

Introduction

The Australian coastline represents one of our most iconic treasures.¹

There is currently no collective long-term vision for our coast.²

- 1.1 Australia's coastal zone is a significant national environmental asset that is also fundamentally important to our lifestyle and economy.³ The majority of Australians – some 80 per cent of the population – live in the coastal zone.⁴
 - 1.2 However, as evidence presented to the inquiry demonstrates, the coastal zone is facing major pressures.
 - 1.3 Firstly, many thousands of kilometres of the Australian coastline have been identified as at risk from the threat of rising sea levels and extreme weather events due to the impacts of climate change. The concentration of Australia's population and infrastructure along the coast makes our nation particularly vulnerable to the coastal erosion and inundation that will accompany increases in sea level.
 - 1.4 Secondly, the growth in population along the Australian coastline and resulting intensification of land use is increasing pressure on the environment in many areas.
 - 1.5 Finally, governance arrangements for the Australian coastal zone have tended to be complex and highly fragmented across jurisdictions, sectors (environment, resource management, urban planning) and agencies.
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1 Professor Woodroffe, *Submission 24*, p. 8.

2 Professor Tomlinson and Mr Lazarow, *Submission 58*, p. 4.

3 The terms 'coastal zone' and 'coast' are used interchangeably in this report and refer to the catchment-coast-marine continuum, unless otherwise specified. (The 'coastal zone' can be variously defined according to linear boundaries such as the mean high water mark, local government administrative boundaries or biophysical features.)

4 Department of Climate Change, *Submission 85*, p. 3.

- 1.6 With responsibility for management of coastal areas shared between all levels of government, it has been widely argued that there is a need for national leadership to promote sustainable use of Australia's coastal zone and address growing concerns about climate change impacts on the coast.
- 1.7 As Professor Bruce Thom, a coastal geomorphologist and leading researcher in Australian coastal management, observed in his submission to the inquiry:

we have reached a stage when Commonwealth leadership in CZM [coastal zone management] is vital. Coastal problems are national, not just state or local. They do have, of course, state, regional and local manifestations. However, the implications of climate change, population growth and demographic change, and infrastructure needs do require, in my view, national direction and technical and financial support ... sustainable solutions for many of these problems risk being limited in time and location unless the Commonwealth can offer leadership in the form of consistent guidance and support to achieve sustainable outcomes of benefit to local economies, environments and social interests.

State, regional NRM [natural resource management] entities, and especially local councils, do not have the resources to provide continuity of policy thinking, of technical and information back-up, and of funding to meet the challenges of population growth, infrastructure needs and how best their communities can adapt to climate change, especially the insidious effects of rising sea levels.⁵

- 1.8 In their evidence to the inquiry, most state and territory governments called on the Australian Government to provide national leadership in coastal zone management through a cooperative approach. This view was summed up by the following submissions from the states and the Northern Territory:

National governance frameworks are essential to implementing a cross jurisdictional and national approach to coastal management and particularly, climate change ... there is a need for stronger national leadership on coastal management, particularly if the challenge of climate change is to be addressed effectively.⁶

The Federal Government has a key role in facilitating partnerships and showing leadership on issues of national importance.⁷

5 Professor Thom, *Submission 6*, pp. 1-2.

6 Northern Territory Government, *Submission 106*, p. 26.

7 Victorian Government, *Submission 90*, p. 9.

Nationally consistent guidelines on how councils can adequately respond to climate change risks, such as potential sea-level rise would provide guidance for private sector investors and coastal communities.⁸

our submission ... calls for national leadership through an arrangement that respects and enhances individual jurisdictional roles and responsibilities empowered and guided by a cooperatively designed strategic framework for policy and action.⁹

There are ... a number of key challenges and information gaps that need to be addressed to meet the growing challenge of dealing with climate change impacts in the coastal zone ... further assistance and/or policy guidance would be beneficial at the national level.¹⁰

- 1.9 The Committee welcomes the cooperation of state and territory governments and support from local government for a national cooperative approach to integrated coastal zone management, driven by national leadership. The Committee agrees that this is an issue of national importance and that the time to act is now.

Key coastal issues

Climate change impacts

- 1.10 The Department of Climate Change notes that climate change impacts on the coastal zone 'will affect a majority of Australians and associated infrastructure because 80% of the Australian population lives in the coastal zone, and approximately 711,000 addresses are within 3km of the coast and less than 6m above sea level'.¹¹
- 1.11 The Intergovernmental Panel on Climate Change (IPCC) estimates that a global rise in sea level of some 80cm is possible by 2100.¹² However, current models may have underestimated the rate of future sea level rise due to polar ice melt, and there will also be significant regional variations

8 NSW Government, *Submission 55*, p. 5.

9 Western Australian Department of Planning and Infrastructure, *Submission 89*, p. 1.

10 Queensland Government, *Submission 91*, p. 5.

11 Department of Climate Change, *Submission 85*, p. 3.

12 See further discussion on IPCC sea level rise projections in Chapter 2.

to sea level rise.¹³ Emerging research on extreme sea level events as a result of climate change (eg storm surge, wave changes, changes to rainfall and runoff) is another factor to be taken into account.

