

Chapter 5

Resourcing Australia's engagement: investment and reward

5.1 From the submissions and evidence presented to the committee, it was apparent that many see this as a crucial moment in determining the future of Australia's status as an Antarctic nation. In a submission the Hon David Feeney MP wrote:

We are...entering a key juncture for international involvement in the Antarctic. Australia can no longer afford to be complacent. At a time when budget pressures are diminishing Australia's ability to maintain its Antarctic effort, other nations are rapidly building their presence and investing in new capabilities to support an Antarctic presence for the decades ahead. Australia must make critical decisions about the future of access to and activities within the AAT, or run the very real risk of being left out in the cold.¹

5.2 The Institute for Marine and Antarctic Studies (IMAS) articulated the concern expressed by many that resources were declining at a time of increasing demands on Australia in the Antarctic region:

Our understanding of future activities in the Antarctic and Southern Ocean leads us to believe that Australia's responsibilities will increase significantly over time. Therefore, under-resourcing or downsizing resource capabilities will also have significant impacts on security, search and rescue, fisheries enforcement, scientific research and, ultimately, sovereignty.²

5.3 The Australian Strategic Policy Institute (ASPI) wrote in late 2013 that:
two fundamental budget issues are combining to potentially cripple Australia's Antarctic efforts. The first is that *Aurora Australis* is reaching the end of its life...The second budget issue is the steady erosion of base funding through the imposition of efficiency dividends and other budget savings.³

Jobs and funding

5.4 A common theme in many submissions, including from government agencies, was concern about the loss of jobs and funding for Australia's Antarctic engagement brought about by budget efficiencies in recent years, particularly the most recent deep cuts in the 2014 Budget.

1 The Hon David Feeney MP, *Submission 16*, p. 9.

2 Dr Julia Jabour, *Committee Hansard*, 16 September 2014, p. 1.

3 Australian Strategic Policy Institute, 'Cold Calculations: Australia's Antarctic challenges', *Strategic Insights*, October 2013, p. 17.

5.5 The Community and Public Sector Union (CPSU), which represents staff in the Australian Antarctic Division (AAD) and CSIRO, stated that the cuts of approximately \$100 million to the Department of the Environment and \$115 million to CSIRO over the forward estimates were resulting in extensive damage to the marine and Antarctic work of both agencies. The union advised that while it had had difficulty precisely tracking the number of jobs lost, it believed that some 49 ongoing and non-ongoing positions had been abolished in AAD to date, and a similar number in CSIRO's Tasmania-based Oceans and Atmosphere Flagship program, with further job cuts to follow, including a further 59 positions to be cut from CSIRO's marine base in Hobart by the end of 2014.⁴ This amounted overall to a loss of approximately 25 per cent of the Tasmania-based staff of AAD and CSIRO, and the CPSU foresaw the cuts as continuing with the impact of further budget efficiencies in both agencies in coming years.

5.6 In its evidence AAD advised that a slightly smaller number, 44 positions, had been abolished in that agency since May 2013, with no further job losses envisaged at this stage. This included the loss of 18 scientists from a cadre of around 110.⁵

5.7 CPSU stated that the recent cuts had a particularly hard impact on the science branch of AAD, with a freeze on the recruitment or extension of non-ongoing staff, a high number of whom were employed by AAD. These tended to be junior scientists and field researchers employed for the duration of particular projects, and operational support staff engaged on a seasonal basis. The inability to re-engage such staff in turn impacted on the ability of AAD to mount future field research expeditions.⁶ Dr Nick Gales, Chief Scientist at the AAD, acknowledged that the largest constraining element on scientific research by AAD was the operational capacity to support scientists.⁷

5.8 CPSU highlighted the 'disconnect' between the government's significant investments in new infrastructure, such as the RV *Investigator* and the replacement icebreaker vessel, and the removal of the staff and budgets necessary to utilise the ships: 'we do not understand why you would make those significant investments if you were not going to make the same investments in the staff'.⁸

5.9 IMAS and others similarly argued that while new funding for scientific research had been made available by the government, such as the Antarctic Gateway research partnership support of \$24 million over three years, there was insufficient support for logistics to sustain the research expeditions necessary for effective utilisation of the grant.⁹

4 Mrs Jessica Munday, *Committee Hansard*, 16 September 2014, p. 28.

5 *Committee Hansard*, 16 September 2014, p. 58.

6 Community and Public Sector Union, *Submission 20*, p. 2.

7 Dr Nick Gales, *Committee Hansard*, 16 September 2014, p. 56.

8 Mrs Jessica Munday, *Committee Hansard*, 16 September 2014, p. 30.

9 Professor Nathan Bindoff, *Committee Hansard*, 16 September 2014, p. 4.

5.10 In addition to staffing cuts, Antarctic agencies also faced significant losses to core funding. The CPSU stated that this year AAD would face a \$12 million funding shortfall and this would have to be found through savings in operations, potentially leading to further curtailment of marine science voyages. Other efficiencies such as restrictions on international travel had reduced Australia's capacity to engage and exercise influence in Antarctic Treaty System-related international meetings.¹⁰

5.11 In its submission, the Department of the Environment noted the very high proportion of AAD's budget tied up in fixed costs. The nature of the Australian Antarctic program was such that around 70 per cent of AAD's expenditure represented fixed costs necessary to sustain operations, and that these costs, such as fuel, were subject to price rises and volatility over time. That budget was nonetheless subject to the same efficiency dividends and cuts as other departmental expenditure.¹¹

