

The impact of legal conventions on Navy roles

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In Hugo Grotius's *Mare Liberum* he quoted Placentinus 'The Sea is a thing so clearly common to all, that it cannot be the property of any one save God alone.'¹

Unfortunately, Grotius was probably turning in his grave when the Law of the Sea Convention 1982 (LOSC) came into force on 16 November 1994. The Convention instituted a 'constitution of the seas'² that attempted to 'balance the competing interests arising from different uses of the sea, and to do so in a way that minimises conflict within the international community.'³ Whilst not establishing a state of *Mare Clausum* the Convention did introduce a number of new regimes and extend States' areas of jurisdiction. The challenge for all States is to achieve the correct balance between the rights and responsibilities associated with these new regimes and areas, and that are implicit within the LOSC.⁴

From its conception LOSC was primarily concerned with the 'peaceful uses' of the seas, yet one of the primary motivations for the convening of the LOSC was the major maritime powers concern over the creeping jurisdiction of coastal States. Consequently, the underlying theme for the LOSC was freedom of navigation.⁵ This freedom is not only important for international trade, it is a vital requirement for the world's navies, including the Royal Australian Navy (RAN).

This article will examine how the RAN's roles and activities, whilst fulfilling government requirements, have been impacted by the LOSC. To achieve this aim the following method will be utilised. Firstly the Navy's roles will be explained, a brief outline will then be given on the new regimes that were introduced by the LOSC before identifying the government requirements. Finally, the affect of the new LOSC regimes on each of the separate roles will be discussed.

Navy roles

The roles of the Navy which will be utilised in this article are the three described by Booth: the military role of projecting and maintaining a balance of power by exercising control over the oceans in times of conflict; a diplomatic role in

supporting foreign policy through passive presence or in a coercive sense; and a constabulary role associated with sovereignty protection.⁶ Of these the military role is primary. It is a Navy's ability to undertake it that underpins its conduct of the other two.

Implications of the LOSC

The LOSC introduced a number of new and wider maritime zones that were to significantly impact RAN operations. These included the widening of the territorial sea from 3-12nm, the introduction of the contiguous zone out to 24nm from the baseline, and the Exclusive Economic Zone (EEZ). It also established the archipelagic waters regime and the associated navigational regimes; straits transit and archipelagic sea-lane (ASL) passage. Lastly, it provided a more rigorous definition of innocent passage.⁷ With the introduction of the 200nm EEZ, Australia now had sovereign rights over the living and non-living resources, the water column, seabed and subsoil beneath. These rights were further extended onto the legal continental shelf area where they exist over the seabed and subsoil only. In Australia's case, the EEZ and continental shelf area measure 14.8 million square kilometres.

Some regional states have introduced domestic legislation that suggests different positions on particular LOSC issues. When conducting operations the RAN must maintain clarity and understanding of LOSC, particularly in regard to navigational regimes and obligations of coastal States in offshore zones.⁸

Government requirements

The Australian Government recognised the rights and responsibilities given to it under LOSC when it released the *Australia's Ocean Policy* (AOP) in 1998. This established the policy basis of management and conservation of Australia's oceans and marine life. Embedded in this policy is the surveillance and protection role for the RAN. The Government's primary policy document for Defence is the Defence White Paper *Defence 2000* released in 2000. In *Defence 2000* the ADF

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is given the primary tasks of defending Australia, contributing to security in the immediate neighbourhood and supporting wider interests. Special emphasis was also given to peacetime national tasks, which include surveillance and enforcement. *Defence 2000* recognised that given 'the size of our maritime jurisdiction, the task of contributing to national surveillance and providing security against illegal incursions into Australia's EEZ and territorial waters are a significant challenge'.⁹ AOP and *Defence 2000* are the prime sources of Government requirements of the RAN.

Military operations

*'Both the 1952 and 1982 LOSC were intended to regulate the sea in times of peace...each of these conferences consciously avoided negotiation of the rules applicable to military operations on the seas.'*¹⁰ This is not to say that the LOSC does not apply during times of conflict. Since the Pact of Paris in 1928, and Article 2(4) in the UN Charter have outlawed a state of war,¹¹ there has been an emergence of the concept of limited war. These are wars limited in theatre, and scale of operations and response.¹² In these wars maritime law is far from moribund. During the Vietnam War the US set up two operations off the North and South Vietnamese coasts. Both of these took into account territorial seas and subsequent rights of innocent passage for certain vessels.¹³ The LOSC also played a part in the RAN's involvement in the enforcement of UN sanctions against Iraq and the associated Iraqi conflicts. Whilst attempting to apprehend Iraqi oil smugglers who were evading within Iranian territorial waters, coalition forces had to be aware of the differences between Iranian 'claimed' territorial waters based on incorrect baselines, and recognised territorial seas. LOSC still has a part to play during limited war, but even if general war were to break out, the San Remo Manual of International Law Applicable to Armed Conflicts at Sea, June 1994, takes into account LOSC considerations.

It could be argued that an ongoing limited war is the US-led war against terror. Part of this war is the Proliferation Security Initiative (PSI) which is aimed at stopping the transport of weapons of mass destruction (WMD). Australia is one of the eleven PSI countries and as a result of the LOSC implications of the initiative¹⁴ there is a potential impact on the RAN if it were to become involved in interdiction operations.

The PSI has its genesis in the boarding of the North Korean cargo ship *So San* on 10 December 2002 in the northern Indian Ocean by Spanish forces in concert with the USN. During the

boarding a number of weapons were found. Despite this discovery the vessel was released due to there being no legal justification to hold it. The vessel was boarded under the authority given in Article 110 as the vessel was unflagged, however as the carriage of weapons is not illegal under the LOSC, the decision to release *So San* was correct. It could be argued that this perceived lack of authority was the impetus behind the US initiating the PSI and together with the other 10 countries releasing the Statement of Interdiction (SOI) in September 2003.

The SOI states that vessels may be boarded in the territorial seas if suspected of carrying illegal cargo, however Article 19 of the LOSC gives all vessels the right of innocent passage through a States' territorial waters as long as this passage is 'not prejudicial to the peace, good order, or security of the coastal state'.¹⁵ The article then expands on what is considered to be prejudicial however with no mention of the carriage of weapons. The SOI also extends to the high seas, however this is also incongruent in that it conflicts with States freedom of navigation on the high seas. The only limitations to this freedom are the conditions outlined in Articles 99-109.

Despite the good intentions of the PSI it is obvious that there is still a degree of work that needs to be done to reconcile it with the LOSC. If Australia was to implement the PSI today and the RAN was to board a ship under PSI conditions it is suggested that there would be significant legal opposition. The freedom of navigation provided by the LOSC is essential for international trade and commerce. Australia should tread carefully when conducting negotiations that may result in any possible degradation of the LOSC.

Does this support Booth's argument when he says '*during periods of peace the law of the sea is more salient than during those periods when military necessities rather than legal norms tend to shape policy. In war it is always said - with ample justification - the law is weak.*'¹⁶ It may be weakened but it is still there. During times of conflict it is apparent that States remain cognisant of the LOSC however they will often manipulate and interpret it differently. Australia and the RAN should adhere to the principle that international law should be a tool to enhance international security and not hinder it.¹⁷

Diplomacy

Lord Grey said '*diplomacy without force is like a symphony without instruments.*'¹⁸ *Defence 2000* states that the second priority for the ADF is contributing to the security of Australia's immediate neighbourhood. The RAN's

contributions include exercising with regional navies and maintaining an Australian military presence through deployments in the Southeast Asian area. The Navy also has a diplomatic role in Australian waters. They must adopt a 'good neighbour' policy and be especially aware of issues including weapons practice areas on the high seas and the potential confliction with Article 88 of the LOSC that states the high seas must be used for peaceful purposes. They must also be responsive to the pollution control measures that are required by the LOSC and consequently the coastal States, including Australia. However, it is when the RAN deploys into the immediate neighbourhood that the LOSC can have a diplomatic impact. The introduction of new boundaries under LOSC has provided a lever or basis for some States to impose limits on the freedom of navigation beyond those associated with the LOSC.¹⁹ These include restrictions within EEZs, altering other States' rights when conducting transit and ASL passage and increased territorial sea claims.

All countries in the Asian region have claimed a 12nm territorial sea with the exception of Singapore which claims 3nm, and the Philippines who have not declared a territorial sea but instead claim historic waters that vary in breadth out to 285nm. Although generally claiming 12nm territorial seas some countries including Japan and Korea reduce them to 3nm in certain areas. Within territorial seas all vessels have a right of innocent passage.²⁰ This includes warships; however some States still reserve the right to require prior notification or authorisation before allowing a foreign warship to pass through its territorial sea.²¹ These States include Myanmar, Cambodia, India, Pakistan, Sri Lanka and Vietnam.²² The right of innocent passage does not exist in internal waters. A number of States have also made excessive claims of internal waters thus denying innocent passage. These include Thailand, Vietnam and in the case of the USSR, Peter the Great Bay at the entrance to Vladivostok.

