

Australian Government response

**House of Representatives Standing Committee on Climate Change, Water,
Environment and the Arts**

House of Representatives Committee Report

Managing our coastal zone in a changing climate: the time to act is now

November 2010

Preface

The Australian Government welcomes the opportunity to respond to the inquiry of the House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts (the Committee) into climate change and environmental impacts on coastal communities. The report of the inquiry *Managing our Coastal Zone in a Changing Climate: the time to act is now* was tabled in the Parliament on 26 October 2009.

The Government acknowledges the work of the Committee in delivering its report and agrees with the major theme in the report, the need for national leadership and cooperation between all levels of government to effectively manage our valuable coastal resources, particularly in the context of climate change.

The Government is driving national reform which will enhance the sustainability of the coastal zone. The Government recognises that coastal management is an issue of national importance, and for the first time is driving inter-connected reform to help protect our coastal environments, ensure that urban development is sustainable and enhances regional productivity, addresses the growing risks from climate change impacts, and builds community resilience in the face of natural disasters. The Government intends to seek state and territory agreement to work through the Council of Australian Governments (COAG) to develop a national coastal adaptation agenda. This would provide an avenue to progress many of the outcomes sought through the proposal in the Committee's report to develop a new *Intergovernmental Agreement on the Coastal Zone*.

In addition, a number of key initiatives by the Government, working in collaboration with other jurisdictions, particularly through COAG, the Local Government and Planning Ministers' Council, and the Natural Resource Management Ministerial Council provide a solid basis for an integrated national approach for the sustainable management of our coastline. The Government has commenced mapping out a framework and process to ensure these initiatives effectively link together.

Adapting to the impacts of unavoidable climate change is an element of the Government's strategy for action on climate change. The Committee's report complements the work that the Australian Government has been progressing through a number of major initiatives in close collaboration with state, territory and local governments. In particular, a number of the issues raised in the Committee's report are recognised in the *Climate Change Risks to Australia's Coast: a first pass national assessment* (National Coastal Risk Assessment) released in 2009.

Both the National Coastal Risk Assessment and the National Coastal Climate Change Forum, held early in 2010, identified key knowledge gaps and issues requiring attention to develop an effective national coastal adaptation response to climate change.

Since the Committee's report was tabled, the Government has also released the position paper *Adapting to Climate Change in Australia* (February 2010) which sets out the Australian Government's vision for adapting to the impacts of climate change and proposes practical steps to realise this vision. Coastal management is recognised in this position paper as a national priority for adaptation action, and work continues to establish new processes for national cooperation in this important area.

These initiatives reflect the Government's commitment through the 2007 *Caring for our Coasts* election statement, to work with state and territory governments, local councils and others to develop a coordinated, national approach to coastal policy.

Recommendation 1

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.

Government Response

Position: Noted

The Government will ensure that there is a strong evidence base, including that drawn from relevant international experiences, policies and arrangements, to support the development of an effective national coastal response to climate change, in close collaboration with state, territory and local governments.

The Government regularly monitors and reviews the experiences and lessons of climate change policies and developments, including coastal governance arrangements, of other countries. Consideration is given to relevant international experience in the development of such reviews, including the recent report *Climate Change Risks to Australia's Coast: a first pass national assessment* and will continue to be considered in future work.

The Government notes that the Victorian Government commissioned a review by Professor Barbara Norman of international and national planning approaches for coastal climate change. The report of this review *Planning for coastal climate change: An insight into international and national approaches* (2009) is publicly available.

Recommendation 2

The Committee notes the importance of mitigation measures in addressing climate change impacts and accordingly recommends that the Australian Government continue to take urgent action to ensure that Australia can best contribute to a reduction in global greenhouse gas emissions.

Government Response

Position: Agreed

The Government is strongly committed to reducing Australia's carbon pollution and is also helping to shape a global climate change solution by working actively and constructively to forge a global climate outcome that is effective, fair and efficient.

Australia is on track to meet its Kyoto Protocol target of limiting greenhouse gas emissions to 108 per cent of 1990 levels over the period 2008-2012. The Government has also committed to reduce Australia's carbon pollution to 25 per cent below our 2000 baseline by 2020 if the world agrees to an ambitious global deal to stabilise greenhouse gas concentrations in the atmosphere at or below 450 parts per million. If the world is unable to reach such an ambitious agreement, Australia will reduce its emissions to 5 to 15 per cent below our 2000 levels by 2020, depending on the extent of action from other nations.

The Government believes that a carbon price is essential to achieving emission reductions at the scale required to meet the 2020 targets. It has established a Multi-Party Climate Change Committee of parliamentarians to consider mechanisms for introducing a carbon price and ways to build community support for action on climate change.

In the short term, before a carbon price is introduced, the Government will boost existing investments in clean and renewable energy and support greater energy efficiency measures in order to bring down greenhouse gas emissions. The Government has in place a range of measures to support Australian businesses and households reduce their carbon pollution, to create the new green-collar jobs of the future and to transform our economy. These measures include the expanded Renewable Energy Target, the expanded \$5.1 billion Clean Energy Initiative, the \$900 million Green Car Innovation Fund, the \$219 million Clean Business Australia program, and \$100 million funding for the Australian Carbon Trust.

Recommendation 3

The Committee recommends that the Australian Government increase its investment in coastal based climate change research on:

- *sea level rise projections and the dynamics of polar ice sheets, particularly in the Antarctic*
- *extreme sea level events, including as a result of storm surge and tropical cyclones*
- *regional variations in sea level rise*
- *ocean acidification, particularly impacts on Australia's coral reefs, higher ocean temperatures and changing ocean currents*

Government response

Position: Noted

The Government recognises the importance of coastal based climate change research. With a large proportion of the Australian population living in coastal areas, this type of research will ultimately inform adaptation strategies for people living in these regions.

In the 2009-10 Budget, \$387.7 million was allocated to the Marine and Climate Super Science Initiative for infrastructure that will underpin research relevant to coastal climate change. This funding includes:

- \$149.6 million for a new marine research vessel to increase Australia's marine research capability (operated by CSIRO);
- \$52 million for the Australian Integrated Marine Observation System to enhance Southern Ocean Monitoring capability and extend coverage of northern Australian waters. This will build on the initial \$50 million investment received as part of the National Collaborative Research Infrastructure Strategy (NCRIS) program;
- \$55 million for the tropical marine research infrastructure at the Australian Institute of Marine Science (AIMS) to construct new tropical marine research facilities at the Australian Institute of Marine Science in Townsville and Darwin; and

- \$50 million for a high performance computer upgrade to provide new high performance computing facilities for climate change, earth systems science and national water management research.

In addition, funding from the Education Investment Fund from the same budget will include:

- \$45 million for an Institute for Marine and Antarctic Studies at the University of Tasmania; and
- \$19.5 million for building the Sydney Institute of Marine Science into a World Class Marine Research Facility in support of Australia's National Research Priorities.

Along with these initiatives the Australian Climate Change Science Program, currently funded until 30 June 2013, supports research on how climate change will affect climate extremes, sea level rise and ocean acidification, particularly through the CSIRO and the Bureau of Meteorology.

The Government has also extended the funding of the Antarctic and Climate Ecosystems (ACE) CRC until 30 June 2014. ACE CRC carries out research into sea level rise projections, ocean acidification and the dynamics of Antarctic polar ice sheets. It has also completed work for the Tasmanian Government on the impact of sea level rise on Tasmania.

The Australian Research Council has announced funding of \$21.4 million over seven years for a new ARC Centre of Excellence for Climate System Science. This funding will commence in 2011. The Australian Research Council also funds numerous projects through its *National Competitive Grants Program* schemes, which cover subjects such as climate science.

Recommendation 4

The Committee recommends that the coastal zone component of the National Climate Change Science Framework and proposed National Climate Change Science strategy be clearly identified by the proposed high level coordination group and involve key coastal stakeholders.

Government response

Position: Agreed

Coasts and oceans are identified as a key challenge for climate scientists to tackle in the National Climate Change Science Framework. The High Level Coordination Group is in the process of preparing an implementation plan. The aim of this plan is to coordinate a national climate change science research effort in order to address this challenge and the others listed in the Framework document.

Recommendation 5

The Committee recommends that the Department of Climate Change continue to fund research to:

- *establish the wave climate around the coast so as to identify those locations most at risk from wave erosion*
- *examine how the wave climate nationally interacts with varying landform types*

Government response

Position: Agreed

The Government recognises the importance of wave climate research especially for coastal regions. The Department of Climate Change and Energy Efficiency is funding research by CSIRO to investigate climate change driven variations in offshore wave climate along the Australian coast. This research is increasing our understanding of how climate change driven variations in offshore wave climate are likely to contribute to coastline recession and vulnerability.

