Chapter 9

Commonwealth, state and territory climate change policies

9.1 The terms of reference for this inquiry direct the committee to examine the adequacy of current state and Commonwealth policies for assessing, planning and implementing adaptation plans and improving the resilience of infrastructure.

9.2 This report has already discussed various plans and programs developed by governments, such as coastal planning strategies that require decision-makers to take into account sea level rise benchmarks. Programs developed in response to specific threats or challenges, such as the Victorian Government's Powerline Bushfire Safety Program for upgrading electricity infrastructure, have also been noted.

9.3 This chapter builds on these examples of government actions in particular sectors, or in response to particular types of threats, by examining the overall approach that the Australian, state and territory governments have taken to managing the climate risks affecting houses, buildings and infrastructure.

Overview of government plans and policies

9.4 Governments across Australia have developed and updated strategies, plans and measures to guide climate change mitigation and adaptation over many years. Some of these are multi-jurisdictional, a key example being the National Climate Change Adaptation Framework adopted by the Council of Australian Governments (COAG) in 2007. That Framework:

> …established priorities for action and a significant evidence base, national climate change science and adaptation research capacity and institutions, and a wide range of resilience-building initiatives. The Framework continues to anchor and guide resilience action by Australian governments.[1]

9.5 Submissions received during this inquiry provided numerous examples of Australian, state and territory government strategies, plans and programs relating to climate change. Some of these measures were discussed in detail. This section does not provide a comprehensive overview of these documents and programs; however, those that are particularly significant or relevant when considering the evidence received during this inquiry are outlined below.

1 Australian Government, *National Climate Resilience and Adaptation Strategy*, 2015, p. 5.

Australian Government policies and programs

9.6 The Australian Government's approach to addressing climate change is influenced by its international commitments to reduce emissions. In particular, as a party to the Paris Agreement, in August 2015 the Australian Government committed to reduce emissions by 26 to 28 per cent below 2005 levels by 2030.[2]

9.7 Following its Paris Agreement commitments, in December 2015, the Government released a National Climate Resilience and Adaptation Strategy. The Strategy 'affirms a set of principles to guide effective adaptation practice and resilience building, looks at leading practice nationally, and considers areas for future review, consultation and action'.[3]

9.8 Across the Australian Government, specific measures relating to climate change include the following:

- Emissions Reduction Fund—this is a voluntary scheme that provides incentives for Australian farmers and landholders to adopt new practises and technologies to reduce greenhouse gas emissions. Under the Fund, participants can earn Australian carbon credit units (ACCUs) for emissions reduction. ACCUs 'can be sold to generate income, either to the government through a carbon abatement contract, or in the secondary market'.[4] A safeguard mechanism places limits (baselines) on the emissions of facilities that emit more than 100,000 tonnes of emissions a year.[5]
- Various measures relating to energy generation and usage, including the Renewable Energy Target, the Clean Energy Finance Corporation, the Australian Renewable Energy Agency, the National Energy Productivity Plan, the National Energy Guarantee and the Solar Communities program (these are discussed in Chapter 7).
- The National Strategy for Disaster Resilience (2011, reviewed 2015) and the National Partnership Agreement on Natural Disaster Resilience, through which the Australian Government supports states and territories to invest in priority disaster resilience projects.
- The Critical Infrastructure Resilience Strategy and the accompanying Critical Infrastructure Resilience Strategy Plan, which encourage critical infrastructure

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2 Australian Government, *National Climate Resilience and Adaptation Strategy*, 2015, p. 13.

3 Australian Government, *National Climate Resilience and Adaptation Strategy*, 2015, p. 5.

4 Clean Energy Regulator, 'About the Emissions Reduction Fund', www.cleanenergyregulator.gov.au/ERF/About-the-Emissions-Reduction-Fund; Department of the Environment and Energy, 'About the Emissions Reduction Fund', www.environment.gov.au/climate-change/government/emissions-reduction-fund/about (accessed 20 February 2018).

5 Department of the Environment and Energy, *2017 Review of Climate Change Policies*, December 2017, p. 48.

owners and operators to better manage risks to the continuity of their operations, including climate change.[6]

9.9 In addition to these programs, various government agencies undertake work relating to climate change as part of their broader responsibilities. For example, projects undertaken by CSIRO to assist government decision-makers were noted in Chapter 4.

9.10 The Australian Government has also supported other research in climate change adaptation, such as the National Climate Change Adaptation Research Facility (NCCARF) at Griffith University (the NCCARF is discussed in Chapter 3).

9.11 The joint submission from multiple Australian Government departments and agencies provides further detail regarding policies, measures and initiatives relating to climate change in place at the Commonwealth level of government. Examples include:

- providing leadership in emergency management matters through the Australia–New Zealand Emergency Management Committee (a committee of the COAG Crime and Community Safety Council);
- coordinating Australia's implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030, which is an agreement reached by United Nations Member States in 2015 that 'emphasises management of disaster risk as opposed to focusing solely on disaster response or recovery';
- supporting the development of hazard information capabilities, such as the next generation National Fire Danger Rating System; and
- assisting states and territories to manage and deliver public safety communications systems.[7]

9.12 Finally, the Australian Government's cities policy overseen by the Minister for Urban Infrastructure and Cities is also relevant.[8] Of particular note are the City Deals being negotiated by the Australian Government. One of the areas of focus for City Deals is 'liveability and sustainability', which among other things covers local responses to climate change.[9] For example, in the Launceston City Deal, the Northern

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6 Department of the Environment and Energy, Bureau of Meteorology, Great Barrier Reef Marine Park Authority, Attorney-General's Department, Department of Agriculture and Water Resources, and Geoscience Australia, *Submission 39*, pp. 6–7.

7 Department of the Environment and Energy et al, *Submission 39*, pp. 6–7.

8 The current Minister is the Hon Paul Fletcher MP. The decision to appoint a Commonwealth minister for cities was described in the National Climate Resilience and Adaptation Strategy as indicating 'the Australian Government's interest in finding opportunities to strengthen the climate resilience and liveability of our cities and built infrastructure'. Australian Government, *National Climate Resilience and Adaptation Strategy*, 2015, p. 37.

