

## ***Interactive comment on “An improved coupling model for water flow, sediment transport and bed evolution (CASFE v.1)” by S. He et al.***

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Received and published: 21 July 2014

Dear Editor and Reviewer

Above all, I would like to thank the reviewer very much for the great comments on this manuscript. It helps this manuscript in all aspects and pushes us forward a lot. I totally agreed with the comments by the reviewer about the velocity at the very bed and the one just above the point. We will add more explanation to point out it and prevent misunderstand occurs. This manuscript will be sent to a professional English-editing company and several experts to improve it before resubmit it. The effect of rainfall is included to give the equations more general although it is ignored in the dam-break computational case. The novel of the new model development and its impact to the previous ones will be highlighted well in the next version.

C1201

Response to General comments The title will be narrowed and the abstract will be re-written in the new submission according the reviewer's wonderful comments. The sediment transport is suspended load mixed with water column. The Figure 1 and 2 will be modified to be more schematic and the description will be given in more detail in the text. The sign for porosity will be revised according to the reviewer's suggestion. The comments in the part of Specific Comments are really great. We learn much from the comments. We will revise the whole manuscript according to great suggestion. I would like to thank the reviewer's great comments again and any more comments are very welcome.

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Interactive comment on Geosci. Model Dev. Discuss., 7, 2429, 2014.