

Cold calculations

Australia's Antarctic challenges

66

Introduction

Here's Australia's Antarctic scorecard:

- We claim 42% of Antarctica—an area roughly the size of Australia minus Queensland.
- We've been there for over a century, and one of Antarctica's greatest explorers was Australia's Sir Douglas Mawson.
- Australia is an original signatory to the Antarctic Treaty, and our then Minister for External Affairs, Lord Casey, played a significant role in its negotiation.
- We have three major research stations in the Australian Antarctic Territory, a research and supply icebreaker, and, in the last decade, the ability to fly direct from Australia to Antarctica in the austral summer.



Researchers studying penguins while voyaging aboard the icebreaker *Aurora Australis*. By Alex Kozyr [Public domain], via Wikimedia Commons

And we support this important national effort with a budget of a mere \$112.8 million for Australia's Antarctic program—not bad, eh?

But while other nations are ramping up their Antarctic activities, has Australia taken its eye off the ball? The last two austral summers have seen a flurry of activity in Antarctica, brought on by the various centenaries of great expeditions in the heroic age of Antarctic exploration. The visibility of Antarctica has been enhanced by the commemorations, and the period has also been marked by some high-profile visits to the continent.

A great deal is happening in the Antarctic. Because of budget pressures brought on by the global financial crisis, many of the 'old' Antarctic nations are reducing their Antarctic capabilities while the 'new' Antarctic nations, such as China, India and South Korea, are increasing their investments in capability and science. These new investments may well have implications for the balance of influence that's been the hallmark of Antarctic relations. Meanwhile, our Antarctic infrastructure is getting a bit long in the tooth and Australia has some big decisions to make in the near future, such as what to do with our ageing icebreaker, *Aurora Australis*.

As a leading Antarctic nation, we have much invested in our science and Antarctic capability, but other nations are rapidly catching up. Antarctica therefore raises important questions for us. This *Strategic Insights* looks at the range of Australian objectives in Antarctica, the assumptions that underpin those goals, and the options open for us to best achieve our aims. It's hoped that this report will inform those responsible for formulating and implementing our Antarctic policies.

The paper looks at a range of strategic policy interests we have in Antarctica and whether we need to trade off any of these goals:

- preserving our sovereignty over our Antarctic territory
- maintaining the continent free from confrontation and militarisation
- protecting the Antarctic environment
- taking advantage of the special opportunities Antarctica offers for science
- deriving economic benefits from Antarctica
- insuring against unpredictable developments down south.¹

How we weigh and set both complementary and competing priorities among our Antarctic objectives (even if it's somewhat imprecise) will be a key challenge, as will judging how other Antarctic players react to our policy objectives and our pursuit of them. Some of our policies mightn't be complementary with those of other Antarctic players.

How we set our Antarctic policies in the broader international context will be important, and that should play into how much we spend on our polar commitments. It may even be that there's a case for *reducing* our current Antarctic activity. But it's noteworthy that last year's Australian Defence Force Posture Review² judged that 'over time, increased resources for relevant agencies, not just Defence, will be necessary to strengthen Australia's presence in Antarctica and the Southern Ocean.'

In recent years, we haven't really had to worry too much about Antarctica, but that state of contentment mightn't last much longer. If the views of the University of London's Professor Klaus Dodds³ are correct, Antarctica's facing a series of crises over sovereignty claims, commercial

fishing, tourism, the rise of China and mineral exploitation. If these ‘five inconvenient truths’ are to be believed, we could see the Antarctic Treaty break down, illegal fishing become rampant, our territorial claim disputed, the environment irreparably damaged, and a ‘cold rush’ for oil, gas and minerals begin.

For example, Ukrainian scientists in West Antarctica recently announced that they’d discovered a petroleum province.⁴ Russia submitted a paper on the scientific results of Russian studies in the Antarctic in 2011 to last year’s Antarctic Treaty Consultative Meeting, which noted Moscow’s interest in the continent’s mineral potential, and China’s apparently also interested in Antarctic resources.⁵ And as concerns over water security grow, iceberg harvesting might become viable: 30% of the world’s fresh water is stored in our Antarctic territory as ice.

The politics of Antarctica are starting to heat up. We need to ensure that our polar policy settings and capabilities are adequate for a new era in Antarctic affairs. Sitting on our hands, or trotting out familiar platitudes on our Antarctic policy, won’t be the best way to ensure our long-term national interests in the frozen continent. We need to consider those interests and the future of our engagement in Antarctic affairs realistically.

This *Strategic Insights* examines the challenges ahead for our Antarctic policy, and how we can best remain a leading Antarctic player. We’ve drawn upon a range of experts for this study. Their contributions first appeared on ASPI’s blog, *The Strategist*, and have been updated where appropriate for this publication. The contributors are listed at the end of the paper.

Stresses on the Antarctic Treaty

The Antarctic Treaty⁶ is an effective international instrument, providing a stable framework for over half a century of collaborative governance. It provides a means for managing geopolitical interests within a framework of international collaboration and commitment to avoiding discord, and is given effect by the number of non-claimant states acceding to the treaty. But an increasing number of accessions to the treaty and its associated instruments, such as the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), and requests for Antarctic Treaty Consultative Party status will bring their own challenges.

The October 2011 accession of Malaysia—formerly a leading critic of the Antarctic Treaty System (ATS), although not of the principles of peace and science embedded in the Antarctic Treaty—is a useful example here. Malaysia’s critique of the Antarctic Treaty and the ATS—referred to as the ‘Question of Antarctica’—contributed to the ATS undergoing fundamental reform. The Antarctic Treaty Consultative Parties simultaneously addressed the challenges of environmental management and the scientific imperatives that come with it and opened up the Antarctic Treaty Consultative Meeting while maintaining control over the system and its processes. The entry of new states to the system (Pakistan acceded to the treaty in March 2012, and Iran’s purported to be interested) is evidence of ongoing interest in the ATS.

The Antarctic Treaty and ATS have faced significant pressures and challenges since coming into force, and similar pressures and challenges will arise in the future. Challenges are important in the evolution of the treaty system and can be constructive as long as the parties accept and maintain commitments to the norms and values of the treaty, as embedded in the ATS. Australia has a major role in ensuring that those norms and values are maintained.

While the nature of decision-making within the ATS mediates any substantial conflicts, this point shouldn't be downplayed. The long-running tensions between Argentina and the United Kingdom on the status of the Falkland Islands/Malvinas (and South Georgia and South Shetland Islands) are both an example of pressures and of how those pressures are managed within the ATS.

The increasing engagement of Asian states such as Malaysia provides opportunities and challenges for the Antarctic Treaty in the 'Asian century'. Such engagement will help maintain the relevance of the ATS, reduce longstanding criticism of the system as a rich industrialised nations' 'club', and broaden the base of scientific endeavour and collaboration. Challenges will arise as new entrants commit to the formal processes and adjust to the norms and values of the system.