9 Department of Infrastructure, Regional Development and Cities, 'City Deal – focus areas', https://cities.infrastructure.gov.au/city-deal-focus-areas1 (accessed 30 April 2018).

Suburbs Revitalisation Plan addresses the need to ensure resilience to the effects of climate change.[10]

State government policies

9.13 As outlined above, this section does not provide a comprehensive overview of climate change-related policies and measures. Policies regarding specific matters, such as coastal planning and renewable energy, have been discussed in previous chapters. However, those policies are underpinned by overarching climate change legislation and strategies. Examples of key strategies and policies are at Table 9.1.

Table 9.1: Examples of state government legislation and policies

Jurisdiction	*Legislation/policy document*
New South Wales	NSW Climate Change Policy Framework
Victoria	*Climate Change Act 2017* (Vic) Victoria's Climate Change Framework
Queensland	Queensland Climate Adaptation Strategy 2017–2030 (2017) Queensland Climate Transition Strategy (2017)
South Australia	Towards a resilient state: the South Australian Government's Climate Change Adaptation Action Plan* South Australia's Climate Change Strategy 2015–2050 – Towards a low carbon economy*
Western Australia	Adapting to our changing climate
Tasmania	Climate Action 21: Tasmania's Climate Change Action Plan 2017–2021
Australian Capital Territory	*Climate Change and Greenhouse Gas Reduction Act 2010* (ACT) Climate Change Strategy and Action Plan Climate Change Adaptation Strategy
Northern Territory	Although a strategy is not in place, the Government is developing a 'whole-of-government framework to respond to climate change, taking into consideration the environmental, economic, social and health implications'.[11]

* The March 2018 South Australian election triggered a change in government which may affect the status of these strategies.

10 Australian Government, Tasmanian Government and City of Launceston, *Launceston City Deal*, https://cities.infrastructure.gov.au/launceston-city-deal (accessed 30 April 2018), p. 33.

11 Northern Territory Government, *Submission 17*, p. 1.

9.14 These strategies outline various targets and objectives regarding the implications of climate change. Key focuses of these documents are commitments or aspirational commitments to reduce emissions, such as the Victoria's legislated target of net zero emissions by 2050[12] and the Queensland Government's target of net zero emissions by 2050 and an interim target of reducing emissions by at least 30 per cent below 2005 levels by 2030.[13]

9.15 On the implications for infrastructure specifically, the following sample of state government policies provide insight into the approaches being taken.

9.16 The Victorian Government's *Climate Change Framework* highlights areas of particular concern regarding infrastructure. Overall, the Framework is a strategy to 'maximise the opportunities while minimising the adverse impacts of climate change for our state'. The Framework includes the objectives of building the resilience of Victoria's 'infrastructure, built environment and communities through effective adaptation and disaster preparedness action'. Among other matters, the Framework includes specific measures for the resilience of buildings, transport networks and energy infrastructure.[14]

9.17 The climate change strategy issued by the Western Australian Government in 2012, *Adapting to our changing climate*, also has a significant focus on infrastructure.[15] The strategy highlights the need to support 'infrastructure risk assessment and adaptation planning'. It also focuses on integrating climate change considerations into a range of government decisions, including development assessments; land-use and infrastructure planning; infrastructure procurement; and maintenance programs. The strategy also notes the need to accelerate infrastructure development in other areas, such as additional water supply sources.[16]

9.18 In Queensland, changes to planning laws enacted by the *Planning Act 2016* (Qld) and the State Planning Policy (2017) required local governments to 'respond to climate change in their planning instruments'. In addition, the state government is 'required to consider and respond to climate change in the preparation of a Coastal Management Strategy under the *Coastal Protection and Management Plan 1991*'.[17]

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12 *Climate Change Act 2017* (Vic).

13 Queensland Government, *Submission 58*, pp. 2–3.

14 Victorian Government, *Victoria's Climate Change Framework*, 2016, pp. 5, 26.

15 See Department of Water and Environmental Regulation, 'Adapting to climate change', www.der.wa.gov.au/your-environment/climate-change/254-adapting-to-climate-change (accessed 30 April 2018).

16 Western Australian Government, *Adapting to our changing climate*, October 2012, pp. 3, 8.

17 Local Government Association of Queensland, *Submission 11*, p. 7.

Perspectives on government strategies and policies on adaptation

9.19 As discussed in Chapter 2, in commenting on the adequacy of current Commonwealth policies regarding climate change, many stakeholders emphasised the need for a strong mitigation response. As mitigation has already been addressed in this report, this section will focus on adaptation strategies, particularly those specifically targeting the resilience of buildings and infrastructure.

9.20 The committee received evidence indicating how Commonwealth and state governments are working together to inform strategies for climate change adaptation. For example, the Tasmanian Government highlighted how work undertaken by CSIRO assisted it to develop its climate change strategy by informing sea level rise projections and planning allowances.[18]

9.21 Some issues that climate change could exacerbate are already the focus of established government programs. For example, Lake Macquarie City Council noted that procedures for floodplain risk management and bushfire are 'relatively mature' in New South Wales.[19] The Tasmanian Government also explained the initiatives it has undertaken to manage bushfire risk, including a fuel reduction program and various programs to educate communities at risk from bushfire about planning strategies.[20]

9.22 Stakeholders also expressed positive opinions about approaches being taken by certain state governments. Mr Dwayne Honor, the Queensland Director of Floodplain Management Australia (FMA), commented that the Queensland Government's decision to require planning policies to account for a sea level rise of 0.8 metres for the entire coast 'has been a positive move' that has resulted in consistent planning scheme controls.[21] Ms Kirsty Kelly from the Australian Sustainable Built Environment Council (ASBEC) commented that the Australian Capital Territory Government is 'quite strong in the resilience space'.[22]

9.23 However, the committee received a significant amount of evidence questioning the effectiveness of current approaches. For example, key stakeholders criticised the Australian Government's 2015 National Climate Resilience and Adaptation Strategy. The Local Government Association of Queensland argued that, with the exception of the CoastAdapt tool, the Strategy 'has not been adequately

18 The information provided by CSIRO was used to develop coastal inundation and erosion maps, which form 'an important input into the new Tasmanian Planning Scheme'. Tasmanian Government, *Submission 4*, p. 3.