- 1.12 Past greenhouse gas emissions will lead to ongoing climate change and sea level rise over the 21st century, regardless of current and future mitigation action. Effective reduction in greenhouse gas emissions is essential to minimising future impacts and limiting temperature increases but adaptation measures must also be implemented to ensure that the unavoidable impacts of climate change are addressed.
- 1.13 On 20 December 2007, the Council of Australian Governments (COAG), under the leadership of the Prime Minister, the Hon Kevin Rudd MP, identified key areas for its 2008 work agenda, including 'climate change and water'.¹⁴ One of the identified objectives of the COAG Working Group on Climate Change and Water is to ensure 'a national cooperative approach to long-term adaptation to climate change', including 'accelerating implementation of actions' under the National Climate Change Adaptation Framework across all jurisdictions.¹⁵
- 1.14 COAG endorsed the National Climate Change Adaptation Framework in April 2007 as the basis for collaboration between governments to respond to climate change impacts. The framework sets out actions to assist the most vulnerable sectors and regions to adapt to the impacts of climate change. The coastal zone is identified as one of eight key vulnerable sectors and regions:

The coastal zone is vulnerable to sea level rise, increased sea surface temperature, increased storm intensity and frequency, ocean acidification and changes to rainfall, run-off, wave size and direction and ocean currents ...

The combined influence of sea level rise, storm surge and storm events (including cyclones) may pose severe localised threats and result in damage from shoreline erosion, salt water inundation, flooding, and high velocity winds. Increasing sea surface

13 See Professor Steffen, *Submission 45*; and Antarctic Climate and Ecosystems Cooperative Research Centre, *Submission 46*.

14 COAG meeting outcomes, 20 December 2007, COAG website accessed on 17 July 2009 <http://www.coag.gov.au/coag_meeting_outcomes/2007-12-20/index.cfm>

15 COAG meeting outcomes, 20 December 2007, COAG website accessed on 17 July 2009 <http://www.coag.gov.au/coag_meeting_outcomes/2007-12-20/index.cfm>

temperatures can lead to the spread of marine pests, changes in fish stocks and bleaching of coral reefs.¹⁶

- 1.15 Federal, state and local government policies and programs addressing climate change risk analysis, adaptation strategies and practices to promote resilience in coastal communities are gradually being developed and implemented. In this regard, climate change risk analysis and adaptation strategies for the coastal zone are still at a relatively early stage of development across the various jurisdictions. As Manly Council commented:

Climate Change is a global issue that requires governments to move beyond traditional approaches and boundaries of governance and environmental response. At present, governance and institutional arrangements concerning climate change and the coastal zone are significantly disjointed, lack leadership and accountability.¹⁷

- 1.16 This again reinforces the value of this inquiry and the need for urgent action in this area. Early planning for the impacts of climate change and appropriate adaptation strategies that reduce the vulnerability of natural ecosystems and infrastructure to these impacts are likely to bring considerable cost advantages.
- 1.17 Climate change impacts and adaptation strategies relating to the coastal zone are discussed in Chapters 2-4.

Environmental impacts

- 1.18 The latest national State of the Environment report (2006), in its 'coasts and oceans' section, noted that Australia's coasts:

are at risk of serious degradation because of the pressures on them, including fishing, population growth and urbanisation, pollution, mining, tourism, species invasion from ballast waters, and climate change. There is also an alarming lack of knowledge because there is no systematic national monitoring of many important aspects of Australia's coastal and ocean systems.¹⁸

16 COAG, National Climate Change Adaptation Framework, COAG website accessed on 17 July 2009 <http://www.coag.gov.au/coag_meeting_outcomes/2007-04-13/docs/national_climate_change_adaption_framework.pdf>

17 Manly Council, *Submission 72*, p. 11.

18 Australian State of the Environment Committee, *Australia: State of the Environment 2006*, Independent Report to the Commonwealth Minister for the Environment and Heritage, Commonwealth of Australia, 2006.

- 1.19 The Northern Territory Government pointed to the need to improve institutional arrangements for environmental management of the coastal zone established across various jurisdictions:

Current institutional and national cooperative frameworks for the environment – particularly on water quality, protected species, migratory wildlife, fisheries and habitat management – need to be reviewed to ensure a national, coordinated and cost effective approach to coastal management.¹⁹

- 1.20 Over six million people live in coastal areas outside the capital cities, with the rate of population growth in these areas being consistently higher than the national average:

Analysis of the latest population data from the Australian Bureau of Statistics shows that at the end of June 2007 there were 6.26 million people living in Australia's non-metro coastal areas, an increase of 1.27 million people since June 1997. This increase is equivalent to approx 6% of Australia's total population ...

Average annual growth in Australia's non-metro coastal areas is approximately 2%, which tends to be 50% or 60% above the national average.²⁰

- 1.21 This population growth is creating significant environmental pressures. The impact of the non-resident population is a further issue – for example, during the holiday season the number of temporary residents in some coastal areas can often exceed the number of permanent residents. Rapid population growth in coastal areas also has significant social and economic implications that need to be managed through a broader focus on ecological sustainable development and sustainable coastal communities.
- 1.22 Environmental impacts on the coastal zone and sustainable coastal communities are discussed in Chapter 5.