Australia has a major role to play here. We have formal responsibilities to ensure the ongoing viability of the ATS, first as an important actor in the negotiation of the Antarctic Treaty and an original signatory, and second, but more specifically, as the depository state for the CCAMLR. Australia took a leadership role during the negotiation of the Madrid Protocol⁷ and in the establishment and operation of the Committee for Environmental Protection⁸ under the protocol. With France, we've made a major effort to increase accessions to the Madrid Protocol and to ensure that it provides a focus to the ATS.

We've supported new entrants to the ATS (and should continue to do so). Our longstanding science program provides important opportunities to partner states, and our experience on the continent is invaluable (China's sought Australian expertise as it establishes its program on the continent⁹).

As in the past, challenges will arise from within and outside the ATS. The challenges may be partly symbolic—treaty parties can expect ongoing and closer scrutiny of their actions by non-government groups and can be expected to press for more open access to the Antarctic Treaty Consultative Meeting and for a broadening of observer status within the system. More substantive pressures



IA30556 Mawson Research Station © G Jacobsen, courtesy of the Australian Antarctic Division.

may arise from the increasing intersection of the ATS with other regimes, and the past practice of ‘quarantining’ issues (for example, whaling, World Heritage listing or United Nations involvement) outside the ATS is likely to be less successful than it is now. Issues currently more closely linked to the ATS agenda, such as tourism, biological prospecting and marine protected areas, provide insights—the system can manage them but perhaps not as quickly or in the directions that outside critics wish.

Australia has a significant role in ensuring the ongoing development of the ATS and should use its good standing to help manage pressures as the system faces new and emergent issues and new external actors (states and non-government organisations). At the same time, we should continue to be active in developing the agenda in Antarctic Treaty Consultative Meeting and CCAMLR forums and work with a range of parties to advance it.

Territorial sovereignty

Eighty years ago, Australians asserted a claim to a stunning piece of real estate with towering mountain ranges and unimpeded water views: 6 million square kilometres of Antarctica. Three years later, those areas became the Australian Antarctic Territory (AAT). Forty-two per cent of the Antarctic continent is Australia’s. If it were a country in its own right, the AAT would be the world’s seventh largest. It’s next door to us. We discovered, explored, mapped, studied and occupied significant parts of it. We still do.

The AAT has considerable value to Australia. Its *scientific* values are diverse and bring long-lasting national benefit. Its *environmental* values include superlative natural features. Its *resource* values include fishing, tourism, minerals (even if not exploited) and other resource potential we can’t yet imagine. Its *diplomatic* values allow Australia influence in Antarctic governance, with flow-on effects in other international forums. Its *cultural* values inspire Australians in the arts.

The AAT has been a fact in Australian law since 1936. All Australians should feel proud of it, but many have only a rudimentary consciousness of the region’s significance beyond, at best, heroic explorers’ misadventures or the annual whaling conflict.

Historically, sovereignty underpinned Australian Antarctic policy. Although we’ve done nothing to conceal that sovereignty, we sometimes appear ambivalent about it. Yes, we’ve asserted our right to maritime zones under the law of the sea. Yes, we’ve enjoyed our status as a sovereign state to influence Antarctic affairs and used it to replace the Antarctic mining convention with an environmental regime. But is that it?

Six other nations claim Antarctic territory. While they act differently to advance their claims, none can demonstrate that its claims are stronger than ours. Indeed, three of the other claims overlap and are directly disputed, but that’s not our problem—the AAT has no competitors. There’s no ambiguity about the AAT’s boundaries because each of our three neighbours recognises Australia’s sovereignty.

None of the seven Antarctic territories is universally accepted. That’s one reason why the Antarctic Treaty was negotiated: a peace treaty not to stop hostilities but to prevent them. Article IV is at the heart of the treaty and deals with sovereignty. The treaty recognises that the claims exist and doesn’t diminish them:

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

relative newcomer, is proposing its third station in the AAT. We've no presence at all in the neglected eastern sector. Effective occupation as a measure of sovereignty might be questioned.

Operationally, our reach is short. We have never or rarely visited great lengths of the AAT coast. There are vast expanses in the territory that we can't even get to. Others can conduct science or observations throughout the AAT and assign foreign names to places we've never seen.

A potential issue for Australia is one of inertia or complacency—accepting that the norms of the past 50 years of the treaty will apply indefinitely. The threats to the AAT might come not from a direct challenge by others—the treaty protects our position—but from us, if we take our eye off the ball as developments incrementally change the playing field.

Some things Australia can do:

- Act with confidence in a way that a sovereign nation might be expected to act, taking advantage of opportunities to advance our position.
- Position Australia as the lead nation in the AAT, with the widest operational reach, the best science, the most effective environmental protection measures, the most comprehensive maps and the best information about the region.
- Defend and strengthen the Antarctic Treaty system as the best means of Antarctic governance, and for protecting our sovereignty and Antarctic security interests.
- Challenge misconceptions that suggest that Antarctic claims are dormant or of decreasing relevance.
- Promote the AAT in the Australian consciousness. Give it a flag. And, just occasionally, wave the flag.

A continent for science

The science that Australia undertakes in Antarctica should be, and be seen to be, in Australia's national interests. There are many reasons for us to be actively engaged in Antarctic science, but our national interests should drive our investment.

Antarctica and its surrounding Southern Ocean is a region of peace. As a result, we don't have to invest in massive security assets to protect our mainland's southern shores. But maintaining the region as a place of peace and cooperation requires active engagement in Antarctic affairs.

Science is the currency of influence in the Antarctic Treaty System.¹⁰ Since the beginning of the treaty in 1961, we've been one of the leading Antarctic nations in terms of scientific output. Over the years, and for the better, Australian science in Antarctica has focused increasingly on the critical questions that we and the world need to answer about the continent.

The current Australian Antarctic Science Strategic Plan emphasises four themes:

- Climate Processes and Change
- Terrestrial and Nearshore Ecosystems: Environmental Change and Conservation
- Southern Ocean Ecosystems: Environmental Change and Conservation
- Frontier Science.

The first three themes are critical to understanding the role of Antarctica in the global climate system, how the continent's changing, the trajectory of climate change in the region, and how these changes affect Antarctica, Australia and the globe.

These are critical questions for Australia. Antarctica drives an enormous component of the global climate system, including Australia's local climate. Any loss of the continent's ice sheets will contribute to coastal sea-level rise, and changes in the physical and chemical characteristics of the Southern Ocean will affect its productivity. Understanding how Antarctica's air, oceans and ice exert that influence, and how they're changing, is central to understanding Australia's future.

The Southern Ocean contains the largest underexploited fishery in the world—the Antarctic krill fishery.¹¹ It's a resource that will most likely become the centre of increased exploitation well before there's any push to overturn the prohibition on mining in Antarctica. Understanding how the krill-based ecosystem operates, and how it might be changing, is central to managing and regulating sustainable fisheries in the region, including the krill fishery. We need to know how it works before we can manage it properly.