19 Lake Macquarie City Council, *Submission 29*, p. 4.

20 Tasmanian Government, *Submission 4*, p. 4.

21 Mr Dwayne Honor, Queensland Director, Floodplain Management Australia, *Committee Hansard*, 23 November 2017, p. 5.

22 Ms Kirsty Kelly, Representative, Australian Sustainable Built Environment Council (ASBEC), *Committee Hansard*, 23 November 2017, p. 38.

informed by the needs of the 'frontline' stakeholders, particularly local governments'.[23] When asked whether the Climate Council had a view on the Strategy, Professor Lesley Hughes noted that he was 'not terribly familiar' with the Strategy and agreed with the proposition that this indicates the Strategy is not as effective as it could be.[24]

9.24 From the perspective of local governments in Western Australia, the representative body for local governments in that state submitted:

> There is little in the way of State and Commonwealth plans or resources directed to adaptation, despite the fact that Local Governments are currently undertaking adaptation action, and needing to make plans for future adaptation action. There is a particularly significant policy vacuum within the Western Australian Government, with negligible demonstrated and coordinated leadership and long-term planning across all areas. For example, the WA Government Climate Change Strategy which was released in October 2012 is inadequate and in need of an update and review.[25]

9.25 A particular concern is that the strategy documents developed at all levels of government have not resulted in the necessary 'on the ground' responses. Regional Development Australia – South West (RDA South West) submitted:

> The paradox is the considerable volume of people working on rising sea-level issues have produced so little effective coastal management response.
>
> In Western Australia there are a number of policy notes and/or draft versions but little coordination between agencies. This is not uncommon. Taking into account academia, CSIRO, Geoscience Australia, the Australian Oceanographic Data Centre, Australian Hydrographic Service, Bureau of Meteorology, Institute of Marine Science, Department of Environment, and State bodies plus a multitude of international organisations and experts, there is a lack of a widely recognised co-ordination and response body.[26]

9.26 Similarly, Green Cross Australia argued that 'it is now well-recognized that…despite a large number of adaptation plans and planning guidelines being written by governments, the private sector and communities, there is a lack of on-the-ground adaptation occurring'. Green Cross Australia considers that this is due to 'the political risk of undertaking adaptation actions, difficulties in securing adaptation funding, and perverse incentives in the property development sector'.

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23 Local Government Association of Queensland, *Submission 11*, p. 6.

24 Professor Lesley Hughes, Climate Council of Australia, *Committee Hansard*, 23 November 2017, p. 35.

25 Western Australian Local Government Association, *Submission 57*, p. 8 (emphasis omitted).

26 Regional Development Australia – South West, *Submission 15*, p. 9.

Green Cross Australia concluded that there is 'a clear role for the Australian Government to assist in removing some of these barriers'.[27]

9.27 The need for effective sector-based strategies was also noted. The Queensland Tourism Industry Council (QTIC) argued that 'there is a gap in existing plans, strategies and framework' relating to the consideration of climate change for the long-term future of the tourism industry. The QTIC called for the development of sector-based climate change mitigation and adaptation sector plans to be expedited and for climate change mitigation and adaptation plans to be integrated into other existing strategies.[28]

9.28 Finally, it was argued that certain Australian Government programs regarding emissions reduction are not well suited to the building sector. Green Building Council Australia argued that, regarding the Emissions Reduction Fund, 'several barriers have prevented the buildings sector—where many low-cost opportunities exist—from accessing the scheme'. Among others, these barriers include a minimum bid size of 2000 tonnes C02-e average abatement per annum; the Green Building Council explained that this bid size 'is difficult to achieve for a single building, except for very large, energy-hungry facilities'.[29]

Calls for greater government leadership and coordination of policies

9.29 A key role several submitters envisaged for the Australian Government is the coordination of efforts to develop a robust, best practice and nationally consistent response to climate change.

9.30 It was argued that, without greater leadership and actions to further climate change adaptation and resilience from the Australian Government, it will be more difficult for the approaches taken by other governments and stakeholders to succeed. The Law Institute of Victoria argued that long-term emissions reduction targets and other measures pursued by state governments, such as the *Climate Change Act 2017* (Vic), will be 'undermined without a nation-wide policy commitment to combatting climate change'.[30] A representative from the Law Institute of Victoria argued that actions taken by state governments 'lack the unifying clarity the federal government can create and which we say is required for a global issue such as climate change'.[31]

9.31 Local governments also called on the Australian and state governments to develop policies that support their adaptation efforts. The City of Melbourne

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27 Green Cross Australia, *Submission 38*, p. 5.

28 Queensland Tourism Industry Council, *Submission 10*, p. 2.

29 Other barriers are identified in the submission: see Green Building Council Australia, *Submission 50*, p. 15.

30 Law Institute of Victoria, *Submission 59*, p. 3.

31 Mr Hubert Algie, Chair, Environmental Issues Committee, Law Institute of Victoria, *Committee Hansard*, 15 March 2018, p. 13.

submitted that the implementation of its Energy, Water and Waste Efficiency local planning policy 'could be made easier by the introduction of State and Federal policy'.[32]

9.32 Ms Emma Herd, Chief Executive Officer, Investor Group on Climate Change (IGCC), argued that a national approach to climate change adaptation would help achieve beneficial outcomes. Ms Herd observed that 'generally in Australia we reduce the economic costs of the response if we're more or less doing the same thing across all states and areas'. Ms Herd envisaged that a national approach to adaptation would involve all levels of government and address the following matters:

