SUBMISSION TO SENATE STANDING COMMITTEE ON FOREIGN AFFAIRS, DEFENCE AND TRADE

INQUIRY INTO AUSTRALIA'S FUTURE ACTIVITIES AND RESPONSIBILITIES IN THE SOUTHERN OCEAN AND ANTARCTIC WATERS

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Executive Summary

In October 2013, the Australian Government announced the establishment of a 20 Year Australian Antarctic Strategic Plan. While the Antarctic may not classify as a strategic priority, the plan reflects the region's ongoing importance to Australian national interests.

For over 75 years, Antarctic affairs have existed as a status quo arrangement preserved by the Antarctic Treaty. This Treaty has forwarded scientific cooperation as an effective mechanism towards regional stability, while preventing challenges to Australia's claim to the Australian Antarctic Territory (AAT). However the changing international order presents a threat to this status quo. China leads a growing number of emerging powers that are investing in Antarctic capabilities and research. While such activity should be welcomed as a means of strengthening Antarctic governance through inclusiveness, Australia must be vigilant as to how this changing strategic reality impacts its own role and priorities in the region.

This submission analyses the importance of both the AAT and the current Antarctic status quo to Australian national interests. As global factors increasingly impact the region, a strong and sustained Australian Antarctic presence is critical to maintaining these interests. However the reality is that other nations are beginning to outpace Australian investment. When viewed in comparison to China's growing Antarctic presence, Australia appears in very real danger of losing its leadership status. Continued underinvestment could impact Australia's diplomatic standing in Antarctic affairs and potentially threaten the viability of its Antarctic claim.

This submission makes recommendations for capability and infrastructure investment in Antarctica, and outlines the role that an Antarctic Ambassador could play in enhancing Australia's engagement in the region. It also makes a case for the continued development of Hobart as an international hub for Antarctic activity. This could potentially attract investment from nations such as the United States and facilitate international collaboration on key research projects, thereby strengthening Australia's role as an Antarctic leader.

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List of Abbreviations

AAD	Australian Antarctic Division
AAP	Australian Antarctic Program
AAT	Australian Antarctic Territory
ATCPs	Antarctic Treaty Consultative Parties
ATS	Antarctic Treaty System
ATSE	Australian Academy of Technological Sciences and Engineering
CASOR	Centre for Antarctic and Southern Ocean Research
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CLCS	Commission on the Limits to the Continental Shelf
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEDTA	Department of Economic Development, Tourism and the Arts
DoE	Department of Environment
DFAT	Department of Foreign Affairs and Trade
ECS	Extended Continental Shelf
EEZ	Economic Exclusive Zone
ICJ	International Court of Justice
RAAF	Royal Australian Air Force
SEWPaC	Department of Sustainability, Environment, Water, Pollution, Arts and Communities
TPN	Tasmanian Polar Network
TYAASP	20 Year Australian Antarctic Strategic Plan
US	United States of America
UTAS	University of Tasmania

1: Introduction

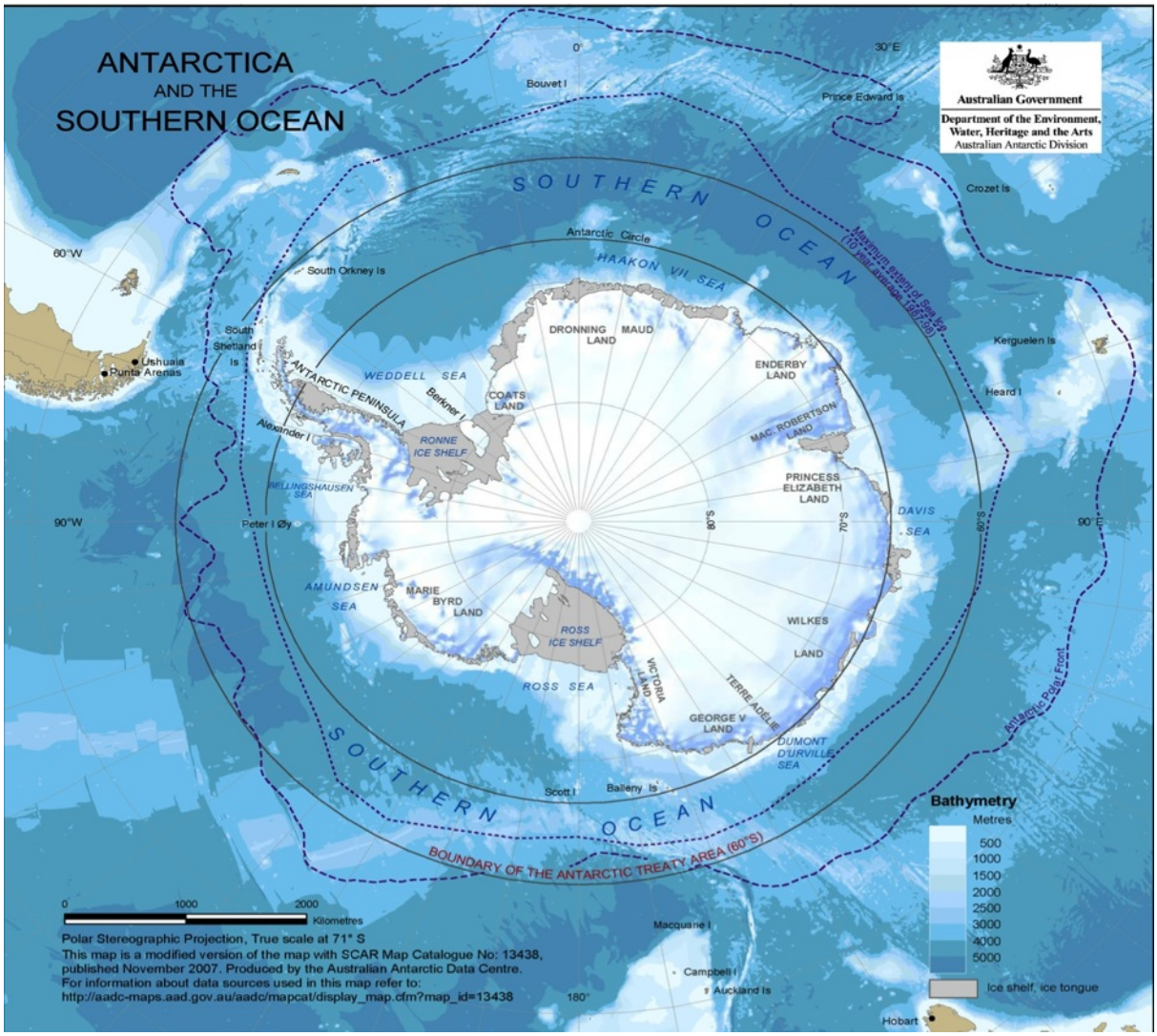

Figure 1: The Antarctic Continent and Southern Ocean (Source: AAD 2014)

As one the world's most hostile and remote environments, Antarctica is often regarded as the final frontier for exploration and adventure (Hansard 2011). It has a permanent population of zero, and the relatively small amount of human activity that has occurred on the continent to date has been achieved with significant innovation and a great deal of endurance. With 98 per cent of its surface covered by an ice sheet that averages 1.6 km in thickness (see Figure 1), Antarctica is home to about 90 per cent of the world's ice and 70 per cent of the world's fresh water.

Australia enjoys close geographic and historical ties with Antarctica. Through the Australian Antarctic Territory (AAT), Australia has been able to play a leadership role in Antarctic governance while at the same time promoting diverse national interests (Powell & Jackson 2007, pp. 38 – 53). From a scientific perspective, Antarctica offers Australia immense

opportunity for research (Haward M *et al* 2006, p. 443 – 445). Its potential for minerals, fishing and tourism also hold substantial potential value, even if unexploited (Bergin 2013, p. 6). Moreover, the position of Antarctica on Australia's southern flank makes the continent of strategic import (Dodds 2014, p. 219). While Australia's strategic orientation has traditionally been towards its northern border, this is at least partly due to the security afforded by a safe southern border.

