

# POLICY BRIEF

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## ANTARCTICA: ASSESSING AND PROTECTING AUSTRALIA'S NATIONAL INTERESTS

### WHAT IS THE PROBLEM?

*International interest in Antarctica is rising. Major powers such as China and Russia have voiced their interest in the continent's resource potential, strongly suggesting the current prohibition of resource exploitation will be revisited after 2048. These developments pose a potential threat to the longevity of the Antarctic Treaty System as well as Australia's dormant claim to 42 per cent of the continent. Australia has limited Antarctic presence and capability, and posits its policy in terms of science and environmental management rather than national security. This raises questions about its ability to preserve its sovereignty claim.*

### WHAT SHOULD BE DONE?

*Australia needs to elevate the priority of Antarctic policy, and better integrate it into national security and strategic policy thinking. It should:*

- *Deepen engagement with the Antarctic Treaty System and make better use of its compliance mechanisms;*
- *Open discussions with likeminded states in anticipation of sovereignty and resource issues being revisited in 2048;*
- *Relocate the policy function of the Australian Antarctic Division to Canberra and move it into the Attorney-General's Department;*
- *Invest in Antarctic science, logistics and other capabilities including ski-equipped aircraft;*
- *Define Antarctica's strategic importance in national security policy statements, including the next Defence White Paper, and explore how personnel from the national security community might contribute to Australia's Antarctic program.*



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**The current situation: frozen claims**

Following the exploration of Antarctica from the mid-19<sup>th</sup> century to the early 20<sup>th</sup> century, Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom claimed sovereignty over territory in the continent. Australia's claim to the Australian Antarctic Territory (AAT) was, and remains, the largest, covering around 42 per cent of the continent (an area about three quarters the size of mainland Australia). Although there was some reciprocal recognition between claimant states, claims were largely rejected or ignored by other members of the international community, while Mary Byrd Land, an area around 1.6 million square kilometres, or just over 10 per cent of the continent, remained unclaimed (see map on page 17).

Until the 1950s, Antarctica was largely overlooked as a place of geostrategic significance. With the advent of the Cold War, however, states began to consider it as a potential location for submarine bases, nuclear testing and intelligence gathering.<sup>1</sup> To quell growing unease, in 1959, the claimant states, with Belgium, Japan, South Africa, the Soviet Union and the United States, negotiated the Antarctica Treaty (the Treaty)<sup>2</sup> to preserve the continent as a demilitarised zone for peaceful and cooperative science,<sup>3</sup> free from international discord.<sup>4</sup> To reach this agreement, existing territorial claims were suspended, new claims were prohibited, and no state activity could be taken as asserting, supporting or denying a claim for the life of the Treaty.<sup>5</sup>

Since the Treaty's entry into force in 1961, its number of States Parties has grown to 47. In addition to the 12 original signatories, 28 other

states also have 'consultative party' status, allowing them to vote on decisions concerning Antarctic administration. The Treaty has also been supplemented with several additional instruments focused on protecting the Antarctic environment and wildlife, comprising the broader Antarctic Treaty System (ATS). Of particular note is the prohibition of any activity relating to mineral resources, other than scientific research, under Article 7 of the 1991 *Protocol on Environmental Protection to the Antarctic Treaty* (the 'Madrid Protocol').<sup>6</sup> This prohibition becomes reviewable in 2048, after which, unless certain conditions are met, any signatory may withdraw its compliance.<sup>7</sup>

**Getting warmer: why interest in Antarctica is growing**

Although regarded as an unprecedented success in international law and diplomacy, the ATS remains a fragile and imperfect compromise. The Treaty was drafted to allow the original signatories to protect their immediate interests. State interests change over time, however; in future, states may feel that their best interests will be served by withdrawing from the ATS.<sup>8</sup> In the 21<sup>st</sup> century, the most likely catalyst for withdrawal will be the search for resource security.

During the Treaty's negotiation, most signatories were primarily concerned with military security. The continent's resource potential was largely overlooked, captured clearly by the declaration of geologist Dr Laurence Gould in 1960 that he 'would not give a nickel for all the resources of Antarctica.' In 2011, however, the need for energy security and growing competition for finite resources

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are compelling states to look further afield for reliable energy sources. This is evidenced most clearly by the growing geopolitical tensions, militarisation and competition for sovereignty over the prospectively oil-rich Arctic continental shelf.<sup>9</sup>

As with the Arctic, a growing understanding of Antarctica's potential to provide food, economic and energy security is influencing the development of a number of states' Antarctic policies. Antarctica plays an essential role in the global weather system, is a major carbon sink, and has vast marine resources<sup>10</sup> and great potential for bioprospecting.<sup>11</sup> Its major resource attraction, however, is its mineral resources, including coal seams,<sup>12</sup> manganese ores, iron, uranium, copper, lead and other metals.<sup>13</sup> Antarctica's predicted oil reserves have been estimated at up to 203 billion barrels, with 50 billion barrels expected in the Weddell Sea and Ross Sea, which respectively cover the continental shelves adjacent to Australia and New Zealand's claimed territories.<sup>14</sup> If the total estimate is correct and the oil can feasibly be extracted in the future, Antarctica's reserves would be the third largest in the world after Saudi Arabia (262.6 billion barrels) and Venezuela (211.7 billion barrels).<sup>15</sup>

With oil prices reaching US\$140 per barrel in 2008, and technology rapidly developing to allow for offshore mining in comparable conditions in the Arctic, the long-cited practical obstacles to oil extraction in inhospitable conditions will diminish.<sup>16</sup> As international interest in extraction and development increases, the current framework for Antarctica's cooperative international administration is likely to come under increasing strain and may not be sustainable.

**Australia's interests at risk?**

The Treaty's prohibition of new territorial claims ostensibly preserves Australia's claim for the life of the Treaty. Eventual international recognition of that claim would provide a unilateral right to determine how the AAT and its large Exclusive Economic Zone (EEZ) and Extended Continental Shelf (ECS) are managed, and how their resources are used. While noting the significance of having Australia's claim recognised, it would be imprudent for Australia to rely solely on the Treaty for assurance that its claim is inviolable. Despite the Treaty's provisions, recent activities of several states suggest that the questions of sovereignty and resource exploitation are far from resolved. In this changing geopolitical climate, Australia must ensure its policies are sufficiently robust and flexible to withstand future challenges.