> …who was responsible for what; how we get a nationally consistent response to climate change across all jurisdictions; how we bring in private sector participation, whether it's in terms of planning or construction or, in our case, investment into solutions; how we get all parts of the economy working together and pulling in the same direction with a common understanding of what the impacts are likely to be and what some of the available solutions actually are.[33]

9.33 Ms Herd added that a national approach to climate change does not require 'over-planning or over-management', rather the objective should be more effectively articulating 'levels of responsibility and opportunities for public-private partnership' and ensuring scientific knowledge regarding climate projects is used to achieve 'a more consistent approach to climate change adaptation management'.[34] Ms Herd suggested that a multijurisdictional reference group could be formed to harmonise climate change policies, forecast scenarios and risk assessment models across different jurisdictions.[35]

9.34 Professor Lesley Hughes from the Climate Council of Australia and Ms Kirsty Kelly from the ASBEC supported the idea of developing a national plan, and the ASBEC also supported the IGCC's suggestion of forming a multijurisdictional reference group to harmonise climate change policies. Notwithstanding this overall support, they emphasised that a national plan should recognise the need to account for developments that are relevant at a state and territory level, such as different rates of sea level rise in different locations. A national plan should also not displace grassroots actions.[36]

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32 The policy 'seeks to ensure that all new buildings, including residential development, achieve high environment standards'. City of Melbourne, *Submission 43*, p. 7.

33 Ms Emma Herd, Chief Executive Officer, Investor Group on Climate Change (IGCC), *Committee Hansard*, 23 November 2017, pp. 16, 20.

34 Ms Emma Herd, IGCC, *Committee Hansard*, 23 November 2017, pp. 15–16.

35 Ms Emma Herd, IGCC, *Committee Hansard*, 23 November 2017, p. 20.

36 Professor Lesley Hughes, Climate Council of Australia, *Committee Hansard*, 23 November 2017, p. 33; Ms Kirsty Kelly, ASBEC, *Committee Hansard*, 23 November 2017, p. 39.

9.35 Similarly, Mr Andrew Petersen, Chief Executive Officer, Sustainable Business Australia, argued that it is 'critical' that greater national coordination of responses to climate risks takes place, although he added that this would not have to be 'a top-down approach, because there is a lot of excellent work that goes on amongst most states and territories at the moment'.[37]

9.36 The QTIC called for a coordinated approach to climate change mitigation and adaptation strategies across levels of government, although it added that industry should also be involved. The QTIC reasoned that, from the perspective of tourism sector, its infrastructure and assets 'cross multiple industries', such as agriculture and transportation, requiring a 'united approach toward mitigation and adaptation strategies' across all relevant sectors.[38]

9.37 Stakeholders also identified issues on which they consider governments should provide explicit guidance and nationally consistent policies. For example, Ms Megan Motto from Consult Australia called for the Australian Government to provide the built environment sector with certainty about the climate risks for which they should be designing. Ms Motto exampled that the sector wants:

> …leadership, particularly from government saying: 'We expect the industry to design to X. Above that, we're not going to hold you responsible because you didn't foresee an unknown future.' So I think that the government needs to show a little bit of ownership in particular as a great owner and deliverer of assets in the Australian jurisdiction. I think the government needs to take a little bit of ownership of where that line in the sand would be to give industry the certainty it needs to perform to a standard.[39]

9.38 Local governments also called on the Australian Government to work with both them and the state governments to prepare and respond to coastal risks. The Australian Coastal Councils Association (ACCA) questioned the merits of the Australian Government having a limited role in these matters to date. Although it acknowledged the argument that constitutional arrangements mean that the states have primary responsibility for the protection of life, property and the environment, the ACCA argued that 'the national scale of the risk' associated with climate change requires 'a coordinated national approach to managing climate hazards in the coastal zone'. The ACCA added:

> This would involve a commitment by the three tiers of government to work collaboratively to ensure the sustainability of the coastal environment and coastal communities. The proposed integrated approach would require each tier of government to play its role in safeguarding the coast from the impact of coastal hazards.

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37 Mr Andrew Petersen, Chief Executive Officer, Sustainable Business Australia, *Committee Hansard*, 23 November 2017, p. 12.

38 Queensland Tourism Industry Council, *Submission 10*, p. 2.

39 Ms Megan Motto, Chief Executive Officer, Consult Australia, *Committee Hansard*, 23 November 2017, p. 26.

> Coastal councils are at the forefront of responding to key issues in the coastal zone, such as climate risks, but are ill-equipped to respond appropriately to the complex and difficult set of challenges involved. These include lack of funding for effective adaptation measures and lack of appropriate policy guidance in many jurisdictions. There is a clear need for enhanced coordination of planning and management of the coastal zone at a local, regional, state and Commonwealth level as well as a greater need for cross-jurisdictional coordination between all levels of government in relation to coastal planning and management.[40]

9.39 RDA South West suggested that the objective of increased national coordination to advance coastal management responses could be achieved through the creation of a 'nationally consistent framework' with 'a respected apex organisation…to co-ordinate all effort and pull together stakeholders'. RDA South West acknowledged that a nationally coordinated approach could potentially reduce the opportunities for flexible and collaborative local responses; however, it is of the view that moving to a single agency approach with 'planning certainty' is required.[41]

9.40 Finally, another area where governments could demonstrate commitment to improving the resilience of buildings to climate change risk is by leading by example through their own property requirements. Green Building Council Australia explained that a decision by the Victorian Government to require all of its new office space to be Green Star-certified is a key example of government leadership on improving building standards. The Green Building Council provided the following evidence regarding how this decision resulted in wider benefits:

> At the time, Green Star certification was still relatively new and only a small portion of industry was familiar with it. However, to supply government demand for high quality Green Star office space, industry rapidly upskilled and adopted Green Star and today 4 and 5 Star Green Star certification is usually achieved on a cost-neutral basis.[42]

9.41 The Green Building Council Australia reasoned that 'with increasing commitments by all governments to reach net zero emissions targets by 2050, it is important that parallel commitments are reflected in government procurement policy'. Accordingly, it argued that a Green Star rating for any government building or office fit-out should be a pre-condition for procurement.[43]

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40 Australian Coastal Councils Association, *Submission 61*, p. 3.