Australia's proximity to two of the larger archipelagic States, Indonesia and the Philippines, has meant that the Australia and the RAN have had to be especially aware of the transit and archipelagic sea lane (ASL) passage regimes. In the Djuanda Declaration of 1957²³ Indonesia enclosed the archipelago and claimed all waters within as internal waters, however it did give the right of innocent passage to foreign vessels. Following legislation in 1960 this claim was protested by a number of countries including Australia, who supported these protests by sending warships operating in normal mode

through the archipelago. In September 1988 Indonesia utilised its 1960 legislation and suspended passage in the Lombok and Sunda Straits alternately for military exercises. This appeared to be in contravention of the LOSC to which Indonesia had ratified however was not in force.²⁴ Despite the LOSC not being in force other countries argued that it was customary international law that passage through international straits should not be impeded. The introduction of the ASL passage regime has significantly clarified this issue.

The issue of ASL passage applies when RAN units are conducting passage of the Indonesian archipelago. All vessels enjoy the right of innocent passage in archipelagic waters which can be suspended temporarily for security reasons after due notice has been given.²⁵ However they receive more extensive rights when conducting an ASL passage on a sea-lane that has been designated by the archipelagic state.²⁶ Indonesia has thus far only designated three north-south sea lanes which has been cause for concern to be demonstrated by other States, notably Australia, with regard to the lack of an east-west route through the Indonesian archipelago. Whilst on ASL passage ships must be cognisant of their navigational limitations as laid down in Article 53 (5)²⁷ but also realise that they can operate in 'normal mode'.²⁸

When the concept of the EEZ was originally developed it was seen as a compromise between those states that were claiming 200nm territorial seas and the countries that were hostile to extended coastal state jurisdiction.²⁹ These countries saw it as a form of 'creeping jurisdiction'. It was mainly due to the compromise nature of this proposal that it was accepted so readily into the LOSC. Despite this ready acceptance, there has been a tendency by some coastal States to challenge and sometimes legislate against other States' rights in the EEZ. The Maldives accords a right of innocent passage rather than freedom of navigation in their EEZ. India and Pakistan ensure freedom of navigation that is 'not prejudicial to the interests of the coastal state.' Samoa and Vanuatu extend any of their laws in force to the EEZ and regulate the conduct of any person in the EEZ.³⁰ Another contentious LOSC issue regarding a warship's freedom of navigation in the EEZ is the conduct of military exercises. Myanmar and Malaysia have declared that no exercises are to be conducted in their EEZ without prior approval. Another States right to conduct scientific research in a coastal State's EEZ is also open to interpretation. A case in point is the issue of

military surveying. Some States believe that this is scientific research and requires prior approval. In 2000 China took military action and lodged protests over USNS *Bowditch* surveying in its EEZ. In 2001 India lodged protests with the US and UK over violations of its EEZ by both *Bowditch* and the British survey ship HMS *Scott*.

Whilst conducting its diplomatic role and fulfilling its primary tasks laid down in *Defence 2000* the RAN has had to be and must continue to be fully aware of its neighbour's interpretations of the LOSC. The widening of the territorial seas and the introduction of transit and ASL passage has had a significant effect on the RAN in its area of interest. These new regimes have also impacted the last of the Navy's major roles that being its constabulary role.

Constabulary

This role has been recognised in *Defence 2000*, which describes the 'ADF's ongoing commitments to coastal surveillance... and the critical contribution that it makes to the security of our coastline from illegal immigration, smuggling, quarantine evasion and other intrusions on our sovereignty'.³¹ To demonstrate the effect that the LOSC has had on the Navy's constabulary role two examples will be used: the RAN's involvement in protection of Australia's closes maritime zones from illegal immigrants, and its involvement in the enforcement of sovereign rights in Australia's EEZ, most notably fishing rights.

The RAN's participation in fisheries surveillance began when Australia enacted the *Fisheries Act 1968*, declaring a 12nm fishing zone. This participation came about as a result of the Department of Primary Industry's inability to police the zone.³² This new requirement was recognised in the 1976 Defence White Paper *Australian Defence* when a number of force structure changes were made with 7 of the 12 patrol boats being based in Darwin and Cairns and 15 new patrol boats to enter service between 1979 and 1984. In 1979 Australia declared a 200nm fishing zone (AFZ) in which all fishing activities had to be licensed under Australian law. This declaration was based on emerging customary international law that was confirmed in LOSC.³³ This further increased the RAN's surveillance and enforcement responsibility.

The burden of this responsibility has traditionally fallen on the RAN patrol boat force, especially in the northern Australian area. Navy has a requirement to provide 1800 patrol days per year to the National Surveillance Program and it this requirement that has driven capital

acquisitions. Most recently is the acquisition of the replacement patrol boat, the *Armidale* Class, where the main tender requirement was the provision of 2100 patrol days irrespective of hull numbers.

It is not only in the northern region where EEZ enforcement has been important. The Heard Island and McDonald Island EEZ (HIME) and the associated AFZ has become increasingly subject to illegal, unregulated and unrestricted fishing. Surveillance in this area is limited and the Australian Fisheries Management Authority (AFMA) generally relies on chartered vessels to carry this out. In recent years the illegal fishermen have become bolder as they challenge the civilian status of the patrol craft. This has necessitated deployments of RAN frigates and tankers to the area to enforce Australia's jurisdiction. The RAN's involvement in this enforcement has sometimes proved controversial in the context of the LOSC. Specifically there have been two occasions where the ADF has participated in apprehensions where Australia's rights of 'hot pursuit' under Article 111 of the LOSC have been doubted. In the case of the *South Tomi* there are differing opinions as to whether the 'pursuit' was actually commenced, and whether a multilateral pursuit is permissible under the LOSC. In the case of the *Volga*, which was apprehended by a RAN frigate, there is doubt once again whether a pursuit had commenced, as the apprehension occurred outside the EEZ without the cumulative conditions of Article 111 being met. In both these cases the veracity of the 'hot pursuit' has not yet been challenged at the International Tribunal of the Law of the Sea.³⁴ Despite a recent agreement that will see armed Australian Customs vessels patrolling the HIME, it is envisaged that the RAN will continue to be involved in sovereignty enforcement in the area.

Another task that has gained recent exposure is the controlling of illegal immigration, or more specifically people smuggling. The United Nations Secretary General has described people smuggling as 'reckless exploitation of people in distress and thus.... a reprehensible form of international crime'.³⁵ The RAN has been involved in the prevention of illegal smuggling as part of Operation *Relax*. In this situation the LOSC has affected the RAN in that it enables them to prevent suspected illegal immigrants from entering Australia's contiguous zone.

Prior to LOSC coming into force in 1994 Australia had only claimed a 3nm territorial sea and no contiguous zone. Consequently, when legislation came into being later in 1994 the RAN had to shift the focus of patrol and surveillance for

all non-fisheries activities not only prevention of illegal immigrants, from the littoral ('footprints in the sand') to the offshore. This change of focus has been demonstrated during Operation *Relax* where protection begins prior to the entry of a people smuggler into Australia's contiguous zone with the authority given under Article 33(1).³⁶ If the vessel continues into the territorial sea further rights are given under Article 25 which prevents non-innocent passage.³⁷ The LOSC states that innocent passage should not prejudice the 'peace, good order or security of the coastal State.'³⁸ In Australia's case the smugglers were deemed to be prejudicing security by engaging in the unloading of persons contrary to the customs and immigration laws of the coastal State.³⁹ LOSC has impacted the RAN in that the Navy is now provided with significant rights to enforce sovereignty in the maritime zones.

The introduction of the LOSC and the associated maritime zones of jurisdiction have had a large impact on not only the RAN's roles and activities but also its force structure. The physical extension of jurisdiction that came with LOSC forced the Navy further offshore and expanded its surveillance and enforcement responsibility.

Conclusion

The introduction of LOSC 82 has had a real impact on the RAN's roles and activities, which it conducts in support of Government requirements. Government sets these requirements in the AOP and *Defence 2000*. To fulfil these the RAN performs three main roles that have been described in this article as Booth's trinity: military, diplomatic and constabulary. A wide range of tasks is implied in each of these roles, which at times overlap. For instance, 'the maintenance of sovereignty rights in the EEZ is part of the defence of Australia tasking. The only difference between their conduct, at times of relative peace and that of conflict is the tempo of operations.'⁴⁰

The key role for a Navy is of course its military role. It is its ability to conduct this function that underpins all others. This article expressed the view that the era of general war has ended and conflicts are now conducted as limited wars. As such it was determined that despite international law being perceived as weak during times of conflict it was far from moribund during limited war where constant consideration is given to the LOSC. This has been demonstrated during the RAN's participation in the recent Iraqi conflicts and its involvement in the PSI, which forms part of the global war against terror. There are a number of LOSC issues that affect the PSI and consequently the RAN's capability to fulfil its

role.

