

Papers in Australian Maritime Affairs

No. 19

Australian Maritime Issues 2006

SPC-A Annual

Edited by
Andrew Forbes and Michelle Lovi

SEA POWER CENTRE - AUSTRALIA



AUSTRALIAN
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Sea Power Centre – Australia

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Sea Power Centre - Australia

The Sea Power Centre - Australia (SPC-A), was established to undertake activities which would promote the study, discussion and awareness of maritime issues and strategy within the RAN and the Defence and civil communities at large. The mission of the SPC-A is:

- to promote understanding of sea power and its application to the security of Australia's national interests
- to manage the development of RAN doctrine and facilitate its incorporation into ADF joint doctrine
- to contribute to regional engagement
- within the higher Defence organisation, contribute to the development of maritime strategic concepts and strategic and operational level doctrine, and facilitate informed force structure decisions
- to preserve, develop, and promote Australian naval history.

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Papers in Australian Maritime Affairs

The *Papers in Australian Maritime Affairs* series is a vehicle for the distribution of substantial work by members of the Royal Australian Navy as well as members of the Australian and international community undertaking original research into regional maritime issues. The series is designed to foster debate and discussion on maritime issues of relevance to the Royal Australian Navy, the Australian Defence Force, Australia and the region more generally.

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- No. 18 *ADF Training in Australia's Maritime Environment* edited by Chris Rahman and Robert J. Davitt
- No. 19 *Australian Maritime Issues 2006: SPC-A Annual* edited by Andrew Forbes and Michelle Lovi

Foreword

I am pleased to introduce the Sea Power Centre – Australia (SPC-A) *Australian Maritime Issues 2006: SPC-A Annual*. SPC-A is charged with furthering the understanding of Australia's broader geographic and strategic situation as an island continent in maritime Asia, and the role of maritime forces in protecting national interests that result from our geography.

The 2006 Annual is an important contribution to the maritime debate in Australia and includes papers written on naval and maritime issues over the period July 2005 to December 2006. The majority of papers come from our monthly *Semaphore* newsletters, which covered issues ranging from historical pieces on aspects of RAN operations to issues associated with activities in the Southern Ocean, maritime security regulation and naval cooperation.

Last November, Dr Stanley Weeks of Science Applications International Corporation was the 2006 Synnot Lecturer, and his two presentations on 'The 1000-Ship Navy Concept' and 'The Transformation of Naval Forces' are included in the Annual as papers.

The Annual also includes the 1959 and 1967 versions of the Radford-Collins Agreement, which were recently declassified. This agreement is the cornerstone of USN-RAN cooperation, and while oft referred to, has never been published in full until now.

The SPC-A, on behalf of the Chief of Navy, conducts the annual Peter Mitchell Essay Competition, which is open to all members of Commonwealth navies with the rank of Commander or below. The winning essays for 2004, 2005 and 2006 are published at the end of this volume.

Other significant publications of the SPC-A over the past 18 months include the *RAN Reading List*, *Australian Naval Personalities*, and as commercial publications, *Australia's Navy in the Gulf* and *Positioning Navies for the Future*.

I trust that you will find *Australian Maritime Issues 2006: SPC-A Annual* informative, interesting and a valuable contribution to the maritime and naval debate in Australia.

Captain Peter J. Leavy, RAN

Director

Sea Power Centre - Australia

26 March 2007

Editors' Note

Semaphore issue 1 of 2006 has been omitted from this publication. The first issue of *Semaphore* published each year is used to promote the Sea Power Centre – Australia's publications, conferences and other activities coordinated by the Centre. Issue 5 on the Western Pacific Naval Symposium was withdrawn, revised and published as issue 14.

All information contained in this volume was correct at the time of publication or, in the case of papers being republished, was correct at the time of initial publication. Some information, particularly related to operations in progress, may not be current. However, information on the *Armidale* class patrol boats has been updated, as has the Western Pacific Naval Symposium membership. All views presented in this publication are the authors' and do not necessarily reflect the views of the Commonwealth of Australia, the Department of Defence or the Royal Australian Navy.

Images included throughout this publication belong to the Department of Defence, unless otherwise indicated in the footnotes of each paper. We thank the following for providing additional images: Dr Gregory P. Gilbert (SPC-A), Mr Andrew Mackinnon (NHQ), and Mr John Perryman (SPC-A).

We gratefully acknowledge the efforts of the staff in the Directorate of Classified Archival Records Review in the Department of Defence for the timely declassification of the Radford–Collins Agreement, which allowed those documents to be published here for the first time.

Contributors

Lieutenant Commander Phillip Anderson, OAM, RAN

Lieutenant Commander Anderson is a conductor, composer and arranger and has been the Director of Music since July 2002. In 2004 he was awarded the Medal of the Order of Australia. As well as being admitted as a Fellow at Trinity College London, he is also a Graduate of the Royal Australian Navy Staff College, and a Graduate of the Queensland University of Technology with a Master in Business Administration.

Lieutenant Andrea Argirides, RANR

Lieutenant Andrea Argirides has a Masters in Defence Studies from the Australian Defence Force Academy (Canberra), and is currently completing Postgraduate Studies in Classics and Archaeology, University of Melbourne. Since joining the Royal Australian Naval Reserve as a Naval Intelligence Officer, she completed a number of postings, including an 18-month appointment at Government House, Canberra, as the Navy Aide-de-Camp to the Governor-General. In July 2005, she joined the Sea Power Centre - Australia as the Senior Research Officer and then as Staff Officer Maritime Doctrine Development until December 2006.

Chief Petty Officer Bob Brimson

CPOWTR Bob Brimson served full time in the RAN from 1969 to 1989 and has been an active reservist since 1990. Some of his career highlights include Captain's Secretary and Commissioning Crew HMAS *Adelaide*, and Defence Force Recruiting Centre, Melbourne. In a reserve capacity on Continuous Full Time Service, he served as Personnel Officer in HMAS *Harman* in 2002-03. During the period May to September 2006 while undertaking reserve service at the Anzac Systems Program Office in Rockingham, he wrote his essay for the Peter Mitchell Essay Competition.

Lieutenant Commander Penny Campbell, RAN

Lieutenant Commander Penny Campbell joined the Royal Australian Navy Reserves in 1994 as an Intelligence Officer, and transferred to the Permanent Navy Force in 1996 on completion of her legal studies. In 1999, she deployed briefly to East Timor, and later deployed to the Arabian Gulf as the legal adviser to Commander RAN Task Group 633.1, during Operations SLIPPER and FALCONER. She served with Headquarters Integrated Area Defence Systems in Butterworth, Malaysia. She is currently Deputy Command Legal Officer in Navy Systems Command. She holds a Bachelor of Arts, a Bachelor of Law, a Masters of Law, a Masters of Arts (Maritime Policy) and is currently studying a Masters of Applied Linguistics.

Mr Andrew Forbes

Mr Andrew Forbes is the Deputy Director Research in the Sea Power Centre - Australia, where he is responsible for the research and publication programs. He is a Visiting Senior Fellow at the Australian National Centre for Oceans Research and Security at the University of Wollongong, and a Research Fellow at the Centre for Foreign Policy Studies, Dalhousie University, Halifax, Canada.

Lieutenant Commander Meg Ford, RAN

Lieutenant Commander Ford joined the RAN as a nursing officer in 1994 and has been posted to HMAS *Penguin*, HMAS *Coonawarra* and held staff officer positions in Navy Health and Health Capability Development in Canberra. She was involved in early planning for the Primary Casualty Reception Facilities and has been operationally deployed for Operations SHEPHERD, BEL ISI, TREK and RELEX. She holds a Masters Degree in Tropical Health (UQ), and is a midwife with specialty qualifications in Infection Control and Womens' Health. She graduated from the Australian Command and Staff Course in 1996 and is currently the Executive Officer of Greater Sydney and Northern New South Wales Area Health Service.

Dr Gregory P. Gilbert

Dr Gregory Gilbert previously worked within the Department of Defence (Navy) from 1985 to 1996 as a naval designer, and subsequently as a Defence contractor. He has broad research interests including: the archaeology and anthropology of warfare; Egyptology; international relations – the Middle East; maritime strategy and naval history. His excavations include Helwan, Hierakonpolis, Koptos and Sais in Egypt. He is currently the Senior Research Officer in the Sea Power Centre – Australia.

Dr Andrew Gordon

Dr Andrew Gordon holds a degree in International Politics from the University of Wales and a PhD in War Studies from the University of London (King's College). He was a desk officer in the Conservative Party's research department, then worked on official histories as a member of the Cabinet Office Historical Section. In 1997 he joined the UK Joint Services Command and Staff College, where he has been a Reader in Defence Studies since 2001.

Lieutenant Commander Mark Hammond, RAN

Lieutenant Commander Mark Hammond is a submariner with sea experience in Royal Australian Navy *Oberon* and *Collins* class submarines, United States Navy *Los Angeles* class, Royal Navy 'S' class, French Navy *Amethyst* class and Dutch Navy *Walrus* class submarines. He has completed the Royal Netherlands Navy Submarine Command Course, the RAN's Principal Warfare Officer Course and the Australian Command

and Staff Course. He was promoted to commander and is currently the Commanding Officer of the *Collins* class submarine HMAS *Farncomb*.

Commander Wesley Heron, RANR

Commander Wesley Heron retired from the RAN in January 2007 having completed 26 years service. A seaman specialist, he saw active service in the Persian Gulf and completed sea service in major combatants, submarines and patrol boats. After a successful command of HMAS *Wollongong*, he was promoted to commander. His last posting was as Deputy Director Patrol and Hydrographic in the Capability Development Group, where he was project sponsor for seven major projects, including the *Armidade* class patrol boat project. He is currently employed as a Deputy Executive Director in the Infrastructure Projects Division of the Victorian Public Service.

Lieutenant Commander Rebecca Jeffcoat, RAN

Lieutenant Commander Rebecca Jeffcoat entered the Australian Defence Force Academy as a midshipman in 1990, and graduated with a Bachelor of Science (Oceanography) degree in 1992. In 1996 she studied for a Graduate Diploma in Meteorology with the Bureau of Meteorology, culminating in the award of the METOC sub-specialisation at HMAS *Albatross*. In 1997 she deployed within the fleet as a member of the Mobile METOC Team to Antarctica and to Heard and McDonald Islands in the Southern Ocean. She was Staff Officer Navy International Relations, NHQ, in 2004, and is currently the principal staff officer to the Deputy Chief of Navy.

Mr Peter Laurence

Mr Peter Laurence joined the Department of Defence in 2005 through the Graduate Development Program. Prior to this, he completed honours degrees in law and history at the University of Sydney. Although currently working in the Finance Executive, he maintains his passion for history by reading and finding artefacts for his small World War II collection.

Mr Andrew Mackinnon

Mr Andrew Mackinnon joined the Royal Australian Naval College as a junior entry in 1963, graduating in 1966, and from the Royal Naval College at Dartmouth, UK, in 1968. He spent much of his early seagoing career in the Far East, including HMAS *Vendetta* off Vietnam in 1969-70; navigating officer of HMAS *Torrens*; and a brief tour in HMAS *Hobart* undergoing modernisation in San Francisco. He took command of HMAS *Coonawarra* in Darwin in 1995-96, for which he was awarded the Conspicuous Service Cross. After more than 38 years naval service, he retired from the RAN in 2001, immediately taking up a civilian position as Director Navy Strategic Analysis (now Navy Basing & Environmental Policy) in Navy Headquarters. He holds a Bachelor of Arts degree from Deakin University and a Graduate Diploma in Strategic Studies.

Commodore Jack McCaffrie, AM, CSM, RANR

Commodore Jack McCaffrie is the Visiting Naval Fellow at the Sea Power Centre - Australia. As an aviator, most of his flying career was spent in Grumman Trackers, embarked and ashore. Most of his later career was spent in a succession of jobs in Canberra. He retired early in 2003 on return from his final posting as Naval Attaché, Washington. Also a visiting fellow and part-time doctoral student at the Centre for Maritime Policy, University of Wollongong, he has published several articles and edited monographs on maritime strategy and naval history.

Commander Andrew McCrindell, RAN

Commander Andrew McCrindell graduated from Brunel University in 1985 and joined the Royal Navy in 1986 as an instructor specialist. He graduated from the Royal Navy's course in Meteorology and Oceanography in 1989 and became a METOC specialist. Andrew immigrated to Australia in 1994 where he joined the Royal Australian Navy as a METOC specialist. In 2003 he simultaneously completed the Australian Command and Staff Course and a Masters of Management in Defence Studies at the University of Canberra. Promoted to commander in January 2004, he is currently Director of the Directorate of Oceanography and Meteorology.

Commander Jonathan Mead, AM, RAN

Commander Jonathan Mead is a Principal Warfare Officer specialising in anti-submarine warfare, and a mine clearance diving officer. His previous service includes time in the patrol boats *Bunbury* and *Geraldton*; the destroyer escort *Stuart*; Sail Training Ship *Young Endeavour*; Executive Officer of Clearance Diving Team One; Training Ship *Jervis Bay*; frigates *Canberra*, *Melbourne* and *Arunta*; destroyer *Brisbane*; Executive Officer of *Arunta*; and Commanding Officer of HMAS *Parramatta*. He has had staff appointments at Maritime Headquarters as part of Sea Training Group, and as Staff Officer to the Chief of Navy. He holds a Diploma of Applied Science, a Masters in Management, is a graduate of the Australian Command and Staff Course, and has a PhD in International Relations. He is currently a student at the Indian National Defence University and will be Australia's Defence Attache to India in 2008.

Captain Richard Menhinick, CSC, RAN

Captain Richard Menhinick joined the Royal Australian Naval College at Jervis Bay in January 1976. In 1987 he undertook the Principal Warfare Officer course and then served on exchange at sea in the Royal Navy. He served at sea in the 1990-91 Gulf War, for which he was awarded the Commendation for Distinguished Service. Later he was Deputy Director Surface Warfare Development in Capability Development Group, for which he was conferred the Conspicuous Service Cross. He has commanded HMA Ships *Warramunga* and *Anzac*, and was the Director of the Sea Power Centre - Australia. He

was promoted to commodore in December 2006 and is currently the Director General Strategic Plans in Australian Defence Headquarters. He holds a Bachelor of Arts and a Master of Maritime Studies.

Mr Brett Mitchell

Mr Brett Mitchell joined the Department of Defence in February 1988 and worked for the Naval Personnel Division before joining the Naval History Section as a Naval Historical Officer in 1992. Having read widely on RAN history, he has helped author numerous Navy historical publications, where he has collated and verified the accuracy of historical data. Brett has also provided research support to numerous naval veterans, Commonwealth agencies and other organisations. Currently he is writing operational histories for each decommissioned *Fremantle* class patrol boat.

Commander Shane Moore, CSM, RAN

Commander Shane Moore joined the Navy as a direct entry instructor lieutenant in 1982. He has served at HMAS *Nirimba*, and on the Directing Staff at RAAF Staff College. He joined HMAS *Creswell* as a lecturer in Naval History and Warfare in 1986-87. In 2002 Commander Moore joined HMAS *Newcastle* as the Task Group N2 for Operation SLIPPER in the Persian Gulf. On promotion to commander, he was selected as the first Director of the Naval Heritage Collection. He holds degrees from Macquarie and Sydney Universities in classics, history, archaeology and conservation as well as a Diploma in Research Archaeology from the British School of Athens. He was awarded the CSM in the 2006 Queens Birthday list for services to Navy's heritage and as Manager of the RAN Heritage Centre.

Mr John Perryman

Mr John Perryman joined the Royal Australian Navy in January 1980 as a 16-year-old junior recruit in HMAS *Leeuwin* in Western Australia. On completion of basic training he undertook category training as a signalman in HMAS *Cerberus*. His postings included service in HMA Ships and establishments *Leeuwin*, *Cerberus*, *Harman*, *Kuttabal*, *Stalwart*, *Hobart*, *Stuart*, *Tobruk* and *Success* as both a junior and senior sailor. Promoted to Warrant Officer Signals Yeoman in 1998 he served for three years as the Senior Instructor at the RAN Communications and Information Systems (CIS) School HMAS *Cerberus*, including a short notice secondment to HQ INTERFET in East Timor, where he served until INTERFET's withdrawal in February 2000. He was commissioned a lieutenant in 2001, and remained at the CIS School until August 2002, at which time he was posted to Canberra to the RAN's C4 directorate. He transferred to the Naval Reserve in 2004 and took up the position as the Senior Naval Historical Officer at the Sea Power Centre – Australia.

Lieutenant Commander Anthony Powell, RAN

Lieutenant Commander Powell joined the Navy in January 1979 and commissioned as a midshipman in 1982. He gained his Bridge Watchkeeping Certificate on HMAS *Tobruk* in 1987 and completed numerous sea postings as a watchkeeper, a navigator, a training officer and an executive officer. In early 2004, he was deployed to Iraq to lead an Australian naval contingent and, as the Coalition's Director Operations and Training, raise the new Iraqi Navy for which he received a Commendation for Distinguished Service. He has commanded HMA Ships *Betano*, *Cessnock*, *Armidale* and *Larrakia*, and now commands the crew 'Attack Two' under the patrol boat multi crewing concept.

Dr David Stevens

Dr David Stevens has been the Director of Strategic and Historical Studies, Sea Power Centre - Australia, since retiring from full time naval service in 1994. He joined the Royal Australian Naval College in 1974 and completed a Bachelor of Arts degree at the University of New South Wales (UNSW). He undertook the Royal Navy's Principal Warfare Officer course in 1984 and specialised in anti-submarine warfare. Thereafter he served as a warfare officer on exchange in HMS *Hermione*, and was one of the first Australians to conduct a Falkland Islands peace patrol. In 1990-91 he was posted to the staff of the Australian Task Group Commander during Operation DAMASK and the 1990-91 Gulf War. He graduated from the Australian National University with a Master of Arts (Strategic Studies) in 1992, and in 2000 received his Doctor of Philosophy in history from UNSW at the Australian Defence Force Academy.

Commander Nicholas Stoker, RAN

Commander Stoker joined the RAN in 1987 and graduated from the Australian Defence Force Academy in 1989 with a Bachelor of Science. He is a qualified Principal Warfare Officer specialising in surface and anti-submarine warfare and holds a sub-specialisation in Meteorology and Oceanography (METOC). He has served on exchange with the Canadian and United States navies, most recently as the Deputy Director ASW team training at the USN Fleet ASW Training Centre. His last sea posting was as commissioning Executive Officer of HMAS *Parramatta*. Following graduation from the Australian Command and Staff Course in December 2005, he was appointed Staff Officer Maritime Operations at Strategic Operations Division (now Military Strategic Commitments). He is to assume command of HMAS *Newcastle* in mid 2007.

MCEAP II Kuldeep Singh Thakur

MCEAP II Thakur joined the Indian Navy as an Artificer Apprentice in 1988. After completing a Diploma in Electrical Engineering in 1992, he served onboard various Indian naval ships and establishments. He is currently undertaking a Masters in Business Administration (Human Resource Management) and a Post Graduate

Diploma in Management. He is currently posted to the Indian Naval Ship Maintenance Authority, Mumbai.

Commander Peter Thompson, RAN

Commander Peter Thompson joined the RAN in 1985, graduating from RANC in 1987. As an Officer of the Watch he served in HMA Ships *Parramatta*, *Torrens*, *Perth* and *Brisbane* and as Executive Officer of HMAS *Warnambool*. He graduated as a Principal Warfare Officer in 1997 and served as Anti-submarine Warfare officer in HMNZS *Wellington* and HMAS *Newcastle*. His most recent seagoing posting was as Executive Officer HMAS *Tobruk*. He has seen operational service in East Timor, the Solomon Islands and Bougainville. A graduate of the Australian Command and Staff Course, he is currently the Director of Operations at Navy Headquarters in Canberra.

Lieutenant Commander Nick Watson, RAN

Lieutenant Commander Nick Watson joined the RAN in 1988, and was awarded a Bachelor of Arts (Honours) in 1991 prior to conducting seaman officer training. After becoming an Officer of the Watch in HMAS *Brisbane*, he joined the submarine arm and served in six submarines, in positions up to Executive Officer. He graduated from Australian Command and Staff Course in 2006, and will assume command of *Armidade* class patrol boat crew *Aware* in 2007. He was awarded a Master of Arts (Maritime Policy) in 2003.

Dr Stanley Weeks

Dr Stanley Weeks is a senior scientist with Science Applications International Corporation, where he currently supports the US Navy on strategy and program issues. He served in the US Navy from 1970-90, and career highlights include being on the drafting team for the Maritime Strategy in 1982, serving in the State Department in 1985-86, commanding a *Spruance* class destroyer in 1987-88 and being a faculty member of the National War College in 1989-90. Since 1994 he has been an adjunct Professor at the US Naval War College. He has extensive policy experience in the Asia-Pacific and is a member of the Council for Security Cooperation in the Asia-Pacific and relevant study groups, as well as the International SLOC Conference. His most recent project responsibility was as the Senior Naval Adviser in Albania from June 2004 to December 2005, where he planned and implemented the transformation of Albanian maritime forces.

Dr Nial Wheate

Dr Nial Wheate joined the Royal Australian Navy in 1995 as an Australian Defence Force Academy midshipman. Following three years of study for a science degree, and a subsequent honours year, he was posted to the School of Chemistry, Australian Defence Force Academy as a Visiting Military Fellow. In 2000 he took two years leave from

the RAN and was employed by the School as an Associate Lecturer, where he taught first year chemistry, while he completed his Doctorate in platinum-based anti-cancer drugs. He came back to full time naval service in 2002, and subsequently served in the Airworthiness and Coordination Policy Agency, Joint Health Support Agency and the Sea Power Centre - Australia. He resigned from the Navy in late 2005 and now works as a Senior Research Associate at the University of Western Sydney.

Lieutenant Commander John Wright, RAN

Lieutenant Commander John Wright has served in the RAN for 18 years as a marine engineering officer. He has served in HMA Ships *Brisbane*, *Perth* and in the commissioning crew of *Parramatta*. He has also worked in a number of project and engineering support roles, including the Landing Platform Amphibious project, the Amphibious and Afloat Sustainment System Program Office (AASSPO) and Ship Repair Contract Office (SRCO(EA)). He was promoted to commander in December 2006 and is currently the Manager of SRCO(EA) before he returns to the AASSPO as the Sustainment Manager at the end of 2007.

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Abbreviations

2IC	Second in Command
AAPMA	Australian Association of Ports and Marine Authorities
AASFEG	Amphibious and Afloat Support Force Element Group
ACPB	<i>Armidale</i> Class Patrol Boat
ACS	Australian Customs Service
ADF	Australian Defence Force
AFMA	Australian Fisheries Management Authority
AFP	Australian Federal Police
AFZ	Australian Fisheries Zone
AMDC	Australian Maritime Defence Council
AME	Aeromedical Evacuation
AMF	Afloat Medical Facility
AMIS	Australian Maritime Identification System
ANARE	Australian National Antarctic Research Expeditions
ANZUS	<i>Security Treaty Between Australia, New Zealand and the United States of America 1951</i>
AO	Area of Operations
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of South East Asian Nations
ASIO	Australian Security Intelligence Organisation
ARF	Association of Southeast Asian Nations Regional Forum
ARG	Amphibious Ready Group
ASW	Anti-Submarine Warfare
AWD	Air Warfare Destroyer
BNH	Balmoral Naval Hospital
BWC	(Biological Weapons Convention) <i>Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction 1972</i>
C2	Command and Control

C4I	Command, Control, Communications, Computers and Intelligence
CB	Chemical and Biological
CBRN	Chemical, Biological, Radiological and Nuclear
CDF	Chief of Defence Force
CIWS	Close-In Weapons System
CLF	Combat Logistics Force
CN	Chief of Navy
CNF	Commonwealth Naval Forces
CNO	Chief of Naval Operations
CO	Commanding Officer
COLPRO	Collective Protection
COS	Chief of Staff
CSG	Carrier Strike Group
CUES	Code for Unalerted Encounters at Sea
CWC	(Chemical Warfare Convention) <i>Convention on the Prohibition of the Development, Production, Stockpiling and use of Chemical Weapons and on their Destruction 1993</i>
DDG	<i>Perth</i> Class Guided Missile Destroyer
DIO	Defence Intelligence Organisation
DIVEX	Diving Exercise
DSTO	Defence Science and Technology Organisation
EBO	Effects-Based Operations
EEZ	Exclusive Economic Zone
ESG	Expeditionary Strike Group
FAAM	Fleet Air Arm Museum
FACE	Forces Advisory Council on Entertainment
FCPB	<i>Fremantle</i> Class Patrol Boat
FFG	<i>Adelaide</i> Class Frigate
FFV	Foreign Fishing Vessels
FGH	Federal Government House

FMA	<i>Fisheries Management Act 1991 (Cth)</i>
FPDA	Five Power Defence Arrangements 1971
FWC	Future Warfighting Concept
FWOC	Fleet Weather and Oceanography Centre
G8	Group of Eight
ha	hectare
HIMI	Heard Island and McDonald Islands
HMAS	Her Majesty's Australian Ship
HMS	Her Majesty's Ship
HQJOC	Headquarters Joint Operations Command
HRD	Human Resource Development
HS	Hydrographic Ship
HSV	High Speed Vessel
IFF	Identification, Friend or Foe
IFM	Isatabu Freedom Movement
IFR	International Fleet Review
IFOS	International Festival of the Sea
IMO	International Maritime Organization
INCSEA	Incidents at Sea
INTERFET	International Force East Timor
IPE	Individual Protective Equipment
ISO	International Organization for Standardization
ISPS Code	<i>International Ship and Port Facility Security Code 2002</i>
ISS	International Seapower Symposium
JI	Jemaah Islamiah
JMC	Joint Maritime Course
JOPC	Joint Offshore Protection Command
JSF	Joint Strike Fighter
km	kilometre
LCM8	small amphibious transport (Landing Craft Mechanised Type 8)
LHD	amphibious assault ship (Landing Helicopter Dock)

LNG	Liquified Natural Gas
LOSC	<i>United Nations Convention on the Law of the Sea 1982</i>
LPA	amphibious transport (Landing Platform Amphibious)
LRIT	Long Range Identification and Tracking
LTTE	Liberation Tigers of Tamil Eelam
MASER	Microwave Amplification by Stimulated Emission of Radiation
MCM	Mine Countermeasures
MCMEX	Mine Countermeasures Exercise
MEAO	Middle East Area of Operations
MEF	Malaita Eagle Force
METOC	Meteorological and Oceanographic
MFU	Major Fleet Unit
MIED	Maritime Information Exchange Directory
MPF	Maritime Prepositioning Force
MTOFSA	<i>Maritime Transport and Offshore Facilities Security Act 2003</i>
MTSA	<i>Maritime Transport Security Act 2003</i>
NATO	North Atlantic Treaty Organisation
NCAGS	Naval Cooperation and Guidance for Shipping
NCW	Network Centric Warfare
NFI	Naval Fuel Installations
NHC	Naval Heritage Collection
NHMS	Naval Heritage Management Study
NOC	Naval Operations Concept
nm	nautical mile
NQEA	North Queensland Engineers and Agents
NSP	Navy Strategic Plan
OIC	Officer in Charge
OMFTS	Operational Manoeuvre from the Sea
ONA	Office of National Assessments
OTHR	Over the Horizon Radar
PCRf	Primary Casualty Reception Facility

PFI	Private Financing Initiative
PfP	Partnership for Peace
PMC	Private Military Company
PNF	Permanent Naval Forces
PNT	Peacetime National Tasks
PPF	Participating Police Force
PSI	Proliferation Security Initiative
PWO	Principal Warfare Officer
QDR	Quadrennial Defense Review
RAAF	Royal Australian Air Force
RAMSI	Regional Assistance Mission to Solomon Islands
RAN	Royal Australian Navy
RANHC	Royal Australian Navy Heritage Centre
RANHF	Royal Australian Navy Historic Flight
RANNS	Royal Australian Naval Nursing Service
RANR	Royal Australian Naval Reserve
RAS	Replenishment at Sea
RHIB	Rigid Hull Inflatable Boat
RN	Royal Navy
RNZN	Royal New Zealand Navy
RoRo	Roll-on / Roll-off
RPB	Replacement Patrol Boat
R/T	Radio Telephony
RUSI	Royal United Services Institute
SAR	Search and Rescue
SEATO	(Southeast Asia Treaty Organization) <i>Southeast Asia Collective Defense Treaty and Protocol 1954</i>
SLAM	Submarine Launched Anti-Aircraft Missile
SLOC	Sea Lines of Communication
SOLAS	<i>International Convention for the Safety of Life at Sea 1974</i>
SPC-A	Sea Power Centre – Australia

STOVL	Short Take-Off / Vertical Landing
SUA	(Suppression of Unlawful Acts Convention) <i>Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation 1988</i>
SWATH	Small Waterplane Area Twin Hull
TAC	Treaty of Amity and Cooperation in Southeast Asia
TADIL	Tactical Digital Information Link
UAV	Uninhabited Aerial Vehicle
UK	United Kingdom
UN	United Nations
US	United States
USMC	United States Marine Corps
USN	United States Navy
USS	United States Ship
UUV	Uninhabited Underwater Vehicle
V/S	Visual Signalling
WMD	Weapons of Mass Destruction
WPNS	Western Pacific Naval Symposium
WRANS	Women's Royal Australian Naval Service
W/T	Wireless Telegraphy
WWI	World War I
WWII	World War II
XO	Executive Officer
ZOPFAN	<i>Zone of Peace, Freedom and Neutrality Declaration 1971</i>

OPENING PAPERS



HMAS *Anzac*, Northern Trident and the 200th Anniversary of the Battle of Trafalgar

Captain Richard Menhinick, CSC, RAN

For five and a half months in 2005, HMAS *Anzac* was away from Australian waters and our region conducting a deployment known as NORTHERN TRIDENT 05. Thousands of people from different nations have stepped across the gangway and enjoyed this piece of Australia, all the while enriching us with their cultures and way of life.