Recommendation 6

The Committee recommends that the Australian Government continue funding under the Climate Change Adaptation Skills for Professionals Program. In addition, the Australian Government should liaise with tertiary institutions to ensure an adequate supply of appropriately skilled coastal planners and engineers.

Government response

Position: Noted

The current Skills for Professionals Program is scheduled for completion in October 2011. The Government will evaluate the outcomes of the program when it is completed.

The Department of Defence's Australian Hydrographic Office notes that an essential skills set for effective data collection in support of coastal zone management is the availability of hydrographic surveyors, and that the Royal Australian Navy's Hydrographic School is the only institution in Australia that provides this training. It is expected that there will be no surplus student positions available on its hydrographic surveyor course in the near future.

The Surveying and Spatial Science Institute (SSSI), in conjunction with TAFE NSW and the University of Otago (Dunedin, NZ), are researching the feasibility of conducting both introductory and advanced hydrographic courses through flexible education initiatives.

Recommendation 7

The Committee recommends that the Australian Government:

- *continue the Local Adaptation Pathways Program as a competitive funding program*
- *review the program's guidelines to secure better outcomes by:*
 - *use of consistent methodology for vulnerability assessments*
 - *evaluation of the outcomes of the projects that are undertaken with the grants*
 - *encouraging regional applications from local councils whenever possible*

Government response

Position: Noted

The Local Adaptation Pathways Program (LAPP) seeks to increase the adaptive capacity of local governments to deal with the impacts of climate change. It provided funding to local governments to identify and prioritise key risks and to develop risk management strategies and adaptive actions.

Over \$2 million has been distributed under two Rounds of LAPP. Regional groupings of councils were encouraged to apply for LAPP funding. In round one, over 60 councils received funding for a total of 32 projects. The majority of these councils were located in coastal and urban areas. Under LAPP Round 2, priority was given to councils in regional and remote areas of Australia. Using a consortium approach, 30 councils received funding amounting to \$874,000 for 7 projects.

A review of the LAPP is underway. The review will be used to inform the Government on future action and policy development concerning capacity building in local government for climate change. The outcomes of the review, including case studies and lessons learned, will be made available to help raise awareness of climate change risks and to provide examples of adaptation actions in communities and local governments.

Recommendation 8

The Committee recommends that the Department of Climate Change share all data collected through vulnerability assessments undertaken as part of the Australian Government Local Adaptation Pathways Program on the proposed National Coastal Zone Database (see also recommendation 42).

Government response

Position: Agreed in principle

The Department of Climate Change and Energy Efficiency recognises the value of ensuring that lessons learned from vulnerability assessments are widely shared, and that data to help assess risk is readily accessible.

The Local Adaptation Pathways Program is supporting initial climate change risk assessments in local governments, many of which are qualitative in nature. It is intended that

lessons learned from the Program through the current review (refer response to recommendation 7) will be made available on the Department's website.

Recommendation 9

The Committee recommends that the Australian Government establish a coastal zone research network within the National Climate Change Adaptation Research Facility and that it complete a coastal zone research plan.

Government response

Position: Noted

The eight priority themes for the National Climate Change Adaptation Research Facility's (NCCARF's) work program, including research networks and developing National Adaptation Research Plans (NARPs), have been established primarily on a sectoral basis, rather than a geographical or regional approach. Specific coastal zone issues have been addressed under a number of these themes.

The Settlements and Infrastructure NARP is particularly relevant to coastal planning issues. The NARP includes a priority theme on Vulnerable Coastal Communities, with two identified high priority research questions:

- How will demographic pressures and changes in different Australian coastal settlement types affect (1) potential impacts of extreme and gradual climate change, and (2) current policy and regulatory settings which govern the decision-making by government agencies, businesses and individuals? How will planning for coastal climate change impacts respond to local circumstances?
- How well do we understand the relationship between climate and coastal processes? How can methods currently used to determine the physical risk on a regional basis of extreme inundation and coastal erosion from climatic and oceanic processes, either singularly or in combination, be improved and new methods developed and applied?

The NARPs on Marine Biodiversity and Resources, Water Resources and Freshwater Biodiversity and Terrestrial Biodiversity address the natural environment and resource use aspects of the coastal environment.

NCCARF also undertakes integrative research to address national priorities and synthesise existing and emerging national and international research on climate change impacts and adaptation. A project focussed on impacts of climate change on coastal ecosystems has recently been commissioned by NCCARF.

The CSIRO Climate Adaptation Flagship also has a Sustainable Cities and Coasts theme which is delivering scientific information and expertise to help Australian cities and coastal communities prepare for the impacts of climate change. The CSIRO Coastal Collaboration Cluster is a three-year research program to develop approaches to better connect science with the needs of governments, communities and industries to meet coastal challenges, including climate change.

Recommendation 10

The Committee recommends that:

- *the Department of Infrastructure, Transport, Regional Development and Local Government undertake a study into the human and resourcing needs of local governments to effectively plan for and adapt to the impacts of climate change*
- *this study be carried out in conjunction with the Australian Local Government Association and the National Sea Change Taskforce*

Government response

Position: Agreed in principle

The Local Government and Planning Ministers' Council agreed in 2009 that a national local government workforce strategy be developed to address skill shortages and enhance the professionalism of local government. The strategy will focus on mechanisms for the attraction, retention and development of skills in local governments, including in occupations such as "planner" and "engineer", that are important in responding to climate change. State Local Government Associations and the Australian Local Government Association have been consulted during preparation of the draft strategy.

Recommendation 11

The Committee recommends that the Australian Government establish a National Coastal Zone Database to improve access to and consistency of information relevant to coastal zone adaptation. The National Coastal Zone Database should be an online portal that allows ready access to:

- *'first pass' National Coastal Vulnerability Assessment data*
- *state and local Digital Elevation Modelling*
- *National Climate Change Adaptation Research Facility reports*
- *federal Local Adaptation Pathways Program reports*
- *state and local coastal vulnerability assessment results*

Government response

Position: Agreed in principle

The Australian Government recognises the need for improved access and discoverability of data and coastal adaptation information, including digital elevation models (DEM). Work has commenced to add a climate change module to the OzCoasts website that will include:

- *general information about coastal climate change and the risks to coastal communities and ecosystems, with links to the Department of Climate Change and Energy Efficiency and other relevant websites for further information;*
- *data on coastal vulnerability such as that in the Smartline tool which describes the geomorphic attributes of Australia's coast including its stability;*

- links to relevant reports, such as the national coastal risk assessment report and reports of the Local Adaptation Pathways Program and National Climate Change Adaptation Research Facility; and
- products and tools to assist communicating the risks to coastal communities from sea-level rise.

An online portal is being developed by the Australian Government under the ANZLIC – the Spatial Information Council’s National Elevation Data Framework, in collaboration with states and territories, to provide easy web access to a wide range of digital elevation data and derived products for public good use. The portal will be hosted by Geoscience Australia. Elevation data will be progressively added as it becomes available, including the medium resolution DEM that was a key input to the report *Climate Change Risks to Australia’s coast: a first pass national assessment*.

Recommendation 12

The Committee recommends that, following the completion of the ‘first pass’ National Coastal Vulnerability Assessment, the Australian Government consider the resourcing and financing of second and third pass assessments, in conjunction with state, territory and local government authorities.

Government response

Position: Agreed in principle

The report *Climate Change Risks to Australia’s coast: a first pass national assessment*, released in late 2009, identified the number of existing residential buildings at risk from inundation as a result of climate change. Current data and methodological constraints limited the capacity of this assessment to quantitatively identify risks to infrastructure, communities, essential services and industry. The Department of Climate Change and Energy Efficiency is planning to finance further assessment of risks to these assets.

The report has also identified a number of issues requiring attention in developing an effective adaptation response to climate change. It notes key knowledge gaps that need to be urgently addressed to inform adaptation and risk management in the coastal zone. The Australian Government will be working with state, territory and local government authorities to address these issues which will help inform a national coastal adaptation strategy.

The Australian Government recognises the importance of tracking progress on how well we are placed to deal with climate change risks and on how effective policy and other measures are. To enable this tracking the Government will commission a Climate Futures report every five years. Further analysis to identify how risks from climate change impacts in the coastal zone are changing and being addressed will inform future Climate Futures reports.

Recommendation 13

The Committee recommends that the Australian Government take urgent action to protect Australians from the threats of dengue fever and chikungunya virus. The knowledge gaps identified by the National Climate Change Adaptation Research Facility research plan with regards to the relationship between climate variation and vector-borne disease should be urgently addressed. The Australian Government should:

- *undertake research into the relationship between climate change and vector-borne disease*
- *produce modelling to allow for advanced early warning of impending threats from vector-borne disease*
- *continue to work towards producing a structured national framework for dealing with mosquito outbreaks in Australia*
- *increase biosecurity measures to better protect against chikungunya virus entering Australia*

Government response

Position: Agreed in principle

Vector borne diseases are one of seven research priorities in the Climate Change and Human Health National Adaptation Research Plan. The research questions address the future increased risk of arbovirus diseases from climate change and meteorological forecasts and modelling and evaluation of early warning systems.

