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Interactive comment on "Research priorities in support of ocean monitoring and forecasting at the Met Office" *by* J. R. Siddorn et al.

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General comments:

"Research priorities in support of ocean monitoring and forecasting at the Met Office" by Siddorn et al. describes the current status and research priorities in near future on ocean monitoring and forecasting in the Met Office. In many research topics, the activities and plans represent the state-of-the-art and are therefore inspiring to the operational oceanography community, which is worth of a publication.

The structure of paper is well formed and written in fluent English. There are a few places which can be improved, e.g., make some long sentences shorter, and the description more precise (see Specific Comments below).

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Specific comments: P2618: L18, "licensing" to be more specific, is this "licensing for marine operations"? P2619: L8, "More recently" can be more specific, e.g., "Since 19xxs" P2620: L23-24, WWIII has a two-way nesting facility, is this used in the nested setup? P2621: L8-L13, regarding to the strength of using SMC grid, it would be good to mention the scientific performance of the SMC grid and nested grid: does SMC grid improve the forecast than the nested grid? And how computationally efficient the SMC grid is? L26-27, it can be helpful to mention what type of tide-surge models is currently used, is it a 2D ore 3D model? P2622: L4: a reference on CS3X could be useful L20: "Data assimilation" in OSTIA: normally the word "data assimilation" is used when the data is assimilated into a dynamic model. In case of OSTIA, I guess it is a statistic model that combines different types of SSTs through optimal interpolation. L23: "each SST" should be "SST at each grid". P2623: L6, do you mean "reanalysis" or "reprocessed time series"? When one use reanalysis, it normally means that a dynamic model is used with assimilation. L17, "GMPE" – full name is needed P2624: L28, "a implementations" should be "implementations". P2627: L21-22, HF radar has been widely used in surface currents but not sea level measurements. If the statement is true, please give a reference. P2628: L18, "skill" vs "a high skill"? P2629: L4, "latency in the ocean system" can be more precise as "latency in the ocean forecasting system"; regarding to the reason why atmosphere-ocean coupled system has not been developed for improve NWP, meteorologists have different explanation: in the time scale of the synoptic events in mid- and high- latitude, the events are mainly driven by Available Potential Energy in the atmosphere, hence the impacts from the ocean are negligible. L15-16, not easy to understand, either give an example or express the idea more explicitly L21, "most significant" vs "most significant issues"? L23, "the impact errors" vs "errors related to the impact"? L24, "errors" vs "the errors" P2630: L3, "below" vs "through" L7, "tracability" vs "traceability" ? P2631: L3, "mature" vs "mature." L23, "Shelf seas environments" vs "Shelf sea environments" P2632: L7, "Shelf seas environments" vs "Shelf sea environments" L15-16, "formulations derived in regimes far removed from those being modelled" – difficult to understand, to be rewritten. P2633:

L13-14, "missing key processes" vs "missing some key processes". P2635, L4, "may well be improved" vs "may well be improved through the coupling"? L23, "Bidlot, 2009)," vs "Bidlot, 2009)." L25, "a users preference" vs "a user's preference" P2636, L6-7, "applying wind stress to the surge model via the waves", can this be explained more explicitly? P2637, some acronyms mentioned without giving the full name, e.g., WWRP, SMRCP-TT, WGNE. P2642, L6, "provide useful information" vs "provide useful estimation" (which is more precise)

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