Governance arrangements

- 1.23 Many coastal stakeholders who contributed to the inquiry pointed to the 'fragmentation, overlaps, complexity and lack of coordination in coastal policy and management' in Australia.²¹ As Professor Woodroffe, a lead

19 NT Government, Submission 106, pp. 26-27.

20 National Sea Change Taskforce (NSCT), *Submission 79*, pp. 7-8.

21 NSCT, *Submission 79*, p. 30.

author of the coastal systems chapter of the IPCC Fourth Assessment Report, summed up the problem:

Decision making is particularly fragmented in relation to the coastal zone, and national coordination is needed, with wider availability of coastal data ... Although there are an increasing number of policies and programs related to coastal zone management at state and federal level in Australia, these are fragmented, and have evolved in a piecemeal way.²²

1.24 The lead federal agency responsible for the 'development and implementation of Australian Government initiatives to protect and conserve Australia's coasts and ocean', the Department of the Environment, Water, Heritage and the Arts, commented that this 'critical area needs greater coordination between agencies and across jurisdictions to ensure that these communities are able to address the challenges posed by population growth and increasing environmental pressures, including climate change'.²³

1.25 Under the Australian Constitution, the responsibility for coastal land use planning rests with state government. The states have legislated to create local government authorities with planning functions. This raises questions about what role the federal government might play in coastal zone management. Dr Wescott, a leading researcher in coastal policy, commented that:

the federal government does have a role in implementing ICZM [integrated coastal zone management] in Australia because of the critical economic, social and ecological importance of the coast to the nation as a whole. The question then becomes: To what extent, and in what areas, is the federal government to be involved? And hence: What form should this involvement take?²⁴

1.26 Mr Stokes, Executive Director of the National Sea Change Taskforce, summed up this matter, stating that:

there needs to be a review of the current institutional arrangements as they affect the coast because all levels of government, at this stage, have a finger in the governance pie. The existing institutional arrangements are confusing. There is a lot of

22 Professor Woodroffe, *Submission 24*, p. 1, p. 3.

23 Department of the Environment, Water, Heritage and the Arts, *Submission 103*, p. 2.

24 Dr Wescott, *Submission 60*, p. 6.

duplication. Sometimes it is unclear who is responsible for what in terms of the planning and management along the coast.²⁵

1.27 Governance arrangements for the coastal zone are discussed in Chapter 6.

Previous coastal inquiry reports

1.28 Leaving aside the various inquiries into specific aspects of the coast (eg coastal pollution, marine reserves, the Great Barrier Reef) and state based inquiries into the coastal zone, there have been three major national inquiries into the coastal zone over the last 30 years:

- *Management of the Australian Coastal Zone*, House of Representatives Standing Committee on Environment and Conservation, 1980
- *The Injured Coastline: Protection of the Coastal Environment*, House of Representatives Standing Committee on Environment, Recreation and Arts, 1991
- *Coastal Zone Inquiry: Final Report*, Resource Assessment Commission, 1993

1.29 Professor Thom recommended that the Committee ‘closely examine the relevance of the findings and recommendations’ of these reports.²⁶ While there is not scope in this report to analyse the recommendations of these inquiries in detail, it is useful to consider their key findings.

1.30 The *Management of the Australian Coastal Zone* report (1980) concluded that coastal zone management involved ‘a vast number of competing users’, making decisions on ‘an individual ad hoc basis rather than on a regional level’. It also pointed to the lack of coordination in coastal zone research, need to improve dissemination of information and absence of a Commonwealth coastal policy. Of further concern was that there was ‘no agency or unit within the Commonwealth public service responsible for co-ordination of Commonwealth activities in the coastal zone’.²⁷ Major report recommendations included that the Commonwealth Government develop a national coastal policy; establish an Australian Coastal Management Council to encourage cooperation between agencies with functions relating to the coastal zone and coordinate coastal zone research;

25 Mr Stokes, NSCT, *Transcript of Evidence*, 26 March 2009, p. 2.

26 Professor Thom, *Submission 6*, p. 6.

27 House of Representatives Standing Committee on Environment and Conservation, *Management of the Australian Coastal Zone*, 1980, p. ix.

and use some form of agreed guidelines for the allocation of national funds – see Figure 1.1.

Figure 1.1 *Management of the Australian Coastal Zone (1980)—key report recommendations*

1. The Commonwealth Government, in consultation with the States, develop and promulgate national policies and objectives for the conservation and preservation of the Australian coastline
2. The Commonwealth Government, jointly with the States, establish an Australian Coastal Management Council to: encourage collaboration and co-operation between agencies and institutions with functions relating to the coastal zone; assess the information requirements necessary to implement management policies; and establish research priorities and co-ordinate and promote related research programs
3. The Australian Coastal Management Council convene biennial national conferences on coastal planning and management; and encourage regular regional workshops and seminars on coastal planning and management ...
5. The Australian Coastal Management Council secretariat establish a central register of information relating to the coastal zone; and prepare and distribute a regular newsletter providing information on coastal zone research
6. The Australian Coastal Management Council, as a matter of priority, establish criteria for the funding of research programs
7. The Australian Coastal Management Council determine guidelines for allocation of any Commonwealth funds that may become available to the States for programs in accordance with national policies