The Department of Climate Change and Energy Efficiency and the National Health and Medical Research Council (NHMRC) have established a joint adaptation research funding program Health Challenges of Climate Change. This is open to researchers in the area of vector-borne diseases to apply. Recently funded projects include:

- an Australian National University study to look at determining the relationship between climate change and dengue transmission in Australia and estimate the impact of impending climate change on the health system, including the availability of donor blood supply; and
- a Queensland University of Technology study to look at establishing and assessing relationships between climate variables such as temperature, humidity and rainfall changes and the transmission of Ross River Virus.

Further proposals for research on the relationship between vector-borne disease and climate change under future funding calls would be considered on merit.

Continuation of the current structured national system of mosquito control is supported. Vector-borne disease is managed by a national process under the Australian Health Ministers' Advisory Council through the Australian Health Protection Committee and its subcommittees, including the National Arbovirus and Malaria Advisory Committee.

It is not feasible to single out prevention of entry into Australia of the chikungunya virus. However, the Australian Quarantine and Inspection Service will continue to ensure that international aircraft are suitably treated, as directed by the Department of Health and Ageing and in accordance with World Health Organization (WHO) Guidelines, to address the insect risks and to provide alerts on arrival of ill passengers, which is critical in guarding against important vector-borne diseases.

Recommendation 14

To further enhance Australia's disaster mitigation, preparedness, response and recovery arrangements in the event of possible major coastal disasters, the Committee recommends that the Australian Government establish a grants program, the Coastal Natural Disaster Mitigation Program, to fund natural disaster mitigation projects in the Australian coastal zone.

The Committee also recommends that the Australian Emergency Management Committee (AEMC) consider the following issues:

- *improved data on coastal disaster risk assessment and vulnerable coastal sites*
- *improved access and evacuation routes for coastal communities*
- *improved coastal community awareness of and resilience to natural disasters*
- *improved coordination of coastal disaster mitigation arrangements with other initiatives currently underway, such as reviews of the Australian Building Code and land use planning policies to take into account climate change impacts*
- *improved early warning systems for coastal areas in the event of an extreme sea level event (storm surge, erosion, flooding)*

The Committee further recommends that the AEMC provide a report on these matters to the Ministerial Council for Police and Emergency Management.

Government response**Position:** Noted

Under Australia's constitutional arrangements, state and territory governments have primary responsibility for the planning and delivery of response to disasters and emergencies within their jurisdictions. Accordingly, each state or territory prepares and maintains its own natural disaster preparedness arrangements, managed through a state/territory emergency management plan (or similar) and covered by state legislation.

With regard to the proposed Coastal Natural Disaster Mitigation Program, the Australian Government's new Natural Disaster Resilience Program (NDRP) consolidates the existing Bushfire Mitigation Program (BMP), the Natural Disaster Mitigation Program (NDMP) and, from 2010-2011, the National Emergency Volunteer Support Fund (NEVSF). This new program will enable more strategic and targeted use of the funds available for activities that enhance disaster resilience, particularly in relation to climate change impacts. From 2009-10, Commonwealth funding for disaster mitigation works and support for emergency management volunteers will be approximately \$110 million over four years.

Within this national approach, states and territories will still have the flexibility to effectively meet the requirements of local communities threatened by disaster (including coastal disasters), in the strategic context of their risk priorities, recognising that these priorities may change over time.

More broadly, in November 2009 the Ministerial Council for Police and Emergency Management – Emergency Management (MCPPEM-EM) endorsed a Climate Change Adaptation Action Plan. The climate change adaptation strategies and projects outlined in the Plan will help ensure that emergency management planning and processes in Australia take climate change impacts into consideration. The Australian Government has already taken the lead on one of the Plan's proposals by hosting a National Climate Change and Emergency Management Roundtable in May 2010.

In December 2009 COAG agreed to the establishment of a new National Emergency Management Committee (NEMC) whose principal role is to examine and address emergency management. In 2010 NEMC's primary task has been the development of a comprehensive National Disaster Resilience Strategy for COAG's consideration.

The Australian Government welcomes the Committee's endorsement on page 97 of its report of the Critical Infrastructure Program for Modelling and Analysis (CIPMA) as a significant tool for analysing coastal disaster management capacity. CIPMA can make a valuable contribution to improved analysis on coastal disaster risk assessment work and identifying vulnerable coastal sites. For example, the program has undertaken modelling and analysis of the impacts of extreme weather events such as storm-surges and cyclones on critical infrastructure and local communities in coastal zones.

CIPMA can provide analysis that assists in (a) identifying critical coastal infrastructure that is vulnerable to climate change impacts and (b) better understanding the costs and benefits of adaptation to climate change.

Recommendation 15

The Committee recommends that the Australian Government, through the Ministerial Council for Police and Emergency Management, recognise the extensive Surf Life Saving Australia network and take appropriate steps to integrate this network into emergency services preparedness, planning, and response systems and activities.

Government response

Position: Noted

The Australian Government recognises the valuable contribution made by the Surf Life Saving Australia network. The network has a range of capabilities that can contribute to emergency response in the states and territories. Due to the differing needs and structures of the states and territories' emergency management agencies, initiatives to integrate the Surf Life Saving Australia network into the arrangements and activities of these agencies would best be undertaken on a case by case basis.

See also the response to Recommendation 14 in relation to the role and responsibility of the Ministerial Council for Police and Emergency Management – Emergency Management and its senior officials' group.

Recommendation 16

The Committee notes that major initiatives relating to climate change adaptation risk assessment and infrastructure are currently in progress. Given that much of Australia's infrastructure is in the coastal zone and the particular threats facing the coastal zone from climate change, involving significant socioeconomic costs, the Committee recommends that the Australian Government ensure there is a comprehensive national assessment of coastal infrastructure vulnerability to inundation from sea level rise and extreme sea level events.

Government response

Position: Agreed

There is currently a major climate change risk assessment underway, which is considering both physical and economic risks to infrastructure. The outcomes of this assessment will inform Australian Government adaptation action towards a more comprehensive assessment of the overall vulnerability of infrastructure.

The Australian Government's Critical Infrastructure Program for Modelling and Analysis (CIPMA) is a significant tool that can support national assessment of coastal infrastructure vulnerability. CIPMA has undertaken modelling and analysis of the impacts of extreme weather events such as storm-surges and cyclones on critical infrastructure and local communities in coastal zones.

The Government is also developing the CIPMA Climate Change Strategic Plan to guide research into climate change and critical infrastructure adaptation. A key component of this research will be to analyse the consequences of climate change impacts, including implications from sea level rise and extreme sea level events, on critical infrastructure. Any climate change work undertaken by CIPMA would be on a full cost recovery basis.

Recommendation 17

The Committee recommends that the Department of Climate Change, in collaboration with the Queensland Government, CSIRO and Indigenous communities in the Torres Strait, undertake a major study into the vulnerability of the Torres Strait to the impacts of climate change and provide assistance in the development of an adaptation plan.

Government response

Position: Agreed

In May 2010, the then Minister for Climate Change, Energy Efficiency and Water, Senator the Hon Penny Wong, released a major report assessing the vulnerability of Indigenous communities in the tropical north of Australia as a result of climate change impacts on health, environment, economic infrastructure, education and employment.

The Australian Government recognises the seriousness of current inundation and climate change facing Torres Strait communities. On 5 May 2010, the Government announced \$400,000 for new research into the impacts of climate change on Torres Strait communities. In addition, \$1 million was allocated for the operation of a new tidal gauge network in the Torres Strait.

The investment into new research will be undertaken collaboratively with the Torres Strait Indigenous community. It will also build upon existing work by the Queensland Government, James Cook University and the CSIRO.

In May 2010, the Torres Strait Regional Authority released a Torres Strait Climate Change Strategy. The Australian Government will work in partnership with Torres Strait community representatives and the Queensland Government to progress implementation of this Strategy.

Recommendation 18

The Committee recommends that the Australian Government give the five recommendations calling for information, studies and data, as proposed by the Torres Strait Regional Authority, early and urgent consideration with a view to their implementation.

Government response

Position: Agreed in principle

See the response to Recommendation 17.

