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PROTECTING THE NATIONAL INTEREST: NAVAL CONSTABULARY OPERATIONS IN AUSTRALIA'S EXCLUSIVE ZONE

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Abstract

One of the fundamental responsibilities of a State is to protect its territorial sovereignty at all relevant levels of the conflict spectrum. Notwithstanding the academic debate over security concepts, Australian foreign and defence policy remains based in the realist tradition of balance of power and the maintenance of territorial integrity. As such, the Australian Defence Force (ADF) is structured for defeating attacks on Australia and generally operates at the higher levels of the conflict spectrum. However, the Royal Australian Navy (RAN) also operates at the lower end of the conflict spectrum with its Patrol Boat Force, when it is undertaking constabulary operations in the exclusive economic zone (EEZ).

The coming into force in 1994 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) has had a major impact on notions of territorial sovereignty. Its major impact has been the legal framework for the concept of the EEZ, and the coastal State's rights and responsibilities in that zone. As an island with extensive offshore territories, Australia has a large and disparate and EEZ with significant economic resources.

From a defence perspective, the range of military threats that Australia could face at the lower end of the conflict spectrum dovetail into sovereignty enforcement operations in the EEZ, which are termed constabulary operations in naval strategy. While many of the force element groups within the Navy can undertake constabulary operations, in the main these functions are carried out by the Patrol Boat Force, which is used as the interception force as part of the national Coastal Surveillance Program.

However, there has been a marked increase in the numbers of intruders in Australia's EEZ, with no consequent increase in Navy funding or additions to the Patrol Boat Force. Concurrently there has been a political debate over the creation of an Australian Coast Guard that would absorb the coastal surveillance function including the removal of the patrol boats from Navy to the new agency. While the creation of a Coast Guard would relieve the burden from the Navy for interception activities, the patrol boats also have a range of warlike functions that need to be retained by the Navy in order to fulfil its primary task of defending Australia. There is also a secondary argument that the coastal surveillance role be subsumed by the ADF. This argument has been rejected by Defence on the grounds that coastal surveillance is not a core

defence task, but perhaps the real reason is a concern over funding levels and the impact coastal surveillance might have on maintaining other, higher level war-fighting tasks.

INTRODUCTION

This study is concerned with the ability of the RAN, when conducting constabulary operations, to protect Australia's national interests.

The public perception of Navy's role is of the patrol boats escorting (or towing) illegal vessels into Australian ports, or rescuing illegal immigrants who have been left on inhospitable offshore territories. However there is much that sits behind these simplistic images and the purpose of this study is to detail the why, how and adequacy of Navy involvement in constabulary operations in the EEZ.

Why Protect National Interests?

There has been considerable academic debate over new security concepts that have emerged over the last twenty years. These concepts move away from the traditional military concepts of national interest based on balance of power considerations and consider economic and environmental factors and more co-operative and comprehensive methods for states to react with each other.

The environment became a major national security issue in the 1990s, particularly with the coming into effect of UNCLOS. Changes in the environment, such as environmental stress from uncontrolled population growth, diminishing natural resources, climatic change and increasing pollution, are increasingly perceived as a threat to a nation's well-being and thus to its national security.[1] However, taken a step further, the state of the marine environment and its associated resources can also be seen as a reason for military conflict. Examples put forward include a state's poor environmental behaviour may lead to resource-led conflicts,[2] while a decline in important food resources of oceans is a possible source of conflict as countries compete over fisheries or seek to protect their access to these resources. The military could be engaged in traditional tasks of defensive or pre-emptive action to gain control over scarce resources or to maintain control over them.[3]

The 1990s saw a trend towards increasing global economic interdependence. The growth in trade between states has linked them closer together and made them reliant upon each other, as changing economic conditions have a flow-on effect between states. It is not

clear whether this reliance brings stability or instability. It can be argued that this economic interdependence brings stability as states will rather trade than invade; and can also be argued that instability occurs because a state may feel vulnerable in its mutual dependence and may go to war to maintain its access to materials and goods.[4] A state requires sustained economic growth for it to maintain internal political stability, which is a prerequisite for the maintenance of its national security. A state also needs a level of security to provide the stability that is required to promote and maintain economic growth.

Notwithstanding the academic debate over national security concepts, Australian foreign policy remains based within the realist school of international relations where territorial sovereignty and balance of power consideration remain paramount. While Australian defence, foreign and environmental policies are not based solely on the new security concepts; they do incorporate them, where possible and relevant, as elements within the traditional territorial sovereignty framework.

The linkage between the various policy documents is minimal, given their dates of publication: foreign affairs in 1997, oceans environmental policy in 1998 and defence in 2000. The strongest linkage is between foreign affairs and defence, although this has only occurred over the last decade.

In December 1989, the Department of Foreign Affairs and Trade (DFAT) published *Australia's Regional Security*, on the relationship between defence and foreign policy. It noted that there were four main priorities in Australian foreign policy:

- protecting Australia's national security through the maintenance of a positive security and strategic environment in the region;
- pursuing trade, investment and economic cooperation;
- contributing to global security; and
- contributing to the cause of good international citizenship.[5]

Although all four priorities were important, the *Australia's Regional Security* discussed only national security as "... the prime interest of any country, including Australia, must be maintaining its physical integrity and sovereignty."[6] It went on to outline seven instruments of policy to protect security interests: military capability, politico-military capability, diplomacy, economic links, development

assistance, non-military threat assistance, and exchanges of people and ideas.[7] This was the first attempt to publicly link defence and foreign policies.

In the National Interest was Australia's first White Paper on foreign and trade policy and was released in late 1997 (developed in conjunction with the Defence document *Australia's Strategic Policy*). The economic linkages first discussed in the *Australia's Regional Security* were expanded upon, where it was noted that Australia's standard of living came from the ability to trade and invest globally, and Australia's most important economic and strategic interests were in the Asia-Pacific region. The concern with the Asia-Pacific region was shown through the economic and strategic linkages between Northeast Asia and Southeast Asia, which could then impact on Australia.[8] Changes in economic growth would impact on domestic politics in region countries, causing some instability,[9] which would have an obvious defence impact. *In the National Interest* provided a stronger linkage defence and foreign policy, by providing an indication of Australia's foreign affairs priorities. It also incorporated a much stronger focus on economic interests but did not provide a strong linkage to environmental issues.

Chapter One examines why Australia should protect its national interests. This chapter explores the issues surrounding the protection of the national interest, albeit from the narrow perspective of territorial sovereignty. Ensuring territorial sovereignty is a defence issue, and for Australia is predominantly a maritime issue. To set the context for the following chapters, Chapter One outlines the extent of Australia's territorial claims, emphasising in particular the impact of UNCLOS. The sovereign rights that Australia has in its EEZ will be discussed briefly, as well as the economic value of the marine industries and some of the threats facing these industries.

In order to both manage and control activities in the EEZ, and implicitly assert sovereign rights, the methods for enforcing sovereign rights are outlined before considering in more detail the national Coastal Surveillance Program. This program, coordinated by Coastwatch requires the use of Navy assets for both surveillance and the interception of possible intruders in Australia's marine jurisdiction. To better consider the role played by Defence and the Navy, the defence planning methodologies for levels of threat, the

Australian Military Strategy and the latest defence policy are discussed. Chapter One concludes with a brief consideration of the adequacy of the various agency policies that impact on the protection of national interests.

How to Protect the National Interest

This study focuses on a narrow but valid conception of the national interest as the protection of territorial sovereignty, in order to demonstrate how the Navy meets this commitment while also having a warfighting role. The protection of national interests is often seen as a less important task than preparing for warlike operations, yet it is a fundamental task that goes to the root of national interests. In the case of Australia, it is the Patrol Boat Force that provides the predominant contribution to the national Coastal Surveillance Program.

Chapter Two examines the Navy and the types of operations it undertakes in the EEZ. The key to the interception of possible intruders in the EEZ is the use of Navy assets at the lower end of the conflict spectrum (constabulary operations). In order to provide a context for these naval operations, current defence policy is considered before moving onto a brief discussion of the concept of sea power and maritime strategy. In the case of Australia, the Navy recently released its first maritime doctrine and this document is used to explain the context and detail of constabulary operations. The core of the chapter is the consideration of constabulary tasks, the structure of the Navy into force element groups and the variety of peacetime operations undertaken in the EEZ. There are also three military operations that can occur in the EEZ and these are briefly discussed to demonstrate the range of Navy activities across the conflict spectrum.

Adequacy of the Navy Contribution

The previous chapter briefly outlines some of the difficulties the Navy is facing in meeting the requirements of enforcing sovereign rights in the EEZ. The ability of the patrol boats to maintain their current operational tempo in the face of increased intrusions in the EEZ implies that there are insufficient patrol boats available for the task.

Notwithstanding the long involvement of the Navy in peacetime sovereignty protection tasks, there is a political debate about whether

an Australian Coast Guard should be created. The major impetus to this debate has come from the federal opposition that has committed itself to the creation of a Coast Guard, which is based on removing the Patrol Boat Force from the Navy; the impact of this policy on the Navy is examined. There is also a debate over whether Defence should assume sole responsibility for the coastal surveillance function and a brief consideration of this issue ends the Chapter.

CHAPTER ONE
Protecting the National Interest

As the former Australian foreign minister Gareth Evans has noted, the elements that make up the national interest are not self-evident. Nevertheless he went on to outline what he saw as the three major elements of Australia's national interests:

- geopolitical or strategic interests;
- economic and trade interests; and
- acting as a good international citizen.

Strategic interests are concerned with the defence of Australian sovereignty and political independence and have both regional and global aspects. Economic and trade interests are met through a free and liberal international trading environment; while acting as a good international citizen includes peacekeeping, action on global environmental issues and non-military threats.[10]

NATIONAL INTERESTS

From a defence perspective, there are difficulties in defining national security interests when there is no threat upon which to focus concerns. Australian national security became one of stating what had to be prevented rather than one that would promote Australian security. In the reorientation of defence policy that occurred in the mid 1980s, Australia's national security interests were defined as:

- The avoidance of global conflict.
- The maintenance of a favourable strategic situation in South East Asia and the South Pacific generally; this is Australia's sphere of primary strategic interest where developments can affect our national security; it covers more than 20 percent of the earth's surface.
- The promotion of a sense of strategic community between Australia and its neighbours (Indonesia, Papua New Guinea, the nearby island states of the South West Pacific and New Zealand); this is Australia's area of direct military interest where we should aim to be able to independently apply military power; it accounts for almost 10% of the earth's surface.

- The defence of Australian territory and society from threat of military attack.
- The protection of Australian interests in the surrounding maritime environment, including our overseas territories and proximate sea lines of communication and focal points.[11]

The last three points are considered to be fundamental defence policy issues that might require the use of armed force and it with the last of these that this study is concerned.

TERRITORIAL SOVEREIGNTY

The narrow view of the national interest is for the preservation of sovereignty and territorial integrity, but, of course, for this to be achieved, the state must have adequate power. So the first obligation of governments is the provision of basic physical security (territorial integrity) and the second obligation is maintaining internal order. A state's armed forces are traditionally the means to meet both obligations.[12] This is reflected in Australia's defence policy:

> The exercise of authority over our continent and offshore territories, our territorial sea and resource zones, and airspace, and the ability to protect our maritime and sea approaches, is fundamental to our sovereignty and security.[13]

This was recognised as a large task, given the size and harshness of Australian territory, the extensive coastlines, size of fishing and resource zones, the distance from the mainland of offshore territories, the great expanses of oceans surrounding Australia and the small size of the Australian population.[14]

Australian Geography

Australia has a land area of about 7.692km^2. It lies between latitudes 10^{o}41' south and 43^{o}39' south and between longitudes 113^{o}09' east and 153^{o}39' east. The maximum latitudinal distance is about 3680km and the maximum longitudinal distance is about 4000km.[15] Australia adjoins the Pacific Ocean in the east, the Indian Ocean in the west, faces the Southeast Asian archipelago in the north and faces the Southern Ocean. As an island, Australia obviously has no land borders with any other state and except in the Torres Strait region it is separated from its neighbours by an air-sea gap that is hundreds if not thousands of kilometers wide. Such geography requires a defence policy with a maritime aspect. Australia also has a number of offshore territories:

- In the Indian Ocean are Christmas Island and the Cocos (Keeling) Islands, 2800km and 3700km west of Darwin respectively; and Heard and McDonald Islands about 4000km southwest of Perth.
- In the Pacific Ocean are Lord Howe Island 700km north east of Sydney and Norfolk Island about 1500km east of Brisbane.
- In the Southern Ocean is Macquarie Island about 1500km south of Hobart.
- There is also the Australian Antarctic Territory comprising 42% of the Antarctic landmass.

While the offshore territories create a range of defence concerns, particularly with regard to territorial sovereignty, the impact of UNCLOS has increased mainland responsibilities for the islands, their surrounding waters and associated resources.

United Nations Convention on the Law of the Sea 1982

UNCLOS came into force on 16 November 1994 and governs all aspects of the oceans including delimitation, environmental control, marine scientific research, economic and commercial activities, transfer of technology and the settlement of disputes relating to ocean matters. The significance of UNCLOS is that it increases resource base of coastal States, provides a framework for managing ocean space as a multi-purpose development zone, and encourages scientific and technological developments.[16] For the purposes of this study, only the implications of the delimitation of maritime boundaries, some of the rights and responsibilities of coastal States, and enforcement obligations will be examined.

Maritime Boundaries

The notion of territorial waters goes back to the days of sailing ships where the waters were about 3nm in breadth. The legal definition, which extended these seas to 12nm is:

> The sovereignty of a coastal State extends, beyond its land territory and internal waters…to an adjacent belt of sea, described as the territorial sea. This sovereignty extends to the air space over the territorial sea as well as to its bed and subsoil. Every State has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles.[17]

The legal definition of the territorial sea means that the coastal State has the same level of sovereignty over the territorial sea as it has on its land territory. The only limitation to this sovereignty is the right

of innocent passage of ships through these waters. There are extensive rules of what constitutes innocent behaviour and the coastal State may take the necessary steps in its territorial sea to prevent passage, which is not innocent.[18]

The contiguous zone is vital for domestic law enforcement as it allows the coastal State to apprehend both its own nationals and foreigners who have broken any domestic laws within the 12nm territorial sea.

> In a zone contiguous to its territorial sea, described as the contiguous zone, the coastal State may exercise the control necessary to: prevent infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory and territorial sea; punish infringement of the above laws and regulations committed within its territory and territorial sea. The contiguous zone may not extend beyond 24 nautical miles from the baselines from which the breadth of the territorial sea is measured.[19]

The defence advantages of the territorial sea include limiting the scope for foreign military aircraft over-flights, preventing non-innocent passage as far from the coast as possible, submarines having to navigate on surface and show flag and also makes intelligence collection more difficult at 12nm.[20] Foreign vessels may be detained if a person onboard has previously committed an offence within the territory or territorial sea. Foreign vessels coming into the contiguous zone from high seas can be stopped, searched and warned off - but they cannot be arrested unless they come into territorial sea and commit an offence.[21]

A coastal State has the sovereign right to explore and exploit the natural resources in its EEZ and associated continental shelf, and it is this issue that has probably attracted the most public attention.