As Press contends "Antarctica is growing in global relevance" (2002, p. 156 – 157). The barriers that have protected it from international attention are disappearing, with Antarctic expeditions now within reach of many of the world's nations. Antarctica can no longer be thought of as existing at the limits of human endeavour or in the margins of strategic interests. For Bush, the impacts of globalisation are already evident (2002, p. 146). Antarctic tourism is on the rise with 34,316 tourists travelling to the continent in 2013. Importantly, in the last decade, there has also been a significant increase in nations wishing to play a role in Antarctic affairs by becoming signatories to the Antarctic Treaty (see Chapter 6).

This growing interest in Antarctica has the potential to impact Australia's role in the region (Davison 2014). The international system is in a state of flux, with strategic power shifting from the Atlantic to the Indo-Pacific, and Asia emerging as a first order economic region. It is in the strategic interests of emerging powers to forge greater influence in the Antarctic region. China, for one, is increasing its Antarctic presence through investment in infrastructure and capabilities (see Chapter 7). Such actions could be regarded as a method of assertion and a challenge to the status quo (Brady 2010, Ng 2013).

We are therefore entering a key juncture for international involvement in 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.

This report will examine the relevance of Antarctica to Australian national interests. It will look into the historical context that has shaped Antarctic affairs, current governance and factors that may impact on the status quo. It will ascertain the investment and policy changes necessary to enabling Australia to maintain its role as a leader in the Antarctic. For the purpose of this report Antarctica will be understood as the region below 60^{o} South

governed by the Antarctic Treaty and will not include the greater Antarctic and sub-Antarctic regions (see Figure 1).

2: Australia's territorial claim to Antarctica

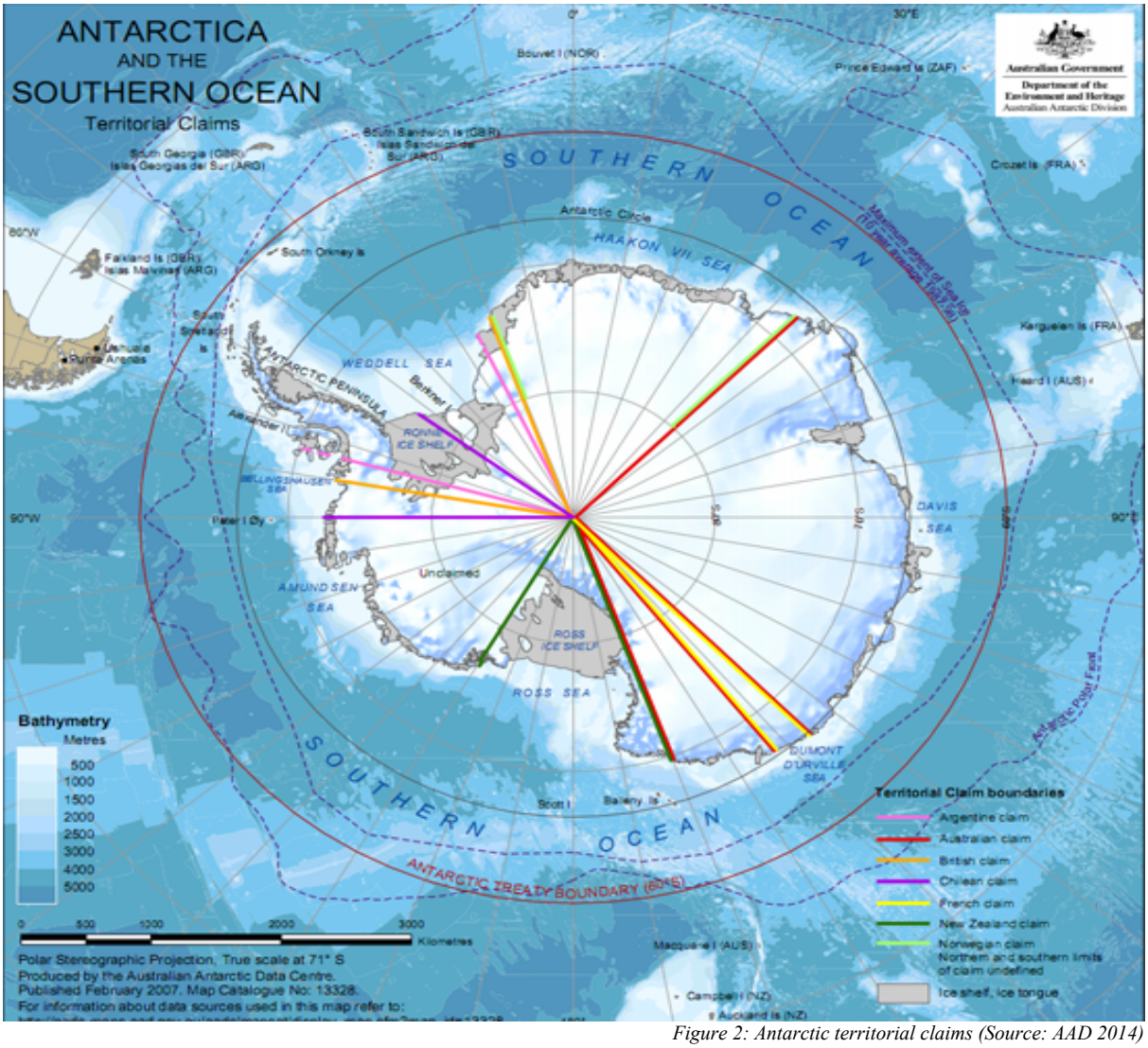

Figure 2: Antarctic territorial claims (Source: AAD 2014)

There are several states that have asserted claims over Antarctic territory. These can be divided into three categories. The first group, consisting of the South American claimants of Chile and Argentina, derive their claim from a 15th century Papal Bull which granted Spain and its successors territorial rights over a tract of land that included, or has been argued to include, the Antarctic peninsular. The second group, which can be grouped under 'other claimants', includes the United Kingdom, France, New Zealand, Norway and Australia. Finally, there are states that have not made a formal claim on Antarctic territory, but have either asserted their right to do so in the future or at least displayed an active interest in the

continent (Scott 2010, p. 155). Therefore seven nations have actively claimed sovereignty over parts of the Antarctic continent: Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom, referred to henceforward as the Antarctic claimant states (see Figure 2).

ANTARCTIC CLAIMANTS		
TERRITORY	**CLAIMANT**	**ESTABLISHED**
British Antarctic Territory	United Kingdom	1908
Australian Antarctic Territory	Australia	1933
Ross Dependency	New Zealand	1923
Argentine Antarctica	Argentina	1940
Chilean Antarctic Territory	Chile	1942
Adelie Land	France	1924
Peter I Land	Norway	1939
Queen Maud Land	Norway	1929

Table 1 (Source: AAD 2014)

Covering an area of 5,896,500 km^2 or 42 per cent of the continent, the AAT represents the largest Antarctic territorial claim. Shown on the eastern side of the Figure 2 map, Australia's claim is premised on the continent's 19th century discovery and Australia's close association with the Antarctic since this time. These factors, together with the AAT Acceptance Act of 1933, which saw sovereignty of the AAT transferred from Britain to Australia, form the legal basis of Australia's claim. In 1936 the boundaries between the Australian (outlined in green) and French (outlined in yellow) claims were secured (see Figure 2). The borders of the AAT are not currently disputed by any of its Antarctic neighbours.

Internationally the status of Australia's claim is recognised by four states: Norway, France, the United Kingdom and New Zealand (Rothwell & Scott, 2007 p. 7). In regards to New Zealand and the United Kingdom, this recognition can be attributed to Commonwealth association. In terms of France's support, geography plays the key role. The French claim is bordered on both sides by the AAT and mutual recognition is therefore beneficial for the maintenance of both claims. This is also a fair assertion for Norwegian recognition of the AAT, as the Norwegian claim is bordered by both the AAT and the British claim. Mutual recognition of Antarctic claimants' territorial sovereignty lends a degree of legitimacy to each claim and demonstrates shared interests. However as Kaye & Rothwell argue, having never

been tested, much uncertainty exists around how each claim would stand up under the scrutiny of an international tribunal (1995, p. 197) (see Chapter 6).