5.12 Professor Anthony Worby summarised the impact of that budget profile in times of austerity:

The current Antarctic program funds three largish stations in Antarctica as well as one ship, an air link, the Wilkins base and Macquarie Island. Managing all of that comes at a certain fixed cost per year, and that fixed cost goes up. In an environment where you have to maintain all those services and your budget is shrinking, the residual budget that you have left to do your science program is shrinking year on year on year. Unfortunately, it has been the science program within the Australian Antarctic program that has been seen as the discretionary part that gets squeezed as budgets get squeezed. That is why we have seen a very significant reduction in the amount of marine science time in particular.¹²

5.13 Mr Timothy Lamb, a CPSU workplace delegate from the AAD, expressed the opinion that a crunch point was rapidly approaching:

We have made numerous small cuts – trimming the bush, if you like – but we are now at the stage where you probably cannot continue to trim it any further without having to make a decision about which large direction we drop altogether... We cannot just continue making little, tiny cuts forever.¹³

5.14 Dr Tony Fleming, Director of AAD, highlighted that new research partnership funds announced by the government in the 2014 budget would flow through to support the activities of AAD, but also acknowledged the challenge:

Because the budget is under pressure – the federal government is under pressure – we will do less science. The efficiency dividends over the last few years have bitten now. So we will do less science.¹⁴

10 Community and Public Sector Union, *Submission 20*, p. 3.

11 Department of the Environment, *Submission 15*, p. 12.

12 Professor Anthony Worby, *Committee Hansard*, 26 September 2014, p. 13.

13 Mr Timothy Lamb, *Committee Hansard*, 16 September 2014, p. 30.

14 Dr Tony Fleming, *Committee Hansard*, 16 September 2014, pp 56, 59.

5.15 Concerns about AAD's financial situation have been addressed in the 20 Year Strategic Plan, which recommended that the Department of the Environment and the Department of Finance undertake a joint review of the AAD budget, taking into account its particular core functions and its high fixed costs, and 'the future operational support required to sustain a credible Antarctic program that matches Australia's national interests in the Antarctic'.¹⁵ The Plan also noted that the Department of the Environment had raised the possibility of diversifying the funding base for its work from other sources such as business, philanthropic institutions and crowd-funding, and encouraged the department to explore such options.¹⁶

5.16 For its part, CSIRO was facing the biggest budget cuts in recent memory: \$111.4 million in direct reductions over four years, plus an efficiency dividend of \$3.4 million, and other indirect losses flowing from cuts to collaborative programs. These reductions would necessitate not only the loss of 500 full-time equivalent positions, but also cuts to research programs, closure of laboratories and sale of assets. The CPSU's submission stated that the division which housed CSIRO's Antarctic and Southern Ocean work would be one of the key areas facing cuts, with research programs to be reduced or abandoned in areas such as bathymetry, coastal modelling, ocean climate, marine biodiversity including fisheries, marine risk assessment and marine habitat mapping.¹⁷

5.17 Mr Mark Green from the CSIRO staff association expressed concern that priority research projects were now at risk due to inadequate staff to continue long-term data collection in areas such as carbon sequestration, which builds models for climate and weather forecasting.¹⁸ Witnesses representing CSIRO, however, reassured the committee that the organisation was seeking to ensure that it maintained the capacity to work in its priority areas, including marine science, despite reductions in staff.¹⁹

5.18 The impact of CSIRO budget cuts on the proposed operations of the RV *Investigator* was a major concern raised with the committee by several witnesses, and is discussed further below.

Committee view

5.19 As ASPI succinctly stated in 2013, 'the bottom line is that Antarctic logistics are both necessary and expensive'.²⁰ The impact of budget cuts and efficiencies on the core functions of Australia's key Southern Ocean and Antarctic agencies is undeniable. The committee recognises that funds are limited, but Australian

15 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 46.

16 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 45.

17 Community and Public Sector Union, *Submission 20*, pp 3-4.

18 Mr Mark Green, *Committee Hansard*, 16 September 2014, p. 31.

19 Dr Bruce Mapstone, *Committee Hansard*, 16 September 2014, p. 43.

20 Australian Strategic Policy Institute, 'Cold Calculations: Australia's Antarctic challenges', *Strategic Insights*, October 2013, p. 18.

investment in this priority area must be protected. As such, the committee endorses the balanced and constructive recommendations made in the 20 Year Strategic Plan for a comprehensive review of AAD's budget, taking into account its special characteristics and needs, and re-consideration of the Division's financing needs accordingly.

Recommendation 13

5.20 The committee endorses Recommendation 28 of the 20 Year Australian Antarctic Strategic Plan, proposing a comprehensive review of the budget and resourcing needs of the Australian Antarctic Division, and recommends that this be adopted and undertaken by the government as soon as practicable.

Australia's maritime presence in the Southern Ocean

5.21 It was clear to the committee that high demands on a very limited Australian maritime presence in the Southern Ocean led to inevitable compromise to operations. With the acquisition of new and improved maritime assets, and increasing demand upon their use, a significant challenge existed to ensure a national fleet capable of meeting Australia's needs in its southern waters, and managing that fleet to greatest effect.

The Aurora Australis and its replacement

5.22 The government's flagship icebreaker, the *Aurora Australis*, originally commissioned as a research vessel, has been subject to competing demand since a decision was made in 2007 to shift to aviation capacity for Antarctic transport, rather than a second ship. As a result the *Aurora Australis* is required to conduct both the AAD's resupply and scientific tasks.²¹

5.23 Professor Kurt Lambeck from the Australian Academy of Science suggested that the air link had perhaps not been as successful as originally hoped in facilitating improved access to Antarctica for scientists, in place of the second ship.²² In evidence to the committee, however, the AAD and CSIRO indicated that Australia's chartered air links were very valuable, and did not support sacrificing them in order to return to a dual-ship model.²³

5.24 The reality remains that AAD's budget will not allow for both, and the impact of funding and job cuts over several years appears to have increasingly shifted the balance of the *Aurora Australis*'s tasking to the detriment of Antarctic science. As noted in chapter 4, AAD itself reported a dramatic reduction in marine science days undertaken by the *Aurora Australis* since 2008.²⁴ The CPSU advised that while in past years the *Aurora Australis* had managed to undertake one or two dedicated research voyages per season in addition to its resupply responsibilities, high operating costs,

21 Department of the Environment, *Submission 15*, p. 12.

22 Professor Kurt Lambeck, *Committee Hansard*, 26 September 2014, p. 8.

23 *Committee Hansard*, 16 September 2014, p. 52; CSIRO, *Submission 14*, p. 8.

