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AUSTRALIAN NAVAL INSTITUTE

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- to encourage and promote the advancement of knowledge related to the Navy and the maritime profession; and
- to provide a forum for the exchange of ideas concerning subjects related to the Navy and the maritime profession.

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Back Cover: A boarding party from HMAS *Manoora* prepares for action. (RAN)

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FROM THE EDITORIAL BOARD

Commodore Warick Gately, AM RAN tendered his resignation from the Navy at the end of 2002 and also as President of the Institute, we wish him well in his future endeavours and thank him for his efforts in expanding the membership of the ANI. The Deputy Chief of Navy, Rear Admiral Rowan Moffitt, RAN has agreed to be the Institute's President.

The ANI Library has been repatriated from the Defence Library system and is now housed in the RAN Sea Power Centre. The Institute will gladly accept book donations on naval and maritime matters (where they will either be added to the library or traded for difficult to obtain books). Could prospective donors please contact Dr David Stevens on (02) 62662423.

The Institute has never had a physical home, but from 2003 it will be housed in the RAN Sea Power Centre. We now seek the assistance of former Council members to locate ANI records and property, as well as the Institute's copies of *Proceedings*, *Naval Review*, *Maritime Studies* and other journals, which will be incorporated into the ANI Library. As ANI material has been found on a number of naval establishments, could all members also check their work locations for any items belonging to the Institute; please contact Mr Andrew Forbes on (02) 62655062 to arrange collection.

The Annual General Meeting is planned for March 2003, where a range of amendments to the Constitution will be proposed to ensure the continued viability of the Institute.

The third King-Hall Navy History Conference on *The Navy and the Nation* will be held in Canberra on 24-25 July 2003. The annual ANI dinner will be held in conjunction with the conference on 24 July and Professor Geoffrey Till will deliver the Vernon Parker Oration, discussing the Royal Navy in the Pacific.

Back copies of the Journal (where held) cost $5 for members and $15 for non-members. The Institute will take back old copies of the Journal if members no longer wish to hold them.

We hope you enjoy this issue.

The Australian Naval Institute
PO Box 29
RED HILL ACT 2603

25 October 2002

Secretary
Joint Standing Committee on Foreign Affairs, Defence and Trade
Parliament House
Canberra, ACT 2600

INQUIRY INTO AUSTRALIA'S MARITIME STRATEGY

Dear Sir,

The Council of the Australian Naval Institute (ANI) has viewed with interest the Committee's intention to inquire into the role of maritime strategy in Australia's defence policy. The following general comments and a selection of articles from the *Journal of the Australian Naval Institute* are forwarded as this organisation's contribution to the debate.

What is a maritime strategy?

Although not specifically addressed in the Inquiry's terms of reference one of the more fundamental issues that might profitably be addressed by the Committee is the meaning and understanding of the term 'maritime strategy'. Unfortunately, there is no single accepted definition and, as in many other areas of Australian Defence doctrine, terminology remains a stumbling block to the creation of an effective joint force capability. As elaborated in a recent article: '*Doctrinally, the ADF has a situation where joint, maritime land and aerospace concepts are expressed in four different languages, which are not necessarily well understood across the ADF*'.[1] This has led to a situation where policy papers, such as *Defence 2000*, use the term 'maritime strategy' in a manner which imposes quite severe and unnecessary constraints on what, in practice, should be a far more flexible and broadly based aspect of national strategy.

According to Professor John Hattendorf of the US Naval War College, a maritime strategy incorporates '*the direction of all aspects of national power that relate to a nation's interests at sea*'.[2] In a similar manner, the Royal Australian Navy defines a maritime strategy as '*The comprehensive direction of all aspects of national power to achieve national strategic goals by exercising some degree of control at sea*'.[3] Clearly, a maritime strategy is closely related to national security, however, it should not be seen as a purely naval, nor even military preserve. Instead, the concept involves the integration of a far wider range of national

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[1] P.D. Leschen, 'The Integration of Joint and Single-Service Doctrine-Ensuring Maritime, Land and Air Concepts are Understood and Applied' *Australian Defence Force Journal*, No. 152, January/February 2002, pp. 5-14.

[2] J.B. Hattendorf, 'What is a Maritime Strategy?' in D. Stevens (ed.), *In Search of a Maritime Strategy: the maritime element in Australian defence planning since 1901* (Canberra: SDSC, 1997), p. 13.

[3] Royal Australian Navy, *Australian Maritime Doctrine*, RAN Sea Power Centre, 2000, p. 156.

institutions and interests. In addition to purely military concerns, these interests should at least include the economic, cultural, industrial and environmental dimensions of Australia's maritime environment. Hence a true maritime strategy must be a sub-set of national grand strategy and, from this perspective, Australia's military strategy should devolve from our maritime strategy rather than the other way around.

Does Australia have a maritime strategy?

Because of its historic failure to harness the wealth of its surrounding oceans Australia has at times been described as an incomplete maritime power.[4] Most Australians still regard their coastline as little more than a convenient playground, while the vast expanse of water beyond is of only peripheral importance. As the late Professor Frank Broeze pointed out in his far too rare survey of maritime Australia: '*Images and perceptions of national identity have largely revolved around inward-looking and often racist concepts of "continental" Australia in which the sea was seen as a fence shutting out intrusions from the surrounding region*'.[5] The perception that the sea is a highway, one which makes every other coastal state in the world a neighbour, has achieved far less national prominence. Yet, it is this last point that highlights the security implications of the nation's broader maritime setting. Any possible military movement of persons and materiel, either by or against Australia, must travel either on, over, or under the sea. Hence, no matter whether the security problem is local, regional or global, and no matter whether viewed from our own perspective or from that of an adversary, the critical factor underlying success will always be the ability of forces to make use of the sea.

Although portrayed as the product of an unprecedented developmental process *Defence 2000* follows the pattern of previous White Papers in focusing only on a very limited range of Australia's national maritime affairs. There is little discussion of the vital role of maritime resources and communications, or even the problems of enforcing Australian jurisdiction over one of the largest combined maritime economic zones on the planet. There is certainly no attempt to integrate these aspects into a comprehensive national security strategy. Unsurprisingly, the maritime strategy portrayed in *Defence 2000* is one limited to 'control of the sea and air approaches'. The prime mission assigned to the ADF's maritime assets centres on the prevention of any incursions in force while supporting the ADF's freedom of operation in our approaches. In effect, Australia has continued to focus on using the sea for the creation of a barrier rather than exploiting it as a highway. Consequently, our endorsed military strategy places a premium on the denial capabilities of our naval and air forces. The danger inherent in this policy is that it too often leaves the initiative with an adversary, while barely acknowledging that our national interests extend well off our coast and involve far more than the defence of territory. More fundamentally, and notwithstanding the underlying importance of protecting Australian soil from a foreign lodgment, current policy needs to acknowledge that our sovereignty can never be seriously threatened while we maintain supremacy offshore.

Rather than impose constraints a true maritime strategy should make use of the flexibility provided by maritime forces (including naval, air and land elements) to concentrate on strategic end states rather than the defence of a particular territory. Australia must continuously seek to impose our choice about where and when to fight and, equally importantly, our level of involvement. Intelligently directed, the capabilities for mobility, power projection and sustainment inherent in maritime forces allow Australia to fine tune our

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[4] D.J. Campbell, 'Maritime power and the Australian Defence Force' in D. Stevens (ed.), *Maritime Power in the Twentieth Century: The Australian Experience* (Sydney: Allen & Unwin, 1998), p. 249.
[5] F. Broeze, *Island Nation: A History of Australians and the Sea* (Sydney: Allen & Unwin, 1998), p. 1.

defence obligations and shift focus with remarkable rapidity. Furthermore, and of vital importance in an era of instability and uncertainty, a nation's maritime power can act as a significant presence anywhere in the world, demonstrating commitment to an alliance or coalition, while acting to both limit the development of problems and keep threats at a distance.

Notwithstanding the shortcomings of its existing Defence strategy, Australia has already begun attempts to better integrate its national maritime activities. Indeed, at the release of *Australia's Oceans Policy* in 1998[6] we probably led the world in this area. The Australian Naval Institute believes that our nation must continue to proceed down this path. By moving closer to a truly national maritime strategy we can expect to make best use of all the attributes offered by our maritime forces and face the future with far greater confidence.

Relevant Articles
Attached are a number of articles from recent editions of the *Journal of the Australian Naval Institute* that might be of interest to the Committee. They cover some recent RAN operations, force structure issues and maritime/naval strategy.

Yours Sincerely,

A.R. FORBES
Journal Editor

D.M. STEVENS, PhD
Councillor

Editor's Note
The articles provided to the Committee were:
Commodore Sam Bateman, AM RAN (Ret'd) 'Australia's Oceans Policy and the Maritime Community' January/March 2000.
Commander Allan du Toit, RAN 'Breaking the Spears: HMAS Tobruk's involvement in Truce Monitoring Operations in Bougainville' January/March 1999.
Captain Allan du Toit, RAN 'Tactical Warfare Command in the RAN' Winter 2002.
Lieutenant Colonel Fawcett, 'Sea Control to Power Protection in the Littoral' Spring 2001.
Lieutenant Commander Trevor Gibson, RAN 'The One That Didn't Get Away' Autumn-Winter 2001.
Captain James Goldrick, RAN 'The Medium Power Navy in the 21st Century' Summer 2000-2001.
Lieutenant Brad Mackay, RAN 'Earthquake Relief in Turkey' Spring 2001.
Mr John Mortimer 'Naval Force Structuring' Spring 2002.
Lieutenants St John-Brown and Lobley, RANR 'A New RAN Focus for the Protection of Shipping' Spring 2001.
Lieutenant Commander D Schopen, RAN 'Has the Royal Australian Navy Achieved a Balanced Fleet?' April/June 1999.
Sutekh 'Funding the Frigates' Summer 2001-2002.
Lieutenant Benjamin White, RAN 'Maritime Operations in East Timor' April/June 2000.

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[6] Environment Australia, *Australia's Oceans Policy*, Canberra, 1998.

Australia's Oceans Policy

By Lieutenant Commander Virginia Oborn, RAN

'We know more about Mars than we do about our oceans'[1]

This statement from a National Oceans Office representative encapsulates the limited knowledge about oceans and their management in Australia. Around 97% of the volume of Australia's trade is moved by sea.[2] Australia's commercial fisheries production is estimated at $1.8 billion pa.[3] Offshore petroleum is worth approximately $8 billion pa and supplies 85% of the nation's petroleum demands.[4] These economic factors, in addition to ensuring the integrity of Australia's ocean ecosystems, protecting marine biological diversity, and supporting a diverse and ecological sustainable marine tourism sector, are some of the diverse challenges and responsibilities Australia faces in guaranteeing the long term health of our oceans. The size of our maritime jurisdictions, our scant knowledge about their resources, and the perceived lack of a maritime culture pose enormous problems for management.[5]

Australia's ratification of the 1982 United Nations Convention of the Law of the Sea (UNCLOS) led to the declaration of an 11 million square kilometre Exclusive Economic Zone (EEZ).[6] Nations who ratify UNCLOS not only gain control over substantial living and non-living resources in their EEZ, but also agree to obligations to protect the marine environment thus gained. In terms of governmental responsibility a massive area previously classified as global commons, is now a national responsibility and of enormous potential economic benefit, provided they are managed effectively.[7] The responsibilities that accompany this zone resulted in the Australian Government delivering an 'integrated and comprehensive' Oceans Policy in 1998. Herriman argued to some extent, Australia already had a national oceans policy in the form of existing strategies, policies, institutional arrangements, from State and federal arrangements, groups and Non-Government Organisations (NGOs).[8] What UNCLOS provided was the impetus to construct a coordinated, integrated and comprehensive approach to managing ocean policy and the opportunity to raise the profile for a maritime culture in Australia. Another stimulus involved in raising the profile of maritime affairs as elements of public policy in Australia were the achievements of some sectors of Australia's marine industry, particularly fishing, marine tourism, and offshore oil and gas.[9]

This article examines the factors involved in the development of *Australia's Ocean Policy*. The factors are representative of the multiple uses of the marine environment and their ability to influence a policy designed to manage Australia's large ocean environment. Managing the policy will be appraised with specific reference to the role of the Offshore Constitutional Settlement and the Regional Marine Planning approach. Finally, the issues facing the future direction of *Australia's Ocean Policy* will be examined and the prospects for an Australian maritime culture.

Development of Australia's Oceans Policy

Upon launching *Australia's Oceans Policy*, Senator Hill stated the release of the policy *'positions Australia as a world leader in implementing integrated oceans planning and management.'*[10] By observing the efforts of some overseas examples this statement may be placed into context. The United States, Canada, Japan, Indonesia, and South Korea have all tackled the issue of developing ocean policy in quite different ways. These varied responses are the result of different drivers and diverse cultural, political and institutional factors.[11] For example, Indonesia is progressing with sectoral policies while Japan is preoccupied with policy aspects surrounding international border issues and mitigation of pollution effects. South Korea, meanwhile, has addressed integration by an institutional path, establishing the Ministry of Maritime Affairs and Fisheries to integrate the ocean related functions from ten government authorities and departments. The US, while originally leading the way in coastal/marine policy, is no closer to developing a national policy. This is based on the reaction to the attitude of their Congress and the failure of a non-sectoral based constituency for a unified Oceans Policy to emerge to combat sectoral interests. The Canadian experience seems to

have been more successful than the US approach, with the creation in 1996 of a two part Oceans Act.[12]

Australia's development of ocean management policy had a fragmented and multi-pronged approach. Government interest in developing an Australian oceans policy commenced with the 1989 McKinnon Report, *Oceans of Wealth*.[13] This report evaluated Australia's marine science and technologies and marine industries and made a strong case for a more coordinated approach to developing Australia's ocean industries. There was also a background series of seminars, scoping papers, working groups, conservation plans, marine networks and reports.[14] In particular, the release of the major report in 1995, *State of Australia's Marine Environment*, found '*there was a lack of strategic, integrated planning in marine and coastal environments.*'[15] Marine agencies, such as Australian Marine Safety Authority, Australian Marine Sciences Association and Australian Fisheries Management Authority, had also begun to produce a range of draft plans and strategies. Linkages across these plans were made by their concern with 'aspects of the management of human use of the oceans.'[16] Running parallel to these plans was the National Strategy for Ecologically Sustainable Development (ESD), whose 1992 report provided a conceptual framework for oceans policy and was a 'compromise between conservation and development.'[17]

With the ESD strategy as the policy framework, bipartisan political support and the planning efforts of the various marine agencies, Australia had a strong foundation for the creation of a comprehensive ocean policy.[18] However, there were some impediments to the development and implementation of an oceans policy. This would involve the federal government working with state and local governments to develop a 'comprehensive and integrated oceans policy' across all jurisdictions.[19]

The Oceans Policy had to be a national, as distinct from Commonwealth, policy to meet its aims of being comprehensive and integrated. One of the first barriers was the friction between the various levels of government in Australia and the risk of the policy becoming a bureaucratically controlled process based in Canberra. Inter-agency rivalry and domination by one, or a few sectoral groups in the development of a policy could led to the exclusion of the user-groups, crucial issues and the community. Finally, there was the risk of the final policy being a series of platitudes with no practical implementation elements included.[20]

The Department of Environment, Sports and Territories (DEST) was assigned the responsibility to oversee the development of the Oceans Policy. DEST established inter-departmental committees and a steering group to aid the development of the policy. On 3 March 1997, the Prime Minister of Australia launched a 'consultation paper' on Australia's Oceans Policy.[21] Before the final policy was released, significant public comment and consultation was undertaken and a further two further reports were produced.

The Ministerial Advisory Group on Ocean's Policy (MAGOP) delivered the first report in March 1998. MAGOP was composed of people from NGOs, reflecting the diversity of interest from groups and sectors involved in Oceans Policy. The MAGOP report agreed with the ESD principles and recommended the principle of multiple use management. The other report was the public service driven process resulting in the delivery of a '*Australia's Oceans Policy - an Issues Paper*'.[22] The Issues Paper was substantial, although it did not include any recommended institutional arrangements for implementing the policy.[23] The adoption of the ESD principles by all stakeholders, and the institutional arrangements appear to be the two major issues that will determine the successful implementation of the oceans policy.