The international community does not generally support existing claims in Antarctica (Bergin 2013). Non-claimant states have little to gain from recognising Australia's claim and potentially much to gain from denying it. Both the United States and Russian Federation have stated they do not recognise the sovereignty of any state in any portion of the Antarctic. The United States, Russian Federation have reserved the right to make claims in the future, which would undoubtedly come into conflict with existing claims. Belgium, South Africa and Japan take a serious interest in Antarctic affairs and are very active and influential within the Antarctic Treaty System. Recently Japan exercised this position of non-recognition in its justification for its whaling operations within territorial waters of the AAT (Scott 2014, p.2). Therefore, while Australia's claim could be viewed as consistent with international legal norms regarding the establishment of territorial sovereignty, international recognition is far from assured. Australia must therefore strive to promote and protect the validity of its claim. This is reflected in the Commonwealth's specified objectives for the AAT. Objective four of the Australian Antarctic Program (AAP) seeks to "Maintain and reinforce Australian sovereignty in the Australian Antarctic Territory" (AAD 2014).

3: Current governance of the Antarctic

For over a century, Australia has played a key role in Antarctic affairs. This has included actively contributing to the development of the legal framework for the region (Jabour *et al* 2007, p. 1 – 5). The Antarctic Treaty along with three further treaties and subsidiary agreements, known collectively as the Antarctic Treaty System (ATS), currently govern international relations in Antarctica. The jurisdiction of the ATS is understood to be everything below 60^{o} south or the Antarctic Circle (see Figure 1).

The historical and political context of the ATS is critical to understanding the sensitivities around Antarctic relations. As Scott states, sovereignty is a fundamental concept of both the state system and international law (2010, p. 157). In the case of Antarctica, there has been little international consensus on the question of sovereignty. This unresolved issue has underpinned most political questions relating to the region.

At the height of its power Britain had sought to claim the entire Antarctic continent. However during the interwar period, the empire's waning power led to a strategic reassessment, which resulted in the negotiation of a division of the Antarctic with France, New Zealand, Norway and Australia. Britain was unable to make a settlement with Chile and Argentina over territorial boundaries on the Antarctic peninsular. The resulting tensions almost brought the United Kingdom and Argentina to war. The issue of disputed sovereignty and its potential to cause international conflict became the impetus towards finding a resolution. During discussions in Santiago in 1948 Julio Buzman suggested that existing legal rights and interests in the Antarctic be frozen for a period of five to 10 years. This was successfully trialled for one year and formalised in the Antarctic Treaty of 1961 (Hall 2002, pp. 27 – 28).

Article four of the Antarctic Treaty suspends the question of sovereignty by stating:

> *Nothing contained in the present Treaty shall be interpreted as:*
>
> *a. a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica;*
>
> *b. a renunciation or diminution by any Contracting Party of any basis of claim to territorial sovereignty in Antarctica which it may have whether as a result of its activities or those of its nationals in Antarctica, or otherwise;*
>
> *c. prejudicing the position of any Contracting Party as regards its recognition or non-recognition of any other State's rights of or claim or basis of claim to territorial sovereignty in Antarctica.*
>
> *No acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting, supporting or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. No new claim, or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.* (Antarctic Treaty 1961)

This suspension of territorial claims and, importantly, arguments about the legality and legitimacy of such claims has helped ensured the peaceful development of international activities in the region. From this basis the Treaty has grown to become an effective system for regulating international relations. It established Antarctica as a scientific jurisdiction and banned militarisation of the continent, stating that "it is in the best interests of all of mankind

that Antarctica shall always continue for ever to be used exclusively for peaceful purposes and shall never become the scene or object of international discord." (Antarctic Treaty 1961)

This arrangement has provided a security environment that is predictable, stable and free from conflict (Bergin & Haward 2007, p. 6) in contrast, for example, to hotspots such as the Arctic or even the South China Sea where geopolitical tensions and concerns over rights to resources are aggravated by the threat and presence of military force. As Miere and Mazo argue, "the absence of regulation means that geopolitical tension transforms regions into strategic spaces for military operations" (2013, p.77). While Antarctica's isolation undoubtedly plays a role, the unique legal framework governing the region has shaped international relations towards cooperation. Since 1961 the Treaty has adopted over 100 recommendations by consensus on issues such as telecommunications, information exchange, preservation of Antarctic heritage sites, tourism, search and rescue operations, cooperation with international organisations and environmental protection (Rowe 2002, p. 16).

There is little doubt that the ATS has proven to be a resilient and robust framework for moderating geopolitical rivalries towards mutually beneficial outcomes. At the same time, this mechanism has protected Australia and other claimant nations from challenges to their claims (Woolcott 2007, p. 26). It is therefore in Australia's interests to maintain the status quo. For the purpose of this report, this status quo shall be understood as an arrangement whereby Australia's claim to the AAT is not diminished and no nation derives economic gains from resources other than for scientific purposes within the AAT without consent. It also encompasses the environmental preservation and continued demilitarisation of the Antarctic continent.

4: The question of Antarctic resources

Antarctica contains resources of both economic and strategic value that have the potential to significantly impact the region's future. These resources can be divided into three categories: those that states can legally access; those that states are expressly forbidden from accessing; and those that may become valuable in the future.

Currently, all states can benefit from the resource of Antarctic research. Scientific research on the impacts of global warming and global climate science, for example, are of Australian and international significance (Budd 2002, 56). Certain fishery resources can also be legally

accessed, albeit in line with strict guidelines. Commercial krill fishing, for example, which began in the Antarctic in the 1970s, was brought under the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) in 1981. This treaty is designed to limit krill catch, protect the Antarctic ecosystem and aid in the population recovery of whales and overexploited fish species. Australian scientists are currently studying krill to better understand its life cycles and improve fishery management (AAD 2014).

Hydrocarbons and minerals including coal, iron ore and chromium are known to exist in the Antarctic and within the AAT (Darby 2006). It is believed that the Antarctic contains as much as a third of the Earth's hydrocarbon deposits (Ward 1998, p. 371). Currently, legal obligations preclude access to Antarctic minerals and hydrocarbons. The current status of mining in the Antarctic is the result of a complex history and is closely tied to the continent's future (Foggarty 2011, p. 2).

In the late 1980s and early 1990s there was considerable international discussion regarding access to mineral resources in the Antarctic. This led to the negotiation of an environmental protocol dealing with non-living resources within Antarctica, which Australia played an important role in developing. Entered into force in 1998, the Madrid Protocol effectively regulates access to and exploitation of Antarctic non-living minerals. It bans access to mineral resources for anything other than scientific purposes and requires all Antarctic activities be subjected to an environmental impact assessment. The drafters allowed for a review of the protocol 50 years after its entry into force, acknowledging circumstances might make it viable or even necessary to access these resources (Boyd 2002, p. 106). The protocol is to be reviewed in 2048, which presents a timeline for some stakeholders to potentially promote discussion seeking its repeal.

Regardless of the legal restrictions, there are several factors that currently make exploiting mineral resources in the Antarctic unviable. This includes the harsh environmental conditions, shortage of ready manpower, geographic isolation and lack of basic materials needed for mining, such as energy. Currently there are easier ways to get any of the minerals that could potentially be extracted. However the future could paint a different picture. Foggarty's report "Antartica: Assessing and Protecting Australia's National Interests" looks into the prospects of accessing Antarctic resources. Foggarty argues that the price of oil will need to be high in order to cover the costs of operating in the hostile Antarctic environment. Foggarty concludes that mining will not be economically viable until oil reaches US$200/barrel (2011, p. 4). As

Figure 3 demonstrates, oil prices will likely reach this price within the next 10 to 20 years. This means that by the 2048 moratorium review, according to Foggarty's assertion, it will be economically viable to tap into Antarctic mineral resources. With resource scarcity likely to be a pressing security concern for many resource-poor nations, it is fair to assume there will be significant discussion regarding Antarctic resources and access to them (Darby 2006).