Diplomatically, the RAN has had to be cognisant of the specific freedom of navigation issues that were introduced with LOSC. A number of States in the region have interpreted these issues differently from Australia, which has sometimes resulted in navigational restrictions rather than freedom. Once these differences are overcome the utility of the warship can continue to be demonstrated. 'Warships will remain instruments of diplomacy for several countries, and defenders of maritime sovereignty for many more.'⁴¹

In its constabulary role the RAN has been increasingly involved with the surveillance, patrolling and jurisdictional enforcement of maritime zones around Australia that came into being with the creation of the LOSC. Instead of littoral, or 'footprints in the sand' type of operations the RAN was required to shift its focus further offshore. As a corollary to this shift in focus there has also been an impact on force structure planning.

The impact of the LOSC on the RAN can perhaps best be summarised by Lieutenant Commander Regan of the US Coast Guard when he says,

*It is essential that naval officers be sufficiently knowledgeable in international law to prevent unwitting violations and to enable them to use the law positively to enhance the effectiveness of naval operations.... Used badly, the law can degrade the national interest.*⁴²

¹ H Grotius, *Mare Liberum* p. 84.

² A Bergin, 'New Developments in the Law of the Sea', *Asian Defence Journal*, 1/92, p. 34.

³ B.R. Opeskin, 'The Law of the Sea' in S Blay, R Piotrowicz and M Herriman (eds) *Public International Law: An Australian Perspective*, Oxford University Press, Melbourne, 1997, p. 325.

⁴ M Tsamenyi and M Herriman, 'Rights and Responsibilities in the Maritime Environment: National and International Dilemmas', *Wollongong Papers on Maritime Policy*, No 5, University of Wollongong, 1996, p. vii.

⁵ D.L. Larson, *Security Issues and the Law of the Sea*, University Press of America, Lanham, 1994, p. 93.

⁶ K Booth, *Navies and Foreign Policy*, Holmes Meier Publishers Inc, New York, 1979, p. 45.

⁷ *The Law of the Sea*, Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, New York, 1982, Art. 19. (From now on all LOSC Articles will be referred to as 'Art ...')

⁸ *The Practice of the Law of the Sea in the Asia Pacific*, Council for Security Cooperation in the Asia Pacific, CSCAP Memo No 6 December 2002 viewed at

<www.cscap.org>

⁹ Department of Defence, *Defence 2000 Our Future Defence Force*, Defence Publishing Service, Canberra, 2000, para 2.14 p 12 (from now on referred to as *Defence 2000*)

¹⁰ R.R. Churchill A.V. Lowe, *The Law of the Sea*, Biddles Ltd, Guildford, 1983, p. 307.

¹¹ loc cit

¹² D.P. O'Connell, *International Law of the Sea*, Clarendon Press, Oxford, 1984, p. 1094.

¹³ ibid, p. 1098.

¹⁴ The Statement of Interdiction includes the following:

a. Take specific actions in support of interdiction efforts regarding cargoes of WMD, their delivery systems, or related materials, to the extent their national legal authorities permit and consistent with their obligations under international law and frameworks, to include:

b. At their own initiative, or at the request and good cause shown by another state, to take action to board and search any vessel flying their flag in their internal waters or territorial seas, or areas beyond the territorial seas of any other state, that is reasonably suspected of transporting such cargoes to or from states or nonstate actors of proliferation concern, and to seize such cargoes that are identified.

c. To seriously consider providing consent under the appropriate circumstances to the boarding and searching of its own flag vessels by other states, and to the seizure of such WMD-related cargoes in such vessels that may be identified by such states.

d. To take appropriate actions to (1) stop and/or search in their internal waters, territorial seas, or contiguous zones (when declared) vessels that are reasonably suspected of carrying such cargoes to or from states or non-state actors of proliferation concern and to seize such cargoes that are identified; and (2) to enforce conditions on vessels entering or leaving their ports, internal waters or territorial seas that are reasonably suspected of carrying such cargoes, such as requiring that such vessels be subject to boarding, search, and seizure of such cargoes prior to entry.

¹⁵ Art. 19

¹⁶ Booth, p. 47.

¹⁷ The Proliferation Security Initiative-The Legal Challenge viewed 31 August 2004 at <www.gs institute.org/docs/09_03_PSI_brief.pdf>

¹⁸ As quoted in Churchill & Lowe, p. 310.

¹⁹ J McCaffrie, Presentation to ACSC Navy Single Service, 25 Aug 2004.

²⁰ Art. 17

²¹ I Shearer, 'Current Law of the Sea Issues' in R Babbage and S Bateman (eds) *Maritime Change: Issues for Asia*, Allen and Unwin, Sydney, 1993, p. 56.

²² Z Keyuan, 'Innocent Passage for Warships: The Chinese Doctrine and Practice', *Ocean Development and International Law*, Vol 29, No 3, Jul-Sep 1998, p. 219.

²³ D.R. Rothwell, 'The Indonesian Straits Incident; Transit or Archipelagic Sealanes Passage', *Marine Policy*, Vol.14, No.6, November 1990, pp. 491-506.

²⁴ loc cit

²⁵ Art. 52

²⁶ Art 53(4) (5) These shall include all normal passage routes used for international navigation or overflight.

²⁷ This article explains that ships should not deviate more than 25nm from the axis provided that they go no closer to land than the distance, which is 10% of the distance between the nearest points of lane bordering the sea lane.

²⁸ The RAN considers normal mode for a warship to include launching and recovering of aircraft. This is less restrictive than the innocent passage requirements.

²⁹ Churchill & Lowe, p. 146.

³⁰ ibid, pp. 145-146.

³¹ *Defence 2000*, p. 52.

³² A Forbes, 'RAN Constabulary Operations', *Maritime Studies*, Mar/Apr 2002, No 123.

³³ P Young, 'Implications for the Australian Fishing Industry', *Wollongong Papers on Maritime Policy No 3*, Centre for Maritime Policy, Wollongong, 1996, pp 77-78.

³⁴ The *Volga* case for 'prompt release' has been heard by ITLOS.

³⁵ Oceans and Law of the Sea; Report of the Secretary General, UN Doc. A/53/456, 5 October 1998, supra note 2 at para. 134.

³⁶ Art 33 (1)

³⁷ Art 25

³⁸ Art 19 (1)

³⁹ Art 19 (2)

⁴⁰ D Chalmers, 'EEZ Interdiction: The Role of the Australian Defence Force', paper to the MAHEC Conference, *The Exclusive Economic Zone: Opportunities for Australian Industry*, Melbourne 4 August 1995, p. 6.

⁴¹ Booth, p. 170.

⁴² ibid, p. 203.

SEMAPHORE

Naval operations other than war 1901-2004

(Issue 6, July 2004)

For over a century, since its inception in 1901 with the creation of the Commonwealth Naval Forces, the Australian Navy has performed many operations other than war. These operations fall into the diplomatic and constabulary categories of the Span of Maritime Operations outlined in Australian Maritime Doctrine. Diplomatic operations involve supporting Australian foreign policy, while constabulary operations involve enforcing the provisions of international and domestic law in Australia's maritime zones. The Royal Australian Navy (RAN) has regularly been involved in deployments in support of Australia's foreign policy, as well as exercises on both regional and international levels to show presence. The RAN has had an ongoing role in national surveillance, and has also provided military assistance to the national and international community in the form of hydrographic surveying and charting. It has provided assistance to overseas communities, as well as disaster relief, search and rescue, and the evacuation of Australian and approved foreign citizens from regional trouble spots. The RAN has also been involved in peace operations, environmental and resource protection, the prevention of illegal immigration, and drug interdiction. The following examples provide a brief overview demonstrating the diversity of operations that Australia's Navy has undertaken over the last century.

In November 1918 the cruiser HMAS *Encounter* delivered drugs, stores and a Medical Relief Force to Fiji during the midst of the Spanish Influenza pandemic that killed over 25 million people worldwide. Despite a death rate of 10% amongst the native population, almost all of the crew volunteered to go ashore to assist, although these landing parties were not subsequently required.

During the Prince of Wales' visit to Australia in 1920 the battlecruiser HMAS *Australia* played a leading part in naval activities associated with the visit, including the RAN's first review in Port Phillip. During the interwar period, RAN ships regularly visited the New Guinea mandate, the Portuguese and Dutch territories, and the islands of the South Pacific to show the flag and maintain order. This included a request in 1927 by the British government for the light cruiser HMAS *Adelaide* to conduct a punitive expedition to put

down a native uprising in the British Solomon Islands. The RAN also provided essential assistance to the Australian community, including bushfire and search and rescue assistance.

