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Abstract

Australia, with its lengthy coastline, vast maritime jurisdiction and multiple offshore territories, undoubtedly fits the description of a maritime nation: but it was not until the issue of Australia's Oceans Policy in 1998 that a comprehensive statement of Australia's maritime challenges and priorities emerged at the Federal Government level. The Oceans Policy articulated a diverse array of challenges and priorities relating to Australia's maritime interests, including the conservation of marine biological diversity, the maintenance of ecologically sustainable fisheries, the prevention of marine pollution, the development of the offshore petroleum and minerals industry, the definition of Australia's maritime jurisdiction and the protection of Australia's national interests both within and beyond Australian maritime jurisdiction. In addition to these fundamental maritime challenges and priorities, the Oceans Policy highlighted some emerging challenges, such as improving and disseminating our knowledge of the role of the oceans in climate change and developing, using and exporting Australia's ocean energy resources. To tackle all these challenges and priorities in a balanced and effective manner, the Oceans Policy identified the need for integrated ocean planning and management, and nominated specific responses for particular sectors of ocean activity. Thirteen years on from the Oceans Policy, it is timely to reassess some key maritime challenges and priorities identified in that document to determine their relevance to the current strategic and political environment for Australia and the Asia-Pacific region. This chapter will examine a selection of these maritime challenges and priorities, their applicability to Australia's current geostrategic circumstances and some recent developments in responding to them.

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Australia's Maritime Challenges and Priorities: Recent Developments and Future Prospects

Robin Warner

Introduction

Australia with its lengthy coastline, vast maritime jurisdiction and multiple offshore territories undoubtedly fits the description of a maritime nation¹ but it was not until the issue of Australia's Oceans Policy in 1998 that a comprehensive statement of Australia's maritime challenges and priorities emerged at the Federal Government level.² The Oceans Policy articulated a diverse array of challenges and priorities relating to Australia's maritime interests including the conservation of marine biological diversity, the maintenance of ecologically sustainable fisheries, the prevention of marine pollution, the development of the offshore petroleum and minerals industry, the definition of Australia's maritime jurisdiction and the protection of Australia's national interests both within and beyond Australian maritime jurisdiction.³ In addition to these fundamental maritime challenges and priorities, the Oceans Policy highlighted some emerging challenges such as improving and disseminating our knowledge of the role of the oceans in climate change and developing, using and exporting Australia's ocean energy resources.⁴ To tackle all these challenges and priorities in a balanced and effective manner, the Oceans Policy identified the need for integrated ocean planning and management and nominated specific responses for particular sectors of ocean activity. Thirteen years on from the Oceans Policy, it is timely to re-assess some key maritime challenges and priorities identified in that document to determine their relevance to the current strategic and political environment for Australia and the Asia Pacific region. This paper will examine a selection of those maritime challenges and priorities, their applicability to Australia's current geostrategic circumstances and some recent developments in responding to them.

Identifying Australia's Maritime Challenges and Priorities

Australia's Oceans Policy had the ambitious objective of setting in place the framework for integrated and ecosystem based planning and management for all of Australia's marine jurisdictions which would be implemented through the

development of Regional Marine Plans based on large marine ecosystems and intended to be binding on all Commonwealth agencies with responsibilities in the marine environment.⁵ It set out broad goals for the care, understanding and use of Australia's oceans. These included:

- The exercise and protection of Australia's rights and jurisdiction over offshore areas, including offshore resources;
- Meeting Australia's international obligations under the United Nations Convention on the Law of the Sea (LOSC) and other international treaties;
- Understanding and protecting Australia's marine biological diversity, the ocean environment and its resources and ensuring ocean uses are ecologically sustainable;
- Promoting ecologically sustainable economic development and job creation;
- Establishing integrated oceans planning and management arrangements;
- Accommodating community needs and aspirations;
- Improving Australia's expertise and capabilities in ocean related management, science, technology and engineering;
- Identifying and protecting Australia's natural and cultural marine heritage; and
- Promoting public awareness and understanding of the oceans.⁶

Whilst the overarching vision of integrated oceans management for Australia's offshore marine environment has been modified since the issue of the Oceans Policy, the Policy did perform the important initial function of expounding the major maritime challenges confronting Australia in twenty areas of oceans planning and management together with proposed responses.⁷ It identified the need for specific

action under several broad headings including ocean uses and impacts, protecting national interests and understanding the oceans.

The second volume of Australia's Oceans Policy enumerated measures to address Australia's maritime challenges in specific sectors of ocean activity under the broad headings identified in the first volume of the Policy. Governmental responses to Australia's maritime challenges since the Oceans Policy have tended to occur within specific sectors of ocean activity rather than being prompted by the regional marine planning process initiated by the Oceans Policy or its successor, the marine bioregional planning process which is being implemented under the Environment Protection and Biodiversity Conservation Act , 1999. While some sectors have adopted a more integrated approach to oceans management, cross sectoral cooperation in oceans management is still developing within Australia's maritime jurisdiction.⁸ Subsequent sections of this paper will analyse key challenges identified in the Oceans Policy, projected responses and recent developments in addressing those challenges.