24 Department of the Environment, *Submission 15*, p. 13.

declining budgets and disappearing specialist staff now meant the AAD no longer had the capacity to fund more than one science voyage every two years.²⁵ Professor Philip Boyd from IMAS asserted that there would be only 12 dedicated marine science days on the *Aurora Australis* in the coming season, down from 80 days in 2013-14.²⁶

5.25 This was also due in part to the additional demand on the vessel, as Australia's only icebreaker, to respond when needed to search and rescue emergencies in Antarctic waters. IMAS reflected on the pressures experienced during the most recent summer season:

The 2013-14 Australian Antarctic season and also that of other national operators was disrupted a number of times. There were difficulties getting into Mawson and Davis stations because of higher than normal sea ice concentration. A helicopter crashed on the Amery iceshelf and a number of staff were injured and required repatriation to Australia. The *Aurora Australis* was diverted from its normal operations to rescue passengers from the *Akademik Shokalsky*...²⁷

5.26 The government's announcement, during the course of this inquiry, that funds had been allocated and the tender process commenced for a replacement icebreaker for the *Aurora Australis* was seen by all as a welcome development. Several submissions emphasised the importance of the new icebreaker to Australia's continued ability to demonstrate an effective presence in the Antarctic region.

5.27 The Department of the Environment stated that the new vessel would provide a 'sustainable and modern capability' to support Australia's Antarctic activities into the future.²⁸ Dr Sam Bateman expressed optimism, based on the tender information available to date, that the new icebreaker would have significantly better capability than the *Aurora Australis* in terms of size, cargo capacity and icebreaking ability.²⁹

5.28 Describing the state of the *Aurora Australis* as 'the single biggest point of failure in Australia's Antarctic efforts', the 20 Year Strategic Plan affirmed this view, adding that the new ship's increased capability would also provide a platform from which Australia could increase its collaboration with other nations. The Plan warned, however, that 'the capabilities of the new icebreaker must be matched with the capacity to conduct both scientific and logistic operations': that is, adequate budget support must be in place for it to do its job.³⁰

5.29 The Plan recommended a number of parameters for the new icebreaker and its use. These included the requirement that the vessel be actively engaged in 'world class research' in the Southern Ocean and in logistical collaboration with other countries,

25 Community and Public Sector Union, *Submission 20*, p. 3.

26 Professor Philip Boyd, *Committee Hansard*, 16 September 2014, p. 7.

27 Dr Julia Jabour, *Committee Hansard*, 16 September 2014, p. 2.

28 Department of the Environment, *Submission 15*, p. 12.

29 Dr Sam Bateman, *Committee Hansard*, 26 September 2014, p. 5.

30 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 21.

but also that, when not engaged directly in Australia's Antarctic program, the vessel should be available for other appropriate uses by the Australian government.³¹

The RV Investigator

5.30 The delivery in September 2014 of CSIRO's new Marine National Facility research vessel, the *RV Investigator*, was heralded as a long-awaited boost to Australia's marine science research capacity. In CSIRO's own words, the *Investigator*:

...must be all things to all Australian marine scientists, as Australia has only one blue-water research vessel. The vessel will support atmospheric, oceanographic, biological and geoscience research...

The ship is technically impressive and will open up avenues of discovery both within and across scientific disciplines. With an enviable suite of equipment, the ship will dramatically improve the national marine knowledge, putting Australia at the forefront of ocean research globally.³²

5.31 The committee had the opportunity to tour the newly-arrived vessel in Hobart, and was impressed by its state-of-the-art and comprehensive scientific capabilities.

5.32 Several witnesses lamented, however, that even before the *RV Investigator's* work commenced, its research expedition time had been cut from the 300 days originally planned to 180 days per year. These days would be shared between expeditions in the north, south, east and west of Australia, leaving many in the science community with little optimism about the opportunities available to utilise its facilities in the Southern Ocean.

5.33 CSIRO advised that the 180 days per year was consistent with the voyage days undertaken by the vessel's predecessor the *Southern Surveyor* in recent years, and that the *Investigator* offered increased capacity in terms of the number of scientific berths on the vessel. CSIRO also advised that it intended to seek interest from international research partners in chartering the ship during the remaining days, and hopefully in doing so create further opportunities for the collaborative involvement of Australian researchers.³³ Nevertheless, there was palpable disappointment among submitters and witnesses within the scientific community that this state-of-the-art, costly and beautifully-equipped research vessel would now be available to play its core role of supporting Australian-led science less than half the days of the year, and of those, an unknown proportion in the Southern Ocean.

5.34 Witnesses from CSIRO also emphasised the importance of being able to access the Southern Ocean and Antarctic waters year-round, including in winter, to make scientific observations, monitor instruments, and measure physical processes throughout the seasons.³⁴

31 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, pp 21-22.

32 CSIRO Marine National Facility, *Investigator*, information sheet distributed to committee, 15 September 2014, Hobart.