In the 1930s the economic situation worldwide worsened and naval activity in Australia was drastically reduced as funding was cut. Notwithstanding this, the RAN was still involved in a range of operations other than war. In 1934, the heavy cruiser HMAS *Australia* embarked the Duke and Duchess of Gloucester for a Royal Tour of New Zealand and the Pacific, with the heavy cruiser HMAS *Canberra* acting as an escort. The sloop HMAS *Moresby* provided assistance to Rabaul after a catastrophic volcanic eruption in 1937 that destroyed much of the city and killed over 500 people. There was also a visit to New York in 1939 by the light cruiser HMAS *Perth* to represent Australia at the World Fair, and to express gratitude for an earlier visit to Australia by ships of the United States Navy in connection with the NSW 150th anniversary celebrations.

In the years immediately after World War II the RAN conducted operations to prevent smuggling and illegal immigration in Japan, as well as operations to dump unwanted ammunition and explosives. The destroyer HMAS *Warramunga* visited Guadalcanal to exercise a steadying influence during a period of unrest. The RAN also intercepted Japanese fishing vessels operating without authority in the waters of the New Guinea mandate.

In 1951 HMAS *Bataan* was involved in preventing the Nationalist Chinese enforcing a blockade outside China's territorial waters, thereby illustrating the ability of warships to exercise a coercive diplomatic role. During this decade, the RAN conducted surveillance tasks around Australia, performed its first rescue operation by helicopter, and conducted anti-smuggling patrols off North Borneo. The RAN surveyed shipping lanes, conducted a successful visit to Thailand, and the frigate HMAS *Queenborough* completed a global circumnavigation to show off Australia's technical capabilities after her conversion to an anti-submarine frigate. The Tank Landing Ship HMAS *Labuan* also carried an Australian National Antarctic Research Expedition (ANARE) party to Heard Island, to claim the territory for Australia.

In 1961 and 1962 RAN ships made goodwill visits to Saigon to demonstrate Australian support

for the South Vietnamese regime, and surveyed shipping routes for ore carrying vessels in the Port Hedland area. Mid-decade, the destroyer HMAS *Anzac* represented Australia at the coronation of the King of Tonga. As part of Australia's diplomatic efforts the Navy assisted overseas communities, including conducting minesweeping operations off Bougainville and building a 210ft pier on Salakan Island in Borneo. As ever, the RAN was involved in search and rescue missions, including a high-speed dash from Melbourne to Macquarie Island to rescue a seriously ill member of ANARE. Assistance was provided after serious bushfires in Tasmania, and the first foreign vessel was arrested for illegally fishing in Australian waters. The RAN was also involved in a two-month operation shadowing a Russian trawling vessel in the Gulf of Carpentaria, as well as shadowing Soviet ships in the waters off Australia.

In the 1970s the RAN was involved in one of the biggest peacetime disaster relief operations conducted in Australia, Operation *Navy Help Darwin*, following the devastation of Darwin by Cyclone Tracy in December 1974. In January 1975 Navy clearance divers responded within seven hours to the Derwent Bridge disaster in Hobart. The Navy also provided disaster relief during the decade fighting bushfires around Sydney. This decade also saw a commemoration of Cook's landing, including 48 ships from ten nations. The guided missile destroyer HMAS *Hobart* completed the RAN's first global circumnavigation in 21 years. The Navy was also involved in patrol and surveillance duties in northern Australian waters, directed towards the protection of territorial waters and contiguous fishing and resource zones. Overseas, a RAN task group visited Osaka at a time when Japan was rapidly becoming Australia's major trading partner. RAN ships supported the protest against French nuclear tests in the Pacific, and RAN personnel provided assistance to the United Nations Emergency Force in the Sinai. The RAN's exercise program provided a significant presence overseas, highlighted by the commencement of the RIMPAC series of exercises and of regular bilateral naval exercises with Indonesia. The RAN also provided assistance to Indonesia through the Defence Cooperation Program, and assistance to Papua New Guinea in the form of channel clearance and cyclone relief.

The 1980s were a period of high activity for the RAN. In 1981, the Navy conducted its first visit to China in 32 years. Also in 1981, as part of an Australian task force, the aircraft carrier HMAS *Melbourne* deployed on an extended

cruise to show the flag in the Indian Ocean. Commencing in 1981 a major fleet unit was maintained in the North West Indian Ocean to observe Soviet ship movements during the Soviet invasion and occupation of Afghanistan. In December 1985 the destroyer tender HMAS *Stalwart* conducted a resupply run to the ANARE mission on Macquarie Island, when the regular Antarctic supply vessel *Nella Dan* was trapped in ice for six weeks. In response to the 1987 Defence White Paper, the RAN initiated a high profile presence in the South West Pacific region and rolling deployments to Southeast Asia. Importantly, the RAN was involved in a wide range of renovation and construction projects in local communities. Overseas deployments were conducted to demonstrate presence and military capability, thereby reinforcing Australia's foreign policy and strengthening defence relationships with countries in our area of primary strategic interest. The Pacific Patrol Boat project saw 22 vessels delivered to reinforce the capacity of 11 South West Pacific nations to protect their maritime resources. The RAN provided relief assistance after an earthquake in Bali, wharf construction and channel clearance in the Solomon Islands, and cyclone assistance to the Solomon Islands and Tonga. The Navy conducted patrols and provided helicopters in support of counter terrorist units for the protection of Bass Strait oil rigs. Operation *Morris Dance* saw ships placed on alert to provide evacuation of Australian and approved foreign nationals and intervention after the 1987 military coup in Fiji, repeated in 1988 during Operation *Sailcloth* for instability in Vanuatu. The RAN also contributed to Operation *Immune*, an ADF operation that provided essential transport during a domestic pilots' strike.

During the 1990s the RAN continued to undertake deployments to Southeast Asia and the South West Pacific as a commitment to presence in our region of interest. The commitment to national surveillance remained, with many boardings and apprehensions of suspected illegal fishing and people smuggling vessels. The exercise program continued, with the RAN participating in ADF, regional and international exercises. During this period, the RAN was placed on alert to evacuate Australian and approved foreign nationals from Papua New Guinea. It also provided assistance in a range of peacekeeping and relief operations to Cambodia, Somalia, Indonesia, the Solomon Islands and East Timor. The RAN played an important role in the Maritime Interception Force in the Persian Gulf, enforcing United Nations sanctions against Iraq.

The largest number of RAN survey vessels assembled since WWII took part in survey operations off Arnhem Land. In a change of pace, the RAN took part in Operation *Clamsaver*, transporting baby clams to alleviate overcrowding on the Great Barrier Reef. It was also involved in several high profile rescue operations in the Southern Ocean that attracted a large amount of media attention.

At the turn of the century, the RAN was undertaking many and varied activities spanning the globe. As well as conducting military campaigns, the RAN provided support to the Centenary of Federation Celebrations, the Olympic and Paralympic Games, the Commonwealth Heads of Government Meeting, the Rugby World Cup, and a visit by the President of the United States of America. The RAN also provided assistance to East Timor, the Solomon Islands and Bougainville, as well as continuing to participate in the Maritime Interception Force in the Persian Gulf. There were also some high profile chases, in conjunction with foreign navies and other Government agencies, to intercept vessels suspected of conducting illegal activities in Australian waters. The RAN provided disaster relief to overseas communities, as well as flood relief and bushfire relief in Australia. There were also ongoing sovereignty patrols in the Southern Ocean and surveillance operations to prevent the arrival of illegal immigrants.

Over the last century or so, the RAN has repeatedly demonstrated its capacity to undertake a diversity of operations other than war. It has been used diplomatically in both benign and coercive operations to support the Australian Government, as well as providing assistance and disaster relief to civil communities in Australia

and overseas. The RAN has also played an increasingly important constabulary role, related to both international and domestic law, including supporting United Nations peace operations, enforcing sanctions, environmental and resource protection, counter-drug operations, and preventing illegal immigration. These few examples demonstrate how significant the RAN's operations other than war have been over the last century, and suggest their continued relevance to Australia in the future.

Network centric USW - exploring the realities

(Issue 12, November 2004)

In 1900 John Holland, the father of the modern submarine, stated *'as nearly as the human mind can discern now, the submarine is indeed a 'sea devil', against which no means that we possess at present can prevail.'*¹ This is a reminder that even the most forward thinking individuals can experience hubris when predicting the future of undersea warfare. When the German submarine U9 sank the old armoured cruisers HMS *Aboukir*, HMS *Cressy* and HMS *Hogue* in a fateful 75 minutes on 22 September 1914, maritime strategists of the day may well have been persuaded by Holland's view. Yet by contrast, in the month of May 1943, when fortunes changed in the Battle of the Atlantic, the Kriegsmarine lost 41 U-Boats, and never regained ascendancy in the campaign, demonstrating that the undersea threat could be effectively countered.

