

To: Editor
Indonesian Journal of Geography
Faculty of Geography, UGM
Yogyakarta, Indonesia

Dear Sir/Madam,

SUBMISSION OF ARTICLE FOR INDONESIAN JOURNAL OF GEOGRAPHY

I am sending herewith the manuscript, which I would like to submit to *Indonesian Journal of Geography*.

The paper is entitled: Precision of The Level of Critical Water Catchment Area For Flood Mitigation Around Bengkulu City

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The research abstract :

For flood disaster mitigation activities, the availability of a potentially flooded area (PFA) map is required. One of the causes of flooding is the criticality of water catchment areas, the higher the criticality level, the higher the potential for flooding. The purpose of this study was to determine the precision of the model for determining the PFA around Bengkulu City, which was derived from the Level of Critical Water Catchment Area (LCWCA) model prepared by the then Ministry of Forestry and Environment. LCWCA is formulated as = $[w_1 \text{ Slope} + w_2 \text{ Soil Permeability} + w_3 \text{ Rainfall} + w_4 \text{ Land Use}]$, where w_1 , w_2 , w_3 , and w_4 are the attribute and scores that have been determined. All maps are inputted into GIS, and then overlay analysis is carried out to determine the LCWCA Map, which is then analyzed further to get a PFA Map. Furthermore, the overlaying is carried out with the Existing Flood Map so that the level of precision will be known. In this study, the level of precision is defined as = $[(FAP/FAE) \times 100\%]$, where FAP is the overlaps areas between the Existing Flood Map and the PFA Map, while FAE is the area on the Existing Flood Map. Threshold values from Justice are used to justify the level of precision into three categories, namely Good (> 85%), Moderate (70 - 85%), and Poor (<70%). The results showed that in the eight sub-watersheds around Bengkulu City, there were two sub-watersheds with Good precision (> 85%), meaning that there was > 85% overlap between areas on the Potentially Flooded Area Map as a result of the analysis of The LCWCA with the area on the Existing Flood Map. There are three sub-watersheds with Moderate precision (70 - 85%) and three sub-watersheds with Poor precision (<70%).

Three Suggested Reviewers as follows:

- (1) Prof. Dr. Kukuh Murti Laksono, IPB, Bogor, kmurtilaksono@yahoo.com
- (2) Muhammad Kamal, Ph.D, Gadjah Mada University, Yogyakarta, m.kamal@ugm.ac.id
- (3) Bambang Edhi Leksono, PhD, ITB, Bandung, bleksono2013@gmail.com

I hope your favorable consideration for publication to *Indonesian Journal of Geography*. Thank you.

Sincerely,

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Date : 8 December, 2020

Attachment: Microsoft Word file of the manuscript.