33 Ms Toni Moate, *Committee Hansard*, 16 September 2014, p. 44.

34 Dr Bruce Mapstone and Dr Steve Rintoul, *Committee Hansard*, 16 September 2014, p. 42.

The Ocean Shield

5.35 On the security and patrolling front, the committee was briefed on the new arrangements between the Australian Customs and Border Protection Service (ACBPS) and the Department of Defence for the replacement of the *Ocean Protector* by the *Ocean Shield*. While indicating the intention of ACBPS that the *Ocean Shield* conduct two 40-day patrols in the Southern Ocean in the coming year, Mr Roman Quaedvlieg from ACBPS explained that its agreement with Defence for the transfer of the vessel included a commitment that the two agencies would closely coordinate its use 'in such a way that, during the disaster season, if you will, it will be on a short tether and be available for humanitarian disaster relief taskings'.³⁵ It was clear that the pressure of competing demands on Australia's only ice-strengthened patrol vessel would remain.

5.36 At the committee's public hearing in Canberra, Mr Quaedvlieg set out the challenge:

We have a number of civilian maritime threats that we deal with...maritime people smuggling, our Southern Ocean patrols, maritime piracy, the security of our offshore and gas installations, the theft of natural resources. So in our coordination of our resources against all of those threats, we use all of our vessels—both marine and air. The *Ocean Protector* and now the *Ocean Shield* is obviously, as I mentioned, the flagship, and we will prioritise the use of that particular asset depending on what particular threats are facing us at any given point in time. So we just had a conversation in relation to the *Ocean Shield* and its utility for humanitarian and disaster relief operations. It has equal and if not more utility for our maritime people-smuggling operations under Operation Sovereign Borders. It is also, as I mentioned, the only vessel that we have that is capable of operating in any meaningful way in the Southern Ocean. So just on those three threats alone you will see that the *Ocean Shield* needs to be spread across all of our threats, and we will make those determinations at the time, depending on the particular priority of the threats that we are facing.³⁶

Maritime assets of the Australian Defence Force

5.37 The Department of Defence indicated that although the present threat level in the Southern Ocean was regarded as low, recognition of potential future risks to Australian interests in the region would be a factor in determining future surveillance capabilities, including in the context of the proposed 2015 Defence White Paper.³⁷ While acknowledging that the Australian Defence Force (ADF) lacked significant resources with the capacity to operate in the icy conditions of Antarctic waters, ADF air and sea assets were already assigned to Border Protection Command as needed, and the department indicated that its assets could also be used where required, and

35 Mr Roman Quaedvlieg, *Committee Hansard*, 26 September 2014, p. 30.

36 Mr Roman Quaedvlieg, *Committee Hansard*, 26 September 2014, p. 30.

37 Mr Tyson Sara, *Committee Hansard*, 26 September 2014, p. 19.

where available, in support of other civil activities such as search and rescue, surveillance, and logistical support to the Australian Antarctic Program.³⁸

Management of the national fleet: a National Fleet?

5.38 In light of the limited maritime resources available for Australia's various responsibilities in the Southern Ocean, witnesses before the committee recognised the importance of ensuring their most efficient and appropriate use to achieve Australia's national interests.

5.39 CSIRO referred to the possibility of more streamlined coordination of research voyage allocation between the *Investigator* and the AAD's present and future icebreaker. Dr Bruce Mapstone observed that:

There has not historically been a very close link between the process through which we allocate time on the Marine National Facility, formerly the *Southern Surveyor*, now the *Investigator*, and research time that is allocated on the icebreaker. There is a great opportunity, I think, for us collectively to better synchronise the allocation of research to the vessels, particularly now, with the *Investigator* being able to go further south than the *Southern Surveyor*, so that we are using the best ship available for the job. It would not make a lot of sense, for example, if logistically we could have the *Investigator* doing work in the Southern Ocean, where there is not an issue with ice, but instead we had the icebreaker sitting out in the Southern Ocean. That is the sort of thing we are talking about...

It makes good sense for a nation with a small fleet of research vessels to be using them as best we can, and that means we need to look at ways of making sure that, when we are allocating research time on vessels, we are allocating each piece of research to the most appropriate vessel, whether that is one run by the CSIRO on behalf of the nation or the icebreaker run under the Antarctic program, or indeed, possibly vessels run by other agencies around the country.³⁹

5.40 Dr Mapstone clarified that this did not necessarily require uniting both vessels under a single management structure, and that there would be some challenges in that regard. He noted that CSIRO had acted to bring senior representatives of AAD and the broader marine community on to the Marine National Facility Steering Committee, to improve coordination of decisions about vessel allocation. Dr Nick Gales from AAD also pointed out that the new model for assessing and allocating science bids for the use of the RV *Investigator* was yet to be fully tested.⁴⁰ Dr Mapstone and Dr Rintoul recognised, however, that there would be value in examining the possibilities for a move toward strengthening links between research approval and related voyage allocation processes, and across the range of national marine facilities in Australia.⁴¹

38 Department of Defence, *Submission 22*, p. 1.

39 Dr Bruce Mapstone, *Committee Hansard*, 16 September 2014, pp 43-44.

40 Dr Nick Gales, *Committee Hansard*, 16 September 2014, p. 55.

41 *Committee Hansard*, 16 September 2014, p. 44-45.