Australia's Oceans Policy

Australia's Oceans Policy was launched in December 1998 as a whole of government initiative. The policy was developed under international obligations to manage waters under Commonwealth jurisdiction. Australia's ocean environments are as rich and as varied as any on earth. They are linked to three of the world's largest oceans basins, the Pacific, the Indian and the Southern Oceans, and encompass all five of the major climate zones, from tropical and subtropical through to southern temperate, subpolar and polar.[24] The policy was driven by an understanding that without a dedicated policy, Australia would continue to operate on a sectoral basis without the capacity to handle the increasing pressures on our oceans. Sakell from the National Oceans Office proposed the policy as a '*small, yet pro active investment for the future sustainability of our ocean*

environments.'[25] *Australia's Oceans Policy* is an integrated, cross-sectoral plan for the sustainable development and management of national maritime zones and their resources.[26] The policy provides a strategic framework for the '*planning, management and ecologically sustainable development of Australia's fisheries, shipping, tourism, petroleum, gas and seabed resources while ensuring the conservation of the marine environment.*'[27] At the core of the policy is the concept of the Regional Marine Plans (RMPs), based on large marine ecosystems and connecting all Commonwealth agencies.[28]

With the release of *Australia's Oceans Policy*, new institutional arrangements were established. The new National Oceans Ministerial Board drives the implementation of the policy. A National Oceans Office was established to undertake a range of functions to support policymaking, including the development of RMPs and coordination across and between government levels. RMPs are one method adopted within the oceans policy to enable decisions about ocean resource management be transparent, sustainable and provide equitable opportunities for the Australian community now and for future generations. A National Oceans Advisory Group was also formed as a key consultative mechanism. Regional Marine Plan Steering Committees, comprising key non-government stakeholders, will be created for each ocean region. In addition to these arrangements, one of the major intergovernmental frameworks is represented by the Offshore Constitutional Settlement (OCS). Both the OCS and the RMP management regimes will be covered in further detail in this paper.

Managing Australia's Oceans Policy

The policy is neither solely an environment protection policy nor solely an economic development policy. It is a policy for the ecologically sustainable development of our oceans designed to manage multiple uses.[29] The elements required for effective multiple use management are: an appropriate legislative framework; and an appropriate operational framework.[30]

The Commonwealth's existing legislative framework for the management of the marine environment comprises international treaties and related instruments, Australian Commonwealth legislation, and inter-governmental agreements between the Commonwealth, State and Territories.[31] The legislative framework is an involved and multifaceted system. It is one of the challenges facing the management of Australia's marine environment. Australia's Oceans Policy Issue Paper 1 describes the Commonwealth's legislative framework for regulating marine sector activities as 'fragmented and complex' and thus, not adequately addressing multiple use management.[32] It further concluded the framework is overly complex and cumbersome and generally, non-traditional economic activities such as tourism and recreational activities are not regulated.[33] There is a need to develop a better management framework. This will require a review and rationalisation of all existing marine sector legislation to identify disparities and areas of common ground. This review could be incorporated in the iteration or phase of the policy.

An appropriate operational framework would consist of several elements to cost-effectively support achieving the national objectives across a wide range of interest groups and numerous existing sectoral management arrangements. This would involve consultative mechanisms, clear management strategies, and a framework to allow evaluation and assessment of the management plan.

Offshore Constitutional Settlement

The federal nature of Australian government and the interrelationship between the Commonwealth, the six states and local governments means the management of marine areas in terms of jurisdiction is complex. Consistent with the provisions of international law, Australia has declared a range of maritime zones under the *Seas and Submerged Lands Act 1973*. The outer limits of all these zones are measured from the territorial sea baseline, measured from the low-water line along the coast. The zones, measured form mainland Australia and islands forming part of Australia, are as follows: the territorial sea, the contiguous zone, the EEZ, and the continental shelf.

Around 97% of Australia's marine area is under Commonwealth government jurisdiction for environmental protection and resource management.[34] In 1973 the States challenged the Commonwealth's assertion of sovereignty under *Seas and Submerged Lands Act 1973* over the then three nautical mile territorial sea.[35] The High Court upheld the Commonwealth assertion of sovereignty and a

series of arrangements were reached with the states known as the Offshore Constitutional Settlement (OCS). The purpose of the OCS was to give the States greater legal and administrative role in offshore areas. The OCS is the primary arrangement between the Commonwealth and the States and Territories concerning management of marine resources. The principle legislation implementing the OCS (*Coastal Water States, Power and Title Act* 1982) entered into force in February 1983.[36]

Within the OCS arrangements the States and Territories were given title to an area called 'coastal waters' consisting of all waters landward of the three nautical mile limit but not including internal waters within the constitutional limits of a State; for example, Sydney Harbour. The States and Territiories were also given concurrent legislative power over coastal waters, which translates to possessing the same power to legislate over coastal waters as they would over their land territory.[37] Even when the territorial sea was extended to the 12 nautical miles limit in 1990, the OCS remained at the three nautical mile limit. The OCS includes a number of 'cooperative arrangements' governing the management of specific industry sectors, including oil and gas, sea bed minerals, fisheries and The Great Barrier Reef Marine Park. The fisheries agreements, for example, assign specified species or fishing activities to a particular Government's jurisdiction throughout the Australian marine environment. The arrangements under the *Fisheries Management Act 1991* enables a fishery both within and outside State coastal waters to be managed by one authority under one law. The OCS jurisdictional system highlights the necessity for cooperative governance arrangements. The Council of Australian Governments' remains an important component of the governance arrangements in reviewing roles and responsibilities for the environment between the Commonwealth, State and Territories.

Regional Marine Planning

Regional Marine Planning (RMP) is one approach available to protect and manage the ocean environment and resources. It is based on large marine ecosystems which 'integrate sectoral commercial interests and conservation requirements.'[38] Morrison cites '*ocean planning and management should attempt to ameliorate conflict of use situations and provide a directed balance between and among various uses of ocean space*'.[39] One of the main vehicles for implementing the Oceans Policy is the development of the RMP concept. It divides Australia's EEZ into 13 marine planning areas. One of the reasons for this approach to 'manage' the large ecosystem was the positive experience and systems established for the management of the Great Barrier Reef.

RMP is ecosystems based and incorporates multiple-use planning as a key focus. Sustainable development is also a fundamental part of environment and resource management and entails stakeholder involvement. In general, each RMP will undertake regional resource assessments, consideration of current and possible uses, development of proposals for broad cross-sectoral priorities and resource allocations among the sectoral uses.[40] Final approval for each plan rests with the National Oceans Ministerial Board. Arising from the RMP process, the National Oceans Office aims for regional marine planning to integrate current sectoral management arrangements and streamline institutional arrangements.

The South-east Regional Marine Plan (SERMP) is the first of the regional planning areas and the planning process commenced in June 2000. The region extends from Kangaroo Island in South Australia to around Eden in NSW and includes Tasmania and Macquarie Island – a total of approximately two million square kilometres in area.[41] It is probably the most complex RMP area, with four state governments, numerous local governments, and more than 50 per cent of the national population in the adjacent coastal lands.[42] Almost two years have been spent on the scoping, assessment and consultation phases of the process incorporating a range of socio-economic indicators, and the pressures on the uses of the region.[43] In March 2002 the assessment phase was completed producing seven reports, bringing together the most comprehensive picture of Australia's waters including a detailed bioregionalisation study. Bioregionalisation is a process of identifying areas (bioregions) based on ecological attributes (geology, ocean currents).[44] Developing operational boundaries for regional, marine planning based on ecosystem characteristics will be a significant step towards ecosystem-based management. The next phase is developing objectives and management options for the plan, including a performance

assessment to monitor the plan's outcomes.

RMPs could be considered the keystone to the successful integration and implementation of the ocean policy as they integrate many smaller jurisdictions and planning zones into a single planning and management regime. The process indicates a significant shift in the current aspects of the marine planning systems. It provides a mechanism for addressing traditional boundary problems, a basis for prioritising marine research needs, and identification of critical knowledge gaps. If implemented appropriately this approach should ensure full public consultation and community involvement in decision-making. It represents an '*exciting challenge for people responsible for protection and sustainable use of the marine environment.*'[45]

Future Direction of Australia's Oceans Policy

What might the regional maritime scene look like in 2020? Bateman forecasted increased pressures on resources, particularly energy and fish, greater environmental pressures, stricter environmental and safety controls on shipping, and an increase in seaborne trade.[46] The policy has a role in balancing national interests and ensuring internationally Australia does not lose more than it gains by new measures.

Remaining proactive and progressive is one of the challenges facing *Australia's Oceans Policy*. From an internal perceptive, success could be gauged by the achievements of first RMP, developed in the southeastern region of Australia's EEZ. This plan has the ability to influence, impact, and encourage Commonwealth and State cooperation in the management of Australia's marine ecosystems. If successful, plans will be developed for other marine regions around Australia. The endorsement of *Australia's Oceans Policy* by State and Territory Governments as an agreed national approach is another factor that will influence its future direction. It also plays and important part in ensuring its effective implementation.

In 1994 Senator Schacht argued Australia needed to develop a maritime culture.[47] Other maritime commentators have agreed with this sentiment. This article contends *Australia's Oceans Policy* provides Australia with its first real national coordinated approach to maritime issues. Although examination of recent government publications demonstrate this national approach is rather limited and departmental policy coordination is in its infancy. One of the objectives of the oceans policy is to promote public awareness and understanding. After examining *Defence 2000: Our Future Defence Force*, Defence's current White Paper, there is no acknowledgment of the Oceans Policy and the role for Defence. This is surprising noting the maritime environment is one and a half times the size of the continental landmass.

Surveillance and enforcement, as part of defence operations, in Australia's region is a paramount importance and is reflected in *Australia's Oceans Policy*. Australia is a maritime nation in a maritime region, featuring maritime boundaries with five nations: Indonesia, Papua New Guinea, the Solomon Islands, New Zealand and the French sub-antarctic and tropical territories.[48] We also have land boundaries in Antarctica with Norway, New Zealand and France. Thus, there is a need for international cooperation. There is a requirement to be able to operate freely in these areas, have unconstrained access to accurate and up-to-date information and, assist in sharing information and extending enforcement and surveillance cooperation with regional global agencies. The Royal Australian Navy's *Australian Maritime Doctrine* recognises Australia's vast area of strategic interest. Australia is dependent on the sea for transport and also, has a heavy reliance on the marine environment for living and mineral resources.[49] However, there is no acknowledgment of the corresponding *Australia's Oceans Policy* and recognition of the whole of nation approach to caring for and protecting our oceans now and for the future. This is a strategic disconnect between government agencies and should be addressed in future iterations of both documents.

In the National Interest, Australia's Foreign and Trade Policy White Paper published in 1997 recognised '*in a globalised world, the importance of integrating domestic and international policies makes a whole-of-nation approach essential.*'[50] This does not mean more bureaucratic coordination and layers of 'clearance'. Rather it means, Government will continue to bring to the policy-making process a clear understanding of the linkages across portfolios.[51] This requires better communication among those working on related issues in the various portfolios. *Australia's Oceans Policy* has departmental linkages between Defence,

Foreign Affairs and Trade, Fisheries, Transport, Environment, Science and Industry. Developing a whole-of-nation approach to 'ocean management issues' should reflect the reality that trade, industry, defence, tourism, investment, resources, and science and technology are important elements of Australia's internal and external interests. They are all closely connected with a focus on advancing Australia's maritime interests.

Conclusion

National and political awareness of the increased rights and obligations under UNCLOS provided stimulus for the development of *Australia's Oceans Policy*. This awareness was teamed with the success and significance of some sectors of the marine industry (shipbuilding, petroleum, fishing, marine tourism) and a strong interest in the marine environment and ecosystem management. *Australia's Ocean Policy* is an integrated management and planning system with tiered responsibility for national coordination and consistency of the policy. It acknowledges regional diversity and the range of backgrounds and interests involved in the managing our oceans and maritime interests.

Australia's Oceans Policy created an operational framework to retain the benefits and efficiencies of sectoral management and associated expertise. It will improve integration and coordination across sectors and jurisdictional interests while concurrently engaging government, industry and the community throughout the planning process. The policy aims to foster a sense of stewardship for our oceans and involvement in ensuring the future of our oceans. The test remains in challenging the current sectoral arrangements, providing evidence to support the principles of integrated management approaches, and investing time and resources for the future of our oceans.

Australia's Oceans Policy provides a comprehensive and coordinated approach to maritime issues. Analysts have commented the policy signifies a new era of maritime awareness for Australia.[52] Development of a maritime culture requires inter-disciplinary approaches from all areas of maritime interests to ensure strategic policy disconnects be addressed in future policies. Measuring the successful implementation of policy will be the adoption of economically sustainable development by all stakeholders and improved institutional arrangements. This will be portrayed by Australia's ability to present itself in to the region as a maritime nation with a developed maritime culture. *Australia's Ocean Policy* is a positive step toward understanding ocean management and in that respect, the benchmark of Mars is more achievable.

About the Author

LCDR Oborn completed a Bachelor of Arts Degree at the University of Queensland before joining the RAN in 1989. A dual specialist officer, she has served in a number of administrative and sea postings. Her sea experience includes postings in HMA Ships Tarakan, Torrens, Westralia, Adelaide and as the Executive Officer of Ipswich. She has enjoyed two staff positions, the first in the Defence Personnel Executive and the second in the Defence Materiel Organisation. LCDR Oborn graduated from the ACSC in December 2002 and is now serving as the corporate communications officer for Navy Systems Command.

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[1] V Sakell, 'Australia's Oceans Policy', lecture to Navy Single Service, Australian Command and Staff Course, 2 September 2002.
[2] Environment Australia, *Australia's Ocean Policy, Vol 2 - Specific Sectoral Measures*, Canberra, 1998, 'Shipping'
[3] Environment Australia, *Australia's Ocean Policy, Vol 2 - Specific Sectoral Measures*, Canberra, 1998, 'Fisheries'
[4] Environment Australia, *Australia's Ocean Policy, Vol 2 - Specific Sectoral Measures*, Canberra, 1998, 'Offshore petroleum and Minerals'
[5] S Bateman, 'Developing a Maritime Culture in Australia', *Ausmarine '94 Conference Papers*, 1994, p. 44.
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Reforming Naval Planning 1977- 78

By Commodore Alan Robertson, RAN (Ret'd)

At the end of 1976 I took up my appointment as Director General Naval Operations and Plans. At the time my predecessor, RADM Andrew Robertson, was very busy getting briefed for his forthcoming appointment as the Head of Joint Services Staff in London, and did not have time to give me a turnover. So it was that I was left with, in effect, a blank sheet of paper on which to write my own views on how the job should be tackled. I did, however, have the benefit of a conversation with CNS' Secretary, Ian Crawford, who had served in Washington, and a copy of Wylie's *Military Strategy*, which had been lent to me by Ian Knox.

As a result of Ian Crawford's remarks on the USN's planning cycle I began to form a view of a similar arrangement for the RAN. And as a result of reading Wylie I came across his elegant phrase that for officers in the armed forces, the appropriate strategic theory should be *the intellectual and conceptual basis of their profession.*

After a while I concluded that my most important planning task was the production of a long-range plan, looking, say, twenty or twenty five years ahead. And, having just completed an Australian Administrative Staff College course which included a segment on strategic planning, it seemed to me that that concept provided a model for dealing with the uncertainty which had bedevilled earlier attempts at providing an effective long-range plan for the Navy. That, in turn, provided the start point for my efforts; which was, to see what we already had in place as a long-range plan. Accordingly, I asked my Staff Officer, Glenn Lamperd to look for a copy of the Navy's existing Long Range Plan.

After several days Glenn came back to me and said that he could not find a long range plan, all he could find was a piece of graph paper with existing Fleet units listed in a column down the left hand side, and years marked out across the top. Against each ship was a thick line drawn out to the expected service life of each ship, and a dotted line onwards after that, indicating, it seemed, a replacement. Written over this was "Ditch" and then Ditch was crossed out and "Stet" written in its place.

I was staggered, and remarked *is this the Master Plan on which we are running an organisation employing over 17,000 people and with an annual budget of about $700m. a year?* But apparently it was. Clearly some urgent action was needed.