Defining and Describing Australia's Maritime Jurisdiction

Critical factors in managing Australia's offshore areas are defining clearly the extent of Australia's maritime jurisdiction and understanding the physical nature of the marine areas under Australian jurisdiction. The Oceans Policy characterised this challenge as defining, describing and documenting the physical, geological and chemical attributes of the marine areas under Australian jurisdiction, including the continental shelf and the physical and chemical structure of the adjacent oceans.⁹ Australia ratified the United Nations Convention on the Law of the Sea (LOSC)¹⁰ in 1994 assuming a wide range of international legal obligations in relation to its offshore areas. One of the major achievements of the LOSC was to provide clearly defined maximum limits for offshore jurisdictional zones including the territorial sea, contiguous zone, exclusive economic zone and continental shelf. Australia had already claimed a twelve nautical mile territorial sea in 1990 and a continental shelf based on earlier criteria in the 1958 Geneva Convention on the Continental Shelf.¹¹ In 1994 Australia claimed a contiguous zone adjacent to its territorial sea out to the maximum limit of 24 nautical miles provided for in the LOSC.¹² Australia's exclusive economic zone was also proclaimed in 1994 out to the maximum limit provided for in the LOSC of 200 nautical miles from the territorial sea baseline.¹³

The Oceans Policy noted that technical advice and information on mapping, seafloor morphology, geology and resource potential were required to support Australia's claim for a legal continental shelf extending beyond the exclusive economic zone under the provisions of the LOSC and also to support Australia's negotiations on maritime boundaries with adjacent countries.¹⁴ GeoScience Australia and its predecessor agencies, Australian Geological Survey Organisation (AGSO) and the Australian Survey and Land Information Group (AUSLIG) have continued to meet this challenge as evidenced by the endorsement of Australia's recommendations for the outer limits of nine of the ten areas of its extended continental shelf claim by the Commission on the Limits of the Continental Shelf (CLCS) in April 2008¹⁵ and successful maritime delimitation negotiations with New Zealand in 2004 since the Oceans Policy was issued.¹⁶ The scientific data gathered by agencies such as GeoScience Australia on the physical, geological, oceanographic and chemical aspects of the water column and the seabed has also been vital in meeting other challenges within Australia's marine areas such as conservation of marine biodiversity, ecologically sustainable fisheries exploitation and the development of Australia's offshore petroleum and minerals industry.

Managing Rights and Responsibilities on Australia's Extended Continental Shelf

Sustainable management of Australia's extended continental shelf will present enormous challenges. The extended continental shelf, located beyond 200 nautical miles (up to a maximum of 350 nautical miles or 100 nautical miles from the 2500 metre isobath) from the coast of Australia and its offshore territories encompasses an area of 2.56 million square kilometres or around a third of the land mass of continental Australia.¹⁷ Extended continental shelf areas contain a cornucopia of non living resources with the most obvious being seabed oil and gas but also including manganese nodules, polymetallic sulphides, gas hydrates and phosphorates.¹⁸ There are also valuable living resources on the shelf including sedentary species such as trochus shell and beche de mer (sea cucumber).¹⁹ The relatively shallow depths of many parts of the extended continental shelf make exploitation of the living resources practical and attractive to authorised and illegal fishers. Valuable marine genetic resources with proven medical, pharmaceutical and industrial benefits have been discovered at seabed features such as hydrothermal vents and cold seeps and are

already supporting a thriving international bio-prospecting industry.²⁰ The catalogue of potential resources that could be derived from Australia's extended continental shelf areas may well be incomplete because scientists are still in the process of researching these areas. International acknowledgment of Australia's claim to the substantial resources bound up in these remote areas is only the first step in realising this bounty. To exploit these resources, Australia and its exploitation contractors will have to grapple with multi-objective management in a complex, legal, investment and operating environment.

All areas of Australia's extended continental shelf lie far beyond its territorial sea limit of 12 nautical miles beneath vast tracts of high seas water column. Under international law the high seas are not owned by any State.²¹ This means that vessels and aircraft of all States can exercise a wide array of freedoms in these areas, including freedoms to navigate, to conduct marine scientific research, lay submarine cables and pipelines and, subject to limited conservation and management measures imposed by some regional fisheries management organizations, the freedom to fish.²² Under the relevant provisions of the LOSC, Australia's exploitation of the extended continental shelf must not infringe or interfere with navigation and the other rights enjoyed by the global community in these areas.²³ The siting of installations to drill for hydrocarbons or mine seabed minerals on the extended continental shelf will need to take account of established shipping routes in the area, the location of submarine cables and pipelines and the existence of equipment related to marine scientific research on the seabed. The potential for disputes arising between Australia and other States with interests in the water column above Australian extended continental shelf exploitation sites cannot be discounted and will have to be factored into investment decisions.

Investors in exploitation activities on the extended continental shelf also face the prospect of some of their profits being surrendered because Australia is obliged to make annual payments or contributions in kind for all production at an extended continental shelf site after the first five years of production at that site.²⁴ The payments are made to the International Seabed Authority (ISA), the supranational body established under the LOSC to administer the exploitation of deep seabed minerals beyond national jurisdiction. The ISA will distribute payments to States

which have ratified the LOSC, taking into account the interests and needs of developing States.²⁵ The proportion of profits to be remitted to the ISA is not inconsiderable, commencing at 1% of the value or volume of production at the site in the sixth year of production and increasing by 1% for each subsequent year until the twelfth year of production and remaining at 7% in subsequent years.²⁶