5.41 In the 20 Year Strategic Plan, Dr Tony Press observed:

Assets used for Antarctic research are in high demand and are expensive to operate. It is therefore important that there is coordination between the Australian Antarctic Division as the lead agency for the Australian Antarctic Program, and other funding bodies and facilities such as the Australian Research Council, the Integrated Marine Observing System, and the Marine National Facility. Processes and systems need to be developed which ensure that investment in Antarctic and Southern Ocean science is coordinated; that there is efficient use of resources; that resources such as ships and moorings are used to best advantage; and that limited resources are focused in priority areas.⁴²

5.42 In their submission to the committee, Dr Sam Bateman and Dr Anthony Bergin argued that Australia's lack of on-water capability in the Southern Ocean was a major problem for the nation, particularly in terms of responding to IUU fishing and search and rescue emergencies, but also to the detriment of Australia's leadership in marine science.⁴³ In evidence at the committee's public hearing in Canberra, Dr Bateman said that in terms of on-water activity 'Australia's lack of research capacity compares most unfavourably with other countries such as Canada, Japan and Russia'.⁴⁴

5.43 Dr Bateman and Dr Bergin proposed that consideration be given to the adoption of a 'national fleet' approach to address the issues facing Australia's maritime capacity:

Rather than each agency doing its 'own thing' with *blue water* capabilities, there is scope for a 'whole of nation' approach to address all national requirements for these capabilities other than naval war-fighting. This would ensure that important capability requirements do not fall down a 'hole' between national agencies.⁴⁵

5.44 Dr Bateman saw the biggest 'hole' in Australia's Southern Ocean capability lying in 'the lack of a decent offshore patrol vessel':

Neither the Customs cape class nor likely the Navy's Armidale class are vessels suited for operations in the Southern Ocean. They do not have the range or seakeeping qualities and also, significantly, they do not have a helicopter. I think the latter, the ability to carry a helicopter, particularly one that can be stowed in a hangar to protect it from weather, is an essential capability for the sovereignty protection and law enforcement tasks...So there are many gaps with regard to our current service capability.⁴⁶

42 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 32.

43 Dr Sam Bateman and Dr Anthony Bergin, *Submission 2*, pp 2-3.

44 Dr Sam Bateman, *Committee Hansard*, 26 September 2014, p. 1.

45 Dr Sam Bateman and Dr Anthony Bergin, *Submission 2*, p. 4.

46 Dr Sam Bateman, *Committee Hansard*, 26 September 2014, pp 1-2.

5.45 Dr Bateman and Dr Bergin argued that it would be extremely difficult to remedy such a capacity gap without a unified national approach, as no single agency would regard a large new patrol vessel as sufficiently necessary to its core business to fund its acquisition. Dr Bateman elaborated that the navy would regard such a vessel as 'insufficiently warlike', while ACBPS would take the view that such a boat was 'bigger and more complex than Customs actually requires for its present activities', particularly given the present border protection focus on Australia's north.⁴⁷

5.46 However, Dr Bateman and Dr Bergin believed that:

if such a vessel were to be acquired, not only would it fill a gap in our ability to patrol in the further limits of Australia's EEZ, including in the Southern Ocean and off Antarctica, it could also have a significant marine scientific research capability.⁴⁸

5.47 Dr Bateman told the committee that utilising patrol boats for research occurred on similar vessels around the world, and while not able to carry out the level of complex research of a ship like the *Investigator*, such a vessel even if operated by the navy or border protection services, could play a significant subsidiary role in marine science.⁴⁹

5.48 Dr Bateman and Dr Bergin suggested that the national fleet concept might provide a basis for more appropriate consideration of Australia's broad sweep of Southern Ocean needs in both the tender to replace the *Aurora Australis*, and in the Department of Defence's project to acquire around 20 Offshore Combatant Vessels (OCV). With respect to the latter, they proposed that rather than purchasing an updated version of the same Cape class vessels as those being acquired by the ACBPS, which are unsuitable for patrolling in the Southern Ocean and Antarctic waters, the ADF could seek a longer-term OCV fleet which took into account the need to operate in Australia's southern waters.⁵⁰ Dr Bateman advised the committee that there were many examples around the world of vessels which may be suitable.⁵¹

Committee view

5.49 This decade is one of significant and necessary investment in Australia's marine capacity, for the Southern Ocean and for Australia's waters more generally. The RV *Investigator* represented an outlay of some \$120 million to acquire, and will cost a further \$66 million to operate over the next four years.⁵² The cost of replacing the *Aurora Australis* has not yet been determined, but the government estimates it will

47 Dr Sam Bateman, *Committee Hansard*, 26 September 2014, p. 3.

48 Dr Sam Bateman and Dr Anthony Bergin, *Submission 2*, p. 4.

49 Dr Sam Bateman, *Committee Hansard*, 26 September 2014, p. 2.

50 Dr Sam Bateman and Dr Anthony Bergin, *Submission 2*, p. 4.

51 Dr Sam Bateman, *Committee Hansard*, 26 September 2014, p. 3.

52 CSIRO *Annual Directions Statement 2014*, May 2014, p. 3.

run into the hundreds of millions.⁵³ Meanwhile our defence and border protection authorities continue to review and update their respective marine assets to meet Australia's significant maritime security and border protection responsibilities.

5.50 It is therefore self-evident that the most effective and efficient management and coordination of such resources, including their flexible tasking where possible and appropriate, should be undertaken to maximise the return on the national investment, and make the best possible attempt to meet the demands in our waters.

5.51 In relation to the RV *Investigator*, the committee finds it difficult to justify that a vessel which represents such a major investment of Australian resources will potentially spend 120 days of the year languishing in port. The committee is strongly of the view that the government should restore budgetary allocation to CSIRO that would allow for the ship to meet its potential of 300 days at sea in coming years. The CSIRO should, in parallel, pursue opportunities to offset this expenditure wherever possible through international charter arrangements, prioritising those which would facilitate the involvement of Australian scientists.

Recommendation 14

5.52 The committee recommends that all options be examined including that budgetary allocation be provided to restore the ability of the RV *Investigator* to spend its optimum 300 days per year at sea, in support of Australian and international scientific research.

5.53 The committee welcomes the recognition by all agencies involved of the importance of Australia's responsibilities in our southern waters, and their expressed and often demonstrated willingness to utilise those resources flexibly where needed and appropriate.