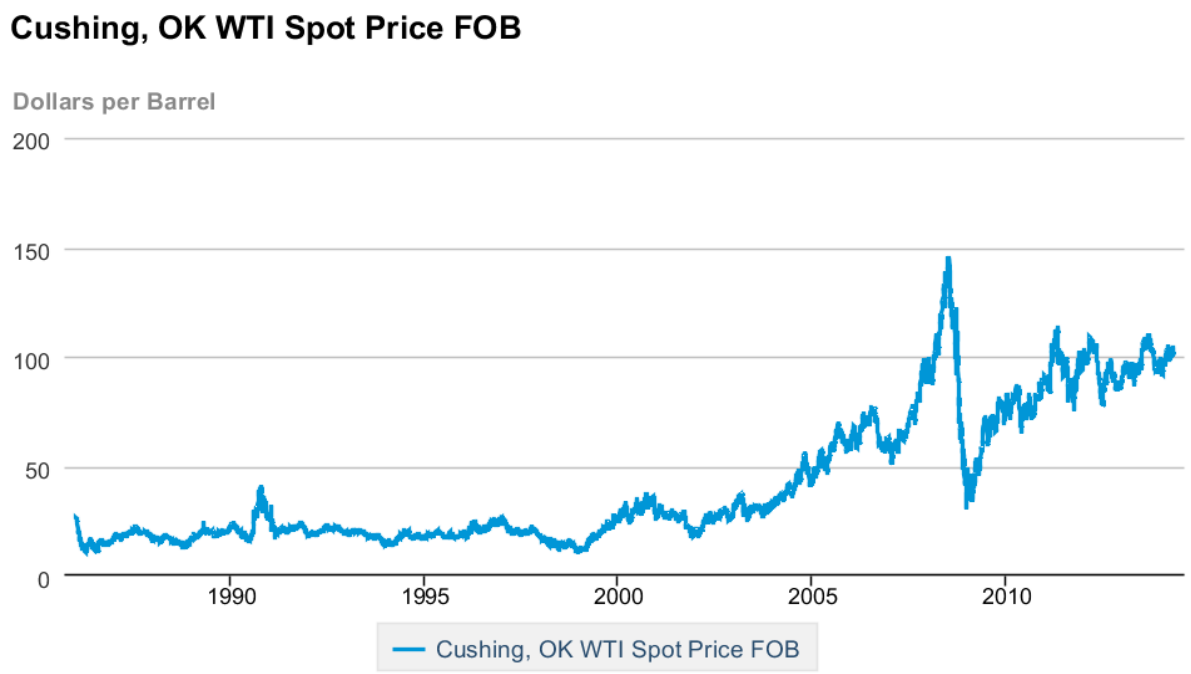

Figure 3: Current trajectory of oil/barrel price (Source: US Energy Administration 2014)

Brady argues that the Antarctic activity of some nations could already be posturing towards the opening up of access to mineral resources (2014, p. 20). While Article 3 of the Antarctic Treaty requires that nations make all scientific discoveries available to all Antarctic parties (ATS 2014, Stephens & Boer 2007, p. 56), there is evidence that some nations are engaged in resource identification as part of their Antarctic science programs. For example in 2013 Ukrainian scientists announced that they had discovered a petroleum province as part of their Antarctic research program (Ukrainian Digest 2013). A paper submitted by Russia to the 2012 Antarctic Treaty Consultative Meeting (ATCM) noted their strong interests in Antarctic mineral and resource potential (Bergin 2013). China too has expressed an interest in Antarctic resources (Chandler 2010). This raises the concern that some nations are engaging in Antarctic research programs as a way of establishing a presence, with the ultimate goal of influencing negotiations at the 2048 minerals moratorium review (Darby 2013).

It would be in the interests of these nations to deny Australia's claim and adopt a favourable posture towards the moratorium's repeal or at least lead discussion with the intent of shaping

the agenda. This presents a potential threat to both Australian interests in the Antarctic and the ATS. Competition over resources could lead to a destabilisation of the region, with geopolitical rivalries negatively impacting security conditions for Australia.

Finally, fresh water falls into the third category of Antarctic resources that may become valuable in the future. Antarctica contains 30 per cent of the world's freshwater in the form of ice. There are currently no protocols regarding its exploitation however there has been discussion regarding its potential as far back as the 1970s (Hult & Ostrander 1973). Presently no state has made any attempt to recover or harvest this resource. However should water scarcity manifest as a serious global security issue (Dalby 2013, pp. 3 – 22), it is likely the viability of harvesting freshwater from Antarctic ice may be assessed as a potential solution.

5: Australia's presence in the AAT

Australia has maintained a continuous presence in Antarctica since the formation of the AAT. In 1948 the Australian Antarctic Division (AAD) was established with the role of administering and managing the AAT and implementing the Commonwealth's Antarctic Program (AAD 2014). Currently the AAD is an agency of the Department of Environment and is tasked with implementing the Department of Environment's objective of the "Advancement of Australia's strategic, scientific, environmental and economic interests in the Antarctic by protecting administering and researching the region" (SEWPaC 2013).

The AAD engages internationally on matters affecting Antarctic governance arrangements, including through the Antarctic Treaty, the CCAMLR and other international instruments. One of its key functions is the delivery of the Australian Antarctic Program (Department of Environment 2013). This program focuses on conducting research relevant to the sound environmental stewardship of the AAT, including research into the roles that Antarctica and the Southern Ocean play in Australian and global climate systems, and the consequences of climate-driven changes (AAD 2014). This research informs policy development and helps Australia meet its regional, national and international obligations (AAoS 2011, p. 5).

Australia's Antarctic presence relies on the maintenance of a secure and reliable link between the Australian mainland and the AAT. The AAD undertakes all Australia's Antarctic transport operations through a network of transport assets designed to operate in the Antarctic's harsh environment. This includes a maritime link for the distribution of heavy

cargo and two aviation systems: an intracontinental air service, which comprises of light aircraft and helicopters to distribute cargo and personnel between stations, and a regular intercontinental air service, an A319 Airbus which operates between Hobart and Wilkins Aerodrome near Casey. Leased on an annual basis and operated by Skytraders, this intercontinental service, known as Airlink, has become key to the AAD's operations. A one-way trip by Airlink is roughly four hours' travel, considerably quicker than the Aurora Australis, which can take weeks. Airlink is capable of conducting up to 20 scheduled flights per season at around 20 passengers per flight, 40 during peak times, and priority lightweight cargo. It can also undertake a rapid medical evacuation in case of emergency (AAD 2014).

Australian Antarctic Research Stations			
STATION	**OPENED**	**POPULATION**	**LOCATION**
Mawson Station	1954	60 summer 20 winter	Mac Robertson Land, AAT
Casey Station	1957	70 summer 20 winter	Vincennes Bay, AAT
Davis Station	1957	70 summer 20 winter	Princess Elizabeth Land, AAT
MacDonald Island Station	1969	40summer 16 winter	Sub-Antarctic, Southern Ocean

Table 2 (Source: AAD 2014)

Airlink relies on the Wilkins runway, a critical piece of infrastructure that is carved into ice near Casey station. Opened in 2008, the Wilkins runway's operational capacity is dictated by climatic conditions. The runway must be rebuilt every summer, a task that is undertaken by a small team prior to the commencement of Airlink's annual summer operations. In 2012 a sudden rise in temperature beneath the runway caused it to melt enough that the structural integrity could not be guaranteed (Darby 2012, Chandler 2012). This closed the runway to the A319 until remediation work could be undertaken. As a result, the AAD was only able to achieve nine of a planned 15 trips during the 2012 - 2013 season and reduced flights during the 2011 – 2012 season, with most flights being diverted to the US McMurdo station. There is currently no conclusive evidence as to whether the melting of Wilkins runway is part of a larger climatic trend that will continue to impact the runway's viability (Hansard 2012). The operational capability of the Wilkins runway is therefore largely unknown and must be assessed on a seasonal basis.

