GT-2023-3-1 Revise manuscript (minor revisions)
1 pesan

Manuscript: GT-2023-3-1 - 2D Simulation of Design Discharge in Flood Hazard Spatial Analysis using Hec-RAS, (Case Study Mata Allo Sub-Watershed, Enrekang, Indonesia)
Authors: Uca Sideng (Corresponding Author), Hamzah Upu (Co-author), Nurul Afdal Haris (Co-author), Dwi Rahmayana (Co-author)
Date submitted: 2023-03-09

Dear Dr. Sideng

Thank you very much for submitting the above manuscript to Geographia Technica.

Your manuscript has now been evaluated by external reviewers and members of the editorial board. A number of points of criticism were raised and these must be addressed before your manuscript can be accepted for publication.

When you resubmit your manuscript, please provide point-by-point answers to the reviewer criticisms in the text field provided during the online resubmission process and highlight any revisions made in your manuscript document.

We look forward to receiving the revised version and thank you, again, for submitting your manuscript to Geographia Technica.

Prof. I.Haidu, University of Lorraine, France
The editor of the journal Geographia Technica http://technicalgeography.org
A journal listed in Master Journal List, WoS, ESCI
SCOPUS – Q3

Editor-In-Chief comments:

Your manuscript was evaluated by three reviewers, two gave "minor revision", one gave "major revision". I believe that there is no need for major structural and content changes of the manuscript. That's why I conclude "minor revision".

Please consider the suggestions of the three reviewers and make the requested improvements as soon as possible. We have to conclude issue 1/2023 on March 23. If the improvement of the manuscript will not be completed quickly, your article will appear online with a DOI index so that it can be cited by anyon,e in the first days of April 2023, under issue 2/2023.

Since the magazine is launched in Europe, it would be normal for there to be more citations from European articles. Hydrological modeling manuals should be mentioned in the INTRODUCTION: US ACE (2010) and Bilasco & Horvath (2016). At the end of the INTRODUCTION, some good examples of modeling that have successfully used the

HEC class should be listed: Ahn et al. (2014), Haidu & Ivan (2016), Khaddor & Alaoui (2014), Strapazan & Petrut (2017).

Data and Methods are not presented according to the rigors of scientific publications. We do not agree to the presentation on points 1, 2, etc., not even on the point 3.1. Data Collection and not at 3.2. Data Processing and Analysis.

When you start talking about Data Collection, it would be good to mention that the selection was made in accordance with the specific criteria for modeling hydrological time series specified by Sarpe (2017).
You must completely re-edit 3. DATA AND METHODS so that it is not a presentation with points 1, 2, etc.

Please see at the end the list of articles that you could consider to make your article for specialized readers.

Regarding your bibliography, we do not approve the presentation in the list of articles in the form of Ahmad, I. et al. (2022) and Uca et al. (2021). Please list all the authors of these articles.

Reviewer 1 report:
Comments to authors

This manuscript discusses about 2D Simulation for Flood Hazard Spatial Analysis using Hec-RAS in Mata Allo Sub-Watershed, Enrekang, Indonesia. after revisions, this manuscript is excellent and responsive to the themes of Geographia Technica.

However, I recommend this manuscript not to be published in its present form, but I recommend a minor revision. Some suggestions to revisions are:

1) This manuscript must do more revision to the abstract. This abstract must be minor rewrite. The author must remember, the abstract should have a clearly: short introduction, problem statement, main objective of the study, methods use, key Results and primary Conclusions. Must clearly describe your problem statement and primary Conclusions in your abstract.

2) This introduction is ok where focusing in to the problem statement and aim of the study. But it is better if author can describe more clearly what the problem statement try to study, and why this study very important to do to solve or study the problem.

3) In sub-chapter Study Area (page 2). The study area is too short. This sub-chapter must clearly explain where the study does. For Fig.1, Better Improve the map of the study area with show where the study in Indonesia map.

4) Transparently present your study areas and data sources, so that others can repeat your work if they wish to do so.

5) Results and Discussions is good. However, need more explanations in conclusions sub-chapter.

Reviewer 2 report:
Comments to authors

A significantly longer description of the hydrologic modeling it self is needed.
The data analysis is alright, the data preparation for the analysis is also good but we should see more information about the HEC-RAS modeling
It is only a recommendation, maybe to try to integrate more papers with European study areas and international visibility, (not only MDPI).

Reviewer 3 report:
Comments to authors

In view of the fact that Geographia Technica is a journal published in Europe and therefore read by many local academics and practitioners, the list of references needs to be expanded with other similar research conducted across Europe. A series of comparisons with other such studies from recent years might be welcome.

The analyzed lower reach of the Mata Allo River is located just upstream of the junction with the Saddang River. Given this fact, the Saddang River has to be shown on the map of the study area in Fig.1 (otherwise the map alone creates the false impression that the location is somewhere in the upstream reaches of the Mata Allo River). The scale of the map should also be included.

The "Data And Methods" section lacks important details regarding the 2D hydraulic modeling approach. I strongly recommend reorganizing this section by adding details on the use of 2D hydraulic modeling within HEC-RAS (details should include the fundamental concept underlying 2D modeling and also the roughness coefficents determination).

Recommended bibliography

Ahn, G.-C., Gordon, S.-I. & Merry, C.-J. (2014) Impacts of Remotely Sensed Land Use Data on Watershed Hydrologic Change Assessment. International Journal of Geospatial and Environmental Research. DOI: 10.13140/RG.2.2.29881.

Bilasco, S. & Horvath, C. (2016) Cartografierea digitală a benzilor de inundabilitate pe baza statisticii, a calculelor hidraulice și a analizei spațiale GIS. (Digital mapping of floodplains based on statistics, hydraulic calculations and GIS spatial analysis – print book in Romanian). Publisher: Casa Cărții de Știință Cluj-Napoca. 170 pp., ISBN: 9786061709076.

Haidu, I., Ivan, K. (2016). Évolution du ruissellement et du volume d'eau ruisselé en surface urbaine. Étude de cas : Bordeaux 1984-2014, France. La Houille Blanche, 5, 51-56.

Khaddor, I.& Alaoui, A.-H. (2014) Production of a Curve Number map for Hydrological simulation - Case study: Kalaya Watershed located in Northern Morocco. International Journal of Innovation and Applied Studies, 9 (4), 1691-1699.

Sarpe, C.A. (2017). Temporal sampling conditions in numerical integration of hydrological systems time series. Geographia Technica, 12(1), 82–94.

Strapazan, C. & Petrut, M. (2017). Application of ARC Hydro and HEC-HMS model techniques for runoff simulation in the headwater areas of Covasna watershed (Romania). Geographia Technica, 12(1), 82–94.

US Army Corps of Engineers-Institute for Water Resources (2010), CPD-74A. Hydrologic Modeling System HEC-HMS, User's Manual. Davis, CA U.S.A, Hydrologic Engineering Center.