

## Background

- 2.1 A continued presence in Antarctic permits Australia to deliver world-class science, and to be a leader in environmental and marine protection in the region. This presence requires a substantial scientific program, supported by complex infrastructure and a range of experts including scientists, engineers, policymakers, and tradespeople.
- 2.2 Due to Australia's long history on the continent, a significant portion of the nation's Antarctic infrastructure is reaching the end of its asset life. Consequently, recent efforts by the Australian Government have been concentrated on strengthening Australia's commitment to its Antarctic program and supporting infrastructure.
- 2.3 This chapter provides a broad overview of Australia's engagement with the Antarctic Treaty System (ATS) and the current state of the Australian Antarctic Program (AAP). This includes a brief outline of the ATS, the overarching framework that regulates relations among states within Antarctica, and the impact this has on Australia's activities within the continent.
- 2.4 The chapter considers the AAP and the Australian Antarctic Division (AAD). This includes the purpose of the AAP, as well as infrastructure and capabilities.
- 2.5 Finally, this chapter considers recent developments, on both a national and international level, that affect Australian operations in Antarctica.

## The Antarctic Treaty System

- 2.6 The Antarctic Treaty and associated agreements, collectively known as the ATS, regulate international relations regarding Antarctica. It is the overarching framework for international governance of both the land and waters south of 60° South latitude.<sup>1</sup> The ATS ensures that international engagement in Antarctica is underpinned by the principles of non-militarisation, environmental protection and freedom of scientific engagement.<sup>2</sup>
- 2.7 The ATS emerged during the height of the Cold War as scientific programs on the continent began to proliferate. In 1957–58, 12 nations<sup>3</sup> participated in the first substantial multinational research program in Antarctica, known as the International Geophysical Year (IGY).<sup>4</sup>
- 2.8 In 1959, the nations that had been active during the IGY negotiated the Antarctic Treaty to preserve the continent as a demilitarised zone for cooperative science, free from international discord.<sup>5</sup> As a claimant state, Australia played a key role in the negotiations. Moreover, this role ensured Australia's decision-making status in the Antarctic Treaty.<sup>6</sup>
- 2.9 Of particular importance, the Treaty addresses disagreement over territorial claims by suspending existing territorial claims, prohibiting new claims, and preventing states from asserting, supporting or denying a claim.<sup>7</sup>
- 2.10 Over time the ATS has been strengthened by the addition of several instruments dedicated to protecting the Antarctic environment and wildlife, encouraging scientific research, and minimising potential sources of rivalry by introducing a prohibition on non-scientific mineral resource

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1 Department of Foreign Affairs and Trade (DFAT), *Submission 17*, pp. [1–2].

2 DFAT, *Submission 17*, p. [1].

3 The 12 nations active in the International Geophysical Year were: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, United Kingdom, United States and the Union of Soviet Socialist Republics (USSR).

4 A Jackson, 'Antarctica without borders', *Australian Antarctic Magazine*, Issue 22: Mawson Centenary Special, 2012.

5 *The Antarctic Treaty*, opened for signature 1 December 1959, 402 UNTS71, (entered into force 23 June 1961).

6 Australian Academy of Science, *Submission 4*, p. 2.

7 *The Antarctic Treaty*, opened for signature 1 December 1959, 402 UNTS71, (entered into force 23 June 1961).

activity.<sup>8</sup> This includes the *Convention on the Conservation of Antarctic Marine Living Resources (1988) (CAMLR Convention)* and the *1991 Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol)*.

- 2.11 Since 1959, 41 additional countries have acceded to the Treaty.<sup>9</sup> Currently, 29 of these countries are recognised as ‘Consultative Parties’ that actively engage in Antarctic research and are entitled to participate in decision-making through Consultative Meetings, and 21 ‘Non-Consultative Parties’ that are invited to attend these meetings but are unable to participate in decision-making processes.<sup>10</sup>

## Australia's key role in the ATS

- 2.12 As a claimant state and original signatory to the Antarctic Treaty, Australia has a longstanding commitment to the ATS values and principles, which it balances with its national interests.<sup>11</sup> Australia has played a significant role in the development and negotiation of a number of Antarctic governance instruments including the *CAMLR Convention* and the *Madrid Protocol*. Australia continues to influence Antarctic governance through a range of avenues including hosting the secretariat and annual meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).<sup>12</sup> Australia's contribution to Antarctic governance is discussed in further detail in chapter 3 of this report.