Over the past decade several states have expressly stated their intentions to increase their Antarctic activities and involvement in Antarctic administration, asserting their interests through a range of novel arguments and strategies. In the 1950s, Argentina and Chile justified their claims on the basis that the Antarctica Peninsula was an extension of the Andes and, subsequently, geographically constituted a continuation of their recognised territory. This has been echoed recently with India's explanation that it has chosen Larsemann Hills to construct an Antarctic station because this is the site where the Indian Peninsula broke away from Antarctica 120 million years ago.<sup>17</sup> Similarly, the New Zealand government refers to New Zealand's and Antarctica's common origin as part of the supercontinent, Gondwanaland, and also refers to Antarctica's proximity and influence over

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New Zealand's climate to imply their unique relationship.<sup>18</sup>

The United States has consistently rejected all Antarctic claims, and reserves the right to make future claims. It has facilities on the territories of most claimant states and its South Pole Amundsen-Scott Station straddles all claimed territories.<sup>19</sup> Various US publications since 1959 have sought to reinvigorate support for the informal claim to Marie Byrd Land made in 1929 but never formalised,<sup>20</sup> while US policy advice has expressly foreshadowed the termination of the ATS. In 1996, for instance, an official memorandum to the Executive Secretary of the US National Security Council outlined Antarctica's importance to US national security, and advised that the United States must 'assert... its rights in Antarctica [and] its basis of claim.'<sup>21</sup> The United States' future resource interests are also evidenced by its insistence that the Madrid Protocol's mineral prohibition be reviewable to avoid 'foreclosing the options of future generations.'<sup>22</sup>

The Russian Federation also rejects all sovereign claims and reserves its right to assert a claim in the future. Its recent activities suggest that such a claim may be forthcoming. In 2001, a Russian government prospecting ship collected data on regional gas and oil reserves, contrary to the Madrid Protocol.<sup>23</sup> The 2010 Government Order on Antarctic Strategy to 2020 was unapologetic in its discussion of the implication of Antarctic resources for Russia's future energy and economic security.<sup>24</sup> It also outlined comprehensive study of mineral and hydrocarbon sources, and development of 'forward looking' strategies in advance of discussions after 2048, as key national

objectives.<sup>25</sup> To 'preserve its geopolitical claims,' Russia is also investing in a new ice-runway, several ski-equipped planes and two new ice-breaker vessels,<sup>26</sup> which will be funded from the US\$2 billion it has allocated to Antarctic activities to 2020.<sup>27</sup>

China is also increasing its Antarctic activities. Chinese officials have stated that China's objectives in Antarctica include securing greater leadership in Antarctic administration,<sup>28</sup> and determining 'the potential of resources and how to use those resources.'<sup>29</sup> To facilitate this, China is investing in a new ice-breaker ship, ski-equipped planes and helicopters as well as extensive Antarctic astronomy and astrophysics,<sup>30</sup> and is refurbishing its stations for year-round occupation. The patriotic titles of its stations,<sup>31</sup> and China's description of its recent ascent of the Antarctic Plateau on the AAT as a 'conquest,'<sup>32</sup> also imply a latent nationalism in China's policy. There are even reports that Kunlun Station, established on the AAT's Dome Argus, features a sign stating 'Welcome to China,' implying Chinese territoriality and denial of Australia's claim.<sup>33</sup>

**Sustaining Australia's claim**

With international attention towards Antarctica and its resources growing, it is timely for Australia to evaluate its current Antarctic policy and capabilities to ensure they are resilient enough to protect our interests in an increasingly competitive international environment.

Over the life of the Treaty, much of Australia's Antarctic policy has been built around two main objectives: remaining active in and

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maintaining the ATS; and preserving Australia's dormant claim to the AAT beyond the life of the Treaty. While Australia has remained actively engaged with the ATS,<sup>34</sup> the effective preservation of Australia's claim is less clear.

Since the Treaty's entry into force, Australia has implemented a number of measures to demonstrate its persistent attitude of sovereignty. Simple measures such as issuing Australian stamps and telephone calling codes for the AAT have been complemented with more assertive measures. In 2004, Australia lodged a submission with the United Nations Commission on the Limits of the Continental Shelf for recognition of an ECS off the coast of the Australia's sub-Antarctic islands, as well as the AAT.<sup>35</sup> Although potentially inflammatory, this represented a clear statement of Australia's enduring interest and belief in its identity as a coastal Antarctic state. Through its Australian Space Research Program, the Australian Government has also invested \$2.1 million to investigate provision of satellite broadband services to Antarctica and its contiguous seas.<sup>36</sup> This would directly support the growing demands of researchers to move increasingly large volumes of data back to laboratories in more habitable parts of the world, and represents a valuable new-technology investment in Australia's Antarctic program.

Although these measures have value, including as markers of Australia's claim, recent years have seen a level of complacency enter Australia's Antarctic policy. Responsibility for Australia's Antarctica policy and programs primarily rests with the Australian Antarctic Division (AAD) of the Department of Sustainability, Environment, Water, Population

and Communities (SEWPAC). Australia's involvement in international Antarctic Treaty Consultative Meetings, however, is managed by the Sea Law, Environment Law and Antarctic Policy Section of the Department of Foreign Affairs and Trade (DFAT).

The AAD has four key objectives: maintaining the ATS and enhancing Australia's influence in it; protecting the Antarctic environment; understanding the role of Antarctica in the global climate system; and undertaking scientific work of practical, economic and national significance. Preserving Australia's dormant claim is not a stated priority. SEWPAC's *2009-10 Annual Report* also overlooks preservation of sovereignty as an AAD policy priority,<sup>37</sup> while its *Australian Antarctic Science Strategic Plan 2011-12 to 2020-21* makes no express reference to the role science plays in supporting strategic Antarctic policy.<sup>38</sup> Similarly, DFAT's *2009-10 Annual Report* refers to the Antarctica Section's responsibility for providing 'policy and legal advice on Australia's substantial involvement in Antarctica, including ... the Australian Antarctic Territory,'<sup>39</sup> but makes no reference to how it contributes to promoting or protecting Australia's claim.

Locating the AAD within SEWPAC limits opportunities for government to consider the national security implications of Antarctic policy. This portfolio sits outside the national security community, and is not involved in ministerial or departmental national security committees. Moreover, physically locating the AAD in Kingston, Tasmania, although providing geographical benefit for operational staff, isolates the Division from the hub of

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Australia's policy thinking in Canberra. This impedes whole-of-government engagement.

