

**Submission
No 194**

INQUIRY INTO CLIMATE RESILIENCE

Organisation: Victorian Marine and Coastal Council

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Legislative Council Environment and Planning Committee
Parliament House
Spring Street
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Dear Mr Ryan Batchelor,

The Victorian Marine and Coastal Council (VMaCC) is appointed under the *Marine and Coastal Act 2018* (Vic) (the Act) with a role to advise Ministers regarding marine and coastal planning and management.

Our vision is a healthy marine and coastal environment, now and in the future. The Council's purpose is to provide evidence and stakeholder-informed advice to enable leadership in the adaptive planning and management of Victoria's marine waters and coastal areas.

The work we undertake is relevant to Victoria's coastal and marine built environment and infrastructure. From this work there are three insights we consider essential to provide to the Committee.

1. The Victorian Marine and Coastal Policy

The Victorian Marine and Coastal Policy (the Policy) is a fundamental enabler for climate resilient planning of our current (and future) built environment and infrastructure. Planning for coastal and marine adaptation is a direct focus of the Policy. It is relevant, contemporary and is known nationally as one of the most forward thinking marine and coastal policies.

There are two crucial elements of this Policy that are worth your committee's attention. First is the importance of consistent and rationale planning tools. The sea level planning benchmark is an essential tool for setting a minimum adaptation response within the strategic and statutory planning context. VMaCC consistently hears from stakeholders that it is crucial for this benchmark to be based on the most up to date sea level projections. Further, this is a foundational piece of the Victorian planning framework that has guided decisions since its first inclusion in the Victorian Coastal Policy in 2008. The appropriate implementation of this benchmark will continue to be important to avoid unnecessary impacts to new built environment and infrastructure.

Second, the Marine and Coastal Policy embeds the objectives and guiding principles of the Act within a *Planning and Decision Pathway* for decision-making. Within Chapter 6 - Managing coastal hazard risk, a *Pathway approach* and recommended order of adaptation actions provides more specific adaptation guidance. These frameworks are essential to promote coastal resilience for built environment and infrastructure. We draw your attention to these practical and relevant planning tools as part of best practice safeguards for Victoria's built environment and infrastructure. They will likely become more important in coming years as climate impacts are experienced by communities on Victoria's coasts.

2. Economic Impacts from Sea Level Rise and Storm Surge in Victoria, Australia over the 21st Century

In 2023, VMaCC released an important input to the public debate regarding managing climate impacts on our coasts. The *Economic Impacts from Sea Level Rise and Storm Surge in Victoria, Australia over the 21st Century* report (the Kompas report) was prepared by a group of expert environmental economists from the University of

Melbourne, the Australian National University, and the University of Tasmania together with Sydney environmental consultants Climate Risk Pty Ltd. The report was commissioned by the Victorian Marine & Coastal Council and Life Saving Victoria, and supported by the Department of Energy, Environment and Climate Action.

There are two versions of the report. First, there is a full technical report is available: [Full report - Economic Impacts from Sea Level Rise and Storm Surge in Victoria, Australia over the 21st century by Kompas, T. et al \(PDF, 1.4 MB\)](#). Second, a [General Summary is available](#) which includes a summary of key findings from the technical report and three recommendations in response from the Victorian Marine & Coastal Council and Life Saving Victoria (see 3rd point in submission below). At the time of release VMaCC provided a [media release](#) with some highlighted information that may also be of interest to the Committee.

Of specific relevance to the scope of this Committee's work is that the Kompas Report covers the economic impacts for 132 local coastal areas (subregions) and 88 different land use classes from now until 2100; the majority of which are built environment and infrastructure.

While we recommend that the Committee consider the full contents of the Kompas report, we have highlighted below a few crucial findings to note regarding impacts to Victoria's built environment and infrastructure:

- a) The losses in discounted present value dollars of residential and commercial assets, reserves and conservation areas, infrastructure, parks, industrial and agricultural assets due to sea level rise and storm surge were estimated to be more than \$337 billion in 2100. This is equivalent to an annual impact of 2.67% of State Gross Product by 2100 if left unmitigated. This is an unsustainable annual impact on the Victorian economy.
- b) The University of Melbourne research shows that by 2100, almost every community along Victoria's coastline will be affected. The residential and commercial areas with the most significant economic impact will be high density areas including Docklands, Port Melbourne and the Bay suburbs.
- c) The report also includes modelling by Climate Risk Pty Ltd focussing on the built environment. It suggests that by 2100, 151,000 Victorian properties (residential, commercial, and key infrastructure) could be at high risk of damage from sea level rise and storm surge. For example, by 2040, more than 16,000 properties in Southbank will be at high risk of damage. And by 2100 this will rise to over 31,000 properties. Docklands will have more than 3,000 properties at risk by 2040 rising to over 37,000 by 2100.
- d) The costs of damage in 2070 are four times larger than 2040, and in 2100 nearly 10 times larger than in 2040 thus providing an economic case for early investment in adaptation of our Victorian coastal built environment and infrastructure.
- e) Further, these costs will be spread unevenly across the state. Section 5 of the General Summary report, including Table 5 and Figure 3, provides further information on these uneven impacts across the State.

3. Recommendations in response to the Kompas Report

Finally, VMaCC and LSV provided three recommendations for consideration in the General Summary of the Kompas Report. We note that some of these overlap in spirit and intent with recent Infrastructure Victoria publications ([Victoria's infrastructure strategy 2021-2051](#), [climate change key recommendations](#) and [Weathering the storm: Adapting Victoria's infrastructure to climate change](#)). [Weathering the storm](#) specifically notes that Victoria invests little in adapting infrastructure (page 19) and that good adaptation does not have to be expensive (page 22).