The Aurora Australis could be classified as Australia's most significant piece of infrastructure in the AAT. Launched in 1989 and operated by P&O, this multi-purpose research and

resupply ice breaking vessel is leased by the AAD during the summer and is the Commonwealth's main Antarctic sea link. This vessel, which is capable of transporting up to 116 passengers and heavy cargo, resupplies all four Australian research stations and is essential for the transport of fuel. It is also the platform from which Australia conducts long-term research in the Southern Ocean. The ship is fitted with a helipad and hangar facilities for three helicopters further contributing to its ability to undertake logistics and science related operations (AAD 2014).

However Aurora Australis is 20 years old and is due to be retired. Recent operations were undertaken by the AAD and P&O to lengthen its operational life to approximately 2016 - 2017, possibly 2018, at a cost of $7.9 million (Budget 2013 – 2014). However a replacement will soon need to be found with the passenger, heavy transport and research capabilities to fulfil the role of primary maritime link. In August 2013 the former government announced that it has begun plans to move the acquisition of a new icebreaker to formal tender (Beniuk 2013). However, it is likely the current government will wait until the release of the TYAASP to commit to any significant acquisition.

6: How the evolving ATS impacts Australia

As previously demonstrated, Australia plays a key role in shaping the Antarctic agenda within the current status quo. This enables Australia to not only further its own research aims, but act as an international leader in ensuring the Antarctic continues as a demilitarised, denuclearised and conflict-free zone. It is therefore in Australia's interests to continue to work to ensure the ATS remains effective and relevant.

However as more states take an active interest in Antarctic affairs, the maintenance of the Antarctic status quo has become more complex. Since coming into force, the number of states party to the ATS has grown to 50. According to Art. IX.2, these states are entitled to participate in the consultative meetings during such times as they demonstrate their interest in Antarctica by "conducting substantial research activity there" (Antarctic Treaty 1961). In total 17 of the acceding countries have had their activities in Antarctica recognised under this provision, and there are now 29 consultative parties in all. The other 21 non-consultative parties may attend the consultative meetings but do not participate in decision-making.

There are many benefits to greater participation in Antarctic governance. The legitimacy and effectiveness of the ATS is in part built upon its openness (Bergin 2013, p. 11). However greater international involvement also means the seven claimant states are in a minority, which may have implications for the status of existing claims. As the decision-making process of the ATS rests upon the principle of consensus, that effectively confers on each of the Antarctic Treaty Consultative Parties (ATCPs) a power of veto. As the capabilities and confidence of some developing nations increases, there exists a very real potential for an upheaval of the system. The impacts of what Bush terms "interests of international actors of influence" (2002, p. 131) could significantly alter the strategic arrangement of the Antarctic, and potentially Australia's role within it.

Currently, upon meeting certain obligations, all states are entitled to undertake scientific research programs and expeditions within the Antarctic (Bergin *et al* 2007, p. 7). In recent decades, many developing nations have established bases and programs within the AAT. The potential exists for Australia's actions within the region to be overshadowed by other nations. This may provide impetus for discussion and debate around the legitimacy or even validity of Australia's claim. Australian policy for the Antarctic must therefore be developed within a complex environment of competing objectives. Australia must balance the need to advance international recognition of its claim against the risk of provoking a legal challenge that may lead to an unfavourable outcome regarding pre-existing Antarctic claims.

A demonstration of this can be seen in Australia's delamination of the outer limit of the AAT's Extended Continental Shelf (ECS). The ability to make a maritime claim is based on a state's legitimate claim to a territory from which the maritime claim is projected (Kaye & Rothwell 2002, p. 373). As coastal states are guaranteed a 200nm Exclusive Economic Zone (EEZ) it may be possible to claim an ECS should the continental margin extend beyond 200nm. To claim an ECS, a state must lodge a submission to the Commission on the Limits to the Continental Shelf (CLCS), a body charged with assessing submissions and making recommendations as to ECS limits. States are then required to establish the limits of their shelves based on these findings.

However due to the suspension of territorial claims in Antarctica, there exists a degree of uncertainty as to whether coastal territories exist on the continent at all. In 2004, Australia submitted a claim to the CLCS, which included waters within the Antarctic Treaty jurisdiction. The CLCS concluded that it could not rule on the AAT's ECS as it cannot rule

on disputed maritime zones unless all parties consent to its examination. Thus the ambiguous status of territorial claims and the provisions of the Antarctic Treaty effectively prevented the CLCS ruling. This demonstrates the difficulties for Australia in developing Antarctic policy that seeks to protect the validity of its territorial rights.

Parties to the Antarctic Treaty 2014		
Consultative Parties (29)		**Non Consultative Parties**
Original Signatories (12)	**Others (17)**	Austria
Claimants (7)	Brazil	Belarus
Argentina	Bulgaria	Canada
Australia	China	Columbia
Chile	Czech Republic	Cuba
France	Ecuador	DPR Korea
New Zealand	Finland	Denmark
Norway	Germany	Estonia
United Kingdom	India	Greece
Non Claimants (5)	Italy	Guatemala
Belgium	Republic of Korea	Hungary
Japan	Netherlands	Malaysia
Russia *	Peru	Monaco
South Africa	Poland	Pakistan
United States *	Spain	Papua New Guinea
* States that have reserved the right to make a claim to the Antarctic at any time.	Sweden	Portugal
	Ukraine	Romania
	Uruguay	Slovak Republic
		Switzerland
		Turkey

Table 3: Parties to the Antarctic Treaty (Source: ATS 2014)

A second example of this complexity can be seen in the proceedings before the International Court of Justice (ICJ) in the case of Whaling in the Antarctic (Australia v. Japan). Australia had to pursue the case in such a way that it did not advance an argument that would force the

Court to consider the validity of Australia's claim to the AAT. Japan's justification was premised on the non-recognition of Australia's claim to the AAT (Scott 2014).

The issue of sovereignty therefore creates significant restrictions in terms of Antarctic policy development, particularly as more states sign on to the ATS and take an interest in Antarctic affairs. As Bergen *et al* argue, in Antarctic matters "science is the currency of diplomacy" (2013, p.7). The ability to undertake research of significant international importance is therefore key to advancing Antarctic influence. A strong Antarctic presence and scientific program, in combination with a reliable connection to facilitate that presence, represents a less contentious and more effective means of advancing Australia's claim to the AAT.

7: China's Antarctic agenda

China's involvement in the Antarctic presents a useful case study for demonstrating the importance that emerging nations are placing on scientific research as a means of establishing an Antarctic presence.