I had already decided on a four stage planning cycle and that the long range plan would be called Plan Blue, with a shorter range plan, say 10 years, would be Plan Green. To cope with the current Defence funding cycle this would leave scope for a three year plan to be called Plan Orange with the current year plan to be called Plan Red.

In view of the absence of a long range plan it was important to me to get a ten year plan written and I decided that for reasons of consistency we needed to include what was already in existence. That was, statements made by CNS in the Chiefs of Staff Committee and any other high level committee in which he indicated what he saw as the way ahead for the Navy, views expressed by DCNS (that was before the establishment of CNORP) in the Force Structure Committee, and existing approved Staff Requirements. As such it would not be a plan in the true sense of the word, but it would provide the Navy with a hymn sheet to which we could all sing.

Getting the plan written was something of a problem however, because to say that Plans was understaffed was an understatement. Ian Richards, my Captain (Plans) had been assigned to the Aircraft Carrier Project, which the CNS (Tony Synnot) had recently decided to establish. His intended Deputy, Commander John Foster, was still on his way south from New Guinea, but had a spell in hospital to do. The incoming Captain (Plans), Mike Hudson, was not due in until mid year (1977) and in any case was to be sent over to Defence for a special Defence of Australia study when he arrived. So I was left with my staff officer, Glenn Lamperd and Des Owen. Des was an ASW specialist who had resigned, but was back in full time service in the RANEM. So it fell to Des to do the essential spadework. It would take time.

In the meantime I had spoken to the planner in Personnel and asked him how he decided on the number he needed to recruit when he did not know what operations had

planned for the size of the Fleet in say, ten years time. He replied mysteriously: *we have our methods*. So I found out that the planners in the other Divisions did not speak with my people, and, indeed, did not speak to one another. So I went and saw their respective Chiefs and got their agreement that I could call their planners to meetings on a fairly regular basis. I got an office allocated and had it furnished with desks, chairs, telephones, a conference table, and a number of notice boards on which we could put up information about the current Navy Office projects, and information about the budget. That done I called them to a meeting, in what I called the Planning Office, and gave them a task.

The task I gave them was to devise a priority list of projects from 1 to about 180. And my reason for giving them that task was that as Director of Communications it had always bothered me that, when the Navy was directed by Defence to save say $60m from its annual budget, it was done in a most peculiar way. It was done like this; the Assistant Secretary Finance was provided with a couple of uniformed officers to assist him, and they went around Navy Office and spoke to all the various Project Directors. This took a couple of days. At the end of this period they came up with a list of projects to be cancelled and, sure enough, it saved the required amount. The reasons for selecting projects for cancellation was never made public, nor was the decision open to appeal. So I asked the Planning Office to establish the criteria for awarding priority to projects, and then to sort the existing projects into a priority list according to their criteria.

The Planning Office wrestled with this problem for, as I remember it, about six to eight weeks, and finally came up with list of projects graded into priority order. But, as for the criteria on which to base decisions to award a priority, they could not, they said, suggest them. So I sat down and wrote sixteen pages of theology as to why we had a Navy and went on to discuss the issues involved in awarding priorities. I then went on to derive some criteria. That done I re-sorted the projects according to my criteria.

Meanwhile Des had done a good job on the embryo Plan Green. And I forwarded this first draft to CNS who liked it, and he directed it to be fully developed. By now it was now about June and Mike Hudson finally appeared. He, too, liked what he saw of Plan Green, and made it his plan. So Plan Green was refined and costed for men and money. And we saw that, given the current funding levels and the approved manning levels, the Navy was unlikely to ever get the money or the men to implement Plan Green's modest objectives. In forwarding the plan to CNS I pointed this out, and got his reply that it did not concern me, it was his job to get the resources needed. So Plan Green went to CNSAC, where Mike Hudson presented it.

Subsequently the project priorities paper was completed and I sent it off to CNSAC as well. As I saw it, if the list was approved, when it came to saving $Xm off the Navy's budget, all that would be needed would be to go to the list and, working up from the bottom, work out the amount needed not to be spent.

I was not invited to attend the CNSAC when it took my paper and had to rely on CNS' Secretary for a description of what happened. According to him, CNS took my sixteen pages of theology and said words to the effect of *well we don't want to discuss this do we?* and put them in the waste paper basket. CNSAC then discussed the priority list and rearranged them to their own satisfaction. It then directed that the list be attached to Plan Green.

So, by the end of 1977 we had a 10-year plan and a priority list of projects. In the meantime I was increasingly concerned about the way the aircraft carrier project was taking a beating in the FSC, and I decided that we needed a Public Relations plan to get some support from the Australian public. To this end I wrote a PR plan which I called *Project Sea Dog* (give a dog a bad name). In those days I was working to DCNS as no one had as yet been appointed as CNORP. DCNS was RADM "Chick" Murray, and he had made it plain that he did not like me. So I thought it unwise to send him the plan as my own work. Accordingly I got my civilian journalist who was responsible for PR to submit the plan to me as his work. On this paper I put a minute suggesting that it was a splendid initiative and recommending it be taken up for action.

The trouble was that CNS baulked at the estimated $80,000 *Sea Dog* was likely to cost. Although I noted that he had authorised some $7m for the aircraft carrier project, CNS suggested that we do *Sea Dog* on the cheap. We would get the Defence psychologist, an Army civilian, to frame the questions to be put to the public, and then get the Reserves to ask the questions. Altogether these stipulations put the end to *Sea Dog*, so the aircraft carrier project was left to the attacks of the RAAF, a number of

Defence civilians who had had their prejudices confirmed by the NAP/TAWS Study, and some Defence correspondents in the media.

By January 1978 I wanted to get on with a proper strategic long-range plan, and, to this end, I called in Mike Hudson, briefed him on the nature of strategic planning and told him to start developing it. Six months later it seemed to me that Mike should have something to show me so I asked him how it was going. To my dismay he told me he had not even started it, he had been too busy he said dealing with tasks given to him by CNS and CNORP. But neither CNS nor CNORP had told me that they were directly tasking him; nor for that matter, had Mike seen fit to tell me himself. There was neither the time, nor any profit, in raking over this matter. In any case I was seriously considering resigning as I had been informed that my next posting was to be as NOIC WA, a prospect that did not fill me with unalloyed joy. So I decided to write Plan Blue myself in my spare time, that is, evenings and weekends. It took me about eight weeks but, at the end of it I produced a first draft of Plan Blue. I gave it a covering minute explaining the nature of strategic planning and asked the members of CNSAC for their comments and advice as to whether it was a suitable approach to a long-range plan.

My approach to writing the plan was based on a couple of ideas. One was the Stansfield Turner's proposal for a hi-lo mix for the USN but whereas the Sea Control Ship and the FFG were the low end of the USN mix, they would be the high end for the RAN. For the low end RAN escorts, I selected the US Coastguard 270 foot cutter. These ships had a crew of 90, cost about $90m a copy in 1978 dollars and shared a lot of common elements with the FFGs, same gun, same Fire Control System, same helicopter, but one, not two, helos, same EW suite, Link 11 etc. It did not have a hull mounted sonar but carried a towed array. It was a simple design and was suitable for building at any number of yards around the country. As such I saw it as a late 20th Century version of the AMS which had served us so well in WWII. The existing version of the ship was limited to 19.5 knots using diesel engines, but, if you wanted it to go faster you could, for more money, put in a gas turbine.

The other main idea behind my draft plan was to use the theory of maritime strategy to produce three different force structures while keeping as much as possible the same force elements in each. These I called variously *Blue Water* a sea assertion model, *Jeune Ecole* a would-be sea assertion model without aircraft carriers but with more FFGs, and *Fortress Australia* a sea denial force (a sort of glorified coastguard).

The three force structures proposed were more or less as follows:

Option A	**Option B**	**Option C**
Blue Water	*Jeune Ecole*	*Fortress Australia*
3 Sea Control Ships	4 FFGs	12 FFGs
6 FFGs (4 already on order)	6 Patrol Escorts	12 Patrol Escorts
6 Patrol Escorts (270'CG)	12 PTFGs	12 PTFGs
6 Submarines	6 Submarines	12 Submarines

I had the civil staff cost each option for capital costs and manning requirements. And the surprising thing was how small the difference was between the three of them. Option C was costed at $3754m and required 3400 people at sea. Option B was costed at $4464m and needed 4044 at sea, while Option A was costed at $4424m and needed 4520 at sea.

The really interesting point was that Option A was $40m cheaper than its supposedly cheaper Option B. However Option A's running costs would have been been higher because of the additional personnel it needed at sea. Option B would have reduced the wages bill from the existing Fleet's costs by $12.5m annually. The other interesting point was that the difference between the extremes of Option A and Option C was only $670M spread over twenty years. And, observing that Defence was liable to require some $60,000m over the same period this only represented a difference of just over 1% of the total Defence expenditure over the planning period.

I laid out a proposed building program for each of the three options, side by side, and showed that, if strategic circumstances changed, or, more likely, the Government jibbed at funding one of the ships/types, it was possible to immediately bring out an alternative proposal and so not lose momentum.

So, off went my draft Plan Blue and I awaited the reaction of the members of CNSAC. One Admiral said he agreed with the approach outlined. I heard that another Admiral, having read the plan, but obviously had not taken in my

covering minute on the nature of strategic planning, said to his Staff Officer *it's not definite enough*. He, poor chap, was convinced that we did not need strategic planning, but wanted to return to the old style of *Destroyer 09 will be launched on 1 July 1992* type of planning which had NEVER worked in the past.

But I had submitted my resignation and by December 1978 I had not got the reactions of all the members of CNSAC. And, to tell you the truth I was losing interest. I was soon to become a civilian again after thirty nine years in the regiment.

Epilogue

Over the course of the next year I heard that the new CNS established a working party of three to look into my proposed plan, and report. Apparently they did, and increased the alternative force structures from three to seven. And when this came before CNSAC, that august body decided to select one of the seven, and ditch the other six. So, that was the end of strategic planning. I also heard that they did not like my coastguard cutter because of its 19.5 knots, for the regular Navy in peacetime; not gung ho enough. The AMS could manage about 16 knots flat out as I recall.

I do not know how true this latter part is; others may. All I can say is that the existing Plans Blue and Green owe nothing to me except their titles. And, of course, as we all know, we have ended up with Option B, which, as you will recall was to cost $40m more than the sea assertion force structure. It is, in fact, a sort of glorified Coast Guard.

Editor's Note

Commander Sam Bateman, RAN led the working party that examined the proposed plan.

The last Plan Blue was published in 1989. With the creation of Development Division in HQADF, and the move of single Service force structure Branches into that Division, it was never revised nor published. In 2000, the Minister for Defence John Moore directed Navy develop a costed 20 year plan to prove to him that Navy had adequate planning processes in place. Chief of Navy VADM David Shackleton directed this be extended by 10 years (work progressed through Navy 2020 and Navy 2030 to become Plan Blue). The classified version was promulgated in December 2002 (to be updated every three years), while the unclassified version *Australia's Navy for the 21st Century* was issued in July 2001 and revised in August 2002.

In July 2000, Plan Green was also resurrected as an annual plan, initially with a five-year focus and then 10 years to mirror the Defence Financial Management Plan.

It is assumed that the Navy Plan (which became the Navy Resources Guide in 1996, and was discontinued in 1998) was based on the proposed Plan Orange.

About the Author

Commodore Alan Robertson served from 1940 to 1979 and saw extensive service in WWII. He later served on the staff of the Commander in Chief Far East Forces and commanded a number of ships including HMAS Duchess *and* Hobart. *A communications specialist, his final appointment was as Director General Naval Policy and Plans. He served as the National President of the Australia Defence Association from November 1990 to June 2001.*

Legal Issues in the Design of Future Warships

By Lieutenant Commander Chris Galloway, RAN & Lieutenant Commander Cameron Moore RAN

The Department of Defence is conducting a range of studies to assist in the development of the operational concept and functional specification for the proposed Air Warfare Destroyer under Project SEA 4000. One of the studies recently completed relates to the impact of the Law of Armed Conflict (LOAC) over the next 20-30 years on warship design. This article is an edited version of that study.

Introduction

In defining the legal implications for and restrictions on the use of the weapon systems in question under international law, a twofold approach has been adopted. Firstly, it is relevant to state the current international law obligations and attendant limitations as they apply today, as this is the law with which putative designs must accord. Secondly, in order to flag potential impact on future design, a review of the historical development in these areas will provide some pointers to the future direction that LOAC might take.

It is impossible to discern with any certainty the future development of the LOAC, except to say that if the last two centuries are any indication, this body of international law has the potential to grow exponentially. This has clear ramifications for future acquisitions, as it is probable that international law will increasingly restrict options for future weapon systems.

The discussion of legal requirements with regard to transporting people must also begin with current requirements. These requirements are unlikely to change, and indeed, the trend is likely to be in the direction of greater regulation with regard to transporting people.

International Law Generally

It is not proposed to list the sources of international law in detail. In general terms, international law derives its legitimacy from a wide range of sources, and can be said to be "the law which the wicked do not obey and the righteous do not enforce".[1] It should also be noted that much of the written international law is the product of compromise, is frequently couched in vague and uncertain terms, and has varying degrees of international support. The result is that in its application, the law is invariably arguable to the extent that any given state may or may not accept it as binding on them or their activities.

In general terms, the international community has developed a set of working principles which are drawn from the following general sources:

- treaties between nations;
- judicial decisions; and
- custom, as developed between nations over a prolonged period.

LOAC as a discrete classification of international law has had its greatest development over the last 150 years. The Geneva Conventions (various) and Additional Protocols provide the main body of the law which governs Australia in preparation for and execution of any military conflict. The result is that in any given conflict involving a number of nations, each may be bound by the Law of Armed Conflict to varying degrees. This was the case in East Timor, where the policy decision was taken to follow the spirit of LOAC, even though opposing forces were not signatories to the Geneva Conventions.

Towards the future, the only workable approach therefore is to assume that LOAC will apply, and structure new systems and methods in compliance. Hence, it is the written content, spirit, and underpinning principles to which Australia must adhere when scoping the future of weapons and systems.

Principles Which Apply in 2002

Part III of the *San Remo Manual*[2] summarises the law as it stands with respect to war at sea. The guiding principles are:

1. There is no right to wage unrestricted warfare;
2. There must be a clear distinction between combatants and non-combatants/civilians;
3. Attacks must be limited to military objectives;
4. It is forbidden to employ methods of

warfare which:

- Cause superfluous injury or unnecessary suffering;
- Are indiscriminate, in that :
- They are not, or cannot be, directed against a specific military target; or,
- Their effects cannot be limited as required by international law (ie by the principles of proportionality and military necessity).

Methods and means of warfare should be employed with due regard to the natural environment; accordingly, damage or destruction of the natural environment, which exceed military necessity or carried out wantonly are prohibited.

Weapons

Article 36 of the *1977 Geneva Protocol I Additional to the Geneva Conventions of 12 August 1949* (Additional Protocol I or AP I) places an obligation on parties to the protocol to determine whether or not new systems would offend any rule of international law. For this reason Australia is both legally and morally bound to apply the rules as they stand in relation to new acquisitions.

Graduated Force and Weapon Mix. The requirements of proportionality and graduated use of force should dictate the range of weapons fitted to a warship. The design of ships with only missiles and no guns supposes that they will be available only in conditions of open warfare on the high seas. A gun is essential for warning, and then for minimal destruction in law enforcement; and it must also be of sufficient range and calibre to constitute an effective use of force to restrain an opponent's naval vessels or clandestinely armed merchant ships in a low level warlike action.[3] Guns are the most suitable weapon for firing warning shots as seen in law enforcement operations such as Operation Slipper (interception operations in the Gulf), Operation Relex (anti-illegal immigration operations) and Operation Cranberry (operations against illegal fishing in northern waters).

Anti-Ship Cruise Missiles. The use of ASCMs is predominantly governed by the Law of Targeting, which is guided by the principles set out above. This has seen the development of so called smart weapons, which can be used to discriminate between military and non-military objectives. As current technology stands, those maritime missile systems which rely on high quality third party targeting information for their accuracy against moving targets, and which are fire and forget may potentially offend LOAC. This is because the target may move, or another target may be inadvertently acquired leading to an indiscriminate effect. As has been postulated in the request for this advice, ASCMs with a range in excess of 1000nm will invariably require mid course guidance or update to assure their accuracy and to minimise collateral damage. That said, the LOAC accuracy requirement and the need to precisely attack and destroy targets is entirely consistent with the military aim to be achieved by these systems.