There will be significant logistical and security challenges involved in establishing and protecting exploitation activities on Australia's extended continental shelf. Offshore installations located in remote extended continental shelf areas could be vulnerable to attack by terrorists and more susceptible to the severe weather events that are predicted in connection with climate change. Illegal exploitation of Australia's extended continental shelf resources is a real threat. To counter this threat more surveillance and enforcement patrols will be necessary. Australia has limited resources to conduct comprehensive surveillance and monitoring of its exclusive economic zone out to 200 nautical miles from its coastline let alone scanning activities occurring beyond this limit.²⁷ Experience garnered from enforcing Australia's fisheries legislation in waters surrounding remote offshore territories such as Heard and McDonald Islands foreshadows some of the jurisdictional dilemmas and practical difficulties which may be encountered by maritime enforcement units. Two foreign vessels suspected of illegal fishing in these remote waters were only apprehended in waters south of South Africa after lengthy hot pursuits across thousands of miles of ocean.²⁸ In addition, the extended continental shelf areas around Heard and McDonald Islands fall within the Antarctic Treaty area and contractors in these areas will be subject to the stringent environmental protection provisions of the Madrid Protocol to the Antarctic Treaty.²⁹ Distinguishing between legitimate marine scientific research activities conducted from foreign vessels on Australia's extended continental shelf and illegal foreign bio-prospecting for marine genetic resources will be an ongoing enforcement challenge because the two activities are closely intertwined.³⁰

Other global governance imperatives related to the protection of the high seas marine environment and its biodiversity are relevant to extended continental shelf areas. The international community has been discussing the conservation of high seas biodiversity in a Working Group established by the United Nations General Assembly

(UNGA) and considering a range of options for more effective biodiversity conservation.³¹ These include developing environmental impact assessment and strategic environmental assessment guidelines for all activities, plans and programmes affecting high seas areas and options for marine spatial management in environmentally sensitive high seas areas.³² The introduction of high seas biodiversity conservation measures in extended continental shelf areas may impose some constraints on resource exploitation. Policy makers, scientists and industry players eager to explore and take advantage of the potential resource bounty on Australia's extended continental shelf will have to come to terms with operating in a complex environment influenced by both national and international regulation.

Protecting Australia's National Interests at Sea

The protection of Australia's interests at sea is a multi-faceted challenge which ranges from preventing potential aggressors crossing Australia's maritime approaches and deterring criminal activity in Australian offshore zones to supporting regional and global security initiatives which help maintain freedom of use and access to the oceans for vessels worldwide. The Australian Defence Force (ADF) is the primary government organization responsible for meeting this challenge although other government agencies such as Customs, Australian Fisheries Management Agency (AFMA), Immigration, Australian Quarantine Inspection Service, Australian Federal Police and state police services also contribute. The Oceans Policy listed projected responses to this challenge which have evolved in recent years as a result of specific threats such as the increase in people smuggling in Australia's northern sea approaches and illegal fishing to the north of Australia and in the offshore zones of its sub Antarctic islands in the Southern Ocean.³³ Initiatives have been taken at national, regional and global levels to protect Australia's national interests at sea.

National Initiatives

One response highlighted in the Oceans Policy was a full contribution by the ADF to the National Surveillance Program managed by Coastwatch.³⁴ This program, originally coordinated by Coastwatch and involving a range of Commonwealth Government agencies, has now been replaced by Border Protection Command, a joint ADF and Customs organization which draws on ADF and Customs assets to perform

surveillance and enforcement tasks in Australia's offshore zones.³⁵ The Oceans Policy also foreshadowed the development of an integrated surveillance system combining all surveillance sources in a single system to provide continuous real-time, all weather detection and identification of aircraft and ships in Australia's maritime approaches.³⁶ The Australian Maritime Identification System (AMIS), introduced in February 2005, is an important component of this system with the objective of providing enhanced maritime domain awareness of shipping and other activity in Australia's offshore zones to Border Protection Command.³⁷ AMIS operates through the phased request of positional information from non Australian flagged vessels seeking to enter Australian ports. Up to 1000 nautical miles or 48 hours steaming time from the Australian coast, Australian authorities request advanced arrival information from International Ship and Port Security Code (ISPS) vessels whose next port of call is Australia. This information on ship identity, crew, cargo, location, course, speed and intended port of arrival is already collected for Australian Customs and ISPS purposes. Up to 500 nautical miles or 24 hours steaming time from Australia, information is sought on a voluntary basis on the identity, course and speed of vessels intending to transit Australia's exclusive economic zone (EEZ) or territorial sea.³⁸

The Oceans Policy flagged the need to develop Australia's ability to defeat threats in its sea and air approaches by expanding its submarine capabilities and making cost effective investments in the defensive and offensive capabilities of its fleet of surface combatants.³⁹ The plans for naval force modernization announced in Australia's 2009 Defence White Paper reflect recent developments in addressing this challenge although their realization will occur over a lengthy time frame and will be subject to fluctuations in the national budget and the ability to achieve projected savings by the Defence organization. The White Paper recognizes that "major surface combatants (destroyers and frigates), submarines and other naval capabilities, supported by air combat (for air superiority and maritime strike) and maritime surveillance and response assets are necessary to establish sea control, and to project force in [Australia's] maritime environment (including for the purposes of maintaining freedom of navigation, protecting our shipping, and lifting and supporting land forces)."⁴⁰ In acquisition terms, the White Paper announces that by the mid 2030s the Government will double the size of the submarine force with 12 more capable submarines to replace the current fleet of six Collins Class submarines and

replace the current Anzac class frigate with a more capable Future Frigate with optimal capabilities for anti-submarine warfare.⁴¹ The rationale provided for the acquisition of the augmented submarine force is that future strategic circumstances in the region and beyond will necessitate “a substantially expanded submarine fleet in order to sustain a force at sea large enough in a crisis or conflict to be able to defend Australia’s approaches (including at considerable distance from Australia), protect and support other ADF assets and undertake other strategic missions where the stealth and operating characteristics of highly capable advance submarines would be crucial.”⁴² The White Paper also emphasizes the deterrent value of such a submarine force for potential adversaries.⁴³