Given Antarctica's mineral and marine resource potential, science opportunities, influence on global weather systems and climate change, and the AAT's status as Australian external territory, effective discussion of Antarctic policy requires cross-portfolio consultation. Agencies with the potential to contribute to strategic, whole-of-government policy on Antarctica include the Departments of: Resources, Energy and Tourism; Innovation, Industry, Science and Research; Agriculture, Fisheries and Forestry; and Climate Change and Energy Efficiency. The Australian Customs and Border Protection Agency (Customs) also has potential in this regard.

Exacerbating Antarctica's low profile in Australian strategic thinking is its near-absence from Australia's principal national security documents. Australia's first *National Security Statement* in 2008 outlined national security as including freedom from attack and threat of attack, as well as maintenance of territorial integrity. In light of emerging security challenges, it also expanded the concept of national security to include energy security, climate security, and food security. All three of these facets of Australia's national security might be affected by the future use and management of Antarctica, yet the statement does not mention Antarctica.<sup>40</sup> Similarly, the 2009 *National Energy Security Assessment* determined that Australia's energy security has decreased, and identified the delivery of reliable, adequate and affordably energy as intrinsic to Australia's social and economic prosperity.<sup>41</sup> Presumably in deference to the Madrid Protocol, the assessment makes no

reference to Antarctica's resource potential, if and how this might influence Australia's energy security beyond 2048, or how Australia might respond to other states pursuing these resources to satisfy their own needs.

Antarctica is also largely overlooked in public statements of defence thinking. Perhaps because of the Treaty's prohibition of all military activity other than for scientific and other peaceful purposes, Australia has no defence presence in Antarctica. It also lacks standing military capacity to provide routine surveillance or assistance with most peaceful activities there.<sup>42</sup> Additionally, the 2009 *Defence White Paper* excluded the AAT from 'all Australian sovereign, offshore and economic territories' which comprise the Australian Defence Force (ADF) operational area.<sup>43</sup> By comparison, many other states, including Argentina, Chile, New Zealand and the United States, have used military personnel and materiel in recent Antarctic activities and operations. The New Zealand *Defence White Paper* outlines defence of New Zealand's sovereignty, including in Antarctica, as a core New Zealand Defence Force (NZDF) responsibility. The NZDF also has a permanent named mission for Antarctic operations, and provides military airlift and other services to help maintain New Zealand's presence on the ice.<sup>44</sup> Similarly, the United States includes Antarctica within the area of operations of US Pacific Command, and provides military logistics support to the US Antarctic Program, for example, delivering shipborne cargo and fuel, airlift assistance, and information security and assurance.<sup>45</sup>

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Scientific activities and physical presence

Under international law, sovereignty signifies the capacity to make authoritative decisions with regard to the people and resources within the territory of the state. A sovereign state is empowered in international law to exercise exclusive and total jurisdiction within its territorial borders. Traditionally, claims to territory have been supported by demonstrations of discovery, occupation, and what is known as ‘prescription’ (a lengthy, uninterrupted possession and use with authority).<sup>46</sup> With the suspension of sovereignty in Antarctica, however, scientific activity is often used as a quasi-legal and political tool, and provides an avenue through which states can occupy and use the continent. Importantly, states that lead in Antarctic sciences also tend to have the greatest influence in international discussions of Antarctic administration.<sup>47</sup>

Over the past 50 years, Australia has maintained research facilities on the ice, providing both presence and occupation. The quality of Australia’s research has also made it a world leader in many areas of Antarctic sciences, contributing substantially to its influence in international discussions. Still, Australia’s ability to retain this position is becoming less assured, which has serious implications for the maintenance of its dormant claim.

Australia’s occupation of the AAT is far from exclusive; at present, the territory is host to the stations of seven (soon to be nine) other states (see map on page 18).<sup>48</sup> Australia’s three continental stations, all originally established before Australia’s claim was suspended, are confined to the coast, leaving the majority of

the AAT unoccupied by Australia.<sup>49</sup> By comparison, China, the United States, France and Italy, and Russia all have inland AAT stations, and all have established new bases, whether on the AAT or elsewhere, since the Treaty’s execution. The largest station in the AAT is not Australian: it is Russia’s inland Vostok station.

Australia’s limited transport capabilities also undermine Australia’s ability to claim independent authority and use of the AAT. Australia has only one ice-breaker ship, the leased and aging *Aurora Australis*, which is often the only viable transport option to move cargo and expeditioners to and from the continent. Moreover, this vessel is presently being leased by the Royal Australian Navy on a temporary basis to assist with disaster relief and other contingency roles until the recently purchased *Largs Bay* amphibious ship enters service.

The recently opened Wilkins Airbase near Casey Station, and Australia’s leasing of a wheeled Airbus 319 for intercontinental flights, were designed to provide quicker access to and from the continent, to allow researchers, technicians and other visitors to stay for short periods, and to free the *Aurora Australis* for marine sciences. These ambitions have not been realised. The Airbus 319 is predominantly a passenger aircraft, suitable only for carrying high-priority, lightweight cargo. Further, unseasonably warm summers since the base opened have largely prevented the Airbus 319 from landing on the ice runway, instead forcing it to be diverted to the American McMurdo base on the New Zealand-claimed territory. This has limited available flights, renewing reliance on the *Aurora Australis* for transport

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and exposing Australia's lack of self-reliance in accessing its own claimed territory.