This paper is predominantly about one of the key ceremonial events upon which the deployment was planned: the 200th anniversary celebrations for the Battle of Trafalgar. These celebrations centred on an International Fleet Review (IFR) in the Solent, off Portsmouth, England, in late June 2005. However, I feel it is important to set the context first and briefly outline other events, outcomes, achievements and benefits before describing the IFR itself.



It had been 15 years since a Royal Australian Navy (RAN) ship visited Northern Europe, the last ship being HMAS *Sydney* in 1990. During this deployment *Anzac* has been privileged to visit ports in India, the Mediterranean, Europe and Africa, marking many firsts along the way. Needless to say highlights have been many, almost too numerous to list, with the ship's company able to call this the 'trip of a lifetime'. Importantly, from a professional perspective, the feedback from countries, foreign military services and Australian overseas missions confirm that the advantages of such deployments to the ship's company, the RAN and the Australian Defence Force (ADF) range across the full spectrum from the diplomatic, through the commercial to the operational spheres.

Significantly we have benefited operationally from close interaction with North Atlantic Treaty Organisation (NATO) forces. As an example, the operational element of the deployment has included various passage exercises with the navies of Greece, Turkey, France and Germany, and a two week Joint Maritime Course (JMC) off Scotland consisting of some 50 ships, 5 submarines and over 80 aircraft. Operationally and tactically the JMC was a success. As already mentioned it had been 15 years since the RAN had deployed to the UK and Europe, and we were interested to measure our performance in their waters. I believe that the national aim of benchmarking RAN practice and capability was achieved. *Anzac* was able to integrate with the NATO units quickly and relatively easily. The JMC debrief contained many positives for *Anzac* and several favourable comments were made by the Task Group Commander's staff regarding our conduct of operations, especially anti-submarine warfare (ASW) operations and the capability of *Anzac's* sensors in the littoral, as well as our clear and effective control of assigned task group units. We think that the capabilities of the *Anzac* class FFH and, importantly, the personnel training standards and expertise of the RAN, were well demonstrated in that particular exercise and shown to be at world's best practice.

One significant event was the first use by an operational ADF unit of the Link-16 Tactical Digital Information Link (TADIL). Link-16 proved to be a major aid to situational awareness and a very effective tool for command appreciation of the larger picture, especially while operating beyond the range of UHF voice communications. As there were many Link-16 fitted assets, including Royal Air Force (RAF) E3D aircraft and Royal Navy (RN) Airborne Early Warning Sea King helicopters, important progress was made in the RAN Link-16 evaluation during this period.

This period of high intensity operations was followed immediately by a resumption of the diplomatic role that the ship had conducted throughout earlier visits to mainland European ports. The diplomatic role of sea power forms an integral part of our national strategy. During the NORTHERN TRIDENT 05 deployment the ship visited 13 countries and hosted, displayed and demonstrated Australian ingenuity, culture and industry ranging from Australian defence companies conducting seminars, tours and product demonstrations, to trade fairs featuring Western Australian wine and Australian seafood.

Ceremonial commemorations have also featured strongly, with two in particular standing out: the privilege for the ship to be underway, close in shore in Anzac Cove on the 90th anniversary of the ANZAC landings; and for 95 of the ship's company to be ashore at the Dawn Service and following commemoration ceremony at the Lone Pine Memorial. When dawn broke on Anzac Day, 25 April, those 95 members who were ashore were among the crowd at Anzac Cove, gathered to remember the ANZACs who fought on those very shores. Those left onboard had sailed the frigate into the cove at 0300, just 1200 yards from the beach, creating a breathtaking backdrop in the early morning quiet, with her entire silhouette, 5-inch gun and two 3-metre-high kangaroos all lit up, and had their own poignant Dawn Service aboard. Prime Minister John Howard said later in the day:

To be at Anzac Cove on Anzac Day with HMAS Anzac in the background – well there's nothing that makes you feel more proud to be an Australian.



HMAS Anzac in Anzac Cove, dawn 25 April 2005

The second occasion was the presence of *Anzac* as the Australian representative at the IFR to mark the 200th anniversary of the Battle of Trafalgar and the subsequent International Festival of the Sea (IFOS), both at Portsmouth. This article is predominantly about our experiences in the IFR and IFOS celebrations, the link being not as apparent as some others with Australian history.

In radio and television interviews with the Australian media, I was asked a few times: what was the connection with Australia and the Battle of Trafalgar? Well for most

it is certainly not as obvious as Gallipoli, the Battle of the Coral Sea or Kokoda, but in many ways it is just as crucial to Australia as any of these. The battle of course occurred in 1805, and in its simplest terms, the violence of it, and the resultant decisiveness of the British victory over the combined fleets of France and Spain, led to the century of sea power dominance that Britain then wielded on the world stage. The 100 years after Trafalgar were the heyday of the British Empire. With sea power and sea control came British world domination – not merely militarily, per se, but most importantly, economically. Sea control meant control of the world economies and also world trade.

In 1805 Australia was a fledgling colony, susceptible to attack from foreign powers, very sparsely populated and largely unexplored. A victory by the combined fleets at Trafalgar, or even a stalemate, may have meant that Britain would not have dominated to the degree it subsequently did. The impact on Australia if that were the case makes interesting speculation. However, what is known is that the 100 years of British dominance that followed Trafalgar was the period in which Australia grew in peace and prosperity into the nation it became in 1901. A close and personal historic link with Trafalgar is perhaps a subject that we, as Australians, should consider more often.

So having established a context, what confronted *Anzac* off Portsmouth in the last week of June and first week of July 2005?



The western half of the review anchorage area, with Cowes in the background

While organised and controlled by the RN, the review included ships from 37 different countries, including Russia, France, Spain, South Korea, Nigeria, India, Japan and Serbia. Aside from small craft, tenders and the like, 176 ships participated in the review. They were all assigned anchorage positions in a 7.5 nm by 1.2 nm area of the Solent (an area of sheltered water between the Isle of Wight and the mainland of England). The

breakdown of major ship types included 5 aircraft carriers, 10 large amphibious ships and 40 destroyers/frigates, not to mention tankers, auxiliaries, corvettes, mine warfare vessels, submarines and countless others. This meant that the Solent was a spectacular sight and you will realise quickly that the available space was occupied fully.

Anzac approached Portsmouth and the Solent on 23 June, having sailed from a short port visit in Cork, Ireland. Before entering harbour we launched our Seahawk helicopter to proceed to RAF Odiham in preparation for the helicopter flypast during the Fleet Review. On approaching Portsmouth we fired a 21-gun national salute, which was returned by HMS *Invincible*, and then proceeded alongside in the naval base. That first evening an official reception was held on board for 100 guests, at which the ship's band and guard performed to rousing applause from all participants. Official onboard receptions have become a speciality in *Anzac*, the ship having conducted 13 during this deployment, all with the guard and band performing to critical acclaim, with the band's live rendition of national anthems being particularly well received.

The scope of activity conducted in the lead up to the Fleet Review precludes detailed listing. Suffice to say that the RN had put on a party, and the social and sporting events were significant. The review ships continued to arrive over the weekend up until 26 June and most went to anchor in the Solent, which led to a complicated liberty boat arrangement. Of course, the very real threat of terrorism was foremost in everyone's minds and the force protection arrangements themselves were rigorous, comprehensive and effective.

One big sporting event was the inaugural 'Navy Ashes'. In this a cricket match was played between the *Anzac* Convicts cricket team and a team from seven RN ships. *Anzac* won the match, and the bails were burnt and sent home in an urn to Australia in the ship. The intention is to play for these 'Navy Ashes' on each occasion that a major unit of the RAN plays a major unit of the RN in cricket. Tradition of course has to start somewhere, and the 200th anniversary of Trafalgar seemed a good place to start another one.

One of the highlights of the Fleet Review was that *Anzac* had been selected as one of six ships to conduct the underway steampast of Her Majesty the Queen. The steampast included four British ships, *Anzac*, and the Canadian ship HMCS *Montreal*, with *Anzac* number two in the column.

Early on Monday 27 June, we departed port to rendezvous with the steampast squadron in the eastern approaches to the Solent. The day was programmed as a rehearsal for the Fleet Review, and all timings, formations and evolutions were executed to ensure no details were missed. The steampast squadron program called for a column in order of HMS *Cumberland*, HMAS *Anzac*, HMS *Gloucester*, HMCS *Montreal*, HMS *Westminster* and HMS *Grafton*, with initially 500 yards and later 300 yards between ships. After the rehearsal, *Anzac* remained at anchor overnight and I was fortunate enough to attend

the 'Band of Brothers' Dinner onboard *Invincible* with the Commanding Officers of participating ships. As the senior Commonwealth officer present, I found myself seated at the left side of the host, Commander-in-Chief Fleet, Admiral Sir Jonathon Band, KCB, RN. This was a most singular honour during a very pleasant evening.

As part of the whole review we were keen to make the day itself as much of an Australian and family event as we could. We knew from the rehearsal that the spectacle of sailing through about 170 ships was one we would probably never again witness. Hence on 28 June, the day of the IFR, a large group of guests were embarked by boat, including staff of the High Commission in London and families of the ship's company. Later that morning, at anchor off Cowes, several media personnel from the BBC, ABC and Channel 9 were embarked. They were destined to get a unique perspective of the event and shot some excellent file footage and conducted many interviews.



HMAS Anzac and four units of the fast steamast squadron approaching the review position (HMS Endurance)

The first stage of the Fleet Review involved Her Majesty sailing in HMS *Endurance* through two lines of anchored warships. This took about two hours and finished with *Endurance* anchoring at the head of the lines at the eastern extremity immediately past the aircraft carriers. Our squadron then weighed anchor for our easterly transit, which was about seven nautical miles long. Once under way, the guide's speed was increased to 15, then 17 knots, and distance between ships was reduced to 300 yards. Even having

had a look at it in the simulator, the real view, both on the practice day and during the review, was stunning. The squadron timings had been worked out to the second, and *Cumberland* adjusted her speed over the ground to achieve them perfectly. The final result was the six ships passing *Endurance* at 300-yard intervals, about 100 yards off at 17 knots, manning and cheering ship as we did so. Those inclined to mental maths will have worked out that at 17 knots, 300 yards is covered in only 31.5 seconds, so Her Majesty was presented with about 2 minutes and 40 seconds of nearly continuous cheering. The feat was made even more spectacular by the fact that the weather was not kind with winds over the deck gusting in excess of 45 knots.

The steampast was reportedly a spectacular sight from both ships in the line, and from *Endurance*. The opportunity was also taken by the steampast squadron to then pass close by the Cunard liner *Queen Elizabeth 2* to complete the event. Our Seahawk helicopter participated in the helicopter flypast, as part of a formation of 16 aircraft, which immediately followed a large fixed wing flypast. The entire event was truly a magnificent sight, with 176 ships at anchor in the Solent, including an entire row of aircraft carriers, large amphibious ships and tankers.

In good Australian tradition that evening, at anchor in St Helen's Roads, a barbecue was held in the hangar for the ship's company and guests. The weather conditions were not ideal, with squalls and choppy seas, but it cleared in time for the *Son et Lumière*, which took the form of a re-enactment of the battle followed by a massive fireworks display. While only the fireworks could be seen from our anchorage, it was a very pleasant sight at the end of a remarkable day. Another significant event, in what was already a day to remember and savour, was the Royal Reception and Royal Dinner in *Invincible*, that I attended with the Chief of Navy, Vice Admiral Chris Ritchie, AO, RAN; Mrs Ritchie; and Lieutenant Arno Tielens, RAN, my senior officer of the watch. At a special ceremony, Lieutenant Tielens was presented with the 2004 Queen's Medal personally by Her Majesty the Queen, in the presence of His Royal Highness the Duke of Edinburgh; the First Sea Lord, Admiral Sir Alan West, GCB, DSC, RN; Vice Admiral Chris Ritchie; Mrs Ritchie; and myself. Her Majesty the Queen's Gold Medal is presented annually to the junior officer who has exhibited the most exemplary conduct, performance of duty and level of achievement while completing either initial entry or initial application training courses during the calendar year. This was the first time in its 89-year history that this award has been presented by the reigning monarch. During the reception, Her Majesty commented very favourably on the appearance of the steampast squadron, *Anzac* herself, and the spectacle the whole event presented.

The IFR and its associated activities were an accurate foretaste of events as, early the next day, we proceeded alongside Portsmouth Naval Base in preparation for the IFOS. The ship's Chaplain, Murray Lund, and the guard were landed by boat that morning to participate in the International Drumhead Ceremony at Southsea Common. Also, our helicopter left RAF Odiham, and moved to RAF Waddington to participate in the

Waddington International Air Show. The ship's Flight did an excellent job representing the RAN, and *Anzac* won the award for best static display at the air show. Also of particular note, Her Majesty signalled RN and Commonwealth units participating in the Fleet Review to 'Splice the Mainbrace'. This was most readily complied with; the ship's company gathered on the flight deck for the occasion and enjoyed a couple of 'cold ones' on behalf of the monarch as a reward for a job well done.

With only a day to move in excess of 70 ships alongside from anchor, the RN did a fantastic job, and on 30 June the IFOS commenced. For *Anzac* this meant being open to visitors, with static displays of small arms, damage control equipment, a canteen stall selling ball caps and the like, and the band playing up a storm. The ship in effect became a concert stage for much of the day with Aussie songs booming out. While fewer ships were involved than in the Fleet Review, the IFOS was still conducted on a grand scale, with displays, stalls and stages covering every wharf in Portsmouth. In the first day alone, over 1500 people toured *Anzac*. The following three days brought the total to over 10,000 visitors to the ship. In order to meet the ship's commitments during the IFOS, including various official receptions, the ship's company was put in a two watch system (half on/half off in a 48 hour rotation). Many personnel used their off-watch time to visit London. It is estimated that over 275,000 people visited the naval base during IFOS.

The whole IFR and IFOS experience was remarkable for *Anzac*, even amongst the very full months of NORTHERN TRIDENT 05. The spectacle of the Fleet Review is difficult to describe; watching the anchorage from St Helen's Roads at sunset, with the masts of 176 ships in silhouette, was stirring. The experience of steaming through the lines in close formation is one not likely to be repeated in the careers of those involved, nor rivalled for its imagery. Additionally, the successful completion of the JMC exercise was a sure sign of the inherent flexibility of the surface combatant. To leave Hamburg in late May after much industry engagement and many receptions, then spend 12 days in company training for war at sea, only to reset for naval diplomacy 72 hours later, was indicative of the broad spectrum of actions a surface combatant can perform in support of Australia's maritime strategy. Roll on the next deployment!

The Best Laid Staff Work: An Insider's View of Jellicoe's 1919 Naval Mission to the Dominions

Dr Andrew Gordon

I came to the subject of Admiral Jellicoe's naval mission from an unlikely direction: my work-in-progress on Admiral Sir Bertram Ramsay. The mastermind of the evacuation of Dunkirk, and the Allied naval commander in the invasion of Normandy, is not normally associated with the Pacific and Australasia. Yet, on New Year's Day 1945 – the day before he was killed in an air crash – had he been asked to name the most traumatic year of his life, it is probable that 1919, the year in which he was Staff Commander to Jellicoe on his odyssey round the Dominions to advise on their future naval policies, would be more likely a candidate than 1940 or 1944. To explain why, this paper has to be an unusual mix of the grand strategic and the intensely personal.

The genesis of Jellicoe's mission lay in the Imperial War Conference in 1918. The Admiralty tabled a plan for a single postwar Imperial Navy, controlled centrally, but had been rebuffed by the Dominion Prime Ministers who wanted their nations to 'develop navies of their own which would cooperate with that of Britain under one command established after the outbreak of any future war'.¹ They accepted that their forces must conform to Royal Navy (RN) standards and practices, and their lordships in the Admiralty were realistic enough to go along with this compromise. They also fell in with the Dominions' expressed wish that they should be visited by a naval adviser of high credentials, as soon as the war was over, to help them plan and organise for their own naval defences accordingly.

As a former Commander-in-Chief Grand Fleet and First Sea Lord, Admiral Sir John Jellicoe (as he still was when the voyage began) was the obvious choice: his name was known around the world and his reputation would command international respect. Further, his being out of sight from the seat of power, and out of mind, for an extended absence would not be intolerable to the present First Sea Lord, Admiral Sir Rosslyn Wemyss, or indeed the next one in-waiting, Sir David Beatty. Jellicoe's remit was:

To advise the Dominion Authorities whether, in the light of the experience of the war, the scheme of naval organisation which has been adopted or may be in contemplation requires reconsideration, either from the point of view of the efficiency of that organisation for meeting local needs, or from that of ensuring the greatest possible homogeneity and cooperation between all the Naval Forces of the Empire.²

He was to visit India, Australia, New Zealand and Canada, and the battlecruiser HMS *New Zealand* was made available for the cruise.

As his Chief of Staff (COS), Jellicoe took with him Commodore Frederick Dreyer, who was by now his habitual retainer, having been his Flag-Captain in the Grand Fleet and then his Director of Naval Ordnance at the Admiralty. A large, overbearing man, Dreyer was a notorious bully, celebrated by historians as the inventor of ineffective fire-control gear. Dreyer recommended Commander Bertram Ramsay as Staff Commander. There is no evidence of any special link between the two, although they had served together twice: briefly in 1907 in the first commission of HMS *Dreadnought*, and then in early 1914 in the battleship HMS *Orion*.

Ramsay had been commanding the destroyer HMS *Broke*, in the Dover Patrol, for slightly more than a year. He had taken her over from the heroic Edward Evans, and proved himself an unbending martinet in pulling her back from near-anarchy. Very likely he had been chosen for that purpose: 'his concern for discipline was out of the ordinary and was recognised as such by both his ship's companies and his superiors'.³ The Dover Patrol also supplied the Flag Lieutenant, Vaughan Morgan, who had been 'flags' to Sir Roger Keyes of Zeebrugge fame, and was thus already well known to Ramsay. Three other officers were carried, to advise on anti-submarine, mining and air matters. For Jellicoe's small, select band, it was barely conceivable that they might refuse such an appointment. It was highly prestigious, promised many months of glamour and adventure, and resolved the anxieties about their immediate future that no doubt accompanied the prospect of postwar demobilisation.

Ramsay duly handed over his destroyer – having told his diary: 'am happy to think I shall pay off *Broke* a much improved ship in every way' – and went down to Portsmouth to join *New Zealand* on 19 February. That afternoon he went to see his friend and near-senior, Commander James Somerville, at the Signal School for experimental duties, and they had a long talk on the way ahead for the Empire's wireless telegraphy arrangements. The day of departure, 21 February, started with a harrumph: 'Admiral's [teenaged] daughters arrived at breakfast to my astonishment, not being used to said procedure'; and did not improve: 'so we start on our Dominions tour, on a Friday & raining, with a falling barometer'.

His superstition was justified: Jellicoe's mission was fatally flawed from the start. The project had been mooted in wartime, when strategical priorities had been obvious and urgent. Just a few months later, the clear objectives and the great sense of common-cause had disappeared along with the German, Austro-Hungarian and Ottoman empires. The Admiral had been given little guidance on postwar defence strategy, on likely expenditure or force levels, or even on whom the next enemies (if any) were officially supposed to be. The world's political kaleidoscope had been violently shaken and had yet to reform into any clear pattern, and all potential maritime rivals were friends and/or allies. Yet, in order to make specific recommendations to their

clients, Jellicoe would have no choice but to devise assumptions on grand strategic matters way outside their terms of reference, and indeed beyond anyone's knowledge at the time.

As *New Zealand* rolled down to Gibraltar in a westerly gale, and then through the Mediterranean, the staff got down to picking through the 'India' file. Ramsay's diary entry for 1 March: 'Received back our dossier from the admiral slightly reconstructed & improved. Worked out a few more details for him. Got on to India again & made out basic principles.' By this time their predicament began to dawn on Jellicoe. He wrote to the First Lord later from Port Said:

It is somewhat difficult under present conditions to formulate proposals for our future naval strength as compared to other powers.

The general uncertainty as to the conclusions that will be reached at the Peace Conference, both on the subject of the institution of a League of Nations and on its functions, as well as the attitude that will result from the Conference on the question of future limitation of armaments, are factors which have a wide bearing on the subject, and the absence of knowledge on my part of the probably course of events adds to my difficulties.

... it is very difficult to formulate proposals of naval defence without basing them on the existence of a potential enemy, and with the present state of the world it is a delicate matter to select such a potential enemy, but the safety of our sea communications is vital to the very existence of the Empire, and it is undoubtedly essential that we should run no risks in this respect.⁴

This was both a plea for top cover for such recommendations as were likely to follow, and a warning of how elaborate the recommendations were likely to be. He never got the top cover; sometimes the Admiralty's replies were evasive, sometimes they were too late for the issue at hand, at least once there was no reply at all.

On 14 March, *New Zealand* arrived at Bombay, where the exotic hospitality and the groundwork began. Ramsay's training on the 1913 War Course, which had included 'studying and writing reports on the problems arising out of the strategical conditions of the present day', uniquely (among Jellicoe's staff) qualified him for the work. He soon clashed with the bombastic Dreyer, of whom he later wrote: 'I had to go down to his room & read his rotten ... piffle. He is the worst COS imaginable.'⁵ It was near impossible to establish an agreeable *modus operandi* with such a man, but together they examined local defences and establishments, and found them to be wanting or virtually non-existent. They realised that no thought had been put into the future naval security of India, partly because the Royal Indian Marine was administered by

the army – an ‘absolutely indefensible’ arrangement – and was a decrepit outfit, fit only for abolition.⁶

After six weeks’ work, helped or hindered by his immediate boss – and punctuated by a tiger-shooting expedition and Jellicoe’s promotion to Admiral-of-the-Fleet⁷ – their report duly recommended the establishment of a Royal Indian Navy, with five to seven light-cruisers, one aircraft carrier, two river gunboats for the Tigris and Euphrates, six submarines with a depot ship, and twenty convoy escorts – plus all the infrastructure to support such a force. Although an Indian Navy would eventually be founded, after a delay of 15 years, little came of its proposed order of battle.

New Zealand departed India and headed for Western Australia via Colombo and the Cocos Islands.

15 May:

*Arrived Albany Sound 0700 & anchored off pier in Princess Royal Harbour. Admiral Creswell & Captain Hyde came onboard. Also mayor. Civic reception in Town Hall. A of F & full staff left Albany in special for Perth. Adm Creswell & Hyde came too.*⁸

While the ship followed at her own speed, Jellicoe and his entourage took the overland route to Perth. At every stop they were greeted by cheering crowds, dinners and speeches, while his staff were making enquiries and taking notes. Australia would be the keystone in their work, partly because she was the most advanced of the Dominions in naval defence, but also in light of their growing certainty that Japan was the logical next enemy and that Imperial defence would have to focus on the Western Pacific.⁹ A core staff, including Ramsay, then went on to Melbourne to prepare for the Admiral-of-the-Fleet’s arrival in the Australian Federal capital.

In Melbourne, they were welcomed at Federal Government House (FGH, in Ramsay’s diary) by the Governor-General. ‘Though essentially kind and of a convivial disposition’, Sir Ronald Munro-Ferguson was said to be ‘subject to outbursts of temper which appeared to threaten physical violence to any unfortunate who may have provoked his wrath or who happened to be near him’.¹⁰ But to Lord Jellicoe’s mission, and subsequently *New Zealand’s* officers, his hospitality was unstinting: in this, he had form. During the war he had made available the amenities of his Scottish estate (in his own absence) to officers on leave from the Grand Fleet. Now, he laid on a succession of dances, dinners and tennis parties at FGH, while Jellicoe’s staff got down to their work.

Of the Interwar period, it was said that:

to travel extensively, to be entertained in every corner of the world as an honoured guest, is usually considered the fortune of a few privileged men

*with means, spare time and influential social connections. To this select company must be added the naval officer. Holding the King's commission, he has the entrée to every club in the world, and the arrival anywhere in the Empire of the White Ensign and those who sail with it is the cause of immediate jubilation.*¹¹

Nowhere exemplified these words more than the reception the Admiral-of-the-Fleet and his gilded staff enjoyed in those halcyon days¹² among postwar Melbourne's bright young things – and 'the year 1919 provided an exceptionally fine vintage of debutantes in both quality and numbers'.¹³ But what was about to happen to Ramsay was so traumatic and out of character that we need to take stock before proceeding.

When he joined Jellicoe's staff for the World Tour in 1919 he was a 36-year old commander, which was a conventional age and rank for a naval officer to get married.¹⁴ Even in his letters as a midshipman, Ramsay had expressed a wistfulness for the family life – the secure family hearth and home – he had rarely known in boyhood. His natural diffidence was enhanced by what he saw as his straitened financial circumstances; in his analysis, he was not much of a catch. Perhaps his head was now turned by the approval that he and his brother officers met wherever they went, but here in Australia the rules seemed to be different.

They met on Sunday 25 May, his second day in town, at a dinner at FGH. Two agreeable young women caught Ramsay's attention: Miss Jean Fairbairn, 'pretty, dark & nice', and her close friend, Miss Joan Russell, 'pretty, fair & nice'.

The next day he lunched with Admiral Creswell at the Athenaeum, and settled the Royal Australian Navy's (RAN) future scheme of communications, along James Somerville's guidelines. At a ball that evening, Ramsay danced three times with Jean and five times with Joan, and decided that, while both were nice, he liked Joan 'immensely ... nicest girl I've met for ages'. He discerned a cloud on the horizon: 'I think Clifford, Mil Sec to G.G. is after her', but made up his mind to 'see as much of her as possible. Haven't felt like this about anyone for ages.'

Over the next three or four days he struggled with work on Australian naval defence, interviewing and drafting, while in an increasing state of reverie over the 22-year old Miss Russell.

27 May:

Busy at Navy Office. Tea with Mrs Hyde. Liked her. Feel I wanted to see Joan Russell very much. Awful waste of time not seeing her but no excuse to do so.

29 May:

Had a busy day at Navy Office. Interviewed Admiral Jackell on RNB matters. Lunched with Fairbairns. Joan even prettier by day than by night. I do like her. How on Earth can I persuade her to like me. To like me well enough to love me seems hopeless as I have nothing to show & have no good cards in my hand. Intend to try my very best.

30 May [Official receptions, and so]:

Drove to FGH. Picked up Clifford & went to call on Fairbairns. Joan there, looking topping. I do love her.

The next day, Saturday 31 May, he worked all morning with Dreyer, and after lunch played tennis at FGH. 'Joan there. Not much opportunity of talking to her.' That evening, he was back in FGH for a dance where he partnered her three times, and then suddenly threw all caution to the wind, took her into a nearby room, and sat her down.

Told her I loved her more than anything in the world. She was too sweet for words about it but couldn't give me any hope of her returning it. She was absolutely sweet about it & of course I love her a thousand times more now. Told her I intended to win her. Oh, if only I could. I asked her tonight because time was so short & I daren't put it off. Didn't intend to do so when I went to the dance. Do hope I haven't spoiled my chances entirely. But I know she is the one.

He had known the girl for only six days. His ship would be in port for another fortnight. She had so far exhibited no signs of being in love with him. Elementary staff work should have told him not to make his move for another week – more time spent on reconnaissance would not have been wasted.