Torpedoes. The API Article 36 requirement above applies equally to torpedoes. In addition Article 1(3) of the *1907 Hague Convention VIII* forbids the use of torpedoes which do not become harmless when they have missed their mark.

Sea Mines. Sea Mines are governed in some detail by the *1907 Hague Convention VIII*. The additional regulation arises by virtue of the historically indiscriminate use of sea mines in war. The convention itself is limited in its application, but by custom the approach embodied in it has been expanded to cover the use of sea mines generally. The major tenet of the convention is that naval mines should be constructed so as to become harmless should they break loose from their moorings or otherwise cease to be under the control of the belligerent that laid them. The rules also require that shipowners be warned of the mines as soon as military exigencies permit, or the conflict ends. Mines should be employed so as to avoid the possibility of damage or injury to neutral third parties. Belligerents are also obliged to remove or otherwise make safe mines at the completion of hostilities. Despite the age of the convention, it remains the guiding law and has customary application to the use of all sea mines. Iran and Iraq were widely condemned for releasing free floating mines into the Gulf during the 1980-88 war between the two countries. In essence, it is the issue of controllability under the convention that is crucial when contemplating new sea mines and their use.

Future Developments

The history of LOAC is instructive. This body of law emerged in the latter part of the 19th Century with the creation of the Red Cross, largely as the result of the particular horror and human suffering which attended war at that time. This basic need to limit suffering has

developed largely in response to methods and weapons used, usually after specific incidents or campaigns. The Geneva Conventions and supporting Additional Protocols attempt to declare this law to a certain extent, but it is more the principles which underpin these documents which are the pointers to the legal framework governing future war. Based on the 20th Century experience, it is not an unreasonable proposition that the growth of LOAC will invariably lead to a continued narrowing of the methods and means of waging war.

The development of a technologically based approach to war in the late 20th Century has proved the worth of international laws that regulate these conflicts. While so called smart weapons have had their very public failures with large numbers of non-combat casualties, this collateral damage is much reduced over the campaigns of WWII and its immediate aftermath. This shift in focus from wholesale indiscriminate bombing of civilian populations to legitimate military targets using precision guided munitions, particularly during the 1990-91 Gulf War and the 1999 NATO action against Serbia, is a clear example of the influence of the law. This shift now places the focus upon intelligence and accurate information gathering, distillation, dissemination and decision-making to ensure improved performance of the weapons themselves. Ultimately it is the quality of the decision making process, as much as the weapons themselves that determine an appropriate, legally justifiable outcome. Failures in this area lead to adverse public opinion, meaning that what is legally justifiable may not necessarily lead to a clearly identifiable or defensible legal position. The most famous example of this is the destruction wrought upon Iraqi forces fleeing Kuwait City on the road to Basra in 1991. While individual actions and their outcome may well fit within the LOAC principles, it may also be that the result of a prolonged campaign or the application of a particular means of war over time may in fact lead to a result that does not. The experience of the US-led air war in the Balkans campaign exemplifies this view.

In contrast to this overall orthodoxy, a view espoused by some commentators is that international humanitarian law actually contributes by allowing the military to do their jobs, rather than act as an absolute protection for non-combatants. Furthermore, LOAC is not necessarily at odds with the military concept of fight and win. The need to husband resources and achieve economy of effort as a military imperative is arguably consistent with the thrust of the law. From a purely theoretical perspective, ordinance expended on a non-mission target is wasted.

It should be noted that the development of technology has also resulted in two classes of belligerent: the haves and the have nots. The haves are able to wage war with a relatively high level of accuracy and precision, by virtue of their ability to afford smart systems in large numbers. This is in contrast with the have nots who must resort to inexpensive dumb weapons to wage war, placing them at a relative disadvantage. The corollary is that because the haves possess the technology to strike surgically, the expected norm is that they will have to use it to comply with the law.

Weapons Summary

The following factors are possible formative legal influences on the use of weapons in future naval warfare:

- There would be little or no reading down or reduction in effect of the current body of the LOAC; on the contrary, it is likely that this field will become more restrictive and complex as it develops.
- The principles established under LOAC and outlined above will continue to apply.
- The need for protection of the environment and minimisation of collateral damage will increase in prominence.
- As technology evolves, the use of weapons and systems which cannot be closely controlled will wane; conversely the expectation will be that accuracy to a perhaps infinitesimal degree will be demanded and deny the haves the ability to use dumb weapons.
- The clear demarcation of objectives as military or not will be essential, because technology can provide it and public opinion will demand it, particularly of the haves. The extent of the disadvantage imposed on the have nots as a result remains to be seen.
- The need for high level, accurate and quality information management and decision making will be essential.

Transportation Issues

A number of issues arise with regard to the transportation of persons that should be taken

into account in the design of warships. The requirements vary between law enforcement operations, the duty to render assistance and situations of armed conflict.

Law Enforcement

The *Crimes Act 1914* provides that:

> *23Q* Treatment of persons under arrest - *A person who is under arrest or a protected suspect must be treated with humanity and with respect for human dignity, and must not be subjected to cruel, inhuman or degrading treatment.*

This provision does not explicitly incorporate international human rights law but it does require a reference to a standard of humanity, human dignity and cruel, inhuman or degrading treatment. It should be interpreted consistently with international law. Australia is party to the *International Covenant on Civil and Political Rights* (ICCPR) and it is arguably customary international law. It states that "rights derive from the inherent dignity of the human person" and is probably the starting point for legal interpretation of phrases such as human dignity. Indeed, s.23Q would appear to draw upon Article 7 ICCPR concerning the right not to be subject to cruel, inhuman or degrading punishment, and Article 10 concerning the dignity of those deprived of their liberty.

Some of the other rights that the ICCPR recognises[4] that may be relevant to maritime law enforcement would include the right not to be discriminated against,[5] freedom of religion[6] and the right of children to be protected.[7] Freedom from discrimination would suggest that officers should be careful to avoid discriminating against people in their custody on the basis of such things as their race, colour, sex, language or religion. Freedom of religion includes the right to worship or make religious observances. Where possible, officers should grant those in their custody the opportunity to conduct their religious observances. Should officers have a child or children in custody they should make special efforts to ensure that they are protected from any harm, be it mental or physical. The *Convention on the Rights of the Child* (CROC) elaborates upon this issue. Australia is party to it and it also probably customary international law. It requires that children are not to be separated from their parents against their will[8] and must be protected from physical or mental violence.[9]

What does this mean for the design of warships? Recent operations suggest that it is quite likely that a major fleet unit would be required to transport either crews of fishing vessels that have been apprehended or the passengers and crew of vessels seeking to enter Australia unlawfully. In the latter case, it is likely that the numbers would be large and include a significant proportion of women and children. It would seem reasonable to expect that a warship could be called upon at short notice to transport such people for periods of days or weeks, until such time as they were landed or transferred to a more suitable vessel. If it is intended to employ major fleet units in such roles they should be designed to conform to at least some degree to the requirements of international human rights standards. This would mean that sufficient space be available on board to accommodate a number of people in at least austere comfort, how many would be a matter for further assessment. There should be sufficient space to sleep, eat and worship, moderate privacy for women and children, reasonable access to heads and showers and the upper deck. It would also be important to have the capacity to separate dangerous or offensive persons from others, particularly women and children. Any designs to this effect could also serve to accommodate extra crew, troops or trainees, evacuees or those rescued at sea.

Duty to Render Assistance to those in Distress at Sea. The RAN has frequently been required to transport people rescued at sea. Sometimes specific operations have taken place to rescue people from yachts, as in the Southern Ocean with Isabelle Autissier in 1995 and Tony Bullimore and Thierry Dubois in 1997, or during the 1998 Sydney to Hobart Yacht Race. At other times however, RAN vessels have had to rescue hundreds of people in distress because they happened to have been in proximity. This was the case in Operation Relex in 2001, even though the aim of the mission was to deter such people from landing in Australia and not to bring them onboard HMA Ships. The RAN has rescued people because it is obliged to do so by law where this is the only way to relieve the distress being suffered. Article 98 of UNCLOS creates an obligation to render assistance to those in distress at sea. This is reinforced by Paragraph 2.1.10 of the *International Convention on Maritime Search and Rescue*. A range of criminal penalties could also apply to members of the RAN who failed in their duty to render assistance to those in distress. The consequence of this is that RAN ships should be

designed to cope with the requirement to transport people rescued at sea, because the legal obligation to render assistance will be only be relieved where it causes serious danger to those rendering assistance.

Armed Conflict. The Laws of Armed Conflict impose particular requirements with regard to the transportation of prisoners of war and certain other categories of persons. There is considerable history of warships having to transport prisoners of war, captured either at sea or ashore. Again, any design that takes account of these issues could serve for other accommodation purposes

Prisoners of War. Prisoners of war must be rapidly evacuated out of combat areas. This must be done humanely and in conditions similar to those of the detaining forces. They must not be exposed unnecessarily to danger, and their safety must be ensured during the evacuation. They must be supplied with sufficient food, drinkable water, necessary clothing and medical attention.[10] They must also be protected against acts of violence or intimidation and public curiosity and insults.[11] Essentially, this would mean that a warship designed to be able to able to carry prisoners of war would need to be able to do so below decks, in spaces that would be considered acceptable for accommodation by members of the ADF. This could be more austere than the accommodation for the ship's company but no worse than that which would be used for detachments of own forces embarked for short periods.

Wounded, sick, ship wrecked. Similar rules as above apply for prisoners of war that are wounded, sick or shipwrecked. An important extra requirement to note is that such prisoners shall be afforded the same level of medical care as own forces and in order of medical priority. A warship may only demand that a hospital ship or merchant ship hand such personnel over to the warship if it can provide adequate facilities and care.[12] The issue for warship design is that warships that are capable of transporting prisoners of war must also be capable of caring for those prisoners of war that are wounded sick or shipwrecked.

Conclusion

The extant principles of the Law of Armed Conflict will continue to define, with increasing particularity, the way wars are fought. It is axiomatic that the future can only be predicated to a limited extent on the past - however the principles of the Law of Armed Conflict and their interpretation will provide the best guide to the legal requirements of an uncertain future maritime warfare environment.

Any requirement to transport persons, whether for law enforcement purposes, after a rescue or as prisoners of war, will also require minimum standards of human dignity to be taken into account in the design of ships. The best way to do so would be to design ships that are big enough to carry extra people in a degree of austere comfort.

About the Authors

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[1] Speech by Abba Eben, Isreali Ambassador to the US, 20 September 1957.
[2] The *San Remo Manual* is a contemporary restatement of the international law applicable to armed conflicts at sea. It is a secondary source of the highest standing, put together by a panel of the world's foremost legal and naval experts between 1980-1994.
[3] This paragraph is a paraphrase of D.P. O'Connell's *The Influence of Law on Sea Power*, Manchester, 1975, pp. 183-184.
[4] A breach of human rights law may not be a DFDA offence in itself but it could be evidence of prejudicial behaviour. This could ground a charge against a member under s.60 DFDA for prejudicial behaviour.
[5] Art 2.
[6] Art 18.
[7] Art 24.
[8] Art 9.
[9] Art 19.
[10] Geneva Convention III Arts 19 & 20.
[11] G III Art 13.
[12] G II Arts 14,15 &16.

Sail to Steam and its Impact on the Strategy of War at Sea

By Commander Nick Youseman, RAN

My Lords Commissioners felt it their bounden duty to discourage to the utmost of their ability the employment of steam vessels, as they considered that the introduction of steam was calculated to strike a fatal blow at the Naval Supremacy of the Empire.[1]

Lord Melville
First Sea Lord, Royal Navy
1828

The history and strategy of maritime powers have been shaped not only by geography and men but also by naval technology.[2] Navies incorporate sophisticated combinations of machinery and weaponry, and require many years to evolve. Indeed, a nation's prosperity and technological development is often judged by the complexity of its navy. Throughout history, maritime nations have been obliged to follow incremental changes in technology to keep their navies viable in conflict, avoid military defeat, and minimise the risk of invasion.[3]

The period 1815 to 1860 saw the end of the age of wood and sail, and the transition to iron and steam. This process was long and drawn out, although ultimately all navies embraced the new technology.[4] Until the invention of the aeroplane in 1903, the warship was the most complex piece of machinery in its day, capable of operating autonomously for days, weeks or even months.[5] The development of steam propulsion also coincided with rapid advances in the field of naval gunnery. Associated changes in hull design, and the use of iron and steel, transformed the warship beyond all recognition. The shift from sail to steam was significant because it was not only the ships but also the way of sailing them that changed.[6] This combination of effects had a profound influence on the way maritime warfare was conducted.

This article will identify the major ways in which the transition from sail to steam transformed the strategy of war at sea. It first provides an historical background to ship development from the Age of Sail to the Age of Steam, providing a contextual setting for subsequent analysis. It then defines strategy as it applies to the subject, before discussing the effects of the shift from sail to steam in five main areas. Finally, it draws all elements together in a conclusion.

The scope of the article extends from the wooden galley and ship of the line, to the ironclad and steel battleship. The influence of Britain's Royal Navy is given prominence, for two main reasons. Firstly, Britain was the dominant world power between 1815 and 1895.[7] The nation's leading role during the Industrial Revolution of the late 19th Century also allowed the RN to adapt to new ideas more readily.[8] Secondly, the quality of records describing the historical development of the RN make turning points in the subject area easier to identify.[9] To set the scene, it is necessary to consider the historical perspective of ship development and war at sea.

Historical Perspective

Maritime power has played a key role in the relationships between nations for centuries.[10] The sea provides the principal routes for exploration, commerce and warfare, being the cheapest and most efficient method of transporting large volumes of goods over long distances. Maritime power has also been used as a means of prevailing in conflict, allowing states to acquire colonies, dominate trade and gain prosperity.[11] Citing the British example, maritime strategist Captain Alfred T Mahan stated in his 1890 work *The Influence of Sea Power Upon History 1660-1783*:

> *It can scarcely be denied that England's uncontrolled dominion of the seas, during almost the whole period...[1660-1783]...was by long odds the chief among military factors that determined the final issue.*[12]

Understanding navies and maritime power requires an understanding of the history of the warship. Before the formation of organised navies, armed merchantmen were used to protect commercial shipping against pirates. Nations subsequently formed navies, building fleets of specialised ships for war.[13]

The development of ships has generally been described according to the means of propulsion. Development began with the Age of Galleys (2500 BC-1571 AD), passing through the Age of Sail (1200-1850), and the Age of Steam (1815-1905), to the Modern Age (1906-Present).[14] Technological change was often rapid but the adoption of new technologies, and their influence on the strategy of war at sea, were more gradual. Hence, the developmental ages do not have exact boundaries. The relevant periods in this case are the

Age of Sail and the Age of Steam

The Age of Sail was a 'Golden Age' for the influence of sea power, when empires were won and lost at sea, sometimes in a single battle.[15] The standard fleet formation under sail was in line abreast, and battles generally consisted of a chase followed by boarding. In a departure from this doctrine, England's victory over the Spanish Armada in 1588 was attributed to the smaller, sleeker English galleons standing off using their guns, rather than closing for boarding action.[16] Despite the lessons learned from this battle, navies in the early 17th Century continued to build larger and larger ships, with up to three gun decks and 100 guns. Such majestic vessels were built as much for prestige as for their fighting ability, but the experimentation in design led ultimately to the classic 'ship of the line'. Adjustments to fleet tactics inevitably followed.

