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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : PROSIDING

Judul karya ilmiah (paper) : Initiatives of Urban Agriculture in Semarang City: Pathways for Sustainability

Jumlah Penulis : 3 orang

Status Pengusul : Zahra Nur Hasanah, **Wiwandari Handayani**, Nana Kariada Tri Martuti

Identitas prosiding :

- a. Judul Prosiding : MATEC Web of Conference
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Komponen Yang Dinilai	Nilai Maksimal <i>Prosiding</i>		Nilai Akhir Yang Diperoleh
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b. Ruang lingkup dan kedalaman pembahasan (30%)	4,5		4
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d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	4,5		4
Total = (100%)	15		13
Nilai = (40% x 13 : 2)			2,6

Catatan Penilaian paper oleh Reviewer :

- a. Kelengkapan dan kesesuaian unsur artikel cukup lengkap. Hanya tidak ada *acknowledgment* sehingga tidak dapat ditelusuri sumber dana penelitian, dll. Pembahasan di setiap komponen artikel (IMRaD) berhubungan dengan judul yang diangkat yaitu *urban farming*.
- b. Lingkup pembahasan sesuai dengan bidang ilmu penulis yaitu perencanaan wilayah dan kota. Pembahasan cukup baik, menganalisis potensi keberlanjutan inisiatif-inisiatif *urban farming* di Kota Semarang, didukung hanya dengan 14 pustaka, dimana 8 diantaranya bersumber dari artikel jurnal.
- c. Memiliki cukup kebaharuan dengan dukungan data yang diperoleh dari wawancara semi terstruktur kepada *key informants* dari pemerintah kota dan *urban farmers*. Data dan analisis ditampilkan menggunakan narasi, gambar, tabel dan diagram.

- d. Prosiding international conference MATEC, prosiding terbitan EDP Sciences. SJR 0,17 (2019) dan SNIP 0,71 (2019). Editor cukup cermat. Artikel tersedia *online* dan *open access*. ISSN dan tautan DOI tersedia, dan di dukung editorial board yang cukup beragam

Semarang, 03-12-2020

Reviewer 1,



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	Internasional 15	Nasional 	
a. Kelengkapan unsur isi paper (10%)	1,5		1
b. Ruang lingkup dan kedalaman pembahasan (30%)	4,5		3
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	4,5		3
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	4,5		3,5
Total = (100%)	15		10,5
Nilai = (40% x 10,5 : 2)			2,1

Catatan Penilaian paper oleh Reviewer :

- a. Kelengkapan dan kesesuaian unsur artikel cukup lengkap. Hanya tidak ada *acknowledgment*. Pembahasan di setiap komponen artikel (IMRaD) berhubungan dengan judul yang diangkat yaitu keberlanjutan pertanian perkotaan
- b. Artikel sesuai dengan bidang ilmu penulis 2 yaitu di bidang perencanaan wilayah dan kota. Artikel tentang *Urban Agriculture* telah dibahas secara terstruktur dan tampilan observasi cukup jelas.
- c. Artikel memiliki kebaruan cukup. Ada 14 referensi, 79% terbitan ≤ 10 tahun terakhir. Turnitin Similarity Index 4%. Metode dijelaskan dengan cukup baik, data diperoleh berdasarkan hasil wawancara dengan informan-informan kunci di Kota Semarang.

- d. Prosiding terbitan EDP Sciences. SJR 0,17 (2019) dan SNIP 0,71 (2019). Artikel tersedia *online* dan *open access*, ISSN dan tautan DOI tersedia.

Semarang, 09-11-2020
Reviewer 2,



Prof. Dr. Ir. Nany Yulastuti, MSP
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	Reviewer I	Reviewer II	
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b. Ruang lingkup dan kedalaman pembahasan (30%)	4	3	3,5
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	4	3	3,5
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	4	3,5	3,75
Total = (100%)	13	10,5	11,75
Nilai = (40% x 11,75 : 2)			2,4

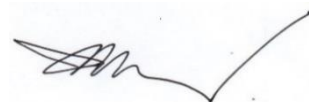
Semarang, 08-12-2020

Reviewer 1,



Prof. Dr. rer. nat. Imam Buchori, ST
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Reviewer 2,



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Urban agriculture (UA) has become a popular concept to bridge growth of urban areas with adequate provision of agricultural land, cheap and healthy food. UA in Semarang began to be encouraged by Semarang City Government since 2015 and involves family welfare groups for its implementation. Most of the people involved in UA activities are often based on hobbies whereas some of them start reaching out to businesses. This study aims to elaborate the initiatives from government, community/individual, university, and corporation ...