Source *Management of the Australian Coastal Zone, House of Representatives Standing Committee on Environment and Conservation (1980), p. vii*

- 1.31 The *Injured Coastline* report (1991) found that ‘existing coastal management arrangements are fragmented and poorly coordinated and fail to encompass a holistic approach’ and that there was ‘a pressing need for improved co-ordination of all levels of government’.²⁸ Major report recommendations included that the Commonwealth Government enact a Coastal Zone Management Act, and develop a national coastal zone management strategy to coordinate coastal management throughout Australia and performance based Commonwealth funding for regional coastal management plans by state and local government – see Figure 1.2.
- 1.32 Major report recommendations of the Resource Assessment Commission (RAC) report, *Coastal Zone Inquiry: Final Report (1993)*, included that a National Coastal Action Program be adopted by COAG; the Commonwealth Government enact a Coastal Resource Management Act

28 House of Representatives Standing Committee on Environment, Recreation and the Arts, *The Injured Coastline: Protection of the Coastal Environment*, 1991, p. xiii.

and establish a National Coastal Management Agency; and regional coastal zone strategies, following nationally accepted objectives, be developed by state and local governments – see Figure 1.3.

- 1.33 These inquiry reports and their recommendations have informed the Committee’s deliberations, as discussed in Chapter 6.

Figure 1.2 *The Injured Coastline: Protection of the Coastal Environment (1991)*—key report recommendations

1. The Commonwealth develop without further delay a national coastal zone management strategy in co-operation with the States and Territories and local governments to provide a framework for the co-ordination of coastal management throughout Australia. The strategy should incorporate agreed national objectives, goals, priorities, implementation and funding programs and performance criteria.
2. Responsibility for developing the national coastal strategy in cooperation with the States and Territories and local governments should be vested with the existing National Working Group on Coastal Management. However, the composition of the NWG should provide for a broader representation of interested parties, involving local government.
3. The Commonwealth provide financial assistance to State and local governments as part of a National Coastal Zone Management Strategy. The provision of such funding would be based upon fulfilment of certain performance criteria, which ensure that State, regional and local plans are consistent with the agreed national objectives and work towards achieving those objectives ...
5. Following preparation and development of a national coastal zone management strategy the Commonwealth enact legislation which sets out a federal interest in the coastal zone; agreed national objectives; agreed national environmental guidelines and standards (including standards for water quality and industrial waste discharges); and financial assistance schemes to assist the States and local governments to formulate coastal management plans and policies that are consistent with the objectives and goals of the national strategy ...
11. Effective public participation in coastal zone management be encouraged at the local government level by a variety of mechanisms, such as the preparation of local zoning plans in consultation with the community, environmental mediation procedures and the establishment of local consultative committees on specific projects and issues.
12. One of the existing Commonwealth databases should be the prime repository of such information concerning the coastal zone as has been prepared and collected by the various Commonwealth agencies. Arrangements for the transfer of information between Commonwealth agencies should to be improved and upgraded.

Source *The Injured Coastline: Protection of the Coastal Environment, House of Representatives Standing Committee on Environment, Recreation and the Arts (1991), pp. xiii-xviii*

Figure 1.3 *Coastal Zone Inquiry: Final Report (1993)*—key report recommendations

R.01 The Inquiry recommends that the National Coastal Action Program for management of the resources of Australia's coastal zone be adopted by the Council of Australian Governments and implemented by the three spheres of government in consultation with community and industry groups that have responsibility for and interests in coastal zone management.

R.02 The Inquiry recommends that the Council of Australian Governments agree to and adopt the national objectives and principles for coastal zone management proposed by the Inquiry.

R.03 The Inquiry recommends that all governments with coastal zone responsibilities develop local and regional coastal zone management objectives that are consistent with the agreed national objectives and that provide firm guidelines for integrated management of resources within each government's jurisdiction ...

R.07 The Inquiry recommends that the Commonwealth enact a Coastal Resource Management Act, which, among other things, would provide that Commonwealth funding of coastal resource management activities—whether in the form of direct expenditure by Commonwealth agencies on coastal zone management or as grants to state and local governments for specific elements of coastal zone management—be confined to activities consistent with the objectives and principles of the National Coastal Action Program.

R.08 The Inquiry recommends that a National Coastal Management Agency be established, with a board representing the interests of Commonwealth, state and local governments and Australia's indigenous people, and a full-time secretariat; an independent chairperson of outstanding stature and with exceptional leadership qualities be appointed. The chairperson would also be the Agency's chief executive officer; that the Agency report to the Council of Australian Governments.

R.09 The Inquiry recommends that a National Coastal Consultative Council be established, to advise the National Coastal Management Agency. The Council should include representatives selected from nominees of peak bodies, research institutions and other bodies with major interests in the management of coastal zone resources.

R.10 The Inquiry recommends that all state governments review the composition and roles of their coastal coordinating committees in light of the characteristics proposed by the Inquiry, to ensure that the committees are in the best position to manage state participation in the National Coastal Action Program; the review include arrangements for the coordination of local and regional groups participating in the development and implementation of strategies to implement the Program; each state establish a coastal advisory committee comprising representatives of non-government groups; all state governments review the existing distribution of coastal management functions between agencies, with a view to incorporating similar or complementary functions in single ministries.

