



Coasts and Climate Change Council Report to Minister Combet

Executive Summary

Many coastal assets – critical infrastructure, beaches and public open spaces, public facilities, homes and commercial interests - are at risk from rising sea levels and other impacts of climate change. The value and distribution of assets at risk reveals the national scale of coastal adaptation.

Effective coastal adaptation will require innovation, reform and structural adjustment. Australia's policies, institutions and investors are not well positioned to manage the scale of risk that climate change will bring to Australia's coast. There is an urgent need now for improved cooperation and collaboration between all levels of government, with leadership from the Australian Government, to drive risk assessment, improved land use planning and design standards and to enhance decision-making capacity in coastal regions.

Continuing to engage stakeholders across both private and public sectors will be critical to the development of partnerships which can deliver demonstrable progress in reducing the climate change risks to our economy, social values and ecosystems.

Early action can help reduce the severity of long term adverse impacts in many areas. This is because the use of strategic risk-based land use planning and well designed legal and regulation reform can ensure that exposure to risk does not unnecessarily increase with further development, and reduce financial and adjustment costs to future generations.

The Coasts and Climate Change Council can assist in communicating risk and impacts to private and public sectors and communities, and continue to provide independent advice to the Minister on effective approaches to coastal adaptation.

Council recommends that the Australian Government:

As a matter of urgency define and progress a 10 year national agenda to ensure that Australia is positioned to address the significant near, medium and long term risks facing the well being of our coastal regions from the impacts of climate change.

Take a leadership role in driving the science and information base for decision-support tools; developing national standards for risk assessment; tackling legal reform to enhance national consistency and to reduce liability risks; and in the provision of technical support for local governments who are at the cutting edge of impacts on communities, property owners and businesses.

Recognise the need to improve collaboration and delivery of outcomes across a range of federal, state and local government agencies and in so doing align adaptation to climate change in coastal regions with national micro-economic reform, social equity, regional development and population sustainability agendas.

The Australian Government continue the appointment of the Coasts and Climate Change Council for at least 12 months to assist in communicating the issues facing Australia from the impacts of climate change on the coast, engaging with a wide range of stakeholders and community groups on their issues and needs, and providing advice the Minister for Climate Change and Energy Efficiency on ways to improve coastal adaptation to climate change.

1. Need for action

Australia is a coastal society; 85% of the population live near the coast and the fastest growing regions are located along the coast outside the major cities. Much of our settlements, infrastructure and natural environments have developed during the recent long period of stable sea levels. Climate change is and will continue to take us beyond this “comfort zone”. There are already signals of future risk in the way current high tide events flood roads and houses, and in the erosion of beaches and flow-on impacts to residential properties.

The Australian Government’s assessment of climate change risks to Australia’s coast for the first time provided a nation-wide indication of the extent of risk, with up to \$63 billion of existing residential buildings alone at risk from inundation by 2100. Further work is needed to identify risks to essential services and infrastructure and the commercial sector however, clearly there is a large legacy risk in the coastal zone. Eventually, the impacts on the coast could lead to abandonment of houses, resettlement of towns or the construction of major protection works for threatened cities and public facilities such as airports. Already, the insurance industry is increasing premiums by a factor of three in some areas while providing no coverage for erosion or marine flooding.

The Government’s assessment report also identified a number of barriers to effective coastal adaptation including that current planning and design specifications are based on historical climate, that the future risks from climate change are often beyond decision-making horizons, and that some parts of the regulatory system do not adequately discourage development in ‘at-risk’ areas.

The House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts, report *Managing Our Coastal Zone in a Changing Climate – the time to act is now* called for wide ranging action and reforms to address the potential impacts to the economy, social values and environmental assets. The Council strongly supports the elements of a reform agenda to address risks outlined in the parliamentary report. As pointed out by the Committee there are significant differences in approaches across states, and there is a call for leadership from the federal government to provide a more consistent and longer term coordinated approach to problems faced by governments, utilities, businesses, communities and individual property owners.

Climate change risks to Australia’s coastal areas are one of the biggest issues Australia’s coastal society is facing over the long term. There is an acceptance amongst coastal decision makers of the underpinning evidence for climate change. There is however considerable confusion about what to do and when. Uncertainty in parts of the science and its often poor coverage in the media, inconsistent policy settings, a lack of a historical analogue, and little guidance on cost-effective future options underpin this confusion. Significant government investment and leadership to better understand the risks, and start building resilience and capability to facilitate a calm and rational transition will be critical.

2. Engaging communities and professions

There is a growing level of media coverage of climate change impacts on the coast, reflecting widening pockets of community concern and local government calls for leadership and support.

The Coasts and Climate Change Council helped shape the Australian Government's national climate change forum in Adelaide in February 2010. The Council has also consulted with professional bodies (engineers, surveyors, bankers, insurance, emergency workers, planners) over the course of the year. The priority issues that have emerged from the forum and consultation with professional groups are the need to: engage early and improve communication; invest in quality information and tools; clarify legal liability; and develop a national approach to planning for climate risks.