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Presented to

Zahra Nur Hasanah

for your active participation and valuable contribution as
Author and Presenter

**at The 5th International Conference on Sustainable Built Environment (ICSBE 2018)
'Management of Changes for Livable Environment'**

11-13 October 2018, Banjarmasin, Indonesia

Dean of Faculty of Civil Engineering and Planning
Universitas Islam Indonesia



Miftahul Fauziah, S.T., M.T., Ph.D.

Mayor of Banjarmasin City



Ibnu Sina, S.Pi., M.Si.

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Universitas Lambung Mangkurat



Dr. -Ing. Yulian Firmana Arifin, S.T., M.T.,

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PREFACE

The 5th International Conference on Sustainable Built Environment (ICSBE) : Management of Changes for Livable Environment

October 11-12, 2019
Banjarmasin, Indonesia

About the Conference

The International Conference on Sustainable Built Environment (ICSBE) is a forum initiated by the Faculty of Civil Engineering and Planning, Universitas Islam Indonesia (UII), through collaborations with worldwide universities and research institutions. The conference is aimed at nurturing the study, comprehension, and appreciation of the built environment.

The conference is intended to provide a forum for ideas exchange, knowledge sharing, and information dissemination concerning the study and research on built environment in different parts of the world. It seeks to further develop regional and international network of academics, professionals, and policy makers on the management of the built environment.

The first ICSBE was held in May 2010 in Yogyakarta, with the theme 'Enhancing Disaster Prevention and Mitigation', which attracted participants from 8 countries, who presented 74 selected papers. In response to the interests of the participants, the second conference was held in July 2012 with the theme 'Livable Cities in Fast Growing Cities. The third was held in October 2014 by theme of 'Resilience and Risk Reduction Towards Well-Being Society'. The fourth conference held in October 2016 presented the theme of 'Sustainable Building and Environment for Sophisticated Life'.

To expand the benefit of the new knowledge of ICSBE to the region, starting on the fifth, the conference will be conducted as travel conference biennial series from one city to another. Therefore, starting this year of 2018, the ICSBE will be held in Banjarmasin, South Kalimantan, Indonesia, co-jointly organised by the Faculty of Engineering, Universitas Lambung Mangkurat (ULM) and the Municipal Government of Banjarmasin.

Management of Changes for Livable Environment

Every community has been facing rapid changes in various aspects of life. At global level, the changes refer to planetary-scale changes in the Earth system which consists of the land, oceans, atmosphere, polar regions, life, the planet's natural cycles and deep Earth processes that its parts influence one another including human society.

Beside the threat of significant climate change, there is growing concern over the ever-increasing human modification of other aspects of the global environment and the

consequent implications for human well-being. Social systems can also change rapidly and discontinuously in ways that may greatly alter environmental systems and human being.

To address the changes, the governments, public and private institutions and people are required to agree on the ethical framework for global stewardship and strategies for environmental system management. The academic and scientific society that are believed to be the most prepared in facing rapid global changes should take a lead in exploring the new way addressing the problem.

With purpose to comprehend any new initiative for managing the changes and keep the environment livable, this conference will discuss in detail about the state-of-the-art of environmental management, technology, and methodology to address the changes at community, city, regional and global levels.

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Architecture, Ecology and Economy: Synergy or Contradiction?

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Abstract. Economy and ecology in architecture are seen by most as contradictions. On the other hand traditional building concepts and vernacular architecture all over the world use local renewable materials and building methods as well as designs based on optimizations, traditions and culture and thus follow an economic and ecologic approach. The environment is not a world outside the economy. Well considered ecologic approaches and solutions for socio-ecological problems can trigger innovation and economic success. As architects we have an increasing responsibility towards sustainability. In this context the use of building cost optimization and life cycle cost optimization without compromising quality will be part of the „Ecological Economy in Architecture“. The goal will be to create consumer value on several levels. Ecologic architectural projects will create economic competitive advantage in conjunction with the creation of unique selling points. The starting points will be the well-balanced analysis and management of economic efficiency, ecological, social and cultural aspects - considering all stakeholders and the whole lifecycle of buildings. Hence current ways of design, decision-making, communication and education must be questioned from all sides.

Key Words: ecological economy in architecture, environmental economics, economic ecology, architectural sustainability, sustainability marketing, 4 Cs, life cycle cost optimization, unique selling point, competitive advantage, consumer value, push and pull, green marketing myopia.

1 Problem

Growth is the overall goal of nowadays economy and politics and the driving force of real estate developments. Today numerous regions of the world experience a growth in economy combined with a booming building sector. Growth creates additional value within the real estate field but at the same time it must be seen alongside with its possible negative consequences in the matters of ecology, social life and culture. This in turn leads to an increasing responsibility of architects towards sustainability.