R.11 The Inquiry recommends that all local authorities review existing arrangements for dealing with coastal zone management issues, using the models identified by the Integrated Local Area Planning approach ...

R.13 The Inquiry recommends that a Coastcare program be established by the Commonwealth Government to deal with the particular needs of coastal areas for soil conservation, maintenance of biodiversity, revegetation, and management and monitoring of the shoreline and near-shore environment; the Coastcare

program provide funds for the appointment of local and regional coastal community facilitators and extension services; the Coastcare program be designed to extend and complement existing initiatives for community involvement in integrated catchment management ...

R.34 The Inquiry recommends that regional coastal zone strategies be developed, principal responsibility for their promotion and implementation resting with state governments; the regional strategies be developed by groups comprising representatives of regional communities and industries, local authorities, and relevant state and Commonwealth government agencies.

R.35 The Inquiry recommends that all states review existing regional boundaries, in consultation with local governments, to ensure that they provide a sound basis for implementing coastal resource management on a regional basis, incorporating both land and marine resources ...

R.65 The Inquiry recommends that the proposed Coastal Resource Management Act provide for agreements between the Commonwealth and state governments in relation to the funding of the National Coastal Action Program, including funding for the National Coastal Management Agency and other parts of the Program; such agreements should include provision for funding according to well-defined criteria and provision for ongoing evaluation of outcomes; expenditures on the National Coastal Action Program by each sphere of government be conditional on programs and policies being designed and implemented in accordance with objectives agreed by the Council of Australian Governments and incorporated in the proposed Coastal Resource Management Act.

Source *Coastal Zone Inquiry: Final Report, Resource Assessment Commission (1993), pp. 357-396*

Outcomes of previous coastal inquiries

- 1.34 The concern of some inquiry participants was not so much about the number of coastal inquiries but that the recommendations of these inquiries had not been taken up: '[m]ajor difficulties arise when the many recommendations of these inquiries have not been acted upon by successive federal governments'.²⁹ However, it is important to be clear here about what recommendations have and have not been acted upon in the past. While inquiry recommendations for a national coastal act and national coastal agency have not been taken up, recommendations for a national coastal policy and a national coastal program, involving state, regional and local performance based funding, have been variously taken up by successive federal governments – see Figure 1.4 for a brief overview of past federal government coastal initiatives.
- 1.35 It needs to be said, however, that while some recommendations have been taken up, subsequent action in this regard has often not been *sustained* – for example, the Commonwealth coastal policy (1995). Rather than being

29 Professor Thom, *Submission 6*, p. 1.

part of a specific coastal policy, coastal initiatives have also at various times been subsumed within general environmental policy – perhaps creating an impression that coastal policy has been submerged or ‘lost’.

Figure 1.4 Brief overview of past federal government coastal initiatives

The RAC Coastal Zone inquiry (1993) led to the development of the 1995 Commonwealth Coastal Policy and the associated implementation package called the National Coastal Action Plan (NCAP). Key programs included Coastcare, which supported community volunteer engagement, partnership development and capacity building. ‘All States and the Northern Territory, together with Local Government Associations, negotiated and signed a tripartite Memorandum of Understanding (MOU) to implement NCAP’, including an agreed shared funding arrangement, particularly for Coastcare. ‘NCAP was therefore a cooperative, jointly funded initiative that reflected national, state and local government coastal and marine priorities’, with an agreed policy underpinning it.

‘In 1996, the MOUs were retained by the incoming federal government’ but rebadged as the Coasts and Clean Seas program. ‘Although the Commonwealth Coastal Policy was dropped, the Principles and Objectives for coastal zone management it contained were retained in the MOUs’. Commonwealth funding was brought under the Natural Heritage Trust (NHT1).

These MOUs, the Coasts and Clean Seas program and Coastcare were abolished in 2002, following the introduction of NHT2 and a new regional Natural Resource Management (NRM) delivery approach. Envirofund was established as a more generic program for funding small community projects. The Coastal Catchment Initiative was also established at this time.

In 2008, the incoming federal government established the new Caring for our Country initiative, which brought together various NRM and environmental funding programs, including coastal initiatives, under the one major program.

Source Department of Environment, Parks, Heritage and the Arts Tasmania, Submission to Senate Rural and Regional Affairs and Transport Committee Inquiry into Natural Resource Management and Conservation Challenges, p. 3
<http://www.aph.gov.au/Senate/committee/rrat_ctte/natural_resource/submissions/sub55.pdf>

Changing climate and changed policy framework

1.36 In recent years, climate change has added a new dimension to the debate about the coastal zone. This was not the case when the previous coastal inquiries were undertaken, although the RAC report did briefly acknowledge issues relating to ‘global warming and the coastal zone’.³⁰

30 RAC, *Coastal Zone Inquiry: Final Report*, Commonwealth of Australia, 1993, p. 13.

- 1.37 Climate change brings with it a changed dynamic. There is a need to address growing concerns about climate change impacts on the coastal zone and this issue impacts on the question of what role the Australian Government should play in coastal zone governance arrangements. Action in this area is urgently required.

