Response to Reviewer 2:

The manuscript presents numerical study of wave attenuation by mangroves in a sitein India and some field investigations to support wave modelling. The impacts of plantstem diameter, plant density and drag coefficient are discussed. The paper is wellwritten in general. The abstract reflects the contents of the paper. Figures are reasonablyclear and informative.

Thanks to the reviewer for her good words about our work, and also for the 3 major specific comments to the article. The authors appreciate the comments and constructive criticism of the reviewer, and that helped in improving the manuscript. All suggested corrections are incorporated in the revised MS.

My major concerns regarding the research presentedin this paper are:

1. Wave conditions used for modelling are very mild and do notin any way represent the conditions during which wave attenuation will be important.Even though the authors mention that wave attenuation is important during tsunamisor high energy wave events such as tropical cycles, wave conditions used in this studydo not reflect such conditions. Therefore, the significance of this study is questionable.

Thanks to the reviewer for this specific comment. It is true that this study does not show directly any attenuation during extreme weather event. As stated in the manuscript, this is only a preliminary study on wave attenuation characteristics in a vegetation zone along the Indian coast using measurement and modelling, of course, during high wave energy conditions (monsoon season) in the open ocean. The authors fully agree with the reviewer that during the short span of observations (August 2015), the wave activity was very low. Also, due to many constraints and logistics issue, the field data collection was limited to a short time window only; longer period of observations with variable wave conditions would have provided better results on the wave dissipation characteristics by mangroves. We admit that this is a limitation of the present study. A more detailed and rigorous exercise with planned field campaigns is warranted in a better perspective to understand the dissipative effects due to mangroves, and that forms the scope of future work. This sentence is now added in the 'Conclusions' section of the revised manuscript. We have already removed the statement on wave energy dissipation during extreme weather events from the manuscript.

It may be noted that both the reviewers have given the same comments. Hence, our response is more or less, the same.

2. Mangroves have a very complex root/branch system. The application of a verysimple model to represent mangroves may have serious implications on the credibilityof results. Those simple models are used in previous studies to represent plants likeseagrass where the structure of the plant is relatively simple.

We thank the reviewer for the comment. The best available numerical description of the effect of vegetation on waves is based on the representation of vegetation by vertical, ridged cylinders that was derived by Dalrymple et al. (1984). To account for wave dissipative effects due to vegetation in SWAN, the model includes wave damping over a vegetation field at variable depths using the cylinder approach suggested by Dalrymple et al. (1984) and modified by Mendez and Losada (2004) and The SWAN Team (2015). In this method, the vegetation is modeled as cylindrical obstacles causing a drag force and translated into an amount of energy that gives an energy dissipation term. The physical mechanism behind wave dissipation by vegetation is detailed in the following work (Dalrymple et al., 1984; Kobayashi et al., 1993; Mendez and Losada, 2004; Suzuki et al., 2011). Suzuki et al. (2011) further modified the SWAN model to include a vertical layer schematization for the mangrove vegetation. As model results have been extensively validated in these studies against field studies and experimental observations in the past, this model is confidently used in the present study.

3. Storm surge duringan extreme event can be very significant for determining water levels and wave propagationin mangrove forests. It is therefore, necessary to investigate high energy waveconditions with surge before concluding wave attenuation capacity of mangroves andthe ability of the numerical model to capture such phenomena.

The authors appreciate the reviewer for his constructive comment. High energetic waves and storm surges resulting from extreme weather events such as tropical cyclones are not considered in this study. The authors fully agree with the comment that during extreme events like tropical cyclones, the total water levels in the nearshore is resultedfrom a combined effect of reduced atmospheric pressure, storm surge and wave-induced setup. As stated in above reply to Query 1, this is a limitation of the present study. A more detailed and rigorous exercise with planned field campaigns is warranted in a better perspective to understand the dissipative effects of mangroves during extreme weather events, and that forms the scope of future work. This sentence is now added in the 'Conclusions' section of the revised manuscript.