During the first Anglo-Dutch war of 1652-54, the English changed their standard fleet formation to a single line ahead.[17] In this arrangement, opposing ships closed beam-to-beam rather than bow-to-bow. The danger of smaller ships ending up opposite larger, more powerful ships led to a gradual increase in the number of guns required for a ship to remain in the line. Ships of the line had to be strong enough to withstand enemy fire and make an effective reply.[18] However, the tactic of coming together in two parallel lines produced few decisive battles. Within the basic system of tactics dictated by the nature of the technology, there remained considerable scope for variation.[19]

Alternative manoeuvres known as 'melee' tactics were developed, aimed at achieving positional or numerical advantage over parts of an opposing fleet. One such tactic was 'crossing the T', whereby a fleet passed through the enemy line and brought its broadside guns against the enemy's limited forward guns. Melee tactics proved more difficult to control, and the British fleet persisted with formal linear tactics until the late 18th Century.[20] Thereafter, melee tactics were used by the RN to great effect, exemplified by Nelson's victory over the combined French and Spanish fleets at Trafalgar in 1805. The era of the ship of the line came to a close at the end of the Napoleonic Wars in 1815, with the arrival of steam propulsion. A metamorphosis of the warship followed, during a prolonged period of relative peace under the Pax Britannica.[21]

The Age of Steam saw changes in all aspects of warship design, and can be divided into three broad periods. The period 1815 to 1860 covered the introduction of the paddle-wheel and the screw propeller. Between 1860 and 1890, the warship was transformed from wooden sailing ship to steel battleship. Finally, from 1890 to 1906, came the progressive refinement of the battleship in the pre-dreadnought era.[22]

The origins of steam propulsion date back to James Watt's invention of the steam engine in 1765. Early versions of the steam engine were large and uneconomical in terms of fuel consumption, but design improvements eventually allowed the machinery to be fitted to ships. The new technology was first used for commercial fleets and the paddle-wheel vessel was created.[23] The principle of the screw propeller was understood but the paddle-wheel was thought to be more adaptable.[24] The first successful steam warship was the American ship *Demologos*, completed in 1915 and propelled by a paddle-wheel between catamaran hulls.

France's building of steam driven paddle warships led to fears in Britain that a cross-Channel invasion could happen before the RN had time to respond. Paddle-wheel vessels participated in a few wars of the period, but carried few guns and were not tested in a major battle. The main contribution of paddle-wheel ships was in shore bombardment, blockade, and river operations.[25] Otherwise, the paddle-wheelers were mostly relegated to secondary roles, including towing ships of the line, and 'packet duty' carrying mail and messages. The situation changed significantly in 1836 when British inventor Francis Pettit Smith and Swedish-American engineer John Ericsson patented designs for a screw propeller.[26]

The screw enabled steam and sail to be combined in a single ship.[27] A disadvantage to

both paddle and screw was the vibration of the machinery, which tended to shake wooden ships apart.[28] A turning point came in 1845, when the British screw-driven frigate *Rattler* pulled the paddle-driven frigate *Alecto* backwards in a competition.[29] Screw ships became dominant by 1850 and the RN's last paddle-wheel warship was launched in 1852.[30] Warships emerging over the next ten years were predominantly conversions; old ships of the line with machinery retro-fitted. Masts and yards were retained, being more economical over long distances.[31]

Britain took the lead in conversions from 1845, although the French were credited with the first large steam battleship, *Le Napoleon*, launched in 1850.[32] Despite this early progress there were problems. Early steam engines were large, and not all hulls were big enough to carry the machinery. The engines were also inefficient, consuming large amounts of coal, and a paddle or screw impaired the ship's sailing qualities. These drawbacks led to scepticism over the value of steam, confining its use for many years to an auxiliary power source only.[33] As each problem arose, however, advances in technology allowed solutions to be found. A subsequent round of development was sparked by the use of iron in shipbuilding.

Iron was a comparatively precious material until the Industrial Revolution, when improved smelting methods and machine tools made large-scale iron structures possible.[34] The RN had ordered its first iron warship in 1840, the paddle gunboat HMS *Albert*.[35] The iron shipbuilding industry was subsequently suspended, while trials were conducted on the resistance of iron hulls to shellfire, susceptibility to bottom fouling, and effects on magnetic compasses.[36] By the mid-1850s, the problems of the iron hull were largely resolved and iron cladding was used to armour wooden ships, creating the ironclad. Coincidentally, the Crimean War of 1854-56 signalled the demise of the wooden warship and an end to the exclusive use of sails.[37]

Although no major sea battles occurred, the Crimean War involved the first large-scale use of shell-firing guns. Cannonballs had the power to damage wooden ships but rarely sank them. The exploding shell, in contrast, had the power to destroy ships constructed of wood, or restricted in manoeuvrability by sails.[38] In 1858, the French Navy launched the wooden, armour plated and steam-driven warship *Gloire*. The existing ships of the RN became obsolete overnight, and rapid action was taken to rectify the situation. Just two years later, in 1860, Britain launched the iron-hulled, steam-propelled warship HMS *Warrior*, technologically the most advanced ship of its day.[39]

The process of change was well established and continued to the end of the century. Having considered the historical perspective, the effects of the shift from sail to steam can now be examined.

Effects on Strategy of the War at Sea

Strategy of war at sea during the technological advances of the 19th Century centred mainly on the capabilities of the platform. Five separate areas of platform capability and associated thinking can be identified, representing the major ways in which transition to steam influenced the strategy. These five areas are: speed and manoeuvrability, endurance and range, strength and armour, destructive power and weaponry, and tactical and analytical thought.

Speed and manoeuvrability. Sailing ships required ample sea room to manoeuvre safely. Beating into wind strained equipment and personnel and was not usually attempted over long periods. Working close inshore put sailing ships in danger of shipwreck. This meant battles were usually fought in open sea, limiting the tactical options open to the commander. Warfare in the days of sail was also relatively slow. The wind would be chosen according to the advantage sought as vessels closed for mutual bombardment, or raking with carronade at short range.[40] Steam, on the other hand, allowed warships to manoeuvre independently of the wind and take the fight to the enemy.[41]

Steam ships suffered few constraints in manoeuvring and generally were only limited by water depth and engine serviceability. A paddle allowed ships to turn much faster than with a screw, although this manoeuvrability was confined to calm conditions. The considerable drag created by the paddle eventually led to dominance of the screw, which could be raised or lowered as required by the sea-state. The strategic importance of anchorages offering safe entry and exit to sailing vessels waned as the manoeuvrability and reliability of steam-driven ships increased.[42] The ability of steam ships to manoeuvre in rivers and confined waters enhanced their application in amphibious style

warfare from the sea. The advance of technology also affected the traditional naval blockade.[43]

Steam tended to favour the blockade-runner. An evading vessel with steam propulsion was capable of similar speed to the blockading ships, and was less reliant on tides than a sailing vessel. The Unionist navy of the American Civil War found it took three times as many steam-and-sail ships to maintain a blockade compared with pure sailing ships, owing to the need for the former to transit to and from refuelling bases.[44]

In the Age of Sail, larger ships usually had a speed and fire-power advantage over smaller vessels. By the end of the 19th Century, the same machinery capable of propelling large ships at a certain speed was capable of driving smaller ships even faster.[45] The use of stand-off weapons such as torpedoes from around 1860 made small, fast craft highly effective against larger, slower vessels. A new school of thought emerged from the *Jeune Ecole* in France, suggesting the days of the battleship were over. The expectations of the *Jeune Ecole* were not realised, however, as it was found that battleships could adequately defend themselves with quick-firing, small calibre secondary armament.[46] Overall, the speed and manoeuvrability produced by steam brought major tactical advantages over sail.

Endurance and range. Steam improved the manoeuvring capability of warships but robbed them of their limitless range capability.[47] Thus, the tactical advantages steam were matched by a loss of strategic freedom. Steam-powered vessels making long journeys needed bases with coal, spare parts and engineering facilities. Being a first-class naval power increasingly meant building the necessary logistic infrastructure, and acquiring as many overseas bases as possible.[48]

During the transition period, British warships were not sent into battle under sail, but sail remained essential for covering the vast distances involved in policing the Empire.[49] Sail was retained in many ships until 1875, when Captain Philip Colomb showed mathematically that more coal was burnt transporting masts and spars than was saved by the occasional use of sail. The development of reliable twin-engine propulsion finally made sail redundant, the drag of two screws under sail removing too much speed to make sail worthwhile.[50]

A significant mismatch occurred between the endurance and range of ships on the one hand, and strategic command and control on the other.[51] This situation was eventually overcome, through a combination of increasingly fuel-efficient engines and improved access to logistic stations through colonial expansion. Nevertheless, distances to the nearest sources of fuel had to be factored into any planning for a war at sea involving steam ships.

Strength and armour. Despite the obvious vulnerability of sailing masts and spars, detractors of steam viewed engines and paddles as weaknesses in battle.[52] As the use of iron increased, so did the methods of protecting machinery and armament. Stability became a major issue and complicated initial attempts at providing added protection. Steel was stronger and lighter than iron, but for many years was too expensive for shipbuilding. The period from 1860 saw improvements in the design and effectiveness of armour, followed by increased production of steel to replace iron.[53]

The American Civil War (1861-65) was an important testing ground for the ironclads. In March 1862, the Confederate ironclad CSS *Virginia* was attacked by the Unionist ironclad USS *Monitor*.[54] *Virginia* had four guns per side, one pivoting gun in the bow, and a gun in the stern able to fire through three ports. *Virginia* was also fitted with an iron beak for ramming. *Monitor's* main armament consisted of twin 11-inch guns in a revolving turret.[55] In an indecisive engagement, both ships suffered only superficial damage from a mutual bombardment heavy enough to sink a wooden vessel.[56]

Virginia's encounter with *Monitor* was evidence of the mobility and strength provided by a combination of steam propulsion and armoured hull.[57] Armour changed war at sea because hull penetration from gunfire was no longer guaranteed, although the real transformation occurred as a result of efforts to defeat armour through improved weaponry.

Destructive power and weaponry. The transition from sail to steam saw a corresponding increase in the destructive power of the warship. The period of development around the American Civil War and Britain's launching of *Warrior* was followed by a 30-year period of experimentation in guns and armament, improvements in the former leading to a greater requirement for the latter. Ships carried fewer guns yet achieved greater firepower. Longer weapon ranges allowed stand-off engagements and dispensed with the need for boarding. The American Civil War also

saw the first appearance of torpedo boats and submarines. Gun turrets were developed, allowing ships to direct fire without turning the ship.[58] Naval gunnery changed in a manner not seen since the introduction of the cannon five centuries earlier, although the new technology had its complications.

Problems with new weaponry included excessive top-weight, and obstructions caused by the masts required for sail.[59] The RN's first major seagoing turret ship, HMS *Monarch*, carried four 12-inch guns, plus 7-inch guns fore and aft to overcome the turret blind-arcs. Concerns over stability and the *Monarch's* relatively high 15-foot freeboard resulted in her sister ship, HMS *Captain*, having a freeboard of only eight feet. The *Captain* capsized in a gale in 1870, drowning 472 sailors. As a consequence, construction of the turret ship in the RN was halted for several years. Other variations in armour and battery configuration were tried to determine the optimum combination of firing arcs, armour and stability.

'Central battery' and 'casemate' vessels were developed, comprising a smaller battery protected by a rectangular box in the centre of the ship.[60] 'Breastwork monitors' had a low freeboard main deck, but a raised armoured deck for the mounting of armament. In 1873, the RN launched the HMS *Devastation*, a breastwork monitor and the first seagoing warship propelled entirely by steam. *Devastation* effectively became the template for subsequent battleships.[61] As ship profiles and main armament changed, so did the technology relating to ammunition.

By 1839, the exploding shell had been adopted by many nations and smoothbore, muzzle-loading guns were being replaced by breech-loading weapons.[62] Accuracy was improved by the introduction of the rifled barrel.[63] The French ironclad *Gloire* was fitted with breech-loading guns. Breech-loading rifled cannon were also fitted in *Warrior*, but misfires in HMS *Eurydus* in 1862 led the RN to revert to muzzle-loading for the next 20 years. This setback did not detract from the overall potency of the new weaponry.

The combination of steam, armour and long-range guns facilitated the capture of previously impregnable forts.[64] Even the use of the battering ram enhanced the ironclad's destructive power. Ramming had been impossible in the Age of Sail, where reliance on the wind and the weakness of hulls were limiting factors. Ramming was the principle tactic at the Battle of Lissa in 1866 between the Austrian and Italian fleets.[65] In 1867, maritime strategist Sir John Colomb stated the ram was 'the ultimate weapon'. Despite the occasional ramming and sinking of friendly vessels in fleet manoeuvres, the ram-bow remained a feature of warship design until the arrival of HMS *Dreadnought* in 1906.[66] The impact on war at sea was clear; ironclads were devastating against anything pre-dating them.

Tactical and analytical thought. Despite the advent of steam, naval thinking remained tied to the principles developed in the Age of Sail. In 1859, Captain Alston stated in his introduction to the Royal Navy seamanship manual:

> *Although we are living in what may be termed the Steam era, and our Navy is a steam Navy, I have in this work wholly excluded the consideration of Steam power, as, owing to the great cost of coal, and the impossibility of providing stowage for it except to a limited extent, the application of Steam power for ordinary purposes must be strictly auxiliary and subordinate, and its employment on general service the exception and not the rule.*[67]

The biggest problem afflicting the RN during the transition to steam was the lack of any serious strategic thought amongst the officer corps. The development of naval strategy was left to flag-officers, and little analysis existed on how the navy might function in time of war. Steam made manoeuvres to bring ships into battle more precise, making it easier to achieve simultaneous engagements than under sail. However, even fundamental questions, such as the range at which the enemy should be engaged, were not addressed.[68] This left Britain poorly placed to achieve tactical and strategic advantage in war.

A good deal of strategic thought was crystallised during the late 19th Century in the writings of Mahan, the Colomb Brothers and others. Many of the conclusions had their foundations in the days of sail, and the publications offered few clues as to how a steam navy should operate. At the Battle of Jutland in 1916, the Grand Fleet of the RN still cruised in line ahead and relied on 'crossing the T' for attack. In the absence of developed tactical and analytical thought, the strategy of war at sea was transformed progressively each time a steam navy went into battle.

Conclusion

By the end of the Napoleonic Wars, sailing ships and men-of-war had reached a peak of perfection. The revolution that transformed naval warfare in the 19th Century was essentially the result of three major developments that occurred more or less simultaneously, namely the invention of the steam engine, the improvements in weaponry, and the ability to build vessels from iron and steel.

The transition from sail to steam dominated military thinking for almost a century and totally re-developed the warship as a fighting machine. Steam transformed the strategic influence and tactical mobility of maritime power. At first, traditions started in the days of sail inhibited rather than encouraged modernisation. The change was ultimately embraced, resulting in strong competition between the major maritime powers over several decades. The dominant navy of the transition period was the RN, but lesser navies were occasionally first to develop new ideas. Britain was never far behind because of its industrial strength, and the RN succeeded in building some of the best examples of vessels based on the emerging technologies.

Few decisive battles were available to test the performance of early steam platforms. Equally, there was barely time to trial new concepts before fresh ideas emerged. Methods of fighting war at sea were, to a certain extent, in a constant state of flux. Sailing masts were initially removed for reasons relating more to armament than to propulsion. The final disappearance of sails was only made possible by the increasing reliability of machinery, and the availability of remote logistic stations. Almost every aspect of naval warfare was changed in the process of this transition.

Ultimately, the shift from sail to steam transformed the strategy of war at sea in five major ways, which encompassed the key capabilities of warships and the tactics of their commanders in battle. The linkages between these milestones in the maritime dimension and the technological changes of the Industrial Revolution created a fascinating chapter in the history of the world's navies.