The history of undersea warfare (USW) in the 20th Century was one of a series of leaps in technology, in which primacy alternated between the hunters and the prey. In the decades following

World War II the march of technology caused the pendulum to swing back in favour of the submarine. Some observers have argued that this period represented the zenith of submarine capability, and that the advent of new sensors and networked USW systems heralded the demise of crewed submarines.² Yet submarine procurement



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continues apace across the globe. The question is whether, in the midst of this rapid growth in submarine numbers, there has arrived unheeded a new suite of USW and Network Centric Warfare (NCW) technologies that will make the oceans transparent, and hence render the submarine as obsolete as the battleship.

NCW is a superficially simple concept, involving the linkage of engagement systems to sensors through networks and the sharing of information between force elements. The aim of NCW is to allow a force to make decisions faster than its adversary and apply firepower with greater precision.³ A review of the literature on NCW reveals two opposing camps. Advocates such as William Owens⁴ see NCW as the key to decision superiority, enabling NCW-capable forces to maintain a tempo of operations that will keep the enemy continually off-balance. On the other hand, sceptics predict information overload: *'What is new is the potential for inundating participants with an ever-increasing flow of data masquerading as information because it has been slickly packaged within the common operating picture.'*⁵ Aldo Borgu, of the Australian Strategic Policy Institute, is even more caustic, stating *'in theory NCW will result in revolutionary change in the way we think about and conduct warfare. Human nature being what it is in reality it's more likely to result in business as usual, namely incremental, evolutionary changes in military capability and doctrine.'*⁶ NCW then is itself a subject of controversy, even before applying the concept to the undersea battle space.

The past decade has seen the advent of some potent new tools in the undersea battle. Processing power, software engineering and communications have between them facilitated the deployment of a variety of sensors that in the past may have been theoretically feasible, but were technically unachievable. Synthetic aperture radar, virtual sonar arrays, superconducting magnetic anomaly detectors, forward looking infra-red sensors, autonomous air and sub surface vehicles, satellites, geo-location systems, low probability of intercept sonar, low-frequency active/passive sonar, and multi-statics (combining data from multiple sonars) all threaten to upset the balance of power in USW. When combined as a network of above and below water sensors, linked through the information, sensor and engagement grids, they potentially offer a new dimension of USW capability. Yet despite these advances, the oceans remain anything but transparent.

The physical properties of the oceans, and their vastness, continue to favour the submarine. In 1997 the US Panel on Undersea Warfare

acknowledged that the submarine threat will increase in the 21st Century. This increase, 'fuelled by the proliferation of advanced submarine quieting, sensors, and processing techniques and technologies, could result in the submarine becoming the dominant threat to the accomplishment of naval missions.'⁷ This was echoed in a review of anti-submarine warfare (ASW) sensor effectiveness:

*Submarine quieting degrades this vast array of capability to the point that the ASW force is capable of placing only small diameter detection circles in the water, around sensors (fixed and mobile) that individually have only a very small detection range - perhaps as small as a mile or less, without the overlapping areas of coverage that would be needed for the sensors and subsystems to work cooperatively.*⁸

Advocates of NCW extol the virtues of precision and speed of response, value-added decision making, and information superiority. Yet USW is an inherently ponderous business; platforms, weapons and energy travel more slowly, and generally over shorter distances, underwater than they do above it. For this reason, the application of NCW in the underwater environment becomes more an issue of how to fuse data to leverage the contribution of multiple sensors, than of merely faster, more accurate, decisions based on improved situational awareness. But for data fusion to work, communications must be effective. This is one of the biggest inhibitions to making undersea NCW a reality.

The bandwidth required for effective above-water NCW continues to push the limits of technology. As identified in the US, *'the exchange of information among sensors that is entailed in netting them ... will require sturdy communications networks that have enormous capacity, in both bandwidth and data rate.'*⁹ Satellite communications systems are stretched to capacity by the demands of network information exchange at data rates of hundreds of kilobytes per second, and the adoption of extra high frequency systems operating in the tens of megabaud range is gathering pace. Underwater though, effective low probability of intercept digital communications are in their infancy. Using spread spectrum techniques, ranges of up to 30km may be achieved, but at data rates of only a few hundreds of bits per second. Even the US Space and Naval Warfare Systems Command Communications at Speed and Depth program is targeting data rates well below those currently available on UHF satellite systems. Given such limitations, the exchange of sensor information

between multiple underwater systems seems unlikely to generate real network synergy for some years to come.

Tactically speaking, there are significant challenges to the use of bottom sensors and unmanned underwater vehicles (UUVs) in the littoral. Such waters can be dangerous to navigation, prone to strong tidal streams, amenable to effective, low-technology countermeasures. Deploying arrays, using UUVs or submarines, and exposing antennae for above water communications all carry risks. Achieving comprehensive coverage with bottom arrays is also problematic. For example, given a 50 x 10 nautical mile area, and detection ranges of about 1000 metres, at least 1000 bottom sensors will be needed to achieve gap-free cover. The time required to deploy them and the frequency of interrogation are not likely to aid rapid compilation of the Common Operating Picture. Tidal streams can play havoc with sensor disposition, and severely limit the endurance of mobile platforms. If an adversary controls the sea and airspace in the littoral, the choice of our mobile platforms able to cooperate in the network, or deploy and monitor its static and mobile sensor fields, is severely constrained.

UUV technology has yet to overcome some of the problems of accurate navigation, and achieve the optimum balance between payload, speed and endurance. Small, expendable UUVs are relatively cheap and readily available, but at speeds of, typically, three knots for eight hours, with a payload of a few kilograms, their utility is limited, especially when 'swimming against the tide'. Larger UUVs capable of deployment from a mother submarine, autonomous operation and subsequent return for replenishment and reconfiguration are under development. Yet the engineering obstacles are formidable, given the complexity and risk involved in mating a 10 metre UUV with a submerged submarine. Subsequent docking of the UUV and connection to the submarine systems in preparation for the next mission is a challenge, given the difficulties of designing a launch and recovery system for even small, tethered objects such as communications buoys.

No military operation exists in a vacuum and, as Field Marshal Helmuth Von Moltke noted, '*No plan of operation survives the first collision with the main body of the enemy*'.¹⁰ The advocates of NCW can thus expect their concepts to be followed with the closest interest by potential adversaries and, even as the debate gathers pace, counters to the technology will be under development. Historically there has been a very

small lag between a new military technology or tactic and its counter. Indeed, the technology itself may be employed to attack the concept. If UUVs can be used to interrogate sensor fields, they could also be used to find and defeat them, either physically or by acoustic jamming. Countermeasures to multi-static systems are already under consideration, and the notion of defeating a network by information overload is a real threat to its effectiveness. Attacking the communications infrastructure directly is one option, but the damage could be compounded exponentially by a small fleet of cheap and expendable decoy UUVs released into the sensor field.

In conclusion, a variety of technologies promise to advance the sophistication of USW, offering the hope that increased mission effectiveness will derive from a combination of improved sensors, multiple platforms, and efficient, rapid data exchange and fusion. But there are profound difficulties in the practical application of both the technology and the doctrine. The larger debate about the nature and value of NCW is far from settled, and the debate about how to apply and manage it in the underwater battlespace is even less mature. ADF doctrine acknowledges the as yet unformed nature of NCW and the risks inherent in trying to incorporate it into Australia's future warfighting concepts.¹¹ What is clear is that we have not yet witnessed the genesis of either a concept or a technology that will make the oceans transparent. It also seems likely that rather than a revolution, NCW operations will ultimately be seen as another step in the leap-frogging process USW has followed since World War I. Certainly, there is nothing to suggest that the next two decades will witness other than a continuation of this process.

The roles and tasks of maritime forces

(Issue 13, November 2004)

Over the last year, the Sea Power Centre-Australia (SPC-A) has conducted research in order to develop a database of Royal Australian Navy (RAN) operational activities. This research clearly demonstrated the flexibility of maritime forces and illustrated that the nature of the roles and tasks undertaken in any given operation can change rapidly. Some of the research results were published in RAN Operations Other than War, 1900-2004. It is intended that a complete database of operations for the period 1990-2004 will be published as an SPC-A Working Paper in early 2005.

Doctrine development is a dynamic, iterative process that is informed by both history and the current activities of the Australian Defence Force (ADF). Accordingly, the results of SPC-A's operational research have been reviewed against the RAN's current philosophical doctrine ('the body of thought on the nature, role and conduct of conflict').¹² This newsletter focuses specifically on a review of the roles and tasks of maritime forces, and of the 'triangle of sea usage',¹³ referred to here as the 'Span of Maritime Tasks'. This diagram broadly illustrates the relationship between the military, diplomatic and constabulary roles and subordinate tasks of maritime forces, with specific reference to the RAN.

