

PAPER EVALUATION

Paper ID: JWRHE10041

Paper Title: Flood Frequency Assessment and Inundation Mapping of Lower Ogun River Basin

Reviewer's Name: Erika BEILICCI

Date: 18.02.2014

Reviewer's Email:

Review Period: **TWO WEEKS**

beilicci_erika@yahoo.com

Please mark your evaluation in the suitable columns. "5" indicates the best and "1" implies the worst.

		5	4	3	2	1	
Scope (very important)	Relevant		x				Irrelevant
Originality	High		x				Low
Significance	Significant		x				No new
Novelty	High			x			Low
Survey Coverage	Broad			x			Shallow
Structure	Excellent		x				Poor
Expression	Clearly			x			vague
Grammar	Good		x				Poor
References	Adequate		x				Incomplete
Length	Too Short			x			Too Long

Please make very detailed technical and editorial comments and suggestions directly on the manuscript. Your comments are an invaluable aid to the author(s) to help in improving the overall technical quality, utility, and readability of the material. These comments are also necessary to maintain the quality of the articles that are published in the journal. Particular attention should be given to details that guide possible revisions, or that clearly explain reasons for rejection. Please summarize comments that appear on the manuscript to help the author(s) focus on the major issues you have raised in your review.

What are the contributions of this paper?

Flood assessment and monitoring is crucial for environmental sustainability particularly within areas traversed by river floodplain. This study has shown the usefulness of geographic information system (GIS) as a spatial technique to understand the behavior of river systems.

Methodology stipulated for creation of inundation maps is based on computing area water levels (estimated gauge heights from the return periods) in the Ogun River. Flood frequency analysis and inundation mapping of lower Ogun River basin was implemented using Gumbel probability distribution method. This method was

tested with Log Pearson Type III to ascertain the best fitting statistical measure for hydrological fluxes using Chi Square.

The future measures for sustainable planning and development must take into consideration the results of modeling process.

Recommendation ()

	A) Accept
x	B) Revise and Accept (Minor Revision)
	C) Revise and Resubmit (Major Revision)
	D) Reject

Comments

Comments to the Author(s)

A) If you suggest to accept this paper, please illustrate your reasons why this paper is qualified to be published in the journal in detail, or provide revision suggestions if you have any.

a) Why this paper is qualified:

This study has shown the usefulness of geographic information system (GIS) as a spatial technique to understand the behavior of river systems. This paper presents a methodology for flood frequency assessment and inundation maps achievement using Gumbel probability distribution method. This method was tested with Log Pearson Type III to ascertain the best fitting statistical measure for hydrological fluxes using Chi Square.

b) Revision suggestions:

- where is situated the Adiyen Intake (Figure 2)?
- TABLE 7: MODELLED YEARLY INUNDATED AREA – it is not clear what meant to represent
- it might be useful in the future, a study of the propagation of the flood wave downstream Adiyen Intake and flood plain determination, using advanced hydroinformatic tools and a comparison between results.

B) If you think this paper needs major modification and resubmission, please provide summary and detailed revision suggestions (on research base, research technique, paper presentation, grammar, jargon use, typesetting, reference, etc.). Please point out the section(s) where you think an error/ flaw occurs.

- Detailed revision suggestions:

C) If you think this paper should be rejected, please expound the reasons why it is not of sufficient quality/novelty or seriously flawed to be published in the journal.

- Suggestions for improvement:

Would you be willing to review a revision of this manuscript? Yes (x) No ()

Thank you for your contribution and effort!