41 Regional Development Australia – South West, *Submission 15*, p. 9.

42 Green Building Council Australia, *Submission 50*, p. 17.

43 Green Building Council Australia, *Submission 50*, p. 17.

Calls for legislative reform and changes to institutional arrangements

9.42 The Commonwealth's responsibilities regarding the environment focus on the protection of matters of national environmental significance, whereas the states and territories have responsibility for matters of state and local significance. This framework means that there can be overlap between levels of government; for example, projects can be subject to both Commonwealth and state frameworks and approval processes. However, responsibilities can be devolved; for example, bilateral agreements between the Commonwealth and states accredit state assessment processes for assessing certain actions that are covered by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). In addition, state governments impose requirements on local governments regarding environmental matters, such as considering environmental considerations in decision-making processes.

Concerns raised in evidence

9.43 Key stakeholders are critical of the current legislative framework regarding climate change and environment protection, as well as how this framework has developed over time. The Chair of the Law Institute of Victoria's Environmental Issues Committee, Mr Hubert Algie, argued that 'the incremental development of Australia's environmental law and policy has generally resulted in an extremely complex, fragmented and uncoordinated legal and regulatory system'. Mr Algie added that:

> The size, scale and impenetrable complexity of environmental legislation, regulation, codes and policies makes real responses to climate change or leadership difficult. The numerous agreements between Commonwealth and states, overlaid by international treaties, complicates matters further.[44]

9.44 Witnesses representing the Law Institute argued that the EPBC Act is particularly deficient for addressing climate change. Mr Algie stated:

> The EPBC Act is complex, and reforms to it over a number of years have made it more complex. It actively divested the federal government of its responsibilities. It's moved them further away from the federal government and further away from federal government leadership on environmental issues. The starting point for climate change reform should be reviewing the EPBC Act…The reality is the EPBC Act was drafted in a time that didn't fully scope the impacts and the speed at which our climate changed. The act itself does not make reference to climate change other than to international treaties on that point. That is an oversight. The reality is the federal environmental legislation ignores those impacts.[45]

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44 Mr Hubert Algie, Law Institute of Victoria, *Committee Hansard*, 15 March 2018, p. 13.

45 Mr Hubert Algie, Law Institute of Victoria, *Committee Hansard*, 15 March 2018, pp. 17–18. See also Dr Leonie Kelleher, Member, Environmental Issues Committee, Law Institute of Victoria, *Committee Hansard*, 15 March 2018, p. 14.

9.45 The Law Institute argued that the complexity of the current framework 'should be remedied as part of wholescale environmental law reform at a federal level'.[46] Although the Law Institute did not endorse any particular reform proposals, it highlighted a suite of recommendations developed by the Australian Panel of Experts on Environmental Law (APEEL)[47] for changes to Australia's environmental law framework. The recommendations were outlined in an APEEL paper tabled by the Law Institute.[48]

9.46 Areas for reform were also identified beyond environmental law. It was argued that existing and future Commonwealth and state legislation and policies on climate change should be integrated into the management of state infrastructure, with a precautionary approach taken 'especially where there is high risk associated, such as with the National Electricity Market'.[49]

9.47 In addition, it was noted that there is no formal mechanism for collaboration between local, state and federal government on climate change adaptation and mitigation. The absence of a ministerial-level Council relating to climate change within the COAG framework was highlighted.[50]

Suggestions for change

9.48 Submitters proposed various changes to institutional arrangements to assist with the coordination of climate change issues across government and to improve how climate change issues are taken into account in decision-making. For example, representatives of Victorian local governments who participated in the Melbourne public hearing indicated support for the Australian Government to establish an independent climate change authority on a permanent basis.[51]

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46 Mr Hubert Algie, Law Institute of Victoria, *Committee Hansard*, 15 March 2018, p. 13.

47 As at March 2018, the members of APEEL include Adjunct Professor Rob Fowler, Emeritus Professor David Farrier, Professor Lee Godden, Professor Neil Gunningham, Dr Cameron Holley, Dr Hanna Jaireth, Dr Bruce Lindsay, Professor Jan McDonald, Professor Zen Makuch, Professor Paul Martin, Professor Jacqueline Peel, Professor Benjamin Richardson, Ms Rachel Walmsley and the Hon Murray Wilcox AO QC. APEEL, 'Meet the members of the expert panel', http://apeel.org.au/expert-panel (accessed 28 March 2018).

48 Australian Panel of Experts on Environmental Law (APEEL), *57 recommendations for the next generation of Australian's environmental laws*, 2017, p. 7; tabled by the Law Institute of Victoria, 15 March 2018.

49 New South Wales' Young Lawyers Environment and Planning Law Committee, *Submission 32*, p. 8.

50 Mr Alan Stokes, Executive Director, Australian Coastal Councils Association, *Committee Hansard*, 15 March 2018, p. 36. The Standing Council on Environment and Water was abolished in 2013 as part of a consolidation of the system of COAG Councils; however, Environment Ministers still meet regularly outside of the COAG system as part of the Meeting of Environment Ministers. Department of the Environment and Energy, 'Meeting of Environment Ministers', www.environment.gov.au/about-us/mem (accessed 30 April 2018).