## The Australian Antarctic Territory

- 2.13 Australia claims sovereignty over 42 per cent of the Antarctic continent, known as the Australian Antarctic Territory (AAT), as illustrated in figure 2.1. This claim extends to the surrounding offshore waters. This represents the largest territorial claim in Antarctica. Sovereignty was transferred from Britain to Australia under the *Australian Antarctic Territory Acceptance Act 1933*, which came into effect on 24 August 1936.<sup>13</sup>
- 2.14 As the Antarctic Treaty prohibits any acts or activities that support or deny territorial claims, Australia's Antarctic claim is only recognised by

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8 DFAT, *Submission 17*, p. [3].

9 Secretariat of the Antarctic Treaty, ‘Parties’, <[https://www.ats.aq/devAS/ats\\_parties.aspx?lang=e](https://www.ats.aq/devAS/ats_parties.aspx?lang=e)>, viewed 2 January 2018.

10 Secretariat of the Antarctic Treaty, ‘Parties’, <[https://www.ats.aq/devAS/ats\\_parties.aspx?lang=e](https://www.ats.aq/devAS/ats_parties.aspx?lang=e)>, viewed 2 January 2018.

11 Institute for Marine and Antarctic Studies (IMAS) University of Tasmania, *Submission 8*, p. 1.

12 IMAS, University of Tasmania, *Submission 8*, p. [1].

13 IMAS, University of Tasmania, *Submission 8*, p. [1].

the United Kingdom, France, New Zealand and Norway, all of which are original claimant states.<sup>14</sup> Consistent with established practices under the Antarctic Treaty, Australia takes responsibility for the management of this area and exercises sovereign rights. Australian domestic law in the AAT applies only to Australian nationals.<sup>15</sup> This also applies to the AAT's adjacent maritime zones, including its exclusive economic zones.<sup>16</sup> Currently, a number of other countries are active within the AAT and some countries, including China, France, Italy and Russia, operate bases within the territory, as illustrated in figure 2.2.<sup>17</sup>

### Heard Island and McDonald Islands

2.15 Australia exercises sovereignty over the sub-Antarctic Heard Island and McDonald Islands (HIMI) in the southern Indian Ocean. HIMI is an external territory of Australia and is administered by the Department of the Environment and Energy, through the AAD. While its territorial sea and exclusive economic zone are predominantly located outside of the jurisdiction of the Antarctic Treaty, it is covered by the *CAMLR Convention*.<sup>18</sup>

### Macquarie Island

2.16 Australia also exercises sovereignty over Macquarie Island in the sub-Antarctic Southern Ocean. While Macquarie Island and its surrounding Exclusive Economic Zone are not within the Antarctic Treaty area and are not covered by the *CAMLR Convention*, the AAD maintains a permanent research station there.<sup>19</sup> As a dependency of Tasmania, the island is managed by the Tasmanian Parks and Wildlife Service, but the research facilities are maintained by the Commonwealth.<sup>20</sup>

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14 R Woolcott AC, 'Foreword', in M Haward and T Griffiths, eds, *Australia and the Antarctic Treaty System: 50 Years of Influence*, UNSW Press, Sydney, NSW, 2011, p. xiii.