Recommendation 19

The Committee recommends that the Australian Government request the Productivity Commission to undertake an inquiry into the projected impacts of climate change and related insurance matters, with a particular focus on:

- *insurance coverage of coastal properties, given the concentration of Australia's population and infrastructure along the coast*
- *estimates of the value of properties potentially exposed to this risk*
- *insurance affordability, availability and uptake*
- *existing and emerging gaps in insurance coverage, with a particular focus on coverage of coastal risks such as storm surge/inundation, landslip/erosion and sea level rise (including the combined effects of sea inundation and riverine flooding)*
- *the need for a clear definition of the circumstances under which an insurance claim is payable due to storm surge/inundation, landslip/erosion and sea level rise, as well as due to permanent submersion of some or all of the land*
- *the possibility of a government instrument that prohibits continued occupation of the land or future building development on the property due to sea hazard*
- *gaps in the information needed to properly assess insurance risk and availability of nationally consistent data on climate change risks*
- *examining the key actions for governments proposed by the Insurance Council of Australia and the Insurance Australia Group in their submissions to this inquiry*
- *possible responses to a withdrawal of insurance for certain risks or regions, noting the increased burden this could place on government and taxpayers*

Government response

Position: Agreed in principle

The Government agrees there is a need to investigate barriers to the effective operation of insurance markets in the coastal zone under a changing climate and related issues. Such a study would ideally be conducted in collaboration with state and territory governments and the Government is working with states and territories to develop a proposal.

Recommendation 20

The Committee notes the Council of Australian Governments initiative (through the Local Government and Planning Ministers Council) to develop state-specific climate change planning policies by mid 2011, to inform local governments and regional planning responses to climate change. The Committee recommends that the Australian Government ensure that the outcomes of this initiative are included as part of the action plan under the proposed new Intergovernmental Agreement on the Coastal Zone.

Government response

Position: Noted

The Australian Government acknowledges the importance of the initiative under the Local Government and Planning Ministers' Council to develop state-specific climate change planning policies and also a national framework for local government planning for climate change adaptation and mitigation.

The Government is also working collaboratively with other jurisdictions under COAG to improve capital city strategic planning systems. COAG has agreed that all states have in place plans that meet new national criteria, including climate change mitigation and adaptation, by January 2012. The COAG Reform Council will independently review the consistency of capital city strategic planning systems against the new criteria during 2010 and 2011.

As outlined under the response to Recommendation 44, these and other national initiatives across the intersecting themes of the coastal environment, urban development, climate change, and disaster management form part of a coherent national approach for the sustainable management of the Australian coastline under an effective planning regime.

The Government is currently mapping out a framework and process for the development of a national approach to coastal management which will be done collaboratively with other jurisdictions and important stakeholders such as the Australian Local Government Association (ALGA) whose President is a member of COAG.

Recommendation 21

The Committee recommends that the Australian Government consider the benefits of adopting a nationally consistent sea level rise planning benchmark and, if so, whether this be done on a statutory basis or otherwise. The outcomes of this consideration should then be

included as part of the action plan for the proposed Intergovernmental Agreement on the Coastal Zone.

Government response

Position: Agreed

The Australian Government believes there are significant benefits for governments, businesses and communities in considering the adoption of a nationally consistent sea-level rise planning benchmark. There are a number of options for achieving a common standard, including agreement across jurisdictions of a common methodology for developing a sea-level rise planning benchmark. This issue was discussed at the National Coastal Climate Change Forum, held in Adelaide in February 2010, and is the subject of on-going discussions between the Australian Government and state/territory jurisdictions as part of the development of a national coastal adaptation strategy and priorities.

See also the response to Recommendation 44.

Recommendation 22

The Committee recommends that the Building Code of Australia, including cyclone building codes, be revised with the objective of increasing resilience to climate change.

Government response

Position: Agreed in principle

The Australian Government recognises the need to update building regulations and to increase the resilience of the Building Code of Australia to climate change. Preliminary activities are underway to inform future changes to building regulations.

In late 2008 the Government provided \$161,000 to the Australian Building Codes Board to 'help ensure building codes take potential future effects of climate change into account'¹. This funding supported the development of a research report *An Investigation of Possible Building Code of Australia (BCA) Adaptation Measures for Climate Change*, which was provided to the Government in January 2009.

In mid 2009 the Building Ministers' Forum considered a report, *Review of the Intergovernmental Agreement for the Australian Building Codes Board*. The report included recommendations for the inclusion of property protection and climate change adaptation, provided that any regulatory proposals provided a clear net benefit to the community through a regulation impact statement. The Building Ministers' Forum noted that it is within the current mandate of the Australian Building Codes Board to consider climate change adaptation, but that further work and consultation would be needed regarding the inclusion of property protection in the Building Code of Australia.

Proposed measures to increase the level of stringency in the Building Code of Australia to address climate adaptation will be subject to the COAG Principles of Good Regulatory

¹ Source: Media Release The then Minister for Climate Change and Water, Senator the Hon Penny Wong, 6 November 2008, Ref. PW 231/08

Process, which include a regulation impact assessment and test of greatest net benefit for the community.

On 30 July 2010, the Australian Building Codes Board released for public comment a regulation impact statement investigating the benefits and costs of proposals to revise the Building Code of Australia requirements for construction in cyclone affected regions. The investigation included consideration of extending the current boundaries of the various cyclone regions and increasing the current wind design speeds within those regions, taking into account past wind events and future climate change impacts. The public comments closed on 17 September 2010 and will inform the final regulation impact statement, which when completed, will be considered by the Board in early 2011.

Recommendation 23

Noting the gap in research on legal issues and climate change impacts on the coastal zone, the Committee recommends that the Australian Government request that the Australian Law Reform Commission undertake an urgent inquiry into this area, with particular focus on:

- *clarification of liability issues with regard to public authorities acting or not acting in terms of climate change adaptation and possible coastal hazards (eg legal basis to implement adaptation strategies of protect, redesign, rebuild, elevate, relocate and retreat)*
- *clarification of liability issues with regard to private property holders acting to protect their properties from the impacts of climate change*
- *legal issues associated with the impacts of climate change on existing developments, as opposed to planned new developments*
- *mechanisms to ensure mandatory risk disclosure to the public about climate change risks and coastal hazards (eg legislation harmonised across all states requiring mandatory disclosure of all known and predicted risk data by state and local governments to property purchasers during property conveyance and title search processes)*
- *whether there should be broader indemnification of local government authorities*

Government response

Position: Agreed in Principle

The Australian Government will engage with the legal profession and research bodies as appropriate, on legal issues associated with climate change impacts in the coastal zone.

The Australian Government recognises the importance of addressing knowledge gaps in relation to legal issues and climate change impacts on the coastal zone, including the clarification of liability issues. Where there are national implications cutting across jurisdictional boundaries, the Australian Government will seek the agreement of the states and territories and ALGA to pursue these issues under a COAG work agenda.

Recommendation 24

The Committee recommends that the Australian Government, through the Council of Australian Governments process, examine the establishment of a system of national coastal zone environmental accounts, employing the model developed by the South East Queensland Healthy Waterways Partnership.

Government response

Position: Agreed in principle

The Australian Government supports the concept of national environmental accounts and is exploring how they might be best implemented, both in terms of the institutional arrangements, including any necessary involvement of COAG, and the technical arrangements, including how the information may be collected and reported. The Government's consideration of the concept of national environmental accounts will also have regard to the government response to the Final Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999.

In May 2010 the then Minister for Environment Protection, Heritage and the Arts, the Hon Peter Garrett AM MP announced a new initiative on environmental information. The National Plan for Environmental Information is a first step towards reform of Australia's environmental information base, including that for the coastal zone.

Recommendation 25

The Committee recommends that the Australian Government, through the Australian Bureau of Statistics, ensure that:

- *accurate and consistent methods of measuring the numbers and the impact of tourists and other non-residents in coastal areas are undertaken to enable resources to be better matched with demand for infrastructure and services*
- *improved data on long-term demographic trends in coastal areas is made available to assist in coastal zone planning and management*

Government response

Position: Noted

There are currently no regular statistical sources known to the Australian Bureau of Statistics (ABS) which provide comprehensive estimates of the impact of tourists and other non-residents in areas. The closest potential sources are:

- Census of Population and Housing information which includes all persons (including visitors) counted in an area on Census night. These counts are available only once every five years and apply to a night in August, which for most coastal areas, would be outside the peak tourism period, and

- one-off studies undertaken (or commissioned) by local organisations for individual regions at particular points in time (but usually not regular and often not using consistent methods and timing from area to area).

Population Projections for areas below state and territory levels are not produced by the ABS. State and territory governments produce sub-state/territory population projections. Data are usually produced and available from state/territory Planning Departments (and equivalent).

The ABS is able to provide accurate and consistent measures for coastal areas as follows:

- annual estimates of usual resident populations for Statistical Local Areas (SLA) at 30 June each year (by age and sex and including estimates of the numbers of births and deaths),
- information on the number and characteristics of people counted on Census night by Census Collector district and higher geographic levels from the five yearly Census of Population and Housing,
- information on the working population attributed to SLAs as counted in the five yearly Census of Population and Housing, and
- quarterly information on tourist accommodation for SLAs covering room capacity and occupancy rates, accommodation takings (\$) and average length of stay (days).