The ability of Australia’s maritime surveillance and enforcement resources to respond to illegal activity within Australia’s offshore zones including illegal foreign fishing, customs and quarantine offences and drug trafficking will be further enhanced by the proposed consolidation of maritime law enforcement powers in a single Commonwealth statute. In September 2009, the Australian Government announced the introduction of a Maritime Powers Bill in 2010 to provide a uniform set of maritime enforcement powers. The proposed Maritime Powers Bill will consolidate the wide array of maritime law enforcement powers contained in 38 separate pieces of Commonwealth legislation by:

- Establishing comprehensive powers on interdiction, boarding, search, seizure and retention of vessels;
- Ensuring a common enforcement approach to promote coordination between agencies;
- Creating a mechanism to implement and enforce international agreements that have a maritime aspect.⁴⁴

Regional and Global Initiatives

Collaboration with regional and global partners in implementing oceans management regimes was identified in the Oceans Policy as a key challenge and critical to protecting Australia’s national interests at sea as well as those of the global community.⁴⁵ Since the Oceans Policy was issued, Australia has made considerable

progress in establishing both ad hoc and ongoing cooperation arrangements with regional and global partners to combat criminal activity at sea. Examples of this are evident in the spheres of illegal foreign fishing, people smuggling and counter piracy operations.

Since 1997, the Australian Government has mounted a concerted challenge to foreign fishing vessels (FFVs) fishing illegally in the exclusive economic zone off its sub Antarctic territories, Heard and McDonald Islands. Addressing this challenge has entailed operational responses and legal developments which involve the broadest interpretation of the current international law framework for maritime law enforcement. The primary target species for illegal fishers in these waters has been the Patagonian toothfish. Australian fishermen began fishing for these species off Heard and McDonald Islands in 1997 and unlicensed FFVs were also operating in the area.⁴⁶ Most of these were registered in flag of convenience States which maintained very limited control over their activities.⁴⁷ Lucrative potential returns made these waters an attractive prospect for the FFVs. Initially enforcement was hampered by FFVs contacting each other to report on the location of enforcement vessels and the extreme weather conditions and long transit times for enforcement vessels to reach Heard and McDonald Islands.⁴⁸

The Australian Navy conducted its first enforcement operation in the Heard and McDonald Islands area in October 1997, arresting two FFVs, the *Aliza Glacial* (Panama registered) and the *Salvora* (Belize registered).⁴⁹ Since 1997 six further FFVs have been arrested with two, the *South Tomi* (Togo registered) and the *Viarsa* (Uruguay registered) being apprehended in waters south of South Africa following lengthy hot pursuits by the civilian patrol vessel *Southern Supporter* in 2001 and 2003.⁵⁰ Following the *Viarsa* hot pursuit, the Australian Government announced that it would initiate full time armed patrols to the Southern Ocean to meet the escalating threat of illegal fishing. A full time contracted vessel, the *Oceanic Viking*, capable of operating all year in almost any weather conditions was chartered to undertake fisheries and customs patrols.⁵¹

Strengthened bilateral cooperation has also played an important role in addressing this significant maritime challenge. Australia and France concluded an agreement on cooperation in their adjacent exclusive economic zones in the Southern

Ocean in 2003.⁵² The treaty provided a framework to enhance cooperative surveillance of FFVs in the neighbouring territorial seas and exclusive economic zones of Australia and France's sub Antarctic islands. It provides for the exchange of information about the location, movements and other details of vessels suspected of fishing illegally to facilitate operational responses, logistical support in the conduct of hot pursuits and the undertaking of cooperative research on marine living resources.⁵³ There is also provision for surveillance of each party's maritime zones with the consent of the relevant coastal State.⁵⁴ It establishes a consent regime allowing for the continuation of hot pursuit into the other party's territorial sea provided the other State is informed and no physical law enforcement or coercive action is taken against the pursued vessel during this phase of the hot pursuit.⁵⁵ Under the 2003 Treaty, practical cooperation has taken place with Australian customs and fisheries officers taking part in French patrols and French enforcement officials participating in Australian patrols. Cooperative activities have also included establishment of a shared register of FFVs licensed to fish in French and Australian waters and exchange of information on suspected illegal FFVs.⁵⁶

In 2007 Australia and France extended their cooperation with the conclusion of a further bilateral agreement on cooperative enforcement of fisheries laws in the maritime zones adjacent to their sub Antarctic islands.⁵⁷ The 2007 Treaty formalizes cooperative enforcement of the two States fisheries laws allowing each party's enforcement officers to apprehend alleged FFVs in each other's adjacent EEZs.⁵⁸ Setting aside the clear practical advantages of the 2003 and 2007 treaties in enhancing cooperative maritime surveillance and enforcement for Australia and France in the Southern Ocean, the treaties provisions on hot pursuit raise a number of questions concerning their consistency with relevant LOSC provisions. Key provisions in the 2003 and 2007 treaties authorize each State's enforcement vessels to maintain hot pursuits through each other's maritime zones in the area of cooperation including through each other's territorial seas.⁵⁹ Article 111(3) of the LOSC provides that the right of hot pursuit ceases as soon as the ship pursued enters the territorial sea of its own or a third State. A literal reading of this provision would appear to preclude French enforcement vessels or Australian enforcement vessels from continuing a hot pursuit through the other's territorial sea. In support of the legitimacy of the 2003 and 2007 treaty provisions on hot pursuit, however, is the argument that the treaty partners

have consented to the continuation of such a hot pursuit and the pursuing vessel would not therefore be infringing on the sovereignty of the coastal State. The critical question in any subsequent prosecution of a FFV, however, would be whether a hot pursuit through the territorial sea of a third State is consistent with Article 111(3) of the LOSC and whether it could be challenged as an invalid exercise of the right of hot pursuit by the flag State of the pursued vessel. Notwithstanding this legal ambiguity, the measures taken by Australia in cooperation with France over recent years to counter illegal fishing in the Southern Ocean appear to have resulted in successful deterrence of illegal fishers in this area of Australia's maritime jurisdiction.