Back on board, he 'had horrible night & scarcely slept a wink. Thought of Joan all the time, sleeping or awake. Feel that I am so useless & unattractive that I can never hope to win her.' Over the next two days he encountered Joan twice, at a Fairbairn tennis party on Sunday, and at a dinner and dance on Monday. On both occasions Joan seemed tired and not terribly well, but she was very sweet and they talked at length, 'making me so happy that I was floating on air'. Each time Clifford drove her home. 'He is undoubtedly in love with her as he won't speak to me at all'. Afterwards, he:

felt frightfully depressed as if I was losing ground. Feel tide is against me & I'm not making headway. Wrote long letter to Joan, posted at 1 am. Went to bed thoroughly depressed. What a rotter I am at this sort of game.

He could not know that when Clifford's car drew up outside the Russells' house on the Monday night, Joan suddenly started crying and did not want to go inside, as if she had some awful premonition.

On Tuesday 3 June, he took part in an inspection of Williamstown Naval Base, and then, feeling unwell, became apprehensive of Joan's health. 'After lunch rang her up & was horrified to be told by Mrs Russell that Joan was ill with flu.' He bought some flowers and drove to the Russells' gaunt, turreted mansion in South Yarra, where he met her mother for the first time. It appears that Joan had mentioned him to her, but evidently not his dramatic declaration on Saturday night.

She told me how serious the illness was [Temp 105°]. Felt simply frozen to the marrow. She was very nice & I liked the look of her so much that trusting for the best I told her of my feelings. She was naturally surprised & said so plainly, but she was simply kindness itself & I felt even encouraged. She told me that Joan had said that she liked me. I couldn't have wished for more.

In June 1919, Australia was reaching its peak of the terrible Spanish influenza epidemic that had ravaged across the northern hemisphere in the previous few months. Ramsay himself was now succumbing to a mild bout and, back on board, the Medical Officer sent him to bed for two days, where he tried to track the progress of Joan's illness.

By Saturday 7 June, Mrs Russell was really anxious.

Oh, it's too sad for words to think of my darling lying there so desperately ill & I doing nothing for her. How I wish I knew what her feelings are for me. Felt altogether miserable & can think of nothing else. Suppose I must go to the races otherwise I shall make myself ill with worry doing nothing.

So he went to the races at the Royal Victorian with Morgan the 'flags', but 'was too distressed to enjoy them'. Morgan, apparently oblivious, thought it 'good fun' and won five shillings.¹⁵

One Sunday, after sitting through a depressing sermon about illness and death, Ramsay went to see the Fairbairns and immediately:

read the bad news on [Jean's] face, doctors given up hope. Oh Heaven what tragedy in the life of the very dearest & sweetest girl in the world. Feel utterly wretched. Refused lunch party [on board New Zealand] but I couldn't get away from the band which played gay tunes outside my cabin ... took Jean for a drive. Walked by the sea. Did us both good.

Joan died that evening.

From this day on, for several weeks, Ramsay struggled to deal with this awful turn of fate. But the role he assumed – that of the bereaved almost-fiancée – was almost entirely of his own imagining. He did not attend the funeral, on 10 June, as the Russells wanted no one there. ‘The thought that my darling was being buried while the sun was shining so brightly & everything peace-like & nice nearly drove me distracted.’ But he went to the cemetery later, stood at her feet and ‘told her all my heart. It was all so peace-like, but oh so lonely for her & for me.’

Many years later Clifford set out his side of the Joan Russell saga. Captain the Hon. Bede Clifford (Royal Fusiliers) was debonair, vivacious and charming, and midway between Ramsay and Joan in age. Like Joan’s brother, Alec, he had also been wounded in France. Seconded to the Colonial Service, the Governor-General had sent him to convalesce at the Russells’ sheep station out near Beaufort. He made friends easily, and with the beautiful Joan slid naturally into a flirtatious but teasingly surreptitious romance.

During Joan’s last few days, she had asked for Clifford ‘so insistently that the doctor had reluctantly consented if precautions against infection were taken. But by this time he was fighting for his own existence against the influenza’ – and had been hospitalised at FGH, (where he was joined by Morgan, who found him ‘one of the very nicest fellows I have ever met’).¹⁶ Later, he was allowed to read a letter from Mrs Russell that said ‘Joan had never ceased to ask for him until she became unconscious.’¹⁷ The Russells ‘wanted no one there’ at the funeral because, although Clifford was absent, Joan was buried with his last letter in her hand and his flowers in her coffin.

For the next several days Ramsay went through the motions of work, while trying to find his bearings in a fog of despair. ‘My hopes were so high & now the future is all dark. How I want her. All my ambitions were centred on her.’¹⁸

On 14 June *New Zealand* sailed for Tasmania, with Ramsay in a state of distraction at what he was leaving behind, but he felt ‘her presence near me now & then & surely her spirit cannot be far off’. The next day, Sunday, a week since Joan’s death, he ‘had a long talk with the Padre about my great sorrow’. Then he worked on an essay on discipline and felt better for it.

The ship voyaged on, by way of Hobart and the Naval College at Jervis Bay, and arrived in Sydney on 23 June.

Lovely sight entering the harbour. Certainly the most beautiful harbour I have ever been in but yet I was disappointed... Feel whole thing so flat without my dear Joan to write to about it. No aim in life at all.

Amidst all the ‘mafeking’, Ramsay was back at work inspecting Cockatoo Dock, Spectacle Island and Garden Island, and the shore defences of South and Middle Heads. Then the Governor-General arrived from Melbourne to accompany Jellicoe on a cruise

to the Solomon Islands, and with him came his Military Secretary. 'The last time I saw him was when he drove off with my darling from the dance on Monday night & from which time I have lost her from view in this life, alas.' Inevitably, Ramsay and Clifford had a very long and intimate talk. 'Discovered that he was under the impression that Joan loved him & all would have been well for him. It does no harm that he should continue to think so.'

On Monday 30 June, a frock-coated thanksgiving service was held for the signing of the Peace between the Allies and the Germans. Later Ramsay and 'Cliffie' dined together ashore. They had a long talk about Joan, and a friendship began to develop through shared loss, while Ramsay immersed himself in a theological work entitled *Our Life After Death*.

Because some of the anchorages in the Solomons and New Britain were small or badly charted, Jellicoe and his staff transferred to a 2000 tonne steamer, commissioned as HMAS *Suva*, and sailed on 5 July. They assessed the capacities of Port Purvis and Tulagi, and Fauro Island in the Solomons, Rabaul in New Britain, Samarai and Port Moresby, drew up their plans and were entertained by (suspected) cannibals. These islands would, Jellicoe believed, be vital in a future war with Japan, of whose likelihood he became increasingly convinced. In his analysis of the Naval Situation in Far Eastern Waters, he wrote:

*Japan is the only nation in the Far East, except the United States, which would be in a position to inflict any permanent injury on the British Empire. I have (perhaps not quite justifiably) omitted the United States in considering the problem.*¹⁹

At the time, Britain and Japan were formally allies, so what was his reasoning? He alluded to the friction that accompanied Japanese naval cooperation during the war, to the anti-Britishness of the Japanese Press, to commercial rivalry, and of course to Japan's notorious 21 demands on China in 1915. He cited four historical examples of countries suddenly turning on their allies, and concluded that 'it would be very unwise to trust solely to this alliance, and to take no steps for naval defence'. He then embarked upon 'one of the most far seeing appreciations ever made by a British naval officer' – based on several connected assumptions:

- realistically, the UK would send a fleet to the Far East only on the outbreak of war with Japan
- meanwhile, Japan would have been quite capable of transporting an army of 100,000 men to Singapore
- her ultimate aim would be to invade Australia
- for which purpose she would seize forward bases in New Guinea and the Pacific islands to the east.²⁰

While the paperwork was mounting, Ramsay and Clifford were also making progress. On the second night of the *Suva* cruise they had another long chat.

Both very sad, this being the anniversary of our darling's death 4 weeks ago tonight. He brought out her dear photo and we both gazed on her sweet face with love and reverence. How ever are we to get on in the future without her for infinity is so awful.

I confess a difficulty in being entirely solemn about the image of Commander Ramsay and Captain Clifford consoling each other in mourning for a woman of whom each considered himself to be the primary bereaved, the other being a deluded but harmless also-ran. The next day, Ramsay:

substituted a thin gold chain for the ribbon which my darling wore in her hair and which I have been wearing round my neck to support the diamond pendant locket with my darling's photo in it. I wish things wouldn't wear out. Of course the ribbon isn't as new as when I first got it but nevertheless it will always be to me the most precious relic of my darling's company...

He was slowly, reluctantly coming to terms with Clifford's (on the face of it) more plausible claim to Joan's affections.

Ah, me. This is a sad world, & I am a weak man in that I am not strong enough to fight depression & to stand up to the world & life ... if only I had the right to call her 'mine'! I feel at times so totally unworthy of her, compared with Clifflie, I am so very dull & uninteresting & very bad tempered. [Though] I think she could cure me of anything.

The eventual Australian Report would be the keystone of the Mission's tour, and its sheer length and detail hint at the staggering amount of staff work involved. Ramsay had to bear the brunt of it, pulling together his own work and others', to pass semi-final drafts up through Dreyer to Jellicoe for approval or amendment.

The fleet-strength recommendations were that Australia should bear 20 per cent of the costs of the Far Eastern Fleet, and contribute two battlecruisers, eight light-cruisers, twenty-eight destroyers plus two flotilla leaders, one destroyer depot ship, eight submarines, one submarine parent ship, five minesweepers, one aircraft carrier and a fleet repair. There were volumes and chapters on strategic and infrastructural matters, training and so on, and concern expressed about discipline in the RAN – illustrated by HMAS *Australia*, returning home, with a mutiny of sorts in Fremantle.

Ramsay sought three days' leave, and went back to Melbourne. He stayed with the Fairbairns who, with the Russells, were extraordinarily kind to him, in circumstances that must have been harrowing enough for them. He returned to Joan's grave, but

felt that she was no longer there. That evening he tried to summon up a sense of her nearness, but failed, and blamed his 'lack of power to concentrate'.²¹

On Friday 15 August, the day before *New Zealand* left for her name-country, Ramsay had his last talk with Clifford.

We were both very upset & both 'blurred'. It couldn't be helped. What mostly upset me was his telling me how he & she had practically fixed [illegible - an engagement?], & yet how could it be? ... for she told me 'there was no-one else' & I would believe her always. I think I should be wrong to take Cliffie's word for all this, better to trust to what I thought right at the time! ... Our talk lasted from 7 to 11, & then we went on to the Allens' dance & fooled around as though we hadn't a care in the world!

New Zealand, the country, was an easier stage in the Mission's work, for the report would lie within the strategic setting of the Australian Report. Jellicoe took to the place (and would later return as Governor-General). He found a more positive attitude towards naval defence, and admired the New Zealander's greater amenability to discipline. Ramsay was unimpressed. 'Very bad dancers here. The whole place is behind the times.'²² Socially, however, he was getting back on his feet, and days would pass without reference to Miss Russell in his diary.

'Flags' tried to help by setting him up with a Miss Hope Wood ('Ugly as Hades but very nice'), and Ramsay was beginning to enjoy her company when he was horrified to realise that she was falling in love with him. He hastily extricated himself.

Can't think what started it. I rather expect Morgan. She is nice & I do feel flattered that in three days she should have been brought to this state. But my heart is not my own.

The New Zealand Report repeated verbatim much of the strategical reasoning of the Australian. It recommended that the Dominion should support three light-cruisers, six submarines, one submarine parent ship, eight minesweepers, one aircraft carrier and one fleet repair ship, and that these should be formed into a New Zealand Division of the Royal Navy. New Zealand should bear five per cent of the costs of the Far Eastern Fleet.

Professionally speaking, Canada, which *New Zealand* reached on 8 November, was the low point of the mission. There was virtually no written direction to begin with – and little interest expressed by the Canadian Government in supplying it. Jellicoe's work was everywhere frustrated by evasive, stonewalling politicians. Ramsay's diary recorded:

*The general impression that I have gathered so far is that we are not wanted. The Navy is thought very little of. The RCN is a joke. The English are always to blame for everything. The Canadians are always right. They make me very cross.*²³

And the next day:

Politics rule everything. Found disgraceful state of affairs in regard to pay, discipline... They won't help us one atom. Makes me furious.

He was still delighted to get letters from Mrs Russell, especially one enclosing a photo of Joan, but he was seeking the company of other women; in particular a Mrs Ahearn, whose husband was absent. 'Norah & I get on really well together & I like her immensely & she likes me equally I know. Her rotten husband is spoiling her life & I hope she will chuck him.'²⁴ In other words, he had assimilated the 'Joan experience' and moved on without disowning any of it.

Most of Lord Jellicoe's recommendations from his Dominions Mission – the big strategical foundations, especially – were, in effect, disowned by the powers that be. Land-fit-for-heroes, war-to-end-wars, collective-security, disarmament-by-example, and so on – slogans and patent remedies, which had not yet kicked in when Jellicoe sailed, were tilting the pitch against him very soon afterwards. Within days of *Suva's* return to Australia from the Solomons, the British Treasury had framed its notorious 'No War for Ten Years' rule. Mankind had somehow turned a corner. It was a brave new world! – but one that was 'living in an era of dreams and would take [huge] doses of morphia'.²⁵

In spite of all his private troubles, Ramsay's infinite capacity for taking pains had been central to the exercise. But in retrospect he condemned the whole thing a waste of time – a lesson on the futility of ill-founded staff work.

There are tentative parallels for today. Australasia is once again looking at an expanding, wild-card naval power of unknown intentions to the north. Once again, we are beset with glib, patent-remedy security concepts, which it is unfashionable to interrogate and which promise that force-economies are compatible with future security. But that is another paper.

Ramsay finally got his hearth and home, ten years later: he won a young, tweedy Scottish heiress, through the careful attrition of friendship, rather than a passionate campaign. Captain James Somerville partnered Ramsay, as Commanding Officer (CO) and Executive Officer (XO) respectively, in HMS *Benbow* in the early 1920s; and in 1940, Vice-Admiral Somerville watch-kept as his deputy, in the Dynamo Room under Dover Castle, so he could get some sleep during Dunkirk – while Rear-Admiral Morgan served as Ramsay's tireless Chief of Staff. Ramsay happily never served with Frederick

Dreyer again, although one night in 1944 he found the retired admiral creepily 'lying in wait' for him outside his lodgings in London, with some bee in his bonnet.²⁶

Sir Bede Clifford led a glittering career. He became the first white man to cross the Kalahari, and rose to be Governor-General of Trinidad during World War II. In 1964 he wrote this of his former love rival: 'Bertie Ramsay had had his disappointments, but his last years were full of action, honour, and triumph.'²⁷ With which one cannot disagree.

This paper was presented at the RAN Sea Power Conference 2006, 31 January – 2 February 2006, Darling Harbour, Sydney.

Notes

- ¹ A. Temple Patterson, *Jellicoe: A Biography*, McMillan, London, 1969, p. 212.
- ² Report of Admiral of the Fleet Viscount Jellicoe of Scapa on 'Naval Mission to the Commonwealth of Australia', Vol. IV, Chapter 1, ADM116/1834.
- ³ J. Gardner, 'Bertram Ramsay' in S. Howarth (ed), *Men of War*, St Martin's Press, New York, 1992, p. 359.
- ⁴ A. Temple Patterson (ed), *The Jellicoe Papers*, Vol. II, Navy Records Society, London, 1968, p. 290.

- ⁵ Bertram Ramsay's Diary, 27 November 1919, Churchill College Cambridge Archives, RMSY3/1.
- ⁶ Jellicoe to Long, 2 May 1919, Ass Mss 49045-49057, *The Jellicoe Papers*, p. 284.
- ⁷ For a few days in early April 1919, Union Flags were flying from two foremasts: *Queen Elizabeth's* at Rosyth and *New Zealand's* in Bombay, which must be unique in history.
- ⁸ William Creswell, RAN, First Naval Member; Francis Hyde, Chief of the [RAN] War Staff.
- ⁹ Their thought processes were almost certainly boosted in this direction by a long letter from Captain W.H. Thring to Dreyer of 24 February 1919. As Thring, a former Director War Staff, was en route back to England after six years in Australia, it is not clear where his letter caught up with Dreyer – possibly Egypt, or it may have followed him around the Indian Ocean, even to Albany. But its influence must be accounted an unknown factor in the Jellicoe Mission: its clear intention was to raise the strategical horizons of the Australian defence policy debate. (My thanks to Dr David Stevens – Sea Power Centre - Australia.)
- ¹⁰ B. Clifford, *Proconsul: Being Incidents in the Life and Career of the Honourable Sir Bede Clifford*, Evans Brothers, London, 1964, p. 37.
- ¹¹ P.D. Thomson, *How to Become a Naval Officer, and Life at the Royal Naval College Dartmouth*, Gieves Ltd, London, 1937, p. 4.
- ¹² Clifford, *Proconsul*, p. 56.
- ¹³ Clifford, *Proconsul*, p. 55.
- ¹⁴ Lieutenants were expected to be single, captains married.
- ¹⁵ Admiral Sir Vaughan Morgan's Diary, Imperial War Museum.
- ¹⁶ Morgan's Diary, 16 June 1919.
- ¹⁷ Clifford, *Proconsul*, p. 60.
- ¹⁸ Ramsay's Diary, 13 June 1919
- ¹⁹ 'Naval Mission to the Commonwealth of Australia', ADM116/1834.
- ²⁰ D. McLachlan, *Room 39: Naval Intelligence in Action 1939-45*, Weidenfeld & Nicholson, London, 1968, p. 418.
- ²¹ Ramsay's Diary, 14 August 1919.
- ²² Ramsay's Diary, 21 August 1919.
- ²³ Ramsay's Diary, 21 November 1919.
- ²⁴ Ramsay's Diary, 31 December 1919.
- ²⁵ Lord Chatfield, *It Might Happen Again*, William Heinemann, London, 1947, p. 5.
- ²⁶ Email from C. Ramsay, the evidence is said to lie in the Ramsay Papers, which I have yet to see.
- ²⁷ Clifford, *Proconsul*, p. 312.

SYNNOT LECTURES

The 1000-Ship Navy Global Maritime Partnership Initiative

Dr Stanley Weeks

The US Navy's (USN) 1000-Ship Navy initiative, now officially titled the Global Maritime Partnership, had its origins in USN Chief of Naval Operations Admiral Mike Mullen's speech to the September 2005 International Seapower Symposium in Newport. This paper will first place this initiative in the broader context of four current key USN strategic plans, to which the initiative is closely related. The origins of the 1000-Ship Navy initiative will then be detailed, with particular emphasis on the initial Newport speech of Admiral Mullen, as well as the more specific development of the concepts in a November 2005 article in the US Naval Institute *Proceedings* by senior USN strategy and policy staff leaders. Admiral Mullen further described the initiative in a December 2005 speech outlining the 'Ten Principles' of this new global maritime network. With this background, an initial critical examination is provided of the 1000-Ship Navy as a concept, and some critiques and concerns regarding this general concept. The challenges and possible frameworks for its implementation are also considered. We then highlight the specific views of the Royal Australian Navy (RAN) leadership on the 1000-Ship Navy concept, and consider some relevant general lessons for the concept from past and current USN-RAN naval cooperation, and note potential RAN contributions in implementing this global maritime partnership.

Broader Context – USN Strategic Plans

Despite its distinct origins, the 1000-Ship Navy concept is closely related to a series of four key strategic plans that together are designed to guide the USN way ahead in the 21st century. These four key plans provide the vision, tactics, resources and strategy guidance for the USN.

'Sea Power 21'. The USN's overarching vision, which sets the ends and aligns its efforts, is laid out in 'Sea Power 21'. This document, which dates from October 2002, articulates the navy's capabilities in terms of the three naval warfighting pillars (Sea Strike, Sea Shield and Sea Basing), with a fourth ForceNet pillar linking them, and also outlines several supporting areas (Sea Trial, Sea Warrior, Sea Enterprise).

Naval Operations Concept (NOC). New in September 2006, this document is signed by both the Chief of Naval Operations (CNO) and the Commandant of the Marine Corps. It provides the tactical framework for application of maritime capabilities. In the context of the five joint strategic missions in the US National Military Strategy (Homeland Defence, War on Terror/Irregular Warfare, Conventional Campaigns, Deterrence, and Shaping and Stability Operations), the NOC identifies thirteen Naval

Missions (such as Forward Naval Presence, Expeditionary Power Projection and Security Cooperation), nine Guiding Naval Principles (such as Coordinated Global Influence and Interoperability), and nine Methods for accomplishing these missions (such as Adaptive Force Packaging and Building Partner Capacity). As these examples suggest, the 1000-Ship Navy concept is closely linked to many of the NOC's Missions, Guiding Naval Principles and Methods.

Navy Strategic Plan (NSP). The NSP, issued in April 2006 (classified version) and June 2006 (unclassified version), provides the guidance to navy staff elements for the resources decisions in development of the navy's budget submissions. The 2006 Quadrennial Defense Review (QDR) Force Planning Construct established joint guidance that Homeland Defence, the Global War on Terror and Irregular Warfare, and Conventional Campaigns (as well as global, transnational and regional deterrence) are separate but overlapping mission sets and bases for joint force requirements. In the NSP, the CNO provides specific focus areas guidance for each of these joint missions, thereby framing a capabilities-based strategy, aligning navy resource decisions with strategic objectives, and (in the classified version of the NSP) providing CNO guidance on risk. The NSP thus serves as the basis for (and tasks) internal USN staff elements to develop more detailed implementing plans to align navy resources and strategic objectives. In this regard, the Deputy CNO for Information, Plans and Strategy (N3/N5) has been tasked to develop a plan for Global Maritime Security Cooperation, with obvious implications for the 1000-Ship Navy concept.

New Maritime Strategy. Currently under development for completion later in 2007, the New Maritime Strategy 'will be the overarching guidance complementing the vision of 'Sea Power 21' and its tenets of Sea Strike, Sea Shield and Sea Basing, which define Navy Capabilities'.¹ It is likely that the eventual New Maritime Strategy document will also include elements of the NOC and NSP, as well as the 1000-Ship Navy concept's emphasis on global maritime security cooperation.

As this review of the current status and ferment of the USN's strategic plans indicates, the 1000-Ship Navy concept is closely related to these plans and likely to remain integral to USN strategy as it continues to evolve.

Origins of the 1000-Ship Navy Initiative

On 19 September 2005, the US President approved The National Strategy for Maritime Security, an unclassified document intended to serve as a vision of a coordinated government-wide effort to safeguard US global maritime interests. This top-level strategy guidance emphasised the need for international maritime security cooperation:

Security of the maritime domain is a global issue. The United States cannot safeguard the maritime domain on its own. We must force cooperative

*partnerships and alliances with other nations and with private stakeholders around the world.*²

Shortly before this top-level strategy for maritime security was issued, Admiral Mike Mullen had become the USN's Chief of Naval Operations. Admiral Mullen had extensive experience of international maritime security cooperation in the NATO/Mediterranean context of his prior US/NATO position in Naples in command of US Naval Forces Europe and Allied forces. He thus brought to his new position as CNO a true personal commitment to international maritime cooperation. The stage was thus set for Admiral Mullen's 21 September 2005 speech to the dozens of heads of international navies meeting at the biennial International Seapower Symposium at the Naval War College in Newport, Rhode Island. The theme for that speech was 'Establishing a Global Network of Maritime Nations for a free and secure maritime domain'.³ A key point was that this 'new vision must include increased interoperability and closer maritime cooperation between the navies and coastguards of the world'. He also noted that 'our level of cooperation and coordination must intensify'. Finally, echoing the new US National Strategy for Maritime Security's emphasis, Admiral Mullen observed that 'No nation today can go it alone, especially in the maritime domain'. Within a few weeks, it would be clear that Admiral Mullen intended to turn his words on the 1000-Ship Navy into action.

The third step in the evolution of the 1000-Ship Navy concept was in the form of an article by Vice Admiral Morgan (N3/N5) and his Director Strategy and Policy (N5SP), Rear Admiral Martoglio, in the November 2005 issue of *Proceedings*.⁴ This article identified in detail the rationale and imperatives for global maritime security cooperation, and the requirements for building the global maritime network.

Rationale. The emerging security environment of increased globalisation and interdependence makes 'policing and protecting the maritime commons' a high priority for all nations, part of a broader trend of more 'international cooperation on economic and security issues'. Most nations were seen as challenged by 'multi-faceted transnational threats' including maritime piracy, organised crime, smuggling, drug trafficking, illegal immigration, weapons (including WMD) proliferation and terrorism. There is thus a need to harness 'the powers of the international community's maritime organisations to confront these multinational transnational threats'. This is because an international problem of maritime security requires an international solution of close cooperation between like-minded nations, as 'no single nation has sovereignty, capacity, and control ...'. Such close cooperation was also seen as 'paying dividends in other circumstances' such as the international maritime humanitarian relief for the December 2004 tsunami in the Indian Ocean.

Requirements for Building the 1000-Ship Navy. The article also states that 'policing the maritime commons requires a combination of national, international and private industry cooperation to provide the platforms, people and protocols necessary to

secure the seas against the transnational threat'. In effect, this requires a voluntary development of a network to increase sensors to monitor security in the maritime domain and to increase the number of responders. Of note, emerging regional maritime security networks are seen as a model. Also, every nation is seen as capable of contributing in some way to security in the maritime domain, as there is no 'one size fits all'. Navies are seen as 'the first and predominant contributors to the 1000-Ship Navy through their continuing role in enabling the peace', and the international shipping industry is also important to vastly increase sensors in the maritime domain.

Overall Goals and Contributions. The overall goal of the Global Maritime Network is to increase security of the maritime domain for the safe use of the maritime commons by all nations. This is to be achieved through an increase in maritime domain awareness and by posturing assets to rapidly respond to crises/emergencies. More capable nations can export maritime security through traditional international naval cooperation, and through security assistance. But the influence of allies, peers and neighbouring nations is important, as 'overcoming resistance based on sovereignty concerns is often a delicate issue'. The US and the USN 'do not have the capability or desire to be the sole exporter of security or security assistance in the maritime domain' (though the USN is seen as being in a unique position to facilitate voluntary enlistment of nations as members of the global partnership), and strong and sustained support from other maritime nations is essential.

The fourth step in the evolution of the 1000-Ship Navy concept was the codification of several themes of the CNO's initial speech and the subsequent *Proceedings* article into the 'Ten Principles of the Global Maritime Network' laid out in a speech by CNO Admiral Mullen at the Royal United Services Institute (RUSI) in London on 13 December 2005.⁵ These Ten Principles were:

1. National sovereignty comes first and foremost and is always respected.
2. Nations, navies, and maritime forces participate where they have common interests (e.g. common transnational maritime threats).
3. Focus of the global network is security in the maritime domain.
4. Foundation of the global network is individual nations' capabilities (capacity to contribute).
5. International navies will be cornerstones in the global network, but network also includes: coastguards, maritime forces, port operators, commercial shippers and local law enforcement all working together.
6. Every nation, regardless of size or capacity, can do something to contribute to maritime security. Those nations or navies that can assist others should do so.
7. Nations or navies that need assistance should ask for it.

8. Regional nations must develop regional maritime networks.
9. To be effective, a global network must widely share information (to the greatest extent possible, unclassified).
10. Timing: a long-term effort, but must start now by strengthening:
 - Individual nations' capacity to provide for their own maritime security
 - The operational side of regional organisations
 - The relationships between regional organisations to build the global network.

The 1000-Ship Navy as a Concept

Although the 1000-Ship Navy as a concept deserves (and undoubtedly will receive as time goes on) more detailed analysis than is possible in this introductory paper, a few initial assessments of this concept, as a concept, are in order here. First, the concept lays out a broader vision of sea power. With its underlying premise of safeguarding the global maritime commons against largely non-traditional, non-military threats to a globalised world economy, this concept is much closer to the broader concepts of 'comprehensive security' (i.e. security seen as including other economic and human concerns beyond strictly military power) – concepts that have been increasingly evident in Europe and parts of Asia since the end of the Cold War. Second, the 1000-Ship Navy concept is inclusive and even idealistic in its view that 'no nation can do everything, but all nations can do something'. Finally, the concept is flexible, both in its basic principles and, potentially, in its scope for implementation.

