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

Judul Jurnal Ilmiah (Artikel)	:	Analysis of River Flow Regime Changes Related to Water Availability on the Kapuas River, Indonesia		
Jumlah Penulis	:	4 orang (Herawati, H., Suripin, S., **Suharyanto, S.**, Hetwisari, T.)		
Status Pengusul	:	penulis ke - 3		
Identitas Jurnal Ilmiah	:	a. Nama Jurnal	:	Irrigation and Drainage
		b. Nomor ISSN	:	ISSN :1531-0353, E-ISSN:1531-0361
		c. Vol, No., Bln Thn	:	Volume 67, July 2018
		d. Penerbit	:	John Wiley & Sons, Inc
		e. DOI artikel (jika ada)	:	https://doi.org/10.1002/ird.2103
		f. Alamat web jurnal	:	https://onlinelibrary.wiley.com/doi/full/10.1002/ird.2103
		Alamat Artikel	:	https://eprints2.undip.ac.id/2723/1/Suharyanto-Herawati_et_al-2017-Irrigation_and_Drainage-2.pdf
		g. Terindex	:	Scopus (SJR: 0.525 (Q2))

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- [√] Jurnal Ilmiah Internasional
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3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**

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Semarang, 12 April 2020
Reviewer 1

Prof. Dr. Ir. Sri Sangkawati, M.Sc.
NIP. 195409301980032001
Unit Kerja : Departemen Teknik Sipil FT UNDIP

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Semarang,
Reviewer 2

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Irrigation and Drainage
Volume 67, July 2018, Pages 66-71

Analysis of River Flow Regime Changes Related to Water Availability on the Kapuas River, Indonesia (Conference Paper) (Open Access)

Herawati, H.[a] ✉, Suripin, S.[b], Suharyanto, S.[b], Hetwisari, T.[c]

[a]Civil Engineering Department, Tanjungpura University, Pontianak, Indonesia
[b]Civil Engineering Department, Diponegoro University, Semarang, Indonesia
[c]Directorate General of Human Settlement, Ministry of Public Works, Semarang, Indonesia

Abstract

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Rivers are major sources of fresh water, which is a basic need in society. The availability of water is affected by river basin characteristics such as rainfall and land cover type. Along with population and economy growth, there has been a change in land use that leads to changes in land cover types, thereby changing the river flow regime and affecting the availability of water in the river. Thus it is necessary to analyse water flow regime changes in the river to determine water availability for proper action plans in the future. Studies on these aspects were conducted in the Kapuas River Basin with an area of about 100 000 km^2, in West Kalimantan, Indonesia. The study was conducted by analysing the trend of annual rainfall and change of land cover during the last three decades, by analysing land cover types and comparing the availability of water in the Kapuas River from measurement results in 2002 and 2012. The results showed that the rainfall trend had increased 4.3% over the last 30 years. The changes in the hydrological aspects of the study area have altered the river flow regime of Kapuas River within the last 30 years and have influenced river water availability. Copyright © 2017 John Wiley & Sons, Ltd. Copyright © 2017 John Wiley & Sons, Ltd.

SciVal Topic Prominence

Topic: Peatland | Peat | Tropical peatlands

Prominence percentile: 96.285

Author keywords

flow regime | Indonesia | land cover change | river | river basin

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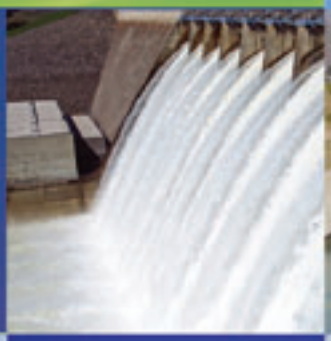

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Volume 67, Issue S1

Special Issue: Special Issue: Sustainable Development of Tidal Areas: Climate Change and Environmental Impacts. Guest Editors: Prof. Ruey-Chy Kao, Prof. Hsiao-Wen Wang, and Dr. H.P. Ritzema. Publication of this supplement was supported by the ICID Committees of Japan, Korea and Taiwan, and National Cheng Kung University, Tainan, Taiwan

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Irrigation and Drainage / Volume 67, Issue S1

Special Issue Paper

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Bart Schultz

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Citations: 3

† This paper is based on the paper presented in the Workshop on Environmental Impacts and Sustainable Management of Tidal Areas, 3 October 2013, Mardin, Turkey.

‡ Effets des changements induits par l'homme dans l'utilisation des terres et du changement climatique sur la vie dans les zones côtières et deltaïques.

Abstract

EN FR

Sea level rise due to climate change is presented as one of our biggest problems. The reality is quite different and generally insufficiently taken into account in decision-making, although the facts are regularly highlighted in professional literature.

Population growth in recent decades has been substantial, especially in emerging and least developed countries, where 85% of the world's population is living. Much of the growth takes place in urban areas, of which 80–90% is located in coastal and deltaic regions where sea level rise could play a role with respect to drainage and flood protection. In the majority of these areas there is subsidence, in extreme cases of 200 mm yr^{-1}. In such cases the impact of the current rate of sea level rise of 3.2 mm yr^{-1}, which implies 0.32 m per century, occurs within 2 years due to subsidence. The Intergovernmental Panel on Climate Change (IPCC) gives a maximum figure for sea level rise of 0.98 m by 2100. A similar comparison as above shows that this would be reached in 5 years. Commonly, inadequate measures are taken to reduce the risk of flooding.

Based on newly available data, trends and forecasts, the relevant aspects and their impacts are presented in this paper, together with a future outlook. Copyright © 2016 John Wiley & Sons, Ltd.

Irrigation and Drainage / Volume 67, Issue S1

Special Issue Paper

Assessment of Land Subsidence and Climate Change Impacts on Inundation Hazard in Southwestern Taiwan†

Hsiao-Wen Wang, Cheng-Wei Lin, Chun-Yao Yang, Chung-Feng Ding, Hwung-Hweng Hwung, Shih-Chun Hsiao

First published:31 January 2018
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† Évaluation de la subsidence des terres et du changement climatique sur le risque d'inondations dans le sud-ouest de Taiwan.

Abstract

EN FR

Excessive extraction of groundwater resulting in serious land subsidence as well as intensified rainfall and storm surges due to climate change complicate the flooding problems in southwest Taiwan. A coupled set of different models was proposed to analyze the effect of inundation risk considering land subsidence and climate change. Three models, including the groundwater flow model, land subsidence model, and the physiographic drainage–inundation model, were used in this study, enabling simulations of different considerations. The results revealed that more severe flooding would result from land subsidence and climate change. The findings of a 21% increase in flood area with an inundation depth greater than 1.5 m for 200-yr return period events clearly showed more severe flooding would result from land subsidence. The flooding in those severely subsiding areas would increase in a range from 3.4 to 21.5% when further considering climate change.

While the simulation results revealed that the flood area could be decreased by as much as 50% taking into account the implemented policies, the coastal region would still be exposed to a high risk of being flooded. It thus suggests that policies focusing on infrastructure would be insufficient, and river basin management as well as spatial planning should be investigated further. Copyright © 2018 John Wiley & Sons, Ltd.

Kaoutar El Oumlouki, Rachid Moussadek, Ahmed Douaik, Hamza Iaaich, Houria Dakak, Mohamed Taoufiq Chati, Ahmed Ghanimi, Azzedine El Midaoui, Mahacine El Amrani, Abdelmjid Zouahri

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