51 See *Committee Hansard*, 15 March 2018, p. 37.

9.49 One of the specific suggestions is the creation of a National Panel on Climate Change modelled on the 'tried and trusted methodology' of the Intergovernmental Panel on Climate Change (IPCC). Doctors for the Environment Australia (DEA), which advocated for this change, argued that a national panel on climate change would provide Australia with 'one, overarching, stable organisation that can provide the up-to-date science, technology and assessment processes to assist Government and stakeholders'.[52]

9.50 In particular, the DEA argued that a national panel on climate change would ensure that scientific data relating to climate change would be 'assembled and interpreted on an ongoing basis to the public and to institutions and governments in a form that is easily understood'. The DEA argued that, to date, 'Australian governments have not understood the necessity for this'. The DEA explained:

> In the past 3 years decisive blows have been struck at the existing structure of climate analysis and research in Australia with the downsizing and re-organisation of CSIRO and the demolition of NCCARF. Existing research assessments, modest though they are, are distributed through a range of institutions without coordination. The Australian Academy of Science has reported on the inadequacy of climate change research and modelling resulting from CSIRO cutbacks and it has supported re-establishment of staffing in CSIRO. DEA supports this, but measures need to be developed to ensure that it is secure from political expediency so such expertise is always available.[53]

9.51 Like the IPCC, the DEA suggested that an Australian panel on climate change would 'still be intergovernmental' with the states and territories involved.[54]

9.52 Another suggestion for changing institutional arrangements to enhance how climate change issues are considered is the DEA's proposal for the creation of a national Environment Protection Authority (EPA). The DEA argued that a national EPA with legislated powers to act in all states would be 'the most appropriate delivery system for climate change policy and related matters'. The DEA commented that the case for a national EPA has been argued in many of its publications, however, it provide the following brief overview of how a national EPA could function by comparing it to the similarly named Environmental Protection Authority in the United States:

> Essentially the US EPA covers the regulation of air, water quality and environmental requirements related to health and delivers policy on environmental preventative health to the entire nation, for example, as with…[the Obama Administration's Clean Power Plan under the] Clean Air Act. In Australia, the intent would be similar, namely, the enactment and

52 Doctors for the Environment Australia, *Submission 41*, p. 10.

53 Doctors for the Environment Australia, *Submission 41*, pp. 10–11 (citation omitted).

54 Doctors for the Environment Australia, *Submission 41*, p. 11.

> delivery of clean air and water and the control of pollution etc, to all Australians, where-ever their abode.[55]

9.53 The 57 recommendations for change to Australia's framework of environmental laws developed by APEEL also contained suggestions for new regulatory and oversight institutions. APEEL argued that these proposed institutions 'replace and expand upon the functions currently exercised by the Minister and Department for [the] Environment and Energy and other existing Commonwealth statutory environmental authorities'. APEEL identified the following three bodies that it proposed could be established:

- A Commonwealth Environment Commission—APEEL envisaged a high-level and independent institution similar to the Reserve Bank of Australia that would:
  - administer a proposed system of Commonwealth Strategic Environmental Instruments (comprising national strategies, programs, standards and protocols, and regional environmental plans);
  - be responsible for 'a nationally coordinated system of environmental data collection, monitoring, auditing and reporting';
  - conduct 'environmental inquiries of a strategic nature'; and
  - provide advice to the Australian Government on environmental matters.
- A Commonwealth EPA—among other things, the EPA would be responsible for administering the Commonwealth's environmental assessment and approval system, and for regulating activities undertaken by Commonwealth authorities or on Commonwealth land.
- A Commonwealth Environmental Auditor—the Auditor would:
  - monitor and report on the performance of Commonwealth entities in the performance of their statutory environmental responsibilities, including the Minister, the Commonwealth EPA, Department for the Environment and Energy and other relevant Commonwealth bodies; and
  - make recommendations to the Commonwealth Environment Commission on the need to develop new strategic environmental instruments.[56]

55 Doctors for the Environment Australia, *Submission 41*, p. 12.

56 APEEL, *57 recommendations for the next generation of Australian's environmental laws*, 2017, p. 7; tabled by the Law Institute of Victoria, 15 March 2018.

Building resilience and betterment of infrastructure assets

9.54 This section addresses evidence received regarding the need for greater expenditure on pre-disaster resilience and the Commonwealth's role in funding the recovery of infrastructure following natural disasters.

Background information on natural disaster funding arrangements

9.55 The Australian Government's approach to recovery assistance is guided by the intergovernmental Natural Disaster Relief and Recovery Arrangements (NDRRA). Under the NDRRA, the Australian Government provides financial assistance to state and territory governments following a natural disaster or terrorist act if a coordinated multi-agency response was required and state expenditure exceeded a specified minimum threshold. State and territory governments determine the individuals and communities in their jurisdictions that will receive NDRRA assistance.[57]

9.56 In participating in the NDRRA, the Commonwealth recognises that natural disasters or terrorist acts may result in large-scale expenditure by state governments, and that the Commonwealth has a role to assist with this burden. In doing so, the Commonwealth's assistance is intended to complement other state government relief and recovery strategies (such as insurance and natural disaster mitigation planning), and is 'not intended to fund every possible relief and recovery assistance measure delivered by a state'.[58]

9.57 Two types of NDRRA assistance measures particularly relevant to this inquiry are the assistance that can be provided for:

- the restoration or replacement of an essential public asset;[59] and
- betterment of an essential public asset, which for the purposes of the NDRRA is defined as the 'restoration or replacement of an essential public asset to a more disaster-resilient standard than its pre-disaster standard'.[60]

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57 Australian Government, *Natural Disaster Relief and Recovery Arrangements: Determination 2017*, www.disasterassist.gov.au/Documents/Natural-Disaster-Relief-and-Recovery-Arrangements/NDRRA-determination-2017.PDF (accessed 28 March 2018), pp. 6, 9; Australian Government, 'Natural Disaster Relief and Recovery Arrangements', Disaster Assist, www.disasterassist.gov.au/Pages/related-links/Natural-Disaster-Relief-and-Recovery-Arrangements.aspx (accessed 27 March 2018).

58 Australian Government, *NDRRA Determination 2017*, pp. 13–14.

59 An 'essential public asset' must be considered by the Australian and state governments to be 'a necessary part of a state's infrastructure and is integral to the normal functioning of a community'. The asset must also be a transport or public infrastructure asset of a department or agency of a state government, or of a body established under state legislation for public purposes such as local governments, which provides services free of charge or at a rate that is 50 per cent or less of the cost to provide those services. See Australian Government, *NDRRA Determination 2017*, p. 6.