> The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured. In the exclusive economic zone, the coastal State has:
>
> - sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters super-adjacent to the seabed and of the seabed and the subsoil;
> - jurisdiction as provided for in the relevant provisions of this Convention with regard to:
>   - marine scientific research
>   - the protection and preservation of the marine environment.[22]
>
> The continental shelf of a coastal State comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea…to a distance of 200 nautical miles from the baselines…The coastal State exercises over

> the continental shelf rights for the purpose of exploring it and exploiting its natural resources. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation. The coastal State shall have the exclusive right to authorize and regulate drilling on the continental shelf for all purposes.[23]

The growth potential of resources in the Australian EEZ and the continental shelf are not known as little information is held, apart from some information about fisheries, oil and gas in certain regions. It is believed that there is potential growth in fisheries but not through increased catches, as they are already fully or over-exploited, but through opportunities are in improved handling, value adding and by-catch and waste minimisation.[24]

Australian Legislation

Australia has a long history of involvement in the international negotiations concerning the development of Law of the Sea issues. While Australia signed UNCLOS on 10 December 1982, it has moved slowly to incorporate the concepts of the law of the sea into domestic legislation:

- under the *Fisheries Act 1968*, Australia legislated for a 12nm Declared Fishing Zone (DFZ) on 30 January 1968;
- declared a 200nm exclusive resources zone (ERZ) in early 1977;
- declared a 200nm Australian Fishing Zone (AFZ) on 1 November 1979;[25] and
- on 13 November 1990, the Government announced its intention to extend the territorial sea from 3 to 12nm and this took effect on 20 November 1990.[26]

On 1 August 1994 a 200nm EEZ was declared, where the Australian EEZ and the continental shelf are between 12-200nm from the Australian coastline. Australia still uses the term AFZ and it is defined in such a way as to be consistent with the EEZ.[27] The AFZ is managed under the *Fisheries Management Act 1991* and is between 3-200nm from the Australian coastline.[28] In December 1999 Australia proclaimed a 200nm EEZ and claimed the continental shelf associated with the AAT.[29]

Australia has maritime boundaries with five other nations: Indonesia, Papua New Guinea, the Solomon Islands, New Zealand and France. Anthony Bergin has outlined these delimitation agreements: three with Indonesia in 1971-72, 1989 and 1997; one with Papua New

Guinea in 1978; one with the Solomon Islands in1988; a number with France in 1982; while there have been no agreements signed with New Zealand.[30]

Management and Conservation Responsibilities

UNCLOS, while regulating the rights of coastal States in the EEZ, also proscribes the responsibilities of coastal States. The fishing zones created in the 1960s and 1970s as a reaction to over-fishing are the antecedents to the exclusive economic zones. The creation of the EEZ as a legal concept means that the proportion of the oceans now under the jurisdiction of coastal States has risen from 3% to 36% and about 90% of all commercial fishing is now under that jurisdiction.[31] How a coastal State manages its fishery is outline below.

> The coastal State shall determine the allowable catch of the living resources in its exclusive economic zone. The coastal State...shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. The coastal State shall determine its capacity to harvest the living resources of the exclusive economic zone. Where the coastal State does not have the capacity to harvest the entire allowable catch, it shall...give other States access to the surplus allowable catch...[32]

Economic Value of Australia's Marine Industries

Changes in technology have allowed an increase in the use of the ocean's resources and these resources have now assumed a greater economic importance.[33] Table 1 shows the estimated economic value of Australia's marine industries in 1994 and 1998. The growth in the marine industries has been high: over the period 1984 to 1994, the industry grew from about $16 billion to about $30 billion (representing 8% of GDP), and is estimated to grow to approximately $120 billion by 2020.[34]

The value of tourism and recreation is calculated as 90% of all domestic tourism and 19% of overseas visitor tourism. Notwithstanding the accuracy (or otherwise) of this calculation, tourism and recreation will not be considered further in this study.

Shipping and transport have a high value, but up to $1 billion of this is related to naval warship construction. Nevertheless, protection of shipping and trade is a defence function, although only certain

aspects will be considered in this study where relevant shipping and port operations are within the EEZ.

Table 1 - Economic Value of Australia's Marine Industries

Activity	Employment 1994[35]	Value 1994[36]	Value 1998[37]
Tourism and Recreation	270,000	$15.0b	$36b
Oil and Gas Production	6,000	$8.0b	$10b
Shipping and Transport	13,400	$3.8b	$3.7b
Commercial Fishing	19,000	$1.6b	$2.3b
Total	**308,400**	**$28.4b**	**$52b**

Oil and gas production and commercial fishing are the most relevant activities in the EEZ and their management, control and protection are major policy issues across a number of government agencies. Both of these activities have major economic importance to Australia, where access to natural resources is necessary to drive industry, as a source of export income and revenue and as a means of employment in regional areas.

Oil and Gas Production

Australia has a significant dependence on offshore oil and gas supplies, but did not discover commercial fields until 1962:

- in 1963 the oil and gas fields in the offshore Gippsland basin were discovered and entered production in 1969;
- the Barrow Island oil field in the Carnarvon Basin was discovered in 1964 and entered production in 1967;
- major gas fields were discovered in 1971 off north west Australia, first entering production in 1984; and
- oil and then gas were discovered in the Timor Gap, between East Timor and Australia.[38]

Based on 1997-98 data, the Gippsland Basin in Bass Strait produced 50% of Australia's crude oil, 52% of liquefied petroleum gas and 32% of liquefied natural gas; while the Carnarvon Basin off Western Australia produced 80% of Australia's consendate, 29% of liquefied petroleum gas and 27% of liquefied natural gas.[39] Offshore petroleum alone is worth about $8 billion pa and supplies about 85%

of national needs while contributing $2.4 billion pa in taxation revenue.[40] There is also a high global demand for natural gas in the Asia-Pacific region and Australia is the third largest supplier of LNG to the region.[41]

Fisheries

The continued worldwide expansion in fishing effort over recent decades has depleted many world fish stocks and fisheries, and as a result, fishing vessels are now venturing further onto the high seas in search of less utilised fish stocks.[42] Since 1950 there has been a growing demand for fish and between 1950 and 1970, the total reported marine capture landings rose from 18.5m tons to 59m tons and since late 1980s has been at about 83m tons. In 1993 it was reported that 69% of world's marine stocks for which there was data were either fully to heavily exploited (44%), over-exploited (16%), depleted (6%), slowly recovering from over-fishing (3%).[43] More than a billion people depend on the world's fisheries for their primary source of protein and the decline of the worldwide catch, caused by over-fishing, has been assessed by the UN as reaching serious proportions. The UN Secretary-General noted that one reason for the increased illegal fishing is the ineffective monitoring, control and surveillance by coastal States of their EEZ.[44]

Figure 1: Australia's Fishing Zones

The AFZ covers an area 16% larger than the Australian landmass and is the 3rd largest fishing zone in world at 8.9 million km^2 (France with her external territories and the US have a larger fishing zone); Figure 1 outlines the extent of the AFZ. Fishing is Australia's fifth largest primary industry with a gross value in 1997-98 of $1.86 billion. Aquaculture is increasing at about 15% pa and production in 1997-98 was about 27,000t and valued at about $490 million, with a national target of about $2.5 billion by 2010.[45]

In Australia's region, fish is a key food source and the oceans constitute the last remaining reserves of protein. Competition for the remaining stocks has intensified where foreign fishing fleets have restricted access and quotas and the fishing nations are becoming more protective of their own fish resources.[46] Importantly for Australia, the level of fishing has increased dramatically over the last decade to the point where all major known fish, crustacean and mollusc resources are fully exploited, with some resources, such as the southern blue fin tuna, gemfish and shark are suffering serious depletion.[47] With the coming into effect of the United Nations Fish Stocks Agreement (UNFSA) in 2000, Australia has an increased responsibility to manage domestic and foreign fishing in its AFZ and in areas of the high seas, as it manages straddling stocks.[48]

Australia is also experiencing the increased impacts of high seas fishing adjacent to the AFZ. In 1974 a Memorandum of Understanding (MOU) was signed between Australia and Indonesia allowing artisanal Indonesian fishing in designated areas of Australia's northern AFZ. Notwithstanding the MOU, the majority of incursions into the AFZ continue to be fishers from Indonesia, as an example 50 illegal Indonesian fishing vessels were apprehended in the northern AFZ in 1998-99.[49] The Australian Fisheries Management Authority (AFMA) believes that entrepreneurs are behind the activities of many of the Indonesian artisanal fishing boats, and that the Indonesian fishing boats are moving from artisanal to commercial activities.[50]

Australia must also be in a position to enforce its rights in its EEZ, through the regulation of foreign fishing vessels licensed to take any surplus catch, and to stop any illegal fishing within its EEZ. This issue can best be considered as a move from protecting fishing rights to the protection of the fish. While these issues are the responsibility

of other departments and agencies, the interception and enforcement of these regulations are seen as a Navy responsibility.

Border Management

An emerging security issue, which has been termed grey-area phenomena, is concerned with the threat that non-state actors pose to the stability of sovereign states. These non-state actors include international crime syndicates, drug trafficking organisations, and terrorist groups and the actions they may undertake. There is also the concern with such issues as uncontrolled or illegal immigration, and the spread of diseases; these activities are problematic given the difficulty in identifying the perpetrators.[51] Many of these issues are a law enforcement problem, but often some form of military assistance is required.

The UN Secretary-General has noted the increase in immigrant smuggling and that the methods of smuggling by sea more sophisticated (ie stowaway on container ship), and other sources put the annual value of the international smuggling industry at US$11 billion.[52] The long-term forecast is that illegal migration and asylum seeking expected to increase over next 25 years. This is particularly the case for some of the islands in the South Pacific, where the impact of climate change and its associated sea level rise are a concern to small island states. Tuvalu, Tonga, Tokelau, Kiribati and the Marshall Islands would be affected by rising sea levels and Australia would expect to be a destination for these environmental immigrants.[53] With regard to illegal immigration by ship, the majority of landfalls occur on the offshore territories such as the Ashmore and Cartier Reefs and Christmas Island, requiring transportation (and sometimes, rescue) to the Australian mainland for processing.[54]

A subsidiary but major concern with illegal immigration is the possible introduction of serious exotic diseases that could affect the Australian agricultural industry and exports. The generally stated estimated cost of a single such outbreak is $30 million.

Most of the illegal drugs in Australia are illegally imported, with the big and more significant importations coming in by sea; the cost of this trade has been estimated at between $1.2-$2 billion pa. As an example, Australia and New Zealand are concerned with sailing vessels bringing in cocaine. John McFarlane notes that weapon

smuggling operates in reverse, with the weapons leaving Australia. Smuggling flora and fauna is not as profitable as drugs, but can return a tidy profit, and involves the illegal export of seeds and plants; and birds and reptiles.[55]

METHODS FOR ENFORCING SOVEREIGN RIGHTS

UNCLOS provides the legal regime for enforcing sovereign rights in the EEZ:

> The coastal State may, in the exercise of its sovereign rights, to explore, exploit, conserve and manage the living resources in the exclusive economic zone, take such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted by it in conformity with this Convention.[56]

The process for enforcing sovereign rights in the EEZ is threefold: surveillance to determine what is happening in the zone, interception of intruders, and legal action to emphasis the sovereign nature of the EEZ.

Surveillance

Sam Bateman has described maritime surveillance as

> the systematic observation of maritime areas to locate, identify and track ships, submarines and other vehicles on or under the sea. The objective is to determine the extent, nature and purpose of ship and aircraft movement and other maritime activity.

And it can be undertaken by satellite, aircraft, surface ship, submarine, land-based radar or by towed and fixed sonar arrays.[57]

The surveillance activity has four processes: detection (is an intruder present); localisation (where the intruder is); classification (what the intruder is); and data fusion (have we seen this intruder before, is this the same contact from different sources etc). There are two types of surveillance: broad area surveillance, which provides a general picture of the area; and focal area surveillance, which provides more detailed information in areas of special concern.[58]

There are a number of electronic means for surveillance, but the important issue is the platform that carries the sensors and the area that can be covered; the main driver here is the height of the platform. In work undertaken for Canada's Maritime Command by the Centre for Foreign Policy Studies, the following table provides information on the height of the sensor and the area that can then be covered.

Table 2 - Sensor Ranges by Platform Type

Platform	Sensor Altitude	Range to Horizon (km)	Area Within Horizon (km^2)
Ship	18m	15	730
Small Aircraft	1500m	140	61,000
Large Aircraft	9000m	340	370,000
LEO Satellite	200km	1600	8,000,000
GEO Satellite	35,700km	41,600	215,000,000

Source: Fred W. Crickard & Glen J. Herbert (eds), *Canada's Oceans Strategies Project - The Atlantic: Final Report*, Centre for Foreign Policy Studies, Dalhousie University, 1997, p. 27.

The major difficulty with using ships for surveillance is that they can only monitor a small area, moreover, their slow speed means the area covered in a day is also small;[59] with organic aviation, the operational horizon extends out at least 200nm.[60] However, they can remain in the vicinity to watch what the intruder is doing, which an aircraft cannot do.

Submarines were not included in the table given their slow speed and inability to raise their sensors more than a few feet above the level of the water.[61] That being the case, they are unable to provide broad area surveillance, but are more suited to focal surveillance - where their stealth and ability to remain on station for a considerable period to monitor events in that area.

A large aircraft can fly fast and have long endurance, so it can cover a lot of territory in a single sortie, and can also fly low for close inspection of the intruder. Smaller aircraft have less speed and endurance, but they can still cover a greater distance than a ship. The major disadvantage of aircraft is their limited duration over the area being examined and their inability to deliver a boarding party.[62]

Australia is to purchase four Airborne Early Warning and Control Aircraft, due to come into service from 2006, with an option for another three.[63] While these aircraft are required for more effective military operations, they could improve the coastal surveillance task and allow better focal point surveillance and interception.