15 DFAT, *Submission 17:1*, Answer to Question on Notice, pp. [4-5].

16 DFAT, *Submission 17:1*, Answer to Question on Notice, pp. [4-5].

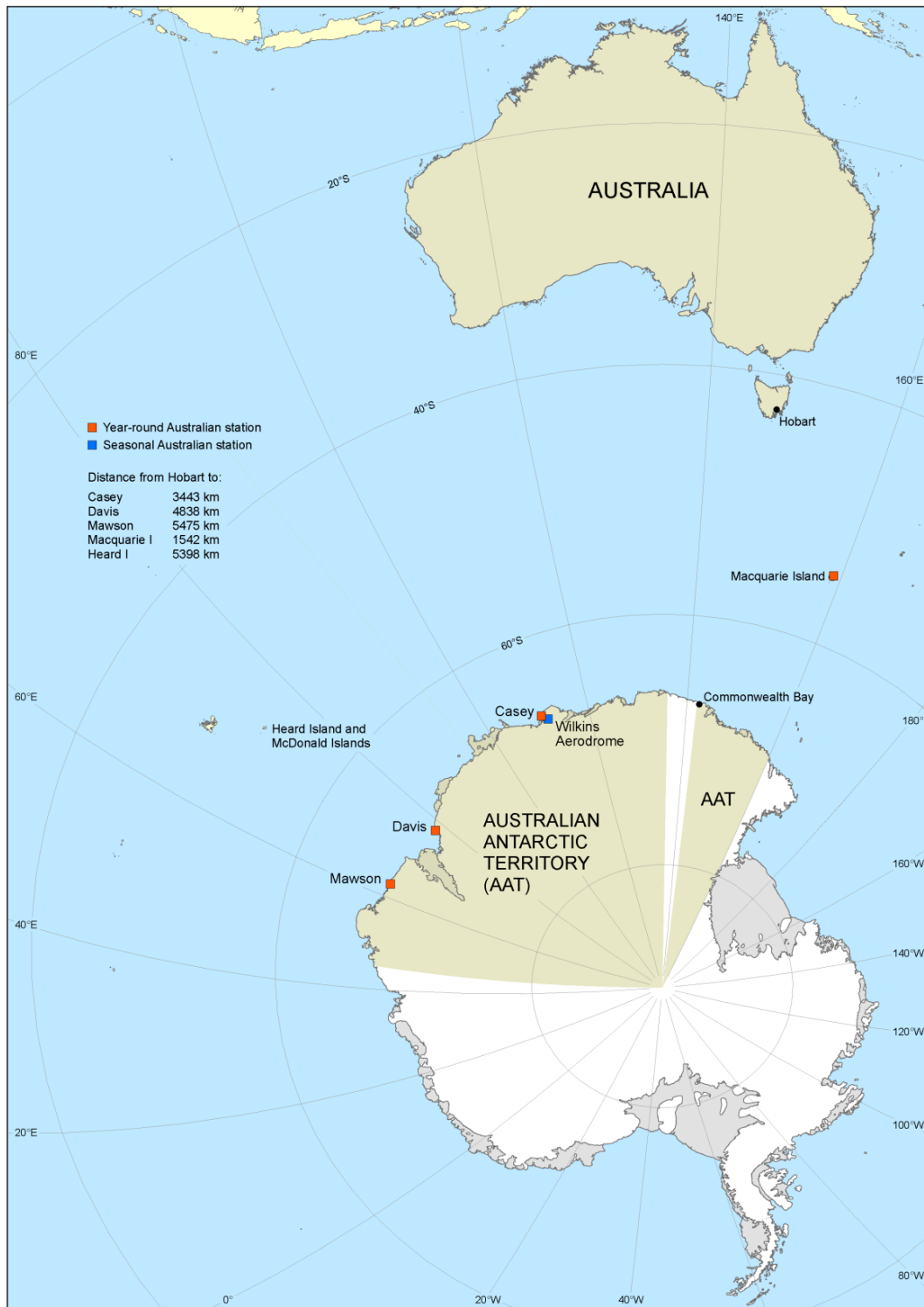
17 Mr James Larsen, Senior Legal Adviser, DFAT, *Committee Hansard*, Canberra, 14 September 2017, p. 5; Embassy of the Russian Federation, *Submission 21*.

18 Australian Antarctic Division (AAD), Department of the Environment and Energy, 'Convention on the Conservation of Antarctic Marine Living Resources,' 8 April 2016, <<http://www.antarctica.gov.au/law-and-treaty/ccamlr>>, viewed 3 January 2018.