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[1] John Winton, *An Illustrated History of the Royal Navy*, Salamander Books, London, 2000, p. 104.
[2] Clark G. Reynolds, *Command of the Sea: The History and Strategy of Maritime Empires*, William Morrow & Company Inc, New York, 1974, p. 9.
[3] ibid.
[4] Winton, *An Illustrated History of the Royal Navy*, p. 104.
[5] James L. George, *History of Warships: From Ancient Times to the Twenty-First Century*, Naval Institute Press, Annapolis, Maryland, 1998, p. 4.
[6] Martin van Creveld, *Technology and War: From 2000B.C. to the Present*, The Free Press, New York, 1989, p. 125.
[7] Richard J. Hill and Bryan Ranft, eds., *The Oxford Illustrated History of the Royal Navy*, Oxford University Press, Oxford, 1995, p. 161.
[8] The Industrial Revolution was a series of technological, economic, social and cultural changes in Britain during the late 18th and early 19th Centuries, which transformed the nation from an agrarian to an industrial society.
[9] George, *History of Warships*, p. 3.
[10] Maritime power is a nation's capacity to project, sustain and apply effective military force at or from the sea. This capability may also be referred to as sea power.
[11] Geoffrey Till, *Maritime Strategy and the Nuclear Age (Second Edition)*, Macmillan Press, London, 1984, pp. 2-3.
[12] ibid.
[13] George, *History of Warships*, p. 1.
[14] ibid., p. 274.
[15] ibid.
[16] ibid., p. 48.
[17] Van Creveld, *Technology and War*, p. 134.
[18] George, *History of Warships*, p. 50.
[19] Van Creveld, *Technology and War*, p. 134.
[20] George, *History of Warships*, p. 53.
[21] The Pax Britannica lasted from 1815 to the outbreak of World War I in 1914. During this time, British warships policed international maritime trade and acted to suppress slavery. Despite attempts to control international order through diplomacy, the underlying requirement for armed force helped to maintain competition between navies.
[22] George, *History of Warships*, p. 60.
[23] The linking of engine to paddle wheel is usually credited to American engineer Robert Fulton.
[24] George, *History of Warships*, p. 61.
[25] ibid., pp. 62-63.

[26] Winton, *An Illustrated History of the Royal Navy*, p. 104.
[27] The first warship propelled by a screw was the USS *Princeton* in 1842, designed by the Swedish-American inventor John Ericsson.
[28] Andrew Lambert, "The Organization of Navies", in John Keegan, ed., *War at Sea in the Age of Sail 1650-1850*, Cassell, London, 2000, p. 213.
[29] *Rattler* and *Alecto* were of identical size.
[30] George, *History of Warships*, p. 64.
[31] Winton, *An Illustrated History of the Royal Navy*, p. 104.
[32] Britain and France went on to develop the world's largest steam battle fleets of the period, although steam was still viewed as an auxiliary means of propulsion and most steam warships carried sail into the 1880s.
[33] R. Humble, *Before the Dreadnought: the Royal Navy from Nelson to Fisher*, Macdonald & Janes, London, 1976, p. 189.
[34] Van Creveld, *Technology and War*, p. 200.
[35] Winton, *An Illustrated History of the Royal Navy*, p. 104.
[36] Iron proved brittle, especially when cold. The effect of iron on the magnetic compass resulted in iron ships being confined largely to rivers, lakes and channel crossings.
[37] Larry H. Addington, *The Patterns of War Since the Eighteenth Century (Second Edition)*, Indiana University Press, Bloomington and Indianapolis, 1994, p. 54.
[38] The exploding shell was a French idea, proposed by Major Henri Paixhan in 1819.
[39] Humble, *Before the Dreadnought*, p. 52.
[40] The English were offensively minded and usually chose to enter battle taking the 'weather gauge', with the wind at their backs. The defensively minded French usually took the 'lee gauge' with the wind in their faces, providing the option of escape if necessary.
[41] Addington, *The Patterns of War Since the Eighteenth Century*, p. 54.
[42] N.A.M. Rodger, "Weather, Geography and Naval Power in the Age of Sail", *The Journal of Strategic Studies*, Vol 22, Nos. 2/3, June/September 1999, pp. 178-179.
[43] Naval blockades served to cut off a country's maritime commerce.
[44] Addington, *The Patterns of War Since the Eighteenth Century*, p. 54.
[45] Van Creveld, *Technology and War*, p. 204.
[46] Van Creveld, *Technology and War*, p. 204.
[47] Addington, *The Patterns of War Since the Eighteenth Century*, p. 54.
[48] Van Creveld, *Technology and War*, p. 133.
[49] Humble, *Before the Dreadnought*, p. 51.
[50] Andrew Gordon, *The Rules of the Game*, Naval Institute Press, Maryland, 1996, p. 166.
[51] Van Creveld, *Technology and War*, p. 204.
[52] Winton, *An Illustrated History of the Royal Navy*, p. 104.
[53] George, *History of Warships*, p. 74.
[54] The *Virginia* was formerly USS *Merrimack*, a Unionist hybrid steam ship with full sailing rig. *Merrimack* was scuttled in US Navy Yard, Norfolk, to avoid her capture by the Confederates, but the Confederates raised the ship and converted her to an ironclad.
[55] Humble, *Before the Dreadnought*, pp. 109-110.
[56] *Virginia* received 22 hits from *Monitor*, and *Monitor* received 20 hits from *Virginia*. *Virginia* also made unsuccessful attempts to ram *Monitor* as the ships circled each other for two hours.
[57] Despite the inconclusive result, the *Monitor* name was later given to a class of warships based on the original.
[58] The concept of a gun turret is credited to Swedish American John Ericsson and Royal Navy Captain Cowper Coles, both of whom suggested the idea in the Crimean War.
[59] George, *History of Warships*, p. 71.
[60] ibid.
[61] ibid.
[62] The effectiveness of breech-loading weapons, with armour-piercing explosive shells, was later demonstrated by the Russians in the defeat of the Turkish fleet at Sinope, Black Sea, in 1853.
[63] George, *History of Warships*, p. 75.
[64] Hill and Ranft, *The Oxford Illustrated History of the Royal Navy*, p. 189.
[65] Van Creveld, *Technology and War*, p. 203.
[66] Humble, *Before the Dreadnought*, p. 112.
[67] ibid., p. 108.
[68] Richard Hill, *War at Sea in the Ironclad Age*, Cassell, London, 2000, pp. 105-107.

The Continued Utility of the ANZUS Treaty

By Commander Jonathan Mead, RAN

'*Without any inhibition if any kind, I make it quite clear that Australia looks to America, free of any pangs as to our traditional links of kinship with the United Kingdom.*'
Prime Minister John Curtin, 29 December 1941[1]

'*The Treaty [ANZUS] remains today the foundation of a relationship that is one of our great national assets.*'
Defence 2000 White Paper[2]

From Curtin's wartime Labour government through to Howard's conservative government of 2000, both political factions have highlighted the importance of the Australia-US alliance. Indeed, whilst the geo-strategic environment has undergone cataclysmic changes throughout the past 50 years the ANZUS alliance has been the bedrock from which Australia could formulate its security polices around.

The aim of this article is to examine the ANZUS Treaty and specifically its influence vis a vis Australia's naval interests. This paper will commence with a brief history of the ANZUS alliance. This will lead into an examination of how the Treaty has influenced Australia's strategic and naval interests. Finally, this essay will conclude with an investigation into the future of ANZUS.

History of ANZUS

Military alliances have been a recurring feature of international relations.[3] The defeat of the Japanese in 1945 and the supremacy of United States military power irrevocably altered the Asian balance of power. The demise of European colonialism within the Asia-Pacific sphere left the United States as the sole dominant power within the region. In 1949, the United States along with its European allies formed the North Atlantic Treaty Organisation (NATO) in response to a burgeoning Soviet threat. Within Canberra, key policy makers including, the Minister for External Affairs, Dr Evatt, advocated for a similar Pacific pact. However, the US Secretary of State, Dean Acheson, articulated the reluctance of the US to enter into such an arrangement. Acheson stated, *inter alia*, that 'while it is true that there are serious dangers to world peace existing in the situation in Asia, it is also true that a Pacific defence pact could not take shape until present internal conflicts in Asia were resolved.[4]

Notwithstanding US ambivalence towards Asia-Pacific engagement, the fluidity of the international arena quickly forced Washington to reappraise its policy. In particular, Mao Zedong's victory over Nationalist forces in 1949 and the outbreak of hostilities in Korea in 1950 galvanised American sentiment towards 'containing' communism within the Asia-Pacific theatre. Washington viewed Japan as the linchpin in any containment strategy. Ironically, Australia's interpretation of the regional security environment was inimical to Washington's interpretation - in that Menzies and Spender both saw a rearmed Japan as a direct threat to Australia's interests. Indeed, even Labour's Evatt expressed concern over Japan's rearmament. In 1950, he stated that:

> *I think it is quite fallacious to concentrate on Russia as the only possible aggressor in the Pacific or South East Asia. I do not believe that Japan will always be content to remain allied to those nations that were its chief enemies in WWII.*[5]

Consequently, Canberra wanted to drag America into the Asian morass in order to deter Japanese expansionism, whilst conversely, Washington wanted to extend its influence into Asia in order to defend Japan from the Soviet Union.

Thus, Japan was the nucleus (though for significantly differing reasons) for both the United States and Australia to entertain a Pacific pact. President Truman declared on 10 January 1951 that:

> *It is the policy of the US Government that the US will commit substantial armed force to the defense of the island chain of Japan... and in order to implement this policy the US Government is willing to make a mutual assistance arrangement among the Pacific Island nations (Australia and New Zealand).*[6]

Thus, a convergence of interests and perceptions between Australia and the United States acted as

the catalyst for negotiations over a security treaty.[7] Subsequently, the negotiating process, which involved a certain degree of quid pro quo, culminated with the signing of the ANZUS (Australia, New Zealand and the United States) Treaty in Washington on 12 July 1951. The principal elements of the Treaty are contained in articles II, III, IV and V. Article II calls upon all states to 'maintain and develop their individual and collective capacity to resist armed attack'.[8] Importantly, Article III details provisions for mutual consultation in the event that any of the parties 'is threatened in the Pacific'.[9] Under Article III, consultation includes such parameters as instability and subversion. Finally, articles IV and V refer to the geographical limitations of the Treaty. The vexing question of the limitations of the 'Pacific arena' has been the subject of much debate and speculation. Indeed, the actual boundaries of where ANZUS applies have never been decisively defined - though this ambiguity allows both states to interpret the Treaty to their own advantage.

Until 2001, the ANZUS Treaty had never been activated - and ironically it was Australia who activated it in defence[10] of the United States. However, throughout its history there has been considerable angst over ANZUS obligations. Indonesia's claim over Dutch New Guinea was to provide the first test of these ANZUS obligations. Menzies sought to gain US commitment towards Australia's stance over Dutch New Guinea. However, the US was reluctant to enter into the foray and instead adopted a neutral perspective. Further, the precise meaning of ANZUS came under extra scrutiny during Indonesia's confrontation toward Malaysia. Canberra sought to obtain a commitment from the US for Australian troops stationed along the Borneo border. Again the US was reluctant to narrow the provisions of the ANZUS and instead left the vagueness of the Treaty stand.

President Nixon's celebrated Guam Doctrine[11] of 1969 further confused and indeed disturbed Australia. No longer could Australia accept the premise that the US would intervene in a conflict emanating in South East Asia - though an attack on Australian soil would still invoke the ANZUS Treaty. Thus, America's attitude towards its ANZUS obligations has been characterised by ambiguity, generality and self-serving interests.[12] Conversely, Australia has been quick to support US interests - Australia's commitment to Vietnam being a case in point.

Despite the nuances of the Treaty its 'value has been less in countering specific threats than as a hedge against many possible threats - put simply the alliance has been threat insensitive.'[13] As Norman Harper noted, 'to the United States the Treaty was designed as part of a network of alliances to contain communism'.[14]

Notwithstanding, the disparity in interpreting ANZUS, the Treaty has spawned a mosaic of political and security fora. Indeed, Australia's military alliance with the US has been branded by a 'rapidly expanding program of strategic cooperation, exchange training, joint military exercises, arms procurement and intelligence sharing'.[15] At the forefront of this military alliance has been collaboration in the arena of naval interests.

ANZUS and Australia's Naval Interests - Positive Impact

Spawning from the ANZUS Treaty has been a host of security consultative fora, Defence programs, Defence arrangements and multi-lateral/bilateral treaties. One of the more significant of these treaties was the Radford-Collins Naval Control of Shipping Agreement. From February 26-March 2 1951, the Australian Chief of Naval Staff, Vice Admiral Collins, and the US Commander in Chief Pacific (CINCPAC), Admiral Arthur Radford, attended a conference at Pearl Harbour aimed at establishing a service level arrangement between the two commands in the sphere of maritime security.[16] The conference concluded with the following recommendations:

- A boundary line was formed in the Pacific for allocation of duties between the US, Australian and New Zealand with respect to naval escort, convoy routing, diversion of traffic, reconnaissance, local defense, ASW and search and rescue.
- Liaison and coordination between CINCPAC and Australia and New Zealand was to be developed – this included exchange of officers.
- Coordination and information exchange between CINCPAC and ANZAM (Australia-New Zealand-Malaya) over naval control of shipping was to be established.
- Reconnaissance, in particular ASW was to be a key objective of the parties.
- Search and Rescue responsibilities within the confines of the delineated area were

defined.

- Synergy of communications was to be developed.[17]

Importantly, the agreement allowed for direct bilateral Naval planning under the ANZUS Treaty[18]. Whilst ANZUS was unique in that it established a military alliance between three states without a common security threat, Radford-Collins was framed to delineate specific 'areas of maritime responsibility'.[19] The ANZUS navies were directed to provide reconnaissance and surveillance of their respective areas. Under Admiral Gorshkov's[20] reinvigoration of the Soviet Navy and in particular with the burgeoning rise of its submarine arm, Australia and the United States focused their resources on Anti Submarine Warfare (ASW). To support Australia's ASW efforts the United States assisted the RAN's development of the Ikara ASW weapons system, Mulloka sonar, and Barra sonobuoy.[21] Further, both navies established an environmental data center in Guam.[22]

As an adjunct to Radford Collins, the RAN formulated contingency plans for the protection of Allied naval shipping in the Pacific - primarily in response to the Soviet Union's submarine threat.

Cascading from Radford-Collins was the development of a series of maritime exercises aimed to increase naval interoperability. In the 1970s, a series of Naval Control of Shipping (NCS) exercises code-named Ripcord[23] and Roller Coaster[24] were established. These exercises subsequently lead to the development of the Bell Buoy exercise series.[25] The jewel of naval cooperation is the RIMPAC exercise which is held biennially off Hawaii.[26]

In 1966, Australia joined the AUS-CAN-UK-US Naval communication organisation. Further, the joint RAN-USN Harold E Holt naval communication base at North West Cape is another manifestation of Radford Collins arrangements. Naval material standardisation through the Australia, Britain, Canada, and United States (ABCA) Quadripartite program has seen cooperative naval logistic programs aimed to support both the RAN and the USN. In 1977, RAN officers were appointed to the USN Pacific Intelligence Center in Hawaii as a forerunner for intelligence sharing arrangements.[27]

However, despite the multitude of benefits that flowed out of Radford-Collins, the agreement itself is particularly vague. Specifically, no naval missions per se, were assigned to Australia.[28] This accorded with the fluid nature of ANZUS and allowed each Navy the ability to respond to a diverse array of contingencies.

In summary the positive aspects of both ANZUS and the Radford-Collins arrangement are:

- Australia's sense of security within the region has been enhanced.
- ANZUS acts as a deterrent to possible aggressors.
- The RAN has received preferential access to naval intelligence.
- Interoperability between the two navies has been enhanced.
- Opportunities to train and exercise with the USN has been increased.
- The RAN has received access to USN equipment and technology.
- The RAN's standing within the region has been improved.
- The Treaty has contributed to the stability of the region.
- ANZUS and Radford Collins have kept a permanent USN presence within the region.[29]

ANZUS and Australia's Naval Interests - Negative Impact

Notwithstanding the litany of positives arising out of ANZUS and Radford Collins there remain some negatives. Fundamentally, critics of ANZUS claim that Australia may become embroiled in a conflict not of its choosing.[30] However, this argument is political in nature and has little relevance to the RAN per se. More subtly, there are some negative aspects that do affect the RAN. The RAN's dependence on US sourced material makes it a 'hostage of USN logistics'. Resupply of vital naval equipment is reliant on American supply lines. Thus, the RAN cannot support but any of the most minor of operations without US assistance. This dilemma is contradictory to the ADF's Policy of 'self-reliance'[31].

Another criticism leveled at Radford-Collins was Australia's disproportionate Defence funding on ASW, to the detriment of other force development areas. This funding had its genesis through a fear that Soviet submarines would interdict Allied shipping in the South

Pacific. However, as Professor Ball noted in 1982, the validity of this threat was dubious and problematic.[32] During the 1970s the Whitlam government sought to readdress this deficiency by 'developing a well balanced fleet which had capabilities in all facets of naval operations'.[33]

Finally, the ever-increasing costs of maintaining parity with the USN in order to achieve interoperability has had a detrimental impact toward RAN long term force structure.