Single Service doctrine, such as Australian Maritime Doctrine (AMD), is subordinate to ADF Joint doctrine, in particular to Foundations of Australian Military Doctrine. Joint doctrine is aimed at supporting the creation of a seamless, integrated Australian force over time, while AMD explains what the RAN contributes to this Joint force. The difference between terms used in single Service doctrine and Joint doctrine is necessarily large, and there are a number of different ways of classifying operations. In ADF Joint doctrine, a distinction is made between combat operations, military support operations, and shaping operations. The 'Spectrum of Conflict' in ADF doctrine refers to the variety of actions in which a military force may be engaged, ranging from general war to peacetime national tasks. These can be divided into two broad categories, based on the level and types of threat faced. 'Warlike operations' are military activities where the application of force is authorised to pursue specific military objectives, and there is an expectation of casualties. 'Non-warlike operations' are military activities where there is a risk associated with the assigned tasks, where the application of force is limited to self-defence, and where casualties could occur but are not expected.¹⁴

While these categories are useful in classifying specific ADF operations, a broader classification system based on the distinction between military, diplomatic and constabulary operations has proven useful in the maritime environment. The utility of this system is emphasised by its wide application across Western navies with which the RAN operates; while the RAN's doctrine is not identical to that of our major allies and friends, it has enough similarities to provide a common philosophical frame of reference.

The 'Span of Maritime Tasks' originates from the trinity of naval functions posited by Ken Booth,¹⁵ developed by Eric Grove,¹⁶ and adapted to the Australian environment in AMD. SPC-A's operational research revealed several potential anomalies in the existing diagram. A simplified diagram, was then developed in an attempt to clarify the interrelationships between maritime roles and tasks while avoiding the anomalies that can develop in a comprehensive visual representation of all the tasks that the RAN undertakes.

However, it is important to remember that the diagram is not the doctrine. The diagram illustrates relationships, rather than definitively describing them. Similarly, the diagram does not describe how any of the roles and tasks assist in achieving any of the maritime strategic concepts, such as sea control, or how those concepts will be achieved in any given circumstance.

Maritime forces possess considerable utility in a wide range of situations that span not only the spectrum of conflict, but also much peaceful human activity. The capability of the RAN to fulfil its diplomatic and constabulary roles is largely a by-product of the resources and core skills developed for warfighting, and the diagram retains the military role as its foundation.



The idea of a constabulary role is particularly valuable because it emphasises the historically close - and continuing - relationship between maritime forces and domestic and international law enforcement. The benign and coercive categories within the diplomatic role are also important because they illustrate the different types of diplomatic operations that the RAN has

the capability to undertake, according to the amount of force applied. Both involve exerting influence over a foreign government through the demonstration of military power, but coercive diplomacy involves a more overt threat. This differentiation helps to demonstrate just how flexible navies can be.

This flexibility has been demonstrated by the RAN's activities since 1990 in the Persian Gulf region, pursuant to Australia's commitment to enforce long-standing United Nations sanctions against Iraq, as well as supporting the ADF contribution to the International Coalition against Terror (Operation *Slipper*). During the recent Iraq conflict the RAN initially had a constabulary role in supporting operations as part of the multinational Maritime Interception Force, a role that it has undertaken since the initial deployment to the Persian Gulf in 1990 following the invasion of Kuwait (Operation *Damask*). With the pre-deployment of forces to the Middle East (Operation *Bastille*), the RAN's contribution became a coercive diplomatic operation, supporting pressure on Iraq to disarm. With the shift to combat operations to disarm Iraq (Operation *Falconer*) as part of the international coalition of military forces, the RAN's role then became military in nature. Following this, the RAN has supported Australia's contribution to stabilisation and recovery operations in Iraq (Operation *Catalyst*) - another coercive diplomatic operation. This transition between roles is a prime example of how the RAN's contribution depended on its inherent military capability; that is, the ability to use force, and the ability to escalate or reduce the use of force as necessary for each different operation.

The significant difference between military and constabulary activities is that the latter depend upon legitimacy deriving from a legal domestic mandate or an internationally agreed order, while the former, whatever the degree of force implied, threatened or exercised, is defined primarily by the national interest. In its constabulary role, the RAN enforces national or international law, in a manner in which minimal force is only used as a last resort when there is some evidence of a breach or intent to defy. The level and type of force that is permitted will frequently be specified in the law, mandate or regime that is being enforced. Maritime barrier operations are listed on the constabulary side of the triangle and aim to prevent unauthorised incursions into maritime areas subject to Australian sovereignty or sovereign control. These operations target illegal immigration, weapon and drug smuggling, illegal fishing, piracy and maritime crime, maritime

terrorism, and quarantine infringements. In its constabulary role, the RAN is involved in the maintenance and enforcement of good order. A recent example of this is Operation *Relex II* where, since March 2002, the RAN has conducted regular patrols intended to deter unauthorised boat arrivals. The maintenance of good order may thus be considered as a differentiated category in the constabulary role, as is the benign application of maritime power in the diplomatic role. The transition in these roles from benign to coercive and from maintenance to enforcement is demonstrated on the triangle by superimposing an arrow to indicate the gradual escalation of force potentially required.

Governments use naval diplomacy to influence the policies and actions of other states. Benign diplomatic tasks involve the use of naval capabilities not directly associated with combat. Coercive tasks involve the use of force, or the threat of force, to persuade other states to adopt a certain pattern of behaviour. The 'Span of Maritime Tasks' outlines the interrelationship between navies and foreign policy through the use of the sea. There are many examples of the RAN's diplomatic role. These range from benign port visits to show the flag to a more coercive role; such as in 1987 when RAN warships exerted a coercive influence during the Fiji coup (Operation *Morris Dance*) to ensure the safety of Australian citizens.

The categorisation of a task as either diplomatic or constabulary depends on the international standing of the action. UN sanctioned embargoes are part of an internationally agreed order and are not aimed at supporting foreign domestic governments. They therefore fall within the constabulary role. When the ADF provided support to The United Nations Assistance Mission to Rwanda (Operation *Tamar*) the RAN performed a constabulary role, which included providing medical support to the UN force and humanitarian assistance to the Rwandan people. However, unilateral operations fall within the diplomatic role, because they are defined primarily by national interest. Australia's second strategic objective is to help foster the stability, integrity and cohesion of our immediate neighbourhood.¹⁷ The RAN's involvement in the ADF contribution to the Australian-led Regional Assistance Mission to the Solomon Islands (Operation *Anode*) was therefore a diplomatic one; helping to restore law and order in the Solomon Islands in accordance with Australia's own national interest.

The experiences and thoughts of military practitioners must shape doctrine. Accordingly,

we strongly encourage you to comment on points discussed in this Semaphore to inform the review of AMD, which is scheduled to commence in 2005. This review will include a more detailed discussion of each task that the RAN undertakes.

The Pacific Patrol Boat Project

(Issue 2, February 2005)

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) introduced a 200nm exclusive economic zone (EEZ) around sovereign coastal states. The sudden expansion of responsibility from a 12nm territorial sea to a 200nm EEZ dramatically increased the area of ocean requiring surveillance, monitoring and policing by these nations, increasing the strain on existing maritime patrol resources, and highlighting the need for countries without a maritime patrol force to obtain one. In particular, island nations throughout the South-West Pacific were faced with the responsibility of policing an area of ocean that was often far larger than their landmass, with unsuitable or nonexistent patrol resources, and limited funding and experience with which to obtain a suitable capability.

In 1979 the Australian and New Zealand governments, at the request of Pacific island nations, sent defence representatives into the South-West Pacific region to assess surveillance and maritime patrol requirements.¹⁸ With the exception of Australia, which had declared a 200nm Australian Fishing Zone in 1979, the advent of UNCLOS introduced regulatory, surveillance and patrol requirements far beyond the capacity of any regional nation. The governments of a number of the Pacific island nations expressed their concern about the need for a suitable maritime patrol force to fulfil their new surveillance requirements. The Australian government responded by instituting a Defence Cooperation Project (DCP), to provide suitable patrol vessels and associated training and infrastructure to island nations in the region. The Pacific Patrol Boat Systems Program Office was created within the Minor War Vessels Branch of the Royal Australian Navy (RAN) procurement organisation to manage the DCP and to be the Project Authority.¹⁹

In August 1984 the Australian government released a request for tender for the construction of patrol craft suitable for Pacific island nations to use in surveillance and maritime patrol operations.²⁰ Australian Shipbuilding Industries Pty Ltd (now Tenix Western Australia) was awarded the contract for the design and construction of the patrol boats in September 1985

and the first of ten vessels was scheduled for delivery in early 1987.²¹ The resulting Pacific Patrol Boat (PPB) is a light, but robust, vessel designed for surveillance and interdiction patrols, search and rescue, and fisheries protection. With a range of 2500nm at 12 knots, a sprint capability of 20 plus knots, and light armament, the PPB is well suited for use by Pacific island nations to monitor and police their EEZs. The first vessel, HMPNGS *Tarangau*, was officially handed over to the Papua New Guinea Defence Force on 16 May 1987. Some initial teething problems were identified and corrected after the first two vessels were completed, with upgrades to propellers, air conditioning, engine cooling systems, and other modifications, becoming standard features in later vessels.²² Tenix maintains follow on support for the PPBs in Brisbane, Queensland, and in Suva, Fiji, through the provision of spare parts and technical advice.