Antarctica and the surrounding Southern Ocean are also harbingers of change. The first evidence that ocean acidification was having an effect on living organisms was found in microscopic foraminifera from Southern Ocean waters. Ice cores from Antarctica have plotted the path of the long-term drying trend in south-west Western Australia, and cores of Antarctic ice up to 800,000 years old can reveal past climate cycles that will shed light on the future.

These are big science issues and Australia should be involved in them, even if we didn't have a claim to 42% of the Antarctic continent.

But Australia's place as a leader in Antarctic science isn't guaranteed. The gradual erosion of Antarctic science expenditure through the application of an indiscriminate efficiency dividend and other recent cuts in the budget of the Australian Antarctic Division have reduced its flexibility and its ability to conduct and support priority Antarctic science. Unavoidable operational costs must take priority in this fiscal environment, but science often takes a disproportionately bigger hit. Other big science infrastructure costs are also looming. Our last major investments in research station infrastructure were made more than 20 years ago. Australia's only icebreaking research and supply vessel, *Aurora Australis*, is reaching the end of its serviceable life and will become increasingly expensive to keep on the water.

Australia should be an Antarctic leader, not a follower. By virtue of our geographical proximity, we're ideally placed to conduct and lead strategically important collaborative science programs in Antarctica and the Southern Ocean, but we currently lack the capacity to do more than just mark time. As countries such as China, Korea and India invest heavily in lifting their Antarctic logistic and research capabilities, Australia is effectively disinvesting in Antarctic science. As northern hemisphere countries turn their polar efforts to the Arctic, that disinvestment will become even more apparent because we'll begin to lose our ability to collaborate with (and leverage off) our 'traditional' European partners.

Investment in priority Antarctic science will return huge dividends to Australia—not just in the currency of influence, but also in knowledge that's vital for our future.

Pressures on demilitarisation

Article I of the Antarctic Treaty provides that Antarctica ‘shall be used for peaceful purposes only’. It prohibits ‘any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military manoeuvres, as well as the testing of any type of weapons’. However, it allows the use of military personnel or equipment for scientific research or for any other peaceful purpose. Thus, countries such as the US, New Zealand and occasionally Australia use military personnel in support roles in Antarctica. In doing so, they conform to Article VII of the treaty, which requires a party to the treaty to inform other parties of the details of any military personnel or equipment introduced into Antarctica.

The demilitarisation of Antarctica was a major goal of the Antarctic Treaty, but the treaty was negotiated in a very different world—strategically, technologically and politically—from the one we have today. If we take a broad view of ‘measures of a military nature’, Antarctica is no longer demilitarised, but it’s difficult to define the term. Such measures don’t necessarily have to be carried out by military personnel. Scientific research and development for military purposes can be carried out by civilian scientists and private sector contractors. Antarctic bases are increasingly used for ‘dual use’ scientific research that’s useful for military purposes, including possibly for controlling offensive weapon systems.

Private security contractors perform many tasks for the military, including research and development, engineering and maintenance, program management, intelligence analysis and security for military facilities. The requirement under Article VII is rather meaningless if it’s taken as referring only to uniformed military personnel.

The rapid pace of technological development in recent decades has implications for assessing the militarisation of Antarctica. Technology has advanced enormously in military areas such as missile warfare, information technology, intelligence collection, satellite surveillance, and the military use of space more generally—and in ways that were unforeseen when the Antarctic Treaty was negotiated in the 1950s.

The intensity of peacetime technical intelligence collection is increasing. The newly modernised military powers of Asia might be expected to use the full range of technical intelligence collection measures, including signals intelligence by means of satellite systems. As well, they’re likely to field their own version of technologies like GPS. Lacking access to sites worldwide, which the US enjoys, other countries could use Antarctic bases as ground stations for monitoring and controlling satellite systems.

Satellite technology and research are now central to Antarctic operations. The inland environment of the continent is optically very clear and ideally suited for astronomical and space research. It’s also remarkably quiet, with little human-made radio interference.

With technological developments in information processing, nanotechnologies, astrophysics and so on, research that was inconceivable in past years is now possible in Antarctica. Much of it has military applications and is conducted for military purposes.

The advantages of Antarctica for satellite and space research are among the reasons for the growing number of bases there. Iran announced plans last year to establish a permanent Antarctic base that would include space-related research among its activities. According to a recent statement by the Iranian Navy, the base will support the country’s interests as a maritime power.

At what stage research becomes non-peaceful and overtly military or potentially offensive is open to question. Most activities associated with the military use of space could be explained away as scientific research for peaceful purposes.

Both China and India have active Antarctic programs and are seeking to increase the number of their Antarctic bases. However, neither currently reports the use of military personnel in Antarctica.

China's third scientific research station in Antarctica, the Kunlun Station at Dome A (Dome Argus), one of the highest and coldest points on the continent, was completed in 2009. It's ideally suited for sending, receiving or intercepting signals from satellites.

Two considerations flow from the likelihood that Antarctic bases are being increasingly used for military research, particularly research involving space and satellites. The first is whether this research is being conducted for peaceful purposes and thus doesn't contravene the provisions of the Antarctic Treaty. As a general principle, it's well accepted that military operations *per se* don't necessarily breach such provisions.

The second is whether the verification and inspection regime under the Antarctic Treaty is up to assessing whether research activities are being conducted for non-peaceful purposes. We could be moving towards the increased weaponisation of Antarctica through the use of Antarctic bases to control offensive weapons systems. That possibility is worrying.

Meeting these challenges requires better adherence to the verification and inspection regime and more transparency in reporting than have been the case in the past.

Some re-examination of what constitutes 'measures of a military nature' is also necessary. This might include, for example, widening reporting of introductions of military personnel into Antarctica to recognise the possible employment of private security contractors and other civilian personnel in activities of an essentially military nature.

Defence policy

The Antarctic has never featured prominently in Defence white papers; indeed, it rated a mention in only three of the last four, those in 1987, 2009 and 2013. Written some 26 years apart, these strategic assessments differ markedly in their tone and content:

The Defence of Australia (1987)

2.56. The Government strongly supports the provisions of the Antarctic Treaty, which prohibit military use of the territory. The national interest of Australia lies in ensuring that Antarctica remains demilitarised and free from political and strategic competition. So long as Antarctica remains demilitarised, no threat to the security of Australia itself is in prospect from or through that region. There is no requirement for defence activities to support our territorial or economic interests in Antarctica or for defence involvement beyond the present limited logistic support for Australia's national effort there.

2.57. The Government's policy is to pursue political, as distinct from military, solutions to any disputes. Growing international interest in the exploitation of continental and off-shore resources in Antarctica is stimulating pressures for challenges to the Treaty. With the other Treaty consultative parties, we are working on means to preserve the Treaty.¹²

Contrast that with the altogether harder-edged statements made in 2009:

Defending Australia in the Asia–Pacific Century: Force 2030

6.38. To guide defence planning, the Government has decided that the ADF's primary operational environment extends from the eastern Indian Ocean to the island states of Polynesia, and from the equator to the Southern Ocean. That area contains all Australian sovereign, offshore and economic territories, such as Cocos (Keeling) Islands, Christmas Island, Heard and McDonald Islands, Macquarie Island, Norfolk Island and also waters adjacent to the Australian Antarctic Territory.

