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Geoscientific Model Development Discussions

Interactive comment on "Development of an atmosphere–ocean coupled operational forecast model for the Maritime Continent: Part 1 – Evaluation of ocean forecasts" *by* Bijoy Thompson et al.

Anonymous Referee #3

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The manuscript presents the development of an atmosphere-ocean coupled operational forecast model for the maritime continent at 4.5 x 4.5 km horizontal resolution and the evaluation of ocean-only model hindcast and operational forecast simulations. Regional settings of MetUM and NEMO models are coupled using the OASIS3-MCT software. The manuscript first presents the details of the atmospheric and ocean models, and further discuss the coupling methodology as well as the operational forecast system settings. To assess the NEMO performance, the model hindcast and forecast simulations are compared with the observations of SST, water column temperature

and salinity, and the SSH. The manuscript is well written and the results are presented clearly. Development of a regional coupled ocean-atmosphere model is a tedious task and it requires all kind of expertise manpower and support from funding agencies. This manuscript represents a substantial contribution to the modelling studies focusing on the Maritime Continent regions and it is within the scope of the journal GMD. On the scientific merit, this work is an excellent peace of quality research and I recommend to publish it in GMD with a few minor corrections. My specific comments are given below.

1. Figure 1: Improve readability/increase font size of figure 1 labels. 2. L 190: mention the mslp data source 3. L192: Any reason for "69-month" ocean hindcast run? 4. Fig 3: Provide sub-region abbreviations inside the figure hence the readability can be improved. 5. Table 3: It will be appropriate to provide the tide-gauge locations in the figure 3. 6. Figure 9a. Looks a typo in figure 9a M1 location. 7. L521: please provide a brief outlook on the analysis which will be included in the MCAao . 8. L587: Update the reference, if available.

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