5.54 The Southern Ocean should not be the poor cousin in Australian defence and border protection. Consideration of the needs to our south should factor into decisions about the most practicable acquisition of defence patrol resources. The ADF's present project to update its offshore patrol fleet appears to present one timely opportunity to do so, and is worthy of further examination.

5.55 The committee believes that there is merit in considering a more formal 'national fleet' approach to the management and tasking of Australian maritime resources, with a view in particular to meeting the present deficit in Australia's maritime presence in the Southern Ocean.

Recommendation 15

5.56 The committee recommends that an interagency working group be established to review Australia's current and proposed marine assets and their utilisation, and to explore the potential costs and benefits of a national fleet approach to the acquisition and management of Australian vessels.

53 ABC News online, 'European shipbuilders short-listed to build Aurora Australis replacement', 19 May 2014, at <http://www.abc.net.au/news/2014-05-19/overseas-countries-short-listed-to-build-aurora-australis-repla/5462594>

5.57 Taking into account Recommendation 17, the committee further recommends that the working group should commission and draw on an independent expert study of Australia's requirements for effective patrol, surveillance and research including in the Southern Ocean and Antarctic waters, the ability of existing national maritime assets to meet those requirements, significant gaps in capacity, and possible best-practice models for the management and coordination of national maritime assets to meet Australia's needs.

5.58 The committee agrees that this should exclude naval war-fighting vessels and direct military activities, but should include the potential use of defence maritime assets in support of Australia's other national interests in the Southern Ocean.

5.59 The allocation of research places on Southern Ocean and Antarctic voyages is an important, and more immediate, subset of this issue. The committee welcomes the recognition by AAD and CSIRO that consideration of research proposals should include a mechanism to specifically consider the most efficient possible tasking of maritime resources. The committee acknowledges steps taken in this direction through cross-representation in decision making bodies, but urges AAD and CSIRO to consider whether and how this coordination can be taken further.

Recommendation 16

5.60 The committee recommends that CSIRO and the Australian Antarctic Division work on a streamlined and integrated approach to the management of scientific research proposals requiring vessel time in the Southern Ocean and Antarctic waters, to ensure the efficient and appropriate use of vessels.

Tasmania: the Antarctic gateway

5.61 Antarctica and the Southern Ocean are important in Tasmania. Hobart is one of five internationally-recognised 'Antarctic Gateway' cities,⁵⁴ offering proximity to the Southern Ocean with modern amenities and transport infrastructure, and world-class expertise in science, logistics, support services and education.⁵⁵ Tasmania is home to 17 governmental, academic and related organisations undertaking Antarctic and Southern Ocean work, two secretariats of international organisations focused on Antarctic waters, and approximately 50 local businesses accessing work from the sector.⁵⁶

5.62 According to the Tasmanian government, in 2011-12 the Antarctic and Southern Ocean sector directly employed 1185 Tasmanians and indirectly another 1606; directly contributed \$187.4 million (0.8 per cent) of Tasmania's gross state product, and indirectly another \$256.9 million. Every dollar generated in the sector

54 The other four are Christchurch, New Zealand; Punta Arenas, Chile; Ushuaia, Argentina and Capetown, South Africa. Professor Denzil Miller, *Committee Hansard*, 16 September 2014, p. 38.

55 Tasmanian Government, *Submission 4*, p. 1.

56 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 37.

generates multipliers in economic benefits to Tasmania and Australia.⁵⁷ The Government of Tasmania estimated that in total, the sector and its flow-on effects generated \$444.2 million for Tasmania in 2011-12, while contributing 4663 jobs and \$687.4 million to Australia's GDP.⁵⁸

5.63 There are qualitative benefits to the Tasmanian Antarctic hub too. In its evidence to the committee, IMAS emphasised the value of the unique collaboration between key Australian agencies and organisations made possible by their co-location in Hobart: 'We have created programs around Antarctica and the Southern Ocean that did not exist... We have led the science around exploration of the Southern Ocean'.⁵⁹

5.64 The Tasmanian Government pointed out in its submission that this concentration of expertise and engagement in Hobart had also birthed a 'unique government-business alliance' in the form of the Tasmanian Polar Network, comprising a diverse membership of 60 governmental and private bodies, with funding support from the state government, and direct input into Antarctic policy initiatives.⁶⁰

5.65 The attributes and services offered by the Antarctic gateway have further benefited Tasmania by attracting other nations to adopt Hobart as a base for their own Antarctic activities. Port visits to Hobart by Antarctic vessels are estimated to generate an average \$1 million to \$1.5 million per visit.⁶¹ The Tasmanian Government informed the committee that it had concluded various memoranda of understanding with international Antarctic programs and other bodies for cooperation in Antarctic and Southern Ocean related work. Long-standing cooperation with France, for example, had been further enhanced with a new memorandum of understanding signed in September 2014, focused on maritime cooperation and port services worth around \$15 million.⁶²

5.66 China was also a key partner and investor in Tasmania, with significant potential for further growth in the relationship. A memorandum of understanding between the Government of Tasmania and the State Oceanic Administration of China was signed in September 2013.⁶³ In evidence to the committee, Professor Denzil Miller from the Tasmanian Government noted that the details of practical cooperation to be undertaken under the memorandum were still being negotiated, but he believed that accessing a Hobart base and support for China's vessels and sea-going operations

57 In evidence to the committee, Professor Anthony Worby cited an earlier study which found that the return on investment was around \$3.50 to \$4.00 for every dollar spent. *Committee Hansard*, 26 September 2014, p. 11.

58 Tasmanian Government, *Submission 4*, p. 1; AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 37.

59 Professor Nathan Bindoff, *Committee Hansard*, 16 September 2014, p. 4.

60 Tasmanian Government, *Submission 4*, p. 1.

61 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 37

62 Professor Denzil Miller, *Committee Hansard*, 16 September 2014, p. 38.

63 Tasmanian Government, *Submission 4*, p. 2.

was a central element of its interest. Professor Miller indicated that cooperation under the agreement could yield \$15 million to \$20 million per year.⁶⁴

5.67 Professor Miller also advised that more limited cooperation took place with the United States (mostly in the nature of vessel visits), and that the state government was also in discussions with India and Russia to promote the use of Hobart's Antarctic facilities and services.