The 1000-Ship Navy: Critiques and Concerns

Several general critiques and concerns regarding the 1000-Ship Navy concept should be noted. First, the concept's underlying premise is a continuation of the process of globalisation – but should major conflict or disaster disrupt this basic foundation, the concept itself (but, of course, much else in today's world) would come into question. Second, there is some scepticism of how really common are the posited common perceptions of new transnational threats – with the sceptics noting the continuing existence and priority in many regions of narrower traditional considerations of national and maritime power. Third, and perhaps closely related, there is concern over the extent to which sovereignty concerns and sensitivities may override the objective factors impelling to multinational cooperation. Fourth, there is the potential challenge raised by the concept to the naval strategy and force planning of all navies. Professor Geoffrey Till of the UK has recently noted the need to balance competing models of naval development (national navies and collective navies) as one of the implications of the concept. Fifth, there is the challenge to all nations' varied maritime force structures of the need for closer national and international cooperation of navies and coastguards,

and other civil maritime law enforcement agencies. (These latter two concerns, if not addressed in a careful fashion, could have unfavourable implications for funding of future navy force structures and budgets.) Finally, there is the concern that the 1000-Ship Navy shorthand title of the initiative does not accurately reflect a concept that explicitly encompasses more than just navies. Accordingly, the USN in late September 2006 adopted a new official name, Global Maritime Partnership, for this initiative.

Implementing the Global Maritime Partnership

As the USN moves to actual implementation of this concept, there are several possible frameworks for implementation. First, it may be useful for the USN to categorise its efforts in terms of Blue Water Navies (Global Partners), Green Water Navies (Regional Partners) and Coastal Navies (Sub-regional Partners) – notwithstanding inevitable differences over which category best describes some national maritime forces. Second, it would be advisable to establish a building block approach to assess and leverage various existing regional maritime cooperation initiatives into the context of a broader global network. Third, there is much work to be done to identify how the USN can best engage and lead the integration of interagency and private maritime sector partners. Fourth, there is a need to identify the availability of technology (e.g. data fusion) and also to ensure realistic basic technology/interoperability requirements for the various categories of navies to participate in the global maritime network, with the caution that the best is often the enemy of the good enough in this area. Finally, internally the USN staff, specifically N3/N5, with its lead role in drafting the Global Maritime Cooperation Strategy, will need to provide a focal point for coordinating and implementing the 1000-Ship Navy initiative, both within the USN and in the broader interagency and international arenas. Within the USN some potential important coordination roles include being the clearinghouse/coordinator/integrator at the global level for the regional USN Component Commanders' theatre maritime security cooperation plans; providing strategic templates for assistance (e.g. model Navy Transformation Plans) to emerging coastal maritime forces; aligning the Security Assistance programs of the USN International Programs Office; coordinating training assets with the US Coast Guard International Programs Office; and coordinating maintenance assistance planning for relevant international maritime partners with the USN Naval Sea Systems Command.

RAN Leadership Views on the 1000-Ship Navy Concept

RAN Chief of Navy Vice Admiral Russ Shalders clearly outlined his views on the concept as part of a March 2006 article in the US Naval Institute *Proceedings*:

- The 1000-Ship Navy concept builds on the historic common interest of mariners and is a logical extension of the outcomes of globalisation.

- The concept articulates well the value of addressing maritime security in a collaborative fashion ... and recognises the many capacity building activities already under way on a regional basis.
- RAN involvement in the successful Pacific Patrol Boat program is an example of the type of regional initiative that the concept espouses, as are bilateral and multilateral exercises.
- The concept acknowledges the many users of the sea and the diverse agencies involved in maritime security. A whole-of-government approach to maritime security is at varying stages of development around the globe. It is perhaps the biggest opportunity and challenge proffered by the concept.
- In Australia, establishment of a Joint Offshore Protection Command – a collaborative Defence–Customs organisation led by a navy admiral and established within the Australian Customs Service – is an example of one nation’s solution to interagency coordination.
- Perhaps the greatest challenge in globalising the effort to secure the sea will be to generate the necessary mindset, trust and transparency. There are potential sovereignty, legal and technical issues, but with time these can be addressed.
- From the RAN perspective, we look favourably on any initiative that increases maritime security awareness and cooperation. In my view, this is the true value of the 1000-Ship Navy concept. We are on board and willing to pursue the ideas outlined.

With these views in mind, it should come as no surprise that subsequently Vice Admiral Shalders confirmed support of the 1000-Ship Navy following discussions at the November 2006 biennial Western Pacific Naval Symposium (WPNS) heads of navies meeting.⁶

Lessons From USN–RAN Cooperation

The USN and the RAN have a long history of naval cooperation, which provides some relevant lessons of use to the development and implementation of broader global maritime cooperation and coordination. These lessons begin with the value of the longstanding nature of mutual maritime cooperation, and the special bonds developed in actual wartime Alliance operations (World War II, Korea, Vietnam, the Cold War and Iraq). Closely related is the value of routine peacetime training and exercising together (and a common commitment to interoperability). All of this is underpinned by what the US and Australia share in terms of language, values and history, as well as institutionalised security and defence planning linkages such as in ANZUS and the Australia–US Ministerial Meetings. Of course, many of the nations in a broader global maritime network will not and cannot share some of these valuable factual and

historical aspects of US and Australian maritime cooperation experience, but other aspects (national navy professionalism, a bilateral relationship and interoperability goals) can help facilitate increasingly close maritime ties for these other global nations also. And as the USN's circle of serious global maritime partners broadens, with other nations developing and exercising closer and more interoperable maritime partnerships with the USN, it will be even more important for Australia to maintain an influential modernised and sizable maritime force, in platforms and capabilities, as currently planned.

Potential RAN Contributions in Implementing the Global Maritime Partnership

As Vice Admiral Shalders noted in his comments in *Proceedings*, Australia has its own valuable experience and contributions for broader maritime security cooperation. Categorising Australia's potential contributions in terms of the three categories discussed above indicates how the RAN contributes across the spectrum of maritime security cooperation:

- Blue Water Navies (Global Partners): The RAN is a global blue water partner, and this suggests it continue its emphasis on maintaining high-level force structure and capabilities for operations globally, and particularly across the Indo-Pacific region.
- Green Water Navies (Regional Partners): Australia has unique regional entrée through the FPDA framework with Malaysia and Singapore, and through its bilateral framework with Indonesia. Australia is thus able to contribute to development of these critical South East Asian maritime forces through information sharing, routine training and exercises, though it will need to be sensitive to adapt as such partner maritime forces mature.
- Coastal Navies (Sub-Regional Partners): The RAN has long history, extensive experience and legitimate concerns for maritime capacity building in South Pacific island states. The Pacific Patrol Boat program is in fact a model for leadership in sub-regional maritime capacity building (with 22 patrol boats, and advisors and support, provided to 12 island states since 1985).

Trust and Reliability

As the Greek Philosopher Epicurus noted: 'It is not so much our friends' help that helps us, as the confidence of their help'. In the final analysis, the establishment and success of the '1000-Ship Navy/Global Maritime Partnership' will depend above all on the development of trust among global maritime forces. This development will require a continuing impulse from the US and the USN, but will also require the US

to be sensitive to the concerns of other global nations and to let other maritime powers share a leadership role and contributions in their regions.

Lecture delivered at Russell Offices on 27 November 2006.

Notes

- ¹ 'Developing a New Maritime Strategy', US Navy Office of Information, <www.navy.mil>, 12 September 2006.
- ² The White House, *The National Strategy for Maritime Security*, September 2005.
- ³ 'CNO calls for more international naval cooperation', *Navy Newsstand*, <www.news.navy.mil>, 21 September 2005.
- ⁴ Vice Admiral J.G. Morgan, USN, and Rear Admiral C.W. Martoglio, USN, 'The 1000-Ship Navy: global maritime network', *Proceedings*, November 2005, pp. 14-17.
- ⁵ US Navy Office of Information, 'Edited Remarks by Admiral Mike Mullen', RUSI Future Maritime Warfare Conference, London, England, 13 December 2005.
- ⁶ Simon Kearney, 'RAN joins the '1000 Ship' Navy', *The Australian*, 20 November 2006.

Transforming Maritime Forces: Capacity Building for Non-Traditional Challenges

Dr Stanley Weeks

Although distant in geography from the Asia-Pacific region, the task in Albania of restructuring and modernisation of maritime forces provides an interesting and instructive case study with much applicability to certain countries of the Asia-Pacific region. For a year and a half (June 2004 to December 2005), the author faced these restructuring challenges every day as the Senior Naval Advisor on Science Applications International Corporation's 'Defense Modernization and Restructuring Team' in the Albanian Ministry of Defense in Tirana.

The task in Albania, as in many countries in the Asia-Pacific region, is the restructuring and modernisation of maritime forces essential to deal with today's challenges to maritime security.¹ Today's challenges increasingly include more non-traditional and civil maritime/maritime law enforcement threats such as illegal trafficking (in drugs, people and goods), marine environmental protection, maritime and coastal surveillance, fisheries protection and marine navigation safety. These challenges, and the new post-Cold War global security environment, not to mention the heightened threats of maritime piracy and maritime terrorism, add new dimensions to the more traditional military maritime defence missions. Restructuring and modernisation of maritime forces to deal with today's challenges is no simple matter for any country, and even more difficult for many developing countries that, like Albania, face other pressing demands for limited resources.² Despite this difficulty, after required changes, maritime forces can and should be more effective and better adapted to current missions – but only if the priorities and details of such transformation are correctly planned and implemented.

In Albania, the start point – today's Albanian maritime forces – reflected a unique historical legacy.³ The end goal of transformation for the Albanian Navy was a future Objective Maritime Force, adapted to Albania's new role as it becomes a full North Atlantic Treaty Organisation (NATO) member by the end of this decade. Any country's historical legacy may influence significantly current attempts to transform its maritime forces. Albania was a Warsaw Pact ally of the Soviet Union from 1945 until the early 1960s, and then was the sole European ally of Maoist China through the mid 1970s, followed by a break with China and total isolation until 1991. These unique Albanian sets of relationships resulted in political, economic and military isolation from the rest of Europe and even from neighbouring Adriatic and Balkan countries such as (the former) Yugoslavia, Greece and Italy. The military legacy of Albania, particularly after

the break with China in the mid 1970s, was one of isolationist self-reliance with high military spending centred on the land forces and three-quarter million pillboxes for manning in mass-mobilised 'people's defence'.

A significant maritime legacy of Albania's mixed alliances, still present, is the presence of two 1960-vintage ex-Soviet ocean minesweepers and a large ex-Soviet *Kronstadt* class patrol craft, as well as several ex-Chinese large fast attack boats (*Shanghai-II* class gunboats), and a few remaining (of several dozen originally provided) ex-Chinese *Huchuan* class hydrofoil torpedo boats. These former Soviet and Chinese vessels constituted the larger warships of the Albanian Navy, organised in two navy 'Battle Groups' – one in each of the two major homeport bases of the Albanian Navy in Durres and Vlora. As all these remaining obsolete ex-Soviet and ex-Chinese vessels must be retired by 2009, a particular challenge for the near-term for the Albanian Navy is their replacement by four newer large offshore patrol ships.

Albania's more recent historical legacy centres on the opening and democratisation of the country beginning in 1991. Early 1997 saw a massive popular uprising against the elected government, following the collapse of a financial pyramid scheme in which most Albanians lost most or all of their savings. A United Nations (UN) mandated peacekeeping force, led and mostly manned by Italy, eventually helped restore order. This uprising looted military bases and armouries, destroyed naval facilities, and even sunk several ships at their piers before order was restored. External to Albania, the Balkan region since 1991 has been a very dangerous and unstable regional neighbourhood, with the wars of independence from Yugoslavia and ethnic wars in the former Yugoslavia. Most notable for Albania was the suppression by Serbia, and the resulting uprising of the large Albanian majority population of the Serbian province of Kosovo. This resulted eventually in the NATO-led war on Serbia in 1999 and the UN administration of Kosovo since then. This conflict brought to Albania a battalion-size NATO rear area support headquarters (which remains to this day) and some airfield and road improvements for the NATO staging and transport route through Albania to Kosovo. The massive outpouring across the Adriatic Sea of illegal immigrants from Albania, intensified especially by the internal instability in 1997, as well as the smuggling of illegal drugs and goods, led Italy to assist Albania (continuing to this day) with military experts and the deployment to Albanian ports of Italian Coast Guard and Guardia Finanza patrol boats. In the maritime area, since the early 1990s, the United States (US) and other NATO countries have provided training assistance to rebuild some of the basing infrastructure and to replace vessels destroyed in the 1997 uprising. In 1999 the US provided Albania with three 65-foot patrol boats and two 42-foot patrol boats, and since 2002 Italy has provided six small local patrol boats and six smaller inshore patrol boats. These seventeen newer ex-US and ex-Italian boats, along with the obsolete larger ex-Soviet and ex-Chinese navy boats form today's Albanian maritime forces.

A final historical legacy of more recent vintage and impact for Albania's maritime forces is the listing of 'navy forces' missions in the Albanian Military Strategy Law of 2002 and the listing of 'coastguard' missions in the Albanian Coast Guard Law of 2002. This latter law established an Albanian Coast Guard 'as part of Navy structure ... equipped with vessels that are assigned in the Navy organisational structure'.⁴ The result of these recent two different laws listing missions was a confusing maritime legal and institutional structure, and two long lists of confusing and often overlapping maritime missions.

Implications of Current Status and Historical Background for the Albanian Navy

As a result of Albania's changed geostrategic, regional and domestic context, a complete transformation of the Albanian Navy was required. This transformation would have to begin with a 'Maritime Strategy' to address today's challenges to the navy by clarifying missions and establishing the Concept of Operations to carry out these missions. The goal, as noted earlier, was to rapidly move to meet current maritime responsibilities as a NATO Partnership for Peace (PfP) program member today, and to be ready to assume its maritime duties as a full member of NATO by the end of this decade. 'Force structure' had to be revamped to add some large offshore patrol ships to replace the retiring larger (ex-Soviet and ex-Chinese) navy boats and to supplement the five (ex-US) mid-range patrol boats and the twelve (ex-Italian) shorter range coastal patrol boats. 'Infrastructure' (bases and depots) would have to be consolidated and modernised to support this force. Finally, an 'Organisational Alignment Plan' was needed to ensure that functional areas (such as personnel, training, logistics, and maintenance) were supportive of the restructured maritime forces.

All of these four basic requirements to transform the Albanian Navy had to be developed within tight constraints, both political and financial. Politically, Albania is a fragile new democracy, with pressing economic, social and public order priorities in addition to the need for military transformation. Financially, Albania's current military budget is 1.4 per cent of gross domestic product, totalling US\$110 million a year (of which only about \$7 million is for the navy). In comparison, the US Department of Defense spends an amount equal to the entire annual military budget of Albania about every two hours!

The Albanian Navy Transformation Roadmap

With these observations and constraints in mind, and following visits to all Albanian vessels and facilities, and extensive discussions with Albanian naval and joint leadership, I developed the Albanian Navy Transformation Roadmap document in August 2004. This document was briefed to the Chief and Deputy Chief of Defense,

Navy Chief and Defense Minister of Albania, and approved by all as the guiding basis for subsequent Albanian Navy development.

The Albanian Navy Transformation Roadmap began by establishing three simple priorities - Get Operational (now), Get Re-Equipped (as soon as possible), and Get Re-Organised (as required). This roadmap consists of four key elements:

Albanian Maritime Strategy. This strategy articulates the need for Albanian awareness of its maritime heritage, interest and responsibilities. It establishes seven clear Missions, and then provides a Concept of Operations providing basic guidance on how the navy will operate to carry out these missions. The seven missions are Defense Readiness, Trafficking Interdiction (including Fisheries Law Enforcement tasks), Search and Rescue, Maritime and Coastal Surveillance, Marine Environmental Protection (including oil pollution response), Marine Navigation Safety, and Peacetime Security Cooperation Operations (Joint, Bilateral, Multilateral, and NATO/PfP). The Concept of Operations established a 'One Navy' concept to have the coastguard missions organisationally and operationally embedded in the navy as a military force (with law enforcement authority when carrying out the five of their seven missions that are 'coastguard' in nature). The Concept of Operations then emphasised establishing 'Maritime Space Awareness' through a modernised system of coastal radars and the command and control communications links to display this data. The Concept of Operations centred on establishing a baseline level and pattern of operations at sea, through regular rotational forward deployments of vessels from Albania's two homeport Main Operating Bases to four smaller Forward Operating Bases geographically distributed along Albania's 362 km coastline. This regular rotational forward deployment concept was designed to provide routine Presence Patrols of Albania's maritime space and ensure Rapid Response Boats available on call for trafficking interdiction, search and rescue, and other contingencies. The Concept of Operations also provides a specific planning baseline for annual training exercises for each of the seven major missions. This Maritime Strategy thus provides the framework for all the subsequent three Albanian Navy Transformation elements.

Force Structure Plan. This plan provided an initial outline plan specifying Current, Transition/Mid-Term, and Objective/Long Term (2010 Plus) vessels and systems needed to execute the Maritime Strategy missions. The plan emphasised the near-term need for four large offshore patrol ships (45 to 60 metres) to replace retiring larger ex-Soviet and ex-Chinese ships, and to provide more sustained capability further offshore. The plan also noted the possible need to obtain these ships as used or donated vessels (in light of fiscal constraints), and provided an initial assessment of how this force structure could meet critical response needs under the Maritime Strategy.

Infrastructure Plan. The Infrastructure Plan outline was designed to support the Maritime Strategy Concept of Operations and Force Structure Plan. It emphasised the need to consolidate and refurbish the two homeport main operating bases and the

four forward operating bases, to dispose of excess land and facilities, and especially to dispose of as soon as possible dangerous excess ammunition (torpedoes and sea mines).

Organisational Alignment Plan. This outline plan highlighted specific functional areas (personnel, training, logistics and maintenance), which must be brought into line with the new Maritime Strategy, Force Structure and Infrastructure Plans.

Major Issues

During the preparation, approval and subsequent initial implementation of the Albanian Navy Transformation Roadmap, a number of major issues emerged. Similar issues may often face maritime forces of certain countries of the Asia-Pacific region as they seek to transform to meet today's maritime challenges. These issues are listed and briefly discussed below:

Navy/Coastguard Organisational Structure and Operational Integration. Each country's laws will guide the specific characteristics and integration (or division of labour) of maritime forces in their civil maritime/law enforcement 'coastguard' type missions. Some Asia-Pacific countries may find, as did Albania, that a somewhat confusing overlap of legal framework and missions for navy and coastguard forces requires clarification in their strategy (and eventually, to the degree possible, in law.) In any case, even where separation of services and missions between navies and coastguards is clear, the parameters of their operational coordination and cooperation will need to be defined.

Jointness and Interagency Cooperation. In Albania, as in many Asia-Pacific countries, the navy depends on the air force for maritime surveillance aircraft and helicopters for search and rescue, etc., so jointness must be 'born in' any Maritime Strategy and its Concept of Operations. Also, other government agencies and organisations – in Albania, notably the Border Police surveillance and maritime elements, Customs maritime elements and the Transport Ministry (responsible for ports) – must be the focus of cooperation with navy forces.

International Cooperation. In the relatively small area of the Adriatic and Ionian Seas where Albania is situated, such cooperation must be bilateral and regional (with neighbours in Montenegro/Serbia, Greece, Italy, Croatia and Slovenia), and multilateral (among all the neighbouring countries and other Mediterranean maritime nations), as well as in the NATO Alliance context – where Albania is already a Partnership for Peace partner and moving toward full NATO membership by the end of this decade.

Port Security. Port Security in Albania, since a change of law in the 1990s, is no longer a responsibility of the navy, but rather of the Transport Ministry (Port Captains), the Ministry of Public Order (Border Police) and the Finance Ministry (Customs). This has

posed problems of interagency coordination, essential to ensure Albanian port security meets the International Ship and Port Facility Security Code (ISPS) requirements.

Excess Infrastructure. Many Asia-Pacific countries share Albania's problem of excess maritime bases and facilities unsuited to current and future requirements. These are a drain on limited resources and need to be consolidated or disposed of as soon as possible.

Dangerous Ammunition. Excess ammunition in old storage areas poses both safety and security (theft) threats, and should be consolidated or disposed of on an urgent basis.

Personnel. The need for reform of low pay, providing better living conditions, improving weak and undermanned non-commissioned officer corps, and the need for modern professional career paths and training are problems in Albania that are familiar to many Asia-Pacific maritime forces.

Poor Logistics/Spare Parts Support. In Albania, as in various Asia-Pacific countries with varied maritime historical legacies, the need to support vessels of various ages and national origins is a continuing logistics and maintenance problem.

Legal/Legislative Basis for Maritime Security. This problem, seen in the case of confusing navy/coastguard laws, also is reflected in delays or failure to ratify or implement regional and global International Maritime Organization agreements. This has also been a problem, particularly in developing nations, in the Asia-Pacific region.

Financial Support and Budget Limits. In Albania, as in many Asia-Pacific nations, financial support available to military forces overall, and specific limits on budgets of maritime forces, result in resources that are frankly inadequate to address required tasks.

Observations on Lessons Learned

With these major issues in mind, and in light of the specific circumstances and implications for Australia's experience and contributions to regional maritime security, a number of personal observations result from my experience as Senior Naval Advisor in Albania, striving to help develop maritime forces capable of meeting current and future challenges. These lessons learned may have considerable applicability to various countries of the Asia-Pacific region, many of which also are developing countries, often with a much greater geographic area of maritime responsibilities.

Impact of Historical Legacy. Every country has a unique historical legacy that has resulted in its current 'legacy' maritime forces, and which impacts on policy, finance/budgets and strategic culture.

The Overwhelming Nature of Multiple Challenges. There is a need to first establish clear priorities and a plan for transformative change, and then adhere strongly to these priorities. Otherwise, the sheer number of such challenges will overwhelm attempts to start or continue change.

Get Operational. This is the priority need for maritime forces. Vessels, aircraft, personnel and any supporting infrastructure that are not contributing to at-sea operations and readiness should be examined closely for their rationale, especially in light of limited resources.

Need for Realistic Force Structure Programs. The maritime force structure must be realistically affordable in both cost to acquire and cost to crew and operate. Developing nations may have to lower their expectations and accept donated or used vessels. But planners must take care to ensure they obtain the right size and capabilities in these used or donated vessels, and be aware of maintenance and training costs, which are not free.

Need to Address Dangerous Problems of Excess Ammunition and Storage.

Need for Change in the Organisational Culture Regarding Personnel. Modern professional career officer and non-commissioned officer corps are essential to modern maritime operations.

Financial/Budget Limits. Undoubtedly, maritime leaders since the times of the triremes have complained that resources and budgets for maritime forces are inadequate. This is a problem that is not likely to be easily remedied, particularly in developing nations with other urgent needs in society and a low level of public maritime awareness. But if there is a coherent plan and roadmap for restructuring and modernising maritime forces, at least the costs and lost capabilities of not funding maritime force elements can be clearly explained to political leaders.

Humility. A final personal observation from working to build maritime capabilities in a developing country is a sense of humility, as one observes the hard work of maritime professionals who persist each day in giving their best efforts despite limited budgets and equipment. It is all too easy for more developed countries to criticise the inadequacies in maritime enforcement, port security, legal frameworks, or other maritime capabilities. But when one is forced to work with very limited resources, the perspective on priorities is quite different – and the need for concrete assistance to help the less developed nations build their maritime capacities and capabilities is quite clear.

Implications for Australia and the Royal Australian Navy

The Royal Australian Navy (RAN) has considerable history and experience of making its own real contributions to maritime capacity building in neighbouring

nations of South East Asia and especially the South Pacific island states. Australia has, through assistance and exercises – both bilaterally, with Indonesia, and in the multilateral context of the Five Power Defence Arrangements (FPDA), with Malaysia and Singapore – aided these regional maritime forces in building their capacity for maritime awareness and patrol operations.

Especially notable is the RAN's longstanding contribution to maritime capacity building among the South Pacific island states. Starting in 1985, the Pacific Patrol Boat program has provided 22 patrol boats (of 31.5 metres each) to 12 recipient states, and recently began a life extension program for these boats. Australia provided not only the patrol boats, but also for each country a Maritime Surveillance Advisor, two technical advisors, through-life logistics and technical support, and in some cases funding for operations and for shore base facilities.⁵ In many ways, Australia's Pacific Patrol Boat program is a model of regional maritime capacity building.⁶

Lecture delivered at the Australian Defence College on 27 November 2006.

Notes

- ¹ The term 'maritime forces' is used deliberately to include not only navy forces performing more traditional military maritime defence missions, but also national coastguard type forces addressing civil maritime and maritime law enforcement missions.
- ² Restructuring and modernisation of maritime forces has been a complex process, with heavy impact, even for the US Navy. Since the end of the Cold War, US Navy force levels have been reduced by over 225,000 naval personnel, 121 surface combat ships and submarines, three aircraft carriers, and dozens of naval bases and facilities.
- ³ For a brief historical summary, see US Department of State, 'Background Note: Albania, Bureau of European and Eurasian Affairs', October 2006, <www.state.gov/r/pa/ei/bgn/3235.htm>
- ⁴ The Military Strategy of the Republic of Albania, July 2002; an updated version (May 2005) can be found at <www.merln.ndu.edu/whitepapers/Albania_English-2005.pdf>. Republic of Albania Assembly, Law Nr 8875, dated 4.4.2002, Establishment of Coast Guard, <www.faolex.fao.org/docs/pdf/alb60863E.pdf>
- ⁵ 'The Pacific Patrol Boat Project', *Semaphore*, No. 2, Sea Power Centre – Australia, Canberra, February 2005.
- ⁶ Dr S. Bateman, 'Developing a Pacific Island Ocean Guard: the need, the possibility and the concept' in Ivan Malloy (ed), *The Eye of the Cyclone: Issues in Pacific Security*, PIPSA and the University of the Sunshine Coast Press, Sippy Downs, 2004, pp. 208-224. Dr Bateman goes on to identify how the Pacific Patrol Boat program – enhanced by aerial surveillance and a few longer-range patrol ships – could provide a true 'Pacific Island Ocean Guard'.

RADFORD/COLLINS AGREEMENT

Vertical line extending downwards from the horizontal line.

RADFORD/COLLINS AGREEMENT

(REVISED 1957)
(Reprinted with minor amendments 1959)

PREAMBLE

In order to provide for the coordination of certain operational matters in the Pacific and Eastern Indian Oceans, it is agreed by the Commander in Chief US Pacific Fleet and the Chief of the Naval Staff Australia on behalf of the ANZAM countries (Australia, New Zealand and the United Kingdom) that, should they find themselves operating together against a common enemy, operations will be conducted in accordance with the provisions enumerated in the following articles.

ARTICLE I

The area to which this agreement is applicable is illustrated in Appendix 1.

It is the sea area of the Pacific Ocean and the Indian Ocean bounded on the west by a line along 78 degrees east from the south coast of India to the South Pole.

ARTICLE II

DIVISION OF THE AREA

The area covered by the Agreement is divided into areas of United States and ANZAM responsibility by a line joining the following points:

- a. 11° 00' N 102° 55' E. Approx. (Thailand-Cambodia border)
- b. 10° 00' N 102° 45' E
- c. 8° 00' N 103° 30' E
- d. 8° 00' N 119° 00' E
- e. 3° 30' N 120° 00' E
- f. 3° 30' N 177° 00' W
- g. 30° 00' S 177° 00' W
- h. 40° 00' S 170° 00' W
- i. The South Pole

The US line will be responsible for the functions enumerated in Article IV in the area North and East of this line, and ANZAM in the area South and West of it.

This dividing line is illustrated in Appendix I.

However, in respect of British territory in the Central Pacific outside the ANZAM area, the US accepts responsibility for the security against seaborne threat to these territories, but in all other respects the responsibilities of the Commonwealth Governments are not in any way altered or limited.

ARTICLE III

SUB-DIVISION OF THE US AND ANZAM AREAS OF RESPONSIBILITY

US Area

The US Area is subdivided into six operational control authority areas (OCA) as follows:

- a. COMWESTSEAFRON
- b. COMALSEAFRON
- c. COMHAWEAFRON
- d. COMNAVFORJAPAN
- e. COMNAVPHIL
- f. COMNAVMARIANAS

ANZAM Area

The ANZAM area is subdivided into five OCA areas as follows:

- a. New Zealand Area
- b. West Australia Area
- c. North Australia Area
- d. East Australia Area
- e. Malayan Area

These areas are illustrated in and coordinates shown in Appendix I.

National commanders will keep each other informed of any changes that may be made to the above sub-divisions within these areas of responsibility.