6.45. While we do not judge that there is a credible risk of our national interests in the Southern Ocean and the Australian Antarctic Territory being challenged such that substantial military responses might have to be contemplated over the period of this White Paper, the Government will continue to monitor the strategic implications of international developments in the Antarctic region.¹³

While the Antarctic Treaty was the centrepiece of the 1987 treatment, the 2009 white paper didn't mention it at all, and indeed went so far as to include the AAT and its waters in Defence's 'primary operational environment'—a significant phrase because that drives priority-setting. While the 1987 white paper emphasised demilitarisation, the 2009 paper only went so far as to concede that 'substantial military responses' to strategic developments were unlikely to be needed. In what are very carefully drafted policy statements, the change in emphasis is unmistakable.

The 2012 Asian Century White Paper mentioned Antarctica in its rather thin chapter on security.¹⁴ There, the emphasis was on 'maintaining and protecting' what sounds like an increasingly beleaguered Antarctic Treaty and working with a large number of countries, including China, Japan, Korea, Malaysia and Indonesia, on scientific and conservation measures.

Published in May 2013, the latest Defence White Paper¹⁵ had two paragraphs of commentary about Antarctica:

2.76. There is no credible risk of Australia's national interests in the Southern Ocean and the Australian Antarctic Territory being challenged in ways that might require substantial military responses over the next few decades. The Antarctic Treaty System provides for the international governance and management of Antarctica and sets aside use of Antarctica for peaceful purposes, with a particular emphasis on scientific research and environmental protection. The Antarctic Treaty's 'Madrid Protocol' prohibits any activity relating to mineral resource exploitation other than scientific research, and until 2048 can only be amended by unanimous consent. Australia is a strong advocate of the Antarctic Treaty System and its goals.

2.77. There is, however, increasing international interest in Antarctica, including in Australia's Antarctic Territory. Australia has forged operational and scientific cooperation relationships with several nations and will continue to monitor the strategic implications of international developments in the Antarctic region. To date, the Antarctic Treaty System has been well respected, but in coming decades it may come under pressure as resources become more scarce elsewhere.

In tone, this statement is perhaps closer to that of the 1987 White Paper than to the 2009 version. The 2013 White Paper is careful not to advance any thought that Defence should take an (unfunded) leap

into providing Antarctic sustainment, by either sea or air. While it commendably keeps a focus on the issue, it really doesn't come to terms with the dramatic hastening of regional interest and activity in Antarctica.

There's clearly something of a 'race to the pole' on the part of countries interested in scoping the resource potential of Antarctica. Increases in instances of illegal fishing in southern waters have forced ADF and Customs responses in recent years in attempts to police our exclusive economic zone.

Regrettably, we've grown used to the annual summer theatre of Japan (which should know better) and Sea Shepherd Australia (which clearly doesn't) jousting over whales in Antarctic waters. What could Australia do if it found it had to respond to a safety of life at sea issue in southern waters? What could we do if there were a need to sustain a maritime presence there during a full summer season? Our currently very limited capacity to operate in the far south is looking embarrassingly poor and not in keeping with the claim that this is part of the ADF's primary operational environment.

When it comes to our interest in Antarctica, Australia had better use it or we risk losing it in what will be a more competitive strategic world in coming decades. The credibility of our claims will erode in lock step with the erosion of our capacity to service our research stations by sea and air. Right now, Canberra officials are considering what can be done to sustain and deepen our air and maritime capability to reach Antarctica. The options are expensive because of the distances involved and the difficult operating conditions.

In the case of aircraft capability, it's hard to identify organisations other than the RAAF that could reliably maintain an air bridge with the necessary safety, so Defence will inevitably be drawn more closely into discussions on sustaining our Antarctic presence. That's very much in keeping with the history of Australian involvement in Antarctica since World War II. Much of our presence there was built or sustained by the ADF until support services were contracted out in the 1990s.

Defence will, of course, balk at being charged with a new mission without financial supplementation: the 2013 Defence White Paper doesn't volunteer any free ADF services for Antarctic sustainment. But Cabinet will soon confront the 'use it or lose it' challenge, and Defence should get ready for that moment.

Those who hoped that the 2013 Defence White Paper would set out a strong case for advancing Australian strategic interests in Antarctica were disappointed, but the paper itself turned out to have a life rather shorter than that of an iceberg calving in the Ross Sea. The 7 September election returned the Liberal–National coalition to power, and it's promised that a new defence white paper will be produced within 18 months.

However, the issue of Defence involvement in Antarctica is likely to be examined in a separate review. In late August, Greg Hunt (then the Shadow Climate Action, Environment and Heritage Minister and now the Minister for Environment) pledged a Coalition government to develop a 20-year Australian Antarctic strategic plan.¹⁶ His media release stated:

The 20 Year Australian Antarctic Strategic Plan will address how Australia can remain engaged, active and visible in the region. It will provide the blueprint for the future with a focus on:

- ensuring robust and reliable access to the Australian Antarctic Territory;
- extending Australia's reach across the Australian Antarctic Territory;
- committing to undertaking nationally and globally significant science;

- committing to exercising influence in the region through the Antarctic Treaty System; and
- expanding the role of Tasmania as the gateway for Antarctic expeditions and scientific research.

Along with the plan came a pledge of funding to establish a new Centre for Antarctic and Southern Ocean Research, to continue funding research on the Antarctic climate and ecosystems and to lengthen the runway at Hobart International Airport, thus enabling Tasmania to ‘play an expanded support role for Antarctica’.

While it all remains to be delivered, the pledge to develop a 20-year strategy offers at least the prospect of a systematic and thoroughgoing effort to define Australia’s strategic interests in Antarctica and a plan for achieving them.

It’s unlikely that an Australian Government has ever taken office with a more detailed plan of action for our Antarctic interests—a commendable aspiration, indeed.

Managing bioprospecting

An Australian scientist excited by the prospect of novelty in Antarctic-derived organic material or processes might have a tough time getting there, collecting samples and bringing them back for processing, but those problems wouldn’t be insurmountable. Antarctic biota and processes aren’t especially protected from the science of biological prospecting. Scientists are virtually given ‘free’ access to prospect for the purposes of scientific research, provided they play by the rules.

The rules are few and relatively simple. The government runs the Australian Antarctic Science Program, which scientists can apply to for support.¹⁷ They don’t need to be government scientists; they can work in a university, for example, which might or might not have an affiliation with an end user such as a pharmaceutical company. If they’re clever enough to win a grant, they’ll have access to a berth on a ship or a seat on a plane going south. They’ll have a bunk at a station and be able to roam the environs in search of their soil/water/organism sample. Then they’ll bring their samples back to their laboratory in Australia, in compliance with the quarantine rules, and start the gruelling process of looking for something novel that might have a commercial application.