Australia's transport capabilities within the AAT are also limited. Australia has no long-range ground traverse capabilities,<sup>50</sup> and its two CASA 212-400 ski-equipped planes, used for intra-continental travel between stations and limited field locations, are not well suited for flights to the Antarctic Plateau. Without suitable aviation capabilities, Australia has been unable independently to provide assistance to evacuate expeditioners from the inland AAT, undermining its ability to fulfil the responsibilities expected of a sovereign state.<sup>51</sup>

Finally, the areas of science which Australia has chosen to prioritise in the coming decade prolong Australia's limited use and occupation of the AAT. As outlined in the *Australian Antarctic Science Strategic Plan 2011-12 to 2020-21*, Australia intends to focus on climate processes and change, terrestrial and near-shore ecosystems, and Southern Ocean eco-systems, largely confining Australia's activities to the coast. Other active Antarctic states such as the United States, China, Japan, France and Italy are increasingly turning their attention to optical/infrared astronomy and astrophysics. The optimal location for Antarctic astrophysics is the Antarctic Plateau, which largely sits within the AAT. By extending their involvement with this emerging science, these states will not only promote their scientific influence, but will also be extending their inland occupation. Despite Antarctic astronomy being identified by a government advisory panel as an opportunity for Australia to retain its status as a world leader in Antarctic sciences in 2005,<sup>52</sup> Australia did not pursue this when France and Italy expressed

interest in conducting a cooperative astronomy program at the Concordia Station on AAT's Dome Circe in 2008.<sup>53</sup>

**Recommendations: How to strengthen Australia's position**

If Australia is to remain influential in international discussions on Antarctic administration, to be prepared for the matter of resources being revisited in 2048, and to assert its right to sovereignty beyond the life of the Treaty, certain policy changes and new investment will be essential.

A number of simple measures could be adopted to help protect Australian interests and prepare for future challenges while also complying with, and possibly enhancing, the ATS. These measures reflect the types of developments and investments which have been undertaken by other leading Antarctic states, and would allow Australia to keep pace with other nations active on the continent. Given the lead time and investment required to fund and implement some of these measures, it is important that action begin soon.

*Enhancing international engagement*

While the administration of Antarctica remains an international responsibility, it is essential that Australia deepen its engagement with the ATS, including by making better use of mechanisms available within that framework. As an original drafter and signatory, Australia has played a key role in the development of the Treaty and the broader ATS. This is demonstrated most clearly through Australia's refusal to ratify the 1988 *Convention for the Regulation of Antarctic Mineral Resource*

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*Activities*, which was designed to regulate, rather than prohibit, the prospecting, exploration and development of mineral resources.<sup>54</sup> Australia's refusal was justified on the basis that the Convention would not optimally protect the Antarctic environment, but the absence of provision for claimant states to gain revenue from mining was likely an additional, albeit unacknowledged, factor.<sup>55</sup> Australia has also hosted two previous Antarctic Treaty Consultative Meetings and will host a third in Hobart in 2012. Nevertheless, Australia should make better use of the ATS's existing mechanisms to facilitate greater oversight of state activity in Antarctica.

Under the Treaty and the Madrid Protocol, consultative parties may nominate their nationals as observers to conduct inspections of the Antarctic facilities of other states.<sup>56</sup> States are also required to make information on scientific observations and planned activities freely available.<sup>57</sup> Most states have conducted few, if any, inspections, and a number of states have not consistently submitted their required annual reports to the Antarctic Treaty Secretariat or the Scientific Committee on Antarctic Research (SCAR).<sup>58</sup>

Australia has a good record with submission of annual reports to the Antarctic Treaty Secretariat, but has been less consistent with reporting to SCAR. Perhaps reflecting current arrangements whereby inspections are funded from the AAD budget, Australia has conducted inspections in only three Antarctic summers (two facilities in 1985-6, 26 facilities in 2004-5, and four facilities in 2010).<sup>59</sup>

Australia should increase its inspections, encourage reciprocal inspections of its facilities

and push for other states to submit their required annual reports. This would promote transparency and provide greater reassurance that the increasing activities in Antarctica are being conducted in accordance with the ATS. Additional funds would be needed to ensure that the cost of inspections is not diverted from the AAD's core business. Australia should also gauge other states' interests in cooperative inspections to share costs.

With claimant states now representing only one quarter of ATS consultative States Parties, it is important for Australia to determine which other states might share common positions on divisive questions such as sovereignty claims and resource exploitation.

It seems inevitable that the mineral resource question will be reopened in 2048. This will likely involve a revival of the previous arguments of India and Malaysia<sup>60</sup> that Antarctica should be preserved as common heritage of mankind, and its resources equitably distributed. It would therefore be prudent for Australia to begin diplomatic consultations with other claimant states to develop a unified position in response to expected future pressure to relinquish claims. Australia must also be realistic in assessing whether international will to extract hydrocarbons may outweigh interest in maintaining Antarctica as a pristine wilderness in the future. It should therefore develop a diplomatic strategy for pursuing an international commitment that, if extraction were to commence, it would at least be conducted in the most environmentally responsible way possible.

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*Redefining Antarctic policy*

On the domestic front, promoting protection of Australia's Antarctic interests must start with this objective being reinstated as a priority of the responsible divisions of relevant government agencies. The home agency of the Australian Antarctic Division, as well as DFAT, should include preservation of Australia's claim as part of their core business, and this should be articulated in policy statements. Second, Antarctic policy must be redefined as a national security and cross-portfolio priority and responsibility requiring innovative, whole-of-government policy ownership and thinking.

To raise the profile of Antarctic policy, the policy function of the AAD should be based in Canberra, to provide greater integration with other relevant policy agencies. To further enhance inter-agency engagement, and to allow all agencies with an interest in Antarctica to contribute to development of Antarctic policy, the AAD should also hold regular inter-departmental committee meetings to ensure the range of portfolio views can be taken on board.

The AAD should be also repositioned within a portfolio which better represents the multi-faceted nature of Australia's Antarctic interests. As the agency responsible for administering Australia's external territories, Regional Australia presents one logical alternative. As Regional Australia falls within the portfolio of the Prime Minister and Cabinet, this would elevate Antarctica in Cabinet Ministers' thinking.

The Attorney-General's portfolio, however, is a more compelling option. As part of the national security community, the Attorney-General's Department has two core objectives:

maintaining and improving Australia's law and justice framework, national security and emergency management; and promoting good governance in the Australian Territories. Locating the AAD within this portfolio would acknowledge both the national security dimensions of Antarctic policy, and demonstrate clearly Australia's view of the AAT as one of the nation's external territories.<sup>61</sup>

To recognise Antarctica's national security importance, the next *Defence White Paper* should at least specify the circumstances under which the AAT might become included within the ADF's operational area or clearly articulate that it has been excluded because of the continent's demilitarisation under international law, not because Australia does not consider it part of its sovereign territory. In addition, opportunities should be explored for select ADF personnel to take part in Australian Antarctic activities in peaceful and scientific roles, allowing officers from agencies beyond the AAD also to contribute to Australia's activities on the ice.