The resurgence of people smuggling in the water gap between Indonesia and Australia in 2008 and 2009 has heightened the need for continued and enhanced cooperation between Australia and Indonesia to apprehend vessels carrying asylum seekers and to investigate and prosecute offenders.⁶⁰ Addressing this challenge entails both maritime and terrestrial dimensions. In the framework for security cooperation contained in the Agreement between the Republic of Indonesia and Australia on the Framework for Security Cooperation (Lombok Treaty) of November 2006 which entered into force on 7 February 2008, law enforcement cooperation has been elevated to the same level as more traditional security concerns such as defence and counter terrorism.⁶¹ In this treaty, Indonesia and Australia have agreed to deepening and expanding their bilateral cooperation at multiple levels to prevent, respond to, investigate and prosecute transnational crimes such as people smuggling.⁶² At the 9th Australia/Indonesia Ministerial Forum in 2008, Ministers released a Joint Statement on people smuggling and trafficking in persons that re-affirmed their continuing commitment to combating people smuggling and trafficking in persons and to cooperating with source, transit and destination countries.⁶³ They agreed to enhance their bilateral cooperation through increased operational assistance and information sharing and exploring measures to strengthen their respective domestic legal frameworks consistent with the relevant international instruments.⁶⁴

The forum nominated to achieve this objective is the Bali Process on People Smuggling, Trafficking in Persons and Related Transnational Crime, co-chaired by Australia and Indonesia, and involving more than 50 countries from the Asia Pacific region and beyond as well as international organizations such as the UN High

Commissioner for Refugees and the International Organization for Migration.⁶⁵ The inception of the Bali Process in February 2002 was in response to the last spike in people smuggling operations between Indonesia and Australia.⁶⁶ In its first few years, the Bali Process established a range of multilateral initiatives between member countries to combat people smuggling which involved operational and policy officials from police, immigration, justice and development agencies.⁶⁷ Many of these initiatives were centred on implementing the Protocol against the Smuggling of Migrants by Land Sea and Air supplementing the UN Convention against Transnational Organized Crime (People Smuggling Protocol) which is intended to prevent and combat people smuggling as well as promoting cooperation among States Parties to protect the rights of smuggled migrants.⁶⁸ The early momentum of the Bali Process, with two ministerial meetings in 2002 and 2003 and a series of regional capacity building activities produced some very positive results including enhanced police to police cooperation, people smuggling legislation in some countries which previously had not criminalised this conduct and improved border control and document identification systems.⁶⁹ The initial enthusiasm for the people smuggling aspects of the process diminished from 2004, however, as people smuggling voyages between Indonesia and Australia lessened and the focus of the process focused more on measures to combat trafficking in persons.⁷⁰

The Bali Process was re-invigorated at a third Ministerial meeting held in April 2009 where the Co-Chairs statement re-emphasized the original objectives of the Process and acknowledged some additional incentives for the resurgence of people smuggling including the global financial crisis and the intensification of conflicts within and beyond the region.⁷¹ The Ad Hoc groups formed to implement earlier Bali Process initiatives have been re-established and tasked with developing practical outcomes at the operational level to assist countries in mitigating increased irregular population movements, enhancing information sharing agreements between most affected countries and reporting back to the Co-Chairs of the Process with concrete recommendations to inform future regional cooperation on people smuggling and trafficking in persons.⁷² One area that the Bali Process has not yet addressed is the possibility of cooperative maritime surveillance and enforcement agreements between neighbouring countries to detect and apprehend people smuggling boats. Precedents for this type of cooperation exist in the illegal fishing arena between Australia and

France in the Southern Ocean and between some Pacific Island States. The Bali Process has now entered a more mature phase in which it appears that it will go beyond fundamental capacity building and prevention to developing specific measures to address people smuggling problems at the request of the most affected States.⁷³ A tailored solution for cooperative detection and apprehension of people smuggling boats between Indonesia and Australia is a potential product of this re-invigorated Process.

At a global level, Australia is also contributing to counter piracy operations in the Horn of Africa region which underpin the freedom of access of all vessels to transit these parts of the ocean unimpeded. A surge in piracy and armed robbery against shipping off the Horn of Africa since late 2008 by Somali pirates has prompted unparalleled cooperation between concerned States who have despatched warships to patrol the Gulf of Aden and waters off the coast of Somalia.⁷⁴ The Horn of Africa contains some of the world's most heavily travelled shipping routes with some 33,000 ship transits through the Red Sea choke point of the Bab-al-Mandeb Strait annually mainly en route to and from the Suez Canal.⁷⁵ In 2008 there was a large increase in piracy and armed robbery attacks against ships transiting the Horn of Africa region with 111 attacks against ships and 42 successful hijackings.⁷⁶ The trend continued in 2009 and 2010 with 47 successful hijackings in 2009 and 49 in 2010 and the pirates range extending beyond the coast of Somali and the Gulf of Aden into the Western Indian Ocean. The piracy incidents have included attacks on a wide array of vessels ranging from traditional dhows, yachts and fishing trawlers to super tankers, passenger cruisers and other large trading vessels.⁷⁷