As a bioprospector with an Australian Antarctic Science grant, they’ll need do little more than complete an environmental impact assessment of their proposed research before they go. If the research involves nothing more than collecting a small sample—say 1 kilogram of soil from an area that isn’t subject to special protection through the Antarctic Specially Protected Area program and subject to a management plan—then the assessment will be straightforward. They’ll declare that their research will cause *no more than a negligible impact* on the environment and they’ll be permitted to proceed (by an authorised officer at the Australian Antarctic Division). If they want to sample soil from a protected area, the process will be more involved, but ultimately not prohibitive.

Bioprospecting in Antarctica is under the jurisdiction of the Australian Government, and almost all Australian laws apply to a bioprospector there. Those laws include the *Antarctic Treaty (Environment Protection) Act 1980*¹⁸, which governs behaviour in Antarctica, and laws about importing material into Australia.

The first phase of biological prospecting involves looking for novelty in a material or a process. Collecting sample material from the Southern Ocean or the Antarctic continent isn’t an environmentally harmful activity, provided bioprospectors observe all protocols relating to the

prevention of the introduction of alien species, for example. Experienced scientists would of course take every precaution to prevent the unintentional contamination of their origin site and samples.

Still, bioprospecting rings alarm bells for some people. Everything that occurs in Antarctica is viewed primarily through an environmental lens, and most of Australia's efforts at policy and law revolve around ensuring that activities there have the least impact on the vulnerable environment. Quite simply, bioprospecting doesn't (yet) fit into the category of harmful activities. So why would it need further policy consideration or even further regulation?

Existing regulations cope very well with the current level of sample collection, and krill harvested for its omega-3 oil is a case in point (see the next section). It makes no difference that the krill harvest is ultimately used for human food, aquaculture feed or nutraceutical or pharmaceutical applications, since it's regulated by the CCAMLR as a fishing activity.

If the Australian Government were really concerned about Antarctic biological material or processes being exploited at an unreasonable level, it could consider—either unilaterally or in concert with the other 27 Antarctic Treaty consultative parties—schemes such as the payment of fees by commercial bioprospectors into a common fund to support Antarctic science, royalty payments into the same fund for commercially successful products, and an open-access sample receptacle for common usage. These suggestions were made 10 years ago when the topic was first being discussed in treaty meetings¹⁹, but the only policy decision emanating from the treaty parties has been that biological prospecting doesn't need regulation beyond what's in place now.

In fact, considering these suggestions for the branding of Antarctic material—a concept readily understood by the marketers of products such as krill oil 'from the pristine waters of the Southern Ocean'—may well be a case of closing the stable door after the horse has bolted. The industry has already begun, patents have been filed, and the hands-off approach by the treaty parties suggests that they believe the existing regulatory system is the appropriate framework for managing biological prospecting and, most particularly, sample collection.

In for the krill

The Southern Ocean krill fishery is potentially huge but currently underexploited. It could become a source of conflict between conservationists and the fishing industry²⁰, in which case we'll have to decide what Australia's role in managing the resource should be.

Periodically, a journalist discovers that there's a fishery for krill in the waters around Antarctica and a shocked report appears, questioning how we could allow harvesting of these 'tiny shrimplike creatures' that form the 'base of the Antarctic food chain'. They point out that this fishery is taking the food from the mouths of the whales and beaks of penguins and is probably doing untold damage to this 'pristine ecosystem'. These reports then drum up support from a range of conservation interests and uninformed scientists who decry this destructive practice.

So, what's krill, how come there's a fishery and why should Australians care?

Antarctic krill are much larger than generally imagined; they reach a length of 60 millimetres, and they are actually at the centre of the Antarctic food chain. The free-swimming crustaceans occur in vast swarms stretching for tens of kilometres, eating microscopic plants and animals and in turn being eaten by most of the larger animals. There's an estimated 120–600 million tonnes of krill, making it among the most abundant animal species on the planet.

The krill fishery began in the 1970s and catches peaked in the early 1980s, when Japanese and Soviet vessels caught half a million tonnes a year. Today about 200,000 tonnes is caught, largely by Norwegian vessels, and it is used to produce high-end aquaculture feed and krill oil supplements for human health. It's proved very difficult to make a marketable product from krill and it's extremely expensive to go fishing for it, so the fishery has always been held in check by market forces.

When the krill fishery began, there was considerable concern that overharvesting would have disastrous ecological consequences.²¹ Australia was instrumental in the rapid negotiation of a comprehensive agreement designed to manage the krill fishery—the Convention on the Conservation of Antarctic Marine Living Resources. One of the aims of the convention was to ensure that the fishery was sustainable and that its management also took the needs of other animals in the ecosystem into account. Because of the central ecological role of krill, the Convention necessarily took a whole-of-ecosystem approach.

The CCAMLR Commission, which established an international secretariat in Hobart in 1981, set the scene for the development of concepts such as ecologically sustainable development and the precautionary approach to fisheries management. The Convention on the Conservation of Antarctic Marine Living Resources was hailed as a groundbreaking approach to resource management when it was signed in 1980, and it remains a remarkable conservation document. The CCAMLR has since overseen the management of the krill fishery, and a range of conservation measures now regulate the fishery through a comprehensive and innovative regime. But the Antarctic's a special place and there's an international focus on its conservation.

Currently, the fishery takes only 0.3% of the estimated krill biomass and 0.4% of that needed by seals, seabirds and whales. Even if it expanded to the current limit in the South Atlantic (5.6 million tonnes a year—an unlikely scenario) it would be harvesting less than 10% of the stock. There are few other fisheries in which the allowable catch is set at such a low proportion of the biomass and the actual catch is so much lower than that allowed, but there are still rumblings about whether the CCAMLR's management is precautionary enough.

The precautionary management regime still allows for a large tonnage to be harvested—8.6 million tonnes globally—should the fishery ever be fully exploited—because krill is a hugely abundant animal. Such large numbers tend to alarm people who then question the continued existence of such a fishery and the way it's managed. However, CCAMLR is the only comprehensive treaty ensuring the conservation of the marine environment around Antarctica and repeated unfounded criticism of the Commission's approach will undermine its effectiveness. Australia's taken a lead in research to ensure that the management of the krill fishery is based on sound scientific knowledge—despite an absence of any domestic economic interest in krill. The Australian Government has repeatedly committed itself to the conservation of the Antarctic ecosystem, and so must continue to engage in the CCAMLR, scientifically and diplomatically. Without the Convention on the Conservation of Antarctic Marine Living Resources, there'd be no Antarctic conservation.

So, will the krill fishery ever gain universal acceptance? Probably not. Will it go away? Possibly through economic pressures but not as a result of management action. Will it remain sustainable? If the CCAMLR remains true to its objectives, then it should. Will Australia maintain its interest in Antarctic conservation? Hopefully yes, because engagement in the CCAMLR—the most active wing of the Antarctic Treaty System—makes good political sense and provides the best hope for a healthy Antarctic ecosystem.