In summary, the negative aspects of both ANZUS and the Radford-Collins arrangement are:

- The RAN is dependent on US sourced material.
- Australia's policy of self reliance is problematic.
- RAN force structure can become 'warped'.
- Cost distortions arising out a desire to source USN technology effectively squeezes the RAN's budget.[34]

ANZUS and Australia's Naval Interests

Regardless of the virtues of the ANZUS Treaty two significant issues emerge. Firstly, the alliance is threat insensitive and secondly the alliance has typically meant more for Canberra than it has for Washington.[35] Appraising whether the Treaty has been a useful arrangement for Australia's Naval interests over the last 50 years is subjective. Undoubtedly, the RAN has benefited from the host of spin offs that the alliance has produced. Opponents suggest that it has made the RAN less self reliant and critically dependent on US supply arrangements. However, a more objective method of assessing the value of ANZUS to the RAN can be made by examining the ramifications to the Royal New Zealand Navy (RNZN) since its de jure termination of the agreement in August 1986.

After 1986, the RNZN was effectively 'frozen' out of USN information sharing, intelligence exchange, weapon sales, communications access and participation in exercises. The net result to the RNZN has been a linear decline in its interoperability not only with the USN but also with other allied navies including the Royal Navy, the Canadian Navy and the RAN. Further, the RNZN's technological parity with other regional navies, its proficiency in general maritime operations and its 'awareness' of regional activities have all been significantly affected.

Thus, the RNZN experience is testimony to the impact that ANZUS has made to both the Australia and New Zealand Navies.

The Future of ANZUS

This article has already concluded that ANZUS has served Australia's naval interests well over the past 50 years. However, the question remains - will it continue to do?

Strategic interests

During the early 1990s the decline of ideological bipolarity coupled with a more stable balance of power and an improvement in Australia's strategic environment led commentators to reappraise the value of ANZUS.[36] However, as the events of East Timor in 1999 and 11 September 2001 graphically highlighted, the Asia Pacific region is characterised by volatility, unpredicability and instability.

Adding to the morass of regional instability is Chinese ambiguity. Robyn Lim, of the Hiroshima Shudo University, commented that 'China is the great beneficiary of the way the Cold War ended, it is pointing east and south strategically.'[37]

ANZUS offers Australia the same insurance policy as it did during the 20th century - protection against invasion by a belligerent power. Further, as the USA's new strategic doctrine of pre-emptive attack[38] illustrates, Australia can ill-afford to be complacent with respect to rogue states. The proliferation of Weapons of Mass Destruction within the region poses considerable strategic risk to Australia.

Admiral Chris Barrie, the Chief of the Australia Defence Force, commented in June 2001, that 'the horizontal proliferation of missiles is a dangerous development, which is in no country's interest and which needs to be discouraged as much as possible'.[39] Consequently, ANZUS provides Australia with a formidable ally to deter and if need be combat a bellicose state or organisation through the 21st Century. Whilst no security agreement can provide absolute protection against all eventualities, ANZUS nevertheless, endows Australia with an instrument to respond to crisis situations and indeed its mere existence may stymie some adverse circumstances from developing.

As the Joint Committee on Foreign Affairs and Trade concluded in 1982, breaking up ANZUS would 'be counter productive not only to Australia's long term security but the stability of the region as a whole'.[40] Further,

Admiral Barrie noted in 2001 that 'the United States must remain fully engaged in the region, it is a stabilising and reassuring presence at a time of complexity and unpredicability'.[41] In 2001, the Australian Minister for Defence, Peter Reith stated that 'I would argue that ANZUS has always been more about the security of the region than about the direct defence of Australia'.[42]

Infidels of ANZUS often cite that the Treaty no longer reflects Australia's national interests, nor, that it is relevant in the prevailing geo-strategic environment. Indeed, in 1980, Professor Joseph Camilleri stated that:

> *A policy of the status quo [ANZUS] appears doomed to failure. There is certainly no prospect that in the years ahead relations with the United Sates will continue to operate in the same fashion as in the period of undisputed American dominance.*[43]

However, ANZUS is focused on shared interests and not threats per se, in addition, as the events post 11 September 2001 illustrated, ANZUS provides Australia and the region with a strategic insurance policy. Gary Brown summarised this salient aspect when he concluded that 'a break up of the alliance would remove a vital piece of the regional security framework'.[44]

It is important to highlight that the validity of ANZUS does not need to atrophy in the absence of a clearly defined threat. Rather, it is the congruency of strategic interests between Australia and the United States, which validates ANZUS.[45] As Lim noted 'cross bracing the US alliance system based on the maritime society needs of all parties is the best way to encourage the evolution of a peaceful and prosperous East Asia'.[46]

Naval interests

ANZUS affords the RAN access to technology, which is critical for its future commitments. Peter Reith underscored this sentiment in 2001 by stating that the RAN was 'dependant on the technology access and scientific cooperation provided by the US alliance.'[47] Reith further concluded that alliance arrangements give 'Australia even better access to US military technology which gives us a vital edge in capability and operations.'[48]

For the foreseeable future ANZUS will provide the RAN the ability to conduct bilateral exercise and training programs in order to 'maintain their capabilities'.[49] The Tandem Thrust series of exercise between the RAN and USN held bi annually in the Shoalwater Bay training area are the largest combined and joint exercises held in Australia. These exercises afford the RAN the opportunity to be interoperable with the USN. This interoperability has best been achieved through 'commonality of equipment'.[50] In addition to these training programs is the burden sharing of intelligence which provides the RAN with regional strategic awareness.

If Australia were to cede from the alliance, its regional technical edge would be quickly lost.[51] Coral Bell noted that without the US alliance Australia would have to quadruple its defense spending in order to 'maintain its strategic environment.'[52]

Notwithstanding the diverse benefits that ANZUS offers for Australia's future maritime interests, there are some drawbacks in rigidly adhering to the alliance. Firstly, ANZUS risks alienating regional states that have inimical political, cultural, economic or security interests to that of the United States. For example, the recent US hard-line stance against Islamic Iraq threatens to undermine Australia's favourable stance with its regional neighbours. As the Joint Standing Committee on Foreign Affairs, Defence and Trade concluded in 1997, 'balance and sensitivity are especially necessary with respect to Australia's efforts to commit the US to the region.'[53]

Secondly, adherence to the alliance can be cost prohibitive. The 21st Century will see the Revolution in Military Affairs (RMA) combine new applications of technologies, new operational concepts and military doctrines in a way that will require substantial funding[54]. Thus, aligning with the USN and attempting to maintain interoperability will be a costly process.

Finally, the rationale and legitimacy of the Radford Collins agreement is now questionable. Indeed, tenets including ASW[55] and reconnaissance[56] focused toward the 'Soviet threat' are now indisputably obsolete. Hence, from a maritime perspective persisting with ANZUS and Radford Collins could be viewed as inimical to the prevailing strategic environment. However, Radford Collins represents far more than the general edict of the agreement. In particular, it represents a commitment for engagement by both navies. Consequently, asserting that Radford Collins is archaic, is an

insufficient reason to dismiss the agreement.

In summary, the future of ANZUS is an amalgam of strategic, economic, operational, technological and security issues. These issues are:

- It offers Australia an insurance policy against a rising China and a proliferation of threats from rogue states and organisations.
- It ensures that the US remains committed to the region thus maintaining regional stability.
- It will continue to allow the RAN access to privileged technological information and intelligence.
- It allows the RAN to be interoperable with the USN.
- ANZUS will provide the RAN a forum from which it can conduct bilateral exercises.
- Ceding from ANZUS could result in the Australian government having to commit substantial more funds for regional stability.
- ANZUS has the potential of alienating regional states, primarily resulting from a suspicion of US foreign policy.
- The RMA has the potential of 'blowing out' the RAN's budget.

Conclusion

The longevity of ANZUS is indicative of the importance that both Australia and the US have placed on their bilateral relationship. The dynamics of the relationship have been diverse and complex. Yet, the security treaty per se has almost been overtaken by a host of other economic, political, military and diplomatic accords.

ANZUS has been a defining instrument for Australia's naval interests. Notwithstanding the arguments cited against the validity of ANZUS there is no disputing the impact it has had on the development and proficiency of Australia's Navy. In particular, the alliance has facilitated the exchange of naval personnel, intelligence sharing, technological advancements, maritime training and overall military proficiency.

The future of ANZUS is often questioned. Critics of the alliance contend that it is no longer relevant in the prevailing geo strategic environment. Yet, it is the very fluidity and dynamism of the strategic environment that entrenches its future. From a strategic perspective it offers Australia security and regional stability. From a naval perspective the Treaty will continue to offer technological, economic, and operational remuneration.

About the Author

Commander Jonathan Mead joined the RANC in 1984 as a Seaman Officer. After graduating in 1986 he completed a number of sea postings before undertaking the Mine Warfare and Clearance Diving Officer Course in 1990. CMDR Mead served as Executive Officer of Clearance Diving Team One from 1991-92. From 1993-94, he undertook the PWO Course, specialising in ASW. CMDR Mead served as the ASW officer onboard HMA Ships Melbourne and Arunta, before fulfilling the duties as the Fleet ASW Officer in 2000. In 2001, CMDR Mead was posted as Executive officer of Arunta, before undergoing staff and command training at ACSC in 2002. CMDR Mead is currently serving as the Staff Officer to the Chief of Navy.

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[1] J.H. Moore, *The American Alliance: Australia, New Zealand and the United States 1940-1970*, Cassell, Melbourne, 1970, p. 44.

[2] Department of Defence, *Defence 2000: Our Future Defence Force*, AGPS, Canberra, 2000, p. 34.

[3] J Camilleri, *ANZUS Australia's Predicament in the Nuclear Age*, Westview Press, Colorado, 1987, p. xi.

[4] ibid, p. 3.

[5] Moore, *The American Alliance: Australia, New Zealand and the United States 1940-1970*, p. 73.

[6] Foreign Relations of the United States 1951, Vol VI: Asia and the Pacific, Washington US Government Printing Office, 1977, p. 137.

[7] Camilleri, *ANZUS Australia's Predicament in the Nuclear Age*, p. 5.

[8] ibid p. 7.

[9] ibid.

[10] The Military objectives of ANZUS were: to deter aggression and other threats to ANZUS interests by maintaining and exercising military forces; and if deterrence fails to conduct ANZUS operations to secure the threatened area and contain the aggression defeat the enemy liberate enemy occupied territory; and deter future aggression.

[11] On 25 July 1969 President Nixon outlined a new US foreign policy in Guam, known as the 'New Strategy for Peace'. It's premise was that US foreign priorities were to be focused around Europe rather than Asia. N Harper, *A Great and Powerful Friend*, University of Queensland Press, 1987, p. 333.

[12] ibid, p .13.

[13] Gary Brown and Laura Rayner, *Upside, Downside: ANZUS After 5o Years*, Current Issues Brief 3 2001-02, Parliamentary Library, Canberra, August 2001. www.aph.gov.au/library/pubs/CIB/2001-

02/02cib03.htm
[14] Harper, *A Great and Power Friend*, p. 346.
[15] ibid, p. 16.
[16] T.D. Young, 'ANZUS Naval Relations: 1951-85' in Goldrick, Frame and Jones, *Reflections on the Royal Australian Navy*, Canberra, 1991, p. 298.
[17] US Department of State, *ANZUS Council Preparations - Background Paper*, Honolulu, August 1952.
[18] T.D. Young, *The Radford-Collins Naval Control of Shipping Agreement*, The Graduate Institute of International Relations University of Geneva, Geneva, 1985, p. 3.
[19] ibid, p. 300.
[20] In 1955 USSR Premier Kruschev appointed Admiral Gorshkov as Admiral of the Soviet Fleet. His charter was to match and surpass the US in maritime supremacy. As part of his modernisation program Gorshkov embarked upon a massive submarine construction agenda. For further details of Gorshkov's plan see: D Chipman, 'Admiral Gorshkov and the Soviet Navy' *Air University Review*, July-August 1982, and H Germain, *The Evolution of the Soviet Navy*, US Army Russian Institute, Germany, 1979.
[21] T.D. Young, *The Radford-Collins Naval Control of Shipping Agreement*, p. 302.
[22] ibid.
[23] www.global security.org/militray/ops/bell-buoy.htm, 30 August 2002.
[24] ibid
[25] ibid
[26] ibid
[27] T.D. Young, 'ANZUS Naval Relations: 1951-85'p. 305.
[28] G Priestnall, 'ANZUS and the Radford Collins Agreement: Australia's naval mission' *Journal of the Australian Naval Institute*, January/March 1997, p. 51.
[29] www.aph.gov.au/library/pubs/CIB/2001-02/02cib03.htm, dated 25 August 2002.
[30] Young, 'ANZUS Naval Relations: 1951-85' p. 310.
[31] *Defence 2000: Our Future Defence Force*, p. 36.
[32] Young, *The Radford-Collins Naval Control of Shipping Agreement*, p. 3.
[33] Department of Defence, *Defence Report 1973*, AGPS, Canberra, 1973, p. 10.
[34] www.aph.gov.au/library/pubs/CIB/2001-02/02cib03.htm, dated 25 August 2002.
[35] ibid, p 20.
[36] J Camilleri, *Australian-American Relations: The web of dependence*, Macmillan, Melbourne, 1980, p. 146.
[37] R Lim, www.glocomnet.or.jp/okazaki-inst/robyn.ausmari.html, dated 30 August 2002.
[38] *Sydney Morning Herald*, 28 September 2002, p.20.
[39] C Barrie, 'Strategic Implications of New Technologies in the Asia Pacific' *ANZUS Anniversary Conference on the United States in an East Asian Context*, University of Sydney, 30 June 2001.
[40] Joint Committee on Foreign Affairs and Trade, *The ANZUS alliance: Australia United States Relations*, AGPS, Canberra, 1982, p. 84.
[41] Barrie, Strategic Implications of New Technologies in the Asia Pacific.
[42] www.australianpolitics.com.au/foreign/anzus/01-0630reith.shtml, dated 20 August 2002
[43] Camilleri, *Australian-American Relations: The web of dependence*, p. 146.
[44] ibid, p. 21
[45] Lim.
[46] ibid.
[47] www.australianpolitics.com.au/foreign/anzus/01-06-30reith.shtml, dated 28 August 2002.
[48] ibid.
[49] ibid.
[50] Priestnall, 'ANZUS and the Radford Collins Agreement: Australia's naval mission' p. 50.
[51] www.aph.gov.au/library/pubs/CIB/2001-02/02cib03.htm dated 2 September 2002
[52] ibid, p. 21
[53] Joint Standing Committee on Foreign Affairs Defence and Trade, September, *ANZUS After 45 Years Seminar Proceedings 11-12 August 1997*, AGPS, Canberra, 1997, p. 245.
[54] Barrie, Strategic Implications of New Technologies in the Asia Pacific.
[55] Gary Brown and Laura Rayner, *Upside, Downside: ANZUS After 5o Years*.
[56] ibid

Extended Operations in Estuarine Waters – Life in the North Arabian Gulf

By Captain Ray Griggs, CSC, RAN

Many thanks to Jerry Lattin for last edition's article on the Fly River, it was great to get some input and I must admit it eased the pressure on me producing another article mid-deployment. If there is anyone else out there with similar articles (long or short) I would appreciate hearing from you.

In this edition I thought I might offer a short piece on life in the Northern Arabian Gulf (or the NAG as it affectionately known). I have based this article on my own experiences from HMAS *Arunta's* Operation SLIPPER deployment in the second half of 2002. I have drawn primarily on information that is available in the public domain so as not to compromise security given that we have ships still committed to the task.

***Arunta* on the prowl with her four Rigid Hull Inflatable Boats (RHIBS): Roy, HG, Fatso and Cedric**

While conducting Maritime Interception Operations (MIO) in the NAG is nothing new to the RAN (we have been doing it for over 11 years), the past few months have seen some subtle changes. Our ships have been pushing further north, closer to the Iraqi coast and essentially operating for extended periods in confined estuarine waters. The smugglers have increasingly used motor dhows as well as steel hulled vessels to ply their trade and the phenomenon of coordinated mass dhow breakouts has kept the MIO team extremely busy. The main operating area is no more than 100 square miles with much of this area unsafe for navigation given the plethora of wrecks and shoal water that exists. In these waters the conduct of safe navigation is the cornerstone for successful operations, every cable of safe water is invaluable and one's navigational situational awareness simply has to be top notch.