*Enhancing Australia's presence and activity on the AAT*

Although any state activity undertaken while the Treaty is in force cannot be seen as asserting or supporting a claim to sovereignty, Australia nonetheless needs to increase its occupation and presence. Greater occupation, and the ability to access all of its claimed territory will make it less difficult for Australia to argue its case for sovereignty in future.

To provide access to all corners of the AAT, and to ensure it can carry out the search-and-rescue roles expected of a sovereign power,

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Australia should also invest in one or more ski-equipped planes suitable for use on the Antarctic Plateau. One option might be to purchase a Twin Otter, a type of aircraft favoured by other states for use in inland Antarctica. A ski-equipped plane for flights between the Australian mainland and Wilkins Airbase would also be a wise investment. An LC-130 Hercules such as that used by the United States for transport from New Zealand to McMurdo, and which could be configured for transport, surveillance and scientific activities, would be another logical choice. This would ensure effective use of Australia's \$46 million investment in the Wilkins Airbase, reduce reliance on other states to access Australia's claimed territory, and relieve the *Aurora Australis* of some of its transport responsibilities. To further ease dependence on the over-stretched *Aurora Australis*, and to provide researchers with greater access to a ship for marine sciences, Australia should also consider buying or leasing a second ice-breaker.

A second ice-breaker might also provide scope for a share-use arrangement between the AAD and Customs for patrol activities in waters adjacent to Australia's claimed territory. Under the 1982 United Nations *Convention on the Law of the Sea*, coastal states have responsibility to conserve and manage fisheries under their jurisdiction. New Zealand conducts regular patrols of the waters adjacent to its claimed territory, and the NZDF is investigating investment in an unmanned aircraft for Southern Ocean and Antarctic surveillance.<sup>62</sup> With an ice-breaker, Customs could increase patrols off the AAT to deter illegal fishing. This would also send a message that Australia considers its claim to be merely suspended, not defeated. Noting the two

countries' lengthy defence relationship and many common strategic interests, cooperative surveillance or joint investment in unmanned capabilities with New Zealand might also be explored.

Australia also needs to invest seriously in refurbishing its Antarctic stations. At present, station maintenance is funded from the AAD's budget. To thoroughly modernise Australia's facilities, a large and specific injection of funds will be necessary.

Australia should also consider building a new inland base for Antarctic astronomy on the Antarctic Plateau. One possible location is the AAT's Ridge A, which offers the world's best vantage point for high-elevation terahertz astronomy.<sup>63</sup> This would promote greater use and occupation of the AAT, and ensure Australia is well placed to keep pace with the science programs of other leading Antarctic states, satisfying the aims of the *Australian Antarctic Science Strategic Plan*.

### Conclusion

Australia's longer-term national security is intrinsically tied to Antarctica's future use and administration. In the face of growing interest from other members of the international community, Australia must act now to ensure its Antarctic policy and activities are suitable to protect its interests. By combining enhanced use of the Antarctic Treaty System's compliance mechanisms with increased investment in Australia's logistics, capabilities and scientific activities, Australia can ensure it remains influential in international discussions of Antarctica's administration. Completing these

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measures with efforts to redefine Antarctic policy as a cross-portfolio and national security issue, and repositioning the Australian Antarctic Division within a portfolio included in the national security community, Australia will be better prepared to manage and defend its interests into the future.

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NOTES

<sup>1</sup> Howkins, Adrian, Defending polar empire: opposition to India's proposal to raise the 'Antarctic Question' at the United Nations in 1956, *Polar Record*, Vol. 44 2008 p 35, p 37; Beck, Peter J, Fifty years on: putting the Antarctic Treaty into the history books, *Polar Record*, Vol. 84 2009, p 4.

<sup>2</sup> *Antarctic Treaty*, 1959.

<sup>3</sup> *Antarctic Treaty*, 1959, Article I(2) and I(1).

<sup>4</sup> *Antarctic Treaty*, 1959, Preamble.

<sup>5</sup> *Antarctic Treaty*, 1959, Article IV(1)(a), (b) and (c); Article IV(2).

<sup>6</sup> *Protocol on Environmental Protection to the Antarctica Treaty*, 1991, Article 7.

<sup>7</sup> Ward, Joseph J, Black gold in a white wilderness – Antarctic oil: the past, present and potential of a region in need of sovereign environmental stewardship, *Journal of Land Use and Environmental Law*, Vol. 13 1998, p 381.

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<sup>10</sup> Beck, P and Dodds, K, *Why study Antarctica?*, CEDAR Discussion Paper Series Number 26, 1998, p 34.

<sup>11</sup> Beck, P and Dodds, K, *Why study Antarctica?*, p 34; Joyner, Christopher C, Challenges to the Antarctic Treaty: looking back to see ahead, *New Zealand Yearbook of International Law* Vol. 6 2008, p 39.

<sup>12</sup> Of the two key coal deposits identified, one has been deemed of a suitable quality for exploitation, while the other has is relatively wet with a high ash content, limiting its utility. See: Ward, Paul, *Human impacts on Antarctica and threats to the environment – mining and oil*, Cool Antarctica, 2010:

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[http://www.coolantarctica.com/Antarctica%20fact%20file/science/threats\\_mining\\_oil.htm](http://www.coolantarctica.com/Antarctica%20fact%20file/science/threats_mining_oil.htm).

<sup>13</sup> Roucek, Joseph S, The geopolitics of the Antarctic: the land is free for scientific work but its wealth of minerals has excited imperialist claims, *American Journal of Economics and Sociology*, Vol. 45 (1) 1986, p 71.

<sup>14</sup> St John, in Macdonald, DIM et al, A preliminary assessment of the hydrocarbon potential of the Larsen Basin, Antarctica, *Marine and Petroleum Geology*, Vol. 5 1987, p 34; Ward, Joseph J, (1998), Black gold in a white wilderness – Antarctic Oil: the past, present and potential of a region in need of sovereign environmental stewardship, p 371.

<sup>15</sup> United States Energy Information Administration, International Energy Statistics, EIA, 2011: <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=57&aid=6>.

<sup>16</sup> Experts have suggested that Antarctic oil extraction would not be economically viable until oil reaches between US\$150 and US\$200 per barrel. See: Bakhtiari, Ali Samsam, in Darby, Andrew, Antarctic next, says oil expert, *The Sydney Morning Herald*, 14 July 2006:

<http://www.smh.com.au/news/national/antarctic-next-says-oil-expert/2006/07/13/1152637808246.html>.