60 Australian Government, *NDDRA Determination 2017*, pp. 5, 20.

9.58 NDRRA funding for the betterment of an essential public asset may be provided if, after reviewing a betterment proposal submitted by a state government, the Commonwealth is satisfied with the cost-effectiveness of the proposal and that the betterment project will 'mitigate the impact of likely or recurring natural disasters of the same type'.[61]

9.59 The Australian Government funds up to 75 per cent of the NDRRA assistance made available to individuals and communities.[62] For 2017–18, it is estimated that the Commonwealth will make cash payments of $532.3 million as part of the NDRRA.[63]

9.60 The Commonwealth also provides funding to the states and territories to enhance national disaster resilience. The Attorney-General's Department[64] provided the following information about the funding provided by the Commonwealth for these efforts:

> …through the National Partnership Agreement on Natural Disaster Resilience, the Australian Government supports states and territories to invest in priority disaster resilience projects. The current Agreement provides $26.1 million in Commonwealth funding each year over the life of the agreement, which is matched by the states and territories through funding or in kind resources.[65]

9.61 Across governments, IAG noted that research completed by the Australian Business Roundtable (ABR) in 2016 found that, between 2002–03 and 2010–11, Australian governments spent more than $450 million per financial year restoring essential public infrastructure assets following extreme weather events. This equated to approximately 1.6 per cent of total public infrastructure spending.[66]

9.62 The NDRRA was reviewed by the Productivity Commission (PC) in 2014. The PC found that 'current government natural disaster funding arrangements are inefficient, inequitable and unsustainable', The PC made the following observations about how the NDRRA influences decision-making by state and local governments:

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61 Australian Government, *NDDRA Determination 2017*, pp. 21–22.

62 Australian Government, 'Natural Disaster Relief and Recovery Arrangements', Disaster Assist, www.disasterassist.gov.au/Pages/related-links/Natural-Disaster-Relief-and-Recovery-Arrangements.aspx (accessed 27 March 2018).

63 Australian Government, *Mid-Year Economic and Fiscal Outlook 2017–18*, December 2017, p. 79.

64 At the commencement of this inquiry, the Attorney-General's Department had responsibility for natural disaster relief, recovery and mitigation policy and financial assistance. The Department of Home Affairs gained these responsibilities in December 2017 following machinery of government changes.

65 Department of the Environment and Energy et al, *Submission 39*, p. 6.

66 IAG, *Submission 56*, p. 7.

> The NDRRA dilute the link between asset ownership, risk ownership and funding. This creates a financial disincentive for state and local governments to manage these risks (especially through land use planning) and a further disincentive to invest in mitigation or insurance. State and local governments generally must bear the full costs of these risk mitigators themselves, whereas they only pay a portion of the cost of restoring an asset damaged by a natural disaster under the NDRRA.[67]

9.63 To develop a framework that is 'more likely to be consistent with the safety-net policy objective of the funding arrangement', the PC argued that Australian Government mitigation funding should be increased while post-disaster support should be reduced. The PC noted that the current cost-sharing rate of 75 per cent under the NDRRA is 'much higher than in other service delivery areas that are principally the responsibility of states'. The PC argued that 'a case has not been made for the Australian Government to have a higher exposure to natural disaster fiscal risks than to other fiscal risks borne by state governments'.[68]

9.64 Key recommendations made by the PC included that:

- Commonwealth mitigation funding to states should increase to $200 million a year (to be matched by the states); and
- the threshold for Commonwealth assistance should be increased,[69] and the cost-sharing rate above this threshold reduced to 50 per cent.[70]

9.65 In its response to the PC's report, the Australian Government indicated that it did not intend to pursue these recommendations after state and territory governments raised 'significant concerns with any proposal to reduce the Australian Government's contribution to recovery funding'.[71]

Calls for greater attention to betterment and pre-disaster resilience

9.66 The approach taken to rebuilding efforts following natural disasters attracted significant comment. A common theme in many submissions is that government-funded reconstruction or rebuilding projects following natural disasters often only

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67 Productivity Commission, *Natural Disaster Funding Arrangements*, Report No. 74, Vol. 1, December 2014, p. 15.

68 Productivity Commission, *Natural Disaster Funding Arrangements*, pp. 17–18.

69 Furthermore, the PC argued that the threshold for Commonwealth assistance should be increased to $2 million to prevent the NDRRA being used for 'small, routine weather events'. Productivity Commission, *Natural Disaster Funding Arrangements*, p. 18.

70 Productivity Commission, *Natural Disaster Funding Arrangements*, pp. 2, 17, 18, 38.

71 Australian Government, *Response to the Productivity Commission Inquiry into Natural Disaster Funding Arrangements*, May 2015, www.ag.gov.au/Publications/Documents/Australian-Government-response-to-the-Productivity-Commission-Inquiry-into-Natural-Disaster-Funding-Arrangements.pdf (accessed 3 April 2018), p. 2.

fund work to return the infrastructure to its original specifications, rather than increasing the resilience of the asset.