An *Arunta* Boarding Party conducting an alongside query with the ship keeping a close eye on proceedings

The sanctions enforcement mission in the NAG is fairly straightforward; intercept, and board as required, inbound and outbound traffic from Iraq to ensure that United Nations sanctions are not being violated. This is effected with three types of boardings: the Compliant Boarding, where the crew obviously complies with instructions to do so, a Resolution 986 boarding, a very structured and detailed search of a vessel, and the often more complex Non-Compliant Boarding (NCB). The RAN provides a unique capability, as it is the only navy whose ship's companies are trained and permitted to conduct all three types of boardings. Boarding parties can be inserted either by RHIB or helicopter fast rope with boarding teams often operating at extended range from the ship. The bulk of the compliant

and non-compliant boardings are conducted up close to or inside Iraqi territorial sea while the Resolution 986 boardings are normally conducted at the UN inspection point called COMISKEY. Boardings are conducted on a range of vessels from 400-500 tonne dhows to 300,000 tonne plus supertankers.

The Boarding Party inspecting an oil smuggler's tanks. Also visible is the pumping set up to transfer the oil.

While the mission may be straightforward, these sorts of operations demand an extremely high quality surface picture in what is a very busy patch of water. On any given day our ships are operating in close proximity to 150-200 fishing dhows and trawlers (of varying sizes), 20-30 inbound and outbound legitimate merchant vessels, 40-50 vessels plying the Iran to Kuwait trading route, 20 anchored merchant vessels awaiting an alongside berth and anything up to 40 smugglers a day attempting to run the blockade. Add in operating temperatures of up to 50°C, poor visibility due to heat haze or dust storms, some foreign military vessels and the ever-present threat of an asymmetric terrorist attack and you had all the ingredients for an interesting day at the office.

While the focus was primarily on illegal activity, one of the important aspects of our work was to ensure that our UN operations did not interfere with legitimate local traffic going about its business. As such it was important then for the bridge, Gun Direction Platform (GDP) and Operations Room teams to quickly come to understand what the patterns of normalcy were.

One of the great advantages of the high traffic densities and the tight navigational constraints was that the Officers of the Watch (OOW) gained a wealth of experience in managing multiple activities. In a normal watch the OOW could reasonably expect to have to handle:

a. running a patrol line with 3 minute fixing;
b. launch, recover and maintain communications with multiple RHIBS;
c. conduct VHF radio queries with vessels to ascertain whether they need to be boarded;
d. launch and recover the aircraft;
e. make constant course and speed alterations to avoid shipping and large numbers of fishing nets by the distances designated by command;
f. routinely work with underkeel clearances of 2-3 metres;
g. maintain stationary positions in up to 2.5-3 knots of tidal stream;
h. maintain constant tactical awareness particularly for potential surface, air and missile threat; and
i. maintain appropriate engineering state dependent on tactical situation.

While traditional in-company time was limited, this was more than compensated for by the requirement to manage at least 5-6 of these tasks simultaneously and often for the vast majority or all of the watch. There is no doubt that the OOW certainly knew that he or she had been 'working' by the end of the watch.

In *Arunta*, with up to 4 RHIBS 'feet wet' simultaneously, the tempo on the bridge was often hectic, particularly during the mass breakouts that were a feature of *Arunta's* deployment. For the OOW, orchestrating the simultaneous communications flow from four boarding parties to the Operations Room added another layer of complexity. Because of the sheer size of some of these breakouts (up to 30 vessels at a time) the ship itself often needed to become part of the action and be manoeuvred

A typical cargo dhow that would carry 400-700 tonnes of illegal oil. The larger dhows could carry in excess of 1000 tonnes.

at close quarters into the path of recalcitrant vessels to ensure compliance.

Ship positioning was always a trade off between available safe water, traffic densities (particularly fishing fleets and nets) and being able to best support deployed boarding teams. This often meant very small, constrained areas for the OOW to work in and required constant attention to detail with passing traffic and not insignificant tidal streams to contend with.

The Navigating Officer was kept busy investigating shoals and Position Approximate (PA) wrecks. Whenever he could get a RHIB he would conduct mini surveys around key areas of interest using hand-held GPS and the relatively new hand-held echo sounders. These torch like echo sounders are a real boon and certainly reduced the setup time compared to the old 'portable' boat echo sounders. I found the clarification of the position of PA wrecks of particular value as it significantly increased the amount of useable water. The spot checking of key shoals and banks also increased my confidence in the survey. That said, a deal of prudence still needed to be exercised particularly as we watched the Iraqi harbour authorities raise a large unchartered cement barge that had sunk a number of years ago. Navigational buoys were numerous in number but invariably unlit and posed a constant hazard for boat crews at night.

The Endeavour navigator electronic raster chart system (installed on a laptop) was another invaluable piece of kit. It was generally used as a command tool as I was always keen that the OOW maintain terrestrial fixing as the primary method. To have the electronic chart and ship's position available on the bridge, Operations Room and CO's day cabin meant I wasn't tied to one spot and that I could lead some semblance of a normal life. Again one had to resist the temptation of becoming overly reliant on the tool. I have no doubt that the OOWs prayed regularly for a corrupt hard drive on the laptop to rob me of what I am sure they considered to be 'far too much information'.

The bridge team's understanding of merchant shipping increased exponentially. Reports became far more specific than 'I have a large merchant vessel at Red 30' as the OOWs improved their merchant vessel recognition skills. This was useful as it is always good for one's credibility if you don't ask a 300,000 tonne VLCC tanker inbound for the Mina Al Bakr oil terminal with about eight metres of underwater paint showing what cargo they are carrying! Even knowledge of basic information regarding the key flags and ports of registry proved useful. *Melbourne* and *Arunta* conducted some 1400 VHF or alongside (from the RHIB) queries during their deployment and many a time, not quite truthful information was passed back. As the information collected was often the basis upon which boarding decisions were made, the bridge teams needed to be alert to known flag of convenience states and unusual flag and port of registry combinations. One enterprising young officer taught himself enough Farsi and Arabic to conduct queries in both languages, this made an enormous difference in the ship's ability to effectively query passing traffic and, of course, to the amount of time he spent on the bridge!

***Arunta* and HMS *Argyll* taking time out to keep some core mariner skills current. (Photo ABPH Barclay-Jeffs)**

Working International Maritime Mobile VHF in the Gulf is notoriously difficult; with Anomalous Propagation exaggerating what is an already crowded band. It was tough enough getting the right vessel to answer on Channel 16 let alone trying to establish a working channel, particularly when there was more than the odd incidence of anti-western sledging on the circuit. The noise that the cluttered VHF band induced on the bridge also took some getting used to; monitoring VHF was essential so turning down the volume was not an option.

In company activity was limited due to the high operational tempo but every opportunity was seized with fellow RAN or coalition ships to maintain important mariner and warfare skills. *Arunta* was able to interact with a number of ships including a most valuable two day Passage Exercise with HMS

Argyll whilst enroute to a port visit

Replenishment of course provided regular interaction with other units. The particular challenge in the NAG was the depth of water and close attention had to be paid to potential interaction effects. It was however a great opportunity to replenish from USN, RN, Canadian and Spanish tankers and to keep the seamanship skills honed.

The author keeps an eye on replenishment with USNS John Ericsson. *Arunta's* helo is about to collect another VERTREP load as USS *Mobile Bay* makes her approach.

The unique combination of an intense tempo set by a relentless and determined group of smugglers, a tense strategic and tactical overlay and difficult navigational and environmental conditions made the task an extremely challenging one. Each rotation to the Gulf has been quite different, as the dynamics of the situation have continued to evolve; we were fortunate to be there during an extraordinary period of activity where the ship's boarding teams conducted 377 boardings and played a key role in all but shutting down the maritime smuggling into and out of Iraq. Much of our ability to do that however was due to the cumulative effect of the entire MIO operation and in particular the unrelenting pressure that coalition navies have applied in the last 18 months.

BOOK REVIEWS

Lost Subs: From the Hunley to the Kursk. The Greatest Submarines Ever Lost - and Found

by Spencer Dunmore (with an introduction by Robert Ballard)
Allen and Unwin
Hardcover, 171 pages, index, RRP $49.95

Spencer Dunmore has written previously on submarine history (*In Great Waters*) as well as co-operating with Robert Ballard on *Exploring the Lusitania*. Ballard's influence on this book is particularly evident: the style and format are similar to his pictorial books on famous ships, which he has located, including *Titanic*, *Bismarck* and *Lusitania*.

For this book Dunmore joins with Ballard to produce a superbly illustrated volume which will enhance any naval collection, particularly if one has an interest in submarines or marine archaeology.

In *Lost Subs* Dunmore combines naval history with recent underwater photographs and diagrams of lost submarines to provide a valuable record of a fascinating subject. He does not draw on primary resources and many of his secondary authorities are similar pictorial-type publications. He also utilises the internet, which is becoming more widely used as a source of information, particularly when researching recent events such as the sinking of the *Kursk*.

The first three chapters deal with the creation and early development of the submarine, looking at the *Turtle* and lesser-known examples of early submersibles. The Confederate submarine *Hunley* is a focal point of this chapter. The reader is given an insight into the recent salvaging of the vessel, and illustrations, photographs and diagrams are well combined to tell a fascinating story. The story of the *Hunley* has been told before, but here we can follow the story of the salvage operation, which exposed the human aspect of a vessel lost for over 130 years. Other early submarines dealt with include *Holland I*, which represented the first class of submarine produced in significant numbers. Photographs of *Holland I* during and after salvage once again link past and present.

Chapter four covers the First World War, and Dunmore shifts focus towards victims of submarine warfare as well as the perpetrators of sinkings. He uses material from Ballard's *Exploring the Lusitania*, including some of Ken Marschall's excellent illustrations. Of particular interest is the account of the Australian submarine *AE II*. Although Fred and Elizabeth Brenchley's book *Stoker's Submarine* tells the story of its operation in the Dardanelles, the exploits are still not well known. Dunmore dedicates only four pages to *AE II*, but the photographs of the wreck provide a fascinating insight into one of Australia's first submarines.

Early examples of submarine rescue are the focus of chapter five. Dunmore looks at the successful rescue of 24 survivors from the USS *Squalus*, and contrasts this with the tragic sinking of HMS *Thetis* with the loss of 99 men. These cases provide a useful introduction to the rescue attempt on the *Kursk*, covered in a later chapter.

No account of lost submarines would be complete without reference to at least one of the 780 German U-boats lost during the Second World War. Dunmore looks at several lesser-known U-boats lost off

the US coast, and poignant photographs of *U352* provide a sobering reminder of the human cost of submarine disaster. Although several pages are dedicated to US submarines, it is unfortunate that Dunmore was not able to access official Japanese photographs of the famous USS *Wahoo*. The Japanese submarine I52, sunk by Allied aircraft off France in 1944, is also included. This submarine was found by an expedition in 1998, which was hoping to find gold. Evidence of treasure being carried on this submarine is unreliable, however, and none was found, but the expedition's contribution to submarine history is significant.

The loss of two nuclear submarines of the US Navy has long fascinated modern submariners. The sudden and catastrophic nature of their loss with all hands highlights the significant risk associated with undersea operations. Robert Ballard undertook expeditions in the 1980s to photograph both the USS *Thresher* and the USS *Scorpion* while looking for *Titanic*. Some of the photographs taken are included in Dunmore's book and once again provide a sobering reminder of what can happen when things go wrong beneath great waters.

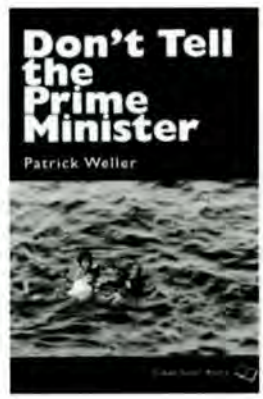
Chapter eight covers the loss of the *Kursk*. The recent book *A Time to Die: The Kursk Disaster* by Robert Moore is a more comprehensive study, but Dunmore's coverage of the salvage operation highlights what an impressive engineering feat it was to raise an 18,000 ton submarine.

Lost Subs is a fascinating read and highly recommended. The strength of this book is not its historical content but the way it combines history with marine archeology, supported by superb illustrations, in telling compelling stories. The selection of case studies is excellent, covering early submarines right through to those of today. Readers wanting a comprehensive historical account of submarine operations and disasters may wish to supplement this book with others, but those seeking entertainment and information about historically significant lost submarines need look no further.

Reviewed by Lieutenant Matthew Hoffman, RAN

Don't Tell the Prime Minister

by Patrick Weller
Scribe Short Books
Paperback, vii & 104pp, RRP $14.95



This short book on the 'children overboard' affair should interest many readers, particularly members of the naval community who would like some analysis of what happened in Canberra during the episode, as well as serious students of Australian politics and public policy. Patrick Weller is well qualified to analyse Government handling of the affair. He is professor of politics and public policy at Griffith University and has published numerous books and articles on public administration in Australia. He was an expert witness at the Senate inquiry into '*A Certain Maritime Incident*'.

Weller concludes that a lot went wrong in Canberra during the 'children overboard' affair. Political-military relations went astray and some normal conventions and traditions of Government accountability went 'out the window'. Most importantly, the public should not have been misled. The Prime Minister's own ministerial code stipulates that misleading statements should be corrected as soon as they are known to be wrong. Clearly this did not occur during the 'children overboard' affair and according to evidence now well established, the then Minister for Defence and his staff were particularly culpable. The ends appear to have justified the means.

The Prime Minister has claimed throughout that he did not know that reports of children being thrown overboard were incorrect. The title of this book suggests that he was protected from the truth. As

Weller points out, there were people all around him who knew that the reports were incorrect. Senior Government officials recoiled from the truth to allow Ministers to maintain their political positions.

Weller draws attention to the 'ever-useful fiction' that 'formal advice' is required before Ministers will respond. Oral briefings, written comments and warnings at meetings do not constitute formal briefing. Officials may have protected the Government during the affair, including by not offering formal advice, but in the case of the senior military officers involved, it dragged them into a politically partisan situation.

The current Minister for Defence has acknowledged problems of communication within his portfolio during the 'children overboard' affair. Emails and mobile phones have created unofficial and informal channels of communication, which can run ahead of formal channels. As Weller claims, the phone call between Commander Banks in HMAS *Adelaide* and Brigadier Silverstone in Darwin is the only source of the myth that children were thrown overboard. As in a game of Chinese whispers, the story was passed on to Defence Headquarters in Canberra and then to the Department of Prime Minister and Cabinet. It was seized upon by political spin doctors and manipulated to unconscionable political advantage.

What can be done about this sort of situation? It is inevitable that in a highly charged atmosphere, bureaucrats and ministerial staff will seek information from the operational level on which to base advice to their Ministers. Mobile phones are readily at hand, but for officers at the coal face phone calls can be highly distracting. The same might be said within the Defence Force about phone calls from higher up the operational chain of command. Hopefully, protocols and procedures are now in place to ensure that similar problems do not arise in the future.

Military officers seem to have been left behind in the heavily politicised environment of the 'children overboard' affair: an environment largely created by aggressive, 'shoot from the hip' bureaucrats and staffers. Subsequently such people were not held accountable and some have even been promoted. Weller argues strongly that reforms are needed to make ministerial staff accountable so as to restore confidence in the senior levels of the bureaucracy. The same might be said about the state of political-military relations. These have been the subject of an article by Hugh Smith dealing with the "children overboard" affair and the subsequent Senate inquiry ('A Certain Maritime Incident and Political-Military Relations', *Quadrant*, June 2002, pp. 38-43). This article is highly recommended along with *Don't Tell the Prime Minister*.

At the end of his book, Weller makes reference to Winston Churchill. Although '*always partisan, blithely opportunistic, and often cynical*', Churchill was prepared to take responsibility. When told of the loss of Singapore and the demonstrable weakness of its defences, he is said to have commented: '*I did not know, I was not told, I should have asked*'.

Reviewed by Dr Sam Bateman, University of Wollongong

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