

**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**

**Title of Submission: Maritime Capabilities for the Southern
Ocean and Antarctic waters**

From: Dr. Sam Bateman AM
Professorial Research Fellow
Australian National Centre for Ocean Resources & Security
University of Wollongong
NSW 2522

Dr Anthony Bergin
Deputy Director
Australian Strategic Policy Institute

2 May 2014

Foreign Affairs, Defence and Trade Committee
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Committee,

MARITIME CAPABILITIES FOR THE SOUTHERN OCEAN AND ANTARCTIC WATERS

Thank you for the opportunity to make this submission to your inquiry into Australia's future activities and responsibilities in the Southern Ocean and Antarctic waters. Our submission addresses Australia's requirement for maritime capabilities, particularly ships, for protecting our interests and discharging our responsibilities in the Southern Ocean and Antarctic waters.

Requirements

In broad terms, Australia has three requirements for ships capable of operating in the demanding sea conditions of the Southern Ocean and off the coast of Antarctica: surveillance patrol and response (for sovereignty protection, law enforcement and search and rescue); marine scientific research; and the logistic support of Australia's Antarctic program. In the longer-term, a requirement may arise for warships with the necessary capabilities but for the purposes of this submission, we accept the assessment of the 2013 Defence White Paper that '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'.¹

Sovereignty Protection and Law Enforcement. Protecting Australia's maritime sovereign interests and exercising jurisdiction over Australia's very large maritime domain constitutes one of the most challenging and fundamentally important of all security tasks confronting Australia in peacetime. It is a particularly demanding task for Australia in the Southern Ocean, around Macquarie Island and the Territory of Heard Island and McDonald Islands and around the Australian Antarctic Territory in view of the distances involved, sea conditions and limited permanent presence. The task requires both surveillance of ocean areas and the ability to respond to any incident that might arise. Response requires a surface vessel and this is where we are most seriously lacking at present. The requirement for the task will increase in the future - apart from our own national interests, the Southern Ocean contains valuable living resources including the largest underexploited fishery in the world—the Antarctic krill fishery.² It's a resource that will most likely become the centre of increased illegal exploitation.

Search and Rescue. Australia has accepted responsibility for a very large search and rescue area in the Southern Ocean between Australia and Antarctica stretching across eighty degrees

¹ Department of Defence. (2013). *Defence White Paper 2013*. www.defence.gov.au/whitepaper2013/docs/WP_2013_web.pdf, paragraph 2.76

² Australian Antarctic Division, Department of the Environment. (n.d.). 'Krill'. www.antarctica.gov.au/about-antarctica/wildlife/animals/krill.

of longitude from 80⁰ East about half-way across the Indian Ocean to 160⁰ East (south of New Zealand). Australia's current capability to respond to a safety of life at sea issue in southern waters is limited to three principal vessels (*Ocean Protector*, *Ocean Shield*, and *Aurora Australis* and only the latter is ice-capable). RAN ships may be available, but none are ice-strengthened and only the fleet replenishment ships, HMAS *Choules* and the LHDs about to enter service, could undertake an extended search without the support of a tanker. The incident which occurred in March 2014 is an example of what may become more common in the future as fishing, particularly for krill, increases - an emergency beacon was detected in the Southern Indian Ocean near Antarctica leading to an air search and the sighting of debris but after an assessment that there were no survivors, the search was suspended.³ No surface response was possible. If survivors had been sighted, it is highly questionable whether a timely rescue would have been possible.

Marine Scientific Research. Oceanographic changes in the Southern Ocean have far-reaching implications for climate change and weather forecasting. The first evidence that ocean acidification as a result of increased absorption of carbon dioxide was having an effect on living organisms was found in Southern Ocean waters. Australia requires a marine scientific research capability to conduct all forms of *blue water* marine scientific research, including hydrography, in the Southern Ocean and around Antarctica, but at present, Australia has only one full-time *blue water* research ship, which is supplemented with some involvement of the Antarctic supply vessel, *Aurora Australis*. With only one aging Antarctic research vessel and limited ship days for marine research we are being left behind by other nations. Future 'big science' will inevitably include marine research, including the seabed resources. Many of the new icebreakers being acquired by other countries will be equipped with a moon pool to allow sea-floor sampling, a key capability absent on *Aurora Australis*.