Integrated coastal zone management and the catchment-coast-marine continuum

- 1.38 In 1992 the United Nations Conference on Environment and Development recognised the international importance of coastal states to committing themselves to ‘integrated management and sustainable development of coastal areas’.³¹ In 2002, the World Summit for Sustainable Development emphasised the need to promote the implementation of programs to achieve integrated coastal zone management.
- 1.39 Integrated coastal zone management (ICZM) is therefore a well-established and internationally accepted concept. It has emerged as the main approach to improving the governance of coastal areas. ICZM reflects:
- the broader principles of environmentally sustainable development, focusing on integration across and between sectors, agencies, and levels of government, between science and management, across the land/sea interface, and inclusive of the needs of all stakeholder groups.³²
- 1.40 The ‘land-sea interface’ or ‘catchment-coast-marine continuum’ therefore underpins ICZM, and integration of policies and actions across this continuum is a priority. ICZM is characterised by an emphasis on:
- coordinated decision-making across various levels of government
 - a focus on an entire ecosystem rather than separate management of each component
 - development of long-term goals, with broad consultation across interest groups

31 *Agenda 21*, UNCED, Rio de Janeiro, 3-14 June 1992, para 5, chapter 17.

32 N Gurrán et al, *Meeting the Sea Change Challenge: Best Practice Models of Local and Regional Planning for Sea Change Communities* (Report No. 2 for the NSCT), University of Sydney Planning Research Centre, 2006, p. 7 – *Exhibit 20*.

- a focus on long-term protection and conservation of the environment, consistent with the principles of ecological sustainable development

1.41 Dr Wescott noted that:

catchment policies have been the major focus of NRM for a decade and are quite well developed, the Oceans Policy still exists (even if it is in need of a revamp) but the missing link between them is the national policy vacuum around coastal policy.³³

1.42 In 2006, the Natural Resource Management Ministerial Council (NRMMC)³⁴ endorsed the *National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan*. The plan sets out the ‘importance of ICZM to Australia’:

Forward thinking is required to initiate a nationally cooperative focus on achieving ecologically sustainable development through integrated coastal zone management (ICZM) ... The fundamental goal of ICZM is to maintain, restore or improve the quality of coastal ecosystems and the societies they support. A defining feature of ICZM is that it seeks to address both development and conservation needs within a geographically specific place – a single community, estuary or nation – and within a specified timeframe ...

Governments have a responsibility and interest in the coastal zone and recognise the importance of ICZM as a tool for managing challenges that are of national scale and scope.³⁵

1.43 There was broad acceptance of the ICZM principle among those giving evidence to the inquiry. Professor Thom, for example, recommended that ‘the inquiry considers adopting the principle of ICZM as developed and agreed to by all parties to the Framework ... and Implementation Plan’.³⁶

1.44 The Committee agrees that the ICZM principle is essential to encouraging a national cooperative approach to coastal zone management and a focus on the catchment-coastal-marine continuum.

33 Dr Wescott, *Submission 60*, p. 2.

34 The NRMMC was established in 2001 under the auspices of COAG. It consists of the Commonwealth and state/territory government ministers responsible for primary industries, natural resources, environment and water policy.

35 NRMMC, *National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan*, Commonwealth of Australia, 2006, pp. 6-7 – *Exhibit 79*.

36 Professor Thom, *Submission 6*, p. 10.

- 1.45 While generally recognising that the *National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan* provided a useful first step towards the development of a broader policy framework in this area, a number of inquiry participants raised serious concerns about progress with implementation of the plan:

[the] Natural Resource Management Ministerial agreement on a national co-operative approach has not led to any significant new investment or commitments by federal or state governments ...

groups designated to implement actions in the Implementation Plan included a range of committees that had little interest or 'ownership' of the issues.

Thus there were no incentives or direct leadership from the Commonwealth to support state and local councils in ICZM by making the Framework and Implementation Plan operational ... Furthermore, there is evidence that State governments have simply ignored the agreement on the document that was endorsed by the NRM Ministerial Council.³⁷

- 1.46 The National Sea Change Taskforce also pointed to major gaps in the plan:

a much broader approach is required to the social and economic issues related to the coastal zone ...

it lacks 'climate change adaptation plans for managing rapid urban growth on the coast. It also lacks a risk management plan, particularly where significant urban development or key installations are located in low-lying coastal areas, and a set of agreed COAG principles that outline the responsibilities of Federal, State and Local government'.³⁸

- 1.47 The *National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan* will be further discussed in Chapter 6.

Support for a coastal zone inquiry

- 1.48 As discussed above, the serious risks posed by climate change and environmental impacts on the coastal zone, combined with existing complex coastal governance arrangements and lack of progress in the implementation of the *National Cooperative Approach to Integrated Coastal*
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37 Professor Thom, *Submission 6*, p. 1, p. 10.