Given their high altitude, satellites have a huge range of view. With a Low Earth Orbit (LEO) satellite, their high speed allows them to sweep an area in a short period of time. However, for maritime

surveillance the key is to monitor an area continuously, so a Geosynchronous (GEO) satellite might be more appropriate.[64]

Australia is developing the Jindalee Operational Radar Network (JORN), which is based on over-the-horizon-radar (OTHR) technology using the high frequency spectrum. Importantly OTHR technology illuminates targets from above, but small wooden fishing vessels are harder to detect, although their "track" can be constructed over a long period.[65] JORN will constitute Australia's broad area surveillance network and is expected to be fully operation in late 2001, with a detection range out to about 3000km from the coastline.[66]

Ground-based microwave radar is suitable for focal area surveillance, but requires initial information from broad area surveillance to enable it to focus on and track an intruder.[67] Defence is also trialing a Surface Wave Radar, which could provide good surface vessel detection; however radar detection also requires visual surveillance to determine who they are and what they are doing.[68]

Interception

Anthony Bergin has outlined the outcomes of the Australian surveillance effort:

- sovereignty enforcement and picture compilation;
- sustainment and protection of the EEZ, monitoring of foreign fisheries activity, and license enforcement;
- detection of illegal trafficking and smuggling of drugs;
- monitoring of environmental and resource protection;
- detection of illegal immigration and refugee protection;
- detection of illegal activity and quarantine breaches;
- enforcement of national marine park protection;
- monitoring any other breaches of Commonwealth laws; and
- enhancement of security through regional engagement.[69]

But surveillance is only one half of the equation; the ability to respond is key to surveillance being of use. The corollary to surveillance is the ability to react to a sighting when necessary. Ships are the only viable method for interception; they are able to get close to the target, they can take photographs as evidence, make continuous observation and board and inspect the intruder as required.[70]

One of the major elements of enforcing sovereign rights in the EEZ is the use of legal remedies to both deter possible transgressors and punish those that have committed offences. Surveillance obviously plays a key role in this process, as surveillance action can provide a recorded visual image of the offence that can be used in court. However, limiting the legal action to relying solely on surveillance evidence does not mitigate the damage the transgressor may have caused. Interception is also necessary in this process as it can also gather more evidence, but perhaps more importantly, it can stop the offence from continuing, thereby mitigating some of its effects. Two examples show the impact of surveillance alone, and surveillance and interception.

The South Tasman Rise Fishery lies south of Tasmania between longitudes 46°30' south and 48°30' south which straddles the AFZ. Australia claims the right to manage the orange roughy fishery as a straddling stock, as all available scientific evidence is that the fishery straddles the Australian AFZ boundary. In 1999, three South African and one Belize flagged freezer trawlers appeared in the Fishery and after representations to those countries, the ships withdrew. At the time there was no legal basis to force vessels to cease fishing in the area as it was on the high seas and UNFSA had not come into effect. The only approach Australia could take was to approach the flag states to request cooperation in managing the straddling stock. After legal action the three South African ships lost their high seas fishing licenses and the Belizean flagged ship was deregistered.[71]

In April 2001, a Togo-registered (but Spanish owned) fishing vessel was caught illegally fishing in the Heard Island and MacDonald Islands Fishery. When challenged by an Australian Maritime Safety Authority (AMSA) chartered ship patrolling the area, the ship initially headed towards the port of Fremantle, but once on the high seas it turned towards Africa. The AMSA vessel chased the ship across the Indian Ocean for 14 days, while ADF personnel flew to South Africa and with the assistance of the South African Defence Force, boarded the ship, which was returned to Australia to face charges.[72] The skipper of the *South Tomi* was fined $136,000, the illegal catch of 116t of toothfish was sold for $1.4m and the boat may be forfeited.[73] In February 2002 a surface combatant and tanker apprehended two suspected illegal fishing vessels with about 200t of alleged illegal catch valued at $2.5m.[74]

Notwithstanding these successes, the conclusions reached by Paul Dibb in his 1986 *Review* are still relevant:

> Our vast coastline, the proximity to it of the island chain, the location of our resource zones, the remoteness of our island territories, the patterns of our coastal and international shipping, and the distances to be covered in the defence of these interests, present formidable surveillance and operational response problems.[75]

Legislation

Hugh Smith has noted that when undertaking law enforcement activities, members of the ADF are sworn as "officers" under the relevant Acts, although the procedures for authorising such "officers" under each Act varies, as do the legal powers granted under each Act. The patrol boats will generally have an AFMA officer on board, as this means that the Navy is not responsible for collecting evidence and for appearing in court.[76] The patrol boats are also good at placing boarding parties on foreign fishing vessels and also escorting them back to an Australian port for processing.

Legislative changes were made in 1999 to implement the full extent of enforcement powers available under UNCLOS. These changes allowed the commander of a Commonwealth vessel to request the boarding of a suspect ship anywhere within Australia's marine jurisdiction - previously this could only be done within the 12nm territorial sea. Upon boarding the suspect ship, powers to detain and use lawful levels of force are allowed, as well as powers to return the ship to Australia and to destroy it.[77]

COASTWATCH AND COASTAL SURVEILLANCE

As Eric Grove has noted, countries need the means to assert their rights and carry out their duties in their territorial seas and their EEZ.[78] In the case of Australia, Coastwatch carries out the coordination of the surveillance aspects of coastal surveillance, while the Navy is predominant in providing the response force and undertaking the interceptions of intruders.

Previous Administrative Arrangements

The current civil surveillance program has its antecedents in the late 1960s, when under the *Fisheries Act 1968*, Australia declared a 12nm fishing zone (DFZ). However the Department of Primary Industry, which had responsibility for enforcing the DFZ, did not have the capacity to do so. On 29 May 1968 the Minister for

Defence announced in Parliament that the Navy would assume the task of civil surveillance of the DFZ, with assistance from the RAAF. It was envisaged that both the Navy and Air Force would patrol the DFZ with the Navy's patrol boats assisting with the surveillance and acting as the response force.[79]

During 1973-74 the activities of foreign fishing vessels in Australian waters increased and traditional Indonesian fishermen were making regular landings on the Kimberley coast area increasing the chances of a quarantine outbreak. In April 1976 the first of the Vietnamese boat people arrived in Darwin. As a reaction to these events the Government moved closer to a coordinated civil surveillance effort by creating the Australian Government Surveillance Organisation in the Department of Transport with responsibility for coastal surveillance.[80]

In August 1977 the Australian Government announced its intention to declare a 200nm AFZ.[81] A committee reviewing the implications of the 200nm AFZ recommended:

> that the objective of surveillance, detection and enforcement should combine deterrence of breaches of customs, health, immigration and fisheries laws with the highest practicable protection of national quarantine interests.[82]

In the early 1980s a number of reviews and a Royal Commission criticised the ability of the coastal surveillance program to detect the entry of illicit drugs into Australia, and the recommendations of the 1983 Beazley Report refocusing coastal surveillance to counter drug smuggling were accepted by the Government.[83] (However one recommendation that the surveillance and interception roles should be combined in one agency was rejected.)[84] A Coastal Protection Unit was set up in the Australian Federal Police for managing and coordinating the overall national coastal surveillance and protection system.[85] The mid to late 1980s saw a concern over increasing numbers of foreign fishing vessels entering the AFZ and of suspect illegal entry vessels carrying suspect unlawful non-citizens, and responsibility for coastal surveillance was moved to the Australian Customs Service.[86]

Over a period of nearly 20 years, the focus of civil surveillance had changed in emphasis from fisheries, to quarantine issues, to drug smuggling, and then back to illegal fishing and immigration (border management). This is also reflected by which department/agency

was given responsibility for coordinating the coastal surveillance effort: Department of Transport, the Australian Federal Police, and finally to Customs.[87]

Coastwatch was created in 1988 as a part of Customs, responsible for the provision of Australia's civil coastal and offshore surveillance and response service, comprising patrolling, detection, identification, surveillance, interception, and deterrence of targets of interest to Coastwatch's client agencies. Coastwatch was established as an administrative arrangement rather than under legislation and delivers its services in accordance with the legislation of its client agencies. Importantly, Coastwatch relies on these agencies, particularly Customs, Defence and external contractors to deliver its services.[88] The ADF provides most of the maritime response capability in offshore areas and carries out surveillance operations.[89]

Roles and Responsibilities

Coastwatch covers the Australian coastline, the offshore islands of Cocos, Christmas and Norfolk, the AFZ and the EEZ; an area of 37,000km of coastline and an offshore maritime zone of 9 million km^2. It focuses on: drug importation, illegal immigration, foreign fishing activity, quarantine breaches, flora/fauna smuggling, national and marine park/wildlife monitoring and protection, environmental protection in coastal/offshore areas, monitoring of historical shipwrecks, and any other breaches of commonwealth or related offences in coastal or offshore areas.[90]

Surveillance Activities

The current Coastwatch surveillance fleet comprises 15 aircraft, eight ocean-going Customs vessels, 15 RAN patrol boats providing 1800 days at sea, RAAF *Orion* aircraft (250 flying hours), and chartered vessels and aircraft. The total operating cost of these platforms is around $165 million pa, of which $117 million is Defence costs.[91] In 1999-00 Coastwatch covered an estimated 90 million km^2, utilising 250 RAAF flying hours, 16,000 flying hours from contractor aircraft, about 1800 Navy patrol boat days and about 800 custom vessel days at sea.[92]

Table 3 details the scope of Coast-watch's surveillance activities. Data in the table is drawn from a range of sources that should be in agreement, but unfortunately are not. Nevertheless the information is reasonably accurate in what it indicates. Perhaps of greater interest

in demonstrating the scope of the surveillance task is the data concerning incidents. These relate to sightings that are reported back to the client agency, either for further action or for information.

Table 3 - Coastwatch Surveillance Activities

Year	Illegal Fishing		Illegal Immigration		Incidents	
	Boardings	**Apprehensions**	**Boats**	**People**	**Major** (a)	**Minor** (b)
1988-89	232	41	2		71	
1989-90	334	46	3	243	112	49
1990-91	378	59	5	172	65	35
1991-92	247	15	3	81	84	62
1992-93	289	31	4	198	127	57
1993-94	231	31	6	200	155	446
1994-95	378	129	21	1089	89	687
1995-96	202	68	14	591	95	931
1996-97	289	117	12	365	155	1243
1997-98	not reported	not reported	17	190	129	1118
1998-99	366	55	42	923	161	1202
1999-00	not reported	65	76	4189	222	889
2000-01	243	76	53	4118	not reported	not reported
TOTAL	**3189**	**733**	**258**	**12359**	**1465**	**6719**

Sources: Australian Customs Service, *Submission to JCPAA Inquiry into Coastwatch*, p. 19. Defence Annual Reports, AGPS, Canberra, various. Department of Prime Minister and Cabinet, *Report of the Prime Minister's Coastal Surveillance Task Force*, Canberra, 1999, Appendix B-1. Australian Customs Service, *Annual Report 1999-2000*, Figure 21.

Notes: (a) a major incident is reported to a client agency and requires a response
(b) a minor incident is reported to a client agency but no further action is ` required

Clearly illegal immigration by boat is becoming the major concern of coastal surveillance, where the increasing number of boats that have to be boarded by the Navy (or Customs) is placing pressure on Navy patrol boat numbers.

Concept of Operations

The aerial surveillance program is made up of strategic and tactical surveillance (80/20 respectively). Strategic surveillance consumes the majority of the flying program and is based on the general

surveillance requirements of client agencies. Tactical surveillance is a mission in response to specific operational intelligence; in essence it is a response to a sighting. However, without prior intelligence, the chances of interception are low.[93] In the early 1990s the concept of operations adopted by Coastwatch was:

- medium range inshore visual surveillance capability,
- medium range electronic surveillance capability and able to provide operational support for response purposes; and
- long range offshore, all weather electronic surveillance capability, operating out to the limits of the AFZ and including the offshore territories.[94]

This concept of operations remains current with some enhancements introduced in 1999 and is outlined below:[95]

Task One - Visual Surveillance. This task is for visual surveillance from Exmouth in the west, north about, to Brisbane in the east, with visual searches of offshore islands and reefs. Six Pilatus Britten Norman Islander aircraft and one Aero Commander AC500 Shrike aircraft are used for this task, with the islander aircraft operating out of Broome (2), Darwin (1), Cairns (1) and Horn Island (2) in the Torres Strait; the Aero Commander operates out of Broome.

Task Two - Offshore Electronic Surveillance. This task is for electronic surveillance up to 600nm off the Australian coast, although the requirement is for 300nm. Three Bombardier de Havilland Dash 8 - Series 200 aircraft, fitted with digital radar and opto-electronic sensors, undertake this task and operate out of Broome, Darwin and Cairns.

Task Three - Combined Electronic and Visual Surveillance. This task is for combined electronic and visual surveillance (day and night) from Perth in the west, north about, to Sydney in the east. Three Reims F406 aircraft with digital radar and night vision equipment undertake this task, operating out of Broome, Darwin and Cairns.

Task Four - Helicopter Services in the Torres Strait Region. This task is for visual search day and night, as well as the transportation of people and equipment in the Torres Strait and the Cape York Peninsular areas. One Bell Longranger IV helicopter is used, operating out of Thursday Island in the Torres Strait.

Task Five - Offshore Electronic Surveillance. This task commenced in December 2000 and is for electronic surveillance up to 600nm off the Australian coast, although the requirement is for 300nm. Two Bombardier de Havilland Dash 8 - Series 200 aircraft, fitted with digital radar and opto-electronic sensors, undertake this task and operate out of Darwin and Cairns.

Task Six - Twin-engined Helicopter Service in the Torres Strait Region. This task is for visual search and day and night surveillance in the Torres Strait and Cape York Peninsular areas, using a Bell 412 helicopter operating from Thursday Island in the Torres Strait.

The Royal Australian Air Force (RAAF) began providing aerial surveillance support in the late 1960s, at about 150 flying hours pa, and by 1973 this had risen to 800 flying hours. By 1977-78 the RAAF was flying about 3000 hours on coastal surveillance, with 540 hours specifically devoted to customs tasks. RAAF flying hours were reduced in mid 1991 and contract aircraft filled the surveillance requirement. Currently the RAAF provides about 1200 hours of ocean surveillance and 250 hours of EEZ surveillance in the Southern Ocean. The annual 250 flying hours equates to two missions per month.[96]

One reason for conducting electronic surveillance out to 600nm from the Australian coastline is to allow enough time for a ship to intercept the intruder; Anthony Bergin notes that it can take up to 30 hours to arrange a response.[97]

PROTECTING THE NATIONAL INTEREST

The importance of territorial sovereignty to a State as an aspect of its national interests, and the additional economic importance of the EEZ to Australia in particular seems obvious.

Given the apparent difficulties Australia has in determining its national interests, and the competing demands of individual Government agencies in this area, this section will briefly outline these differing policy determinants.

