

**LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH**

- Judul karya ilmiah (artikel) : Spatial Exposure and Livelihood Vulnerability to Climate-Related Disasters in The North Coast of Tegal City, Indonesia
- Jumlah Penulis : 2 penulis
- Status Pengusul : **Iwan Rudiarto**, Dony Pamungkas
- Identitas Jurnal Ilmiah :
- a. Nama Jurnal : International Review for Spatial Planning and Sustainable Development
 - b. Nomor ISSN : 2187-3666
 - c. Vol.,no.,bulan,tahun : 8, 3, July 2020
 - d. Penerbit : J-STAGE, International Community of Spatial Planning and Sustainable Development
 - e. DOI artikel (jika ada): https://doi.org/10.14246/irspsd.8.3_34
 - f. Alamat web jurnal : https://www.jstage.jst.go.jp/article/irspsd/8/3/8_34/article-char/en
 - g. Terindeks di SJR Q2 0,227 (2019) dan SNIP 0,504 (2019)
- Kategori Publikasi Jurnal Ilmiah : Jurnal Ilmiah Internasional /internasional bereputasi
 (beri ✓ pada kategori yang tepat) Jurnal Ilmiah Nasional Terakreditasi
 Jurnal Ilmiah Nasional /Nasional di DOAJ,CABI, COPERNICUS

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- b. Pembahasan mendalam berkaitan dengan keterpaparan spasial dan tingkat kerentanan masyarakat yang terdampak banjir rob di pesisir Kota Tegal ditinjau dari aspek ekonomi, lingkungan fisik, social, dan kesehatan dan sangat relevan dengan bidang ilmu penulis terutama untuk kebijakan perencanaan wilayah pesisir. Pembahasan dalam artikel melibatkan 20 sumber pustaka (27%) yang

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- d. Jurnal internasional bereputasi terindeks *Scopus* dengan SJR 0,227 (Q2) yang diterbitkan oleh J-STAGE bekerjasama dengan *International Community of Spatial Planning and Sustainable Development*. Tersedia *online* dan *open access* dengan tautan DOI dan tidak berbayar yang dilengkapi dengan I-SSN dan *editorial board* yang beragam dari berbagai negara.

Semarang, 20-07-2020

Reviewer 1,



Prof. Dr.rer.nat. Imam Buchori, ST
NIP. 197011231995121001
Departemen PWK, FT. Undip

**LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
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d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12			11,5
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Nilai = (60% x 37,5)				22,5

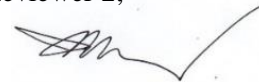
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Semarang, 29-07-2020

Reviewer 2,



Prof. Dr. Ir. Nany Yulastuti, MSP
NIP. 195407171982032001
Departemen PWK, FT. Undip

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
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b. Ruang lingkup dan kedalaman pembahasan (30%)	11,0	11,0	11,0
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	11,0	11,0	11,0
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	10,5	11,5	11,0
Total = (100%)	36,5	37,5	37,0
Nilai = (60% x 37)			22,2

Semarang, 30-07-2020

Reviewer 1,



Prof. Dr. rer. nat. Imam Buchori, ST
 NIP. 197011231995121001
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Reviewer 2,



Prof. Dr. Ir. Nany Yuliasuti, MSP
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International Review for Spatial Planning and Sustainable Development
Volume 8, Issue 3, 2020, Pages 34-53

Spatial exposure and livelihood vulnerability to climate-related disasters in the North Coast of Tegal City, Indonesia (Article)

Rudiarto, I., Pamungkas, D.

Department of Urban and Regional Planning, Diponegoro University, Indonesia

Abstract

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Climate-related disasters such as floods and tidal floods impact livelihood systems in coastal areas everywhere, particularly in developing countries, resulting in a certain degree of livelihood vulnerability. In this paper, we examine the spatial exposure and livelihood vulnerability level of Tegal, a city in Central Java, Indonesia. Data were collected from 100 household samples distributed in the study area. Two types of assessment were performed: a spatial assessment with distance analysis and a vulnerability assessment using the Livelihood Vulnerability Index (LVI). The results of the study show that 33.80% of the settlement area and 22.25% of the fishery area are vulnerable to tidal floods. Climate-related disasters also threaten 32.20% of the households sampled, whose members work mostly as fishermen and rely on coastal resources for their livelihood. A key finding of the study is that the community is highly vulnerable with a low adaptive capacity level. This calls for more decisive policy interventions to enhance the community's adaptive capacity and reduce its exposure level. © 2020, SPSD Press.

