

Reply to comments from Referee#1

D. Fuka (Referee)

drf28@cornell.edu

Received and published: 23 August 2010

This is a well written and excellent start to what will be a great paper with a few modeling studies. Currently, the paper describes a need, flood to minimize impacts of floods, gives a modeling approach that could offer help, and then does not implement the model or provide studies showing anything other than calibration results and hydrographs. 3 easy things to be added before the paper adds Scientific Significance and Quality are:

Your suggestion are highly appreciated, we believe it will improve overall quality of the paper. All the reviewers comments are listed below and our responses in italics.

1. A calibrated model parameter description, and sensitivity study of these model parameters. Add to the discussion this parameter sensitivity study.

We agree with referee. Required details on parameter sensitivity analysis will be added in the revision. In addition a brief description on CREST model parameter will be added. Readers will be directed to the listed CREST Model manuscripts that describes parameters in detail.

Wang, J., Y. Hong, L. Li, J. J. Gourley, K. Yilmaz, S. Khan, F. S. Policelli, R. F. Adler, S. Habib, D. Irwin, T. Korme, and L. Okello, 2010: The coupled routing and excess storage (CREST) distributed hydrological model. J. Hydrol. (in press)

Khan, S. I., Y. Hong., J. Wang., K. .Yilmaz., J. J. Gourley., R. F. Adler., G. R. Brakenridge., F. Policelli., S.Habib., D. Irwin., 2010, Satellite Remote Sensing and Hydrologic Modeling for Flood Inundation Mapping in Lake Victoria Basin: Implications for Hydrologic Prediction in Ungauged Basins, Geoscience and Remote Sensing, IEEE Transactions on , vol.PP, no.99, pp.1-11, 0. doi: 10.1109/TGRS.2010.2057513

2. Demonstration and reporting in a temporal range that adds significant information for use in flood impact and hazard planning (daily or higher temporal resolution.)

The temporal resolution can be defined based on the precipitation forcing data. As discussed under 2.2.2 NASA TMPA, TRMM precipitation data is at 3hrly time step and the gauge discharge data is available at daily scale. This is the reason the CREST

simulations were compared with the daily observed discharge. This will be elaborated in the next version.

3. Some example forecasts of historically significant flooding events.

Historically significant flooding events will be added in the introduction or study area section.