Australia's Oceans Policy

Australia's Oceans Policy, released in December 1998 by Environment Australia, is a multi-Government, multi-agency policy for the management and conservation of Australia's oceans and

marine life, based on the ecologically sustainable development of the oceans. The broad goals of *Australia's Oceans Policy* are:

- To exercise and protect Australia's rights and jurisdiction over offshore areas, including offshore resources.
- To meet Australia's international obligations under the United Nations Convention on the Law of the Sea and other international treaties.
- To understand and protect Australia's marine biological diversity, the ocean environment and its resources, and ensure ocean uses are ecologically sustainable.
- To promote ecologically sustainable economic development and job creation.
- To establish integrated oceans planning and management arrangements.
- To accommodate community needs and aspirations.
- To improve our expertise and capabilities in ocean-related management, science, technology and engineering.
- To identify and protect our natural and cultural marine heritage.
- To promote public awareness and understanding.[98]

The first goal of *Australia's Oceans Policy* is the major consideration of this study and there are a range of measures relating to surveillance and enforcement:

> Effective surveillance and enforcement within Australian maritime jurisdiction is fundamental to protecting our national interests and the Government will continue its assertion of our sovereign interests in this area.[99]

Two challenges in surveillance and enforcement are noted: ensuring there is an effective and efficient surveillance capacity and effective enforcement of national legislation throughout Australia's marine jurisdictions. With respect to the Navy, it is to contribute fully to the national Coastal Surveillance Program managed by Coastwatch. Furthermore, the Navy is also to contribute fully to fisheries law enforcement activities, particularly in Australia's north and northwest but also within the EEZ of Australia's offshore territories.[100]

Military Threat Levels

The linkage of these maritime protection issues to Defence comes through the development of the concepts of the levels of military threat that might face Australia; their importance is related to constabulary operations that will be considered in the next chapter.

In the early 1980s, the Joint Committee on Foreign Affairs and Defence (JCFAD) placed on the public record the unclassified elements of the defence threat methodology. Four levels of threat that could face Australia were identified: global conflict, the invasion of Australia, intermediate-level threats to Australia and low-level contingencies.[101]

The most relevant possible low-level threats were:

- harassment of shipping, fishing activities, and offshore exploration and exploitation;
- military support for the illegal exploitation of offshore resources;
- the planned introduction of exotic diseases or the support of illegal migrants or drug-runners; and
- large-scale but non-violent intrusions into Australia's EEZ for the purpose of poaching scarce resources.[102]

The most relevant intermediate level threats were:

- limited lodgements on Australian offshore islands and territories as for example the Cocos Islands, and Australian territory in Antarctica;
- blockade of Australian ports including by the relatively economical device of laying mines; and
- disruption of shipping.[103]

The Committee noted that an effective deterrent to low-level threats included an effective civil and military surveillance capability integrated under central control, and which has access to suitable reaction forces. It also noted that the existing arrangements for coastal surveillance needed to be assessed and raised the issue of whether greater deterrence could be achieved if this responsibility were allocated to the ADF. For intermediate level threats, the Committee noted that an effective deterrent to such threats was similar to that necessary to deter an invasion. Australia would need

to be able to destroy attacking forces while moving to or from Australia and that an effective and integrated surveillance system was required so that any hostile action could be detected at an early stage.[104]

Paul Dibb in his 1986 *Review of Australia's defence capabilities* introduced the concept of escalated low-level threats, which limited the possible escalation to the military capabilities available to a regional aggressor. The concept of escalated low-level threat covers all low-level and intermediate level threats below that of a lodgement on Australian soil. He considered the relevant threats to be the:

- harassment of fishing vessels and coastal shipping;
- terrorist type raids on offshore oil and gas rigs;
- covert mining;
- raids on remote and isolated northern communities and offshore islands;
- attacks on coastal shipping;
- mining in northern waters; and
- attacks on offshore territories.[105]

The significance of these planning concepts short of invasion are that they recognise that an aggressor may use military force in support of political objectives or to pressure Australia into making political concessions.[106] As will be shown later in this study, the military forces required responding to these military threats are similar to that required in response to non-military threats.

Australian Military Strategy

In 1997 *Australia's Strategic Policy* was released outlining four scenarios for defence planning. The priority for defence planning was for defeating attacks on Australia, where Australia must have the military capability to prevent an enemy attack in the maritime approaches, gaining a foothold on Australian territory or extracting concessions through the use of military force. This included the offshore territories, particularly Christmas and Cocos Islands, while it was acknowledged that the Antarctic was effectively demilitarised. While the likelihood of an attack on Australia was considered very low, it is the basis for defence planning and development of the ADF force structure.[107]

Australia's security from attack depends on the regional strategic situation, so under defending Australia's regional interests, the defence posture must also include the means to influence the strategic affairs in the region. This includes extensive dialogue, military-to-military talks, visits, exchanges and ship visits.[108]

Australia also has global interest under its foreign policy objective of being a good international citizen. The major defence contribution to supporting global interests is a contribution to humanitarian and peacekeeping operations.[109]

The final planning scenario was activities that assisted the Australian community. It was noted that it was rare for defence capabilities to be more effective than civilian alternatives, and that such support diverted Defence from its core business with two exception: counter-terrorist operations and civil surveillance and response. Civil surveillance also had a strategic defence purpose in that it provided a continuous defence presence in the Australian northern maritime approaches.[110]

These planning scenarios have been brought together under the classified Australian Military Strategy (AMS), which is an over-arching plan with five subsidiary tasks: defeating attacks on Australia, defending regional interests, defence of global interests, protection of national interests and shaping the strategic environment.[111] The aim of the AMS is to shape the strategic environment, conduct military support operations and provide combat ready forces to meet the range of contingencies that might threaten Australia or its national interests.[112]

Defence 2000

The latest Defence White Paper, *Defence 2000: Our Future Defence Force* was released in December 2000. It noted that armed force is still a part of international affairs but recognised that there is an increase in operations other than war that will impact on the structure and operations of the ADF (particularly those tasks that fit under protecting national interests in the AMS).[113] *Defence 2000* appears to have contracted the AMS to four major tasks: defending Australia, contributing to the security of the immediate neighbourhood, supporting wider interests, and peacetime national tasks. The principles relevant to defending Australia include the notion of self-reliance, the control of the air and sea approaches to

Australia through a maritime strategy, and the use of proactive operations against a hostile force as far from Australian shores as possible. Contributing to the security of the immediate neighbourhood involves the ability to work with regional neighbours in the unlikely event they are attacked, and also to participate in UN-sanctioned operations. Supporting wider interests involves the ability to contribute to international coalitions that might operate across the conflict spectrum (high intensity conflict to disaster relief). Peacetime national tasks are those regular or occasional tasks in support of wider national interests. They include counter-terrorism response; training, coordination and assistance for civil emergencies; search and rescue, navigational and hydrographic work, fisheries management and border protection.[114]

Defence 2000 has made other changes to security interests and priorities. In priority order, defence strategy will be based on:

- interests and objectives closest to Australia (DAA and the direct approaches);
- security in Australia's immediate neighbourhood (Indonesia, East Timor, PNG, NZ and the Southwest Pacific);
- stability and cooperation in Southeast Asia;
- contribute to strategic stability in the wider Asia-Pacific region; and
- contribute to the international community, especially the UN.[115]

Maritime forces are amongst the most active and effective capabilities available in protecting national interests. The RAN Hydrographer ensures safe navigation through hydrographic surveys and the production of charts, while the remainder of the Fleet provides patrol, surveillance and response forces to ensure that Australian sovereignty, resource zones and other environmental and economic interests are protected.[116]

However, while protection of national interests is stated as a priority, it is not clear that the resources devoted to the task are adequate. This will be considered in the following chapters.

Policy Integration

An examination of the major Australian policy documents that relate to the national interest shows both an integration problem and a

narrow focus. Firstly, there remains a gap in the development of a holistic approach to national security interests. While there is a growing importance on environmental issues, they have yet to be linked to economic interests in a meaningful. *Australia's Oceans Policy* goes someway towards the management of Australia's marine jurisdictions but the linkage to foreign economic policy is yet to be made.

The incorporation of economic and environmental issues into defence policy essentially remains non-existent, as an example, Sam Bateman has raised the policy failure of *Defence 2000* and *Australia's Oceans Policy*.[117] The defence-related material in *Australia's Oceans Policy* was based on *Australia's Strategic Planning* and extensive consultation with Defence, but few of the stated defence obligations in *Australia's Oceans Policy* have appeared in *Defence 2000*. While *Defence 2000* states the importance of operations other than war, and in particular notes the "threats" that have been outlined earlier in this chapter, it makes no attempt to integrate then into an overall defence strategy. Moreover, there is no consideration of the adequacy, or otherwise, of the Defence contribution to these tasks.

CHAPTER TWO
Navy Constabulary Operations

This chapter is concerned with Navy constabulary operations in the EEZ. A number of disparate but interconnected themes are drawn together to explain the rationale for the Navy, how it operates and why it is structured the way it is.

EVOLUTION OF DEFENCE POLICY

Alan Dupont in his monograph on Australian threat perceptions summarised the central defence concerns over time:

- In the colonial period, there was a fear that Britain's European competitors could, if they gained territory in the Southwest Pacific, impact on British supremacy in the region and thereby threaten Australia's security.
- From Federation in 1901 until World War II, the fear was that European and Asian countries could carry out raids or make lodgements on Australia's northern coast, as well as threaten Australia's trade and sea lines of communication. The object of these attacks would be to extract territorial, commercial, financial or political concessions from Australia.
- From the end of WWII, concern over a resurgent Japan and a communist subversive threat emanating from China.
- From the late 1960s, an increasing concern with lower level threats short of invasion.[118]

It is the last two concerns that will be considered further, predominantly due to their impact on Navy force structure planning and defence planning for the protection of national interests.

Forward Defence

Australia had a long history of integrating into other coalition forces under the concept of forward defence. There was a two-fold aim: to protect Australia by fighting a threat as far away from Australia as possible, but perhaps more significantly, to fight with allies on the assumption they would come to Australia's assistance if she were ever threatened. Australian forces fought in the Korean War, were permanently deployed in Malaya from the late 1950s, fought in Borneo during Confrontation with Indonesia in the early 1960s,

fought in South Vietnam from the early 1960s until 1972, and were based in New Guinea.

Forward defence enabled Australia to avoid the question of what were Australia's vital interests and what forces were needed to protect them. The long-term consequences of Australian involvement in the Vietnam War, and Nixon's 1969 Guam Doctrine where allies were expected to do more for their own defence, forced a reorientation in Australian defence policy. However this reorientation was hampered by two factors: by legacy combat systems that were inappropriate for territorial defence, and a Service attitude that was still based on coalition operations rather than joint operations.[119]

In the post-World War II period, naval force structure planning was based on the purchase of two aircraft carriers with a subsequent shift in operational role to anti-submarine warfare. The rationale for purchasing aircraft carriers was because naval air power was now considered an essential part of sea power and that a balanced navy must have carriers. The move to anti-submarine warfare was based on Australia's vulnerability to trade disruption, the growing threat of the USSR, and a reassessment of the submarine threat.[120] The Radford-Collins Naval Control of Shipping Agreement was signed in 1951 as a service-to-service arrangement between the RAN and the USN, and is assumed to cover such issues as escort, convoy routing and diversion of traffic; reconnaissance; local defence anti-submarine warfare and search and rescue.[121] Jack McCaffrie makes the point that the establishment of the Fleet Air Arm (FAA) in 1948, based on a two-carrier force led to distortions in the overall RAN force structure. The resource constraints facing Defence led to the late introduction of the submarine arm, limited capability surface combatants until the arrival of the DDGs in the early 1960s and cursory attention given to mine countermeasures and amphibious operations until the 1980s.[122]

Defence Self-Reliance

From the late 1960s there was a recognition by defence planners that a more self-reliant defence posture was necessary and subsequent defence White Papers in 1972 and 1976 began promoting the theme of a greater Australian responsibility for its own defence. However the defence debate in the 1970s and 1980s became bogged down in

arguments over the levels of threat facing Australia and the appropriate force structure necessary to counter those threats.

One of the fundamental planning factors in Australian defence policy is the concept of warning time. This concept originated in the early 1970s as Australia moved towards developing its more self-reliant defence posture, and is based on assessing the time it would take for a military threat to be developed against Australia. Paul Dibb noted that while there was no identifiable direct military threat to Australia and that it would take up to 10 years and massive support for such a capability to develop in the region, there were possibilities of lower levels of conflict that could arise with shorter warning times.[123] As Australia faced no direct threat, defence planning was to be based on current and proposed regional military capabilities; that is, Australia would maintain a technological edge in military equipment compared to the region.[124]

The defence policy proposed by Dibb was a strategy of denial that was, in essence, a defensive policy that would seek to deny any enemy the ability to cross the sea-air gap surrounding Australia and to prevent the landing of any forces on Australian territory. The denial strategy would involve a series of layered defences through which an enemy would have to pass before reaching Australia:

- Intelligence and surveillance to know about regional military developments and to detect any threat approaching Australia.
- A maritime force of air and naval assets to destroy an enemy in the sea-air gap; this means a refocusing to the north, and for a higher level of conflict, the ability to strike an adversary's bases and interdicting his lines of supply.
- Defensive capabilities close to Australian shores to prevent enemy operations in our focal areas or shipping lanes or on our territory; this might include surface ships, mine countermeasures capabilities, air defence assets and mobile land forces.
- Highly mobile and dispersed ground forces to deny population centres and military infrastructure if an enemy force landed.[125]

The resulting Defence White Paper *Defence of Australia 1987* adopted most of the recommendations of the *Review*, but adopted the terminology of defence in depth rather than layered defence, and noted that the ADF should be capable of handling low level and

escalated low level contingencies with the force-in-being.[126] The Government did alter the relative priorities for Australia's national interests:

- the defence of Australian territory and society from threat of military attack;
- the protection of Australian interests in the surrounding maritime areas, our island territories, and our proximate ocean areas and focal points;
- the avoidance of global conflict;
- the maintenance of a strong defence relationship with the United States;
- the maintenance of a strong defence relationship with New Zealand;
- the furtherance of a favourable strategic situation in Southeast Asia and the Southwest Pacific;
- the promotion of a sense of strategic community between Australia and its neighbours in our area of primary strategic interest; [and]
- the maintenance of the provisions of the Antarctic Treaty, which ensure that the continent remains dimilitarised.[127]

The first priority drives the development of the force structure of the ADF, while the second emphasises the maritime nature of the threats and national interests facing Australia and the focus is predominantly on the Navy at all relative levels of the conflict spectrum.

Notwithstanding the strategic assessments and White Papers that have been published since the *Defence of Australia 1987*, the basis of defence policy has remained fundamentally similar.