<sup>17</sup> Molle, Kris, Third base for India on Antarctica, Polar Conservation Organisation, 2010: <http://www.polarconservation.org/news/pco-news-articles/third-base-for-india-on-antarctica>.

<sup>18</sup> New Zealand Ministry of Foreign Affairs and Trade, New Zealand and Antarctica, Ministry of Foreign Affairs and Trade, 2010: <http://www.mfat.govt.nz/Foreign-Relations/Antarctica/1-New-Zealand-and-Antarctica/index.php>.

<sup>19</sup> Bases presently sit wholly within the territories of Australia, New Zealand, and the disputed territory claimed by Argentina, Britain and Chile.

<sup>20</sup> Mitchell, Barbara, and Kimball, Lee, Conflict over the cold continent, *Foreign Policy*, No. 35 1979, p 125.

<sup>21</sup> Burns, William J, PDD/NSC-26: US Antarctic policy, in Committee on Science, *The United States and Antarctica in the 21<sup>st</sup> century*, Washington DC, US House of Representatives, 1997, p 2.

<sup>22</sup> Bush, George, in Grotta, Daniel, and Grotta, Sally, Antarctica: whose continent is it anyway?, *Popular Science*, Vol. 240 (1) 1992, p 91.

<sup>23</sup> Joblin, Scott, Oil and ice: petroleum extraction in Antarctica, RIANOVOSTI, 2010: <http://en.rian.ru/valdai/20100906/160481450.html>.

<sup>24</sup> Russian Federation Government Order, October 30 2010, No 1926-p, p 2

<sup>25</sup> *Ibid.*, p 5.

<sup>26</sup> *Ibid.*, p 8.

<sup>27</sup> Topalov, Aleksaey, and Kovalevsky, Andrey, \$2 billion of Russian money will melt in Antarctica, RT, 2010: <http://rt.com/politics/press/gazeta-ru/2-billion-of-russian-money-will-melt-in-antarctica/en/>.

<sup>28</sup> Brady, Anne-Marie, China's rise in Antarctica?, *Asian Survey*, Vol. 50 (4) 2010, p 759.

<sup>29</sup> Tanzhou Qu, in Darby, Andrew, China flags its Antarctic intent, *The Sydney Morning Herald*, 11 January 2010: <http://www.smh.com.au/opinion/politics/china-flags-its-antarctic-intent-20100111-m287.html>.

<sup>30</sup> Feder, Toni, China is latest country to pursue astronomy in Antarctica, *Physics Today* Vol. 64 (1) 2011, pp 22-3.

<sup>31</sup> China's Kunlun Station connotes to the mythical Daoist paradise and the Kunlun Mountain range which makes up the northern edge of the Tibetan Plateau, the border of 'old China.' China's other bases are titled Great Wall Station, and Zhongshan Station, in reference to Dr Sun Zhongshan, the 'father of modern China.'

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<sup>32</sup> Stone, Richard, Long (and perilous) march heralds China's rise as a polar research power, *Science* Vol. 315 (5818) 2007, p 1516.

<sup>33</sup> Author's consultation with experts interested in Antarctica.

<sup>34</sup> Hemmings, Alan D, Beyond claims: towards a non-territorial Antarctic security prism for Australia and New Zealand, *New Zealand Yearbook of International Law*, Vol. 6 2008, p 82.

<sup>35</sup> Hemmings, Alan D, and Stephens, Tim, Australia's extended continental shelf: what implications for Antarctica?, *Public Law Review*, Vol. 20 (1) 2009, p 3.

<sup>36</sup> Antarctic Broadband, About, 2010: <http://antarcticbroadband.com/about/>.

<sup>37</sup> Department of the Environment, Water, Heritage and the Arts, *Annual Report 2009-10*: <http://www.environment.gov.au/about/publications/annual-report/09-10/outcome3.html#objectives>; NB: SEWPAC is the present iteration of the Department of Environment.

<sup>38</sup> Department of Sustainability, Environment, Water, Population and Communities, *Australian Antarctic Science Strategic Plan 2011-12 to 2020-21*, Commonwealth of Australia, 2011, p 8.

<sup>39</sup> Department of Foreign Affairs and Trade, *Annual Report 2009-10*: [http://www.dfat.gov.au/dept/annual\\_reports/09\\_10/performance/1/1.1.9.html#sealaw](http://www.dfat.gov.au/dept/annual_reports/09_10/performance/1/1.1.9.html#sealaw), section 1.1.9.

<sup>40</sup> States, including New Zealand, Russia and the United States have all flagged Antarctica's relevance to their economic and national security in policy documents.

<sup>41</sup> Department of Resources, Energy and Tourism, *National Energy Assessment*, Commonwealth of Australia, 2009, p 1, p 4.

<sup>42</sup> One exception is the Royal Australian Air Force's involvement with the SAR operations following a helicopter crash which killed four French expeditioners near the French Dumont-d'Urville Station.

<sup>43</sup> Department of Defence, *Defending Australia in the Asia Pacific century: Force 2030 – Defence White Paper 2009*, Australian Government, 2009, p 52.

<sup>44</sup> New Zealand Ministry of Defence, *Defence White Paper 2010*, Government of New Zealand, 2010, Chapter 4(10).

<sup>45</sup> United States Pacific Command, USPACOM INSTRUCTION 0708.1, USPC, 2008: [http://www.pacom.mil/web/pacom\\_resources/pdf/USPACOMINST%207081.pdf](http://www.pacom.mil/web/pacom_resources/pdf/USPACOMINST%207081.pdf).

<sup>46</sup> Harris, DJ, *Cases and materials on international law*, 6th edition, London, Sweet & Maxwell, 2004, p 230; see also *Netherlands v United States (Island of Palmas Case)*, 1928, Permanent Court of Arbitration. Sole Arbitrator: Huber. 2 R.I.A.A. 829.

<sup>47</sup> Brady, Anne-Marie, China's rise in Antarctica?, p 765.

<sup>48</sup> Parnell, Sean, PM told to defend Antarctic territory, *The Australian*, 21 December 2010: <http://www.theaustralian.com.au/national-affairs/pm-told-to-defend-antarctic-territory/story-fn59niix-1225974139407>.