- The global response to the piracy incidents off the Horn of Africa has encompassed a variety of measures. A series of Security Council Resolutions have been passed under Chapter VII of the United Nations Charter authorizing member States of the UN to act against the piracy attacks. Initially Resolution 1816 of 2 June 2008 authorized member States cooperating with the Somali Transitional Federal Government to enter the territorial waters of Somalia and to use “all necessary means” to repress acts of piracy and armed robbery at sea in a manner “consistent with the relevant provisions of international law.”⁷⁸ In passing this Resolution the Security Council had clearly taken into account the unstable

political conditions in Somalia and its inability to undertake maritime law enforcement in waters under its jurisdiction and beyond. Security Council Resolution 1838 of 7 October 2008 reinforced Resolution 1816 and called upon “all States interested in the security of maritime activities to take part actively in the fight against piracy on the high seas off the coast of Somalia, in particular by deploying naval vessels and military aircraft.”⁷⁹ In a further Resolution 1851 of 16 December 2008 the Security Council encouraged States to establish an international cooperation mechanism to act as a common point of contact among them on all aspects of the fight against piracy off Somalia.⁸⁰ Subsequent resolutions, particularly Resolution 1918 of 27 April 2010 have expressed concern that the failure to prosecute those responsible for piracy has undermined anti piracy efforts by the international community.⁸¹ Resolution 1950 of 23 November 2010 re-authorized States to intervene in acts of piracy by Somali pirates at sea for a further period of 12 months.⁸² It expressed ongoing concern at the threat of piracy and armed robbery at sea and noted that this threat now extended beyond Somalia to the Western Indian Ocean and children were involved. Member States were urged to improve the capacity of authorities in Somalia to prosecute those planning and undertaking attacks, to determine jurisdiction and to criminalise piracy under their domestic laws.

The principal global response to the piracy off the Horn of Africa has been a naval one. Warships from the United States, Canada, a number of European states, Russia, India, China, Japan and more recently Australia are now or have recently been active in the waters off the Horn of Africa.⁸³ Within the region, anti piracy efforts are coordinated and information shared under the Code of Conduct concerning the Repression of Piracy and Armed Robbery against Ships in the Western Indian Ocean, concluded in Djibouti in January 2009.⁸⁴ Several concurrent naval operations are occurring in the region. In October 2008 NATO launched a counter piracy operation called *Allied Provider* which was succeeded on 17 August 2009 by Operation *Ocean Shield*.⁸⁵ In December 2008, the European Union initiated Operation *Atalanta* which includes warships from ten countries and in January 2009, the United States established Combined Task Force (CTF) 151 which now includes a warship from the

Australian Navy on an as required basis.⁸⁶ To enhance protection of shipping in the heavily transited Gulf of Aden area, a Maritime Security Patrol Area (MSPA) has been defined to provide a common system of reference which allows navies patrolling the area to de-conflict their activities. Running through the MSPA, an Internationally Recommended Transit Corridor (IRTC) has been established and group transits of shipping through the IRTC are protected by ships from CTF 151, NATO and European Naval Forces (EUNAVFOR).⁸⁷

The naval response to piracy off the Horn of Africa of which Australia is part, has assisted in maintaining a degree of maritime security and freedom of access for shipping in the region but it has not curbed or significantly decreased the number of piracy attacks on shipping in the region or addressed the root cause of the problem which lies in the lack of governance, political instability and poverty which are rife in Somalia itself. A particular problem that participating Australian Navy vessels face in contributing to these operations is the dilemma of what to do with captured Somali pirates. As there is no functioning central government operating in Somalia, pirates cannot be handed over to Somali authorities for investigation and prosecution. Although they could be tried under Australian law, detaining and transporting them to Australia for trial would represent a considerable burden on the Government's resources. Although some States participating in the naval patrols off the Horn of Africa have negotiated transfer agreements with countries in the region such as Kenya to accept the pirates for investigation and prosecution, Australia has been unable to secure such an agreement thus far.⁸⁸ All these factors militate against States in Australia's circumstances taking criminal justice action against apprehended pirates and have led to the adoption of a catch and release policy where the pirates' weapons are confiscated and the pirates themselves are released.⁸⁹ Australia's contribution to this global maritime challenge, while beneficial in maintaining a degree of security for shipping transiting these areas, falls short of establishing a substantial deterrent to this form of criminal activity at sea.

Maintenance of regional and global maritime security as well as security and integrity of resources in Australia's own offshore zones will require ongoing extension and development of existing frameworks for cooperative maritime surveillance and enforcement across national boundaries and on the high seas. Future

maritime challenges for Australia in conjunction with global and regional partners may include surveillance and enforcement operations related to high seas fishing of highly migratory stocks and straddling stocks and collaborative monitoring of other high seas activities such as marine genetic resource exploitation, climate change mitigation activities and dumping operations by ships in order to prevent adverse impacts on high seas biodiversity and maintain high seas resources for current and future generations.

Understanding the Oceans and their Relationship to Global Climate

Australia's Oceans Policy anticipated the global preoccupation with mitigating and adapting to the adverse effects of human induced climate change and the need to understand the role of the oceans in that process. The challenge articulated in relation to climate change and variability was to improve and disseminate Australia's knowledge of the oceans in climate change, including sea level rise and the uptake of carbon dioxide.⁹⁰ The Oceans Policy also recognised that where possible Australia should identify alternative energy sources including ocean based energy and investigate the potential for using the ocean's capacity to absorb greenhouse gases.⁹¹ In relation to ocean based energy sources the Policy encouraged the development, use and export of Australia's ocean energy resources, technology and expertise to their full commercial potential within the limits of ecological sustainability and identified five potential ocean based energy sources: wind, tidal, wave, ocean thermal and ocean currents.⁹² Australia's vast maritime jurisdiction represents an enormous asset in responding to climate change and variability, however, national development of ocean based energy sources and climate change mitigation activities associated with the ocean is still at an early stage.