19 A J Press, '20 Year Australian Antarctic Strategic Plan', July 2014, p. 56.

20 A J Press, '20 Year Australian Antarctic Strategic Plan', July 2014, p. 56.

**Figure 2.1 Australian Antarctic Territory**

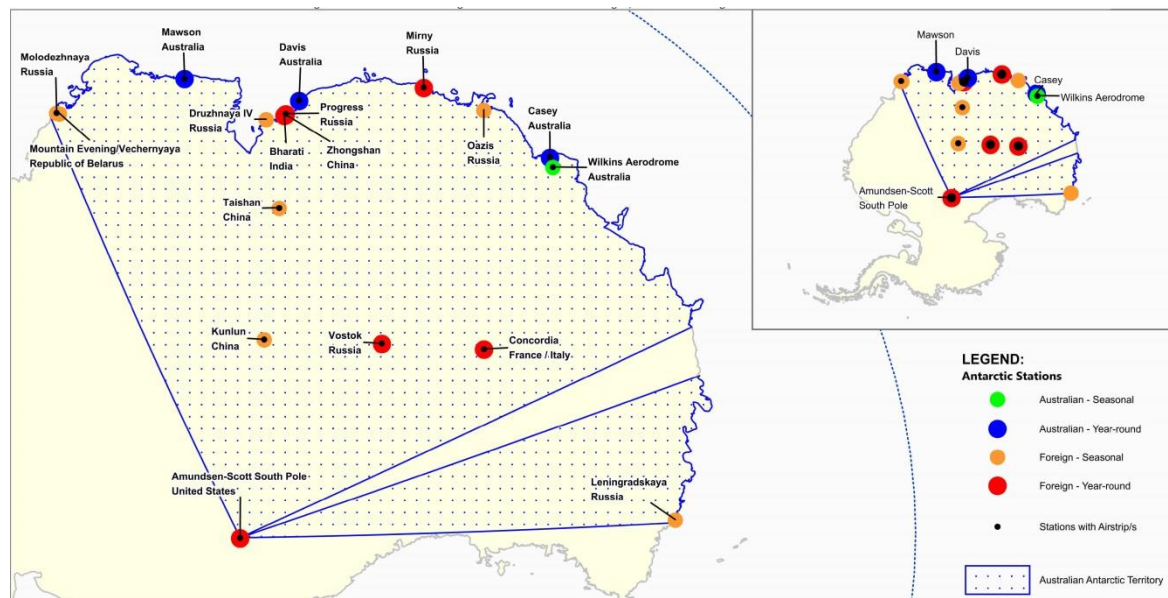


Projection: Lambert Azimuthal Equal Area  
Horizontal Datum: WGS84

Produced by the Australian Antarctic Data Centre, July 2017  
Map Catalogue No. 14603  
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Source Department of the Environment and Energy, Submission 13, p. 4.

**Figure 2.2 Map of Australian and foreign bases in the Australian Antarctic Territory**



Source Council of Managers of National Antarctic Programs – *Antarctic Station Catalogue: August 2017* (image credit: Australian Parliamentary Library, May 2018)

## Australia's Antarctic Program

2.17 The AAP aims to maintain the integrity of the ATS and enhance Australia's influence within it. It also strives to protect the Antarctic environment, understand the role of Antarctica in the global climate system, and to undertake scientific work of practical, economic and national significance.<sup>21</sup> The program is led by the Commonwealth Department of the Environment and Energy through the AAD.

2.18 The majority of work under the AAP is conducted in the AAT. This work focuses on Antarctic science that is aligned with Australia's national interests and integrated with operation capabilities.<sup>22</sup>

## Australia's history in Antarctica

2.19 Australia has a long history of operating in Antarctica, with its first Antarctic expedition dating back to the early 1900s. Since the

21 AAD as quoted in J Jabour and M Haward, 'Resources', in M Haward and T Griffiths, eds, *Australia and the Antarctic Treaty System: 50 Years of Influence*, UNSW Press, Sydney, NSW, 2011, p. xiii.

22 Department of the Environment and Energy, *Submission 13*, p. 5.

establishment of Mawson station in 1954, Australia has maintained a permanent presence within the continent.<sup>23</sup> Over this time Australia has been a leader in the region and played a significant role in shaping Antarctic governance.<sup>24</sup>

- 2.20 Australia continues to have direct interests in Antarctica and the Southern Ocean due to its 'geographical proximity to the continent and the regional connections through climate and Southern Ocean ecosystems.'<sup>25</sup> Moreover, the non-militarisation of Antarctica and the way in which it is governed ensures a region of peace and security at Australia's southern borders.<sup>26</sup>
- 2.21 Due to the ATS emphasis on scientific research combined with the unique Antarctic climate, the continent provides unique opportunities for researchers to gain a greater understanding of critical issues including climate processes, terrestrial and nearshore ecosystems, Southern Ocean ecosystems, and frontier science.<sup>27</sup> This includes long-term observational and monitoring programs that support Australia's engagements and commitment to key international forums, including those under the ATS.<sup>28</sup>

### **Australia's national interests**

- 2.22 Australia's activities in Antarctica serve a broader strategic purpose in protecting sovereignty and national interests in the region. While Australia's scientific and logistical presence allows the country to contribute world-class research, it also plays an integral role in preserving Australia's claim to 42 per cent of the continent beyond the life of the Antarctic Treaty.
- 2.23 The Australian Government formally set out the national interests in the *Australian Antarctic Strategy and 20 Year Action Plan*. These interests determine the policy settings that frame Australia's engagement in Antarctica. At present, these interests are:
- maintaining Antarctica's freedom from strategic and/or political confrontation;

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23 Department of the Environment and Energy, *Australian Antarctic Strategy and 20 Year Action Plan*, 2016, p. 4.

