

Interactive comment on “Exposure to Floods, Climate Change, and Poverty in Vietnam” by Mook Bangalore et al.

Anonymous Referee #1

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The paper deals with a very interesting topic. It shows the exposure on the one hand of the Vietnamese population and on the other hand of the population in HCMC to current and future flooding. Interestingly, the authors find out that at the local level especially the poor are highly exposed. The paper has a clear structure and is well written. All in all, I think that this paper has the potential to be a major contribution. Overall, I recommend a revision.

I restrict my comments to the following aspects:

1. The paper is a pure empirical paper on the exposure. As there are many studies on the exposure to risks in Vietnam, the question is really about the value added of this contribution. In my opinion a strong selling point is the consideration of socioeconomic characteristics and the focus on the poor. Therefore, a stronger theoretical foundation on the relationship between poverty and vulnerability is suggested.

Thanks for your comment, and overall review. Yes, we also agree that the value added of this contribution pertains to the focus on socioeconomic characteristics, and poverty in particular. One of the co-authors recently co-authored a report on poverty and disasters (<https://openknowledge.worldbank.org/handle/10986/25335>), so the theoretical foundation from that report can be adapted to the Vietnam context and added to the paper.

2. The authors promise that “we combine high-resolution flood hazard data with spatial data on slum location, urban expansion, and migration. . .”. In my opinion, nothing is really said on urban expansion, and migration. It would be very good to discuss development trends of HCMC – to get a much better understanding of the context conditions, and the driving forces behind the urban expansion.

We will revise this statement. We have used the PUMA dataset to look at urban expansion and expansion/location of slums over the period 2000-2012. We don't discuss migration nor do we have any information on the future development trends in HCMC. To accommodate your comment we will put the PUMA datasets a bit more in perspective and investigate literature on population growth/ urban growth in HCMC over the period 2000 – 2012 to back up the PUMA data.

3. The reader is more or less left alone with the results. The authors claim to have shown the “benefits of investing in risk and flood management today”. But, no in-depth discussion on the possible positive advantages of introducing a management system has been addressed. The central question is how such a management system should look like and how it could be implemented in HCMC or Vietnam – where institutional framework conditions are not easy.

Thanks for your comment. This is indeed a complex question, but our results can provide some insights on where geographically infrastructure to reduce flooding might take place. Generally these decisions are based upon which areas have the highest property and asset values, but do not consider where poor people live. Poor people don't own much, so this won't be reflected in asset values, but they suffer the

most. As a result, we can offer some suggestions of how to incorporate these socio-economic characteristics when planning where to invest.

At the urban scale, the issue is very different. HCMC is continuously growing, and one possible implication of the finding that slums are highly exposed to floods is to try to encourage development in safer parts of the city, linked to the city center by transport. We can identify such areas in the paper. However, the institutional challenge remains and becomes even more binding, as such a strategy would require coordination between many agencies – flood management, urban planning, and transport.