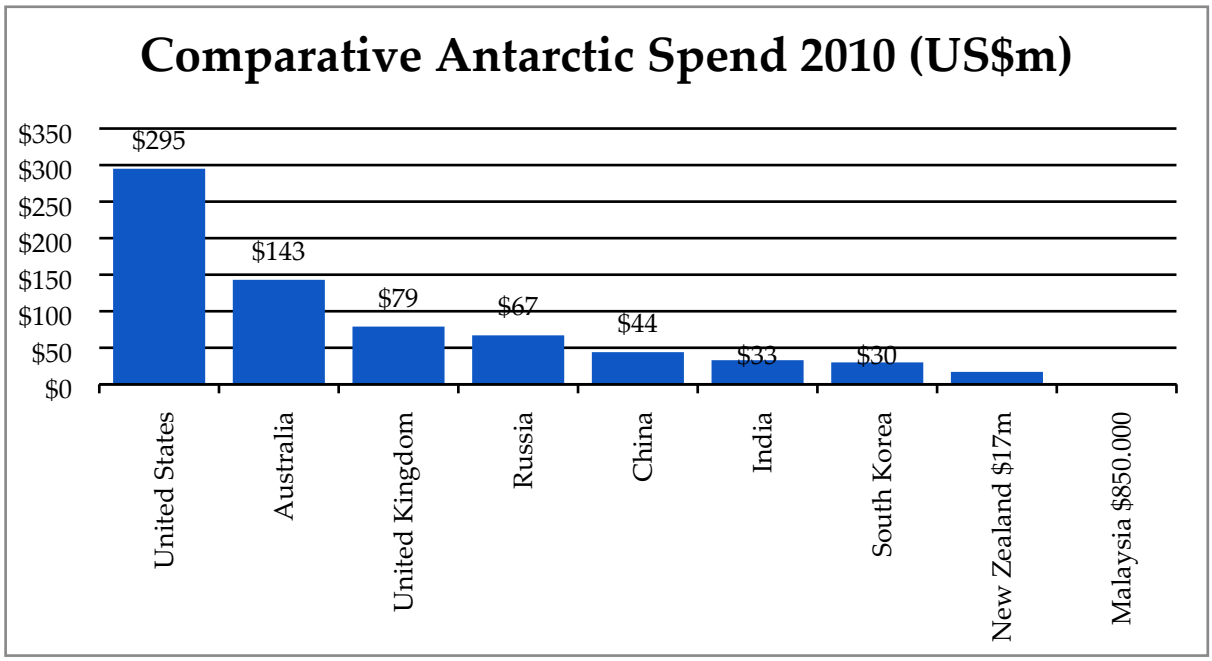

Figure 4: Antarctic Spending (Source: Brady 2014)

Antarctica is open to all nations' participation as directed by the Antarctic Treaty. However economic limitations have effectively excluded most of the developing world and many middle-income nations from undertaking and developing Antarctic research programs and capabilities. Furthermore the best locations for the establishment of research bases have already been acquired by earlier Antarctic exploration and activity (Keyuan 1995, p. 239).

However, the shift of economic and strategic power to the Indo-Pacific is providing opportunity for nations such as South Korea, India and China to commit to and develop Antarctic research capabilities. At the same time, the global financial crisis has greatly diminished the Antarctic funding of nations such as the United States, United Kingdom and Australia. As Figure 4 demonstrates, China still lags behind the US and Australia in Antarctic spending. However it has established a significant presence in comparison to many established Antarctic nations such as the UK, Italy and Germany.

China is growing in both economic and strategic influence, and is exercising increased power within the international system. China has not made a claim to the Antarctic nor does it expressly recognise existing claims of any Treaty members. Despite this, some Chinese scholars have argued that existing claims are untenable and should be relinquished, as all nations should own and enjoy benefits derived from Antarctica (Brady 2012, p. 105). This is consistent with the concept of the heritage of mankind, which is currently applied to global commons such as the deep sea and space (Triggs 1984, pp. 29 – 66).

However for the time being, China is best able to serve its objectives through the ATS. China has thus far benefited a great deal from the Antarctic Treaty. It has enabled China to develop an Antarctic presence without coming into conflict with other claimants while at the same time learning from established nations towards developing its own presence and research programs (Lee 1990, p. 585). The current arrangement provided by the ATS suits China's agenda by affording it the time to develop and establish a strong Antarctic presence.

As explored in the previous chapter, scientific research represents a means of gaining authority within the ATS. While China was relatively slow to join the Antarctic Treaty, acceding in 1983 and launching its first expedition to the continent in 1984, it has more than made up for this late start (Lee 1990). China quickly established two bases: Changchen Station in East Antarctica in 1985 and Zhongshan Station in the AAT in 1989. This demonstrated interest in Antarctic science and research qualified China to become a consultative party to the Treaty in line with the criteria set out in Article IX in 1985. Since being admitted as a full consultative party member, China has participated in all Antarctic Treaty Consultative Meetings (ATCMs) whether regular or special (Brady 2013, p. 30).

China's annual spending on polar expeditions has trebled in the last 10 years. Of this roughly 80 per cent is being spent on the Antarctic. In the last five years China has acquired a new icebreaker worth US$300 million, refurbished its established bases and completed a US$60

million upgrade to its polar facilities in Shanghai. It has expanded its number of polar scientists from 200 to 1000 and established a Polar Research Institute (Brady 2013, p. 33 – 36). In 2008 China established the Kunlun Station at Dome A on the Antarctic Plateau and the Taishan station in the AAT in 2014. It has also announced plans to establish a fifth base (Winterbottom 2014) and acquire an Antarctic ice-capable aircraft to provide an air link (Brady 2012, p. 105). The United States and the United Kingdom each has six bases while Germany, Italy, Japan each has five.

China's Antarctic Research Stations			
Station	**Opened**	**Capacity**	**Location**
Great Wall	1985	60 summer 25 winter	King George Island, East Antarctica
Zhongshan	1989	60 summer 25 winter	Larsemann Hills, Prydz Bay, Australian Antarctic Territory
Kunlun	2009	25 summer	Dome A, Australian Antarctic Territory
Taishan	2014	20 summer	Princess Elizabeth Land, Australian Antarctic Territory

Table 4 (Source: Chinese Arctic and Antarctic Administration 2014)

China has in effect caught up with most of the developed states' Antarctic operational capabilities. Continued underinvestment by Australia could potentially see its capabilities and presence fall behind those of China (Darby 2013). In fact, with the recent installation of Taishan station in the AAT interior, China is now able to access tracts of the AAT that remain largely inaccessible to Australian researchers (Bergin *et al* 2013, p. 12). This effectively prevents Australia from functioning as a leader in research projects.

8: Current plans for investment in the AAT

In 2013 the Coalition announced that if elected it would launch a strategic review of Australia's Antarctic priorities (Darby 2013). Due to be released in July 2014, the Twenty Year Australian Antarctic Strategic Plan (TYAASP) presents an opportunity for Australia to assess its ongoing engagement with Antarctica. The Plan's purpose is to articulate an outline for future policy development that focuses on:

- Ensuring robust and reliable access to the AAT
- Extending Australia's reach across the AAT
- Committing to undertaking nationally and globally significant science
- Committing to exercising influence in the region through the ATS
- Expanding Tasmania's role as the gateway for Antarctic expeditions and research

(TYAASP 2014)

Two submissions made public are critical of the lack of investment in supporting Australia's ongoing scientific presence within the Antarctic and argue for the development of necessary infrastructure. Both submissions recognise that the growing influence of China presents a significant challenge to Australia's AAT presence (ATSE 2014, TPN 2014).

The Government has also pledged to establish a Centre for Antarctic and Southern Ocean Research (CASOR) to continue funding research on the Antarctic climate and ecosystems, and undertake significant upgrades to Hobart International Airport. A 500-metre extension will be funded in 2014-15, which will allow more traffic and larger aircraft to land.

At the same time, the Government has announced its intention to cut $100 million from the Department of Environment over four years (Oriti 2014). This will mean the loss of approximately 670 jobs, or a quarter of its workforce, with 250 expected to come before December 2014. This will have implications for the AAD in carrying out its Antarctic objectives and will likely impact Australia's capacity to undertake scientific research.

However all remains to be delivered. The pledge to develop a 20-year strategy offers the prospect for a systematic and thorough effort to define Australia's strategic interests in Antarctica and plan for ways to achieve them in the Asian Century.

9: Recommendations for future investment in the AAT

If Australia wishes to retain its influence in shaping the Antarctic agenda, it must act to ensure its claim to the AAT can withstand the changing nature of the region (Phillips 2014, Davison 2013). As demonstrated in chapters 5, 6 and 7, there are practical and even prudent steps Australia can take to maintain an active and engaged use of the AAT.