SEA POWER AND MARITIME STRATEGY

Peter Haydon has explained that sea power has two dimensions: the first is largely a function of trade and its protection, while the second concerns the use of naval force to acquire and defend territory, and as a means of increasing a State's influence. He goes on to note that:

> the basic principle of sea power - the ability of a state or group of states to exercise control over the seas and to project power when necessary - has not changed.[128]

In the context of naval strategy, there has been a move away from the concept of command of the sea (where the predominant naval power could conduct any operations it wished while at the same time denying that ability to an adversary), as such command could not be absolute. The concepts of naval strategy were further defined to consider sea control and sea denial (localised or temporary command of the sea), which would allow a state to control the sea at the time and location most important to meet its strategic needs and deny its use to an adversary. Sea control has been the traditional mission of navies and can be considered as actions to ensure that a specific ocean area can be used freely for whatever purpose the State desires. The importance of the concept of sea control is that it applies to sovereignty enforcement and many constabulary tasks. As Peter Haydon emphasises, to be sovereign at sea, a State must be able to control what happens in its seas, whether alone or in conjunction with allies (as part of a coalition).[129]

John Hattendorf has noted that a maritime strategy is the use of national power for enhancing or managing a State's national interests at sea. Maritime strategy includes a range of functions: diplomacy; the safety and defence of merchant shipping at sea; fishing; the exploitation, conservation, regulation and defence of the EEZ; protection of offshore islands; as well as participation in regional and world-wide concerns relating to the use of the sea.[130]

Trinity of Naval Roles

In the 1970s Ken Booth developed the concept of the trinity of naval functions, which outlines the inter-relationship between navies and foreign policy through the use of the sea. The three elements of the trinity are the military, diplomatic and policing roles. Booth noted that States use the sea for three purposes - passage of people and goods, passage of military force for diplomatic purposes or for targets on land or sea, and the exploitation of resources in or under the sea - navies exist as a means to further these ends. The Military Role is the base of the triangle as the essence of all navies is their military character; moreover, it is the ability to threaten or use force that enables the other two roles to occur. The Diplomatic Role is the management of foreign policy short of employing force, while the Policing Role is mainly concerned with extending sovereignty over the state's own maritime frontiers.[131]

The important issue with the conceptualisation developed by Booth is that it is the military role that is paramount in enabling the other two roles to occur. The military capability of a navy enables it to have a policing function within its maritime strategy.[132] Where a high level of military capability does not exist within a navy, or there is no navy, then in all likelihood a coastguard will carry out the policing function in a para-military manner.[133]

Eric Grove noted that while navies are built primarily for war, they find their main utility in peace.[134] Peter Haydon expanded on this issue by noting that historically navies have had a multi-faceted role, but that during the 20th Century the dominant feature of navies was their warfighting capability.[135]

Constabulary Tasks

The *Australian Maritime Doctrine* defines constabulary operations as:

> The use of military forces to uphold a national or international law, in a manner in which minimum violence is only used in enforcement as a last resort and there is some evidence of a breach or intent to defy.[136]

The *Australian Maritime Doctrine* goes on to outline the possible constabulary roles that might face the Navy in the course of its activities; the list starts with roles that require less force, but the level of force increases further down the list.

- environmental and resource management,
- search and rescue,
- hydrography,
- peace building,
- environmental and resource protection,
- quarantine operations,
- prevention of illegal immigration,
- peace keeping,
- defence aid to the civil power (retaking oil rigs etc),
- drug interdiction,
- anti-piracy operations, and
- peace enforcement.[137]

It is clear that many of the roles required to "protect the national interest", particularly with regard to the EEZ fall within the ambit of constabulary operations. A number of these constabulary tasks contained in the *Australian Maritime Doctrine* are outside the scope

of this study - peace building, peace keeping, peace enforcement and anti-piracy operations - are all legitimate roles that would occur in Australia's region but not within Australia's EEZ.

The Navy Mission

Australia has adopted a maritime defence policy that seeks to engage an aggressor in the sea-air gap in the northern approaches. The Navy is, therefore, structured to operate across the conflict spectrum, while meeting the trinity of naval roles. This is reflected in the mission of the RAN, which is to:

- be able to fight and win in the maritime environment as an element of a joint or combined force;
- assist in maintaining Australia's sovereignty; and
- contribute to the security of our region.[138]

It is the second mission with which this study is concerned, but importantly it must be remembered that naval activities in maintaining sovereignty are part of wider naval obligations to the defence of Australia.

NAVY FORCE ELEMENT GROUPS

The concept of a balanced fleet is important when considering the structure, equipment and roles that can be undertaken by the Navy. A balanced fleet is a naval force that can be generated and sustained with a wide range of capabilities, which provide the Government a number of possible options to meet the strategic goals required to meet national security interests. By adopting a balanced fleet approach, the Navy is able to deliver options for the Government in all three roles outlined by Booth and to operate over much of the conflict spectrum. In March 2000, the Navy was reorganised into a Force Element Group structure to ensure that its combat capability is delivered in the most efficient and effective manner possible.

Surface Combatant Force

The Surface Combatant Force comprises the 6 *Adelaide* class guided missile frigates (FFG), and 3 *Anzac* class frigates (FFH) with another five to be delivered by 2005. Three FFGs and four FFHs will be based on each coast, at Fleet Base East (FBE) in Sydney and Fleet Base West (FBW) in Rockingham south of Perth.

The Surface Combatant Force provides the capability to assert sea control, conduct surveillance, maritime patrol and response operations, intelligence collection, counter-insurgency operations, the protection of shipping, offshore territories and assets and operations other than war in support of the Government.[139] The frigates provide the capability for undersea, surface warfare and naval gunfire support; provide a visible and effective patrol and response capability as well as a good long range surveillance capability through embarked helicopters. Both the FFG and FFH are undergoing capability upgrades to improve their warfighting abilities. The FFGs have a range of 4500nm at 20 knots, and the FFHs have range of 6000nm at 18 knots.

Naval Aviation Force

The Naval Aviation Force comprises three types of helicopter to support fleet operations and is based at NAS Nowra near Sydney. There are 12 *Seahawk* helicopters (with another 4 being brought out of reserve) that are embarked on the FFGs (and will be embarked on two of the FFHs). They are an integral component of the ship's weapons systems and provide a surface surveillance and undersea warfare capability (through the use of sonabouys and can carry two torpedoes) and have an operational speed of 250 kph and a range of 690nm. Eleven *Super SeaSprite* helicopters are being purchased for the FFH, where they will provide a longer range undersea warfare and surface warfare capability; they can carry two torpedoes and Penguin anti-ship missiles, and will have an expected operational speed of 240 kph and a range of 625nm.

There are seven *Sea King* helicopters that operate with the amphibious lift and afloat support forces in a utility transport role (they are not armed); they have an operational speed of 230 kph and a range of 730nm.

The Naval Aviation Force is also used extensively for search and rescue both at sea and ashore

Patrol Boat Force

The Patrol Boat Force comprises the 15 *Fremantle* class patrol boats and provides the capability to conduct peacetime surveillance, and maritime patrol and response operations within coastal waters and operations other than war in support of the Government. The patrol boats are Navy's principle contribution to the national task of

fisheries protection and immigration, customs and drug law enforcement operations, but they also meet maritime roles in hostile operations. The patrol boats have a range of 1450nm at 30 knots.

The *Fremantle* class patrol boats are at the end of their operational lives and are in the process of being replaced with a larger and more capable ship, built to a civilian specification and due to come into service from 2004.[140]

Submarine Force

The Submarine Force comprises three *Collins* class submarines with three more *Collins* class submarines being progressively delivered. The submarines are based at FBW but there is the capacity to have two operate from FBE when required.

The Submarine Force provides the capability to conduct covert surveillance and reconnaissance, offensive operations against warships, submarines and merchant shipping, and mining and support to special operations.[141] Surfaced the submarines have a range of 11,500nm at 10 knots, and submerged their range is 400nm at 4 knots.

Afloat Support Force

The Afloat Support Force comprises the auxiliary oiler replenishment (AOR, based at FBE) and the auxiliary oiler (AO, based at FBW) and provides the capability for underway replenishment of fuel, water, stores and ammunition, and strategic bulk fuel transport.[142] The Afloat Support Force is an enabler for the rest of the fleet (except for the submarines) because it increases the reach and endurance of the fleet. The AOR has a range of 8,600nm at 15 knots and the AO has a range of 7,260nm at 15 knots.

Mine Warfare Force

The Mine Warfare Force comprises four *Huon* class coastal minehunters (MHC) with the remaining two to be delivered in 2002, three auxiliary minesweepers (MSA) and two clearance diving teams; all based at *HMAS Waterhen* in Sydney. The Mine Warfare Force provides a capability to conduct mine clearance from beaches, shallow and deep water, route survey and lead through operations, and provision of the ADF capability for mining.[143] The MHCs have a range 1600nm at 12 knots, while the MSAs have a range of 3000nm at 10 knots.

Amphibious Lift Force

The Amphibious Lift Force comprises two amphibious transports (LPA), a landing ship heavy (LSH) and six landing craft heavy (LCH). The LPAs and LSH are based at FBE, while the LCHs operate from HMAS *Cairns* in Queensland. The Amphibious Lift Force provides a capability to conduct amphibious operations, and to support land operations from the sea, provide strategic, operation, tactical and administrative sea transport, and provide support to beach intelligence gathering.[144]

The Amphibious Lift Force plays a major role in peacetime tasking, particularly with peace building, peacekeeping and peace enforcement in the region. The LSH has been heavily involved in truce monitoring operations in Bougainville, while the LPAs were used to evacuate Australian and foreign nations from the Solomon Islands and have also been deployed there as a venue for truce negotiations.[145]

RAN Hydrographic Service

The Hydrographic Service comprises two Hydrographic Ships (which each carry three survey motor boats), four survey motor launches (SMLs) and the Laser Airborne Depth Sounder carried in a Fokker F27-500 aircraft, all operating out of HMAS *Cairns*. The Hydrographic Service not only provides essential military hydrographic information to the fleet but also meets Australia's international obligations to provide safe navigation within Australian marine jurisdictional areas. The SMLs operate in pairs in shallow waters and have a range of 3500nm, while the Hydrographic Ships operate independently and have a range of about 8000nm.

PEACETIME OPERATIONS

The majority of fleet activity is based around peacetime operations, whether it is collective ship training, Australian, joint or multilateral exercises or actual operations. The four examples provided below are based on constabulary operations, but all can also have a warfighting role.

Maritime Patrol and Response

Maritime patrol and response is the *sine qua non* of naval forces. This role applies in both conflict and peace and is based on the notion of undertaking general maritime surveillance to enforce

sovereignty, while retaining the ability to respond to any threat. The surface fleet (both the Surface Combatant Force and the Patrol Boat Force) undertakes the maritime patrol and response role.

In the case of the surface combatants, as they are equipped for higher-level warfighting activities, their general surveillance is a by-product of their training and exercising in Australian waters. Although given their range, they are allocated specific tasks where their unique capabilities provide the only method of response.

Given the fundamental nature of the maritime patrol and response role to the Navy, a background to the force structure decisions relating to the surface combatants and the historical allocation of a coastal surveillance task to the patrol boat force is provided.

Evolution of the Surface Fleet

The 1976 Defence White Paper *Australian Defence* set the size of Navy's surface fleet at 12 ships, while deferring decisions on the replacement of the aircraft carrier.[146] In 1982 the Government decided not to replace the aircraft carrier and the Navy was forced to rethink the way it was structured and the roles it could undertake. In the mid-1980s the Navy developed the concept of a three-tiered surface combatant force:

- Tier 1 would be higher capability ships (such as the DDG/FFG), which were suitable for blue-water operations;
- Tier 2 would be lesser capable ships suitable for operations in the EEZ and proximate waters and which could be used for dealing with credible short warning contingencies; and
- Tier 3 would be patrol boats suitable for coastal operations with primarily defensive capabilities.

Paul Dibb in his 1986 *Review of Australia's defence capabilities* expanded upon the work of the Navy. He noted that in a range of low-level contingencies, surface vessels could provide a visible and continuous presence for protection and enforcement of sovereignty, including interception and arrest. He assessed that a significant presence may be required at five offshore focal points: Dampier, the Timor Sea, the Arafura Sea and the Torres Strait, Christmas Island, and in the Indian Ocean approaches. Two to three vessels would be required in each area to deter or counter any harassment of fisheries activity, offshore installations or coastal shipping. Considering

maintenance requirements, transit time from northern ports and to have a small level of reserves, he assessed that between 16-24 vessels would be required. He thought that between six and nine ships should be higher capability destroyers, with lesser capability ships operating in close in relatively protected coastal waters. He also identified the need for a light patrol frigate to provide for an effective and sustained presence in the focal maritime areas, more exposed or distant waters (including Bass Strait), and at outer limits of the AFZ and the EEZ.[147]

Defence of Australia 1987 proposed a major surface combatant force of 16-17 ships, comprising three guided missile destroyers (DDG), six guided missile frigates (FFG) and eight new frigates (FFH). Importantly the FFH was a higher-level capability ship than envisaged by Dibb for his light patrol frigate.[148]

The 1991 *Force Structure Review* modified the three-tiered structure into a two-tiered structure in recognition that the FFH was not a second tier capability. A 28 ship surface force was envisaged for 2010 comprising 16 destroyer/frigates and 12 offshore patrol vessels. The numbers of surface ships were calculated as follows: using pairs of major surface combatants to patrol the approaches between Derby and the Torres Strait would require eight ships, while simultaneous patrols off the northeast coast and the North West Cape would require another two ships. To maintain these ten ships on station, 16 ships would be required. For the lower-tiered capability, the protection of Christmas and Cocos Island and the offshore resource platforms would require four ships, with the possibility of convoy operations requiring another four ships. To maintain these eight ships on task, 12 offshore patrol vessels would be required from 2004, which would have better sea keeping and be more heavily armed than the *Fremantle* class patrol boats.[149]

In 1994, *Defending Australia* set the size of the major surface combatant force going into the 21st Century at 14 ships, with six FFGs and eight FFHs. The *Fremantle* class patrol boats would also be replaced with an enhanced offshore patrol vessel that was being developed in conjunction with Malaysia.[150] However, when Malaysia decided on a German designed boat rather than the Australian design, the OPV did not eventuate, and the *Fremantle* class patrol boats remained in commission.

Defence 2000 noted that the FFGs were about to undergo an upgrade to their surface and undersea warfare capabilities and that the FFH would be upgraded to provide a reasonable level of anti-ship missile defence that included the fitting of the Harpoon missile. From 2013, the six FFGs would be replaced with three air warfare destroyers.[151] These decisions put the size of the destroyer/frigate force in the second decade of the 21st century at 11 ships.[152] The *Fremantle* class patrol boats were also to be replaced.