The number of vessels planned for construction and the number of participating countries increased during the course of the project. The end-state of the construction phase of the project was a total of 22 boats delivered to 12 countries, compared to the original order of 10 boats for 8 countries. Nations currently operating PPBs include Papua New Guinea (4), Fiji (3), Federated States of Micronesia (3), Tonga (3), Solomon Islands (2), Cook Islands (1), Kiribati (1), Marshall Islands (1), Palau (1), Western Samoa (1), Tuvalu (1) and Vanuatu (1).²³ The final vessel to be constructed was delivered to the Federated States of Micronesia in June 1997. In total, the project cost for 22 vessels and associated support was \$A155.25 million.

In addition to providing the patrol boats, Australia has conducted training for personnel intended to operate the PPBs, giving them the skills to conduct surveillance operations with minimal external input. This training has come from two sources. The Department of Defence has provided training through its International Navigation and Navigator Yeoman courses, as well as more general management, staff and operational courses. The Australian Maritime College (AMC) in Launceston, Tasmania has provided many courses in maritime technical, seamanship, communications and management subjects in support of the PPB Project. Since 1998, the AMC has conducted 32 courses per year for the PPB Project at an annual cost to the Australian government of approximately \$A1.5m.²⁴

Although Australia does not operate the PPB, the project has provided a number of RAN posting opportunities. Positions have been established for

one officer and one or two senior sailors, as operational and technical advisors, in each island nation operating the PPB. The RAN advisory teams aim to assist in the development of sustainable maritime surveillance capabilities,²⁵ whilst also providing assistance and support for personnel operating PPBs, and ongoing training for their effective operation. The advisors concentrate on factors including command and control, surveillance and maintenance and repair of the vessels. Additionally, the RAN has provided infrastructure and support for the PPBs through wharf and support facility construction and the progressive establishment of 17 Maritime Surveillance Communications Network Centres throughout the region.²⁶

Australia's continued support of the PPB has contributed to closer relations with neighbouring countries.²⁷ Strengthened relations through the South-West Pacific aligned well with Defence aims through the late 1980s and early 1990s, when the strategic focus shifted from a 'Defence of Australia' posture to a shared understanding of strategic priorities and cooperation. This incorporated the development of strategic capabilities and the fostering of a 'self reliance' attitude in Australia's neighbours - an aspect well provided for by the PPB project. A potential long-term benefit of investing in capabilities of other nations is the refinement or redirection of Defence support spending in the future, as those nations grow in experience of maritime surveillance and response operations.

Additionally, the introduction of self-reliant patrol forces throughout the region has eased the strain on Australia's own maritime patrol force. Cooperation between Australia and its Pacific neighbours has allowed for a greater allocation of RAN patrol boats to protecting Australia's maritime resources, patrolling the Sea Lines of Communication (SLOC), and conducting border protection operations. Australia currently conducts bilateral and multilateral exercises with countries participating in the PPB project to develop and maintain high standards of surveillance and patrol capabilities in the region.

Recently, PPBs from all nations involved in the project have undergone a half-life refit and are undertaking a life extension program. The life extension program provides a refit for the vessels at the 15-year mark, in addition to the previously conducted 7-8 year refit, and also provides for further training and logistic support from Australia. The life extension refit involves the refurbishment of the hull and structure, and the refurbishment or replacement of ship systems. The life extension program commenced in 2003

and is expected to complete in 2012. As a result, the service life expectancy of the vessels has been doubled from 15 years to 30 years. This will see the PPB potentially operating in the region until at least 2027.

Because the PPB project has been such a success in providing an effective surveillance and response capability, countries that have developed expertise in the operation of the PPB may in the future see a need to enhance this capability by incorporating a more sophisticated vessel, with greater endurance, improved seakeeping, and better boarding capacity, into their maritime patrol forces. The driving factors behind such a policy decision would most likely be linked to increasing pressure on local fish stocks from foreign fishing, as oceanic resources are increasingly depleted in traditional fishing grounds outside the South-West Pacific, or changes to the coastal state rights and obligations currently detailed in UNCLOS.

Should this be the case, the design and construction capabilities of Australian industry can meet the requirement. As an example, the *Armidade* class patrol boats currently being constructed by Austal Ships for the RAN may be a suitable design. An alternative might be the Inshore Patrol Vessel to be constructed by Tenix Defence Pty Ltd for the Royal New Zealand Navy. In addition to enhancing the current capabilities of countries operating PPBs, and increasing the interoperability of Australia's maritime patrol capabilities with those of neighbouring nations, these options would support Australia's maritime industry by providing for the construction of additional patrol boats beyond the current project completion dates of 2008 and 2010. However, Australian industry should be well placed to meet whatever the future aspirations of the PPB user nations are as the boats themselves approach their life of type.

The Pacific Patrol Boat Project has been beneficial for the ADF in general, and the RAN in particular. The development of self-reliant regional maritime patrol forces is significantly improving the response to resource violations in South-West Pacific EEZs. Strengthened regional relations and increased maritime patrol capabilities help maintain Australia's sovereignty and SLOCs, as well as contributing positively to regional stability and maritime security cooperation.

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Maritime Books, Cornwall, 2003

appendices, bibliography, 232 pages

Royal Navy Escort Carriers is a compendium of information covering the Second World War service in the Royal Navy of several classes of escort carriers. It is a beautifully presented and lavishly illustrated book, produced by Commander David Hobbs, a retired RN Fleet Air Arm pilot who is now Curator and Principal Historian of the RN FAA Museum.

Escort Carriers opens with a brief section describing the evolution of the type and how these ships were used during the war. The author points out that the escort carriers were a belated response to the critical need for convoy escorts and to the failure to foresee the need for them. Underlying the importance of the part they played is the striking comment that one third of all RAF Coastal Command sorties in support of convoys failed to find the ships they were meant to escort.

The major portion of the book is taken up with potted histories of each of the escort carriers that saw RN service. They were a mix of American and British built vessels, some converted merchant ships, others built for the role. Each ship is dealt with individually in anything up to six pages, with a mixture of text and photographs. These photographs are possibly the greatest strength of the book. Their quality is generally very good and they do convey, very fully, many aspects of life on the escort carriers – and most notably the conditions under which aircraft flew from these relatively short and often narrow decks.

The text is in the form of log or diary entries along the lines of this one from HMS *Tracker*: '28.12.43: Disembarked 816 NAS to RNAS Donibristle'. Even those entries that deal with specific operations are brief to the point of frustration and are likely to leave many readers unsatisfied. Even so, they do give an overall sense of the kinds of operations these ships conducted, the losses they suffered, and the successes they enjoyed. Similarly, some fascinating items of information can be unearthed during a leisurely but careful reading of the individual ship histories. An example is the fact that the *Pretoria Castle* operated for some time with an experimental catapult powered by slow burning cordite!

Convoy escort was the primary function of the

escort carriers, but as the entries for many of the ships point out, some were also used for assault operations and to ferry aircraft and ultimately ex-prisoners of war. Perusal of the ship histories also highlights the considerable success their squadrons had against submarines as well as against a variety of surface and shore targets in the assault role. Several of the ships were particularly active in this role in the Mediterranean during the latter stages of the war.

Australian readers will find many points of interest throughout the book. Several of the carriers visited Australia during their war service and there is reference to *Arbiter* being used in Australia in September 1945 to train former RAAF pilots who had volunteered for the Fleet Air Arm. There are also several mentions of squadrons that subsequently became part of the RAN Fleet Air Arm; 816, 851, 808 and 817 specifically. Perhaps the most poignant Australian reference is the photograph from *Ranee* showing a line book entry celebrating the birthday, on the 5th of January 1945, of Lieutenant A.M. Synnot, RAN.

The book concludes with several appendices containing a wealth of technical and other detail on the ships, their squadrons and the convoys they escorted. This section also contains fascinating vignettes of how two enterprising Fleet Air Arm pilots (is there any other kind?) escaped from their German captors. In marked contrast to the rest of the book, some of these later sections suffer from editorial lapses.

Of the 44 escort carriers described in this book, only three were sunk by enemy action. Some were paid off and broken up after the war, but most of them reverted to or became merchant ships and served on into the nineteen sixties and in some cases the seventies.