<sup>49</sup> Australia's only post-Treaty Station, Casey, was built to replace the former Wilkes Station (built by the US in 1957, and taken over by Australia in 1959), which was destroyed by weather in 1969. Macquarie Island was built in 1948; Mawson was built in 1954; and Davis was built in 1957.

<sup>50</sup> Australian Antarctic Division, Field support vehicles, Australian Antarctic Division, 2011: <http://www.antarctica.gov.au/living-and-working/travel-and-logistics/ground-transport/field-support-vehicles>.

<sup>51</sup> In 2005, a Chinese expeditioner was evacuated from Dome Argus by the US, as Australia had no aviation capability to access the area. In 2010, Australia was able to provide assistance with a second evacuation from Dome Argus because it had chartered a ski-equipped Twin Otter from Canada to temporarily replace a damaged CASA212-400. See

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National Science Foundation, Chinese engineer receives medical treatment after falling ill during Antarctic traverse,' National Science Foundation, 2005:

[http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=100725&org=NSF&from=news](http://www.nsf.gov/news/news_summ.jsp?cntn_id=100725&org=NSF&from=news); see also Clifton, Ross, A challenging Antarctic season, *Australian Antarctic Magazine*, Issue 20, 2011: <<http://www.antarctica.gov.au/about-antarctica/australian-antarctic-magazine/issue-20-2011/a-challenging-antarctic-season>.

<sup>52</sup> Prime Minister's Science, Engineering and Innovation Council, *Opportunities for Antarctic and Southern Ocean science*, Department of Innovation, Industry, Science and Research, 2005:

<http://www.innovation.gov.au/Science/PMSEIC/Documents/OpportunitiesforAntarcticandSouthernOceanSciencePaperforPMSEIC11mar05.pdf>, p 4.

<sup>53</sup> Pathfinder for an International Large Optical Telescope.

<sup>54</sup> Blay, SKN, and Tsamenyi, BM, Australia and the Convention for the Regulation of Antarctic Mineral Resource Activities (CRAMRA), *Polar Record*, Vol. 26 1990, pp 195-6.

<sup>55</sup> Hawke, Bob, and Evans, Gareth, in Blay, SKN, and Tsamenyi, BM, Australia and the Convention for the Regulation of Antarctic Mineral Resource Activities (CRAMRA), p 198.

<sup>56</sup> *Antarctic Treaty*, Article VII; *Protocol on Environmental Protection to the Antarctic Treaty*, Article 14.

<sup>57</sup> *Antarctic Treaty*, Article III(a) and (c).

<sup>58</sup> Antarctic Treaty Secretariat, Information exchange – annual report, Antarctic Treaty Secretariat, 2011:

[http://www.ats.aq/devAS/ie\\_annual.aspx?lang=e](http://www.ats.aq/devAS/ie_annual.aspx?lang=e); Scientific Committee on Antarctic Research, National annual reports to SCAR, Scientific Committee on Antarctic Research, 2011: <http://www.scar.org/about/nationalreports/archivedreports.html>.

<sup>59</sup> Secretariat of the Antarctic Treaty, List of inspections under Article VII of the Antarctic Treaty and Article 14 of the Protocol on Environmental Protection, 2010:

[http://www.ats.aq/e/ats\\_governance\\_listinspections.htm](http://www.ats.aq/e/ats_governance_listinspections.htm); Australian Antarctic Division, Australia makes flying inspections, 2010:

<http://www.antarctica.gov.au/about-antarctica/australian-antarctic-magazine/2006-2010/issue-18-2010/australia-makes-flying-inspections>.

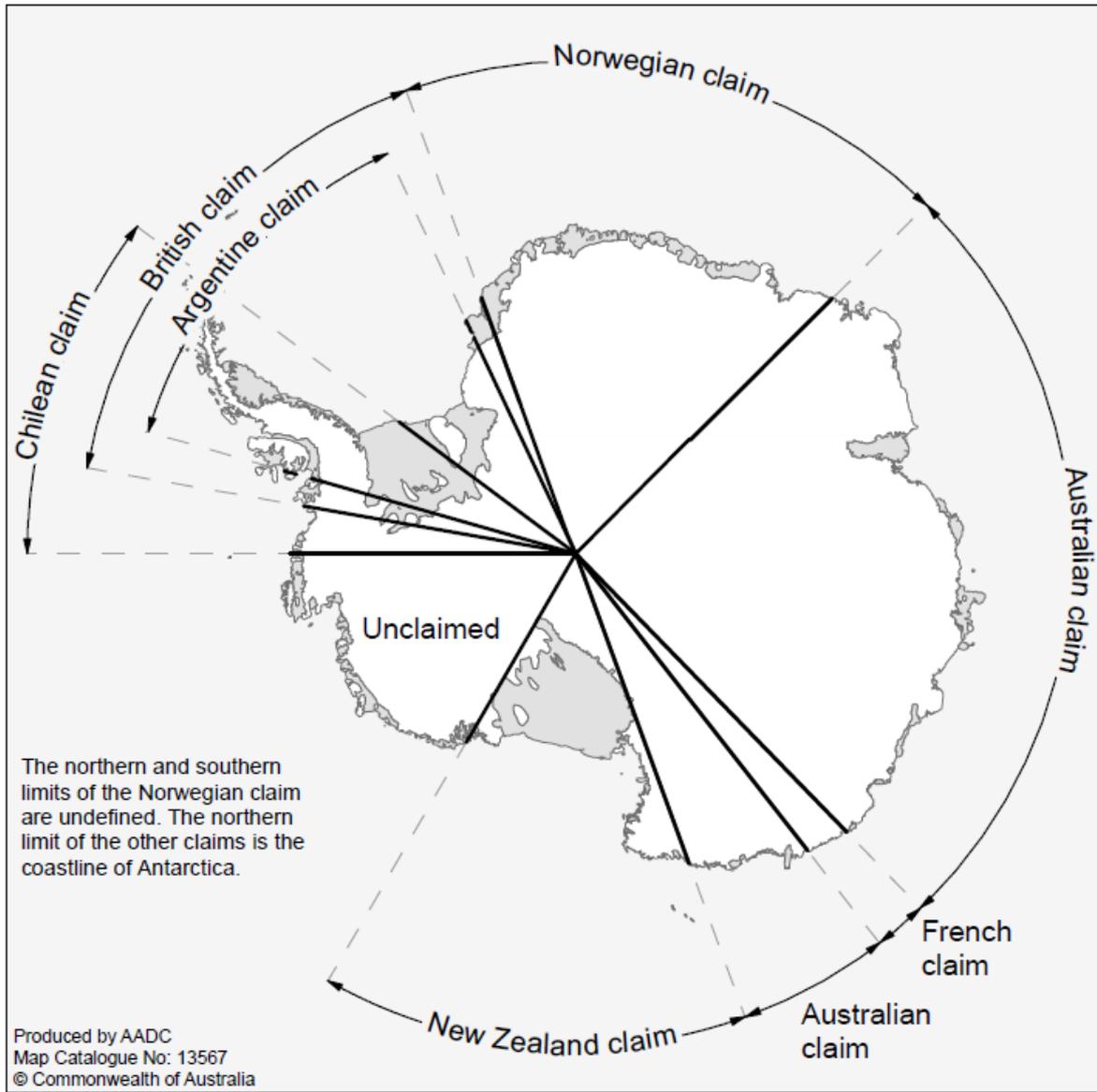
<sup>60</sup> Howkins, Adrian, Defending polar empire: opposition to India's proposal to raise the 'Antarctic Question' at the United Nations in 1956, p 35; Beck, Peter, Twenty years on: the UN and the 'Question of Antarctica,' 1983-2003, *Polar Record*, Vol. 40 2004, p 207.