Patrol Boat Tasking

The dedicated use of the patrol boats to coastal surveillance occurred in 1968, and while no one at the time believed this tasking was a Navy responsibility, it has endured and become the primary role of the Patrol Boat Force. During the early 1970s the Navy began relocating its patrol boats north, with three boats transferred from Sydney to Cairns in 1971 and a fourth boat moved to Darwin in 1974. The seven patrol boats based in the north were heavily committed to the protection of Australian territorial waters and the contiguous fishing and resource zones. In 1973 the Minister for Defence emphasised the importance of maritime surveillance and the role of the Navy in coping with intrusions into territorial waters and fishing and resource zones.[153]

Aspects of the 1976 Defence White Paper *Australian Defence* were influenced by the implications of the law of the sea negotiations and there was recognition of an increased requirement for surveillance, patrol and policing of national waters and maritime resources zone, and to demonstrate sovereignty. *Australian Defence* noted that the patrol boats provided a capability for patrol, apprehension, intelligence, coastwatching, sovereignty visits, survey and law enforcement support (customs, fisheries, health); they were also used for search and rescue, fleet support, hydrographic survey and reserve training. Seven of the 12 patrol boats were based in Darwin and Cairns for defence and civil surveillance and patrol. The decision was taken that the Government would acquire 15 new patrol boats to enter service between 1979-84.[154]

In 1976, the Navy was given responsibility for the protection of the offshore oil platforms in the Bass Strait, which is a part of Australia's territorial sea.[155] While the offshore oil installations are vulnerable to sabotage, extortion or terrorism, the most relevant

issue is actually a safety at sea issue, to ensure that ships do not collide with the rigs.

To better meet the surveillance and apprehension commitments in northern area of Australia, the patrol boats based in Sydney and Perth were relocated to Darwin in late 2001. This removes the long transit times to their patrol areas, meaning more time is available on task. Ten patrol boats are based in Darwin and five in Cairns.

The patrol boat force provides 1800 days at sea to Coastwatch for national surveillance and during 1999-2000 there was a reorientation of patrol boat tasking from fisheries management to immigration response.[156]

Mainland Fisheries

The major contribution of the Patrol Boat Force to the protection of national interests is assisting AFMA with the fisheries compliance program. Under the program there are three considerations: domestic licensed vessels, foreign licensed vessels, and unlicensed vessels. Surveillance in the AFZ is to monitor both licensed and unlicensed (illegal) fishing activity. Surveillance of licensed foreign vessels is relatively simple as they are known, are required to report their positions regularly and are subject to pre and post fishing inspections in port. However, what is also required is the ability to respond at sea to issues arising from the surveillance. Licensed foreign fishing vessels can be inspected at sea but the major concern is an adequate at sea response for the problem of illegal fishing.[157]

Several hundred Japanese fishing vessels are permitted to fish in areas of the AFZ or use Australian ports. The size of the Japanese fishing fleet impacts on the fishing compliance program as they need to be tracked and inspected. As noted earlier, infringement of Australia's northern AFZ is by Indonesian artisanal fishermen. Suspicion that these fishermen are moving beyond artisanal fishing to commercial fishing is reflected in the changes in technology of their fishing vessels. Over past five years they have progressed from sail powered to motorised, from navigation by the stars to GPS and from day to night activities.[158]

Table 4 outlining the boarding and apprehension of illegal fishing vessels reflects the workload placed on the Navy patrol boats both in an interception role and then in an enforcement role.

Table 4 - Navy Illegal Fishing Interceptions

Year	Boardings	Apprehensions
1988-89	232	41
1989-90	334	46
1990-91	378	59
1991-92	247	15
1992-93	289	31
1993-94	231	31
1994-95	378	129
1995-96	202	68
1996-97	289	117
1997-98	not reported	not reported
1998-99	366	55
1999-00	not reported	65
2000-01	243	76
TOTAL	**3189**	**733**

Source: Department of Defence, *Defence Reports/Defence Annual Reports*, AGPS, Canberra, various

It is important to note that if a patrol boat has apprehended a ship, it cannot easily continue in an interception role.

Offshore Fisheries

Each of Australia's offshore territories also has an EEZ that mist be monitored and enforced. Little is known about some of the fish stocks in these fisheries, but some fisheries are subject to foreign fishing in their vicinity.

- The Norfolk Island Fishery is about 1500km east of Brisbane, and Australia exercises control over the 200nm EEZ. There is no current fish stock assessment and while Japanese fishery vessels have fished in the area since the 1950s but they have been excluded from the fishery since 1997. A 30-54nm area around Norfolk Island is reserved solely for use of Islanders and exploratory fishing in the outer area of the AFZ is subject to strict catch and operational limits. Importantly, the remoteness of the waters makes surveillance and enforcement of the EEZ difficult.[159]

- The Christmas Island Fishery is about 2800km west of Darwin. The EEZ has been modified as Java (Indonesia) is less than 200nm to the north, the northern area of the zone has been narrowed where it abuts the Indonesian zone. Reef fish are regarded as being fully fished, while pelagic stocks have not been assessed but are regarded as being lightly fished - but there is evidence of increased fishing activities in the wider Indian Ocean that could impact on the fishery. The Cocos (Keeling) Islands Fishery is about 3700km west of Darwin. Fishing is artisanal or recreational and it is thought that some species are heavily fished. There appears to be limited opportunities for commercial fishing, although deep water trawling for tuna may affect the fishery.[160] Australia has intercepted both Indonesian and Taiwanese fishing vessels in the AFZ adjacent to these two islands.[161]

The distance of all these fisheries from the Australian mainland makes the surveillance, but more importantly, the interception of any intruder problematic, as the intruder would have time to leave the area before interception occurs.

The Southern Ocean fisheries are a unique problem given their distance from Australia and the environmental conditions in those areas.

- The area of the Antarctic continent is about 24 million km^2 and the Australian Antarctic Territory (ATT) comprises about 42% of the landmass. The 200nm EEZ extending from the AAT is not included as part of the AFZ, although the regulations flowing from the *Fisheries Management Act 1991* apply Australian citizens and companies. Foreign vessels in the AAT EEZ are exempt from Australian fisheries regulations, but come under Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). There has been little commercial fishing in this area as it is a difficult fishing environment.[162]
- The Macquarie Island Fishery is about 1500km south of Hobart. Waters within 3nm are under the jurisdiction of Tasmania, with the AFZ of 3nm to 200nm under the jurisdiction of AFMA. The fishery was established as a developmental fishery in 1996 with a precautionary catch limit applied to the Patagonian toothfish with access restricted to one boat. There has been no direct evidence of illegal fishing in this area. While this fishery is outside the

jurisdiction of CCAMLR, AFMA plans to manage it in accord with CCALMR arrangements.[163]

- The Heard Island and McDonald Islands are located in the southern Indian Ocean about 4000km southwest of Perth. Commercial fishing is prohibited within the 12nm territorial waters, while delineated areas of the AFZ (12nm and 200nm) are managed separately by AFMA and CCAMLR. The fishery was surveyed in 1987, and between 1990-93 to determine appropriate fishing catches, and only two Australian fishing operators are allowed to fish in this area. The area is regarded as fully fished with an allowable catch in 1999 of 3690t of Patagonian toothfish and 1160t of mackeral icefish. The fishery suffers from illegal fishing, where it has been estimated that between 10000-18000t of Patagonian toothfish were taken in 1997 and up to 3500t was taken in 1998.[164]

Importantly Coastwatch can only provide limited coverage of the far southern oceans and the AAT; RAAF aircraft patrol this area although operations in this environment are difficult.[165] In October 1997 and February 1998, the surface combatants with afloat support were sent 2200nm from FBW into the Heard Island and McDonald Island Fishery to monitor illegal fishing in the AFZ and apprehended vessels illegally fishing for the Patagonian toothfish (at an estimated cost of $13-15 million).[166] During 1998-99, AFMA used the Australian Maritime Safety Authority (AMSA) vessel *Cape Grafton* for civil surveillance in these waters, conducting a number of trips (at an estimated cost of $4.2 million pa).[167]

The range of the patrol boats is insufficient to patrol the offshore fishing zones, so this task is either allocated to the surface combatants (with afloat support) or contracted to civilian ships. While a civilian charter would seem preferable to using an expensive to operate and maintain warship, only a warship can provide armed force to deter or stop illegal activity.

Protection of Oil and Gas Installations

The Gippsland Basin in Bass Strait is between 20-80km offshore of Victoria and there are a total of 20 oil and gas producing fields. From 1975 a detachment of Grumman Tracker aircraft from the aircraft carrier *HMAS Melbourne* were based in Broome to assist aerial surveillance in the north, and this ceased in December 1980

when contractor aircraft took over the role. Tracker aircraft had also been involved in surveillance of the Bass Strait oil rigs from the late 1970s but this ceased on 31 December 1983 with the demise of the Navy fixed-wing aircraft and the assumption that civilian radar coverage would assist in managing the oil rig safety zone.[168] In the late 1970s three of the 12 patrol boats were devoted to continuous surveillance of the Bass Strait oil rigs. In the early 1980s, patrolling in Bass Strait had been reduced to one patrol boat on continuous operations in the area. By the mid 1980s the commitment was reduced from a continuous presence to a program of not less than 33 ship visits annually, with the purpose of warning off shipping that might encroach the oil platform safety area.[169] This ranges from 500 to 700 patrol boat days per year.

The Carnarvon Basin in the North West Shelf is between 125-150km northwest of Dampier in Western Australia and there are seven oil and gas producing fields.[170] There is no specific mention in public Defence documents of patrol boat visits to the North-West Shelf. The move of the patrol boats to northern bases would impact slightly on patrolling the North West Shelf, as the boats have a longer transit time from Darwin than if they were operating out of FBW.

Australia and Indonesia signed a treaty on 11 December 1989 to enable petroleum exploration and development in the Timor Gap. With the independence of East Timor from Indonesia in 1999, Australia recently renegotiated the treaty with East Timor splitting revenue 90/10 between East Timor and Australia. While Indonesia and Australia had agreed to complementary naval patrols in the area, with East Timor's independence, Australia would have to assume sole responsibility for security in the zone.

Current patrol boat operations with the oil and gas installations are predominantly with those located in Bass Strait and are concerned with safety of navigation issues. However, in the future patrol boat visits may be required to all oil and gas installations as a security measure to protect the rigs from attack. Such attacks could take the form of foreign control of a rig for its resources, or to deny Australia access to its resources. Any attempt to damage or destroy the rigs could have a possible environmental catastrophe impact.

Border Management

The legislation governing migration to Australia is the *Migration Act* 1958 and associated Regulations. Importantly, under the Act an authorised officer is only able to act on illegal immigration within the migration zone of 3nm (ie Australia's internal waters).[171]

There are two types of illegal immigration by sea. The first type is overt, where boats land at Christmas Island or Ashmore Reef (320km north of Western Australia and 160km from Indonesia). Interception off Ashmore Reef often means that the patrol boats have to "rescue" the illegal immigrants, as there are no facilities on the reef. The illegal immigrants are usually from the Middle East and are intent on claiming refugee status. The second type is covert where boats try to land undetected on the Australian mainland, and are predominantly Chinese.[172]

Table 5 - Interception of Illegal Immigrants

Year	Boats	Boat Arrivals
1988-89	2	
1989-99	3	243
1990-91	5	172
1991-92	3	81
1992-93	4	198
1993-94	6	200
1994-95	21	1089
1995-96	14	591
1996-97	12	365
1997-98	17	190
1998-99	42	923
1999-00	76	4189
2000-01	53	4118
TOTAL	**258**	**12359**

Source: Department of Prime Minister and Cabinet, *Report of the Prime Minister's Coastal Surveillance Task Force*, Canberra, 1999, Appendix B-1. Australian Customs Service, *Annual Report 1999-2000*, Figure 21.

The number of illegal immigrants arriving by boat is increasing, as are the number of boats used, which makes the detection and interception task more difficult. The routes taken by illegal

immigrants are also changing. While Coastwatch provides systematic coverage of northern approaches (Mackay to Port Hedland) with less intensive coverage of other areas, illegal immigrants were now using an East Coast route rather than landing in North.[173]

Search and Rescue

Australia is signatory to the *International Safety of Life at Sea Convention 1974* (SOLAS) and the *International Search and Rescue Convention 1979* and is responsible for search and rescue over a vast area of the Indian, Pacific and Southern Oceans. AMSA coordinates air and sea rescue over a 47 million km^2 area, through AusSAR.[174]

In each sate and territory, the police are the local SAR authority and most of the SAR is undertaken by volunteer organisations, with some commercial organisations involved.[175] Where SAR incidents at a distance from the Australian coast, ADF assets are normally requested to assist.[176]

The Navy has been heavily involved in search and rescue operations. The naval aviation force has been used both ashore and at sea, while the major surface combatants and the patrol boats provide extensive support. In January 1997, a major surface combatant rescued two yachtsmen 1400nm into the Southern Ocean, while in late 1997 the Navy was extensively involved in the Sydney to Hobart Race rescue.

Support to Remote Northern Communities

For most of the Australian northern coastal regions, the sea is either the only means of access or the only way in which any substantial numbers of people or amounts of cargo can be delivered.[177] It is also important to note that the majority of ports in the north load or discharge insignificant amounts of cargo, but they are indispensable for supplying the remote communities located in the north. These communities rely exclusively on coastal shipping, using barges and small ships operating from Darwin and Cairns; any low-level disruption to this trade would have major consequences.[178] This situation is further exacerbated in the event of natural disasters, where a number of remote coastal communities become isolated, and the Navy is able to supply them with essential food and water, through either the patrol boats or the LCHs.

Safe Navigation

Under the *International Convention for the Safety of Life at Sea, 1974* (SOLAS), Chapter V includes details on the safety of navigation. The current version of SOLAS does not specify government responsibility for producing hydrographic charts, but a 1983 resolution referred to the importance of charts and invited governments to conduct surveys and distribute charts, while a 1985 resolution urged governments to establish hydrographic or charting groups.[179] A revised Chapter V was adopted at end of 2000 and comes into effect on 1 Jul 2002, which places the responsibility for safe navigation within their maritime zones on the coastal State. The International Hydrographic Organization has set the following priorities for surveys:

1 ports, harbours and sensitive coastal areas;

2 territorial sea, EEZ, and the continental shelf;

3 publishing and distributing data; and

4 make data available in GIS format for fishing, coastal zone management and scientific studies.[180]

In the case of Australia, the RAN Hydrographer assumed responsibility from the British Admiralty for hydrographic surveys in 1920 and the publication of charts in 1942. In 1946 the Commonwealth Cabinet made the RAN Hydrographer responsible for the surveying and charting of Australian waters; he is also the ADF agency responsible for provision of operational surveying support and maritime military geospatial information for ADF operations and exercises.[181] The RAN Hydrographer publishes and maintains the Australian chart series, which covers about 12% of earth's surface.

The Defence Geo-spatial Requirements and Policy Committee determines the mix of defence and civil surveying to be conducted on an annual basis and this is published in the national hydrographic surveying plan HYDROSCHEME.[182] But it is important to note that due to resource constraints, ADF priorities for surveying would come before civil requirements, notwithstanding SOLAS obligations.