24 Mr Larsen, Senior Legal Adviser, DFAT, *Committee Hansard*, Canberra, 14 September 2017, p. 1.

25 IMAS, University of Tasmania, *Submission 8*, p. [1].

26 Dr Anthony (Tony) Press, Private capacity, *Committee Hansard*, Hobart, 10 November 2017, p. 41.

27 Department of the Environment and Energy, *Submission 13*, p. 5.

28 Department of the Environment and Energy, *Submission 13*, p. 5.

- preserving our sovereignty over the AAT including our sovereign rights over adjacent offshore areas;
- supporting a strong and effective ATS;
- conducting world-class scientific research consistent with national priorities;
- protecting the Antarctic environment, having regard to its special qualities and effects on our region;
- be informed about and able to influence developments in a region geographically proximate to Australia; and
- fostering economic opportunities arising from Antarctica and the Southern Ocean, consistent with our ATS obligations, including the ban on mining and oil drilling.<sup>29</sup>

## The Australian Antarctic Division

- 2.24 The Department of the Environment and Energy, through the AAD, is responsible for leading and coordinating the AAP and administering the AAT, and, in the sub-Antarctic, the Territory of Heard Island and McDonald Islands.<sup>30</sup> This includes the management of over 3,300 Antarctic infrastructure assets with a value of over \$880 million.<sup>31</sup> The AAD employs approximately 70 scientific staff and some 60 associated research, technical and administrative support staff.<sup>32</sup>
- 2.25 In collaboration with other agencies, the AAD provides advice to the Commonwealth on Australia's national and international policy positions and obligations, from environmental protection issues to policy and legal questions regarding the administration of the Antarctic territories.<sup>33</sup> Furthermore, the AAD plays a central role in facilitating Australia's participation in international forums.
- 2.26 Currently, the AAD is located in Kingston, near Hobart, Tasmania. The site houses laboratories for science, electronics and electron microscopy,

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29 Department of the Environment and Energy, *Australian Antarctic Strategy and 20 Year Action Plan*, 2016, p. 17.

30 Department of the Environment and Energy, *Australian Antarctic Strategy and 20 Year Action Plan*, 2016.

31 Department of the Environment and Energy, *Submission 13*, p. 1.

32 AAD, Department of the Environment and Energy, 'Meet our scientists', <<http://www.antarctica.gov.au/science/meet-our-scientists>>, viewed 26 March 2018.

33 Department of the Environment and Energy, *Submission 13*; Department of Foreign Affairs and Trade, *Submission 17*.



mechanical and instrument workshops, a krill research aquarium, equipment stores, and other operational and support facilities.<sup>34</sup>

## Emphasis on collaboration

- 2.27 The AAP is highly collaborative, comprising partnerships with government, national and international research institutions, and other nations. Collaboration is in part necessitated by the remote location and extreme weather conditions associated with Antarctica.
- 2.28 In particular, science in Antarctica and the Southern Ocean is conducted by a wide range of organisations in Australia including universities and agencies such as the AAD, Geoscience Australia, the Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC), the Bureau of Meteorology, the Australian Nuclear Science and Technology Organisation (ANSTO), and some divisions of the Commonwealth Scientific and Industrial Research Organisation (CSIRO).<sup>35</sup>
- 2.29 The Department of Foreign Affairs and Trade leads Australia's Antarctic Treaty engagement and works closely with the AAD on Antarctic policy and strategy.<sup>36</sup> The Department of Defence provides substantial but niche operational and logistical support to the Antarctic program including heavy-lift aviation capabilities.<sup>37</sup> Furthermore, agencies such as the Department of Immigration and Border Protection and the Australian Maritime Safety Authority exercise maritime safety and security responsibilities in Antarctic and Southern Ocean waters including search and rescue coordination.<sup>38</sup>

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34 AAD, Department of the Environment and Energy, 'About Us', 8 August 2017, <<http://www.antarctica.gov.au/about-us>>, viewed 8 January 2018.