Logistic Support. The *Aurora Australis* is approaching the end of its serviceable life and a decision is needed to commit to a replacement. In recent years Australia has relied on a single vessel to support its program. The 2013 Federal Budget contained provision for life-extension work for the *Aurora Australis* at a cost of \$7.9 million over four years. The disruption of the re-supply program caused by the involvement of *Aurora Australis* in the incident in December 2013 involving the Russian expedition ship *Akademik Shokalskiy* demonstrated the vulnerability of Australia's Antarctic program to having only one ice-capable vessel available.

What might be done

While other nations are rapidly building their presence and capabilities in Antarctica and the Southern Ocean, Australia has no plans to increase its currently limited capacity to discharge its responsibilities and look after its interests in the Southern Ocean and the seas around Antarctica. In fact the revelation to the Senate Estimates Committee in February 2013 that we hadn't deployed a patrol vessel to the Southern Ocean for over a year suggests that instead of increasing our presence, we are actually reducing our presence in the Southern Ocean.⁴ It is probably now over two years since we have had a patrol vessel in the Southern Ocean and we have relied entirely on assistance from France – but that is only available off the Territory of Heard and McDonald islands.

³ Australian Maritime Safety Authority, 'Search suspended for missing fishing vessel', Media Release, 31 March 2014.

⁴ Senate Estimates Committee, 12 February 2013, pp. 53-55.

The concept of a 'national fleet' offers a possible approach to building the required capacity. Rather than each agency doing its "own thing" with *blue water* capabilities, there is scope for a 'whole of nation' approach to address all national requirements for these capabilities other than naval war-fighting. This would ensure that important capability requirements do not fall down a "hole" between national agencies. The lack of an effective offshore patrol vessel in the current national fleet is an example of such a 'hole'. Defence isn't likely to recommend such a vessel: it does not relate to what it views as 'core business', while the ACS would regard it as beyond their current border protection requirements. However, if such a vessel were to be acquired, not only would it fill a gap in our ability to patrol in the further limits of Australia's EEZ, including in the Southern Ocean and off Antarctica, it could also have a significant marine scientific research capability. The vessels would thus contribute to overcoming our current lack of research vessel capability. At a time of increasing sea-ice cover at least one Australian vessel should be sufficiently ice-strengthened that it can reach any part of the coastline of the Australian Antarctic Territory at any time of the year.

The national fleet concept might be considered in both the project to replace the *Aurora Australis* and Defence Project SEA 1180 to provide a class of around 20 Offshore Combatant Vessels (OCVs). Regarding the latter project, the 2013 Defence White paper noted that 'in the shorter-term, Government will seek to replace the current Armidale Class patrol boats with a proven vessel to ensure that Defence can continue to provide a patrol capability' while a longer-term solution was considered.⁵ It is probable that the Armidale Class replacement will be an updated version of the Cape Class vessels being acquired by the Australian Customs and Border Protection Service.⁶ Such vessels will be unsuitable for operations in the Southern Ocean and off Antarctica - the requirement for operations in those waters should be considered in selecting the longer-term solution for the OCV.

Recommendation. An independent study should be conducted of Australia's requirements for blue water capabilities for maritime policing, patrol and scientific research, including in the Southern Ocean and off Antarctica. Naval war-fighting capabilities would be excluded from this study, but account should be taken of the ADF's contribution to civil maritime tasks. This study should then provide the basis for informed decisions on the OCVs and the replacement of *Aurora Australis*.

Should further information be required, we would be happy to be of assistance.

Yours sincerely

Dr Sam Bateman
Professorial Research Fellow
Australian National Centre for Ocean
Resources & Security
University of Wollongong

Dr Anthony Bergin
Deputy Director
Australian Strategic Policy Institute

⁵ *Defence White Paper 2013*, Paragraph 8.56.

⁶ Ian Bostock, 'Early Replacement looms for Armidales', *Asia-Pacific Defence Reporter*, Vol. 40, No. 3, April 2014, pp. 16-17.