For completeness we provide the recommendations from VMaCC and LSV in full to the Committee for consideration. They can be found in the General Summary of the Kompas Report.

In considering a response to the Kompas report, the Victorian Marine and Coastal Council (VMaCC) and Life Saving Victoria (LSV) support its general recommendations and propose some important next steps. The additional recommendations recognised:

- the actions commenced by the Victorian Government to respond to sea level rise and storm surge (including inundation) through, for example, funding to implement Victoria's Marine and Coastal Strategy 2022, and the ongoing development of sector-based climate change adaptation action plans,
- that extensive infrastructure (roads, water treatment plants, ports) supporting the economic viability of Greater Melbourne, Greater Geelong, Portland and the Gippsland Lakes region is located on the coast,
- the majority of Victoria's most expensive real estate (per hectare) is on the coast; and that
- the Victorian coast is the preferred tourism destination for most Victorians and visitors.

While the newly released Marine and Coastal Strategy 2022 has received important initial funding, VMaCC and LSV note that a realistic and appropriate level of ongoing funding needs to be provided to implement the actions proposed in the Strategy. We also note that future strategies can use the funding outcomes of the taskforce proposed in Recommendation 1 as an input.

Recommendation 1.

An independent taskforce or commission with investigative and determinative powers be established to develop and promote a vision for, and operational blueprint to guide, Victoria's response to the economy-wide consequences of rising sea levels and related storm surge.

VMaCC and LSV have given thought to the potential scope of such a taskforce, and how it could complement the actions of Victoria's Marine and Coastal Strategy (2022) (Strategy). We offer the following reflections but understand that it is for government to define the scope and operations of such a taskforce. We have highlighted areas of alignment with the actions outlined in the Strategy.

The purpose of an independent taskforce would be to produce a multi-decadal blueprint for Victoria's response to sea level rise and storm surge that considers the potentially conflicting needs of stakeholders and rights-holders. This blueprint could do the following:

- Review the current planning approaches and instruments used by government agencies (national, state and local) and by non-government entities with a view to the integration and coordination of responses to sea level rise and storm surge, including a focus on economic efficiencies (complements Strategy Actions 4 and 6).*
- Seek world's best practice for adaptation to rising sea levels and storm surge with a view to the improvement and implementation of these practices in Victoria (complements Strategy Action 3). This would include interventions consistent with the adaptation hierarchy outlined in Victoria's Marine and Coastal Policy.*
- Identify and disseminate information on the adaptation measures required to address the potential loss of cultural values and heritage, public spaces (including parks and reserves), public infrastructure (including roads, provision of potable water, and management of sewage and stormwater), emergency services (including lifesaving clubs) and recreational services (including yacht clubs, boat ramps, moorings, and berths), and marine and coastal species and habitats (complements Strategy Actions 1 and 3).*
- Identify and disseminate innovative, adaptive and resilient coastal design for buildings and private infrastructure (complements Strategy Actions 3 and 4).*
- Support the establishment of a process to be determined and driven by Traditional Owners, which allows them to address the loss of cultural values and Country within Victoria's marine and coastal environment, and to develop ways to adapt (complements Strategy Action 1).*
- Assess the effect that sea level rise and storm surge will have on coastal stakeholders (building on the Kompas report and the initial outcomes of the Victorian Government Department of Energy, Environment and Climate Action's project on coastal hazard risk management and adaptation titled Victoria's Resilient Coast – Adapting for 2100+), informed by studies on the environmental, tourism, commercial, recreational, social and cultural value of all these places to humans and wildlife (complements Strategy Actions 3 and 4).*
- Create a framework for the investment fund proposed in Recommendation 2 for the replacement of public land and amenity lost to rising sea level and storm surge.*

It is recommended that:

- *Members of the taskforce should include eminent Victorians and independent experts.*
- *The taskforce should operate with appropriate administrative support for a short, targeted period (for example, 18 to 24 months).*

Recommendation 2.

A Victorian Coastal Adaptation Future Investment Fund be established to enable investment in future adaptation actions to sea level rise, storm surge and associated impacts on coastal environments and processes.

VMaCC and LSV recognise that a key action (Action 6) of Victoria's Marine and Coastal Strategy 2022 is to assess the financing of coastal adaptation programs. The outcomes of that project (and taskforce findings) should be used as an input to shaping the fund.


VMaCC and LSV have given thought to the fund and understand that it is for government to define its scope and operations. Modelled on the Australian Futures Fund, or similar investment driven vehicles, the fund would require early investment of a substantial amount of capital, building up to a large base by 2030. While noting that the final quantum is a decision for government, the size of the initial investments should consider the projected cost detailed in this report of the impact without adequate adaptation, as detailed in the Kompas Report.

Recommendation 3.

Raise community awareness of the implications of sea level rise and storm surge associated with climate change and normalise the community's understanding of the need for ongoing adaptation. To support this recommendation, it is recommended that the findings of the Kompas Report be broadly communicated.

We would be pleased to assist the Committee's deliberations in any way. Our Chair, Dr Anthony Boxshall is available to appear before the Committee in support of this submission if requested.

Yours sincerely,



Anthony Boxshall PhD, GAICD, BSc
Chair – Victorian Marine and Coastal Council