35 Australian Academy of Science, *Submission 4*, p. 2.

36 DFAT, *Submission 17*, p. [1.]

37 Department of Defence, *Submission 14*, p. 2.

38 Department of Immigration and Border Protection, *Submission 15*, p. 1.; and Australian Maritime Safety Authority (AMSA), *Submission 19*, p. 2.

## Recent developments

- 2.30 Over the past four years the Australian Government has placed significant emphasis on renewing the AAP through increased investment in infrastructure and science in the region. The following section outlines some of the motivations behind this change.

## International investment in Antarctic infrastructure

- 2.31 The past decade has witnessed an increase in interest in Antarctica with a range of countries expanding their investment in infrastructure in the region. This highlights the growing recognition of the broader benefits that infrastructure assets and capability have for science and leadership in the region.<sup>39</sup> Recent investments include: France's new icebreaker, which will be delivered in 2017; the United Kingdom's major modernisation program, which includes a new £200 million icebreaker and planned upgrade of their Antarctic stations; New Zealand's redevelopment of Scott Base, with NZ\$9 million allocated for initial scoping work; China's plans to build a fifth Antarctic research station at Inexpressible Island and a new skiway at its existing Zhongshan station in the AAT; and the United States' major Antarctic Infrastructure Modernisation for Science program, which includes development of new facilities and infrastructure at McMurdo Station.<sup>40</sup>

## Growing emphasis on strengthening the AAP

- 2.32 While other countries have invested significantly in infrastructure, some commentary has noted Australia's 'historical under-investment at a time when new players are emerging in Antarctica.'<sup>41</sup> In the 20 Year Antarctic Strategic Plan, which was commissioned by the Government, Dr Tony Press, former Director of the AAD and Adjunct Professor at ACE CRC, argued that due to this, '... Australia's standing in Antarctic affairs is eroding...' and the leadership that it '... has naturally assumed by its proximity, history and experience, risks decline.'<sup>42</sup>

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39 The Department of the Environment and Energy, *Submission 13*, p. 14.

40 The Department of the Environment and Energy, *Submission 13*, p. 14.

41 A J Press, '20 Year Australian Antarctic Strategic Plan', July 2014, p. 2.

42 A J Press, '20 Year Australian Antarctic Strategic Plan', July 2014, p. 2.

- 2.33 In order to address this, the Dr Press report made 35 recommendations on a range of issues including: protecting Australia's national interests in Antarctica; supporting and leading national and international Antarctic science; increasing Tasmania's role as an Antarctic Gateway city; strengthening Australia's Antarctic station's operations, transport and deep field traverse capabilities; and the effective administration of the AAT.<sup>43</sup>
- 2.34 Simultaneously, the Senate Foreign Affairs, Defence and Trade References Committee's 2014 inquiry focusing on Australia's future activities and responsibilities in the Southern Ocean and Antarctic waters, made a number of recommendations regarding the allocation of funding for scientific research and securing national interests within the region.<sup>44</sup>

### **The Australian Antarctic Strategy and 20 Year Action Plan**

- 2.35 In 2016 the Australian Government responded to the Dr Press report and the Senate Foreign Affairs, Defence and Trade References Committee's 2014 inquiry by committing to revitalise the program with the release of the *Australian Antarctic Strategy and 20 Year Action Plan*. The Plan outlines Australia's national Antarctic interests and sets out major action the Government will undertake over the next two decades to safeguard these interests.
- 2.36 The Plan includes the acquisition of a new world-class icebreaker, renewal of inland traverse capabilities including ice core drilling, preliminary work to develop year-round aviation access, review Antarctic research station infrastructure, and strengthening Antarctic science funding and infrastructure.<sup>45</sup> The Plan was supported by an additional \$2.2 billion in investment.<sup>46</sup>
- 2.37 The Department of the Environment and Energy said that key actions the Government has delivered to date include:
- \$1.9 billion to deliver and run a new icebreaker, a world-class scientific and logistical capability, over its four-year build program and 30-year operational life;

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43 A J Press, '20 Year Australian Antarctic Strategic Plan', July 2014.

44 Foreign Affairs, Defence and Trade References Committee, *Australia's Future Activities and Responsibilities in the Southern Ocean and Antarctic Waters*, 2014.