While the Hydrographic Service appears to have the necessary equipment to undertake the required surveys, there is a major

problem with the production of survey charts to ensure safe navigation in Australian waters. Table 6 outlines the size of the charting backlog, which has arisen due to the need to convert charts from imperial to metric measurement, and to convert from paper to electronic charts. The Hydrographer notes a need for about 15 additional civilian staff to maintain ongoing responsibility for navigational safety.[183]

Table 6 - RAN Hydrographer Charting Backlog

Category/Scale	Published Imperial	Published Metric	Total Published	Planned Total
Australia				
larger than 1:25,000	2	20	22	44
1:25,000 - 1:100,000	8	73	81	162
1:101,000 - 1:300,000	55	99	154	308
<1:300,000	13	20	33	66
Sets of Plans	3	28	31	62
Papua New Guinea				
larger than 1:25,000	2		2	3
1:25,000 - 1:100,000	14	4	18	30
1:101,000 - 1:300,000	15	12	27	54
<1:300,000	1	1	2	7
Sets of Plans	5		5	7
TOTALS	**118**	**257**	**375**	**683**

Source: Royal Australian Navy, *Hydrographic Service Annual Report 1999-2000*, Wollongong, 2000, Annex C.

MILITARY OPERATIONS

While the previous discussion has been concerned with constabulary operations in the EEZs, there are also three military threats that can also occur within the zone. The ability of navies to operate across the conflict spectrum is highlighted by the more capability oriented roles they can also undertake in the EEZ.

Protection of Offshore Territories

Two of the offshore territories have a major defence significance that goes beyond territorial sovereignty and fisheries protection.

Cocos Island is 2768km northwest of Perth and 3785km west of Darwin and consists of 27 small coral islands in 2 separate atolls with a total land area of about 14km^2. The defence value of Cocos Island is its airfield, which is a third of the way across the Indian Ocean and allows Australian air operations to support Indonesia, Malaysia and Singapore.[184] Christmas Island is 987km from the Northwest Cape and 2623km from Perth and has a total land area of about 135km^2. The defence value of Christmas Island is its airfield, which allows Australian air operations to support Indonesia, Malaysia, Singapore, the Philippines, Vietnam and into China.[185]

Importantly from a surveillance perspective, both islands can be used as a forward base for aircraft and ships when patrolling the north-western approaches.[186]

Based on threat levels, an appropriate force response to these islands would be the patrol boats, but given their distance from Australia (the patrol boats would need to refuel at the Islands), it would appear that the surface combatants with appropriate afloat support would be required to protect the islands.

Protection of Shipping

Australia has an extensive and important coastal trading network. Australian coastal shipping is typified by the very long distances involved, the large volume of bulk products transported and its importance in sustaining Australia's remote coastal areas. In 1998-99, 89.5% of coastal trade was in the bulk trades, with dry bulk accounting for 61.5%, and liquid bulk about 28%.[187] The high volume of dry bulk and liquid bulk is due to industry requirements where raw materials are shipped to other sites for processing.[188]

- Bauxite is transported from Weipa to Gladstone for processing.
- Iron ore is moved from Western Australia to Port Kembla and Newcastle in New South Wales.
- Wheat moves between the Victorian, South Australian and Tasmanian ports.
- Raw sugar moves from Queensland to Sydney, Melbourne and Fremantle.
- Crude oil moves from Westernport to Sydney and Brisbane.

- Petroleum moves from Sydney, Brisbane and Kwinana to many Australian ports.
- LPG moves from Westernport and Bonython to Tasmania and Sydney.[189]

As one of a number of internal RAN studies, Martin Dunn assessed some of the economic impacts of attacks on Australia's coastal trade. Using 1984-85 prices, he identified the value of production of commodities loading at various ports. By implication, if these ports were then closed, and with limited other transport opportunities, the economic cost of closing the port could be deduced. If, for whatever reason, Australia "lost" all of its coastal trade for six months, the cost would be about $2 billion and about $350 million in increased transport costs.[190]

Harbour and Focal Point Defence

The threat to focal points relates to the approaches to Australian ports and the ports themselves. Such threats could range from the mining of ports and approaches, blocking ports by sinking a ship, or attacking shipping in the approaches of a port. The threats in the north would appear to be mining, which are perceived as credible, whereas the south could suffer from submarine attack which is not currently perceived as credible.[191] The shallow water depth profiles of Australia's ports means they are susceptible to mining as are the shallow approaches to many northern ports, which require shipping to enter via long narrow channels - the Port Hedland channel is 27nm long and the Weipa channel is 8nm long. Importantly, the NSW Maritime Services Board has stated that sinking a vessel at the entrance to either Newcastle or Port Kembla would close those ports for many months.[192] The ten major ports involved in the coastal trade, in order of tonnage are: Port Kembla (NSW), Gladstone (Qld), Weipa (Qld), Port Hedland (WA), Hastings (Vic), Brisbane (Qld), Newcastle (NSW), Melbourne (Vic), Botany Bay (NSW) and Fremantle (WA). These ten ports account for 62% of cargo loaded, 71% discharged and 67% of the total coastal freight moved.[193]

If any of Australia's ports were to be closed through the use of mines, there might be some flexibility in using alternative ports, albeit recognising that the cargo carried and the facilities available at alternative ports would be the determining factor. However, as Jack McCaffrie noted the six *Huon* class coastal minehunters will be able

to keep only a limited number of ports or focal areas clear for extended periods.[194] The question then is which ports should be defended, those is the north that could be attacked easily, or those in the south that could suffer the most economic impact?

The *Fremantle* class patrol boats also have war duties such as protecting harbours, the harbour approaches and coastal shipping.[195] However, with their limited armament it is questionable how well they could undertake this task. They might be able to counter an adversary's harassment of coastal shipping if similar vessels were used, or to deter any act of piracy. Certainly they would not be able to handle any threat that involved larger surface combatants.

CHAPTER THREE

Navy's Capacity to Protect the National Interest

The previous two chapters have outlined the rationale and legal obligations for enforcing sovereign rights in the EEZ, and the use of the Navy to achieve this sovereignty assertion. Chapter Three is concerned with the ability of the Navy to undertake these constabulary operations; the issue is one of adequate capacity, not the level of training or commitment of Navy personnel.

Notwithstanding *Defence 2000*, which re-emphasised the continuing role of the ADF in such peacetime operations, there has been a political debate between the federal opposition party and the Government over the creation of an Australian Coast Guard. This issue would have an impact on some of the constabulary operations of the Navy, particularly the Patrol Boat Force, so the implications of the Coast Guard proposal are assessed.

In many of the debates over the coast surveillance role, a view often put forward has been that the ADF take over the entire surveillance and interception function. Defence has always rejected this and the reasons will be outlined at the end of this chapter.

NAVY CAPACITY

The two force element groups most directly involved in constabulary operations in the EEZ are the Patrol Boat Force and the RAN Hydrographer (the Surface Combatant Force is indirectly involved) and their capacity to meet the growing requirements of these operations is considered below.

The Patrol Boat Force devotes 1800 sea days per year to maritime surveillance to monitor and enforce Australia's sovereignty and sovereign rights. As an example of the workload facing the patrol boat crews, if the 1800 days is spread across the 15 patrol boats, that equates to about 120 days at sea on maritime surveillance tasks per boat. However, boat maintenance requirements add an extra 130 days a year, while Navy exercise and training commitments and regional engagement requirements can add up to another 100 days per year.[196] When considered against the Navy's personnel policy *Op Tempo*, which tries to limit the time at sea to 150 days a year, it

is apparent that there are problems with the demands placed on the crews of the Patrol Boat Force.

At an operational level, the 1800 days equates to about 4-5 vessels deployed at any one time, with the 1800 days spread between actual patrol time and as an operational response vessel in port on 4-8 hours notice to sail. Another important factor is that it might take up to 4-5 days to escort an illegal fishing vessel back to an Australian port, which means that the patrol boat cannot be assigned to another interception.

Interestingly, when Australia declared its 200nm Economic Resource Zone in 1977, the Minister for Defence questioned whether the current 15 patrol boats would be enough to manage the increased surveillance and interception task.[197] With the numbers of intrusions increasing, the improved surveillance enabling better interception, and the workload of the patrol boats, it is not clear that there are enough patrol boats to meet the task.

AFMA has stated that they believe a high rate of interception and apprehension of illegal fishing vessels in the AFZ is required as a deterrent to such behaviour. When debriefing crews from illegal fishing vessels, these crews have told AFMA that they plan on an apprehension rate of about 10%; so they are generally safe.[198] This would imply that illegal fishing in the AFZ is larger than thought.

The immediate issue therefore, is not the capability of the patrol boat but the number of boats available. When the structure of the Navy's surface fleet was being examined in the early 1990s, the proposed reduction from 15 *Fremantle* class patrol boats numbers to 12 offshore patrol vessels created concern within those agencies involved in fisheries protection and barrier management. The current plans to replace the patrol boats with a larger boat built to civilian specifications raises some concerns over the commitment of the Government, and areas of Defence to the Navy's interception role. The planned capital equipment program is a one-for-one replacement program, that does not appear to have been based on an assessment of the numbers of patrol boats actually required to meet the surveillance and interception task. It has been reported that the Navy prefers a one-for-one approach, while other elements within Defence prefer companies bidding for the project meet the number of sea days required with a variety of possible boat numbers.[199] The most recent advice is that a privately financed (private ownership)

arrangement is preferred by Government, with no set criteria for the number of hulls to be provided. Rather the successful contractor would be required to provide the Navy with patrol boats that have the capacity to deliver 3000 patrol boat days per year (including meeting the requirements for the coastal surveillance program).[200] Industry responses to the replacement patrol boat tender indicate that only 12 boats would actually be provided, rather than the current 15.[201] As has been shown above, this fundamentally misunderstands the role of the patrol boats, where it is the ability to conduct interceptions that is critical, not general surveillance tasks.

The Surface Combatant Force normally plays an incidental role in constabulary operations in the EEZ. Their primary task is the defence of Australia and they operate at the higher end of the conflict spectrum. It is a by-product of their more extensive maritime patrol and response activities that assists activities in the EEZ. However, one area where the surface combatants are critical is in surveillance and interception in the offshore territories, which the patrol boats cannot meet because of range limitations, and in the Southern Ocean, also due to sea conditions. However, while the surface combatants are built to absorb battle damage, they are not built to absorb the mountainous seas in the Southern Ocean.[202]

This means that the Southern Oceans do not have an adequate level of surveillance or interception capability. While charter civilian ships can patrol the area, they are not armed and therefore cannot force an illegal fishing vessel to cease its operations and return to the Australian mainland. This issue would now appear to become more complicated with the declaration of the 200nm EEZ around the AAT, as Australia, and certainly the Navy, are in no position to operate in that area to enforce sovereign rights.

Safe navigation also appears to be under pressure. As noted above, the RAN Hydrographer is facing a significant backlog in processing data, updating and producing new charts. This is a complex situation, as the major role of the RAN Hydrographer has both a civil and military component. The civil hydrographic survey program is of benefit to the Navy if it is transiting through those waters, but military-specific surveys have no utility in the civil sphere. The issue is one of funding the RAN Hydrographer to meet both commitments: an international legal obligation under SOLAS for civil requirements and a Defence obligation for naval-specific

charting. However, for additional funding to go to the RAN Hydrographer, it has to come from other areas within the Navy or Defence, impacting on other defence activities.

AN AUSTRALIAN COAST GUARD

There has been a political debate in Australia over whether a coastguard should be created to subsume the coastal surveillance activity. This was first considered in an interdepartmental committee in the 1960s, where it was rejected and has been rejected by Government ever since, usually on the grounds of cost.

The argument takes two forms, usually put forward either by lobby groups (the Australian Defence Association) or academics (Centre for Maritime Policy), which will be considered in more detail below. The first argument is that coastal surveillance and interception is a law enforcement issue, not a national security issue and therefore the ADF should not be involved; a coast guard should then be created to assume this major law enforcement problem. The second argument (put forward by the Returned Serviceman's League) relates to command and control issues, where it is noted that the extensive use of Defence assets (intelligence, planning, patrol boats and aircraft) would dictate that all activities be brought under the ADF to better manage resources.

ALP Coast Guard Proposal

On 23 January 2000, the Australian Labor Party (ALP) announced that is supported the creation of an Australian Coast Guard, and went into the November 2001 general election with this as a policy issue. As there was (and is) a direct impact on the Navy, the proposal requires limited consideration. The following outline is based on the ALP's proposed framework.[203]

The Australian Coast Guard would be established under an Act of Parliament and would have primary responsibility for the maintenance and enforcement of Commonwealth maritime law. As such, it will be located in Justice and Customs portfolio, but will have a seconded operational commander from the ADF.

The Australian Coast Guard's role would extend beyond monitoring the coastline and would be charged with the detection, surveillance and law enforcement response to people smuggling, drug smuggling and illegal fishing, search and rescue operations, and maritime safety. It would also have responsibility for oil spill and

environmental protection and pollution control and would undertake surveillance in Australia's southern waters to prevent illegal fishing and environmental degradation.

The Coast Guard is envisaged as being a well-trained, well-equipped organisation with a command and control structure that will allow it to easily integrate with and come under control of ADF when necessary. That is, in times of war or declared emergency the Coast Guard would come under military command and act as the fourth arm of the ADF.

The Coast Guard would also have a volunteer and entirely civil reserve component, which could be called the Australian Auxiliary Coastguard, but it would not transfer to ADF in times of war or declared emergency. Membership would include the 3000 members of the existing volunteer Search and Rescue (SAR) groups who agree to accreditation and service obligation arrangements with the Commonwealth.

The Australian Coast Guard would be formed from the existing operational components spread across a number of departments and agencies with an expected budget of about $220 million. While maritime policy functions would remain with existing departments and agencies, the creation of the Australian Coast Guard is based on:

- removing the patrol boats from RAN, but they would revert back to RAN in time of conflict to carry out coastal surveillance and protection of shores against incursions;
- would assume responsibility for SAR, apparently absorbing AusSAR from AMSA;
- would assume responsibility for pollution prevention by absorbing the anti-pollution functions from the Environmental Protection Service of AMSA; and
- would subsume Coast-watch and associated resources (but would continue to rely on the RAAF to contribute surveillance hours).

Assessment

At a policy level, the proposal aims to combine all relevant law enforcement and management and conservation responsibilities in Australia's marine jurisdictions. At an operational level, it seeks to bring together under one agency all the surveillance and interception activities.

There is a major personality factor involved in the Coast Guard proposal. Chapter One briefly noted that the 1983 Beazley Review had recommended combining the surveillance and interception functions into one agency, but that the Government rejected this. Beazley went on to become the Minister for Defence and was responsible for the fundamental reorientation of defence policy via the Dibb *Review* and *Defence of Australia 1987*, and the associated major ADF re-equipment programs. Beazley went into the 2001 federal election as the Leader of the Opposition, and revived the consolidation of the surveillance and interception functions from his 1983 Review, using an Australian Coast Guard as the framework.