Reliable and secure maritime and aviation links with the AAT are vital to undertaking research and ensuring nations operating within Australia's territory meet international obligations, particularly with regards to environmental protection. The purchase of a new multi-role icebreaker to replace the Aurora Australis is therefore vital. This ship can be equipped to meet the requirement of both scientific research and logistic supply capabilities. With specific consultation, such a vessel could be designed to attract international research programs and provide Australia with capacity to coordinate and lead international science programs, thereby boosting its credentials as an Antarctic leader. At the same time, Airlink must be adequately funded to ensure it can continue to keep up with demand.

The viability of the Wilkins runway must also be further explored. The ice runway's operational capacity will continue to be subject to varying weather conditions. This greatly impedes the AAD's capacity to maintain vital air connection to the AAT. Research into the building of a permanent fixed rock runway concluded that environmental conditions made this unfeasible (Hansard 2012). There have been arguments for a potential second blue ice runway however there could be no guarantee it would not be subject to the same conditions impacting Wilkins (Bergin 2013, p. 18). A detailed study would be required to ascertain the best way to secure reliable access.

There is also the potential for Australia to develop or acquire intercontinental ski-equipped aircraft, similar to the LC-130 operated by the US. The LC-130, a variant of the C-130 Cargo plane, can land on both hard runways and snow or ice surfaces, and is capable of transporting heavy cargo. Skytraders developed a retractable ski landing system for the CASA 212 (part of the intracontinental service) which resulted in the first transport category aircraft to be put on skis in over 40 years. This suggests the possibility of developing a local solution rather than buying a foreign off-the-shelf asset. An assessment suggests that a ski-equipped C130J aircraft could service the AAD's intracontinental and intercontinental needs (Hansard 2012). As the Antarctic Treaty only precludes armed military personnel for Antarctic activities

(Jennings 2013), any future ski-equipped aircraft could be operated and maintained by the Royal Australian Air Force for logistical operations in support of scientific research.

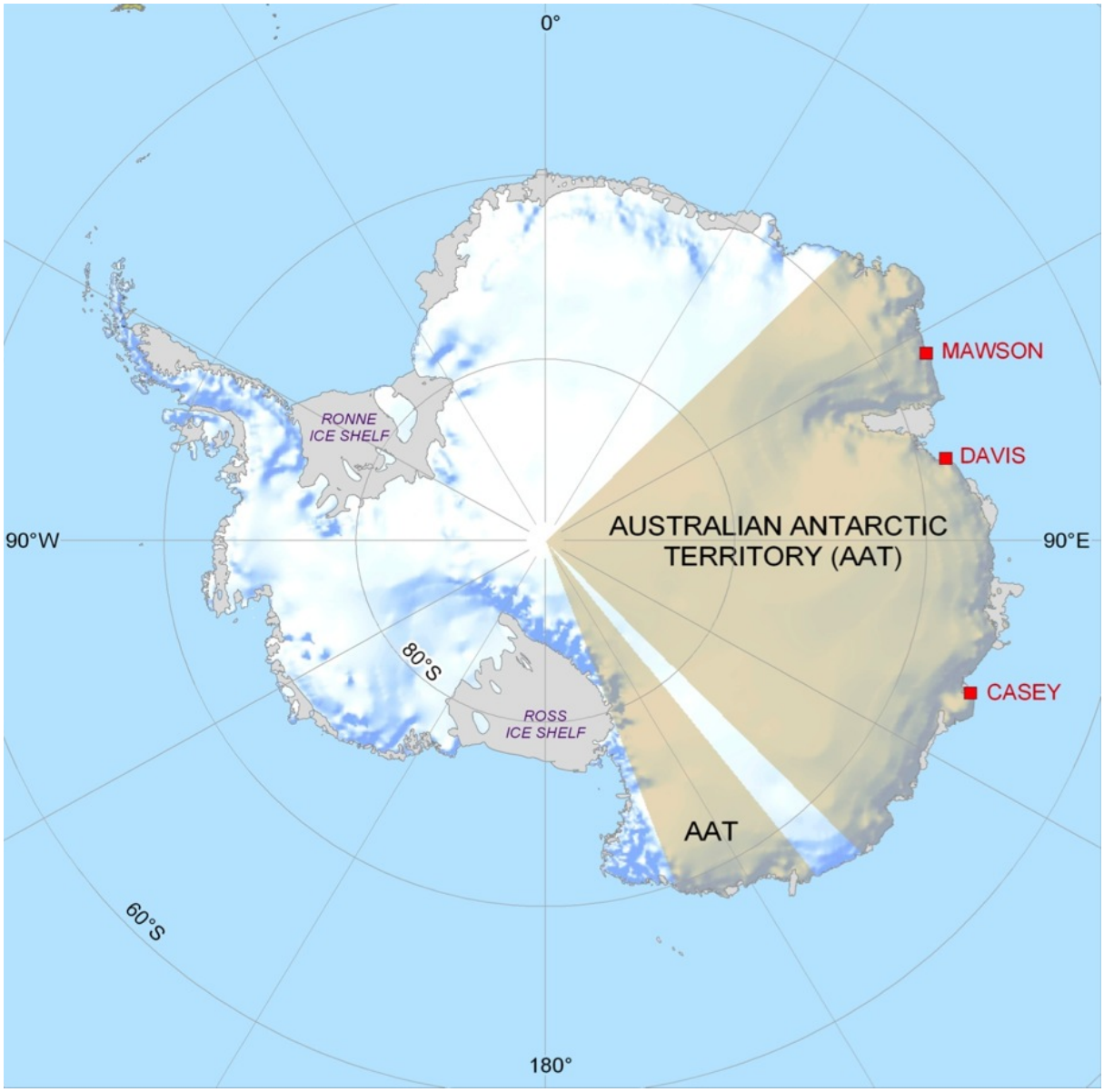

Figure 5 (Source: Australian Antarctic Division 2014)

Regarding Australia's on-ground Antarctic presence, a significant infrastructure gap exists in the AAT interior that prevents Australia from functioning as a leader within its own territorial claim (see Figure 5). An inland base would enable Australia to coordinate international projects across the AAT and give Australian researchers greater opportunity to collaborate with other nations on projects. Current best practice methods mean the base could be developed with minimal environmental impact. Such a base was recently established by Belgium and promoted as a 'Zero Emissions Base'. This would place Australia within a growing camp of Antarctic nations that have established environmentally friendly stations,

helping promote Australia as a responsible Antarctic nation and adding weight to its environmental credentials (McCallum 2013). Any inland base would require certainty of access, so a secure and reliable transport link would need to be assessed in tandem.

Beyond infrastructure, there is a potential diplomatic path that Australia can take towards progressing its interests in the Antarctic. A Special Ambassador for Antarctica could be appointed to lead and coordinate Australia's Antarctic policy (Bergin 2007, p. 11). While there is no precedent for appointing an Ambassador to administer an overseas Australian territory, such a role could facilitate a whole of government approach by providing a link between policy and the operations of the AAD. This ambassador could lead bilateral, regional and international delegations relevant to Antarctic Policy. The appointment would ensure Australian interests are represented and convey the weight the Commonwealth places on the Antarctic issue.

There are precedents for Special Ambassadors to be appointed on policy priority issues or those deemed in the national interest. A review of the Department of Foreign Affairs and Trade (DFAT) Heads of Mission shows there are currently 12 Special Ambassadors appointed to roles not accredited to any sovereign nation (excluding the Holy See and Taiwan) (DFAT 2014). These positions cover a range of responsibilities, including people smuggling, counter terrorism, women and girls, HIV, climate change and disarmament.

The role could be based in Canberra to provide a link between policy development and Kingston operations through the coordination of departments and agencies. Currently, Australian delegations to international meetings, which cover aspects of the Antarctic, are composed of representatives from a variety of agencies. The Special Ambassador could be situated within the Department of Environment portfolio to coordinate a whole-of-government approach to the Antarctic with the AAD, relevant agencies and interested bodies.