45 Department of the Environment and Energy, *Australian Antarctic Strategy and 20 Year Action Plan*, 2016.

46 The Department of the Environment and Energy, *Submission 13*, p. 1.

- \$200 million over 10 years in additional funding for the AAD's operations;
- \$50 million for a new research station on Macquarie Island to replace current aging infrastructure with a more efficient and environmentally friendly station;
- \$45 million to re-establish an overland science traverse capability to enable research in all parts of the AAT, including to locate and drill a million year ice core; and
- \$10 million for scoping work and the development of a business case to inform options for establishing year-round aviation access between Hobart and Antarctica, including estimated infrastructure and associated costings of options through their whole lifecycle.<sup>47</sup>

## Government reports

- 2.38 The Government's renewed focus on the AAT was highlighted in the 2017 Foreign Policy White Paper, which emphasised the importance of Antarctica to Australia and reinforced Australia's commitment to the ATS, including its principles of environmental protection and non-militarisation, and its indefinite ban on mining and oil drilling.<sup>48</sup> The paper highlighted the additional \$2.2 billion the Government is spending to protect Australia's Antarctic interests, and noted the importance of supporting Tasmania's status as the premier gateway for science and operations in East Antarctica.<sup>49</sup>
- 2.39 The most recent Defence White Paper also emphasised the importance of a continued commitment to the ATS. The paper also made the assessment that the AAT '... faces no credible risk of being challenged in such a way that requires a substantial military response for at least the next few decades.'<sup>50</sup>

## Funding

- 2.40 The 2016–17 Budget included commitments to provide funding in support of the *Australian Antarctic Strategy and 20 Year Action Plan*. This included:
- providing \$55 million over 10 years from 2016–17 to undertake scoping studies and commence delivery of enhanced infrastructure capabilities

47 The Department of the Environment and Energy, *Submission 13*, p. 2.

48 DFAT, *2017 Foreign Policy White Paper*, p. 85.

49 DFAT, *2017 Foreign Policy White Paper*, p. 85.

50 Department of Defence, *2016 Defence White Paper*, p. 54.

in the AAT. This includes support for an over-ice traverse science capability and preliminary work to develop year-round aviation access to Antarctica; and

- providing \$83.1 million over four years from 2016–17 and further funding of \$413.1 million over 29 years from 2020–21 with \$10.3 million per annum ongoing funding from 2049–50, to contribute to maintaining a sustainable level of operations to protect Australia’s environmental, economic, scientific, security and strategic interests in Antarctica.<sup>51</sup>

- 2.41 The 2017–18 Budget confirmed the commitment of \$49.8 million over 11 years from 2016–17 to the building of a new research station on Macquarie Island.<sup>52</sup> This is in addition to the money set aside for the *Australian Antarctic Strategy and 20 Year Action Plan*.
- 2.42 Whilst significant funds have been allocated to strengthening Antarctic infrastructure, at the same time, CSIRO and other agencies and programs have been subject to reduced budget appropriations that have impacted Australia’s Antarctic science program.
- 2.43 For example, the Committee heard that in 2016 the CSIRO underwent significant restructuring to revise the organisation’s key areas of focus from climate science to decadal forecasting.<sup>53</sup> This included a number of staff reductions.<sup>54</sup>
- 2.44 A significant portion of the evidence to the Committee highlighted concerns around funding to multiple scientific programs. This is discussed in further detail in chapter 4.

## Committee comment

- 2.45 Australia has a long and proud history of involvement in Antarctica and has significantly contributed to shaping the region, both through the ATS and on the ground. The Committee agrees with the assessment that the dominance of the AAP has enabled Australia to contribute to world-class research, and to protect its sovereignty and national interests in the region. Maintaining Australia’s dominance in Antarctica is critical, particularly at

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51 Commonwealth of Australia, *Budget Measures Budget Paper No. 2 2016-17*, pp. 87–88.

52 The Department of the Environment and Energy, *Portfolio Budget Statements 2017-18*, p. 20.

53 Dr Anthony Worby, Director, Oceans and Atmosphere, Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Committee Hansard*, Hobart, 10 November 2017, p. 31.

54 Dr Worby, CSIRO, *Committee Hansard*, Hobart, 10 November 2017, p. 31.

a time in which international activity on the continent is increasing. To that end, the Committee welcomes recent commitments to increase investment in the AAP to ensure that Australia continues to maintain a leading role on the continent. The following chapters provide recommendations to ensure that this commitment is implemented successfully to enable Australia to continue its leadership in Antarctica.