Mineral resources

The issue of Antarctic geological resources hasn't been discussed seriously for decades, and for two good reasons. There's been no serious interest by industry for sensible economic reasons, and the Protocol on Environmental Protection to the Antarctic Treaty (the Madrid Protocol) includes a moratorium on mining from 1991.

Some years ago, the US Bureau of Mines introduced a system for classifying mineral deposits using both geological and economic criteria. The system has three main categories—economic, marginally economic, and sub-economic. Antarctic minerals were taken to be sub-economic and classed simply as 'mineral occurrences'.²²

But there have been some changes in the past couple of decades that may well alter the equations in the near future. The changes are mainly in technology, rendering identification and extraction potentially easier. Economics remains, as it's always been, the greatest deterrent, unless there's a specific non-economic reason to extract.

What's constant is that many mineral resource types will be absent: heavy mineral beach sands; residual deposits such as bauxite that are surficial, soft and easily removed by ice; deep leads, where ice has gouged them out and dumped them in the sea. Also absent are superficial gossans (a broad surface weathering product over an ore body) which indicate subsurface ore.

But geophysical survey methods have evolved in leaps and bounds. Electrical, seismic and space-based methods are much more sensitive and able to penetrate where prospecting was impossible a couple of decades ago. As climate change takes its toll on Antarctica, it's possible that more ground around the margins will be exposed and subject to examination.

Even now, there are places, such as the Tryne Islands in the Vestfold Hills, with rock associations and some mineral associations that would interest resources companies if they were on other continents.

In the same vein (to pun), copper staining on rocks near the old Wilkes Station in the Windmill Islands would bear further study. Another possible resource lies in narrow, deep channels such as the Svenner Channel in eastern Prydz Bay.

But the greatest potential change is offshore. In the 1980s, offshore exploration was limited to about 200 metre water depth. In Antarctica, that would have meant exploration relatively close to shore in the densest sea-ice zone. If resources were found, any facility would have to be prepared for disruption by sea ice and icebergs.

That's changed dramatically. Drilling's now done routinely in water depths to 1,500 metres or more, and that allows facilities to be much farther offshore in regions with less sea ice. Furthermore, deeper water allows the deployment of seafloor-mounted rigs that are much less likely to be affected by icebergs. Scientific drilling by the Integrated Ocean Drilling Program has shown how quickly (scientific) drillships can disconnect from the seafloor in the face of advancing icebergs. Industry could adapt quickly, if it were economically worthwhile to do so.

The question then is what sort of resources would be of interest? The region along the Antarctic margin between about Cape Adare and the Windmill Islands has had a geological history akin to that of the poorly explored southern margin of Australia. While poorly known, it's likely to be a better source of natural gas than liquid hydrocarbons.

Exploration along the southern Australian margin will give better indications of the Antarctic's potential. The world now has so much recoverable natural gas that it doesn't know what to do with it. Add to this the recent Japanese experience in accessing seafloor gas hydrates, and the need to explore Antarctica recedes further.

As always, the biggest considerations are economic and strategic: if there's a need based on economics or a national strategic consideration (even if strictly uneconomic), resource exploration could proceed in the Antarctic region now.

The Madrid Protocol forbids exploration and exploitation of Antarctic geologically based resources (while allowing biologically based fishing) for 50 years from 1991. But there's a long history of such agreements lasting for shorter periods than initially intended. 'No' can become 'yes', although any process for review of the ban would require a massive shift in global attitudes to the Antarctic.

It's hard to have a firm position on resource exploitation in Antarctica. For now, the Convention on the Regulation of Antarctic Mineral Resource Activities is subject to an unnecessary moratorium—unnecessary because only 'mineral occurrences' are known so far and economics is still the greatest barrier to exploitation. If someone does discover something of value (strategic or otherwise) and wants to extract it using some of the developments in mining technology since the convention was negotiated, a way will be found. Ultimately, resources of sufficient strategic or economic value will be exploited for a resource-hungry world. International agreements can always be renegotiated.

Logistics

Australia made its last significant new investment in Antarctic logistic capability during the Howard government years, when we funded a commercial Airbus A319 flying from Hobart to an ice runway in Antarctica. That was the first time a wheeled commercial jet had been licensed to fly to and land in Antarctica. The construction of Australia's research and resupply icebreaker, *Aurora Australis*, in Newcastle (Australia) and a station rebuilding program in the 1980s were our previous major investments in Antarctic logistics.

Almost a decade after we funded the Antarctic air link, two fundamental budget issues are combining to potentially cripple Australia's Antarctic efforts. The first is that *Aurora Australis* is reaching the end of its life. It will need to be replaced within a few years, and the replacement won't be cheap.

The second budget issue is the steady erosion of base funding through the imposition of efficiency dividends and other budget savings. When the budget's tight, keeping the people safe and the stations resupplied and operating will always trump a marine research project or a deep-field ice-core drilling program, no matter how important they might be. This year, for example, the international sea-ice research expedition to Antarctica, SIPEX 2²³, was only able to proceed with additional funds from the Antarctic Climate and Ecosystems Cooperative Research Centre.

The relentless erosion of core capacity, in the absence of a fundamental rebasing, runs the risk of recreating a 'Sir Humphrey Appleby's hospital'²⁴ in Antarctica: three research stations and a marine science capability, but no means to fund and support real or relevant scientific activity in the Australian Antarctic Territory.

Australia's Antarctic efforts should be supported to a level that matches our interest as a claimant of 42% of the continent and as a leading nation in Antarctic and Southern Ocean science. So, what should our Antarctic logistic capabilities look like in the years to come?

- *Maritime capability*: A replacement for *Aurora Australis* needs to be commissioned in the next few years—keeping it on the water beyond its design life would be both expensive and inefficient. A new ship (or ships) must be capable of icebreaking and have fit-for-purpose cargo capacity and science capability. Australia shouldn't be tardy in making this decision, or we run the risk of losing our essential icebreaking capability, as the US did a decade ago, and becoming hostage to an unpredictable and expensive supply chain.
- *Continued intercontinental air transport capability*: While the use of the A319 has demonstrated the importance of intercontinental air transport to a modern Antarctic program, our reliance on a single ice runway near Casey Station has proven limitations. It's time to seriously explore options for additional capabilities. They could include the use of long-range ski-equipped aircraft, if they were available, to land at each of Australia's research stations, or the construction of another ice runway inland from Davis Station. These or similar options would provide a kind of logistic hub and spoke system based in Hobart.
- *Deep-field logistic capabilities*: For Australia to play a leading role in significant research efforts, such as the drilling of a million-year-old ice core in Antarctica (a real game-changer in understanding past climate), we'll need to be able to operate far from our coastal stations. To do that efficiently, we need the logistic capability to conduct overland traverses, and access to the deep field with ski-equipped aircraft.

International cooperation is the key to future logistics and science in the Antarctic. The bottom line is that Antarctic logistics are both necessary and expensive. Collaborating with other nations in the movement of personnel and supplies and in science will be necessary in a fiscally constrained global economy. Being able to provide leadership and build collaborative logistics should be an underpinning ambition in Australia's Antarctic efforts.