Ocean Based Energy Sources in Australia

The Intergovernmental Panel on Climate Change (IPCC)'s Fourth Assessment Report states that the potential marine energy resource of wind driven waves, gravitational tide ranges, thermal gradients between warm surface water and cooler water at depths of > 1000m, salinity gradients and marine currents is huge but what is currently exploitable as the economic potential of these energy sources is low.⁹³ The Report recommends the rapid development of renewable energy technologies to eventually

overtake fossil fuel sources of energy.⁹⁴ In order to maximise the potential of these new technologies, sustained government support and supportive regulatory frameworks will be necessary over the coming decades. In its statements on renewable energy targets, the Australian Government has committed itself to ensuring that 20% of Australia's electricity supply comes from renewable energy by 2020.⁹⁵

Australia has suitable climates for wave energy particularly off the coast of Western Australia. In an article on climate change and renewable energy from the ocean and tides, David Leary and Miguel Esteban describe the pre-commercial wave energy projects being undertaken by three companies off the Australian coastline.⁹⁶ The Western Australian company Carnegie Corporation has developed the CETO wave power converter which produces high pressure seawater from the power of waves which is used to power on shore turbines that produce electricity. Commercial testing of the CETO apparatus was completed in 2009 and construction of a commercial scale plant is due for completion and connection to the electricity grid by 2013.⁹⁷ Another company Biopower Systems was planning to pilot wave power apparatus on King Island and Flinders Island in conjunction with Hydro Tasmania in 2009.⁹⁸ Oceanlinx re-deployed its pilot wave energy device at Port Kembla on the New South Wales coast south of Sydney during 2009.⁹⁹ A major hurdle for all these projects is the attraction of sufficient ongoing investment to become viable commercial operations and finding suitable locations for the deployment of wave energy devices which accommodate other ocean uses in the relevant areas and are approved by government authorities.

Climate Change Mitigation Options Involving the Ocean

The capacity of the ocean to act a storage receptacle and to absorb rising levels of carbon dioxide in the atmosphere has been the focus of a number of activities designed to mitigate the adverse effects of climate change on the environment. As the impacts of climate change begin to be felt, States and policy makers are turning to marine geo-engineering schemes as part of the solution. Used irresponsibly, ocean based climate change mitigation options could have catastrophic consequences for the marine environment.¹⁰⁰ For this reason regulatory frameworks subjecting such activities to environmental safeguards are growing in importance.

One of the earliest climate change mitigation schemes associated with the ocean involves the permanent sequestration of carbon dioxide emissions from large point sources such as fossil fuel fired power plants, steel works and fuel processing plants into sub-seabed geological formations.¹⁰¹ The process involves separating carbon dioxide from flue gases and pressurising it for transport by pipeline or vessel to a sub-seabed storage site such as depleted oil or gas fields or deep subterranean and sub-sea saline aquifers.¹⁰² The principal risk associated with carbon dioxide disposal in the sub-seabed is the potential for leakage of carbon dioxide and any other substances in the carbon dioxide stream such as heavy metals into the marine environment either during transport to a storage site or after storage.¹⁰³ Considerable research has been undertaken by States and corporations in developed countries to assess and minimise the risks associated with sub seabed sequestration of carbon dioxide and this method of disposal is being implemented in a number of projects around the world.¹⁰⁴

Australia is one of the first countries in the world to legislate for offshore carbon capture and storage. The Offshore Petroleum Amendment (Greenhouse Gas Storage) Act 2008 aims to provide certainty for operators regarding access and title to offshore greenhouse gas storage formations while also ensuring storage is safe and secure. Actual greenhouse gas injection will be regulated through an injection licence requiring a comprehensive site plan.¹⁰⁵ At the end of an injection site's life, decommissioning reports must be submitted to the appropriate Minister together with suggestions for monitoring, measurement and verification. The holder of a licence will not be free of statutory liability until a site closing certificate has been issued. The requirement for site closing certificate includes a thorough assessment of migratory behaviour of the injected greenhouse gas.¹⁰⁶ As a result of amendments to the Bill in the Senate, the Act contains a provision on transfer of long term liability from the operator to the Government at the end of a closure assurance period which is to be a minimum of 15 years. The Act also includes a 20 year sunset period on the proponent's liability for damages.¹⁰⁷

The IPCC's Fourth Assessment Report acknowledges that the fertilization of the oceans may also be a strategy for removing carbon dioxide from the atmosphere.¹⁰⁸ The process of open ocean fertilization uses iron and other micro

nutrients to increase phytoplankton growth in iron and other nutrient deficient areas of the ocean in order to promote further draw down of photosynthesised carbon into the deep ocean.¹⁰⁹ The Southern Ocean is one of the areas of the ocean which is iron deficient.¹¹⁰ There are a variety of risks and uncertainties associated with open ocean fertilization which have excited concern among scientists and environmentalists. The effects of stimulating phytoplankton growth on other marine organisms and ecosystems are poorly understood.¹¹¹ Increased phytoplankton growth may boost the production of other greenhouse gases such as nitrous oxide neutralising the positive effects of carbon dioxide draw down and the sinking of phytoplankton blooms into the deep ocean may reduce oxygen levels at these depths with adverse consequences for fish and other marine organisms.¹¹² The sustainability of open ocean fertilization has also been called into question on the basis of the lengthy time frames and huge quantities of iron or other nutrients required for the process to have any positive effects.¹¹³