ARTICLE IV

NATURE OF US AND ANZAM RESPONSIBILITIES IN THEIR RESPECTIVE AREAS

The functions for which the dividing line between the US and ANZAM areas is established are as follows:

- a. Organization, routing, diversion and protection of convoys, and independent shipping
- b. Reconnaissance
- c. Salvage of shipping and escorts
- d. Search and rescue.

In item a. above 'protection' includes defence against enemy air, surface, submarine and mining threats to shipping.

ARTICLE V

LIAISON BETWEEN THE RESPECTIVE NAVAL COMMANDERS

In Peacetime

In peacetime negotiations in connection with this agreement will be conducted between CINCPACFLT on the one hand and CNS Australia, acting as coordinator for the other ANZAM countries on the other.

In Wartime

In wartime, in order to facilitate coordination between CINCPACFLT and ANZAM Headquarters, Liaison Officers of Commander's rank will be exchanged.

At the OCA level, a US officer of Commander's or Lieutenant Commander's rank will be sent to Maritime Headquarters, Wellington for liaison duties and at Sydney and Singapore the US Naval Control of Shipping Liaison Officers may act in this capacity.

ARTICLE VI

COMMUNICATIONS

Communications will be in accordance with the provisions of the South East Asian Allied Maritime Communications Plan (SEACOMPLAN) including the United States-Commonwealth Addendum thereto and applicable Allied communications publications prescribed therein.

ARTICLE VII

COORDINATION BETWEEN US AND ANZAM COMMANDS

Shipping Routes

The shipping routes in the two areas referred to in Article 2 will be coordinated so that they interlock and will be exchanged between CINCPACFLT Headquarters and ANZAM Headquarters to make through routeing possible.

Arrival Points

CINCPACFLT Headquarters and ANZAM Headquarters will exchange arrival points data for the major ports in their areas and keep each other informed of changes that are made.

Location and Manning of NCS Offices

The participating parties will be responsible for planning for the provision of naval control of shipping offices and personnel at ports situated within their own territory.

At ports within the area to which the agreement is applicable but not situated in the territory of any of the participating parties the country within whose area of responsibility a port is situated will be responsible for planning for appropriate representation of the naval control of shipping organization.

Details of these arrangements will be exchanged between US and ANZAM authorities.

When these details have been exchanged the participating parties will make proposals for the appointment of such naval control of shipping liaison officers, as they may consider necessary.

Enemy Position Reports

ANZAM Headquarters will pass to CINCPACFLT Headquarters appropriate enemy information that it receives.

This information will be evaluated by CINCPACFLT together with that received from other sources. CINCPACFLT will promulgate appropriate daily enemy position reports to all OCAs.

STIPPLE Messages

Stipple messages, when appropriate, will be exchanged for information between CINCPACFLT Headquarters and ANZAM Headquarters.

A Stipple message is defined as 'A message promulgated daily by an Area Commander to his OCAs stipulating the order of priority in which available air escort is to be provided to units at sea'.

The message will normally be in two parts:

ALFA: Units for which escort is required during the next 24 hours in order of priority

BRAVO: Probable future requirements.

Degree of Control

Where US and ANZAM areas adjoin, CINCPACFLT and ANZAM Headquarters will consult together before establishing the degree of control to be exercised in these areas.

It is provisionally agreed that, initially, in the area north and west of a line Sunda Strait, Timor, Wake, Prince Rupert, every effort will be made to fulfill the requirements of degree of control ALFA as defined in ATP-2.

ARTICLE VIII

COORDINATION BETWEEN OCAs

All OCAs, both ANZAM and US may deal directly with each other on matters pertaining to the functions for which this agreement has been established (see Article IV above). When doing so, they should keep their superior commanders informed.

Mutual Support

Adjacent OCAs may provide assistance, one to another, if asked to do so, to the extent that circumstances permit. Requests for such assistance should be addressed, for information, where appropriate, to CINCPACFLT and ANZAM Headquarters.

Such requests will only be made to meet a special emergency, and as a temporary expedient.

Through Escorts

The decision to provide a through escort will rest with the OCA originating a convoy or his superior commander. When a through escort is provided it should be 'chopped' to succeeding OCAs en route but should not be employed by them for any other purpose, except in grave emergency. Arrangements for the return of a through escort will be a matter for agreement between the OCA originating the convoy and the OCA at the destination.

Convoy Commodores

It will be the responsibility of the OCA originating a convoy to provide or designate the Convoy Commodore, Vice-Commodore and Rear-Commodore, and to provide them with staffs.

The employment of Commodores and their staffs at the end of voyages which terminate in ports outside their own national OCA areas shall be by agreement between the OCA at the port of arrival and the OCA of the area in which the Commodore originally embarked.

Whenever possible, Commodores and their staffs should be embarked for duty in returning convoys.

Tactical Doctrine

The conduct of tactical operations will be in accordance with ATP-1.

Shipping Control

The conduct of naval control of shipping operations will be in accordance with ATP-2.

Zig-Zagging

When all units in a force are authorized to hold ARP-3, or extracts therefrom, zig-zag plans from that publication will be employed.

In mercantile convoys zig-zagging will be initiated in accordance with ACP-148.

When ships included in a mercantile convoy are not authorised to carry ATP-3, or extracts therefrom, the NCSO will provide zig-zag plans in the sailing order folder.

Navigational Warnings

The promulgation of navigational warnings will be in accordance with AHP-1.

Search and Rescue

The conduct of SAR operations will be in accordance with national doctrine within the respective areas of responsibility. SAR publications will be exchanged.

Daily Estimated Position Summaries

Each OCA will promulgate a DEPSUM.

A DEPSUM is defined as ‘A daily report in the form of a message made by an OCA listing the forecast 0001Z position of all allied and neutral merchant shipping, and combatant units, including submarines, at sea in his own area, together with courses, speeds and expected alterations thereto during the next 24 hours.’ The purpose of the DEPSUM is to keep all shore authorities who need to know and all naval ships at sea, informed of the disposition of friendly shipping at sea.

These summaries will be addressed, when appropriate, to adjacent OCAs and CINCPACFLT and ANZAM Headquarters for information.

It is recognized that there may be occasions when knowledge of movements of certain combatant units should be limited and that in such circumstances reports of such units may be omitted from the DEPSUM. In such cases OCAs should, if practicable, be kept informed of movements of all ships in their own area.

ARTICLE IX

INCLUSION OF ALLIED AND NEUTRAL SHIPPING IN CONVOY

The shipping of allied powers may be included in convoy, provided authority exists for their ships to carry ACP-148 and ACP-149.

Shipping of those allies for whom such authority does not exist and shipping of friendly nations may be routed and diverted by the NCS Organization upon application.

ARTICLE X

AUTHORIZATION TO EXERCISE CONTROL OF SHIPPING

OCAs may exercise control of the merchant shipping of other participating parties when their own governments and the government of the country to which the ship belongs have assumed control of shipping.

ARTICLE XI

PEACETIME EXERCISES

Exercises may be conducted in furtherance of the functions for which this agreement is established when mutually convenient to the participating parties. Proposals for such exercises should be made direct from one national commander to another.

ARTICLE XII

TRAINING FACILITIES

The training facilities of any one of the participating parties may be made available to another on application, subject to the limitations of national requirements.

Requests for the use of such facilities should be made direct from one national commander to another.

ARTICLE XIII

STORAGE OF SPARE PARTS AND AMMUNITION

Arrangements may be made for the storage of spare parts, ammunition and other items for US Forces at Manus, Sydney and Singapore, and for ANZAM Forces at Subic Bay and Guam.

ARTICLE XIV

EMERGENCY CONDITIONS SHORT OF WAR

When emergency conditions short of war indicate the possible need for early control of shipping, the participating parties will consult together concerning the timely implementation of the relevant provisions of this agreement.

ARTICLE XV

REVISION OF THE AGREEMENT

CNS Australia is the custodian of this agreement. Recommendations for revisions of the agreement are to be addressed to him.

In the normal course of events CNS Australia will coordinate these recommendations annually, circulate them by correspondence or call a meeting as seems appropriate and, in due course, issue an agreed amendment, when approved by the appropriate authorities.

Action on amendments of an urgent nature will be taken without delay.

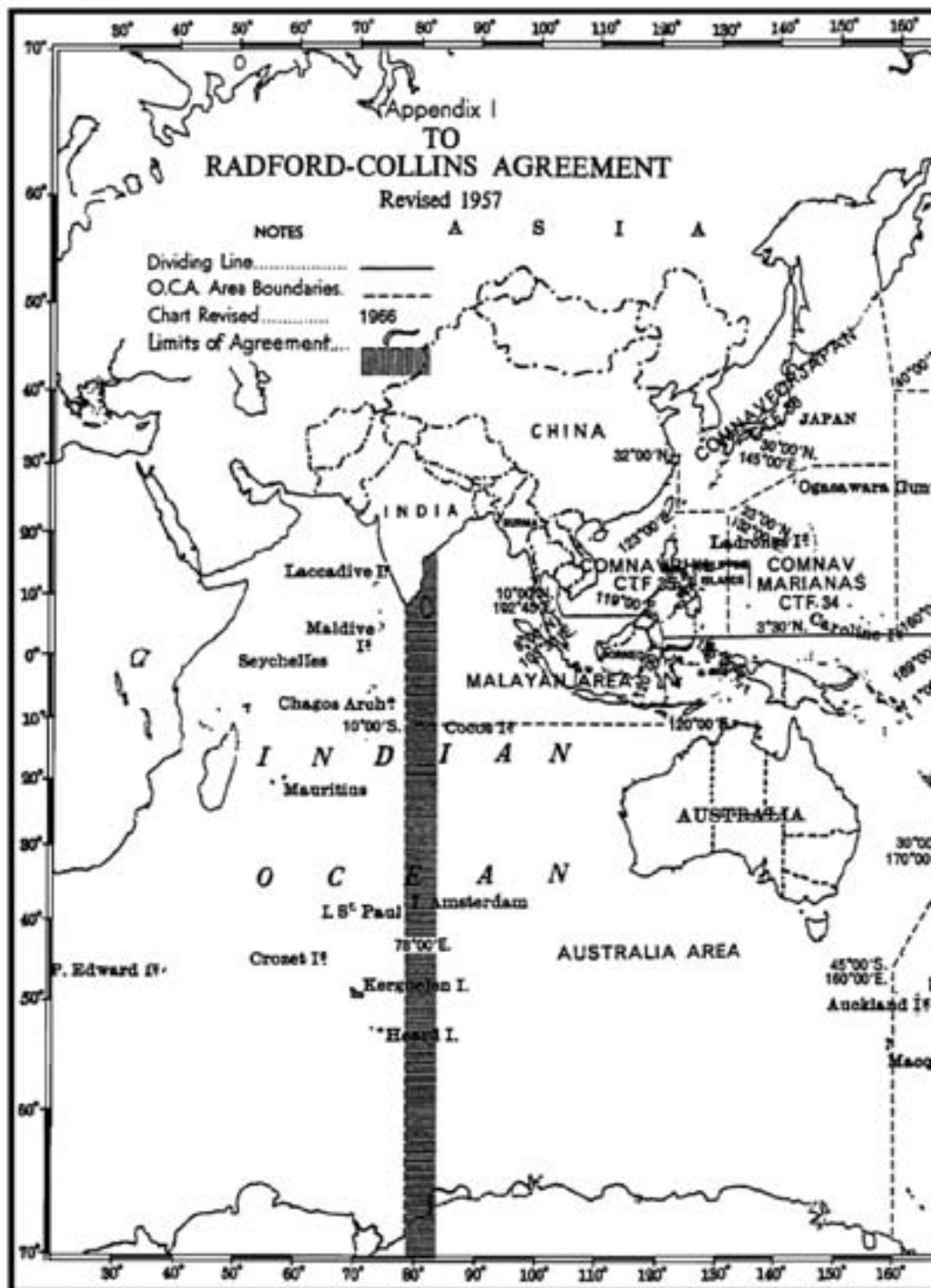
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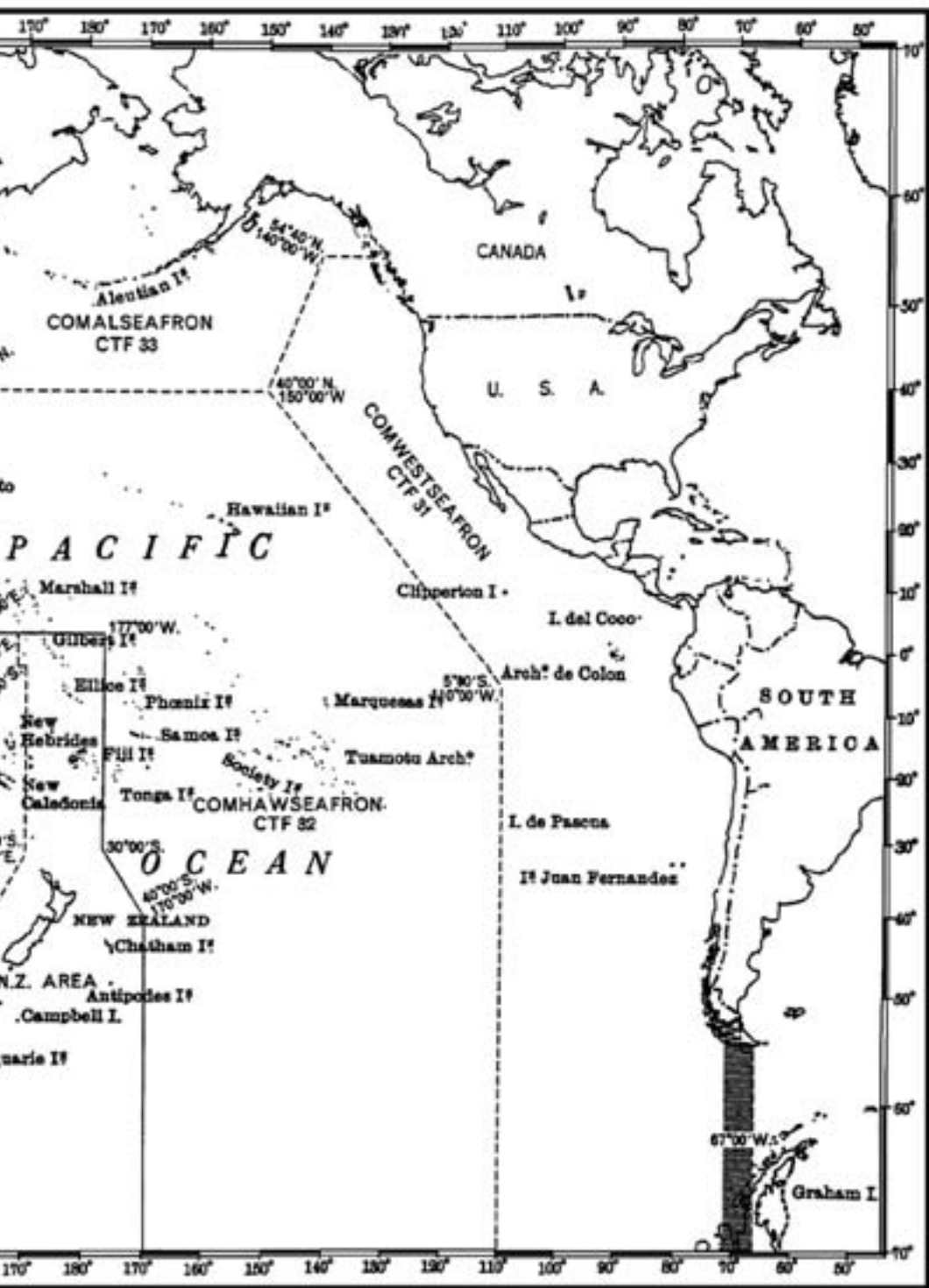
This reprinting of the Radford-Collins Agreement, incorporating minor amendments, is effective on receipt. The copies of the Radford-Collins Agreement (revised 1957) dated 12th January, 1957, will then be considered superseded.

Appendix I
TO
RADFORD-COLLINS AGREEMENT
Revised 1957

NOTES A S I A

- Dividing Line.....
O.C.A. Area Boundaries.....
Chart Revised..... 1956
Limits of Agreement.....





RADFORD/COLLINS AGREEMENT

(REVISED 1957)
(Reprinted with minor amendments 1967)

LETTER OF PROMULGATION

1. The Radford/Collins Agreement revised 1957, having been approved by the participating parties, is hereby promulgated by the Chief of Naval Staff, Australia, who is the custodian of the Agreement.
2. This document provides for implementation of Allied Naval Control and Protection of shipping in the Pacific and Eastern Indian Ocean areas.
3. The agreement which divides, geographically, the responsibility for certain operational matters between two commands, has evolved from the report of a conference between representatives of the ANZAM countries and the United States, held at Pearl Harbour 26th February-2nd March, 1951. The signatories to the original document were Admiral A.W. RADFORD US Navy, Commander in Chief Pacific, and Vice-Admiral Sir John COLLINS, Chief of Naval Staff, Australia, representing the United States and the ANZAM countries respectively.
4. Revised in 1957, the agreement in its present form covers the desirable features of the supplements to the original report and the Sangley Point Agreement (1952).
5. In May 1966, an offer to extend to SEATO the Naval Control of Shipping (NCS) arrangement, implicit in the agreement, was made by participating parties. The offer was later accepted by certain other SEATO countries. Selected articles of the Radford/Collins Agreement constitute the tentative planning document to be used as a point of departure for NCS as it pertains to SEATO.
6. Appendix 2 to this document provides for planning the administrative arrangements and shore-based facilities for NATO and friendly merchant shipping within the ANZAM area.

(A.W.R. McNICOLL)
Vice-Admiral,
Chief of Naval Staff,
Australia

6 December 1967

PREAMBLE

In order to provide for the coordination of certain operational matters in the Pacific and Eastern Indian Oceans, it is agreed by the Commander in Chief US Pacific Fleet and the Chief of Naval Staff Australia on behalf of the ANZAM countries (Australia, New Zealand United Kingdom) that, should they find themselves operating together against a common enemy, operations will be conducted in accordance with the provisions enumerated in the following articles.

ARTICLE I

The area to which this agreement is applicable is illustrated in Appendix I.

It is the sea area of the Pacific Ocean bounded on the east by a line along 67 degrees West longitude from the south coast of South America to the South Pole, and the Indian Ocean bounded on the west by a line along 78 degrees East longitude from the south coast of India to the South Pole.

ARTICLE II

DIVISION OF THE AREA

The area covered by the Agreement is divided into areas of United States and ANZAM responsibility by a line joining the following points:

- a. 11° 38'N 102° 55'E Approximately (Thailand-Cambodia border)
- b. 10° 00'N 102° 45'E
- c. 8° 00'N 103° 30'E
- d. 8° 00'N 119° 00'E
- e. 3° 30'N 120° 00'E
- f. 3° 30'N 177° 00'W
- g. 30° 00'S 177° 00'W
- h. 40° 00'S 170° 00'W
- i. The South Pole.

The US will be responsible for the functions enumerated in Article IV in the area North and East of this line, and ANZAM in the area South and West of it.

This dividing line is illustrated in Appendix I.

However, in respect of British territory in the Central Pacific outside the ANZAM area, the US accepts responsibility for the security against seaborne threat to these territories, but in all other respects the responsibilities of the Commonwealth Governments are not in any way altered or limited.

ARTICLE III

SUB-DIVISION OF THE US AND ANZAM AREAS OF RESPONSIBILITY

US Area

The US area is divided into six sub-areas which are depicted in Appendix I. The Operational Control Authority (OCA) for the respective areas are:

- | | | |
|---------------------------------------|----------------|-------|
| a. Commander Western Sea Frontier | COMWESTSEAFRON | CTF31 |
| b. Commander Hawaiian Sea Frontier | COMHAWSEAFRON | CTF32 |
| c. Commander Alaskan Sea Frontier | COMALSEAFRON | CTF33 |
| d. Commander Naval Forces Marianas | COMNAVMARIANAS | CTF34 |
| e. Commander Naval Forces Philippines | COMNAVPHIL | CTF35 |
| f. Commander Naval Forces Japan | COMNAVFORJAPAN | CTF36 |

The Commander Anti-submarine Warfare Force, Pacific (COMASWFORPAC) serves as the principal advisor to CINCPACFLT in all matters pertaining to anti-submarine warfare and Control and Protection of shipping. COMASWFORPAC (CTF30) coordinates overall US Pacific Fleet ASW and Control and Protection of shipping operations, and directs the operations of the US Pacific Fleet OCA's, who are elements of the ASWFORPAC Organisation.

ANZAM Area

The ANZAM Area is divided into three OCA Areas as follows:

- a. New Zealand Area (NAVCOMNZ)
- b. Australia Area (CNS Australia)
- c. Malayan Area (COMFEF)

These areas are illustrated in and coordinates shown in Appendix I.

National commanders will keep each other informed of any changes that may be made to the above sub-divisions within these areas of responsibility.

ARTICLE IV

NATURE OF US AND ANZAM RESPONSIBILITIES IN THEIR RESPECTIVE AREAS

The functions for which the dividing line between the US and ANZAM areas is established are as follows:

- a. Organisation, routeing, diversion and protection of convoys and independent shipping.

- b. Reconnaissance.
- c. Salvage of shipping and escorts.
- d. Search and rescue.

In item a. above “protection” includes defence against enemy air, surface, submarine and mining threats to shipping.

ARTICLE V

LIAISON BETWEEN THE RESPECTIVE NAVAL COMMANDERS

In Peacetime

In peacetime negotiations in connection with this agreement will be conducted between CINCPACFLT on the one hand and CNS Australia, acting as coordinator for the other ANZAM countries on the other.

In Wartime

In wartime, in order to facilitate coordination between CINCPACFLT and ANZAM Headquarters, Liaison Officers of Commander’s rank will be exchanged.

At the OCA level a US officer of Commander’s or Lieutenant-Commander’s rank will be sent to Maritime Headquarters, Wellington for liaison duties and at Sydney and Singapore the US Naval Control of Shipping Liaison Officers may act in this capacity.

ARTICLE VI

COMMUNICATIONS

Communications will be in accordance with the SEATO Supplement to ACP 176 Series and the applicable Allied Communications publications prescribed therein.

ARTICLE VII

COORDINATION BETWEEN US AND ANZAM COMMANDS

Shipping Routes

The shipping routes in the two areas referred to in Article 2 will be coordinated so that they interlock and will be exchanged between CINCPACFLT Headquarters and ANZAM Headquarters to make through routeing possible.

Arrival Points

CINCPACFLT Headquarters and ANZAM Headquarters will exchange arrival points data for the major ports in their areas and keep each other informed of changes that are made.

Location and Manning of NCS Offices

The participating parties will be responsible for planning for the provision of naval control of shipping offices and personnel at ports situated within their own territory.

At ports within the area to which the agreement is applicable but not situated in the territory of any of the participating parties the country within whose area of responsibility a port is situated will be responsible for planning for appropriate representation of the naval control of shipping organisation.

Details of these arrangements will be exchanged between US and ANZAM authorities.

When these details have been exchanged the participating parties will make proposals for the appointment of such naval control of shipping liaison officers, as they may consider are necessary.

Enemy Position Reports

ANZAM Headquarters will pass to CINCPACFLT Headquarters appropriate enemy information that it receives.

This information will be evaluated by CINCPACFLT together with that received from other sources. CINCPACFLT will promulgate appropriate daily enemy position reports to all OCA's.

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Stipple messages, when appropriate, will be exchanged for information between CINCPACFLT Headquarters and ANZAM Headquarters.

A Stipple message is defined as 'A message promulgated daily by an Area Commander to his OCAs stipulating the order of priority in which available air escort is to be provided to units at sea'.

The message will normally be in two parts:

- ALFA: Units for which escort is required during the next 24 hours in order of priority
- BRAVO: Probable future requirements.

Degree of Control

Where US and ANZAM areas adjoin, CINCPACFLT and ANZAM Headquarters will consult together before establishing the degree of control to be exercised in these areas.

It is provisionally agreed that, initially, in the area north and west of a line Sunda Strait, Timor, Wake, Prince Rupert, every effort will be made to fulfil the requirements of degree of control ALFA as defined in ATP-2 Series.

ARTICLE VIII

COORDINATION BETWEEN OCAS

All OCAs, both ANZAM and US may deal directly with each other on matters pertaining to the functions for which this agreement has been established (see Article IV above). When doing so, they should keep their superior commanders informed.

Mutual Support

Adjacent OCAs may provide assistance, one to another, if asked to do so, to the extent that circumstances permit. Requests for such assistance should be addressed, for information, where appropriate, to CINCPACFLT and ANZAM Headquarters.

Such requests will only be made to meet a special emergency, and as a temporary expedient.

Through Escorts

The decision to provide a through escort will rest with the OCA originating a convoy or his superior commander. When a through escort is provided it should be "chopped" to succeeding OCAs en route but should not be employed by them for any other purpose, except in grave emergency. Arrangements for the return of a through escort will be a matter for agreement between the OCA originating the convoy and the OCA at the destination.

Convoy Commodores

It will be the responsibility of the OCA originating a convoy to provide or designate the Convoy Commodore, Vice-Commodore and Rear-Commodore, and to provide them with staffs.

The employment of Commodores and their staffs at the end of voyages which terminate in ports outside their own national OCA areas shall be by agreement between the OCA at the port of arrival and the OCA of the area in which the Commodore originally embarked.

Whenever possible, Commodores and their staffs should be embarked for duty in returning convoys.

Tactical Doctrine

The conduct of tactical operations will be in accordance with ATP-1 Series.

Shipping Control

The conduct of naval control of shipping operations will be in accordance with ATP-2 Series.

Zig-Zagging

When all units in a force are authorised to hold A.T.P.–3 Series or extracts therefrom, zig-zag plans from that publication will be employed.

In mercantile convoys zig-zagging will be initiated in accordance with ACP–148 Series.

When ships included in a mercantile convoy are not authorised to carry ATP–3 Series or extracts therefrom, the NCSO will provide zig-zag plans in the sailing order folder.

Navigational Warnings

The promulgation of navigational warnings will be in accordance with AHP–1 Series.

Search and Rescue

The conduct of SAR operations will be in accordance with national doctrine within the respective areas of responsibility. SAR publications will be exchanged.

ARTICLE IX

INCLUSION OF ALLIED AND NEUTRAL SHIPPING IN CONVOY

The shipping of allied powers may be included in convoy, provided authority exists for their ships to carry ACP–148 Series and ACP–149 Series.

Shipping of those allies for whom such authority does not exist and shipping of friendly nations may be routed and diverted by the NCS Organisation upon application.

ARTICLE X

AUTHORISATION TO EXERCISE CONTROL OF SHIPPING

OCAs may exercise control of the merchant shipping of other participating parties when their own governments and the government of the country to which the ship belongs have assumed control of shipping.

ARTICLE XI

PEACETIME EXERCISES

Exercises may be conducted in furtherance of the functions for which this agreement is established when mutually convenient to the participating parties. Proposals for such exercises should be made direct from one national commander to another.

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The training facilities of any one of the participating parties may be made available to another on application, subject to the limitations of national requirements.

Requests for the use of such facilities should be made direct from one national commander to another.

ARTICLE XIII

STORAGE OF SPARE PARTS AND AMMUNITION

Arrangements may be made for the storage of spare parts, ammunition and other items for US Forces at Manus, Sydney and Singapore, and for ANZAM Forces at Subic Bay and Guam.

ARTICLE XIV

EMERGENCY CONDITIONS SHORT OF WAR

When emergency conditions short of war indicate the possible need for early control of shipping, the participating parties will consult together concerning the timely implementation of the relevant provisions of this agreement.

ARTICLE XV

REVISION OF THE AGREEMENT

CNS Australia is the custodian of this agreement. Recommendations for revisions of the agreement are to be addressed to him.

In the normal course of events CNS Australia will coordinate these recommendations annually, circulate them by correspondence or call a meeting as seems appropriate and, in due course, issue an agreed amendment, when approved by the appropriate authorities.

Action on amendments of an urgent nature will be taken without delay.

EFFECTIVE DATE

This reprinting of the Radford/Collins Agreement, incorporating minor amendments is effective on receipt. The copies of the Radford/Collins Agreement (Revised 1957) reprinted with minor amendments, 1959 will then be considered superseded.



Appendix 2 TO RADFORD/COLLINS AGREEMENT Revised 1957

MEMORANDUM OF AGREEMENT

between

Commander in Chief US Pacific Fleet

and

Chief of Naval Staff, Australia

on

Planning Responsibilities for Naval Control of NATO and
Friendly Merchant Shipping within the ANZAM Area

1. In order to provide in peacetime for a world-wide organisation which can control the movements of NATO and friendly merchant shipping during wartime, the NATO member nations concerned have agreed to assign the responsibilities for planning the administrative arrangements and shore-based facilities of such organisation, within specific geographic areas, to respective NATO member nations.