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Characteristics of dissolved organic matter in a water purification plant and distribution pipes

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Abstract. Dissolved organic matter (DOM) needs to be characterized to determine the ability of a water treatment unit to reduce organic matter and its relationship to the levels of chlorine required for disinfection. We investigated water quality parameters, including DOM, in a water purification plant and distribution pipes located in central Japan. The dissolved organic carbon (DOC) concentration decreased from 0.73 mg/L in raw water to 0.50 mg/L in purified water by conventional treatment processes. The DOC of purified water decreased slightly in the pipes downstream of the plant. The three-dimensional excitation-emission matrix fluorescence spectra showed some specific peaks for humic-like substances and protein-like substances in all water samples, and the compositions of DOM in purified water were close to those in raw water. However, there was a peak of protein-like substances in purified and returned water, which was not observed for raw water. The fluorescence intensities of humic-like substances in purified water decreased downstream of the plant, while the fluorescence intensities of protein-like substances increased in the pipes. The measured molecular weight distributions of DOM in water presented some specific peaks, and DOM with a smaller molecular weight was not easily removed by water treatment processes. There were positive relationships between decreases in the intensities of some peaks and residual chlorine decay.

1 Introduction

In Japan, most drinking water is treated by conventional treatment methods, such as coagulation, sedimentation, and filtration. The treatment system can produce high-quality drinking water because the pollution level of raw water is low. However, some drinking water treatment units use a closed system that reuses water from sludge treatment and backwash filters. This can affect the quality of raw water, especially the content of organic matter.

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Flushing Methods in Polder Drainage System to Obtain Better Environment Quality

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Abstract. The Banger Polder is a polder system which covers an area of around 670 hectares in Semarang city. There are about 90,000 inhabitants living in this area. The Polder area is vulnerable to flooding caused by high water levels during high tide and more during heavy rain. Climate change which may cause high sea level forms a serious threat for the coastal areas in Semarang as delta area. Objectives of the paper are to create cause relation flowchart, to analyse flushing zone, and to plan implementation and maintenance of flushing system. Regarding the research methods for implementing the case, there are seven parties interviewed and observed related to flushing program. The parties are described with their interests, influence and (optional) negative impacts of stakeholders. The Causal relation tree of flushing process is divided into 5 different steps: innovative, quality effect, operational effect, qualification effect, and monitor effect. According to the observation and interview result, flushing zone in Banger polder area can be divided into 5 zones which are implemented by some institutions; SIMA, PSDA, BBWS and Bappeda. A good implementation and maintenance is needed to maintain the flushing system.

1 Introduction

The Banger Polder is a polder system which covers an area of around 670 hectares. There are about 90,000 inhabitants living in this area. The Polder area is vulnerable to flooding caused by high water levels during high tide and more during heavy rain. Climate change which may cause high sea level forms a serious threat for the coastal areas of Semarang that are located at below sea level [1]. The business site is improving the hygiene and water quality in the Banger Area by flushing the canal drain during draught. This improvement will be the next priority after implementing the polder system. In dry season, the hygiene needs to be improved. In current situation, several toilets discharge land directly to secondary and tertiary gutters along the streets, which is known as an open sewer.

In dry season, flushing is a kind of difficult process since there is a scarcity of water. If the gutters cannot be flushed, the water quality and the hygiene will extremely reduce.

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An innovative approach to tracking sediment transport along roads

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Abstract. A study of sediment transport was carried out in the New England area of the United States where large quantities of sediments and other debris accumulate along roads. These sediments are mostly transported by roadway runoff and stormwater drainage structures, where present, tend to concentrate them. However, polluted sediments might also find their way into ecologically sensitive areas. Our research aimed at tracking the transport of these sediments as they move along a road. Further, we attempted to quantify the rate by which the sediments were transported. Glass microbeads in the size range of sand were released as a tracer of sediment transport at six comparable locations. Over a period of 10 months, their movement was tracked using microscopy. Our results indicate that this type of tracer was successful in following along the sediment transport. More research is required to establish this new method under different stormwater runoff regimes or different roadside maintenance conditions.

1 Introduction

Roads are arteries for transporting a large number of cars, but their impervious surfaces also accumulate large quantities of sediment and other debris. Besides endangering motorists, these sediments eventually end up on the sides of roadways where they can degrade drainage systems, if present. Sediment laden runoff from roads can be minimized by either erosion control or sediment control best management practices (BMPs), such as retention ponds, bio-retention systems, or hydrodynamic separators, to name a few [1]. Temporary measures include silt fences, geosynthetic dikes, wattles, berms, bales, and rock check dams [2]. Large accumulations of sediments in BMP drainage structure can impact their function. If entirely overwhelmed, BMP clogging can cause street flooding. Along with increasing number of roads and motorists, these problems will be amplified by stronger storms predicted in most climate change models for the Northeast region of the USA. Also, the surfaces of sediment particles can attract contaminants, such as heavy metals or petroleum hydrocarbons [3-5], which than can get transported together.

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