The Committee's report canvasses the issue of supplementary data collection that might be undertaken over the Christmas/New Year period by the ABS. It should be noted that the existing Population and Housing Census costs in excess of \$400 million to conduct. If the coastal population outside the capital cities now represents 30% of Australia's population (as indicated in paragraph 5.40 of the report), and this population is boosted significantly by tourism over the proposed reference period, the potential cost of such an undertaking is clearly very large and not within the existing resource capacity of the ABS.

However, it may be possible to model estimates and/or projections of population numbers by SLAs for coastal regions using ABS annual SLA Population Estimates, state/territory SLA population projections, ABS quarterly Tourist Accommodation occupancy and length of stay data, and other sources. This type of analysis is not in the domain of the ABS, but could be commissioned through academic or private research sources.

Recommendation 26

The Committee recommends that the Australian Government:

- *expand the list of national priority areas identified under the Caring for our Country program to include climate change impacts on biodiversity*
- *give consideration in future funding rounds to projects that:*
 - *involve working with state/territory and local governments to improve coastal land use planning*
 - *seek to address loss of coastal habitat as a result of coastal development and population pressures*

Government response

Position: Noted

The Australian Government's Caring for our Country initiative acknowledges the significance of climate change in its overarching goal - to achieve an environment that is healthier, better protected, well managed, resilient, and provides essential ecosystem services in a changing climate.

Caring for our Country identifies six national priority areas under this goal, including biodiversity and coastal environments. There are opportunities for funding projects that take account of climate change impacts on biodiversity under the initiative.

The Caring for our Country initiative also provides a number of opportunities for funding in coastal areas to address water quality issues, coastal rehabilitation and community engagement. A National Local Government Facilitator has been appointed to help Local Government and Natural Resource Management organisations work together more efficiently in delivering natural resource management activities, including in coastal areas to ensure consideration is given to local planning frameworks.

In addition, research undertaken through the National Climate Change Adaptation Research Facility (NCCARF) will provide guidance on how to target future on-ground investments that cost-effectively target climate change impacts on biodiversity.

Recommendation 27

The Committee recommends that, in seeking to expand the area protected within Australia's National Reserve System (NRS) under the Caring for our Country program, the Australian Government focus on high biodiversity coastal habitat, including more effective off-reserve coastal zone conservation and expanded coastal reserves that provide larger buffer zones. In undertaking this initiative, the Australian Government should continue to work with state/territory and local governments, Indigenous groups, conservation organisations, private landholders and other stakeholders to ensure that these protected areas are added to the NRS in a timely manner.

Government response

Position: Noted

Australia's National Reserve System (NRS) is a nation-wide network of reserves especially set up to protect Australia's unique natural environment for current and future generations. The aim is to protect a comprehensive, adequate and representative range of examples within each of Australia's 85 bioregions.

Under the Caring for our Country program, the overriding priority for expanding the NRS is to increase the protection of bioregions with less than ten percent representation in the NRS. Within these bioregions the priority is to include unrepresented regional ecosystems, under-represented regional ecosystems, and habitat for nationally threatened ecological communities and species.

While areas of coastal habitat do occur within these priority bioregions, coastal habitat is comparatively well represented within the NRS. The Australian Government, under the Caring for our Country program, will continue to work with all stakeholders to ensure the NRS is a comprehensive, adequate and representative sample of Australia's natural environment including those coastal areas which remain poorly reserved.

Australia's Strategy for the National Reserve System 2009 - 2030 seeks to develop the NRS to adapt to climate change. Strategies include an integrated approach to protected areas taking a whole of landscape approach to adjust to competing land use and build resilience using a variety of on-reserve and off-reserve mechanisms.

Recommendation 28

The Committee recommends that the Australian Government, in considering its response to the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), take into account concerns about the EPBC Act and coastal zone management raised as part of this inquiry—in particular, the need to address the cumulative impacts of coastal development. This could be achieved by numerous means, including:

- *a land clearing trigger*
- *defining coastal ecosystems as a matter of national environmental significance*
- *making more use of landscape-scale assessments through strategic assessments or bioregional plans*

Government response

Position: Noted

The Australian Government is committed to ensuring that the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC)* provides an effective framework for meeting environmental challenges and delivering ecologically sustainable development. The Final Report of the Independent Review of the EPBC Act (Hawke Report) was tabled in Parliament on 21 December 2009.

The Government notes that a recurring theme raised in submissions to the Independent Review and public consultations was that the EPBC Act and its current administrative arrangements have difficulties in dealing with cumulative impacts.

The Government notes the Hawke Report's view that, in practice, consideration of cumulative impacts is best achieved through management by bioregional plans, strategic assessment and recognition of critical habitat in these plans and assessments, rather than through case-by-case approaches. This view extends to the cumulative impacts of coastal zone development. The Australian Government will continue to consider the most appropriate mechanism(s) for addressing cumulative impacts of proposed actions.

The Government recognises that the Hawke Report also highlights the importance of cooperation between the Australian Government and the states and territories for the integrated planning and management of coastal development.

The Government is carefully considering the Hawke Report, its recommendations and their implications, and remains committed to responding to the report.

Recommendation 29

The Committee recommends that the Australian Government:

- *continue working with the Queensland Government and local councils under the existing Great Barrier Reef Intergovernmental Agreement to improve land use planning in the catchment*
- *commission analysis of the Great Barrier Reef as a case study for integrated coastal zone management (ICZM) in Australia. The study should draw out possible directions for ICZM in Australia with regard to:*
 - *addressing challenges associated with climate change impacts on biodiversity*
 - *declining water quality from catchment runoff and loss of coastal habitat from coastal development and population pressures*
 - *building cooperative partnerships between Commonwealth, state and local government, and other stakeholders*
 - *establishing governance and institutional frameworks*

Government response

Position: Agreed in principle

The Great Barrier Reef Outlook Report 2009 (Outlook Report) identifies climate change, coastal development affecting coastal ecosystems and declining water quality due to catchment runoff as the most significant factors affecting the outlook for the Great Barrier Reef.

The Australian and Queensland governments in their response to the *Outlook Report* have identified the need for a more strategic approach to land use planning and management in the Great Barrier Reef catchments. The 2010-11 Federal Budget provided \$3.8 million to address risks identified in the *Outlook Report*.

In July 2009, the Commonwealth and Queensland governments signed a new Great Barrier Reef Intergovernmental Agreement, providing a framework for governments to work together to ensure the protection and management of the Great Barrier Reef, including from pressures such as coastal development and catchment water quality. At the first meeting of the Great Barrier Reef Council under the new Agreement, the governments agreed to:

- *do more to manage the modification of important coastal habitat adjacent to the Reef, including identifying opportunities for strategic assessments under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) in relation to areas adjacent to the Reef as a means of improving environmental outcomes and reducing regulatory complexity;*
- *improve the quality of water entering the Reef through complementary and coordinated action;*

- work together to build and maintain resilience of the Reef to the impacts of climate change; and
- investigate opportunities for improving coordination, sharing and communication of research across investors and governments.

Recommendation 30

The Committee recommends that the Australian Government urgently commission a detailed climate change vulnerability assessment for Kakadu National Park, in consultation with the park's traditional owners and other stakeholders and drawing on the results of the 'first pass' National Coastal Vulnerability Assessment of the park. This assessment should specifically focus on the vulnerability of Kakadu's freshwater wetland systems to saltwater intrusion. A key outcome of the assessment should be the development of a Climate Change Action Plan for Kakadu National Park, with coordinated input from the Australian Government and Northern Territory Government, Indigenous land owners, researchers and other stakeholders.

Government response

Position: Agreed

The Department of Climate Change and Energy Efficiency has commissioned a climate change vulnerability assessment on *Kakadu: vulnerability to climate change impacts*. A major objective of this study is to assess the risk of saltwater intrusion and extreme rainfall events under a changing climate on the low lying coastal wetlands of Kakadu National Park. The project is also identifying and evaluating climate change adaptation options for use by park management, stakeholders including traditional owners, and government authorities. The final project report is expected to be released in 2010.

This study builds upon climate change vulnerability assessments for World Heritage Areas (*Implications of climate change for Australia's World Heritage properties: a preliminary assessment*) and Indigenous communities in tropical northern Australia (*Risks from Climate Change to Indigenous Communities in the Tropical North of Australia*).

Parks Australia has developed the Parks Australia Climate Change Strategic Overview 2009-2014 that identifies the principles and objectives that will guide Parks Australia's response to managing the consequences of climate change on Commonwealth terrestrial reserves (including Kakadu) over the next five years.

