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

Judul karya ilmiah (artikel) : The Spatio-Temporal Trends of Urban Growth and Surface Urban Heat Islands Over Two Decades in the Semarang Metropolitan Region

Jumlah Penulis : 3 penulis

Status Pengusul : Anang W Sejati, **Imam Buchori**, Iwan Rudiarto

Identitas Jurnal Ilmiah :

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- b. Nomor ISSN : 22106707
- c. Vol, no, bulan, tahun : Vol. 46 April 2019
- d. Penerbit : ELSEVIER Ltd
- e. DOI artikel (jika ada):
<http://dx.doi.org/10.1016/j.scs.2019.101432>
- f. Alamat web jurnal :
<https://www.sciencedirect.com/science/article/pii/S2210670718313969?via%3Dihub>
- g. Terindeks di Scimagojr/Thomson Reuter ISI knowledge atau di Scopus; Q1 SJR 2019 :1.36

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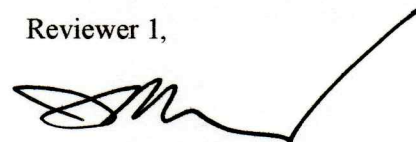
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	Internasional/ internasional bereputasi 40	Nasional Terakreditasi 	Nasional 	
a. Kelengkapan unsur isi artikel (10%)	4			4
b. Ruang lingkup dan kedalaman pembahasan (30%)	12			12
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	12			11.5
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12			12
Total = (100%)	40			39.5
Nilai Pengusul: (40% x 39.5) : 2 =				7.9

Catatan Penilaian artikel oleh Reviewer:

- a. Artikel lengkap. Substansi artikel sesuai dengan bidang ilmu penulis.
- b. Isi artikel berkaitan dengan *Urban Growth* telah dibahas dengan komprehensif.
- c. Artikel memiliki nilai kebaruan yang baik. Ada 53 referensi dan 89% terbitan ≤ 10 tahun terakhir. Turnitin Similiarity Index 11%.
- d. Journal Sustainable Cities and Society terindex Scopus Q1 (2019) dan SJR 1,36 (2019). Penerbit Elsevier.

Semarang, 20 Juli 2020

Reviewer 1,



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

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Hasil Penilaian *Peer Review* :

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	Reviewer I	Reviewer II	Nilai Rata-rata
a. Kelengkapan unsur isi artikel (10%)	4,0	4,0	4,00
b. Ruang lingkup dan kedalaman pembahasan (30%)	12,0	12,0	12,00
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	11,5	11,0	11,25
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12,0	12,0	12,00
Total = (100%)	39,5	39,0	39,25

Semarang,

Reviewer 1,



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

Reviewer 2,



Prof. Dr.-Ing. Gagoek Hardiman
NIP.195308191993031001
Departemen Arsitektur FT. Undip

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Total = (100%)	40			39,0
Nilai Pengusul:				

Catatan Penilaian artikel oleh Reviewer:

- Kelengkapan unsur isi sangat baik.
- Pembahasan sangat mendalam dan didukung oleh lebih dari 50 pustaka, yang sebagian besar bersumber dari artikel jurnal terkini.
- Data dan analisis mutakhir, menggunakan teknologi Geographic Information System (GIS).
- Unsur dan kualitas terbitan jurnal sangat baik, terindeks SCOPUS Q1 dengan SJR tahun 2019 (saat terbit) 1,36. Penerbit Elsevier.

Semarang, 13 Juli 2020

Reviewer 2,



Prof. Dr.-Ing. Gagoek Hardiman
NIP.195308191993031001
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Sustainable Cities and Society

Volume 46, April 2019, Article number 101432

The spatio-temporal trends of urban growth and surface urban heat islands over two decades in the Semarang Metropolitan Region ^(Article)

Sejati, A.W.^{a,c}  Buchori, I.^{a,c}  Rudianto, I.^a 

^aDepartment of Urban and Regional Planning, Universitas Diponegoro, Indonesia

^bDoctoral Programme in Architecture and Urbanism, Universitas Diponegoro, Indonesia

^cCentre of Geomatics Application for Sustainable Development (CEGAS), Universitas Diponegoro, Indonesia

Abstract

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This paper conveys the findings of a study of the development of Semarang Metropolitan Region (SMR) over two decades. The developments seen were urbanisation and its impact on Surface Urban Heat Islands (SUHI). This research used remote sensing data satellite imagery of Landsat 5 TM and Landsat 8 OLI to see land cover change from 1998 to 2018. Furthermore, to predict the land cover change, this research used a Stochastic Cellular Automata-Markov Chain (SCA-MC) algorithm. Measurements of the LST and SUHI used Landsat products with Thermal Infra-Red Sensors (TIRS) Band 10 (2018) and TIRS Band 6 (1998). The classification of the results from 1998 to 2018 indicates a widespread change in the built-up area of about 74.62%, revealing urban expansion in the SMR. Moreover, there has been a decline in the vegetation canopy of 36.14%, resulting in an increase in average surface temperature of 2–5 °C. Areas with increased surface temperatures reached more than 30 °C, which is an increase of 245.57 km² from 1998 to 2018. Furthermore, the SCA-MC prediction suggests the scenario to mitigate the SUHI through spatial planning instruments. Thus, control of development is essential to the sustainability of the SMR, through land use planning scenarios. © 2019 Elsevier Ltd

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8

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Li, Y., Kong, X., Zhu, Z. (2020) *Sustainable Cities and Society*

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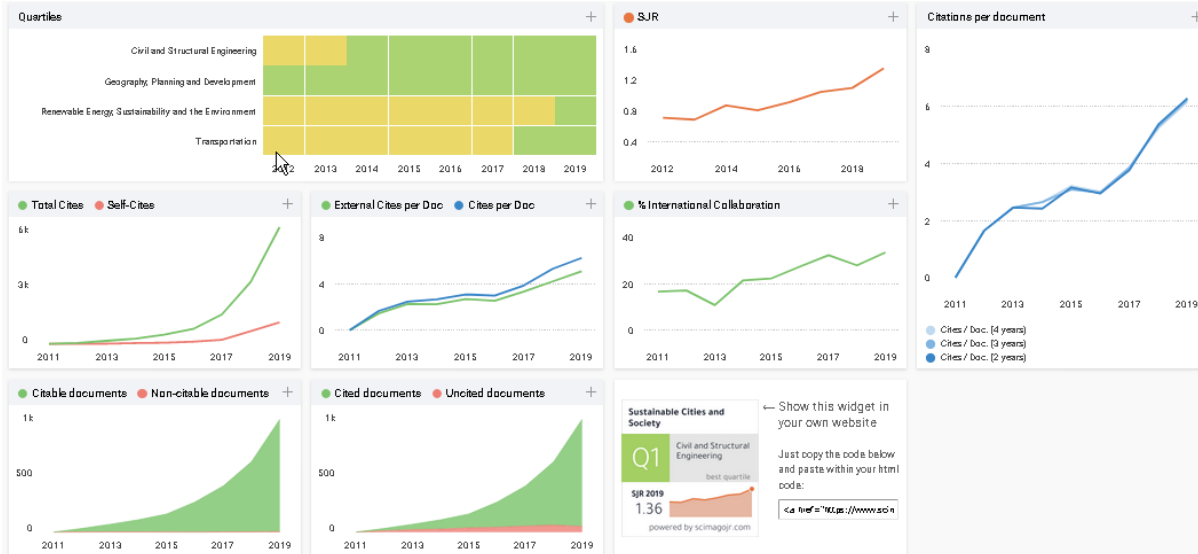
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