5.68 Attracting further international investment and deeper cooperation in the Antarctic sector was seen as a potential growth area for Tasmania's economy, as well as a positive contribution to Australia's own Antarctic collaborations, and its international standing in Antarctic and Southern Ocean affairs. Hobart's location and attributes made it an undoubtedly strong contender to exploit such opportunity, but it was not the only city seeking to capitalise on international Antarctic interest. Christchurch was noted before the committee as one key competitor.⁶⁵

5.69 Professor Miller advised that:

The countries concerned will go to where it is most convenient and most competitive for them to go...We do not just have to be competitive – it is not about competition; it is about winning. We need to give the best service and make sure we are the most convenient place for those vessels to come...⁶⁶

5.70 Discussing China's interest in particular, Dr Tony Press advised the committee that three things would attract Chinese investment to Hobart: the ability of its port to service Chinese vessels effectively and competitively; the presence of a large and respected science community with whom Chinese scientists could interact; and the facilities provided by Hobart airport for transport between China, Tasmania and Antarctica.⁶⁷

5.71 The government's stated commitment to maximising Hobart's Antarctic gateway potential, and its promise in the 2014 budget of \$38 million for upgrading Hobart's airport in particular, were welcomed as important contributions to both the Tasmanian economy, and to Australian leadership in Antarctica.⁶⁸

5.72 Nevertheless, it was repeatedly highlighted to the committee that the present decline in resourcing and priority to core Antarctic activities must be reversed if the gateway's potential was to be realised. The decline in resourcing for Antarctic agencies in Tasmania, and the consequent reduction in operational and scientific activity, was cited as a direct threat to maximising the opportunities available to Tasmania. IMAS argued that the leadership represented in Tasmania was already

64 Professor Denzil Miller, *Committee Hansard*, 16 September 2014, p. 37.

65 *Committee Hansard*, 16 September 2014, pp 37-38.

66 Professor Denzil Miller, *Committee Hansard*, 16 September 2014, p. 38.

67 *Committee Hansard*, 16 September 2014, pp 63-64.

68 Professor Denzil Miller, *Committee Hansard*, 16 September 2014, p. 37.

under threat due to diminishing resources for Hobart-based agencies, and for scientific research.⁶⁹

5.73 The Tasmanian Government told the committee that there were opportunities to build on the benefits derived from Tasmania's status as the Antarctic gateway, but that without continued priority resourcing:

Erosion of Australia's international [Antarctic and Southern Ocean] affiliations/cooperation will negatively impact future sustainability of the Tasmanian [Antarctic and Southern Ocean] Gateway. This would compromise the state's regional development by possibly foreclosing on socio-economic benefits from, and investment in, Tasmanian based Antarctic and Southern Ocean-associated activities...⁷⁰

5.74 The Tasmanian Government urged the Commonwealth and state governments to recognise the potential and priority of development of the Antarctic Gateway, for both Tasmania and for Australia's larger national interests. The Tasmanian Government proposed the development of a cooperative model under which the state and federal governments would integrate their commitments, initiatives and priorities, including the alignment of funding as well as strengthened public-private partnerships.⁷¹

5.75 In the 20 Year Strategic Plan, great emphasis was placed on the potential benefits for Tasmania of developing its status as the Antarctic gateway. The Plan assessed that:

Tasmania has the capacity to become a market leader in Antarctic support and logistics services, and the market leader in this sector in East Antarctica...[but t]he capacity to expand this sector without investment in critical infrastructure is extremely limited.⁷²

5.76 The Plan emphasised the need to upgrade the Port of Hobart, and to remedy its present shortcomings with respect to fuel availability, as crucial to Hobart's ability to sell its Antarctic and Southern Ocean services. It recommended that the Commonwealth and Tasmanian governments work together on addressing these infrastructure issues, and also that Commonwealth agencies in Tasmania actively engage with the Tasmanian business community to facilitate opportunities for businesses to participate in procurement processes and other work in the Antarctic sector. Dr Press also mentioned other opportunities for maximising Tasmania's Antarctic connection, by promoting its expertise in areas such as education and polar medicine.⁷³

69 Professor Nathan Bindoff, *Committee Hansard*, 16 September 2014, p. 4.

70 Tasmanian Government, *Submission 4*, p. 3.

71 Professor Denzil Miller, *Committee Hansard*, 16 September 2014, p. 36.

72 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 39.

73 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, pp 39-42.

Committee view

5.77 Making the most of Tasmania's potential as the 'Antarctic Gateway' is a win-win for Australia. Increased national and international concentration of resources and expertise in the state will boost the Tasmanian economy, while enhancing Australia's Antarctic leadership and influence. Moreover, the benefits of co-location among experts in the region are already apparent, and can only grow with the injection of more international students and scientists.

5.78 However, like all aspects of Australia's Antarctic engagement, reaping the reward requires investment. The government's commitment to upgrading Hobart airport is a welcome step toward the renewal of infrastructure necessary to attract and retain international partners to Hobart. Creating the necessary port facilities should be next. As such, the committee endorses the recommendations of the 20 Year Strategic Plan, that the Commonwealth and state governments continue to work together in a structured way to build Tasmania's capacity to be a leading global gateway to Antarctica and the Southern Ocean.