2. By authoritative NATO documents, the United States has been designated to act as the NATO nation regional planning coordinator for NATO Naval Control of Shipping matters in the Pacific Ocean, the Australia-New Zealand waters, and the Eastern Indian Ocean. This area coincides with the geographic area covered by the Radford/Collins Agreement. Article III of the Radford/Collins Agreement subdivides these geographic areas and assigns responsibility for the Eastern Indian Ocean and the Australia-New Zealand waters to the ANZAM nations (Australia, New Zealand, and the United Kingdom). The preamble to the Radford/Collins Agreement designates the Chief of Naval Staff Australia as acting on behalf of the ANZAM nations under the authority of the Agreement.

3. The Planning Coordinator responsibilities are limited by NATO agreement to administrative arrangements. These include provisions for shore-based facilities and matters relating to the control of movement of shipping, i.e., convoy organisation, reporting, routing, sailing and diversion. They do not involve assignment of protective forces or command relations. Provisions for the exercise of administrative functions of similar nature are included in the Radford/Collins Agreement and the CNS Australia is coordinator for these functions in the ANZAM geographic area.

4. It is mutually agreed by CINCPACFLT and CNS Australia that the CINCPACFLT responsibilities for planning the administrative arrangements and shore-based facilities for NATO and friendly merchant shipping within the ANZAM area will be exercised through CNS Australia, under the same procedures provided for in the Radford/Collins Agreement.
5. In order to provide standardisation, common Allied procedures which have been adopted within NATO for Naval Control of Shipping will be utilised.
6. NATO members shall be advised by the United States of the provisions of this Memorandum of Agreement.
7. A copy of this Memorandum of Agreement shall be appended to the Radford/Collins Agreement.

SEMAPHORE

JUNE 2005 –
DECEMBER 2006



The Chemical, Biological, Radiological and Nuclear Threat

Dr Nial Wheate

The terrorist attacks of 11 September 2001 and the subsequent United States (US) anthrax letter attacks in October 2001 have resulted in a heightened awareness of the vulnerability of civilian communities to such attacks. This has had a flow-on effect to military forces, which now operate at increased alert levels. The anthrax letter attacks also served to increase the perceived risk of chemical, biological, radiological and nuclear (CBRN)¹ weapons use, by both state and non-state aggressors.

Concern over the proliferation of CBRN weapons and potential support of terrorist operations influenced the US-led coalition forces to invade Iraq in March 2003. Royal Australian Navy (RAN) ships that deployed to the Middle East Area of Operations were fitted with chemical warfare agent detectors and personnel were given vaccinations against biological warfare agents. It was subsequently discovered that Iraq, at the time of the 2003 war, had no chemical or biological weapons capability.² However, Operation FALCONER raised several important questions for the RAN, including: what is the nature of the threat to our fleet, if any, and, if attacked, could it adequately protect its ships and people?

Conventional weapons (bombs, missiles and firearms) will always constitute the bulk of any nation's arsenal, as chemical and biological (CB) warfare agents are difficult to both manufacture and disseminate. In addition, the use of CB weapons is stigmatised in Western society. The development and acquisition of nuclear weapons by nation-states is even more difficult and expensive although, theoretically, nuclear weapons are easier to use than CB weapons.

CB weapons are difficult to disseminate effectively. Chemical agents are easily consumed or degraded by blasts and heat, and therefore require specifically engineered bombs and missiles. Biological agents are most effective when dispersed as an aerosol at dusk or early evening. A typical scenario includes an aerosol line-dispersal from a fixed wing aircraft, helicopter or even an uninhabited aerial vehicle, where the agent is then carried as a downwind plume toward the target.³

Improvised Radiological Devices are much easier to make and use, as radioisotopes cannot be destroyed in a blast. An explosion from a conventional bomb containing radioactive material would spread isotopes over a large area, potentially contaminating strategic sites and preventing their use. Most injuries, however, would occur from the actual explosion and not from the radioactive material, as it would be too finely dispersed. Of course, a dirty bomb is just one way of disseminating radioisotopes. Enemy

forces can also use deliberate placement, such as a high radiation source hidden in a strategic location and placed to cause radiation sickness to personnel working in the vicinity. Such placement may be relatively easy for enemies to carry out and difficult for military forces to detect.

A nuclear explosion produces blast, shock, intense heat, intense light and radioactivity. The effect of a nuclear weapon on a ship depends on the type and size of the weapon, whether the blast occurs in the air, on the surface or underwater, and its distance from the ship. There is no practical defence against a nuclear explosion.

Threat System	Potential Fatalities
<i>Nuclear</i> 1 megaton nuclear bomb	500,000 - 2,000,000
<i>Chemical</i> 1000 kg sarin nerve agent (line source with agent drifting on wind)	Clear day: 300 - 700 Overcast: 400 - 800 Clear night: 3000 - 8000
<i>Biological</i> 100 kg weaponised anthrax spores (line source with agent drifting on wind)	Clear day: 130,000 - 460,000 Overcast: 420,000 - 1,400,000 Clear night: 1-3 million

Potential fatalities from typical CBRN weapon systems, under various environmental conditions⁴

Most literature on CBRN acknowledges that the threat to land forces is real and constant. This influences the structure and functions of many armies, such as Australia's, which is tasked with the lead role in developing and maintaining CBRN doctrine and research. But how relevant is CBRN defence to the RAN?

RAN ships operate in two environments, the littoral and blue water, and both provide unique conditions under which ships may be attacked. When a ship is operating close to land, or is alongside, it is most vulnerable to attack from land forces which can deploy a variety of CB munitions including: missiles, artillery, mortars, mines and rocket launchers, as well as aerosol release. In the littoral a ship may be limited in its ability to manoeuvre away from CB plumes. In blue water, where the ship is beyond engagement by land forces, the main threat is from direct aerosol release, as there are no known naval munitions able to carry CBR agents. In blue water, ships are better able to manoeuvre to avoid CB plumes; therefore, an attack is less likely to be effective, even if the ship is without CBR countermeasures.

The requirement for the RAN to have effective CBRN countermeasures is therefore dependent on the nature of each operation and the threat. Certainly the RAN has been involved, and will continue to be involved, in both littoral and blue water operations. The more important question, then, is whether there is a reasonable threat?

Currently, 170 countries are signatories to the *Chemical Warfare Convention 1993* (CWC).⁵ The Democratic People's Republic of Korea is one of only ten countries in the world that has not acceded to this Convention. The CWC is enforced through the Geneva-based Organisation for the Prohibition of Chemical Weapons, which deploys inspectors throughout the world who are empowered to conduct site examinations to monitor the development and manufacture of chemical weapons.

As of December 2004, there were 169 signatories to the *Biological Weapons Convention 1972* (BWC),⁶ including: Indonesia, China, the Republic of Korea, the Philippines, Malaysia and Japan. The BWC is also supported by other states such as: Russia, the US, Pakistan, India, Afghanistan, Iran and Iraq. However, the BWC does not have enforceable rules and there are no real penalties for countries that breach the conventions. Therefore, some experts believe that a few countries that are signatories to the convention still develop biological agents. Australia is a signatory to both the CWC and the BWC; as such, Australia does not produce or stockpile CBRN weapons, but does retain the right to conduct research in CBRN defence.

To defend against CBRN attack there are two types of protection available: individual protective equipment (IPE) and collective protection (COLPRO). IPE includes the use of protective clothing: overalls, masks, butyl-rubber gloves and overboots; as well as vaccines, antidotes and prophylactics. COLPRO is a means of protecting personnel, equipment and stores from CBR exposure by securing the unit (whether it is a ship, building, vehicle or aircraft) within a filtered air environment. For navy ships COLPRO usually comprises a citadel system; a term applied to the main group, or groups, of interconnecting compartments with unbroken gas-tight boundaries and which can be provided with filtered or recirculated air. A citadel normally embraces the bridge superstructure and any other superstructure that can reasonably be included. COLPRO can also include a pre-wetting system that can spray every part of the upper decks and superstructures with water, before, during or after an attack to prevent and remove contamination.

While IPE is relatively inexpensive compared to other protective measures, and personnel can be effectively trained in its use in a single day, it places a physical burden on personnel. Respirators and masks reduce visibility, making verbal communication and breathing at a normal rate more difficult, while thick rubber gloves reduce dexterity. Chemical overboots and additional clothing can lead to increased perspiration, causing dehydration and shock, and limiting the length of time and types of duties that personnel can perform while wearing IPE.

The benefits of COLPRO over IPE are that it provides a place where personnel can work unencumbered, where personnel are able to remove and change IPE, and a place of respite. However, COLPRO is difficult to construct and maintain. Because of this, very few current RAN ships are fitted with citadel systems.



Royal Australian Navy personnel conducting decontamination drills prior to Operation FALCONER (2003 Iraq War)

Between the 1950s and 1970s, the RAN fleet comprised mainly Royal Navy (RN) design or ex-RN ships, which incorporated extensive citadel systems. From the 1970s, however, the RAN moved to Australian built ships based mainly on US Navy designs. During the following two decades it was determined that the CBRN threat was small, and citadel systems were not necessary.

During the 1990-91 Gulf War, RAN ships were faced with a serious CBRN threat, highlighting the need for the RAN to strengthen CBRN protection for its ships. This war saw a move to a reliance on IPE over COLPRO, which remained the protective philosophy up to and including the 2003 Iraq War. With no evidence of CBRN proliferation, the RAN is now reassessing the perceived threat and its response.

A structured assessment of the impact of CBRN on RAN operations has commenced in order to provide an objective basis for future debate on the relevance of the CBRN threat to the RAN. This study will assist in the design of the next generation of ships (like the air warfare destroyers and amphibious ships) and their supporting doctrine.

Notes

- ¹ Previously these were referred to as Nuclear, Biological and Chemical (NBC) weapons, but the classifications have changed in recent years to reflect the differences between nuclear (atomic) weapons and improvised radiological devices (i.e. dirty bombs).
- ² C. Duelfer, *Comprehensive Report of the Special Advisor to the Director of Central Intelligence on Iraq's Weapons of Mass Destruction*, 30 September 2004, <www.cia.gov/cia/reports/iraq_wmd_2004>.
- ³ A.A. Stebins, *Can Naval Surface Forces Operate Under Chemical Weapons Conditions?* Thesis, Naval Postgraduate School, Monterey, California, June 2002, p. 10.
- ⁴ D.G.E. Caldicott and N.A. Edwards, 'The tools of the trade: weapons of mass destruction', *Emergency Medicine*, Vol. 14, No. 3, 2002, pp. 240-248.
- ⁵ Organisation for the Prohibition of Chemical Weapons website, <www.opcw.org> viewed 29 July 2005.
- ⁶ Biological and Toxin Weapons Convention website, <www.opbw.org> viewed 29 July 2005.

Blockading German East Africa, 1915-16

Mr John Perryman

The wardroom of the Royal Australian Navy's (RAN) premier training establishment, HMAS *Cerberus*, is home to many fine treasures reflecting Australia's naval heritage. Perhaps the most curious of these is a dark blue enamelled iron postbox emblazoned in gold with the words *Post-Briefkasten*. This artefact was presented to the wardroom in 1916 by Lieutenant Commander R.C. Creer, RAN, and has its origins in Bagomoyo, German East Africa.¹ The story of how it became one of the most recognisable artefacts in the *Cerberus* wardroom lies in the account of one of the RAN's lesser-known warships, HMAS *Pioneer*, and the operations in which it was involved during the blockade of German East Africa in World War I.

The Royal Navy commissioned the 3rd class cruiser HMS *Pioneer* on 10 July 1900. *Pioneer* displaced 2200 tonnes and was armed with eight 4-inch single mount guns, eight 3-pounder guns and several machine guns. The ship also mounted two 14-inch torpedo tubes above the waterline. *Pioneer* first arrived in Australian waters in October 1905 and continued in service as a unit of the Royal Navy on the Australia Station until 29 November 1912 when she paid off at Sydney for transfer to the RAN as a gift from the Admiralty. Commissioned as HMAS *Pioneer* into the RAN on 1 March 1913, she was subsequently used as a seagoing training ship for the Naval Reserve.

When war with Germany was declared on 4 August 1914, *Pioneer* was in dry dock at Williamstown, Melbourne. Within 24 hours of the declaration of war the ship was afloat, provisioned, coaled and ready for sea. The following day she sailed for Fremantle, from where she patrolled the waters off the West Australian coast.

On 16 August, eight miles west of Rottnest Island, *Pioneer* captured the German steamer *Neumünster* (4424 tonnes) and escorted her into Fremantle. On 26 August *Pioneer* captured a second ship, the Norddeutcher-Lloyd vessel *Thüringen* (4994 tonnes), also off Rottnest Island. Neither of the German ships carried wireless equipment and it transpired that their masters were unaware of the outbreak of war.

In early November 1914, *Pioneer* sailed as part of the escort to the first Australian troop convoy bound for the Middle East. Unfortunately she suffered condenser failure and was consequently ordered to return to Fremantle to effect repairs. This twist of fate was to result in an adventure that would take *Pioneer* away from Australian waters for almost two years, where she participated in a classic example of sea control in the littoral environment.

On 24 December 1914, the Admiralty requested the urgent aid of *Pioneer* to take part in a blockade off the German East African coast. In September the German cruiser



Königsberg, mounting ten 4.1-inch guns, had engaged and destroyed *Pioneer's* sister ship, HMS *Pegasus*, and had skilfully manoeuvred herself approximately 12 miles upstream in the shallow Rufiji River delta, in German East Africa, beyond the range of effective fire from the sea. The British forces assembling off the African coast were now faced with a double duty: first, the maintenance of a blockade to prevent supplies reaching German land forces in East Africa; and second, the neutralisation of a dangerous German raider.

Pioneer sailed from Fremantle on 9 January 1915 and joined the British force off Zanzibar on 6 February. The force consisted of the light cruisers HMS *Weymouth* and *Hyacinth*, HMS *Pyramus* (another of *Pioneer's* sister ships), the armed merchant cruiser *Kinfauns Castle* and six smaller vessels. Formal blockade was proclaimed on 1 March 1915, and five days later Vice Admiral Sir H.G. King-Hall arrived in the old battleship HMS *Goliath* to take charge.

For the purpose of blockade operations, the East African coastline was divided into three sections. *Pioneer* was ordered to patrol the northernmost of these and was appointed in charge of the *Kinfauns Castle*, the armed steamer *Duplex* and the whaler *Pickle*. There was little traffic to be watched, except for native dhows creeping along the coast, but signal activity by the enemy gave the impression that the *Königsberg* would soon make her bid to break through the blockade.

After several attempts to drive *Königsberg* from her lair, it was decided to tow to the scene the 6-inch gun monitors, HM Ships *Severn* and *Mersey* that had been specially designed for river work. By taking advantage of their shallow draught it was planned to manoeuvre them upstream within range of the raider.

The attack began early on the morning of 6 July 1915, with the two monitors creeping silently into the northerly Kikunya mouth of the river under the cover of darkness. *Pioneer's* orders were to proceed with *Hyacinth* to the southerly Simba-Uranga mouth and bombard its shore defences, as shown on the map opposite.²

Serving in *Pioneer* was Surgeon Lieutenant G.A. Melville-Anderson who described the action as follows:

On we went, very cautiously, and when we were about 5000 yards from the river entrance, we dropped anchor and allowed the tide to swing us broadside on. Hence all our starboard guns bore on the entrance. Previous to anchoring, a shell burst in the water not far from the ship, and another in the air. No one knew from whence they came. Very soon we were firing salvos and then each gun rapidly independently. Our shells were bursting everywhere, throwing up great clouds of sand and earth. No sign of life was visible in the neighbourhood.

In the meantime, the monitors were steaming up the river under heavy fire from the banks, but they went on and soon were within range of the Königsberg. They then directed their fire on her, the range being five miles. Seaplanes assisted the monitors in locating the position, but they were not very successful. The Königsberg fired salvos of five guns, the accuracy of which was good. From firing salvos of five guns she dropped to four then to three and two and finally one. During the last hour-and-a-half of the engagement she ceased fire altogether. One of her shells hit the forward gun of Mersey and practically wiped out that gun's crew – four men were killed and four wounded.³

At 3:30pm after firing six hundred 6-inch shells, both monitors were withdrawn. The *Königsberg* although badly damaged had not been destroyed and she remained a threat. Consequently the operation was repeated on 12 July. This time *Königsberg* straddled the *Severn* as she prepared to drop anchor, but *Severn* quickly found the range and hit the German ship several times, setting her on fire and forcing the enemy to complete her destruction using demolition charges. While this was taking place, *Pioneer* was again engaged in bombardment against German shore defences from a range of 2000 yards.

Following the destruction of *Königsberg*, *Pioneer* spent a period patrolling off the river mouth, and later, some time in the southern section of the blockade area. By the end of July she had been under way every day for more than six months with the exception of nine days spent in harbour. On 31 August she ceased patrol duties and proceeded to Simonstown, South Africa, for refit. Six weeks later routine patrol was resumed in the southern section with no enemy opposition encountered. It was uneventful and monotonous work.

On 20 December *Pioneer* anchored in Nazi Bay, south of the Rufiji River, and sent a cutter away to obtain fresh provisions from ashore. A hundred yards from the beach the cutter suddenly came under rapid fire from a small enemy force on the shore and two men were wounded before the boat could be brought about. *Pioneer* retaliated with 50 rounds from her 4-inch guns and the boat and crew were recovered. The wounded were later transferred to the *Severn*. *Pioneer* remained in the southern patrol area until 13 January 1916, by which time she had spent an incredible 287 days underway, travelling 29,434 miles.

Early in February 1916, in fulfilment of a promise made to the Australian Government, the Admiralty ordered *Pioneer* back to Australian waters; however, on 13 February General J.C. Smuts assumed command of the Anglo-South African forces in East Africa and his plans demanded more naval cooperation than had previously been envisaged. As a result, on 23 February 1916, *Pioneer's* crew learnt that they were to resume blockade duties in the southern patrol area.

On 22 March 1916 *Pioneer* proceeded to rendezvous with *Hyacinth* and the flagship *Vengeance* off the capital of German East Africa, Dar-es-Salaam. A German 'hospital ship' named *Tabora* was suspected of being used for less honourable purposes and consent was requested from the Germans to inspect it. Permission was refused for an inspection party to board her, and *Pioneer* was ordered to close in and open fire if any movement was detected among the ships in harbour. She fired several 4-inch rounds before *Vengeance* ordered her to cease and await a response to a signal ordering the Germans to evacuate their sick from *Tabora*. With no answer forthcoming, all three ships opened fire and the suspect vessel was destroyed.

Following this action, *Pioneer* returned to blockade duties and participated in further bombardments of the ports of Tanga and Dar-es-Salaam in June and July 1916. The action in July was the last in which *Pioneer* participated, although parties from her crew were detached to relieve the garrison at Sadani during the capture of Bagamoyo on 15 August. It was during this raid that the German letterbox that now graces the wardroom of HMAS *Cerberus* was taken as a trophy by two of *Pioneer's* officers, Acting Commander W.B. Wilkinson and Lieutenant R.C. Creer, who were acting as Beach Master and Provost Marshal respectively.

By this time the naval situation in East Africa had stabilised, as the German forces were being driven inland, and contraband traffic by sea was not considered likely to do them much good.⁴ It therefore became possible to send *Pioneer* home.

On 22 August 1916 she sailed from Zanzibar to Australia, flying her paying off pennant. Her arrival in Sydney on 22 October brought the career of this obsolete ship, dating from pre-federation years, to an end, yet she had probably seen more actual fighting and fired more rounds in the course of World War I than any other Australian ship.⁵ *Pioneer's* hulk was scuttled off Sydney on 18 February 1931. The postbox souvenired by two of *Pioneer's* officers remains in commission.

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Notes

- ¹ L.G. Wilson, *Cradle of the Navy*, Victoria, 1981, p. 271.
- ² Adapted from J.S. Corbett, *History of the Great War, Naval Operations*, Vol. III, Longmans, London, 1923, p. 63.
- ³ M.A. Melville-Anderson, *An Account of the Movements of HMAS Pioneer during the Great War*, August 1919, (Navy Historical Section).
- ⁴ For further reading see: H. Strachan, *The First World War*, Simon & Schuster, London, 2003, pp. 80-94.
- ⁵ A.W. Jose, *The Royal Australian Navy*, Angus & Robertson, Sydney, 1928, p. 238.

The Royal Australian Navy and the Restoration of Stability in the Solomon Islands

Mr Peter Laurence and Dr David Stevens

On the morning of 24 July 2003, the citizens of Honiara awoke to find a massive grey warship anchored close off shore; HMAS *Manoora*, a highly versatile amphibious transport had arrived to help restore law and order to the Solomon Islands. Unlike previous deployments to the region, *Manoora's* presence was an unmistakable show of military strength, indicating to all observers that change for the Islands was imminent. *Manoora's* appearance off Guadalcanal beach marked the beginning of Operation HELPEM FREN, the Australian-led Regional Assistance Mission to Solomon Islands (RAMSI). Australian Defence Force (ADF) participation in HELPEM FREN came under the banner of Operation ANODE, and continued a long tradition of positive involvement by Australian and Australian-based naval vessels in the development of the Solomon Islands.¹



HMAS Manoora dubbed 'Bikfala Sip' by the Islanders

Operation HELPEM FREN was preceded by a great deal of local unrest. In 1998, simmering tensions on Guadalcanal broke out into conflict between the indigenous inhabitants and ethnic Malaitans. Flowing from resentment of the growing political and financial power of the Malaitans, the Guadalcanal Revolutionary Army (later the Isatabu Freedom Movement or IFM) was formed to redress the perceived power imbalance. The IFM raided police armouries, intimidated local businesses and forced nearly 20,000 Malaitans from their homes. The Malaitans responded to this threat by forming the Malaita Eagle Force (MEF), which had strong ties with the local police force. On 5 June 2000, the MEF, along with paramilitary elements of the police, deposed the Prime Minister, Bartholomew Ulufa'alu, and facilitated the installation of a new government headed by Manasseh Sogavare. Although the MEF and IFM signed a peace treaty in October 2000, thousands of high-powered weapons remained in the community, increasing the lawlessness that had swept the nation. Equally destabilising, the conflict had resulted in the widespread damage and destruction of local infrastructure, severely restricting the government's ability to provide key services.² The situation continued to deteriorate, until by February 2003 the Solomon Islands was being publicly labelled 'the Pacific's first failed state'.³ Facing complete collapse, and fully aware that it could not restore law and order without external assistance, the government sought help from Australia and other regional nations. Created by the Pacific Islands Forum in response to this request, RAMSI's aim was 'to uphold the laws of the Solomon Islands and assist the Solomon Islands' Government and people restore stability in their country'.⁴

Eight nations contributed to RAMSI's police and military forces: Australia, New Zealand, Fiji, Papua New Guinea, Samoa, Tonga, Kiribati and the Cook Islands. In the initial deployment of 2225 personnel, Australia sent 1745 personnel, of whom 1500 belonged to the ADF.⁵ Royal Australian Navy (RAN) personnel formed a significant proportion of the ADF contribution. Apart from *Manoora*, the patrol boat HMAS *Whyalla*, the heavy landing craft HMA Ships *Wewak* and *Labuan*, and the coastal minehunter HMAS *Hawkesbury* were sent to the area of operations. Following the initial deployment, two RAN vessels were generally maintained on station, and by the end of ANODE, 19 Australian warships had taken part. The last of these, the patrol boat HMAS *Fremantle*, sailed for home in October 2004.

Despite the RAN's many previous missions to the Solomons, Operation ANODE was unique in that the Navy's primary role was to support and facilitate the work of the Participating Police Force (PPF). Moreover, in addition to being the first time that the RAN had supported a police-led mission,⁶ the operation was unusual in that its leader, Nick Warner, was a civilian from the Australian Department of Foreign Affairs and Trade. Notwithstanding this whole-of-government involvement, the eventual success of RAMSI would still owe much to naval participation.

Following the establishment of a permanent and secure RAMSI presence in Honiara, one of the PPF's primary objectives was to establish and sustain police outposts

throughout the scattered Solomon Islands. With support facilities extremely scarce, the task would have proved impossible without the sea and airlift capability provided by *Manoora*, her two embarked Sea King helicopters and the activities of the hard-worked heavy landing craft. Yet, although the provision of logistic support to the PPF was essential, RAN units also played an important part in establishing RAMSI's authority. It is doubtful that the PPF could have returned law and order to the Solomons as quickly as it did without RAMSI's ability to deploy overwhelming military force if its members were threatened. As Nick Warner remarked of RAMSI's accomplishments:

*a very important factor was the very large military force deployed; at its peak we had 2000 military, one major and five small war vessels and eight helicopters and a couple of Caribou. That got the attention of the people!*⁷

The creation of a seemingly ubiquitous and strong military presence was relatively routine for naval units. Self-deployable and inherently mobile, Australian warships could appear almost anywhere without warning. The situation was far less simple for other deployed forces. In the initial phase of the operation every PPF officer needed to be accompanied by approximately 50 military personnel.⁸ Given the remoteness of many police outposts, this requirement presented something of a logistics challenge. Hence, extensive cooperation between the RAN and other ADF elements was essential throughout, particularly with respect to the transport of heavy equipment, stores and personnel within the area of operations.



HMAS Manoora disembarks two LCM8 landing craft to transport troops and equipment ashore at the commencement of Operation HELPEM FREN

The RAN's diplomatic contribution to Operation ANODE was on par with its military undertakings. RAMSI's critics openly questioned its legitimacy, and the most taxing diplomatic goal was to win Islander support. The basis of RAMSI's response was better education, and public displays of equipment proved particularly effective in generating a positive message. In August 2003, *Wewak* and a helicopter from *Manoora* were opened to the public in Honiara. The estimated 10,000 people that visited the displays

not only demonstrated the intensity of local interest, but also allowed for face-to-face discussions with the public, and provided an important measure of how the Islanders perceived RAMSI's efforts.

As visits to many remote villages were only feasible by sea, RAN vessels also played a crucial role in spreading the RAMSI message as widely as possible. Particularly threatening to the ready restoration of law and order were the thousands of weapons still held within the community. Informing locals on the benefits of the RAMSI weapons amnesty, and the penalties for those planning to withhold weapons became critical to reducing this threat. During their first two-month deployments, both *Whyalla* and *Hawkesbury* collected over 300 military weapons and a large amount of ammunition. Wherever RAN vessels visited, the provision of small gifts (chocolate and toy koalas proved immensely popular) helped to win the hearts and minds of communities. More important still was the ability of the RAN to make use of the variety of professional skills possessed by its specialist sailors. Humanitarian efforts ranged from disaster relief through to explosive ordnance disposal.⁹ Building on the Navy's long experience of operating in the South Pacific, direct assistance to the community became the defining feature of the RAN's involvement.

In December 2003, for example, *Wewak* carried 90 tonnes of relief supplies to the residents of Tikopia and Anuta who were facing starvation after a cyclone. *Hawkesbury*, meanwhile, rescued six men whose canoe had capsized in heavy seas, while simultaneously transporting a sick child to Ghizo hospital. In a similar vein, the crews of a succession of RAN vessels helped a hospital on the island of Taro resume full services. In January 2004, HMAS *Wollongong* repaired the hospital's damaged generator. Later, crew from HMA Ships *Yarra* and *Geelong* repaired and replaced all the hospital's electrical wiring. An ability to repair damaged infrastructure was also demonstrated by HMAS *Gascoyne* at Falamai in the Treasury Island Group. By fixing the village tractor, the minehunter's crew not only fostered goodwill, but also helped revive the local agricultural industry.

Before the mission, the Australian Minister for Foreign Affairs and Trade, The Hon Alexander Downer MP had emphasised that returning civil order to the Solomons would be useless unless steps were taken to revive the economy.¹⁰ For many years, the RAN has had Maritime Surveillance Advisers in place throughout the South Pacific. In 2003 and 2004, the RAN extended this assistance to provide a continuous program of active patrols throughout the Solomon Islands' huge exclusive economic zone (its EEZ is 390,686 nm² in area). These patrols regularly prevented the exploitation of local marine resources by the many foreign fishing vessels frequenting these waters. RAN personnel also provided additional professional training to the crews of the Solomon Islands' two Pacific Patrol Boats, ensuring that the Islanders regained the ability to maintain their EEZ.