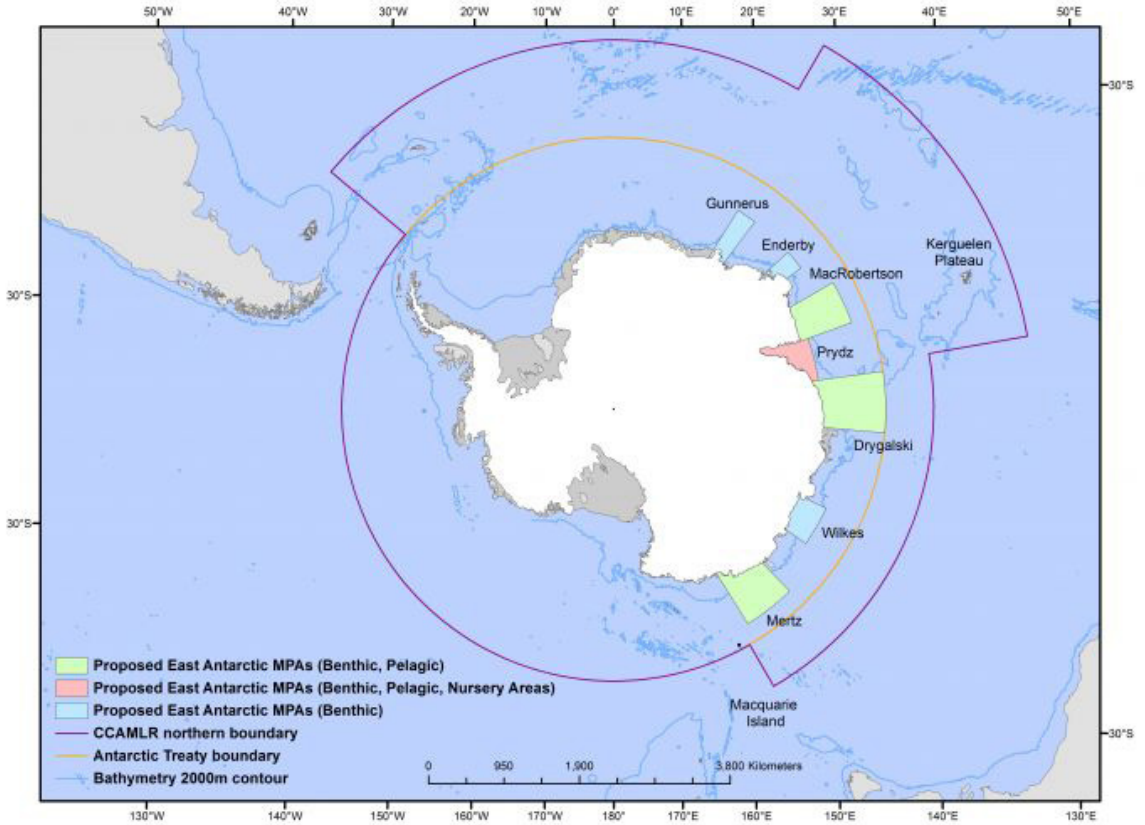
It's also time to think hard about the role of Australia's military capabilities in the logistics arena. Antarctica's demilitarised by virtue of the Antarctic Treaty, but that doesn't constrain the use of military logistics to support science there—many nations do it. However, it might inhibit other nations from joining us in Antarctic science. The alternative would be to develop a greater role for private commercial support for our Antarctic logistic requirements. These options should be investigated.

In developing Australia's future logistic capabilities in Antarctica, it's imperative that we have a clearly articulated view of our strategic interests in the region. If we want to maintain a leading role in the critical science that's being conducted in the Antarctic, we need to have the capacity to do it deep in the field, in the sea-ice zone and in the Southern Ocean. Our scientific capability needs the funding and the flexibility to not be bound to our coastal stations. And it needs the vision and the capacity to be involved in and lead large international efforts in Antarctic science and logistic support.

An Australian Antarctic program that struggles to make ends meet will have little to contribute to expanding international research efforts in Antarctica. If that's the way we go, we'll become inward looking and increasingly irrelevant in our own backyard, the Australian Antarctic Territory.

Marine protected areas

At their annual meeting in October–November 2012, the 25 members of the CCAMLR considered three proposals for MPAs: the Ross Sea region MPA proposed jointly by New Zealand and the US; the East Antarctic Representative System of MPAs (EARSMPA) proposed jointly by Australia, France and the European Union; and the Antarctic Peninsula Ice Shelves (proposed by the European Union). The



A map showing the location of the proposed Marine Protected Areas. (Map: Australian Antarctic Division Multimedia Unit and Data Centre).
Source: *Australian Antarctic Magazine*, issue 24, June 2013.

members failed to come to an agreement, and the Ice Shelves proposal was withdrawn. Following that, they agreed to continue their discussions at an almost unprecedented special meeting in Bremerhaven in July 2013.

Most officials and observers travelled to Bremerhaven in the spirit of hope and expectation that at least one of the two remaining MPA proposals would be accepted.²⁵ The work had been done—CCAMLR members had been discussing the concept of MPAs for more than 10 years, and both proposals had been through multiple rounds of scientific analysis. There seemed to be no reason why a deal couldn't be reached, but Bremerhaven was a widely publicised failure.

The CCAMLR Scientific Committee met for three days, and the proposals were still 'alive' at the end of that meeting, despite a dramatic last-minute reservation lodged by the Russian delegation against the Ross Sea proposal. The meeting report agreed that no new science had been introduced and that the available science was sufficient to support both proposals, with the exception of the northern spawning area in the Ross Sea proposal which required further consideration.

However, a few nations reopened discussion on previously agreed concepts and understandings by demanding more data in so-called data-poor areas and clear evidence of imminent threat. Those concepts included 'representativeness', which is the foundation for the agreed process to develop a 'representative system of maps' across the convention area, and 'precaution'—the basis of the Convention on the Conservation of Antarctic Marine Living Resources.

A number of issues more appropriate to Commission discussions were also raised at the Scientific Committee meeting, including the duration of the MPAs, the opening of areas within the proposed MPAs that are currently closed to fishing, the overall size of the (and by implication, of any) MPAs, and, in the case of the EARSMPA, the number of MPAs included in the proposal. Those statements signalled a determined push by some fishing nations to prioritise fishing access over conservation. They also suggest a lack of trust that the multiple-use concept incorporated in the EARSMPA would provide access for fishing.

Representatives went to the Commission meeting on 15 July ready for serious negotiation. Unfortunately, the meeting was derailed when Russia and Ukraine questioned the legal competency of the CCAMLR to designate and establish MPAs and insisted that no further discussion occur without the development of a detailed and strict definition of MPAs accepted by consensus in a formal document, and preferably in line with the law of the sea.

That position took most representatives by surprise. After more than 10 years of discussions and agreements on the establishment of a system of MPAs for the Convention area and the designation of the South Orkneys MPA in 2009, it's difficult to understand how any member could have legitimate questions about the process or the commission's legal competency.