Consistent with this Strategic Overview, the Kakadu National Park Board of Management has developed and endorsed the Kakadu National Park Climate Change Strategy 2009-2014. The Strategy draws upon research findings to date and identifies key actions and timeframes to be implemented by Parks Australia and the Board of Management. The Strategy will be reviewed on a rolling basis to take account of new information or changes in policy directions.

Recommendation 31

The Committee recommends that the Australian Government:

- *require that all Ramsar listed wetlands have effective and operational management plans and that resources are allocated by governments to monitor the implementation of these plans*
- *increase the number of coastal wetlands classified as Ramsar sites, particularly those classified as Nationally Important wetlands*
- *work with state and territory governments through the Natural Resource Management Ministerial Council, and in consultation with other stakeholders, to improve the management and monitoring of coastal wetlands, particularly Ramsar sites located in close proximity to development*
- *improve public awareness about what actions impacting on a Ramsar wetland should be referred to the Minister under the Environment Protection and Biodiversity Conservation Act 1999*
- *ensure that the National Guidelines for Ramsar Wetlands also include modules on the process for nominating Ramsar wetlands*
- *develop a climate change action plan for coastal Ramsar wetlands and Nationally Important wetlands*

Government response

Position: Agreed in Principle

The Australian Government seeks to ensure the wise use of all wetlands, not just those listed as Ramsar sites or identified in the Directory of Important Wetlands in Australia.

The Australian Government is continuing to provide national wetland policy leadership and direction with the aim of improving management of wetlands. Strategic direction and guidance for national management of Ramsar and other wetlands is currently provided through the Wetlands and Waterbirds Taskforce (WWTF), a multi-jurisdictional advisory group reporting to the Natural Resource Management Ministerial Council. The WWTF provides advice and facilitates national coordination and support for wetland issues, as well as informing national policy and program development.

The Final Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999 (Hawke Report) also makes a number of recommendations concerning ‘Protected Areas and Management Planning’ which relate to management plans for Ramsar sites. Future management planning for Ramsar sites will be guided by the Government’s response to the Hawke Report’s recommendations.

The Ramsar Convention’s Scientific and Technical Review Panel is preparing guidance for parties to the Convention that will assist in responding to the impact on wetlands of climate change. This guidance will assist Australia to better respond to the threats posed by climate change.

Recommendation 32

The Committee recommends that the Australian Government:

- *work through the Natural Resource Management Ministerial Council and in consultation with Birds Australia and other stakeholders to implement a National Shorebirds Protection Strategy. The strategy should focus on tightening restrictions on beach driving and access to bird breeding habitat, preserving habitat, identifying suitable buffer zones for migration of coastal bird habitat, managing pest animals and increased public education*
- *provide further funding to Birds Australia and other research groups to ensure continued monitoring and data collection with regard to migratory and resident shorebirds*
- *provide funding to strengthen partnerships between domestic and international shorebird conservation groups to increase awareness and conservation efforts in other countries*
- *commission a detailed climate change impact study on Australia's migratory and resident shorebirds*
- *in its consideration of amendments to the Environment Protection and Biodiversity Conservation Act 1999 following the independent review, give consideration to the formal listing of coastal shorebird and sea bird communities as threatened species/ecological communities under the act*

Government response

Position: Agreed in principle

The Australian Government generally supports the Committee's desire to ensure adequate protection for shorebirds, both within Australia and internationally.

The Australian Government works extensively with the states, territories and non-government organisations, including Birds Australia, to promote the conservation of shorebirds, both within Australia and across the East Asian – Australasian Flyway.

A Wildlife Conservation Plan for Migratory Shorebirds exists under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act), and provides a nationally coordinated approach to migratory shorebird conservation.

The Wetlands and Waterbirds Taskforce (WWTF), which was formed under the Natural Resource Management Ministerial Council, is currently investigating the adequacy of available data on migratory shorebird populations in Australia to meet Australia's national and international obligations and is aiming to report on the outcomes of this work during 2010.

An Australian Research Council linkage grant proposal, to which the Australian Government is contributing, began in July 2010 and is aimed at understanding and reversing the rapid declines in Australia's shorebirds. The initial element of this project is to robustly identify population trends in shorebirds across Australia by combining state space models and time series models using all existing data. It is envisaged that these analyses, together

with the investigation by the Wetlands and Waterbirds Taskforce (as referred to above), will provide a clear set of funding priorities for future shorebird research and monitoring projects in Australia.

The Australian Government has also initiated and funded much shorebird conservation activity at the international level.

The East Asian-Australasian Flyway Partnership (EAAFP) was established and largely funded by the Australian Government. The partnership Secretariat was initially hosted by Australia, before being transferred to the Republic of Korea in 2009. The EAAFP provides a framework for international cooperation for the conservation of migratory waterbirds and the sustainable use of their wetland habitats in the flyway. The partnership supports the development of a Waterbird Site Network (for sites of international importance) as well as a range of activities to increase knowledge and raise awareness of migratory waterbirds, while building capacity for the sustainable management and conservation of migratory waterbird habitat along the flyway.

The Department of Sustainability, Environment, Water, Population and Communities currently administers a \$300,000 program to establish an Indonesian Bird Banding Scheme. The project comprises an annual training program in Indonesia, funded through the Australian Agency for International Development (AusAID) and promotes regional environmental leadership in the region as well as providing an invaluable capacity building opportunity for Indonesia.

In relation to the Committee's recommendations on threatened species listing, the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) prescribes a scientific process for identifying species and ecological communities that are threatened. Additional species and ecological communities can be nominated for review of their conservation status at any time and should be based on clear evidence about the status of that particular species or ecological community.

The Final Report of the Independent Review of EPBC Act (Hawke Report) also makes a number of recommendations relating to the identification and listing of threatened species and ecological communities. The Government's response to the Hawke Report will include consideration of those recommendations.

Recommendation 33

The Committee recommends that the Australian Government:

- *work with the Natural Resource Management Ministerial Council and other stakeholders to develop an action plan to:*
 - *ensure that coastal buffers, coastal habitat corridors and high ecological value areas are identified and included in Commonwealth, state and local government management processes*
 - *ensure appropriate infrastructure planning and that land is made available to allow for the migration of coastal ecosystems*
 - *promote cooperative ecosystem-based planning and management approaches across jurisdictions*

- *implement a nationally consistent coastal and marine biodiversity monitoring and reporting framework*
- *develop a targeted strategy to address key gaps in knowledge of coastal and marine biodiversity and improve access and sharing of knowledge and data*
- *develop regional climate change adaptation policies and plans and integrate them into coastal and marine bioregional planning processes*
- *ensure that all future national coastal zone policy incorporates these priorities, as well as future revised national sustainability, biodiversity, climate change and environmental policy frameworks*

Government response

Position: Agreed in principle

The Australian Government is pursuing a strong reform agenda through the Natural Resource Management Ministerial Council, the Local Government and Planning Ministers' Council, and through COAG that will provide the basis for a national approach to coastal management spanning coastal environment, urban development, climate change, infrastructure, and disaster management. The national coastal approach will clarify roles and responsibilities across governments and the private sector and identify priorities for collaborative action.

With regard to the knowledge gaps highlighted by the committee, the Australian Government is pursuing a number of other important initiatives that will inform the development of a national coastal plan, including:

- the then Minister for Environment Protection, Heritage and the Arts announced on 19 February 2010 the establishment of the National Environment Research Program (NERP). The NERP will provide around \$20 million each year for environmental research to improve our capacity to understand, manage and conserve Australia's unique biodiversity and ecosystems. In taking forward this initiative, policy questions to be addressed by soon to be established research hubs have been identified. These questions include understanding and management of threats to coastal ecosystems, and the management of housing development in fragmented coastal areas to ensure maintenance of biodiversity and natural ecosystems.
- activities under the Australian Government's Climate Change Adaptation Program for improving knowledge of coastal and marine biodiversity.
- recent national reports that have improved our understanding of the implications of climate change for marine and coastal biodiversity, in particular an assessment of the vulnerability of our biodiversity, *Australia's Biodiversity and Climate Change, Climate Change Risks to Australia's Coast: a first pass national assessment*, and the report, *A Marine Climate Change Impacts and Adaptation Report Card*, developed by the CSIRO with Australian Government support.
- improving access to coastal, estuarine and marine information through web-based directories, search engines and databases such as OzCoasts, BlueNet and the Australian Ocean Data Centre, and indicators identified by the National Land and Water Resources Audit.

Recommendation 34

The Committee recommends that coastal based Natural Resource Management bodies seeking funding under the Caring for our Country program have coastal and marine priorities, as well as coastal zone management principles integrated in their management plans.