While still carrying out its primary role of facilitating the work of the PPF, the RAN performed a far wider range of operations than might at first be evident. The professional, flexible and sympathetic manner in which the RAN's men and women undertook these tasks fostered strong ties with the citizens of the Solomon Islands and better encouraged local compliance with RAMSI initiatives. As such, the naval role in Operation ANODE provides yet another case study in the measured application of sea power and offers lessons that will remain relevant for future deployments in regional trouble spots.

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Notes

- ¹ See A. Collie and D. Stevens, 'Australian Operations in the Solomon Islands' in G. Kerr (ed), *Australian Maritime Issues 2004 - SPCA Annual*, Sea Power Centre - Australia, Canberra, 2004, pp. 53-57.
- ² J. Fraenkel, *The Manipulation of Custom: From Uprising to Intervention in the Solomon Islands*, Pandanus Books, Wellington, 2004, p. 8.
- ³ 'Solomon Islands: the Pacific's first failed state', *The Economist*, 13 February 2003, cited in Fraenkel, *The Manipulation of Custom*, p. 8.
- ⁴ G. Davies, 'HELPEM FREN Op kicks in', *Navy News*, 31 July 2003.
- ⁵ This total included 1500 ADF members, 155 Australian Federal Police and 90 Australian Protective Service personnel; see Davies, 'HELPEM FREN OP kicks in'.
- ⁶ C. Woods, 'Bikfala Sip: Aussies come to help our Pacific friends', *Navy News*, 14 August 2003.
- ⁷ R. Keith-Reid, 'So what now for the Solomon Islands? 2004 will be a year of reconstruction', *Pacific Magazine*, January 2003.
- ⁸ S. Hawke, 'Together as one', *Army*, 28 August 2003.
- ⁹ In mid 2004, sailors from HMAS *Diamantina* noticed a child playing with what appeared to be a ball. On closer inspection, the object was found to be a pineapple style grenade with the cocking handle missing! Apart from destroying the grenade, *Diamantina* disposed of another two 250-pound bombs and an unidentified projectile on the island of Taro.
- ¹⁰ A. Downer, 'Our Failing Neighbour: Australia and the Future of Solomon Islands', <www.foreignminister.gov.au/speeches/2003/030610_solomonislands.html> viewed 10 June 2003.

The Royal Australian Navy Heritage Centre

Commander Shane Moore, CSM, RAN

On 4 October 1913 the ships of the new Australian Fleet Unit sailed into Sydney Harbour for the first time. On 4 October 2005, the Royal Australian Navy (RAN) will reach another major milestone with the opening of the RAN Heritage Centre (RANHC). The need for such a facility has been recognised for many years. In 1922, Vice Admiral Sir William Creswell, the RAN's first professional Head, suggested the building of a museum to permanently display the Australian Navy's already rich and unique heritage. Since then, there have been several attempts to establish an international-standard naval museum. The origins of what is now about to become the RANHC date from 2001, when the then Chief of Navy commissioned a Naval Heritage Management Study to examine in detail how the RAN's past might best be used to support the present Navy's goals. One of the most important recommendations was the creation of a facility for the public display of the Naval Heritage Collection (NHC). Once approval for funding was received, a RANHC Project Board was formed and the project began on 24 May 2004.

Mission and Design

The RAN believes it is important that all Australians have the opportunity to understand their Navy's valuable contribution to the development and security of the nation. The NHC contains more than 250,000 individual items, and the mission of the RANHC is to display those objects of museum standard to the public, and through these displays capture something of the Australian naval experience. The centre is located within the Public Access Precinct at the northern end of Garden Island, Sydney, and makes use of two National Estate listed buildings: the former Gun Mounting Workshop (1922) and the Garden Island Boatshed (1913). The precinct also includes a landscaped external exhibition space between the two buildings.

In its design, the centre seeks to retain the industrial and naval feel of the buildings, while providing a museum facility with multi-function capability. In addition to the exhibition galleries, the RANHC includes an indoor/outdoor café, an education and small conference facility named the *Tingira* Room, and an exhibition space for naval and ship associations to use. Both the *Tingira* Room and the café/ Large Technical Item display area will also be available for hire once the centre is opened.



Display plinths under construction in the Gun Mounting Workshop building

Exhibition Themes and Displays

The overall theme of the initial exhibition is *Australia's Navy in Peace and War*. The two main exhibition themes are *Business on Great Waters* and *A Sailor's Life For Me*. The first of these emphasises the history of the seagoing Navy, while the second tells the story of the RAN's people and highlights the traditions that still underpin our professional fighting Service.



Special Exhibition Gallery under construction in the Gun Mounting Workshop building

The Displays

The displays have been developed to provide visitors with a contrasting portrayal of events and elements, ranging over more than 100 years of Australian naval history. Some displays are chronological, but most are thematic and emphasise the uniqueness of naval service. The size and variety of items held by the NHC allows for the rotation of displays over an extended period. The initial displays will include:

The Battle of Sydney: This centres on the conning tower from one of the Japanese midget submarines that attacked Sydney Harbour on the night of 31 May – 1 June 1942, and also includes the Boom Boat belonging to the Maritime Services Board that first raised the alarm. The display is supported by an interactive audio-visual presentation.

In Which We Serve: This is a large chronological display of items that tell the stories of famous Australian ships and their battles. Artefacts are included from the colonial era, the First and Second World Wars, the Cold War and more recent operations in the Persian Gulf.

The Professions of a Navy: This is a large thematic display focusing on how the Navy's people have 'done the job' at sea over the years. Branches and categories past and present are used to explain how the naval profession has changed and developed.

Naval Technology & Ordnance: A specific display illustrating how the Navy has developed and applied technology to the seafighting environment. It includes precision instruments for navigation and gunnery, in addition to examples of naval ordnance ranging from shells and torpedoes to modern guided missiles.

The Bridge: This is a mock-up of a Battle class destroyer's open bridge, and is one of the major interactive displays in the centre. Using original equipment from 50 years ago, *The Bridge* is aimed at helping visitors acquire some experience of what takes place on a warship's bridge at sea.

A Sailor's Life for Me: This main exhibition display uses the entire mezzanine level of the workshop building, and provides visitors with an introduction to a sailor's life at sea. The display includes a mock-up of a World War II mess deck, as well as artefacts highlighting naval traditions and pastimes.

The Periscope: Those who serve beneath the waves have not been forgotten, and in a unique interactive display a fully operational submarine attack periscope has been installed to allow visitors an unusual view of Sydney Harbour.

Boats and Dockyards: The 1913 Boatshed has been dedicated as the display gallery for artefacts related to small boats and Australian dockyards, particularly Garden Island.

Operations of the RANHC

Opening Hours. The RANHC is open from 0930 to 1530 daily. The café operates between the same hours. The centre and Garden Island Public Access Precinct is closed on Good Friday, Christmas Day, Boxing Day, New Year's Eve and New Year's Day.

Entry Fees. Entry is free to all areas of the RANHC and Garden Island Public Access Precinct except for the Special Exhibition Gallery, where a fee of \$5 will be applied. Revenue raised at the RANHC will go directly to conserving, restoring and exhibiting the collection nationally.

Access and Security Prohibitions. The RANHC shares a fence line with Garden Island Dockyard and the need to ensure visitor safety and maintain the security of the operational areas of the dockyard is a priority. Consequently, there is no direct pedestrian or private vehicle access to the centre.

From 5 October 2005, and in collaboration with Sydney Ferries Corporation, pedestrian visitors can access the RANHC via the Circular Quay to Watson's Bay ferry, which will stop at the Garden Island Ferry Wharf during opening hours. Organised tour groups visiting the centre are permitted to transit Garden Island Dockyard in their own bus. However, passengers may not disembark until they are inside the Public Access Precinct. Additionally, private vessels remain prohibited from entering the Naval Waters around Garden Island.

Facilities and Services

The Salthorse Café. The Salthorse Café provides visitors with café meals and beverages. The café includes interior and al fresco dining areas with views over Sydney Harbour. The café also supports out-of-hours functions and activities.

The *Tingira* Room. The *Tingira* Room is named after HMAS *Tingira*, an ex-clipper ship commissioned by the RAN in 1913 and anchored in Rose Bay, Sydney until 1929. *Tingira* was used as a training ship for boy seamen between the ages of 12 and 15. The room is primarily an educational space for school groups. Defence or private groups who wish to hold small conferences, meetings, leadership retreats or other functions for up to 70 persons in a unique location will be able to book the *Tingira* Room for a small fee.

Function Hire. The Gun Mounting Workshop Main Gallery can be hired as a venue for functions outside normal opening hours. The largest function possible is a reception/cocktail party for approximately 300 people.

Anniversary Exhibition Area. An anniversary exhibition area is included in the workshop building Main Gallery. This area has been reserved for naval and ship associations and other like-minded groups to use for their commemorations and reunions.

The Future

The opening of the RANHC is a major event in the preservation and display of Australia's naval heritage. The continued development of the RANHC will ensure that it becomes an institution of national significance. It is a facility that not only supports the RAN's goals, but also meets the Navy's responsibilities to remember the service of those who have proudly served their nation at sea in peace and war.



Reproduction of the plaque presented by the City of Sydney to HMAS Sydney II, in commemoration of Sydney II's destruction of the Italian cruiser Bartolomeo Colleoni

More information on the RANHC is available from the centre's website:
www.navy.gov.au/ranhc

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Trafalgar – 200 Years On

Dr Gregory P. Gilbert

On 21 October 1805 a British fleet, under the renowned Lord Horatio Nelson, attacked and defeated a more numerous French and Spanish combined fleet off Cape Trafalgar on the Spanish coast. By the end of the day Nelson's fleet, with 27 ships of the line, had destroyed or captured 17 enemy ships, although Nelson himself died of wounds. The story of this action rapidly grew into a British naval legend, which by the late 19th century was seen to be the quintessential example of a decisive naval battle; one that resulted in over 100 years of British naval supremacy. This is the story that has been accepted by innumerable school children and naval strategists alike, however, as with many historical tales, elements of myth and propaganda have had a large influence on how many perceive these events.

The Battle of Trafalgar was only one action during the Napoleonic Wars of 1803-1815, which themselves formed the final chapter in the long struggle between the French and the British for maritime supremacy. During 1805 Napoleon prepared to invade Britain, assembling a flotilla capable of transporting 100,000 troops across the English Channel. The British responded with a close blockade of ports along the French Atlantic coast by ships of the Channel Fleet under Sir William Cornwallis. Ships of the line blockaded the major elements of the French fleet at Brest and Rochefort, while gunboats and smaller vessels blockaded the invasion force. For as long as Cornwallis' fleet controlled the Channel, Britain was safe from invasion. The central strategic importance of this blockade has often been lost in public perception, even though it has been well understood by naval strategists:

*Never in the history of blockades has there been excelled, if ever equalled, the close locking of Brest by Admiral Cornwallis, both winter and summer, between the outbreak of war and the Battle of Trafalgar.*¹

Even prior to 1805 Nelson was a British national hero, and it was his previous experience and daring character that led to his appointment as the Commander of the Mediterranean Fleet in June 1803. His task was to blockade the French fleet at Toulon and their Spanish allies at Cadiz, while protecting British sea communications and Britain's allies in the Mediterranean. In March 1805 the Toulon Fleet, under Admiral Pierre Villeneuve, broke out past Nelson's blockade and sailed to the West Indies. The French plan to use what is now described as *manoeuvre warfare*² to distract the blockading British fleets, and to combine all available French and Spanish forces in support of the projected invasion of Britain, was unsuccessful. Following Villeneuve's return to Cadiz in August, and the failure of the French fleet to break Cornwallis' blockade of Brest, Napoleon realised an

invasion of Britain was no longer feasible. In a surprise strategic move, he ordered his *Grande Armée* towards the Austrian frontier and began the series of successful land campaigns that ultimately conquered much of continental Europe.

Napoleon now ordered Villeneuve to enter the Mediterranean and land troops near Naples. In naval terms this order to land an expeditionary force along a coast that was defended by strong naval forces was clearly extremely risky. Napoleon, however, was quite specific on what he required when he ordered Villeneuve 'not to hesitate to attack superior or equal forces and to engage in fights *à outrance*. The Emperor would not count the loss of ships so long as they were lost with Glory!'³ The combined French and Spanish fleet sailed from Cadiz on 19 October 1805.

Maintaining his open blockade of Cadiz, Nelson was promptly informed of the fleet's departure and was able to make all necessary preparations for a fleet action off Cape Trafalgar. The details of the battle, including the subsequent death of Lord Nelson 'at the moment of his greatest victory', need not concern us too much here. It should be recognised that at the time of Trafalgar the British nation had been fighting an exhausting and at times bitter war against France for almost twelve years and was to continue to fight Napoleon for at least another twelve. Nelson's role as a national hero was important for British morale, as was the image of sailors and officers bravely fighting tooth and nail against everything that the resourceful enemy could throw at them. Both images must have contributed to the national war effort, as well as helping to counter the economic strain that the war was causing within the civilian community.

The loss of 18 French and Spanish ships of the line – about 20 per cent of the total – would have been significant in the short term, but the French shipbuilding capabilities, when combined with their allies and the increasing economic assets under the Napoleonic empire, allowed these ships to be rapidly replaced. The human casualties of the battle would have been much harder to replace, as the French suffered from a shortage of experienced mariners. The French tried to overcome this shortcoming by the use of marine conscripts who, if somewhat short of marine skills, were mostly enthusiastic. Given such evidence, Brian Tunstall's summary of the outcome of the battle appears more apt than the generally accepted panegyric:

*superficially, at any rate, the Battle of Trafalgar appears to have been one of the less important events of the war. Only a small part of Bonaparte's naval forces were destroyed and only one-sixth of the total British ships of the line were actually engaged.*⁴

No single naval battle can be decisive by itself, as it is not possible for naval forces to permanently secure possession of the sea in the way that it is possible to take land in a military context. Control of the sea, including the control of sea communications, is a fleeting condition that enables a maritime force to make use of the sea, but not to possess the sea.

Some past naval strategists suggested that the main aim of naval strategy is to seek out and destroy the enemy, to fight what Nelson called ‘a close and decisive battle’. Mahan believed that ‘in war the proper main objective of the navy is the enemy’s navy’, and that ‘the fleet should strike at the organised force of the enemy afloat, and so break up the communication between his ports’.⁵ Such statements are open to misinterpretation and historically may have led some rash naval commanders to take excessive risks by seeking a decisive naval victory. The public’s obsession with naval battles is partly due to the works of naval historians who, at least during much of the 19th and early 20th centuries, recorded battles without linking them to the strategy of the war in which they were waged. This was recognised by the 1940s:

The result has been that the British nation, as a whole, has tended to concentrate its attention and memory on historic battles, and to look on them as having won the war, instead of being mere incidents in the general war strategy. This relation between battles and strategy is amply proved by the fact that during the war of the French Revolution and the Napoleonic wars, which lasted on and off for 20 years, only six battles of first class importance took place: the Glorious First of June, Camperdown, St Vincent, the Nile, Copenhagen and Trafalgar. Yet the same strategy underlay all our dispositions throughout the 20 years of war, and it was due to our unfaltering adherence to that strategy, rather than to battles, that the war was won.⁶

For modern navies sea battles are only decisive when they form part of a strategy that utilises sea control to subsequently influence events on land. In modern parlance, the application of one’s naval strength directly against an enemy’s strength forms the basis of *attrition warfare*.⁷ When success in war at the operational and strategic levels depends on the ability to destroy or deny the enemy critical resources faster than they can recover, classic attrition warfare techniques are being employed. In this context the Battle of Trafalgar may be seen as one conflict within the broader naval war of attrition that was waged for many years and ultimately secured British sea communications across the globe.

During the Napoleonic Wars, the Royal Navy successfully implemented strategies for controlling its own sea communications and denying the use of the sea to its enemies. Not shying away from battle when it had tactical advantage, the Royal Navy was able to sustain effective control of the sea for much of the period and ultimately to assist, through maritime power projection operations, the decisive land campaigns that led to Napoleon’s overthrow.

Seapower is attritional, with battles and campaigns forming part of the gradual, cumulative process that wears down an enemy’s resources

*and creates a dominant position at sea that can be turned to strategic advantage.*⁸

This re-evaluation of Trafalgar should not be seen as denigrating the bravery and discipline of the many sailors – British, French and Spanish – who fought and died during the battle itself. The death of the legendary commander Lord Nelson, along with the fact that Trafalgar was the last fleet action of the Napoleonic Wars, became linked in the imagination of the British nation to the idea that the Royal Navy had effectively gained control of the seas in a single, decisive battle. At long last, and in many minds, the natural destiny for the British peoples had been achieved; Britannia was seen to ‘rule the waves’.

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Notes

- ¹ A.T. Mahan, *The Influence of Sea Power upon the French Revolution and Empire, 1793–1812*, Vol. II, Little, Brown and Co., Boston, 1892, p. 126.
- ² ‘A war-fighting philosophy that seeks to defeat the enemy by shattering their moral and physical cohesion – their ability to fight as an effective, co-ordinated whole – rather than by destroying them physically through incremental attrition.’ Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, RAN Doctrine 2, Defence Publishing Service, Canberra, 2005, p. 246.
- ³ P. Padfield, *Nelson’s War*, Hart-Davis & MacGibbon, London, 1976, p. 172.
- ⁴ B. Tunstall, *Naval Warfare in the Age of Sail: The Evolution of Fighting Tactics, 1650–1815*, Conway Maritime Press, London, 1990, p. 173.
- ⁵ A.T. Mahan, *Naval Strategy*, Sampson Low, Marston & Company, London, 1911, p. 199.
- ⁶ R. Bacon, *Modern Naval Strategy*, Frederick Muller, London, 1940, pp. 65–66.
- ⁷ ‘A style of warfare characterised by the application of substantial combat power that reduces an enemy’s ability to fight through the loss of personnel and equipment. It is a concept which relates to maritime warfare at the operational and strategic levels, since by their nature successful tactical actions in the maritime environment generally achieve destructive effect.’ Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 141.
- ⁸ A. Lambert, *War at Sea in the Age of Sail, 1650–1850*, Cassell, London, 2000, p. 17.

The Strategic Importance of Australian Ports

Mr Andrew Mackinnon

Australia is fundamentally a maritime nation and its economy is absolutely dependent on shipping. Of its international trade, 99.9 per cent by weight and 73.5 per cent by value is carried by ship. Australia's ports are vital to this trade and their managers are constantly seeking to improve productivity and reduce overheads in the search for improved profitability.

Specific Australian ports are also crucial to Australia's defence. The geography of mainland Australia, and the proximity of our northern approaches to potential operations, necessitates core naval infrastructure and major fleet support bases be located in the south, close to Australia's industrial centres, augmented by operating bases in the north from which operations are mounted by locally based or forward deployed elements.

Consequently the RAN's major ships are located at Fleet Base East at Garden Island, Sydney and Fleet Base West at Garden Island, Rockingham, WA, which is also home to the submarine force. Smaller patrol, hydrographic and amphibious vessels are based in Darwin and Cairns. These locations are all close to important offshore training areas, and have dedicated naval fuel installations (NFI) that provide strategic fuel stockholdings to meet the varying operational demands of locally based and visiting warships. Major naval ship and submarine construction, refit and repair tasks are conducted at commercial facilities located in the industrial centres of Brisbane, Newcastle, Sydney, Melbourne, Adelaide and Fremantle.

The relative importance of individual ports to the Australian Defence Force (ADF) will be determined by the location, nature and duration of each contingency, plus the nature and tempo of normal peacetime operations including activities supporting border protection in Australia's north. The RAN's strategic planning assumes continued access to those commercial ports that contain naval bases, and seeks to ensure access to other northern commercial port facilities needed to support forward-deployed assets. Most importantly, this includes Darwin, Cairns and Townsville, which are key bases for maritime operations in Australia's northern approaches, plus Gladstone, close to Shoalwater Bay Training Area, Weipa and Gove in the Gulf of Carpentaria, and Broome, Dampier and Port Hedland on the north-west coast.

The Department of Defence has already invested in Townsville and Darwin to meet specific Army amphibious load/offload requirements for the RAN's current major amphibious ships,¹ which require stern door Roll-on/ Roll-off (RoRo) loading facilities, plus associated berth space and vehicle marshalling areas. In Townsville, these requirements are met under a Deed of Licence with the Port Authority for access

to its RoRo facility, which involved Defence-funded construction of an extension to the associated Berth 10. In Darwin, Defence has funded refurbishment of the RoRo facility at Fort Hill Wharf under a Deed of Licence with the Port Corporation that also addresses access and berthing rights in the city wharf precinct. The requirement for Defence investment in port infrastructure in Cairns² and Dampier³ is under active consideration.

Port infrastructure investment necessarily requires a long-term view, with trade projections and berth capacity uppermost in the minds of port and government planners. Planning lead times are typically in the 20 to 50 year scale. While investment in new infrastructure generally increases productivity and reduces ship turnaround times, the cost of these investments must be recovered. In addition, new infrastructure initially tends to have relatively low usage rates, but as trade increases so too does port congestion. Port authorities are inevitably faced with striking a balance between the costs of infrastructure expansion and those of port congestion. Ultimately, ports aim to ensure their berths lie idle for as little time as possible. This means that spare berth capacity for naval use will diminish over time, particularly if redundant wharf areas are not replaced.



Australia's Major Ports and Rail Links

Under Section 70C of the *Defence Act 1903*, RAN ships are exempt from payment of berthage fees in Australian ports, although they do pay for received services such as water, power and telephones. Therefore, while local communities benefit economically from RAN ship visits, port authorities themselves receive no direct revenue. This partly determines a commercial reality that naval ships do not enjoy the same priority for berthing as commercial shipping. Even so, Australian ports have generally been outstanding in their efforts to accommodate visiting warships around their busy commercial shipping schedules.

Australia's Major Ports and Rail Links

In looking to the future, the key question is whether existing arrangements will be sufficient to provide RAN and other ADF elements with the port access necessary to carry out assigned national security tasks. Arguably a port system that is unable to respond to the support and surge demands of Defence during contingencies will quickly become a bottleneck and impede operations.

Present liaison links between the RAN and the chief executives of key ports certainly seem capable of dealing with future contingencies where the Department may require priority access to a port for a specific task attracting high national priority. This liaison has occurred successfully in the past to accommodate various regional contingencies, under the principle that commercial shipping may be held off a berth while a higher priority Defence task is undertaken. In most contingent situations, Defence will need access to general cargo and RoRo berths, plus refuelling and intermodal links.

Short term but high naval demands are also placed on ports during major exercises such as the recent KAKADU 7 off Darwin and TALISMAN SABRE 05 off the Queensland coast. In the latter case, the Department established liaison cells in key ports to assist with the significant additional RAN and US Navy requests for alongside berth space, often at short notice.

Access to dedicated naval F76 diesel fuel supplies remains a key issue. Although some uncertainties exist over naval fuel offload arrangements in Darwin beyond 2010, fuel storage capacity at that port's NFI remains adequate for the foreseeable future. Limitations on commercial fuel storage capacity and re-supply in Townsville, particularly during major Defence exercises, suggests the need to consider establishing a dedicated Navy fuel storage facility in that port, noting that access to the nearby NFI storage in Cairns may not be possible for larger ships due to channel limitations in that port.

Present and future Defence needs for access to Australian ports are best facilitated through an ongoing liaison and dialogue process. Prominent in this is the Australian Maritime Defence Council (AMDC), established in 1982 in recognition of the need to develop and maintain sound working relationships between the Department and key

maritime industry players. Chaired by the Deputy Chief of Navy, the biannual AMDC meetings provide a valuable forum in which senior Defence and industry stakeholders can exchange information and keep each other informed of trends and key matters of national maritime interest.

The commercialisation and privatisation of Australian ports has seen a steady shift from Defence dealing with State governments as the owners and operators of ports, to dealing with port operators singularly and collectively. How Defence communicates and interacts with ports has a significant influence on its capability. To address this, Defence has established a close relationship with the Australian Association of Ports and Marine Authorities (AAPMA), which represents the majority of ports. This relationship is further supported by the documented *Guiding Principles for Defence Access to National Ports*, which provide a clear and agreed understanding between the Department and the ports of their shared obligations for Defence access to, and use of, Australian ports.

A new factor in this strategic relationship has been Australia's enactment of the *Maritime Transport and Offshore Facilities Security Act 2003* (MTOFSA). This legislation provides a framework for the deterrence and detection of acts that pose a threat to maritime transport and associated facilities, and applies to approximately 70 ports, 300 port facilities and 70 Australian ships involved in international and interstate trade, plus various offshore facilities. The MTOFSA does not apply to military vessels, ports, or parts of ports under the exclusive control of the ADF. However, the RAN has agreed to work closely with all ports to ensure the force protection measures adopted by its ships dovetail with the MTOFSA security levels and measures that ports are necessarily obliged to implement, and thus avoid compromise of port security arrangements.⁴

The new focus on port security around Australia has also drawn attention to apparent inconsistencies between the ambitions of development planners who seek to place high return residential accommodation at the waters' edge in working ports, versus port authorities who seek to protect the security of their waterfront from urban encroachment. RAN policy is to obtain a minimum of 50 metres and ideally at least 100 metres of clear space around any ship alongside a commercial berth. US Navy requirements for ships visiting Australian ports are comparable. As a consequence, the RAN has decided that its ships will no longer berth at the innermost berths in Port Adelaide, where new townhouses are now located close to the wharf edge – a situation that could well be replicated in other ports under similar circumstances.

In summary, despite the current modest levels of commercial port infrastructure investment by Defence under Deeds of Licence in key ports, and the good working relationship that the Department enjoys with ports and the maritime industry, these arrangements need constant attention to ensure they continue to meet the operational support needs of visiting RAN and foreign warships. With anticipated trade growth in ports like Townsville and Darwin increasingly constraining berth availability, there is

likely to be added pressure on Defence to invest in port infrastructure to meet its specific needs. Unless directed by their governments under community service obligation provisions, ports will not invest in facilities from which they gain no revenue.

These issues are uppermost in present deliberations over future Defence refurbishment and retention of the Iron Ore Wharf in Darwin, and the adequacy of various port facilities – notably in Darwin, Townsville and Gladstone – to accommodate future RAN amphibious ships and their load/offload requirements.⁵ Meanwhile, the RAN's access to key Australian commercial ports will remain vital to conduct of operations and exercises in Australia's northern region, and will continue to be determined largely by the quality and effectiveness of its relations with individual ports and their representative national body.

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Notes

- ¹ HMA Ships *Kanimbla*, *Manoora* and *Tobruk*.
- ² The planned redevelopment of HMAS *Cairns* from 2007-10 seeks to incorporate use of the Sugar Wharf to overcome berth shortfalls.
- ³ The Minister for Defence has announced that Dampier is the preferred operating port for *Armidale* class patrol boats conducting patrols in the North West Shelf area.
- ⁴ RAN force protection policies and the regulations under the MTOFSA are not directly linked.
- ⁵ Current planning is to replace *Kanimbla*, *Manoora* and *Tobruk* with two larger amphibious ships and a sealift capability from 2010.

Farewell to the *Fremantle* Class

Mr Brett Mitchell

On 23 June 2005 the Australian White Ensign was hauled down for the last time in the *Fremantle* class patrol boat (FCPB) HMAS *Cessnock*, heralding the first tangible sign of the end of an era. The following day marked the beginning of an exciting new chapter for the Royal Australian Navy's (RAN) Patrol Boat Force Element Group with the commissioning of HMAS *Armidade*, the first of the new generation of patrol boats. It is thus timely to reflect on the achievements of the *Fremantle* class and the contribution patrol boat men and women have been making to the Navy and the nation.

Planning for the introduction of the *Fremantles* can be traced back to 1970. Operational experience with the 20 *Attack* class patrol boats (146-tonne), which had entered service between 1967 and 1969, highlighted a number of areas for improvement in a future class of patrol boat. In September 1970 the Navy proposed the construction of ten additional patrol boats, to enter service between 1976 and 1980, that would augment the *Attack* class patrol boat fleet and replace two General Purpose Vessels. Important operational considerations for the new boats were improved seakeeping and updated equipment and weapons fit.¹ Recognising the increasing responsibility for Australia to protect its maritime approaches, this plan called for a projected patrol boat fleet of 30 vessels: 16 operated by the RAN, 4 by the Royal Australian Naval Reserve (RANR), and 10 by Papua New Guinea.