9.67 Specific examples were provided. The South East Councils Climate Change Alliance advised that, following extreme rainfall events in March 2011 and May and June 2012, over 200 landslides occurred in the Baw Baw Shire area. The landslides resulting in road closures and loss of service, with some roads affected multiple times. However, recovery assistance received from the state government, which was supported by Commonwealth funding under the NDRRA, 'only covered "replacement to the same standard" and delays in reimbursements left council financially exposed'.[72]

9.68 The PC made similar observations about repeated repair projects in its 2014 report on natural disaster funding arrangements. The PC referred to 'Groundhog Day' projects where assets are rebuilt to the same standard on multiple occasions, such as the following anecdote:

> …a water intake plant in Queensland was damaged by floods in 2011. Soon after it was reconstructed to its pre-disaster state, it was damaged again by flooding in 2013.[73]

9.69 Evidence received by the committee explained that it can be difficult for governments to justify investing in more resilient buildings and infrastructure. The Northern Territory Government submitted that private infrastructure owners and operators should face sufficient incentives 'to decide for themselves whether constructing and maintaining economic infrastructure to a higher standard is in their economic interests'. However, in relation to publicly-owned infrastructure that does not produce a direct income, the Northern Territory Government submitted:

> There is a risk that cash-constrained governments at all levels limit their investment to what they can afford in the short-term, and in doing so forgo the advantages of a longer economic life achievable if higher, yet more expensive engineering and building standards were applied, in addition to more intensive maintenance.[74]

9.70 Consult Australia acknowledged that the cost of upgrades 'can be significant, especially following large-scale natural disasters'. However, it reasoned that the opportunity cost of electing not to upgrade damaged assets needs to be taken into account. Consult Australia argued that not investing in improvements 'means that the rebuilt infrastructure may be just as vulnerable…[which] in turn increases the risk that future natural disasters will cause even greater damage, with escalating reconstruction costs and disruption to the economy'.[75]

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72 South East Councils Climate Change Alliance, *Submission 30*, p. 2.

73 Productivity Commission, *Natural Disaster Funding Arrangements*, pp. 15–16.

74 Northern Territory Government, *Submission 17*, p. 4.

75 Consult Australia, *Submission 44*, p. 11.

9.71 Similarly, IAG argued that by not improving the resilience of essential public infrastructure assets following a natural disaster, 'individuals, communities, businesses and governments are left more vulnerable to widespread disruption and higher costs post disaster'. IAG noted that Australian governments spent over $450 million per financial year between 2002–03 and 2010–11 restoring essential public infrastructure assets following extreme weather events.[76]

9.72 The Western Australian Local Government Association (WALGA) also favours the betterment of assets 'to prevent a situation where, for example, valuable infrastructure is washed away and then identically replaced every few years'. WALGA argued that the projected increase in the frequency or intensity of many types of extreme weather events means that the benefits from increasing the resilience of assets are likely to be greater than has been the case.[77]

9.73 The PC found that betterment is rarely used under the NDRRA. The PC explained that this is because, under the NDRRA, betterment:

> …is subject to a lower reimbursement rate, a higher administrative burden and lack of a budget allocation by the Australian Government (which means that offsetting savings must be made elsewhere to fund betterment).[78]

9.74 Betterment programs that have been undertaken include two Betterment Funds jointly funded by the Australian and Queensland Governments in 2013 and 2015 under the NDRRA.[79]

9.75 In its submission, the Queensland Government noted that the Betterment Funds address the problem of NDRRA funding generally only enabling damaged infrastructure to be repaired to its pre-disaster standard (that is, governments have to 'build back the same vulnerable infrastructure "like for like" in the same vulnerable location'). The Queensland Government argued that the Betterment Funds reflects international best practice. In particular, the Queensland Government noted that many of the 295 betterment projects undertaken have faced and withstood subsequent natural disasters and it is estimated that reconstructions costs of approximately $104 million have been saved as a result.[80]

9.76 The FMA suggested that the Queensland betterment funds could be used as a model for a joint Commonwealth and state fund that could lead to 'more resilient

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76 IAG, *Submission 56*, p. 7.

77 Western Australian Local Government Association, *Submission 57*, p. 10 (emphasis omitted).

78 Productivity Commission, *Natural Disaster Funding Arrangements*, p. 16.

79 Queensland Government, *Submission 58*, p. 6.

80 Queensland Government, *Submission 58*, p. 6.

recovery and reconstruction options' that factor in future climate change-related risks.[81]

9.77 More generally, it was noted that Commonwealth expenditure on post-disaster recovery and relief far exceeds expenditure on pre-disaster resilience. The FMA referred to a Deloitte Access Economics report which found that there is a ratio of 10:1 of post-disaster expenditure by the Commonwealth compared to pre-disaster resilience. The FMA highlighted this to support its argument that greater government investment is required in pre-disaster resilience; from the FMA's perspective, it is 'concerned about the insufficient government investment in flood risk mitigation generally and the worsening consequences that will be caused by climate change'. The FMA submitted:

> There is Australian and international evidence that increased investment in best practice flood risk management and mitigation measures would reduce the budget impact of recovering from floods for all levels of government. It would also reduce the economic and social cost of floods to individuals and businesses and improve the ability of communities to recover.[82]

9.78 The approach taken in Australia was contrasted to that in other countries with a high risk of natural hazards. On floods generally, Mr Grech from the FMA commented that the ratio of pre-disaster mitigation and post-disaster recovery in the Netherlands is essentially the reverse to Australia: 'They spend 90 per cent on mitigation and 10 per cent on post-disaster recovery'.[83]

9.79 The IGCC submitted that the Deloitte Access Economics analysis referred to by the FMA also found that 'carefully targeted programs of resilience investment in the order of $250 million/yr could see government spending reduce by more than 50% by 2050'.[84]

9.80 Since this evidence was received, there has been a development regarding the Australian Government's approach to these issues. In April 2018, the Minister for Law Enforcement and Cyber Security announced the creation of a National Resilience Taskforce to 'lead nation-wide reforms to reduce the impact and financial burden of disasters on our communities and economy'. The Minister explained that the taskforce, in consultation with the state and territory governments and the finance and insurance sectors, would 'develop a five-year national disaster mitigation framework to reduce the impact of disasters'.[85]

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81 Floodplain Management Australia, *Submission 35*, p. 5.

82 Floodplain Management Australia, *Submission 35*, p. 4.

83 Mr Paul Grech, Director, Land Use Planning, Floodplain Management Australia, *Committee Hansard*, 23 November 2017, p. 7.

84 IGCC, *Submission 55*, p. 8.

85 The Hon Angus Taylor MP, Minister for Law Enforcement and Cyber Security, 'Reforms to reduce impact of natural disasters in Australia', *Media release*, 10 April 2018.