Government response

Position: Agreed in Principle

Regional Natural Resource Management organisations have formed a crucial partnership with the Australian Government to facilitate the integrated delivery of Caring for our Country at the regional level. The Australian Government identifies priorities and targets for Caring for our Country funding nationally through the annual business plan. Coastal and marine priorities are included in the 2010-11 business plan. However, while many Natural Resource Management organisations have a regional plan that outlines regional priorities, activities and resourcing, the Australian Government does not identify priorities for, accredit or approve these plans.

Recommendation 35

The Committee recommends that the Australian Government, in consultation with Indigenous Australians and other coastal stakeholders, commission work to provide a national repository identifying Indigenous and non-Indigenous cultural heritage sites in vulnerable coastal areas.

Government response

Position: Noted

Through the Australian Heritage Council, the Australian Government has a well established process for listing, protecting and managing cultural heritage sites, including in vulnerable coastal areas. Under this arrangement, the Australian Government's responsibility for heritage relates to World Heritage and National Heritage listed places, which are matters of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999*. The state and territory governments maintain heritage registers and are primarily responsible for heritage management, including the day to day management of most places on the World and National Heritage Lists.

The Australian Government commissioned the Australian National University to undertake a study on the potential impacts of climate change on Australia's World Heritage properties. The resulting report *Implications of Climate Change on Australia's World Heritage properties: A preliminary assessment* was released on 2 August 2009. The study is the first comprehensive report by any country into the impacts of climate change on its World Heritage properties, demonstrating Australia's leadership on both climate change and World Heritage issues. The report finds that climate change impacts, including reduced rainfall, higher sea and land surface temperatures, more severe storm events, ocean acidification and rising sea levels are all expected to impact significantly on the values of Australia's World Heritage properties.

The report has been provided to Australia's World Heritage property managers to help integrate climate change considerations into their management planning. Many World Heritage properties are already developing adaptation plans and practices. For example, the Great Barrier Reef Marine Park Authority has published *Climate Change and the Great Barrier Reef: A Vulnerability Assessment*, and is implementing an \$8.9 million Climate Change Action Plan, funded under the Climate Change Adaptation Program.

Recommendation 36

The Committee recommends that the Australian Government urgently commission further research on socioeconomic vulnerability to climate change impacts, particularly in coastal communities.

Government response**Position:** Agreed

The Government recognises that there is a need to better understand the risks that climate change will bring to communities, particularly in the coastal zone.

The National Climate Change Research Facility's Settlements and Infrastructure National Adaptation Research Plan (NARP) research priorities for vulnerable coastal communities include socio-economic questions. These include the role of perceptions of risk in influencing adaptive capacity; and the extent to which demographic pressures and change to coastal settlement types might affect vulnerability in the coastal zone. In addition, the NARP identifies a range of cross-cutting issues that include socioeconomic dimensions of adaptation.

A wide range of research proposals have been received following the announcement of the Settlements and Infrastructure call for proposals in March 2010. These proposals are currently being assessed for funding through the National Adaptation Research Grants Program.

The National Climate Change Adaptation Research Facility has also developed a NARP on Social, Economic and Institutional Dimensions. The key research topics in this NARP are: understanding vulnerability and adaptive capacity; understanding and overcoming the barriers and limits to adaptation; and understanding governance, institutions and decision-making. A call for proposals against this NARP is expected before February 2011.

The Government is developing the Critical Infrastructure Program for Modelling and Analysis (CIPMA) Climate Change Strategic Plan that will seek to address information gaps on the socioeconomic vulnerability of coastal communities from climate change impacts on critical infrastructure. The Strategic Plan will be used to focus and direct research to address the information needs of critical infrastructure owners and dependent communities in coastal areas from climate impacts.

Recommendation 37

The Committee recommends that the Australian Government:

- *consider the Victorian Government's model of a sustainable coastal community as part of the proposed Intergovernmental Agreement on the Coastal Zone to be concluded through the Council of Australian Governments*
- *ensure an early response to the recommendations provided in the Sustainability for Survival: Creating a Climate for Change—Inquiry into a Sustainability Charter report and the Sustainable Cities report*

Government response

Position: Agreed in principle

The Australian Government recognises the need for national leadership and cooperation between all levels of government to enable a coordinated national approach to the management of Australia's coastal zone, integrating the themes of the coastal environment, urban growth, climate change, infrastructure and disaster management under an improved planning regime. Work to progress a national approach to coastal management is proceeding through initiatives under COAG, the Natural Resource Management Ministerial Council and the Local Government and Planning Ministers' Council.

A Major Cities Unit has been established by the Australian Government to provide advice to the Australian Government and Infrastructure Australia on issues of policy, planning and infrastructure that have an impact on our cities and suburbs. The Unit aims to provide coordinated action across all spheres of government, the private sector and the community to help secure the nation's economic, social and environmental wellbeing through our cities.

Also, as outlined in the response to Recommendation 20, COAG has agreed that, by 1 January 2012, all states will have in place capital city strategic planning systems that meet new national criteria, including climate change mitigation and adaptation. Nearly all of Australia's capital cities are on the coast, and many have experienced high levels of growth in recent decades. The COAG Reform Council will independently review the consistency of capital city strategic planning systems against the new criteria during 2010 and 2011.

The Australian Government is considering its position on the issues raised in the two Parliamentary Inquiries (into a sustainability charter and sustainable cities) in light of recent developments (such as the Independent Review of the *Environment Protection and Biodiversity Conservation Act 1999*, water reform processes, the Report on Australia's Future Tax System and work to develop a Population Strategy for Australia) and intends to finalise its response as soon as possible.

Recommendation 38

The Committee recommends that the Australian Government request that the Centre for Excellence for Local Government ensure a particular focus on capacity building for coastal local councils. Capacity building should focus on addressing issues relating to:

- *population growth pressure*

- *planning and design of new infrastructure*
- *integrated coastal zone management*
- *climate change impacts and adaptation*

Government response

Position: Noted

The Australian Government established the Australian Centre of Excellence for Local Government (the Centre) in 2009 to enhance professionalism and skills, showcase innovation and best practices and facilitate a better informed policy debate.

The Centre will encourage the wider adoption of innovative practices and solutions to help address current and emerging issues and challenges facing the sector. That could include helping local government equip themselves with the tools and expertise to deal with climate change and to address the other challenges outlined in Recommendation 38.

The Centre is independent of government and its board of management will need to make its own decisions about how it can assist local government deal with climate change challenges. The Australian Government has a direct interest in the Centre's work and has built a strong relationship with the Centre and its consortium partners. But ultimately the Centre's work on climate change is a matter for the Centre and its consortium partners.

In addition, the Government's Local Government Reform Fund (LGRF) aims to strengthen local governments' capacity to plan, fund and manage its infrastructure over the long term. Projects which assist local government to respond to climate change have been funded under the LGRF.

Recommendation 39

The Committee recommends that the Australian Government give consideration to establishing a separate funding program for infrastructure enhancement in coastal areas vulnerable to climate change. Such funding should be provided according to a formula requiring contributions, either financial or in-kind, from state governments and relevant local government authorities.

Government response

Position: Noted

The Government believes that adapting to the impacts of climate change is a shared challenge and a shared responsibility. The Government has released the position paper *Adapting to Climate Change in Australia*, which sets out the Australian Government's vision for adapting to the impacts of climate change and proposes practical steps to realise this vision. In this position paper, the Government has identified both infrastructure and coastal management as national priorities for adaptation action.

However, the Government does not agree that establishing a separate fund for infrastructure enhancement in vulnerable coastal areas is the best approach to addressing the need.

The Government has contributed over \$1 billion for local infrastructure works such as water conservation and water recycling plants through the Regional and Local Community Infrastructure Program. The priorities for investment are appropriately determined at a local level. In 2010-11, the Government has allocated \$2 billion in Local Government Financial Assistance Grants that are untied and can be used to address climate change priorities.

In addition, significant action that supports coastal areas that are vulnerable to climate change has already been implemented by the Government through specific climate change programs. One such example is the Clean Sustainable Skills package.

Recommendation 40

The Committee recommends that the Australian Government undertake an awareness campaign to alert coastal communities to the key challenges facing the coastal zone and the value of community engagement in addressing these challenges. The campaign should aim to build understanding and awareness of coastal management issues to encourage the continued membership and support of volunteer networks in the coastal zone.

Government response**Position:** Agreed

The public release by the then Minister for Climate Change and Water on 14 November 2009 of *Climate Change Risks to Australia's Coast: a first pass national assessment* is serving to raise substantially the awareness of coastal communities to challenges of climate change, including the effects of coastal inundation from future projected sea-level rise. This was built on with the convening of the National Coastal Climate Change Forum in Adelaide on 18-19 February 2010. The Forum included participation by representatives of Australian, state and local governments, business and coastal community groups and stakeholders. The issue of raising community awareness will continue to be progressed as part of the development of a national coastal climate change adaptation strategy and priorities.