- **Coastal communities are seeking accessible and consistent information and messaging.** Coastal communities are starting to engage with future climate change risks however, there is often a lack of relevant information and engagement processes that is necessary to educate communities about risk and implications. A well informed community base will be essential to guide discussions of adaptation options beyond simply protection of coastal areas. Innovative communication approaches that recognise diverse information needs are needed to bridge the gap between the science and the general public. Consistent messages, plain language, and technologies that involve communities in shaping adaptation responses are important aspects of building consensus for tough decisions ahead.
- **Decision-makers are calling for high quality, regionally targeted and consistently created data and engagement.** Access to the best possible information on projected impacts is needed. Key industries (insurance and banking) recognise the value of investing in high quality information to bring more certainty to assessing the vulnerability of natural and built assets. Higher resolution digital elevation models coupled with hydrodynamic and geomorphic modelling will improve decision making at local and regional scales. Industry supported early community engagement to build consensus for the large societal change needed. Visual communication of projected risk (maps, images) was seen as a powerful way to engage communities.
- **Local governments and property owners need issues of legal liability clarified.** Coastal land is transient with storm events and the sea building up and wearing down beaches and coastal environments. These conditions will be exacerbated under rising sea levels and increased storm intensity/frequency. Legal frameworks around property title in Australia are less flexible than common law legal systems in the UK or USA. At present it is unclear how our different state systems can cope with the legal challenges that are starting to emerge to dispute planning decisions and will increase in response to property loss from inundation or if they are unable to protect against erosion. As a matter of urgency legal issues, particularly relating to land title status will need to be clarified. The alternative is to allow the judicial system to determine coastal policy through individual case law.
- **Local governments and professions need greater policy and regulatory consistency.** Managing climate change impacts is very much a live issue for local governments in coastal regions and councils are responding in different ways. There has been a strong call for national leadership to drive reform that improves policy consistency, particularly around planning frameworks. Nationally consistent frameworks or benchmarks combined with regionally focussed responses to adaptation can start to drive robust planning responses.

Litigation could be reduced if national standards supported by consistent state legislation were applied.

An agenda for coastal adaptation

There are significant differences in approaches to planning for coastal climate change risks across local government and state jurisdictions. There has been a strong call for leadership from the federal government to provide a more consistent and longer term coordinated reform agenda. The scale of the risk into the future is such that governments are increasingly recognising this will become an issue of structural adjustment and will be beyond the capacity of any one jurisdiction to address. Significant and early government planning and investment can reduce future liability and costs.

A 10 year national agenda for coastal adaptation

As a matter of urgency, Council recommends the Australian Government define a 10 year national agenda, spanning governments, community and commercial interests, to address the significant immediate and long term risks facing Australia's coastal regions from the impacts of climate change. The 10 year agenda needs to align with regional development and population sustainability agendas to reduce the potential for perverse outcomes or maladaptation actions. Key elements of the agenda need to span:

- National regulatory reform – one of the most immediate ways to meet the challenges of climate change and sea level rise is through strategic land use planning. A nationally agreed set of planning standards that form a hierarchy of risk to define possible land uses in areas affected by inundation, storm surge invasion, shoreline erosion, or other effects, over the next 50 to 100 years will be critical. Other countries such as the Netherlands are adopting this approach and developing ways to better communicate risks to stakeholders.
- Public-private partnerships – coastal adaptation will not be effective unless all relevant decision-makers are working together to enable a future with risks understood and managed. Partnerships within regions and between sectors (private and public) will be essential to reduce the current confusion in how to act. Partnerships can pilot approaches and explore practical, innovative adaptation responses for coastal regions. Bringing together property interests, insurance, scientists, water and energy authorities, and councils can assist state and federal agencies to understand the range of issues and areas of reform that need to be addressed.
- Information and tools to address uncertainty – robust decision-support tools; analysis of regional vulnerability and improved understanding of the science of global warming as it relates to changes in regional vulnerability are needed to underpin national standards for risk assessment to address legal reform and to communicate risk to stakeholders.
- Build capacity of decision makers There is a need to develop the capacity of decision makers who have a responsibility to plan and manage coastal natural and built assets now and into the future. The House of Representatives Committee noted the appeal from local authorities in particular for information and tools. The view was strongly felt by the Council that federal leadership could best be applied in ways which offer nationally consistent support.

A continuing role for an advisory council

Council recommends that the Australian Government continue the appointment of the Coasts and Climate Change Council for at least 12 months to assist in the communication of the issues facing Australia from the impacts of climate change on the coast through engaging as wide a range of stakeholders and community groups as possible, and from these engagements advise the Minister for Climate Change and Energy Efficiency on ways to improve adaptation to those impacts.

The Coasts and Climate Change Council was appointed by Minister Wong in November 2009 through to December 2010 to provide early advice on how best to prepare coastal communities for the challenges of a changing climate. The Council has responded enthusiastically to this task and in its brief term has helped raise the profile of new climate challenges and engaged with key groups on a forward national agenda. Council activities collectively include public addresses and lectures, workshops with technical experts, media interviews (television, radio), parliamentary briefing, international presentations and attendance at Council meetings.

There is currently an absence of any single and permanent forum or council which brings together the diverse economic, social and environmental issues facing coastal Australia. While local governments have a huge stake in managing coastal assets, there are broader regional problems requiring inputs from a range of stakeholders including different state and federal agencies as diverse as those responsible for national security, planning and infrastructure, land and environment management, human health, primary industry, economic development and social services.

The scale of threats facing these agencies and the risks faced by communities and private investments by climate change, including sea level rise, are potentially so huge as to require a high level of national coordination and collaboration.