They are all remembered in this book which will be most valuable to those with a particular interest in these ships or the operations in which they participated. Readers who discover that they would like to know more will probably find the Kenneth Poolman books noted in the bibliography useful complements to *Escort Carriers*. For those to whom a picture is worth a thousand words, this book will do it all.

Reviewed by Commodore Jack McCaffrie AM,
RANR

Nelson: Britannia's God of War

Andrew Lambert,

Faber and Faber, London, 2004,

hardcover, 446 pp., illustrations, index,

RRP AUD\$49.45

This analytical and critical study of the influences which made Nelson the most highly celebrated British naval icon is a truly masterful piece of work. Andrew Lambert is a Professor of Naval History at King's College, London, and an internationally renowned naval scholar. His previous books include *Trincomalee: The Last of Nelson's Frigates*, *The Foundations of Naval History* and *War at Sea in the Age of Sail* which was also broadcast as a documentary on BBC2. In this book, Lambert goes to great lengths not to retell the well-documented life of Nelson, but to investigate more thoroughly the motivations, events and personalities which influenced the great man as well as to dispel the myth of Nelson's dark and sinful side.

The book itself is a pleasant and interesting read, not overly long-winded and quite easy to follow. Part One: The Making of a Hero, deals with the early years of Nelson's life, from his tutelage as a student of war under the patronage of great men through to his subordinate role under Hood and Jervis in the Mediterranean. Part Two: Towards Greatness, explores the period in which Nelson experienced great adversity, with the fateful Battle of Tenerife and the loss of his right arm, as well as triumph and fame with the celebrated victories at Cape St Vincent and the Nile. This part also investigates what is often seen as a black mark against Nelson's name: the period in which he was supposedly guilt of gambling and illicit pleasures of the flesh. Part Three: The Years of Command, covers the period of the victory at Copenhagen and time on half-pay after the Peace of Amiens, through to command in the Mediterranean, the campaign and Battle of Trafalgar and Nelson's death. Part Four: Nelson After Trafalgar, examines the impact that Nelson had on the psyche and direction of the Royal Navy (and indeed the British Empire) as well as the way in which he has been represented over the past 200 years.

The book is thus much more than a simple narration of Nelson's deeds or persona. There is a focus on how even small events and lesser people had an impact on Nelson's life. Lambert closely examines Nelson's motivations and understands him as a professional naval officer and warrior. Nelson came to greatness because of how he transformed the way in which war was fought at sea. He was a champion of the use of British naval

aggression. Lambert intricately probes the notion that Nelson's habit of forcing the enemy to fight and of pushing the advantage at sea was the direct result of the emergence of total war in the western world. Lambert shows the reader how Nelson did indeed learn from his mentors and took much of their characteristics and opinions onboard. But we see also how Nelson burst forth in his own right as a great naval leader, leaving much of the strategically stagnant and traditionally conservative 18th century ideas on naval warfare behind.

Lambert's book is neither a dry nor romantic history. It is an informative and opinionated work backed up by facts and extensive research. Lambert also considers the other authors who have written about Nelson and explores their motives, as well as the political, social or historical contexts in which they wrote. His work goes deeper and further into the story of Nelson and sheds new light on the true origins of this man's genius at a time when warfare had changed and his country was alone. The reader gains a new appreciation of Nelson's brilliance, his ability to simplify the complex, his charisma, his courage and above all his profound sense of duty.

Reviewed by Midshipman Bernard Dobson, RAN

The Command of the Ocean: A Naval History Of Britain, 1649-1815

N.A.M. Rodger,

Allen Lane/Penguin, London, 2004,

hardcover, lxxv, 907 pp., maps, illustrations, appendices including chronology, glossary, annotated bibliography, index

RRP: AUD\$65.00

The publication of this second volume of Nicholas Rodger's acclaimed naval history of Britain is being hailed around the world as an event in historical scholarship and naval studies. With its appearance, a leading historian has achieved critical mass in producing for our age, and for posterity, a great historical work designed to place sea power at the centre of the British story, and which - in its own way - rivals the famous writings of Mahan and Corbett. That it should appear in perfect time for the celebration of sea power surrounding the Trafalgar bicentenary seems like poetic justice. The book can only further promote the renaissance in naval history which has occurred during the last twenty-five years.

The Command of the Ocean covers the story of British sea power during its classic age. It begins

with the advent of a revolutionary republic surrounded by great enemies and dependent on sea power for its very survival. It travels through the eras of the Anglo-Dutch wars and the Anglo-French struggle for maritime hegemony, concluding with the victory in the Napoleonic Wars and the British achievement of strategic oceanic command. The book is conveniently organised into thirty-six thematic chapters, each dealing with one of naval operations, administration, ships, or social history within a discrete chronological period. This structure places traditional military history in wider historical context, while still allowing it its due. There are full and detailed accounts of great battles and campaigns as well as more obscure operations, and Rodger is as conversant with the intricacies of tides, winds and shoals and their implications for tactics and strategy (even for politics and revolution) as with the complexities of Dutch finance, French bureaucracy or English politics. One of the book's great merits is the comparative and international perspectives it adopts. These are, of course, essential in naval history, a truly international subject.

Three major virtues struck this reader about the book. It is, first, eminently readable and written in the style we have come to expect from Nicholas Rodger: lucid, witty, and graceful. The pages virtually turn themselves. When one reads or works with the book one becomes aware, secondly, of the monumental depth and breadth of its scholarly underpinning. This is a study based upon profound learning. The annotated bibliography, including works in eleven languages, runs to eighty-seven pages. But the real pleasure of the book is, for this reader, the liberal and humane spirit informing its scholarship and style. Throughout one encounters the author's balance, fairness, and respect for complexity (for example, in discussing the relative effectiveness - contra Mahan - of the French *guerre de course* in the 1690s), as well as his astute but generous humanity, even whimsicality, in dealing with a vast array of characters. Rodger writes of Admiral Arthur Herbert, one of the seven signatories of the invitation to William of Orange in 1688, who had publicly opposed James II's policy of religious toleration, on grounds of conscience, that '*This caused some astonishment, Herbert's warmest admirers not having hitherto realized that he had one*' (p. 137). One also encounters periodically Rodger's contempt for the intolerant and tyrannical, as well as his dislike (invaluable in a military historian) of unnecessary killing, violence, and destruction.

There is insufficient space here to explore the many wider historical issues (including the seventeenth century revolutions, eighteenth century society, and the industrial revolution) touched on in this book, still less the possible implications for them of Rodger's work. In specifically naval terms, one issue may be mentioned. Rodger has a sophisticated view of the eighteenth century 'blue water' school of British strategy, seeing it as something of a retrospective superimposition. He argues credibly that things were less clear-cut and more pragmatic in practice. But one suspects that Rodger may ultimately subscribe to a form of the blue water view. He sees continental commitments as unusual for Britain and a response to total war, rather than a natural function of the national interest. While giving maritime power its due for enabling Britain to fight the Peninsula War (and quoting Wellington to this effect), he does not specifically link Trafalgar with a resulting ability to project power on the continent. On the other side, he appears to chide Napoleon for being unaware 'that sea power is irrelevant to great continental armies' (p. 543). A careful reading of the book might find his interpretation differing from that of Paul Kennedy, who has stressed the importance to British strategy of an historical balance between ocean and continent.

Rodger is unquestionably right in the central premise underlying this book: that sea power lay at the heart of the British politico-social system and that the evolution of the latter cannot be understood without consideration of the former. But the book is also a case study with many lessons to teach about the nature of navies and maritime power. One is, perhaps, that single navies (such as the Britain's) have actually been many navies. Military services are like churches and cherish their patrimony; the Royal Navy still glories, rightly, in Nelson and Trafalgar. But one of the virtues of a long historical perspective, such as Rodger's, is that it shows us the various navies (products of their particular historical circumstances) which have at different times made up the Royal Navy. The fleet and the service which defeated the Armada were not those which fought the Dutch Wars, nor those which won at Trafalgar, despite the family resemblances. There is food for thought here for all naval planners seeking to negotiate between change and continuity. It points up the wisdom in the US Navy's concept of 'The Navy After Next'.

However one is inclined to approach this magnificent book, whether to browse, read, quarry it for information, engage with its scholarship, or simply wallow in its breadth and depth, it cannot

disappoint. The book (like its preceding volume *The Safeguard of the Sea*) is a collector's must for thoughtful maritime professionals, naval historical buffs, scholars in a number of disciplines, and general lovers of history. We await eagerly the third and final volume of the trilogy, which will carry the story up through the high imperial and twentieth century periods. If it takes (as this one understandably did) a further seven years to

appear, the wait will have been well worthwhile. We wish Professor Rodger fair winds and following seas on the homeward leg of this great historical endeavour.

Reviewed by Dr John Reeve, Osborne Fellow in Naval History, UNSW-ADFA

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