The Coasts and Climate Change Council, chaired by Professor Tim Flannery, is to provide advice to the Minister for Climate Change and Energy Efficiency on key issues in communicating coastal climate change issues across vulnerable communities.

The Australian Government's Community Coastcare 2007 election commitment is providing \$100 million over five years through Caring for our Country to improve the protection and restoration of coastal environments through grants to community and other relevant organisations. The priorities for this funding include increasing community engagement and capacity to protect, manage and restore coastal areas, including coastal hotspots, and increase awareness of the environmental impacts of climate change and development in coastal areas.

The Australian Government through Caring for our Country currently invests in facilitating Coastcare Week, which occurs in December annually. In 2009 Coastcare Week was promoted as part of the "Life on the Edge" campaign that promoted and increased awareness about our coasts, how we use them and what we can do to protect them.

The 2010-11 Caring for our Country business plan also recognises the great efforts of coastal communities in tackling erosion and climate threats to Australia's coastline. To help them, funding of \$29 million is available to support ongoing volunteer Coastcare activities.

Since 2008, the Attorney-General's Department has conducted regular community consultation on possible climate change impacts in the Indian Ocean Territories.

Recommendation 41

The Committee recommends that the Australian Government nominate 2012 as the Year of the Coast, to further build community awareness about the issues facing the coastal zone. The Australian Government should work with coastal stakeholders, volunteer groups and the general community in determining key activities as part of this initiative.

Government response**Position:** Noted

The Australian Government notes the Committee's interest in pursuing a stronger engagement of the community in efforts to improve management and use of coastal resources. The Government will consider the Committee's recommendation for 2012 to be the Year of the Coast in the context of broader government priorities and in moving forward with states and territories as part of a coordinated national approach to coastal zone management.

The Australian Government is already making a significant investment in community engagement and capacity in this area as part of the Community Coastcare election commitment. This program is providing grant funding to community and other relevant organisations for a range of activities, as described in the response to Recommendation 40.

Recommendation 42

The Committee recommends that the National Coastal Zone Database be expanded over time to include information on environmental data and management and planning information relevant to the coastal zone.

Government response**Position:** Agreed in Principle

As outlined in the response to Recommendation 11, a process has commenced to significantly upgrade the OzCoasts website, hosted by Geoscience Australia, to serve as a central web site for public access to coastal climate change risk information, including underpinning data such as digital elevation and mapping information. This site will have a link to the Department of Climate Change and Energy Efficiency website.

The Australian Government supports the establishment of national environmental datasets and has commenced development of a National Plan for Environmental Information to coordinate the collection and management of environmental data at a national level. The

2010-11 Federal Budget provided \$18.0 million over four years to develop the National Plan for Environment Information.

Recommendation 43

The Committee recommends that the Australian Government provide funding support for the ongoing activities of the Australian Coastal Alliance in providing a national information and communication interface between research organisations and local government authorities and other coastal stakeholders.

Government response

Position: Noted

There are currently no arrangements to fund the Australian Coastal Alliance, but the Australian Government welcomes the input of the Australian Coastal Alliance and other stakeholders to the development of national priorities for coastal adaptation research. The National Climate Change Adaptation Research Facility (NCCARF) and its associated Networks have been established by the Australian Government to serve as a bridge between researchers and stakeholders and to generate information that can be used by decision makers.

The issue of vulnerable coastal communities is a priority research area in the *National Climate Change Adaptation Research Plan: Settlements and Infrastructure*, and is an important component of the Adaptation Research Network for Settlements and Infrastructure. Coastal management is also one of the national priorities identified for adaptation action in the Australian Government position paper *Adapting to Climate Change in Australia* (February 2010).

Recommendation 44

The Committee recommends that the Australian Government, in cooperation with state, territory and local governments, and in consultation with coastal stakeholders, develop an Intergovernmental Agreement on the Coastal Zone to be endorsed by the Council of Australian Governments. The intergovernmental agreement should:

- *define the roles and responsibilities of the three tiers of government—federal, state and local—involved in coastal zone management*
- *include a formal mechanism for community consultation*
- *incorporate principles based on strategic regional coastal planning and landscape scale/ecosystem based coastal zone management*
- *include an effective implementation plan with resources allocated to ensure that objectives are realised*
- *be overseen by a new Coastal Zone Ministerial Council*
- *be made public*

Government response

Position: Agreed in Principle

The Australian Government recognises the need for national leadership and cooperation between all levels of government to develop an integrated, cohesive and effective national approach for the management of Australia's coastal zone. To this end, the Government will seek to work through COAG to develop a national coastal adaptation agenda, which would provide an avenue to progress many of the outcomes sought through the proposal to develop a new *Intergovernmental Agreement on the Coastal Zone*.

The Government has committed, through its 2007 *Caring for our Coasts* election commitment, to help prepare coastal communities for the impacts of climate change and to provide a national focus on coastal climate change adaptation.

A number of specific initiatives are already underway that address this commitment, including:

- The Government has released its position paper *Adapting to Climate Change in Australia* (February 2010), which sets out the Australian Government's vision for adapting to the impacts of climate change and proposes practical steps to realise this vision. The paper identifies coastal management as a national priority for adaptation action.
- Through COAG, the Government is working collaboratively with other jurisdictions to develop a national agreement on the sustainable management of our cities, a national agenda for climate change adaptation, and a national approach to natural disaster preparation and management.
- Through the Local Government and Planning Ministers' Council, the Government is working with state, territory and local governments to develop a national framework to inform local government and regional planning responses to climate change.
- Through the Natural Resource Management Ministerial Council, the Government is working with state and territory governments to:
 - review the *National cooperative approach to integrated coastal zone management (ICZM): framework and implementation plan* and address implementation challenges
 - identify and address the most pressing priorities for mitigating the impacts of climate change on natural resources in the coastal zone
 - promote cooperative ecosystem-based planning and management approaches across jurisdictions
 - implement a nationally consistent coastal and marine biodiversity monitoring and reporting framework
 - develop a targeted strategy to address key gaps in knowledge of coastal and marine biodiversity and improve access and sharing of knowledge and data.

Recommendation 45

The Committee recommends that the Australian Government:

- *ensure that the Intergovernmental Agreement on the Coastal Zone forms the basis for a National Coastal Zone Policy and Strategy, which should set out the principles, objectives and actions that must be undertaken to address the challenges of integrated coastal zone management for Australia*
- *establish a broad based National Catchment-Coast-Marine Management program to provide funding for initiatives relating to:*
 - *sustainable coastal communities*
 - *climate change and biodiversity*
 - *implementation of projects to progress integrated coastal zone management*
- *establish a National Coastal Zone Management Unit within the Department of Environment, Water, Heritage and the Arts to support the implementation of these national initiatives*
- *develop a Coastal Sustainability Charter based on the Victorian Government model*

Government response

Position: Noted

This recommendation will be considered in the context of activities outlined in the response to recommendation 44.

Recommendation 46

The Committee recommends that the Australian Government establish a National Coastal Advisory Council to:

- *provide independent advice to government*
- *advise the new coastal unit within the Department of the Environment, Water, Heritage and the Arts*
- *ensure community input into national coastal zone policy, planning and management*

Government response

Position: Agreed in Principle

The Australian Government recognises the importance of independent advice and community input into coastal adaptation. In December 2009 the then Minister for Climate Change and Water, Senator the Hon Penny Wong, established a Coasts and Climate Change Council to advise on coastal adaptation issues, in particular the needs of communities and decision makers.

This recommendation will be considered in the context of activities outlined in the response to recommendation 44.

Recommendation 47

The Committee recommends that proposals for a National Oceans and Coast Act and a statutory Coastal Council be the subject of ongoing consideration once the Intergovernmental Coastal Zone Agreement is determined.

Government response**Position:** Noted

This recommendation will be considered in the context of the Government's response to the Hawke Report and activities outlined in the response to recommendation 44.

The Australian Government recognises the need for national leadership and cooperation between all levels of government to maintain a robust and effective governance structure for management of Australia's coastal zone. It is unclear the extent to which new stand-alone national legislation for oceans and coasts would facilitate achievement of this objective.

This issue was considered in the context of the independent Review of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC (Hawke Report)). The final Hawke Report of that review notes that for an Oceans Act to be effective, it would need to extend regulatory control into the coastal zone, recognising the relationship between coastal land uses, near shore developments and the wider ocean ecosystems. The Hawke Report concluded that this would create significant duplication with state and territory legislation and the operation of the EPBC Act, and could create regulatory inefficiency.

The Offshore Constitutional Settlement, which is reflected in a range of different Acts at the federal and state level, sets out the extent of legislative powers and responsibilities of the Commonwealth and the states and the Northern Territory in respect to offshore areas.