Since then, both proposals have been revised for consideration at the upcoming annual CCAMLR meeting in Hobart.

The revised New Zealand and US Ross Sea proposal reduces the size of the MPA by more than 40% and no longer mandates permanent protection. This is a significant and somewhat baffling retreat at a time when there's a compelling scientific case for the size of the MPA and no clear indication that all members are at the negotiating table or even ready for good-faith discussions. And one wonders about the ongoing implications of this approach. Is there a cut-off point for acceptable compromise which continues to ensure an MPA still capable of protecting the unique Ross Sea ecosystem? Will all future MPA proposals be designated around existing and potential fishing interests?

The EARSMPA proponents have made some technical revisions in response to views that have been sent to them since Bremerhaven, but they've left more significant issues for negotiation in Hobart.

Unfortunately, the US–New Zealand approach is likely to place extreme pressure on the EARSMPA proponents to reduce their proposal significantly, but not on the basis of science or protection. This is an alarming possibility that raises doubt about the commitment of CCAMLR members to the objective of the Convention on the Conservation of Antarctic Marine Living Resources—the conservation of Antarctic marine living resources, based on science, precaution and a holistic ecological approach.

As members prepare for the Hobart meeting in just a few weeks, it's difficult to be positive about a good outcome for the Southern Ocean. As one of the last great wildernesses, it deserves special recognition, respect and commitment from those governments that have chosen to manage it.

Our Antarctic balance sheet

The 2013 Defence White Paper says that there's 'no credible risk of Australia's national interests in the Southern Ocean and the Australian Antarctic Territory being challenged in ways that might require substantial military responses over the next few decades'. But in the decades to come, major military conflict between the major powers could well have an Antarctic dimension, given the possible role of

Antarctic bases in surveillance and satellite monitoring. There's also a possible scenario in which we might have to deal with illegal resource exploitation in our territory or elsewhere in Antarctica.

This *Strategic Insights* has looked at a range of issues relating to our Antarctic policy and set out a cluster of important national interests that we pursue in Antarctica. They include sustaining opportunities for critical scientific research and cooperation, resource conservation and environmental protection, and geostrategic interests that involve economic and security considerations. Our security interest is in maintaining a stable political and legal order in the region, especially the demilitarisation of the continent. That's dependent on the preservation of the Antarctic Treaty.

The treaty's the international vehicle through which we pursue our polar interests. It continues to serve our national interests well, particularly by preventing conflicts over territorial claims. The 2013 Defence White Paper points out that in coming decades the Antarctic Treaty might come under pressure as resources become scarcer elsewhere. The treaty's Madrid Protocol forbids exploration for and exploitation of Antarctic minerals but, as noted earlier in this report, 'Ultimately, resources of sufficient strategic or economic value will be exploited for a resource-hungry world. International agreements can always be renegotiated.'

Our diplomatic efforts to protect and advance the Antarctic Treaty are being diminished by shrinking resources for the Department of Foreign Affairs and Trade, which has responsibility for leading our delegations in treaty meetings. (This year's budget subjects the department to significant efficiency measures.²⁶)

Several contributors to this *Strategic Insights* have noted that our Antarctic investment is struggling: our research and logistic infrastructure is ageing and we're facing critical decisions about our future access to Antarctica and our activities there. At the same time, others are rapidly building their presence in our territory, so we're running the risk of being left behind. China's established a station at Dome A²⁷, the highest point in the AAT. India's opened a base near Davis Station. China's building a new icebreaker and will soon take its presence in the AAT to three stations, with the addition of a second inland station. (A fourth Chinese station is proposed in the adjacent New Zealand sector.²⁸) There's even talk of Iran establishing an Antarctic base.²⁹ Meanwhile, we've no presence in the AAT's eastern sector, other than Mawson's Hut at Cape Denison.³⁰

On research matters, 'big science' in Antarctica now focuses on Southern Ocean oceanographic and ecosystem research, the stability of the Antarctic ice sheets, and deep-drilled ice cores. But our capacity in those areas is weakening. China's deep-field capabilities in our territory, for example, position it to find the glaciologists' and climatologists' Holy Grail: a million-year-old ice core.

China, Japan, Russia, South Korea and South Africa have launched or announced the construction of new icebreakers in recent years. Australia's *Aurora Australis*, the Antarctic program's multipurpose icebreaker, is approaching the end of its serviceable life.

But there was some silver lining in this year's federal budget: provision was made for life-extension work, at a cost of \$7.9 million over four years, on the *Aurora Australis*, and Hobart's Antarctic Climate and Ecosystems Cooperative Research Centre received \$25 million to continue its work on Antarctic climate science. The government has also allocated \$1.7 million for the development of a business case for a new Antarctic shipping capability.

Those were bright points in an otherwise gloomy picture. We run our Antarctic program on the smell of an oily rag: for 2013–14, its overall budget is \$169 million³¹, an 8% cut from 2012–13. A continued downward trajectory in budget allocations might well lead to the closure or mothballing of stations, reduced scientific gains and a diminished standing in Antarctic affairs.

Other nations' deep-field logistic capabilities allow them to visit parts of our territory that we've never seen and can't get to (they give them their own placenames). Yet our intercontinental air link is unreliable in mid-summer—the time of peak demand—and it only services Casey Station. It can't provide a solution for intra-Antarctica movements (which require ski-equipped aircraft). We're not using our military resources to support our Antarctic program, even though many other nations use theirs. It's part of the verification regime that they should report the use of military personnel, but many don't.

If we're fair dinkum about pursuing our Antarctic interests, we need to be active in Antarctica. But our present capability means that we can't match what others are doing in our territory, let alone lead. We'll need to invest more if we're going to regain our position as a leading Antarctic player, particularly in our own patch, and ensure that critical Antarctic science is adequately funded and supported.

We should be serious about Antarctica—it's part of Australia. Our role there gives us international influence in Antarctic affairs, as well as opportunities to work with Asia.³² The *Australia in the Asian Century* White Paper also promotes the importance of fostering closer cooperation with China, Japan, Korea, Malaysia and Indonesia and other partners on Antarctic research and logistics. Tasmania has recently signed a Memorandum of Understanding with China's State Oceanic Administration that includes a commitment to use Hobart as gateway for Chinese Antarctic research expeditions.³³

We could start by commissioning a replacement icebreaker and increasing our reach within our territory by providing deep-field traverse and air access. We could then establish an ongoing presence in the unoccupied eastern sector of the AAT. The lack of progress is disappointing. Six years ago, an ASPI report noted that:

We need a solid foundation for planning Australia's Antarctic policy over the next decade ... Without [it], the government can't make good decisions about the investment we make in the Antarctic region and how we best use our strengths and attributes to ensure our Antarctic future.³⁴

We need a long-term plan for Antarctica. That's why it's very positive that the Abbott government has promised to develop a 20-year Australian Antarctic strategic plan. That work's long overdue.

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