[redacted]

Question 1 Answer: under the section 2.1.2, the last paragraph on potential risks I think it should mention increased ocean acidification and ocean temperatures. These will increasingly stress natural environments. Related to this will be the need for ongoing monitoring of oceanic variables (ongoing funding of the IMOS reference stations will be extremely important here).

Question 2 Answer: under climate change, I think the issues will extend beyond the coast into the marine environment, as per my previous comment, coastal systems are also vulnerable to changes in ocean pH and water temperature changes.

Question 3 Answer: regarding the point about not duplicating the efforts of others, information emerging points to impacts of climate change at the coast may lead to localized impacts. The need to monitor coastal change is extremely important particularly in potential hot spot regions (e.g. where changes in weather leads to changes in wind and wave driven currents and hence erosional patterns

Question 4 Answer: I would stress that increased greenhouse gases lead not just to sea level rise, changes to weather patterns, increased temperatures and acidification. Understanding the impacts of these changes together with other anthropogenic pressures will require ongoing coastal monitoring, both of the physical changes at the coast, hydrodynamic components (waves and sea level) and monitoring of ocean chemistry and the ecological response of these changes

Question 5 Answer: YES

Submission to the draft coastal plans of the Western, Central and Gippsland Coastal Boards.

[redacted]

As a researcher actively publishing research on climate change and coastal impacts, I would like to offer the following comments on the Draft Coastal Plans of the Western, Central and Gippsland Coastal Boards.

Shoreline change as a result of rising sea levels and changing weather patterns is a major challenge for Victorian coastlines. This is supported by recently published CSIRO research that highlights parts of the Victorian coastline to be potentially subject to seasonal changes in both wind and wave driven currents with subsequent impacts on shorelines. To improve understanding and prediction of shoreline change, nearshore and shoreline monitoring will need to be substantially increased and sustained into the future. This includes measurements of coastline position, nearshore waves (possibly via a network of wave-enabled HF radar), sea levels, currents and changing bathymetry.

I also wish to note that there are a number of coastal zone drivers associated with increasing anthropogenic emissions of greenhouse gases that are not explicitly acknowledged in the draft plans. While sea level rise and extreme sea level events (waves and storm surges) and their link to coastal erosion and inundation is acknowledged, increasing ocean temperatures and acidification may have significant impacts on coastal marine ecosystem composition with ramifications for long term coastal management. Changes in these variables and their impacts on marine ecosystems will also need sustained monitoring in the future.