<sup>61</sup> The international character of Antarctic affairs might be seen as a reason to locate the AAD within DFAT. This, however, should be discouraged as it will send the message that Australia considers Antarctica and the AAT as an international territory.

<sup>62</sup> Hemmings, Alan D, Beyond claims: towards a non-territorial Antarctic security prism for Australia and New Zealand, p 85.

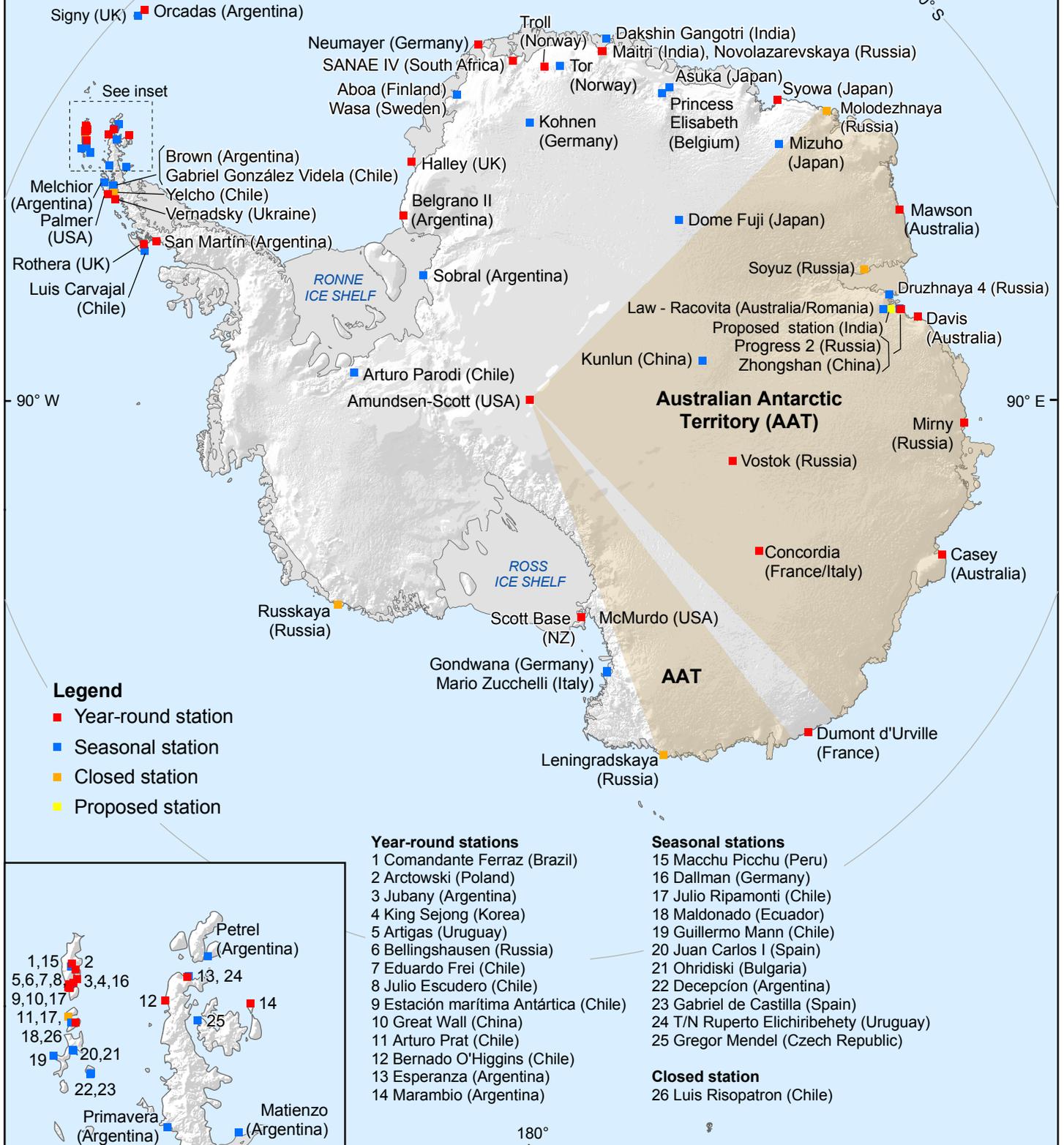
<sup>63</sup> Kulesa, Craig, High Elevation Antarctic Terahertz (HEAT) Telescopes for Ridge A, *Astronomy and Astrophysics from Antarctica (AAA) - SCAR AAA Science Research Program – Conference 2011*, Sydney, Australia, 2011.

# TERRITORIAL CLAIMS IN ANTARCTICA



# STATIONS IN ANTARCTICA

Produced by the Australian Antarctic Data Centre  
 Stations as listed at <http://www.comnap.aq/facilities>  
 Hillshading from RAMP DEM v2  
 Coastline from ADD v5 - 10m  
 Published August 2009  
 Map Catalogue No 13690



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