On paper, bringing together the associated surveillance and interception capabilities associated with law enforcement in Australia's marine jurisdiction would appear to be able to generate efficiencies. However, the policy elements behind these activities will remain in the original agencies, meaning the Coast Guard will have to continue a major coordination function, similar to what Coastwatch currently undertakes. Creating a Coast Guard will create another bureaucracy, which might well consume all of the initial administrative efficiencies gained through consolidation. While Coastwatch has experienced difficulties in its operations (and Chapter One outlined the administrative difficulties experienced in setting up a Coastal Surveillance Program) it is not evident that there must be major administrative and structural changes to the current arrangements to improve coastal surveillance in Australia. As an example, in evidence to the Joint Committee on Public Accounts and Audit, all client agencies of Coastwatch expressed satisfaction with the service provided and saw no need for the creation of a Coast Guard.[204] The proposal therefore seems to be based more on domestic political considerations (ie public fears over increased illegal immigration) than on administrative necessity.

The Coast Guard would be a para-military force that will come under ADF command in times of conflict. There are a number of major considerations with this aspect of the proposal. Firstly, it is not at all clear what will constitute the benchmark that transitions the Coast Guard to the ADF. This is significant as it will have a critical impact on Defence operational planning - when will the Coast Guard become available for warlike training and be available for operations. Secondly, it is not clear of what use the Coast Guard

would be to the ADF in time of conflict. Currently the Navy patrol boats undertake a range of warlike and peacetime tasking for which they train continuously. It would appear that the Coast Guard would be involved in law enforcement activities in peacetime but would then have to be trained in warlike operations when they transition to the ADF. This links back to the first issue of when the Coast Guard would become available to the ADF, how much additional training would be required, and perhaps more importantly, who would provide that training to the Coast Guard, since they would be in additional to the current ADF training system. As the transition of the Coast Guard to the ADF would be public, it could conceivably inflame the situation that could lead to conflict. Thirdly, if a conflict were to occur then the coastal surveillance and interception assets and responsibility would pass to the ADF. Depending on the possible level of conflict, it is not clear whether civil surveillance would continue, or whether it would be integrated into the military surveillance system. Moreover the Coast Guard vessels would now be used for military operations rather than interception activities.

The Coast Guard debate is mired in accusations that are inextricably linked to the size and cost of the United States Coast Guard. Beazley's 1983 review which also recommended the consolidation of the surveillance and interception functions was costed at about $2 billion (in today's dollars). The current proposal is costed at about $220 million, and while not stated, Defence costs (patrol boat and *Orion* maritime surveillance) of about $120 million are included in this figure. This costing reflects a major misunderstanding of the attributed nature of Defence costs to the coastal surveillance program. As an example, the full costs of the Patrol Boat Force is in the order of $274-290 million pa, which reflects the total Defence costs that contribute to the delivery of the patrol boat capability (ie including basing costs, personnel etc). The ALP figures in this regard are grossly understated.

In other material, the ALP proposed to replace the 15 *Fremantle* class patrol boats with 15 purpose built ships - 12 high speed twin hull vessels of about 45-60m in length to operate in the north and three 80m ships to operate in the Southern Ocean. It was alleged this would cost in the order of $850 million whereas the Defence replacement project for the patrol boats is costed at up to $450 million.[205]

Impact on the Navy

The major impact of the proposal on the Navy is the removal of the patrol boats to the Coast Guard. The impact of their removal from the Navy would be two-fold: a capability issue in losing platforms that have a warfighting role and a training/personnel issue where the patrol boats provide a training pipeline for progression to capabilities in the other Force Element Groups.

As has been noted above, while the patrol boats have a predominant role in coastal surveillance and interception, they also have a range of military tasks in times of conflict. The removal of the patrol boats would impact on the operational flexibility built into maritime forces. While the surface combatants can undertake some of the functions of the patrol boats they are too large for some of the coastal work and special operations work that the patrol boats undertake. Put another way, a Coast Guard vessel could operate at the lower end of the conflict spectrum (if adequately armed), but cannot undertake higher level tasks, while a warship can operate at all levels of the conflict spectrum.

The issue of non-compliance by apprehended vessels, whether fishing illegally, carrying illegal immigrants or smuggling drugs is becoming an issue. Indonesian fishing vessels are increasingly non-compliant with boarding parties and also undertake passive and active resistance (the vessel is either not seaworthy for towing or they attempt to escape). This behaviour calls into question the utility of unarmed and lightly crewed charter or Coast Guard vessels for interception against a hostile or uncooperative intruder.[206]

What is not clear to many people is the training and command benefits that service with the Patrol Boat Force gives to the other Navy force element groups. The patrol boats are an important training ground for younger officers and senior sailors who are given command at an early age and gain experience at an early stage in their careers in important operational areas around Australia.[207] This has obvious long-term benefits to the Navy and also for the protection of national interests.

As noted earlier in Chapter Two, naval strategy encompasses the concept of the trinity of roles for warships: military, diplomatic and constabulary. The removal of the patrol boats from Navy would severely impact on the ability of the Navy to undertake all three

roles when providing capability options to the Government for the defence of Australia. The enforcement of sovereignty requires maritime forces capable of maintaining surveillance over large areas to enforce Australia's jurisdiction, detect over-fishing and/or illegal fishing, detect illegal seaborne immigration and prevent smuggling.

Defence would also have a concern over where the alleged $850 million for the new Coast Guard vessels will come from. There is a fear that Defence would have to pay for them (an additional $400 million to that allocated for the *Fremantle* class patrol boat replacement), which would have a major impact on defence planning and activities.

There is also a recruiting impact. Currently the Navy is unable to recruit quickly enough to overcome its current and projected personnel shortfalls. The creation of a coast guard could see a competition develop between the Navy and the coast guard for those few individuals interested in a sea going career. The creation of a coast guard could therefore impact on the ability of the Navy to recruit the numbers of personnel required in the future.

At both a financial and operational level, there appears to be no need to create an Australian Coast Guard, as it would create another bureaucracy, and the transition to such an organisation would severely impact on coastal surveillance operations until the new structure was fully operational. Furthermore, it is not clear what operational benefit would be gained by such an approach. All Government departments and agencies are satisfied with the service delivered by Coastwatch, so it is not clear how a coast guard would provide an improved service and in what areas that service would be superior.

While the policy to create an Australian Coast Guard is clearly political, and Defence and the Navy would implement the policy if directed, it is not clear that the ALP fully understands the impact of their proposal on the Navy, the protection of national interests, and defence generally.

DEFENCE ABSORBS COASTAL SURVEILLANCE RESPONSIBILITIES

While the Australian Coast Guard debate has been politically topical since 2000, a longer debate has concerned the Defence role in coastal surveillance and whether it would be better for Defence to

completely absorb this function. Such an argument has political appeal because the majority of costs incurred in coastal surveillance are Defence costs - so the rationale is move it all into Defence. Defence obviously has a number of concerns with such a proposal and has been consistent in rejecting it.

An immediate issue is whether Defence would use military or civil assets in the coastal surveillance and interception role. There has long been a concern over the high operating costs of Defence assets used in coastal surveillance compared to the use of civil aircraft. As an example, the hourly cost of a P-3C *Orion* maritime surveillance aircraft is about ten times that of the Coastwatch Dash 8 aircraft.[208] While the *Orion* is a larger aircraft, with greater range and carries more complex surveillance equipment, it becomes a question of whether the more advanced military surveillance equipment is more cost effective than that of the civil aircraft. Many would suggest not.

Defence also provides much more assistance to the coastal surveillance task than is recognised by the politicians and the public. Apart from the visible use of the patrol boats for surveillance and interception, and the use of the P-3C *Orion* aircraft for maritime surveillance, Defence also provides data from military surveillance, and more importantly access to: defence communications networks, intelligence data and assessment and provides defence planning expertise. Importantly however, this additional assistance is a by-product of military activity and is not generated solely for Coastwatch.

Notwithstanding the defence contribution to coastal surveillance, Defence has been consistent in its rejection of the suggestion that it assumes full responsibility for coastal surveillance. The sole reason put forward is that absorbing this role would impact upon the ability of the ADF to carry out its core task of the defence of Australia. Being forced to conduct coastal surveillance and interception would divert the ADF from its core warfighting role. It would distort funding priorities (ie the $850 million Coast Guard capital equipment program) and it would reduce the availability of defence capabilities for high level tasks (ie. surface combatant operations in the Southern Ocean).[209] The obvious exception to this is the Patrol Boat Force, which virtually since its inception in the mid-late 1960s, has had a major role in coastal surveillance.

Defence has not adequately refuted the argument that it takes over the coastal surveillance role. While the coastal surveillance function is clearly not "warfighting" nor an activity involved in defeating attacks on Australia, and therefore not core business for Defence; the fact that Defence and the Navy both provide resources and expertise to the role precludes ignoring the issue. A relevant analogy is that of peacekeeping operations, undertaken, in the main, by the Australian Army. While the Army trains for warlike operations, it is also able to conduct peacekeeping operations that are at the lower end of the conflict spectrum. (It is also important to recognise that peace keeping can be dangerous or violent, or that peace keeping might be conducted at higher levels in the conflict spectrum.) The key point is that in training for higher levels of conflict, armed forces are also able to operate at the lower levels of the conflict spectrum. In naval strategy, this concept comes under the trinity of naval roles, which can operate across the conflict spectrum.

Under a broader concept of security (and defence policy), with a stronger integration of economic and environmental issues, the case can be made for an increased Defence involvement in coastal surveillance, if not absorbing the task completely. Such an approach would allow for the integration of military and civil surveillance assets to better monitor activities in both the EEZ and further out into the air-sea gap in the northern maritime approaches. Interception operations in the EEZ could be more strongly integrated into the overall maritime patrol and response activities of the Navy to better utilise all assets undertaking these activities.

The real issue about incorporating the coastal surveillance role into Defence is financial. The concern is that as the costs of coastal surveillance increase (as intrusions increase), then Defence would be required to switch resources from its core warfighting tasks to coastal surveillance tasks, to the long-term detriment of the ADF to conduct operations at the higher levels of the conflict spectrum. If that fear could be overcome, perhaps through a costing regime related to the annual effort expended on coastal surveillance, then it might become more acceptable for the coastal surveillance role to move into Defence. Moreover, such an approach would also fit within the trinity of roles traditionally undertaken by naval forces.

It therefore appears that the arguments put forward by Defence in rejecting the possible absorption of the coastal surveillance function

are superficial and that further internal consideration of this issue is required in case of a change of Government policy.

CONCLUSION

The previous three chapters, while examining the rationale for Navy constabulary operations in the EEZ, also raised a number of issues that require resolution to better ensure the protection of territorial sovereignty.

Both the Introduction and Chapter One outlined the various policy documents that relate to protecting the national interest and the disparity between some of them. Current activities are related to enforcing territorial sovereignty and sovereign rights in the EEZ, but in the future this might actually become the protection of natural resources. While work is required to develop foreign policy that better encompasses the new security concepts, for the focus of this project there needs to be a better linkage between economic and environmental issues in general, and *Australia's Oceans Policy* in particular with defence policy.

Chapter Two outlined the concepts of seapower and naval strategy, leading to the trinity of naval roles. It was only in 2000 that the Navy developed its own maritime doctrine. While maritime doctrine can be universal in its application, it is not clear that it is well understood outside the Navy, or whether it has been incorporated into defence planning. The opportunities that are made available to Government through a balanced fleet that can operate over most of the conflict spectrum are becoming more evident; future plans for the Navy within the context of the overall ADF therefore need to consider this issue more effectively than in the past. It is therefore important that the principles of the *Australian Maritime Doctrine* are incorporated into defence strategic policy and planning: to allow the provision of a broad range of capability options for Government, and to allow the future development of the Navy to occur in a timely and effective manner.

Chapters Two and Three outlined the constabulary operations undertaken by the Patrol Boat Force in the EEZ, and noted the increasing requirement placed upon them. While duty aboard the patrol boats is rewarding, it can also be exhausting. Planning for the new patrol boats is in progress, with a Government preference for private financing with the contractor to provide the capacity to meet

a requirement for 3000 patrol boat days. It is not clear that the Government (or elements within Defence) fully understands the mechanics of interception in the EEZ, where the number of hulls is assuming a greater importance. Any increase in the number of patrol boats required would increase capital, personnel and operating costs, which conceivably would have to come out of extant Defence funding. However, given the unique status of the Coastal Surveillance Program, Defence could argue for additional funding from Government for this task.

There is a growing requirement for operations in the Southern Ocean, both for the Heard and McDonald Island Fisheries, but more recently for the 200nm EEZ declared around the ATT. Coastwatch cannot operate in this area, and the ADF also has severe difficulties - the patrol boats cannot operate there at all, and it is not safe for the surface combatants to stay there for prolonged periods. While there has been an increasing use of civilian-chartered ships to patrol these areas, they are unarmed which does not act as a deterrent to illegal behaviour. Therefore there is a requirement for the responsible agencies to develop options for Government for the enforcement of sovereign rights in the Southern Ocean.

Perhaps the least visible but of greater importance is the issue of safe navigation in Australia's marine jurisdiction. Chapter Two outlined Australia's international legal obligations for proper surveying and charting, with this role delegated to the RAN Hydrographer. The critical issue is one of staffing within the Hydrographer's Office to create the required charts. As this would be an increase in administrative capacity, the required funding would have to come from Navy in the first instance, at the expense of existing activities, or from Defence with the same result. Given the dual nature of the RAN Hydrographer (civil and military functions), it might be opportune to approach the Government for additional funding based on legal requirements arising from the revised Chapter V of SOLAS.

While the ALP did not win Government in the November 2001 federal election, they remain committed to the creation of a US-style Coast Guard. There is not enough information available to properly assess the proposal, but on present data is appears to be grossly underfunded in operating and capital costs (which could impact on Defence). More importantly, the proposal would see the patrol boats removed from Navy to make up the core of the Coast Guard. This

would have a critical impact on the Navy operationally (as the patrol boats also undertake warlike activities) and on personnel and training (the patrol boats are a training pipeline for the remainder of the fleet). Removal of the patrol boats from Navy would also impact on the ability of Navy to provide a range of capability options to Government in all three of the naval roles - military, diplomatic and policing. Therefore the Navy needs to fully assess the consequences of the ALP Coast Guard proposal on its future force structure and roles.

In Chapter Three, the possible transfer of coastal surveillance to defence was briefly discussed. The reason put forward by Defence to rebut this argument - that it is not a core warfighting task - is only superficially plausible. Under current foreign and defence policy there is an inadequate consideration of economic and environmental issues as they affect national interests and security. If these policies were to be broadened, as inevitably they must be over time, then there are fewer reasons for Defence to refuse to consider subsuming the coastal surveillance function. The major factor against such an approach at present is a valid concern over resources and the possible impact on the capacity and capability of the ADF to continue higher level conflict tasks if scarce funding had to be transferred to the coastal surveillance function. Therefore Defence needs to consider whether and how it might absorb the coastal surveillance role in the future.

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