38 NSCT, *Submission 79*, p. 9, p. 10.

Zone Management: Framework and Implementation Plan, have resulted in calls for greater national leadership in coastal zone management. Groups and individuals providing evidence to the Committee widely welcomed the inquiry and emphasised its timeliness and importance:

The [National Sea Change] Taskforce welcomes the inquiry and believes it can make a significant contribution to the development of a national policy framework for coastal Australia ... it is timely and important to undertake a broad scale review of governance and institutional settings for the Australian coast.³⁹

International context

- 1.49 Important lessons can be learnt from how other countries are addressing climate change and environmental impacts on the coastal zone, including coastal sustainability initiatives and adaptation strategies, and coastal zone governance arrangements. Valuable parallels can be drawn between the policies and programs in these countries and the Australian situation.
- 1.50 For example, the NSCT commented that there are coastal planning models 'in the United Kingdom, the United States and the European Commission worthy of consideration in the Australian context'.⁴⁰ Of interest in this regard is that the UK has a national coastal planning policy, the US has federal coastal zone legislation and the EU has a comprehensive trans-national approach to coastal management, through its adoption of an Integrated Coastal Zone Management Strategy for the EU.⁴¹
- 1.51 Other inquiry participants similarly pointed to international developments in coastal zone management, particularly in the US, which has a similar federal system to Australia,⁴² and urged the Committee to consider international best practice.
- 1.52 The *Coastal Zone Management Act 1972* in the US provides the national framework for coastal planning at the state and local level, and is currently being revised. The US Coastal States Organization recently

39 NSCT, *Submission 79*, p. 4, p. 30.

40 NSCT, *Submission 79*, p. 12.

41 N Gurrán et al, *Meeting the Sea Change Challenge: Best Practice Models of Local and Regional Planning for Sea Change Communities* (Report No. 2 for the NSCT), University of Sydney Planning Research Centre, 2006, pp. 8-9 – *Exhibit 20*.

42 See, for example, Professor Thom, 'the US system works well in a federation and needs to be ... considered by this Inquiry', *Submission 6*, p. 4.

adopted a draft bill, the Coastal Management Bill 2009, which identifies four national priorities for effective coastal management and calls for a comprehensive planning effort by the states and increased coordination of federal, state and local actions. The bill provides a useful reference point in terms of key priorities in coastal zone management – see Figure 1.5.

Figure 1.5 US Coastal Management Bill

The Congress finds and declares that it is national policy—

- (1) to preserve, protect, restore, enhance and manage the resources of the Nation's coastal region for this and succeeding generations while enabling compatible, sustainable, and appropriate development.
- (2) to encourage and assist the states in exercising their coastal stewardship and management responsibilities by maintaining the authorities and essential program services of state coastal management programs and to provide incentives to states to develop and implement programs to address national coastal management priorities to:
 - (A) support healthy, resilient coastal communities and economies;
 - (B) protect and restore coastal ecosystems, habitats, waters, and unique resources including historic, cultural, aesthetic, and recreational resources;
 - (C) prepare for effects of climate change on the nation's coasts and coastal communities; and,
 - (D) ensure that local, state, regional, and federal coastal programs are coordinated and integrated at all appropriate scales ...
- (4) to encourage the participation and cooperation of the public, non-governmental organizations, businesses, educational institutions, and others in carrying out the purposes of this Act ...

Source CSO Coastal Management Bill, 23 October 2008

<http://www.coastalstates.org/uploads/PDFs/CSO%20Coastal%20Mgmt%20Bill%2010-31-08.pdf>

1.53 The Victorian Government also drew the Committee's attention to a recent comparative study of international and national approaches to planning for coastal climate change.⁴³

1.54 A review of how other countries are addressing climate change and environmental impacts on the coastal zone and of their coastal zone governance arrangements is beyond the scope of this report and also outside the inquiry terms of reference. However, the Committee is not aware of any comprehensive research having been undertaken and believes that such a study, in adding to our knowledge base in this area, would contribute to the development of effective responses to the long-term management of Australia's coastal zone.

43 See B Norman, *Planning for Coastal Climate Change: an Insight into International and National Approaches*, Victorian Department of Sustainability and Environment and Department of Planning and Community Development, 2009 – *Exhibit 176*.

Recommendation 1

- 1.55 **The Committee recommends that the Australian Government commission a study on international coastal zone governance arrangements, policies and programs for addressing coastal climate change impacts, and adaptation strategies. The completed study should be made public.**

Regional issues

- 1.56 As identified by the IPCC, coastal zones across the world are facing increasing environmental pressures from population growth and intensification of land use, and increasing threats from climate change impacts:

Coasts will be exposed to increasing risks, including coastal erosion, over coming decades due to climate change and sea-level rise ... The impact of climate change on coasts is exacerbated by increasing human-induced pressures ...

Coastal population growth in many of the world's deltas, barrier islands and estuaries has led to widespread conversion of natural coastal landscapes to agriculture, aquaculture, silviculture, as well as industrial and residential uses ...

The attractiveness of the coast has resulted in disproportionately rapid expansion of economic activity, settlements, urban centres and tourist resorts. Migration of people to coastal regions is common in both developed and developing nations.⁴⁴

- 1.57 Countries across our region face similar challenges to Australia in dealing with these impacts on the coastal zone.
- 1.58 Developing countries will be particularly vulnerable to climate change impacts as they have limited adaptive capacities and are more dependent on climate-sensitive resources such as local water and food supplies.
- 1.59 Low-lying island nations, including Pacific Island countries, face particular challenges from rising sea levels. Sea level rise is a critical issue for low-lying atoll states such as Kiribati, Tuvalu and the Maldives.