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Impact Mechanism and Improvement Strategy on Urban Ventilation, Urban Heat Island and Urban Pollution Island: A Case Study in Xiangyang, China

Qingming Zhan^{1,2*}, Sihang Gao^{1,2}, Yinghui Xiao^{1,2}, Chen Yang^{1,2}, Yihan Wu^{1,2}, Zhiyu Fan^{1,2}, Jiaqi Wu^{1,2}, Meng Zhan^{1,2}

1 School of Urban Design, [Wuhan University](#)

2 Collaborative Innovation Center of Geospatial Technology

** Corresponding Author, Email: qmzhan@whu.edu.cn*

Received: November 11, 2019 Accepted: June 01, 2020

Key words: Urban Ventilation Corridors Planning, Urban Thermal Environment, Computational Fluid Dynamics, Geographically Weighted Regression, Remote Sensing, Urban Air Pollution

Abstract: There has been a growing interest in finding mitigation measures for urban heat islands and urban pollution islands that focus mainly on urban landscape mechanisms. However, relatively little research has considered spatial non-stationarity and temporal non-stationarity, which are both intrinsic properties of the environmental system, simultaneously. At the same time, the relevance of and differences between the thermal environment and air pollution has also been rarely discussed, and both issues are of great importance to urban planning. In this study, which is aimed at improving urban ventilation to reduce the urban heat island and urban pollution island effects, an urban ventilation potential evaluation, land surface temperature time-series clustering and air pollution source identification are comprehensively applied to identify the operational areas, compensation areas and ventilation corridors in Xiangyang, China, thus bridging the gap between academic research and urban planning. The specific research areas include: (1) defining the operational areas for urban ventilation corridor planning through an urban ventilation potential evaluation featuring urban morphology indicators, land surface temperature time-series clustering with *k*-means and an urban air pollution source diffusion analysis via the Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) and geographically weighted regression (GWR) methods; (2) identifying urban cold islands through land surface temperatures and delimiting the compensation areas in urban ventilation corridor planning; (3) designating urban ventilation corridors through an urban ventilation potential evaluation and computational fluid dynamics (CFD); and (4) improving urban ventilation corridor planning through defining operational areas, compensation areas and ventilation corridors as well as proposing corresponding control measures.

1. INTRODUCTION

Rapid urbanization has been changing urban forms and functions continuously ([Stone, 2009](#)), as manifested in increasing surface roughness ([Chen, Liang & Dirmeyer, 2019](#)), decreasing ventilation potential, the expansion of impervious surfaces ([Yang, Chen et al., 2019](#)) and the weakening of surface transpiration ([Dienst, Lindén, & Esper, 2018](#)). These changes make

Characteristics of spatio-temporal urban growth patterns due to the driving forces of urbanization: *The Coastal City of Antalya, Turkey*

Merve Yılmaz^{1*} and Fatih Terzi¹

1 Department of Urban and Regional Planning, Faculty of Architecture, Istanbul Technical University

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Received: October 20, 2019 Accepted: April 10, 2020

Key words: Antalya, Coastal City Morphology, Multi-Temporal Satellite Images, Remote Sensing, Urban Spatial Growth

Abstract: Urban growth patterns are a reflection of how urbanization is affected by physical geography as well as by the economic, social, and natural factors of individual cities. Therefore, an analysis of any urban growth pattern triggered by these factors by using measurable variables can make a significant contribution towards the determination of future spatial growth strategies. This paper aims to characterise and evaluate the urban growth pattern of Antalya, a coastal city in Turkey, that occurred between 1987 and 2016. To achieve this, a multi-temporal analysis of satellite images was carried out to determine the city's urban growth patterns in 1987, 2000, and 2016, and spatial growth indices were then used to identify three urban growth types – sprawl, infill, and leapfrog. The results clearly show that the amount of built-up area in Antalya increased considerably after 2000, and is estimated to have grown by a factor of eight over the period covered by this study, predominantly through the processes of sprawl and leapfrog development.

1. INTRODUCTION

Demands for land use result in the conversion of natural areas and also accelerates urbanization, thereby creating pressure on the natural environment (Pickett et al., 2001; Sekovski, Newton, & Dennison, 2012). Maintaining the link between sustainability and urban form requires a balance that allows sustainable urban growth, but urbanization and the spread of built-up areas can lead to a series of unintended results. These often include an increase in impervious surfaces, changes to surface water drainage lines, disruption of the hydrology cycle, and negative microclimatic effects (Erell, Pearlmutter, & Williamson, 2011; McCarthy, Best, & Betts, 2010; Yılmaz & Terzi, 2018). Arguably, the most serious reasons for the latter are the creation of intense/high heat islands (Gartland, 2010; Jusuf et al., 2007; Li, Y. y., Zhang, & Kainz, 2012), and increased greenhouse gas emissions (McCarthy, Best, & Betts, 2010). In addition, urbanization around rivers and surface water drainage areas adversely affects the ecosystems and habitats often present at the land-water transition point. This gives rise to a requirement that in such cases the specific type of urban growth should be