

Interactive comment on “Wave energy dissipation in the mangrove vegetation off Mumbai, India” by Samiksha S. Volvaiker et al.

Anonymous Referee #2

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This manuscript presents measurements of wave heights in a mangrove coastline over a four day period in 2015. These data are then used to test model sensitivities to vegetation density, vegetation diameter and drag coefficients in predictions of wave attenuation through mangroves. The paper presents potentially useful data for future work on mangroves and further highlights model limitations and data needs. The major limitation of the paper as currently presented is that the motivation for and value of the presented results is poorly articulated.

In its present form, the manuscript does not highlight why this study was conducted and how it furthers our existing understanding of the influence of mangroves on waves and how to model this biophysical interaction. Other than to state that the results confirm prior work the manuscript does not present a compelling reason that this work ad-

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vances the field. This perception is added to by substantial direct repetition of data from Pinsky et al 2013, including a figure unmodified in any apparent way. The manuscript needs to convey how or why the inclusion of this previously published work has value above the reader going directly to the original Pinsky work.

Some suggestions for improving the effectiveness of the manuscript:

In the Abstract and Introduction, explain what is not known and how that limits the science currently. The introduction does a very good job at reviewing the literature and providing a clear summary of the state of the knowledge. The introduction lacks any explanation regarding the goal of this manuscript. Explain why a reader would want to read this paper. In the results and discussion, explain how this newly collected data may shed more light on the role of mangroves. The data does not appear inconsistent with past efforts, but it is different from other studies, can this manuscript provide any insights into why that is, and what new might be learned about mangroves and/or the modeling of mangroves?

A few specific comments:

Page 6, line 15 and 16: how was the number of plants estimated?

Page 6, line 29, please provide the formulas for Re and KC

Page 8 lines 9 - 17: This seems redundant from the introduction and out of place here.

Page 10 line 13: Given all of the data and past work, it seems like more than a hypothesis that mangroves can attenuate wave energy.

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