Recommendation 17

5.79 The committee recommends that the Commonwealth government and the Government of Tasmania work together on the development and implementation of a dedicated strategy for maximising Tasmania's potential as an Antarctic Gateway, including joint investment toward the upgrading of Hobart's port and other key infrastructure, and drawing upon the recommendations made in the 20 Year Australian Antarctic Strategic Plan.

Whole-of-government coordination

5.80 Antarctica is a cross-portfolio issue for Australia and so, by extension, is the Southern Ocean. While the AAD takes the leading role on science, operations and environmental policy, others such as the Department of Foreign Affairs and Trade also hold key diplomatic and legal responsibilities, and maritime operational activities further engage a broad range of implementing agencies. The receipt of no less than nine separate submissions from Commonwealth agencies to this committee's inquiry demonstrated the point.

5.81 The committee's interactions with government representatives throughout the inquiry indicated that relations between the various agencies working on policy and operations in Antarctica and the Southern Ocean were generally positive and functional. The Antarctic community is a close-knit one, and the functional cooperation required between actors conducting operations in the challenging conditions of the Southern Ocean has given rise to strong working relationships and effective lines of communication.

5.82 Several submissions, including from the Tasmanian Government and from some Commonwealth government agencies, nevertheless recommended that whole-of-government coordination could be further strengthened. Dr Tony Press said:

I think one of the things that the government can do and that future governments should do is to look at how [Australia's] strategic interests are

then dealt with in a whole-of-government sense and reported on in a whole-of-government sense.⁷⁴

5.83 In the 20 Year Strategic Plan, Dr Press proposed the specific allocation of responsibility for each of Australia's Antarctic priorities to one leading agency, with lines of communication and accountability between relevant bodies channelled through the lead agency.⁷⁵

5.84 The Plan also recommended greater coordination between the Commonwealth and Tasmanian governments, including pursuit of a joint agreement for infrastructure investment to support the East Antarctic gateway. This reflected the submission made by the Government of Tasmania, which urged stronger coordination of policy and integration of activities between the federal and state governments in this work.⁷⁶

5.85 Some submitters, such as Austral Fisheries, also proposed that more cost efficient and effective linkages between agencies at the operational and technical level could save money, citing as examples 'greater exchange and sharing of expertise amongst the organisations and greater linkages for such aspects as gear storage and supply, equipment purchase and distribution [and] improved logistics arrangements'.⁷⁷

Telling the story

5.86 Raising public awareness of Australia's interests and activities in Antarctica and the Southern Ocean, particularly the importance of Antarctica to Australia, our sovereignty there and the value of the scientific and other work undertaken in the region, was identified as an important element in justifying the necessary prioritisation of resources. Dr Tony Press told the committee that Australia's interests and activities in Antarctica were recognised:

to a certain extent inside the community, although I think there is more that we can do in bringing Australians up to speed with how important that region is to us economically, politically and otherwise.

5.87 Witnesses from the Australian Academy of Science discussed the challenge of attracting media and public interest in Australia's research in the Antarctic.⁷⁸

5.88 In the 20 Year Strategic Plan, Dr Press recommended that Australia facilitate a program of visits by senior government figures to the Australian Antarctic Territory, as part of a series of activities to better highlight Australia's sovereign interests in the region.⁷⁹

5.89 In his submission the Hon David Feeney MP proposed the creation of a Special Ambassador for Antarctica, to coordinate Australia's Antarctic policy and to

74 Professor Anthony Press, *Committee Hansard*, 16 September 2014, p. 63.

75 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, pp 19-20.

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

77 Austral Fisheries, *Submission 13*, p. 5.

78 *Committee Hansard*, 26 September 2014, p. 12.

79 AJ Press, *20 Year Australian Antarctic Strategic Plan*, July 2014, p. 26.

lead bilateral, regional and international diplomacy in relation to the region. Mr Feeney argued that such an appointment would 'ensure Australian interests are represented and convey the weight the Commonwealth places on the Antarctic issue'.⁸⁰

Committee view

5.90 The committee is satisfied, in broad terms, that whole-of-government coordination on Antarctic issues is in good shape. Nevertheless, at a time of limited budgets and increasing demand, the committee welcomes the suggestion from several witnesses both inside and outside government that scope may exist for further improving the efficiency and effectiveness of the whole-of-government effort. The committee encourages the government to carefully examine the recommendations made by Dr Press for the allocation of responsibilities within government and the strengthening of whole-of-government coordination in relation to Antarctic and Southern Ocean policy and activity.

5.91 At the operational level, the committee also urges relevant agencies, particularly those based in Tasmania, to explore what new arrangements may be possible to maximise cooperation and efficient resource-sharing in practical terms.

5.92 Further, the committee urges the Commonwealth and Tasmanian governments to continue to pursue close cooperation and coordination toward their shared interests in maximising the benefits of the Antarctic Gateway for Tasmania and Australia.

5.93 Given the significant level of resourcing required to maintain Australia's role in the region, the committee also sees value in government considering how public awareness of, and support for, Australia's Antarctic interests could be better promoted, particularly outside Tasmania, provided that any such initiatives do not unduly divert resources from the core needs of the Antarctic programs themselves.

5.94 The suggestion of an Antarctic Ambassador may in fact serve both ends: providing key leadership and focus for whole-of-government coordination around Antarctic and Southern Ocean issues, and at the same time raising the profile of Antarctica within government and with the broader Australian public. The committee believes that such a role could conceivably be created without significant diversion of resources, and recommends its further consideration.

Recommendation 18

5.95 The committee recommends that the government considers options for further strengthening whole-of-government coordination in the pursuit and promotion of Australia's national interests in Antarctica and the Southern Ocean, including the appointment of an Australian Antarctic and Southern Ocean Ambassador to coordinate whole-of-government policy and to provide senior leadership for the promotion of Australia's interests and role domestically and internationally.

80 The Hon David Feeney MP, *Submission 16*, p. 28.

