allocation improves city effectiveness, and is also a way of practices reflecting on city's sustainable development. This concept should be emphasized on Taiwan New Town for pursuing sustainable development in the future. By using ArcGIS as an analyzing tool, this article exams the spread effect on land-use changes from different types of growth pole in Linco new town, and concludes the necessary land uses on each kind of growth pole, so as to discuss an effectiveness strategy toward sustainable issue. The result appears the spread effect happened at the range of 600m. And under certain distance, growth pole is able to appeal to residential demand. The landscape metrics result reveals that the value in residential land use is the highest, while the change amount in commercial land use is the most.

Selection and peer-review under responsibility of SUSTAIN conference's committee and supported by Kyoto University; (OPIR), (GCOE-ES), (GCOE-HSE), (CSEAS), (RISH), (GCOE-ARS) and (GSS) as co-hosts.

Keywords: Sustainable city, department sustainable development, Kaohsiung new town, Growth Pole Theory

1. Introduction

Sustainable development is one of the key parts on sustainable city; the urban land-use patterns is a major concern for sustainable development (Ward et, al; 2003).Urban sprawl, leapfrog fragmentation of urbanization and rapid open space development on the urban space without considering inner cities redevelopment are all needed to dominate urban form nowadays (Williams, 2000).Those experiences cause economic separation, environmental deterioration and fragmentation of agricultural land. In fact,

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Selection and peer-review under responsibility of SUSTAIN conference's committee and supported by Kyoto University; (OPIR), (GCOE-ES), (GCOE-HSE), (CSEAS), (RISH), (GCOE-ARS) and (GSS) as co-hosts.
doi:10.1016/j.proenv.2013.02.054

Available online at www.sciencedirect.com

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Procedia Environmental Sciences 17 (2013) 537 – 546

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The 3rd International Conference on Sustainable Future for Human Security SUSTAIN 2012

Photovoltaic module modeling using simulink/matlab

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Abstract

This paper describes a method of modeling and simulation photovoltaic (PV) module that implemented in Simulink/Matlab. It is necessary to define a circuit-based simulation model for a PV cell in order to allow the interaction with a power converter. Characteristics of PV cells that are affected by irradiation and temperature are modeled by a circuit model. A simplified PV equivalent circuit with a diode equivalent is employed as model. The simulation results are compared with difference types of PV module datasheets. Its results indicated that the created simulation blocks in Simulink/matlab are similar to actual PV modules, compatible to different types of PV module and user-friendly

Keywords: modeling; PV module; PV characteristic; simulink/matlab

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doi:10.1016/j.proenv.2013.02.069

Available online at www.sciencedirect.com

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Procedia Environmental Sciences 17 (2013) 566 – 575

Procedia Environmental Sciences

The 3rd International Conference on Sustainable Future for Human Security
SUSTAIN 2012

Assessing the impact of the Fukushima nuclear disaster on policy dynamics and the public sphere

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Abstract

Social and political fallout following the March 2011 Fukushima-Daiichi nuclear disaster permanently altered the zeitgeist of global public attitude towards nuclear power and towards energy technology in general. This area of public policy, which in Japan is particularly opaque and stagnant, was forced into a period of energy sector review amid domestic and worldwide debate. This study explores novel methodologies for measuring these developments, covering the 1) framing effects of traditional media and the 2) user-sourced content of social media. This quantitative approach yielded the following hypothesis verifications; 1) in an AHP-style online survey, exposure to real and simulated nuclear-related disaster headlines reduced collective partiality towards nuclear power by 3% and 4% respectively, and 2) retrospective opinion mining of Twitter procured an relative increase in negative nuclear-related posts of 38% and 134% in Japanese and English respectively, from the pre to post-Fukushima world. Using nuclear power and Fukushima as a case study, this paper attempts to elucidate both the influence of media on the public sphere, and the influence of the public sphere on policy and policymakers. From the results it is possible to make the conjecture that a lack of scientific education with regard to energy issues increases the former influence, and similarly reduces the latter.

Selection and peer-review under responsibility of SUSTAIN conference's committee and supported by Kyoto University; (OPIR), (GCOE-ES), (GCOE-HSE), (CSEAS), (RISH), (GCOE-ARS) and (GSS) as co-hosts.

Keywords: Fukushima; Twitter; social media; nuclear profile; public sphere; policy dynamics; AHP; headlines

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Selection and peer-review under responsibility of SUSTAIN conference's committee and supported by Kyoto University; (OPIR), (GCOE-ES), (GCOE-HSE), (CSEAS), (RISH), (GCOE-ARS) and (GSS) as co-hosts.
doi:10.1016/j.proenv.2013.02.072

Available online at www.sciencedirect.com

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Procedia Environmental Sciences 17 (2013) 899 – 908

Procedia Environmental Sciences

The 3rd International Conference on Sustainable Future for Human Security
SUSTAIN 2012

Public attitudes toward the additional roles of university in disaster management: Case study of Thammasat University in 2011 Thailand floods

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Abstract

Higher education institutions are nowadays performing more than just their fundamental role of providing higher education to our society in accordance with the trend of Corporate Social Responsibility (CSR). However, not all higher education institutions have the potential to do so. Merely somewhat institutions in the nation could eager to response this expectation. This research focuses on reviewing public attitudes toward the additional roles of university in disaster management to ensure university the benefits that university could have in return from the society by using the case study of Thammasat University, Thailand in the devastation disaster of Thailand Floods in 2011. The research applies Social Return on Investment analysis (SROI) to investigate the public attitudes in term of Venue and Trust and interpret the data into the level of satisfaction. The study distributes 153 questionnaire sheets to Sapansoong community, which is a community surround Thammasat University to know their opinions concerning the role of university in flood crisis. In sum, the result shows that 69.9% of the respondents express that they admire Thammasat University in providing support to community. As for their contribution, the majority ratio of the respondents would love to support university activity by giving some donation and 54 respondents (35.3%) define that the amount of the donation per year should not exceed 300 THB (9.5 USD) and they will continue to give the donation even disaster does not occur up to 5 years until they will stop to donate.

Selection and peer-review under responsibility of SUSTAIN conference's committee and supported by Kyoto University; (OPIR), (GCOE-ES), (GCOE-HSE), (CSEAS), (RISH), (GCOE-ARS) and (GSS) as co-hosts.

Keywords: Disaster; Flood Management; University

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Selection and peer-review under responsibility of SUSTAIN conference's committee and supported by Kyoto University; (OPIR), (GCOE-ES), (GCOE-HSE), (CSEAS), (RISH), (GCOE-ARS) and (GSS) as co-hosts.
doi:10.1016/j.proenv.2013.02.108