44 IPCC, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, Contribution of Working Group II to the Fourth Assessment Report of the IPCC, Cambridge University Press, Cambridge, 2007, p. 317, p. 319.

- 1.60 While these concerns are noted, it is outside the scope of the inquiry terms of reference to further investigate these broader international and regional issues. However, the Committee points out that the Australian Government's climate change policy includes 'action to help shape a global solution' to the problems of climate change.⁴⁵ Under this broader policy, Australia is seeking to work with the international community – including countries in our region, low-lying island nations and developing economies – to develop a global response to climate change that is effective and fair.
- 1.61 Further, the Australian Government's International Climate Change Adaptation Initiative aims to meet high priority climate change adaptation needs in vulnerable countries in Australia's region. Some \$25 million of this \$150 million initiative has been allocated to help implement practical adaptation programs in Pacific Island countries, including improving coastal zone management to increase the resilience of coastal areas and community settlements to climate change, and supporting disaster preparedness and disaster risk reduction programs. A further \$12 million has been provided for the Pacific Adaptation Strategy Assistance Program to strengthen the capacity of Pacific Island countries to assess their vulnerabilities to climate change and develop adaptation strategies.⁴⁶
- 1.62 In August 2009, the Australian Government also released the policy document, *Engaging our Pacific Neighbours on Climate Change: Australia's Approach*. This document consolidates the Australian Government's policy approach to working with Pacific island countries on climate change to 2015.⁴⁷

45 Department of Climate Change, *Australian Climate Change Science: A National Framework*, May 2009, p. 1, DCC website accessed on 24 July 2009
<<http://www.climatechange.gov.au/science/publications/pubs/cc-science-framework.pdf>>

46 Media release by Senator the Hon Penny Wong, Minister for Climate Change and Water, and the Hon Stephen Smith MP, Minister for Foreign Affairs, 'Australia announces funding priorities for Pacific climate change adaptation', 6 August 2009.

47 DCC website accessed 25 August 2009
<<http://www.climatechange.gov.au/international/index.html>>

Other matters

Other reviews and inquiries currently being conducted

- 1.63 The Department of Climate Change is undertaking a detailed 'first pass' National Coastal Vulnerability Assessment of Australia's coastal zone. The assessment involves digital elevation modelling to assess the impact of sea level rise and covers coastal assets including infrastructure, biodiversity, human settlements and coastline stability. It is being supplemented by a series of case studies, as well as research into socioeconomic risks and governance issues arising from climate change impacts.⁴⁸
- 1.64 The department indicated that it would be releasing a detailed report on this work and hosting 'a national forum on the challenges of climate change to coastal communities' towards the end of 2009.⁴⁹
- 1.65 The department's report was due to be released at the same time as this report went to print. Accordingly, the information in the department's report was not available to the Committee in finalising its report. However, the Committee is pleased that the department was able to be informed by the evidence received as part of this inquiry, in the form of public submissions and transcripts of public hearings, in finalising the departmental report.
- 1.66 Major reviews of Australia's national environmental policies and legislation were also underway at the same time as this inquiry, including a review of the *Environment Protection and Biodiversity Conservation Act 1999*, the Australian Government's central piece of environmental legislation, and the National Strategy for the Conservation of Australia's Biological Diversity, Australia's premier biodiversity conservation policy statement. These policies and legislation form the national framework for environmental governance in Australia.
- 1.67 The revised policy and legislative framework that eventuates from these major reviews will result in new approaches to managing the environment, which will also flow through to new approaches to integrated coastal zone management. The Committee believes that these major changes to Australia's sustainability and environmental policy frameworks further reinforce the need for action in developing a national coastal zone policy.

48 Department of Climate Change, 'Assessing the vulnerability of Australia's coasts to climate change', fact sheet, DCC website <<http://www.climatechange.gov.au>>

49 Department of Climate Change, *Submission 85*, p. 7.

A note on the report structure

- 1.68 This report comprises six chapters focusing on issues relating to coastal zone management across the broad themes of climate change, the environment and governance arrangements.
- 1.69 However, it is acknowledged that there are important issues concerning coastal zone management that cut across these broad themes. This report seeks to avoid creating 'silos' in discussing these themes and to emphasise that integrated coastal zone management is about building linkages across sectors (climate change, environment, governance), as well as across institutions and levels of government and across the catchment-coastal-marine continuum.
- 1.70 To link the discussion in each of the chapters and encourage dialogue in terms of the issues raised, the report includes:
- a discussion on planning and the coastal zone across several chapters, recognising that planning is a key linking theme in looking at climate change and environmental impacts on the coast and governance arrangements for the coastal zone
 - a section on climate change impacts on coastal biodiversity in the chapter on the environment, to bring together the important themes of climate change and the environment
- 1.71 The final chapter on governance arrangements for the coastal zone also serves as a concluding chapter, to draw all the themes together.