Finally, Antarctic research and science are critical to maintaining a leadership role in the Antarctic region (Hall & Kellow 2007, pp. 21 – 37). Necessary steps must be taken to ensure that Australia does not fall behind Antarctic newcomers. Large-scale scientific endeavours can enhance Australia's strategic interests and position within the ATS and therefore work towards securing the status quo. International participation and collaboration on 'big science' projects such as the building of a multinational telescope, the search for the million-year-old ice core and the exploration of remote areas for biodiversity can help strengthen Australia's leadership role while at the same time sharing project costs between nations. As the

Scientific Committee on Antarctic Research (SCAR) suggests, scientific partnerships are likely to become more prominent in the future as collaboration towards big science projects becomes necessary (SCAR 2011, p.21).

10: Hobart's potential as an Antarctic gateway

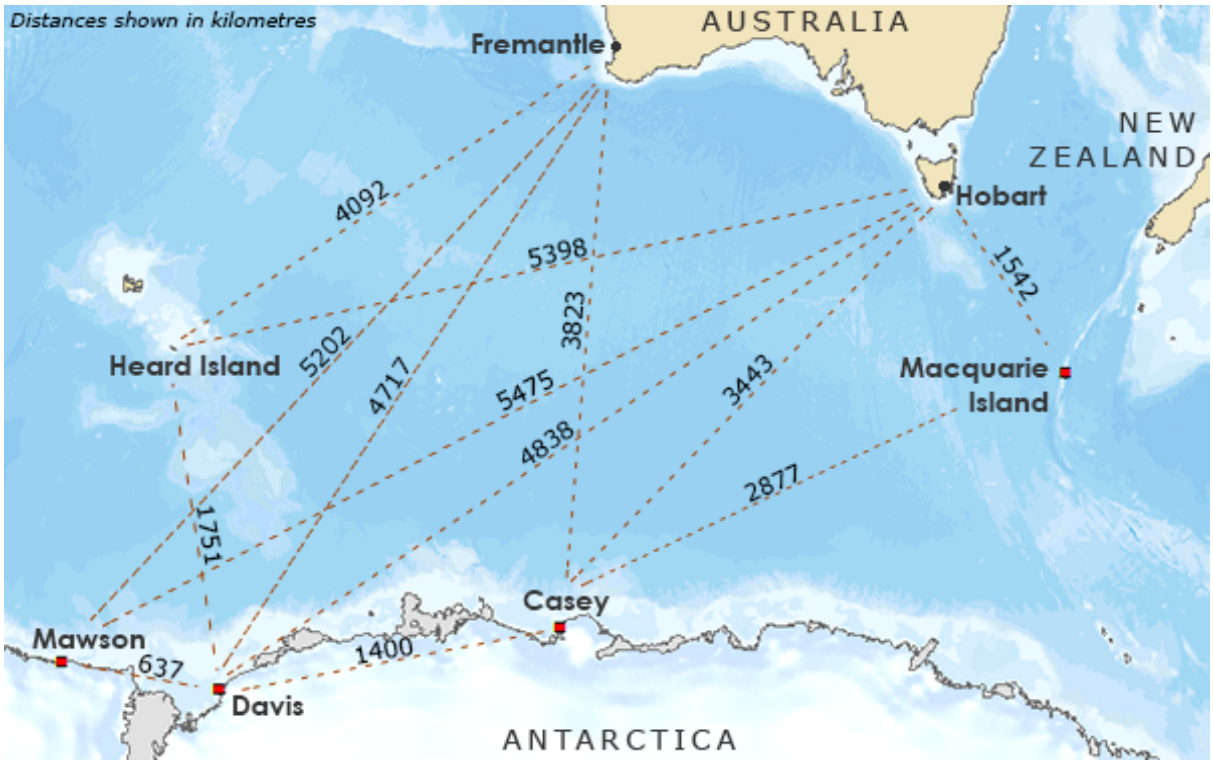

Figure 6: Distances to Antarctic research stations (Source: AAD 2014)

In an era of diminishing budgets, Antarctic investment must be channelled where it can have the greatest impact. Tasmania has the advantage of close proximity to the Antarctic region (see Figure 6). Moreover, the Antarctic sector has been identified in Tasmanian Government economic studies as likely to be one of the key sectors to stimulate economic and jobs growth in Southern Tasmania over future decades (Hansard 2012). By building upon the role of Hobart as an international Antarctic gateway, Australia can support this economic growth while extending its Antarctic influence.

As a natural departure point for the eastern Antarctic, Hobart has almost 150 years of experience derived from supporting Antarctic operations (Bacon 2007, pp. 167). It hosts a world-class array of science organisations and interests. Hobart is home to the AAD, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the University of Tasmania (UTAS), the Commission for the Conservation of Antarctic Marine Living

Resources (CAMLR), and the Agreement on the Conservation on Albatrosses and Petrels (ACAP).

Tasmania is well aware of the economic opportunity Antarctica represents. Around 60 per cent (over $70 million in 2011-12, falling to an estimated $68 million in 2012-13) of the AAD's budget flows directly into the Tasmanian economy in the form of salaries and wages, and the purchase of goods and services. The Antarctic industry already provides $180 million to the local economy and employs 850 workers. In 2009, Antarctic Tasmania established the Tasmanian Antarctic Gateway (TAG) working group. TAG provides a targeted approach for industry and government to secure new opportunities to grow the Antarctic and Southern Ocean sector. The Tasmanian Government also recently signed a memorandum of understanding with the Chinese Antarctic Research Program to use Hobart as its gateway for all future Antarctic and Southern Ocean research activities (Paine 2013).

The 2012 – 2013 Austral summer season drew five international ships to Hobart as part of their Antarctic expeditions (DEDTA 2013). The pledged runway extension will already increase Hobart's international aviation capacity and provide significant opportunity for Hobart Airport to function as a logistical and tourist hub. Aircraft that are currently in use by US polar programs could fly out of Hobart, rather than Christchurch. By further capitalising on Hobart's advantages, there is the potential that the US, along with other Pacific nations such as Japan, South Korea, Indonesia, Malaysia and Russia, could be attracted to use it as a logistical hub for Antarctic and Southern Ocean research expeditions.

More can be done to enhance Hobart's capacity to handle Antarctic activity into the coming decades. A vigorous campaign to promote Hobart on the international arena and the appointment of a Special Ambassador to promote Tasmania as an Antarctic gateway could assist in encouraging nations to use the state as an Antarctic hub. Along with working to secure international activities such as tourism, research and funding, the Special Ambassador could facilitate international collaboration on big science projects where co-investment is vital to achieving Australia's research aims.

11: Conclusion

The Asian Century will undoubtedly bring new challenges and opportunities to the Antarctic region. One certainty is that Australia can no longer rely on the shared interests of Antarctic claimant states as a means of maintaining the status quo. The changing nature of international interests in the region, when viewed in tandem with continued underinvestment by Australia, present the very real potential for Australia's role as an Antarctic leader to be eclipsed. With the 2048 mining moratorium review, rising powers such as China may seek to revoke or realign the ATS to better cater to their own interests.

As demonstrated, there is the potential for any change in the Antarctic status quo to be to the detriment of Australia and the international community. To date the ATS has turned the Antarctic region into the world's largest demilitarised space free of diplomatic and resource-led conflict. Its success is largely due to its open and evolving framework, which enables it to respond to the changing international environment. Australian must seek to work within this framework to meet the concerns of new member countries.

At the same time, Australia must make its mark on the continent through the pursuit of scientific research. Participation in Antarctic science programs is vital to effective Antarctic diplomacy, providing significant opportunity to develop cordial relations between nations. Should AAD capabilities become insufficient to undertake Australia's Antarctic program it would likely impact not only on Australia's standing as an Antarctic leader but weaken Australia's claim to the AAD.

It is in Australia's national interest to continue to develop the attributes that have made it an Antarctic leader for over a century. Its close proximity and unparalleled experience in the region provide Australia with a natural advantage over other nations. By promoting Hobart as an international hub for Antarctic activities, appointing a Special Ambassador to coordinate diplomatic efforts and collaborating internationally on key projects, Australia can strengthen its role in the region and help lead Antarctica into the next era.

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