Guidelines for assessing the impact of ocean fertilization experiments on the marine environment have been developed by the Scientific Groups of the London Convention and Protocol.¹¹⁴ The risk assessment framework on ocean fertilization takes a risk analysis approach to the decision to approve ocean fertilization experiments as legitimate scientific research. The framework provides that a decision to approve ocean fertilization and to determine that it is legitimate scientific research which is not contrary to the aims of the London Convention and Protocol should ensure that the scientific objectives of the experiment can be met and that, as far as practicable, environmental disturbance and detriment are minimized and benefits maximised. The proponent of an ocean fertilization experiment must prepare an impact hypothesis which forms the basis for impact monitoring. Now the risk assessment framework has been endorsed by the London Convention and Protocol Parties, it opens the way to ocean fertilization experiments on a larger scale in waters within and beyond national jurisdiction. For ocean fertilization experiments under Australian national jurisdiction or control, the challenge will be to put in place sufficiently rigorous environmental safeguards to prevent adverse impacts on the marine environment of Australia's offshore zones including those around its sub Antarctic islands.

Conclusion

This article has examined a selection of Australia's maritime challenges and priorities through the prism of Australia's 1998 Oceans Policy which was the first comprehensive Commonwealth Government policy statement on ocean related issues. The Oceans Policy described a complex and multifaceted set of challenges and projected responses and had the ultimate objective of achieving integrated and ecosystem based management for marine areas under Australian national jurisdiction. Analysis of three policy areas highlighted in the Oceans Policy, defining Australia's maritime jurisdiction, protecting Australia's national interests at sea and understanding the oceans and their relationship to global climate reveals that some of the challenges identified in the Oceans Policy have been successfully addressed, others will require ongoing commitment and others have evolved into more urgent and substantial challenges. Australia has reached an advanced stage in defining its maritime boundaries having negotiated delimitation agreements or joint resource development arrangements with all its neighbouring States. The challenge now lies in conserving, managing and exploiting the resources and biodiversity in all of the areas under its national jurisdiction in an ecologically sustainable manner. As an island continent with an extensive coastline, significant offshore territories and enormous areas of ocean under its national jurisdiction the task of protecting Australia's national interests at sea is constant and daunting in its complexity. Maintaining border security and combating the poaching of Australia's fisheries by FFVs have been the focus of significant Government policy initiatives, resource investment and legislative action in the years since Australia's Oceans Policy was issued. While these challenges will continue to absorb Australian Government resources for the foreseeable future, positive developments have occurred in cooperative maritime surveillance and development with neighbouring States such as France in the Southern Ocean and in criminal justice cooperation links with Indonesia. Finally Australia is just beginning to address the emerging challenge of harnessing the oceans to combat climate change with the development of technology and regulatory frameworks for ocean based energy and offshore carbon capture. The addition of new areas of maritime jurisdiction in the form of the extended continental shelf, the presence of ongoing threats to Australia's resource and border security represented by illegal fishers and people smuggling operations and the considerable investment required for ocean

based technology to combat climate change highlights the need for a comprehensive re-assessment of the challenges and priorities outlined in Australia's Oceans Policy in the near future.

Notes:

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- 2 Commonwealth of Australia, *Australia’s Oceans Policy* (Canberra: Environment Australia, 1998), p. 9, available online at <http://www.environment.gov.au/coasts/oceans-policy/publications/pubs/policyv1.pdf>
- 3 Ibid.
- 4 Ibid., Vol 2, p. 23, p. 34.
- 5 Ibid., Vol 1, p. 11.
- 6 Ibid., Vol 1, p. 6.
- 7 See the description of Marine Bioregional Planning, available online at <http://www.environment.gov.au/coasts/mbp/index.htm> which has replaced the original concept of Regional Marine Plans set out in the *Oceans Policy*.
- 8 Enhanced cooperation between Commonwealth Government agencies involved in maritime law enforcement has been achieved through initiatives such as the Border Protection Command discussed later in this paper.
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- 20 Joanna Mossop, 'Protecting Marine Biodiversity on the Continental Shelf', *Ocean Development and International Law*, 38 (3) (2007), pp. 284-285.
- 21 LOSC, Article 89.
- 22 LOSC, Article 87(1).
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- 24 LOSC, Article 82(1).
- 25 LOSC, Article 82(4).
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- 27 Schofield et al, above note 1, p. 94.
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- 30 D. Farrier and L. Tucker, 'Hitching the Conservation Cart to the Bioprospecting Horse' *Ocean Development and International Law*, 32 (3) (2001), pp. 213-14 defines bioprospecting as "the collection of small samples of biological material for screening in search for commercially exploitable biologically active compounds or attributes such as genetic information."

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- ³¹ The United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction has met three times in 2006, 2008 and 2010. The Reports of the Co-Chairpersons are available at <http://www.un.org/Depts/los/biodiversityworkinggroup/biodiversityworkinggroup.htm>; Rosemary Rayfuse and Robin Warner, 'Securing a Sustainable Future for the Oceans Beyond National Jurisdiction: The Legal Basis for an Integrated, Cross-Sectoral Regime for High Seas Governance for the 21st Century', 23(3) *The International Journal for Marine and Coastal Law*, 23 (3) (2008), pp. 403-407.
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- 57 *Agreement on Cooperative Enforcement of Fisheries Laws between the Government of Australia and the Government of the French Republic in the Maritime Areas Adjacent to the French Southern and Antarctic Territories, Heard Island and the McDonald Islands*, opened for signature 8 January 2007, (entered into force 7 January 2011) available online at <http://www.info.dfat.gov.au/Info/Treaties/treaties.nsf/AllDocIDs/A357911148DOF38CA257IDC000D800A>.
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