The acquisition of replacement patrol craft was announced in April 1975. The 11 shipbuilders invited to submit tenders were shortlisted to two in 1976: Brooke Marine of the United Kingdom with the *PCF 420* design; and Lürssen Werft of West Germany with the *FPB 45* design. On 22 September 1977 the then Minister for Defence, The Hon James Killen MP, advised Parliament that the *PCF 420* design had been selected and that 15 patrol boats would be built at a cost of A\$115m. It was decided that Brooke Marine would build the lead ship in Lowestoft, United Kingdom, and that North Queensland Engineers and Agents (NQEA) would build the majority of the boats in Australia. Plans to acquire five additional patrol boats were deferred indefinitely in 1982.

With a length of 42 metres and displacing 220 tonnes, the FCPBs would be 28 per cent longer and 50 per cent heavier than the *Attack* class. It was recognised early on that the existing bases in Cairns and Darwin were incapable of supporting the new boats. Therefore naval infrastructure in both ports was upgraded to provide new dedicated patrol boat bases incorporating modern maintenance, logistic and administrative facilities to cater for the larger craft.

Construction of the first of class, HMAS *Fremantle*, began in October 1977 and she was launched in blizzard-like conditions on 16 February 1979. The commissioning of

Fremantle was delayed until 17 March 1980 when contractor trials revealed that she was some 20 tonnes overweight. However, the ship more than proved her worth after she was detached from the contractor's trials program to rescue a British seaman thrown from his fishing trawler after a collision with an oil tender.²

Fremantle sailed from Lowestoft on 7 June 1980 on the commencement of the long delivery voyage to Australia. She arrived in her home port of Sydney on 27 August 1980 after a voyage of 82 days, 48 at sea, and having steamed 14,509 nautical miles.

The first of the Australian built boats was HMAS *Warrnambool*. The keel was laid in September 1978; she was launched on 25 October 1980 and commissioned on 14 March 1981. NQEA delivered three boats in each of 1981 and 1982, and four in each of 1983 and 1984. HMAS *Bunbury*, the fifteenth and final vessel, entered RAN service in December 1984.



HMAS Cessnock on patrol

By the time all 15 boats were in service, four each were based in Cairns, Darwin and Sydney; two in HMAS *Stirling*, Western Australia, and one in HMAS *Cerberus*, Victoria. The *Attack* class patrol boats still in service were transferred to Indonesia and the RANR.

The FCPBs have primarily been concerned with maintaining Australian sovereignty and preventing illegal immigration, fishing and smuggling.³ They have often worked in close cooperation with external government agencies including: the Department of Immigration, Australian Customs Service, Australian Fisheries Management Authority, and the various National Parks and Wildlife Services. Navy patrol boat boarding parties have at times encountered obstruction and hostility from illegal fishermen and people smugglers. Attempts to avoid the apprehension or administrative seizure of illegal vessels frequently challenged the limits of the jurisdiction of Australia's maritime zones. FCPB crews were often essentially engaged in a form of 'lawfare' in Australian waters.

Although the primary focus of operations was off Australia's northern coast, during the 1980s regular patrols were also conducted in the restricted waters around the Bass Strait oil rigs by Melbourne and Sydney-based boats, supported on an ad hoc basis by their northern-based sister ships.

In line with government efforts to engage Australia's regional neighbours, the FCPBs have regularly deployed to the South West Pacific and South East Asia, fostering military and diplomatic relationships and furthering Australia's strategic interests. The boats have deployed as far afield as Thailand to the north, and the Cook and Marshall Islands to the east and north-east.

Deployments often coincided with multinational exercises, including the STARDEX and STARFISH series in the South China Sea, or required the ship's companies to represent Australia on ceremonial occasions. For example, *Cessnock* and *Ipswich* visited Penang for the Royal Malaysian Navy International Fleet Review in 1990, and *Whyalla* and *Wollongong* were in Indonesia for the Republic's 50th anniversary fleet review in 1995. Occasionally a FCPB has had the privilege of being the first Australian warship to visit a particular port. One of the more significant 'firsts' was the visit of *Launceston* and *Dubbo* to Cambodia in June 1996. FCPBs have also supported regional disaster relief operations.

Locally, the FCPBs have participated in major tri-Service exercises including the KANGAROO and KAKADU series, conducted search and rescue operations, provided security for visiting heads of state, and aided the civil community by supporting local events and festivals. The class as a whole received high profile media exposure when the Australian Broadcasting Corporation televised the second season of Patrol Boat in 1983. *Launceston*, *Townsville*, *Warrnambool*, *Whyalla* and *Wollongong* were all seen masquerading as the fictitious HMAS *Defiance*.

In addition to their routine operational surveillance tasks, the FCPBs have also been deployed on regional military operations. *Cessnock*, *Dubbo*, *Townsville* and *Wollongong* supported Operation MORRIS DANCE, in which a RAN task force was stationed off Fiji following the May 1987 coup. *Bunbury*, *Dubbo*, *Geraldton* and *Gladstone* were

placed on station in the Timor Sea during the initial stages of Operation WARDEN in September 1999 to provide a military search and rescue capability in the Darwin–East Timor air corridor.

The arrival of the MV *Tampa* off Christmas Island in August 2001 and subsequent incursions by Suspected Illegal Entry Vessels saw the government implement Operation RELEX, an unprecedented whole-of-government effort to deter unauthorised arrivals attempting to enter through Australia's northern maritime boundary. To cope with this, the RAN permanently redeployed the Sydney and Stirling-based patrol boats to Darwin. The increased operational tempo in 2001-02 saw the patrol boats provide 2103 days in support of the Civil Surveillance Program, significantly higher than the performance target of 1800 days.⁴

Operationally the pinnacle for the *Fremantle* class occurred in 2003-04 with their collective contribution to Operation ANODE, the Australian Defence Force contribution to Operation HELPEM FREN, the Australian-led Regional Assistance Mission to Solomon Islands. *Whyalla* deployed with the initial task group in July 2003 and remained on station until early September 2003. She was followed by seven of her sister ships: *Ipswich*, *Wollongong*, *Gladstone*, *Cessnock*, *Geraldton*, *Geelong* and *Fremantle*. *Fremantle* had the honour of being the last Australian ship committed to Operation ANODE. Her departure in October 2004 drew to a close the RAN's 15-month presence in the troubled island state.⁵

Incidents such as the grounding of HMAS *Wollongong* at Gabo Island in June 1985, and the structural damage to HMAS *Gawler* caused by the failure of the Darwin Naval Base synchrolift in November 1997, attracted media attention. However, these events stand out as the only major problems in sustained operations since 1980. Despite their ageing hulls and systems, the boats have proven themselves to be highly reliable platforms and have experienced few major difficulties, which is a credit to their design and construction, and to the dedicated men and women who have served in and maintained them.

During their operational lives, the FCPBs provided invaluable training and experience to the RAN's future leaders. Patrol boat operations provided independent operational and command experience early in officers' and sailors' careers, in a complicated environment in which real-time decisions had immediate and real consequences. For a time during the late 1980s and early 1990s, *Fremantle* and *Warrnambool* also served as reserve training vessels, manned by a cadre crew of permanent naval personnel supplemented by members of the RAN Reserve.

Plans to replace the FCPBs were first given consideration in the early 1990s as the oldest boats approached their designed hull life of 15 years. The intent was to acquire a substantially larger and more capable Offshore Patrol Combatant (OPC), however, without international support that program became unaffordable. The decision was

made to modernise the *Fremantles* and extend their hull life to 19 years. A request for tender to replace the *Fremantles* was finally released in 2001, and tenders were evaluated during 2002-03. A contract worth \$553 million was signed on 17 December 2003 with Defence Maritime Services to supply and support twelve 56-metre *Armidale* class patrol boats, to be built by Austal Ships in Western Australia. Two additional vessels have since been ordered to support the newly established Joint Offshore Protection Command.

For a quarter of a century the 15-strong fleet of *Fremantle* class patrol boats has been the cornerstone of Australian maritime surveillance, interdiction and border protection operations, undertaking tasks and voyages never envisaged when they were first acquired. The eventual decommissioning of *Gladstone* in February 2007 will no doubt be tinged with some sadness as it draws the final curtain down upon the *Fremantle* era.

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Notes

- ¹ Navy Project Brief 31, *Ten Patrol Boats*, September 1970.
- ² F. Cranston, 'Unaccepted boat saves man', *The Canberra Times*, 6 November 1979.
- ³ Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, RAN Doctrine 2, Defence Publishing Service, Canberra 2005, p. 133.
- ⁴ Department of Defence, *Defence Annual Report 2001-02*, Department of Defence, Canberra, 2002.
- ⁵ See 'The Royal Australian Navy and the restoration of stability in the Solomon Islands', *Semaphore*, No. 13, August 2005.

Naval Ingenuity: A Case Study

Mr John Perryman

Throughout history, seafarers have had to consistently use their ingenuity to improvise, adapt and overcome in the face of adversity. The very nature of ships is such that when they sail and the 'umbilical cord' connecting them to shore infrastructure is cut, they become dependent upon their own provisions and resources. Notwithstanding the technological advantages enjoyed today by mariners the world over, this truism remains.

It was certainly the case in January 1979 when the *Perth* class Guided Missile Destroyer (DDG) HMAS *Hobart* closed up at 'flying stations', and in a world first prepared to land a helicopter onboard a hastily constructed helicopter pad situated on her quarterdeck. The story of this historic event is but one example of the type of initiative and resourcefulness displayed by officers and sailors serving in the Royal Australian Navy (RAN). It remains a fine example of naval ingenuity.

On 4 January 1979, *Hobart*, under the command of Captain P.G.N. Kennedy, RAN, was berthed outboard of the destroyer tender HMAS *Stalwart* in Sydney, undergoing an Assisted Maintenance Period. With much of her machinery and vital equipment in pieces, and with many of her crew still absent on Christmas leave, the possibility of sailing within 24 hours seemed remote. However, when orders were received to standby to sail for an urgent medical evacuation task at Macquarie Island in the Southern Ocean, the ship responded to the first of a series of obstacles that were to be encountered throughout the mission.

As further details of the tasking were received, the full extent of *Hobart's* mercy mission became apparent. It was learned that Mr Roger J. Barker, a biologist working as part of Australia's Antarctic Expedition on Macquarie Island, had fallen 200 feet down a cliff face while studying bird life, and that he had sustained extensive spinal and leg injuries. Although he had been recovered from the scene of the accident and was receiving first aid, it was clear that he required urgent specialist medical treatment and that he would need to be evacuated to the nearest hospital, some 900 miles to the north-west in Hobart, Tasmania. *Hobart* was consequently briefed to make preparations to steam south with all dispatch and evacuate Mr Barker from Macquarie Island to Tasmania.

The first of the obstacles that *Hobart's* command faced was to bring the destroyer to a state of immediate readiness for sea and the second challenge was to assemble a crew. A number of essential *Hobart* personnel were recalled from their leave, while other RAN vessels alongside Garden Island and several shore establishments contributed members of their duty watches to complement her depleted ship's company. A further obstacle

was to restore vital machinery to working condition. As this work went on *Hobart* fuelled throughout the afternoon and evening of 4 January at which time confirmation of the mission was received from Fleet Headquarters. With final preparations continuing throughout the morning of 5 January, *Hobart* sailed from Sydney at 1500, on one boiler and short 100 men from her usual complement of 333. As she made her way through Sydney Heads the second of her four boilers was brought on-line with the remaining two being flashed up off Jervis Bay and Gabo Island respectively. With full power now available, *Hobart* proceeded with dispatch on the 1340 mile mercy dash to Macquarie Island.

In the meantime, the antarctic support vessel MV *Thala Dan* was only 12 hours steaming from the port of Hobart. The *Thala Dan* was directed to put into Hobart, disembark her passengers and take on a helicopter chartered by the Antarctic Division to assist in the rescue.

The following day, *Hobart* established direct communications with Macquarie Island and a full medical update on Mr Barker's condition was received. Having fallen from the cliff face, Mr Barker had spent four agonising hours lying on his stomach trying to stop skuas from pecking at his injuries before he was rescued.¹ Grave concerns were held for his wellbeing and it was unclear what the best method of transferring him to *Hobart* would be, in light of deteriorating weather conditions at Macquarie Island.

On Sunday 7 January a three way communications link was established between *Hobart*, the *Thala Dan*, and the Macquarie Island base. Transfer options were discussed with the pilot of *Thala Dan*'s small utility helicopter, Nigel Osborn who, as luck would have it, was an ex-Royal Navy pilot. It was agreed that a makeshift helicopter pad should be constructed onboard *Hobart* to enable transfer of the patient by air in the event that weather conditions at Macquarie Island were unsuitable for a boat transfer.

Throughout the day, *Hobart* found herself in rapidly deteriorating weather, with a 15-foot swell running and the wind registering a constant force seven (28-33 knots). A number of her crew, particularly those who had been seconded for the voyage and who were not accustomed to the pitching and rolling of a DDG, experienced great discomfort as the ship steamed steadily south. In spite of this, the destroyer's shipwrights, engineers and seamen commenced work on the construction of the helicopter pad on the port side of *Hobart*'s quarterdeck, using only the material and expertise available onboard. By the end of the day they had skilfully assembled a stout platform and were reasonably confident that it would be capable of receiving *Thala Dan*'s helicopter should the need arise.

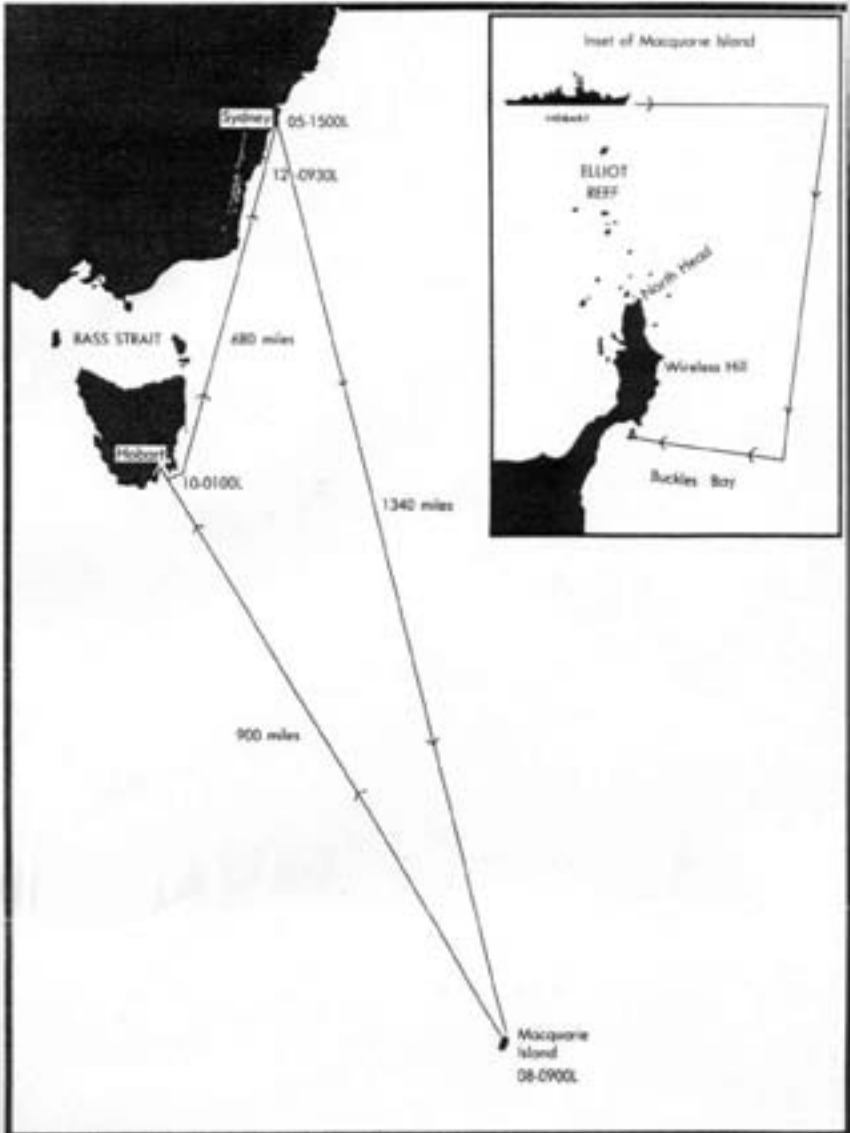


Chart depicting Hobart's mercy dash



*Thala Dan's helicopter on the make-shift helipad
onboard HMAS Hobart*

At 0515 on Monday 8 January, Macquarie Island was raised on radar and shortly afterwards *Hobart* altered her course to pass between the Judge and Clerk Islands as she proceeded to rendezvous with *Thala Dan* in Buckles Bay. On arrival in Buckles Bay at 0854, *Hobart* anchored two and a half cables to seaward of *Thala Dan* where an immediate assessment was made on how best to transfer the injured scientist. *Hobart* was rolling up to 12 degrees with the wind gusting between 30 and 35 knots, while the choppy sea state was estimated to be between three and four feet in height. Notwithstanding the shelter offered within the bay, it was obvious that it would be much too hazardous to attempt a boat transfer and risk further injury to the patient in such conditions. Thus the decision was made to transfer the patient using *Thala Dan's* helicopter.

Within half an hour *Hobart* was closed up at 'flying stations' and *Thala Dan's* helicopter was called in to attempt a trial landing on the recently constructed helipad. The landing was timed to avoid periods of excessive rolling and at 0930 the helicopter landed safely on board the makeshift structure. With the trial complete attention now turned to the medical evacuation of Mr Barker, which began at 1002 following the passing of a

heavy rain squall. Again the helicopter was called in and the transfer was successfully completed in approximately 60 seconds.² With the patient and an Antarctic Division medical officer safely on board *Hobart*, the helicopter returned to *Thala Dan* with the distinction of being the first aircraft to land on board a *Perth* class DDG.

Hobart weighed anchor without delay and once clear of the island set course at best speed for the 900-mile voyage to Hobart. Mr Barker handled the rough sea conditions well throughout Monday 8 January and the forenoon of the following day; however, concern over a deterioration in his condition necessitated an increase in speed in spite of the weather. The Derwent River was entered at 2340 on Tuesday 9 January and *Hobart* berthed alongside Macquarie Wharf at 0115 on Wednesday morning, completing the journey in a record 39 hours. Shortly after berthing, Mr Barker was transferred to a waiting ambulance and taken to the Royal Hobart Hospital.

Throughout the transit from Macquarie Island to Hobart, it was reported that the injured Roger Barker displayed great courage and remained composed in spite of his terrible injuries. He underwent emergency surgery on arrival in hospital at Hobart, which sadly resulted in the amputation of his left leg. It was with deep regret that the crew of *Hobart* later learned that he lost his fight for life when he succumbed to his injuries in Melbourne on 8 February 1979.³ As a tribute to Roger Barker, the Barker Channel in the Vestford Hills region of Australian Antarctic Territory was subsequently named in his honour.⁴

Hobart's mercy dash in 1979 typifies both the character and compassion of the Australian sailor. Her 'scratch' crew's willingness to put service before self to assist someone in great need, coupled with their ability to improvise in the face of adversity continues to serve as a fine example of naval ingenuity.

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Notes

- ¹ 'Hobart's mercy dash to the Antarctic and back', *Navy News*, Vol. 22, No. 1, 26 January 1979.
- ² HMAS *Hobart*, *Report of Proceedings*, January 1979.
- ³ The rescue of Mr Roger Barker is mentioned in Tim Bowden, *The Silence Calling, Australians in Antarctica 1947-97*, Allen & Unwin, St Leonards, NSW, 1997, pp. 351-352.
- ⁴ Australian Antarctic Division (Australian Antarctic Data Centre), Antarctic Names and Gazetteer, search for 'Barker', <www.aad.gov.au/default.asp?casid=5364> viewed 15 November 2005.

A First Analysis of RAN Operations, 1990–2005

Mr Andrew Forbes

Over the past 15 years the Australian Defence Force (ADF) has experienced an increasing operational tempo as the strategic environment has changed, leading successive governments to commit forces to operations around Australia, into the region and further afield. The Royal Australian Navy (RAN) has been at the forefront of these operations, as the recently published *Database of RAN Operations 1990–2005* illustrates.¹ While the information in the database has been gathered from a variety of sources and is being continually refined and updated, an analysis of the existing data reveals some significant strategic issues.

Categories of operations in the database are based on the Span of Maritime Tasks described in *Australian Maritime Doctrine*, a modification of Ken Booth's trinity of naval roles: military, constabulary and diplomatic.² Military operations are directly related to combat and the use, or threat, of force to achieve Australia's national interests. Constabulary operations – law and order or policing functions – are concerned with the enforcement of both domestic and international law, while diplomatic operations include all the activities supporting national interests, including foreign relations and national foreign policy. Thus the role of any particular operation does not indicate the level of intensity of the threat environment. Importantly, it is the capabilities that enable the conduct of military operations that also permit constabulary and diplomatic operations to occur. Table 1 provides a summary of the number and type of Australian maritime operations from January 1990 to March 2005.

Notwithstanding that the RAN mission is *to fight and win at sea*, numerically more constabulary and diplomatic operations have been conducted than military operations, although it is important to note that individual operations vary considerably in scope, size and duration. The ADF exists to defend Australia and Australian interests and when not committed to combat operations, it is a deterrent to potential adversaries. Where navies differ from armies or air forces is that a broad range of naval activities continually takes place, irrespective of whether forces are committed to combat operations.

Military operations are rare in number but have involved numerous, highly capable units for prolonged periods at lengthy distances from Australia. For example, the RAN has been committed to operations in the Persian Gulf since 1990, with some 30 deployments of individual ships or 2-3 ship Task Groups. This extensive commitment highlights the flexibility and durability of naval forces. When first deployed in 1990, the Australian Task Group was ready to sail within 48 hours of being committed, trained to a high readiness level while in transit and was ready to conduct operations on arrival in theatre. Subsequent deployments have involved a range of constabulary

Year	Types of Military Operations		
	Military	Constabulary	Diplomatic
1990	0	30	17
1991	1	15	10
1992	0	12	9
1993	0	8	8
1994	0	12	8
1995	0	13	9
1996	0	10	3
1997	0	22	12
1998	0	13	10
1999	1	14	6
2000	0	9	6
2001	1	15	7
2002	1	5	6
2003	2	25	12
2004	0	27	10
Jan-Mar 2005	0	2	5
Totals (376)	6	232	139

Table 1: RAN Maritime Operations 1990 - March 2005

and coercive diplomatic roles when enforcing United Nations (UN) sanctions against Iraq, as well as direct combat during the 2003 Iraq War.

The other major national commitment during this period was the UN-mandated operation in East Timor from 1999. The RAN conducted a traditional amphibious operation, transporting and resupplying ADF and allied elements ashore. The RAN also undertook hydrographic surveys in Dili Harbour, cleared the harbour of obstacles and conducted explosive ordnance disposal, inserted troops along the East Timor coast, provided respite onboard its ships for shore-based forces, and, particularly in the initial stages, provided air defence to forces ashore.

Numerically, constabulary operations comprised the majority of operations since 1990, with the RAN providing a considerable and continuous contribution to Peacetime National Tasks (PNT).³ The major focus of effort was the Civil Surveillance Program, with 1800 patrol boat sea days made available annually to Coastwatch for the surveillance, interception, boarding and repatriation of ships suspected of involvement in illegal

fishing or illegal immigration. This commitment illustrates the RAN's long-term utility in a whole-of-government approach to national security. In other anti-illegal fishing operations, major surface combatants have, with tanker support, patrolled deep into the Southern Ocean since the late 1990s to protect the fisheries of Australia's offshore territories.

The RAN also regularly provided Search and Rescue (SAR) assistance throughout Australian and overseas waters, searching for sailors and aviators lost at sea. Warships have been dispatched deep into the Southern Ocean on rescue missions, and often worked in conjunction with the Royal Australian Air Force (RAAF), with long-range fixed wing aircraft locating those in distress and the major fleet units rescuing them. Naval aviation also played an important role, with the Sea King and Seahawk helicopters being called upon for SAR missions both at sea and ashore.

The Australian Hydrographic Service charts Australian and adjacent waters for both civil and military requirements. Under international law coastal States are required to ensure the safety of navigation in their waters, and the RAN has the national responsibility for hydrographic surveys and the creation, maintenance and updating of charts. This surveying and charting responsibility extends from mainland Australia to Antarctica and includes assistance to Papua New Guinea.

The RAN also made a significant contribution to the 2000 Sydney Olympics, with an amphibious transport ship (LPA) on stand-by and a clearance diving team and a helicopter squadron both fully committed for several months.

Many diplomatic operations were undertaken from 1990, including peacekeeping, evacuations, humanitarian assistance, regional and international exercises, and port visits. These operations included support to peacekeeping efforts in Cambodia, Somalia, Rwanda, Bougainville and in the Solomon Islands. The purposes of bilateral and multilateral exercises are for each navy to benchmark their skills, pass on their expertise, and to learn from the other participants. This assists international maritime security cooperation, while achieving the aims of Australian foreign policy for a stable and friendly region. Port visits have been conducted throughout the South West Pacific and Asia on a regular basis.

These maritime operations have been conducted during a period of major re-equipping of the RAN. The Navy's force structure is based on the concept of a balanced fleet, providing a range of flexible and responsive options for government across the conflict spectrum. The RAN is structured for combat operations and the inherent flexibility and adaptability of its maritime platforms allows them to be employed across the numerically greater range, but usually lesser threat, of constabulary and diplomatic tasks.

Often forgotten are the major changes to the Navy's inventory over the past 15 years. While new platforms have enhanced the RAN's combat capabilities, considerable administrative and planning effort has been devoted to their introduction, including

training and logistic and maintenance support, while the operational tempo has continued unabated.

The *Anzac* class frigates were being progressively introduced at a mid-level capability but, with the RAN's commitment to high-end operations, they are currently undergoing major warfighting capability upgrades. The three *Perth* class guided missile destroyers were decommissioned between 1999 and 2001, leaving a command and control (C2) and an air defence capability deficiency in the fleet that the planned Air Warfare Destroyers will address. Four *Adelaide* class frigates (FFG) are also undergoing a capability upgrade.

HMAS *Westralia* was initially leased and then purchased to provide dedicated tanker support to the surface combatants for long-range and extended endurance missions. The LPAs not only provide a relatively new amphibious capability for the ADF, which has immeasurably extended the range over which the Australian Army may deploy in mass, but they also provide some aspects of the missing C2 capability. An LPA provided the Australian C2 capability during the 2003 Iraq War and in a number of regional operations.

The *Huon* class coastal minehunters are a new capability introduced to manage possible sea mining threats to Australian ports and approaches. The *Collins* class replaced the *Oberon* class submarines, but given the sensitivity of submarine operations, most of their



HMAS Westralia

activities are not included in the database. Two older survey ships were decommissioned and two new *Leeuwin* class hydrographic ships entered service from 2000. After the demise of fixed wing aviation with the decommissioning of the aircraft carrier HMAS *Melbourne*, the Seahawk helicopter was introduced as an integral component of the FFGs and the Seasprite helicopter is currently being introduced for the *Anzacs*.

Since 1990, the number and intensity of RAN operations has increased, and their geographic locations have broadened, to levels not otherwise experienced since World War II. Linking policy changes and the detailed programs of individual units (neither of which are shown in the database) with the commitment of units to operations illustrates some of the challenges of concurrent operations.

The effect of this increased operations tempo on personnel required the redevelopment of policies to manage the number of days spent at sea by individuals. A series of initiatives has been introduced since the early 1990s to enable Navy people greater opportunity to take their leave entitlements and also to progress career opportunities through the conduct of advanced training and education courses. Achieving these people-focused initiatives remains a challenge during concurrent operations, which has more recently led to the trial and implementation of flexible or multi crewing of some RAN ships.

Another operational response to the increased tempo has been possible because of the interrelated characteristics of maritime power that allow warships to simultaneously operate across the conflict spectrum and undertake multiple tasks over prolonged periods.⁴ In 2001 the government refocused constabulary operations to the border protection role through Operation RELEX, which increased the naval presence in northern waters to deter and intercept increased numbers of illegal immigrants attempting to enter Australia. Major surface combatants, coastal minehunters, amphibious ships and hydrographic ships supplemented the patrol boats on border protection duties. Significantly, many of the units initially committed to Operation RELEX were returning from regional deployments or exercises and took up station in northern waters without first returning to port, and were able to remain on station through being resupplied at sea when required.

A first analysis of the *Database of RAN Operations 1990–2005* shows that Navy units acted independently, with single ships being tasked to many operations, or as part of larger forces, and across the trinity of naval roles. They operated as part of RAN Task Groups, where their capabilities were most effectively integrated, and as part of combined Task Groups, because of the interoperability achieved between navies through bilateral and multilateral exercises. They conducted joint operations with the Australian Army or RAAF or both. While the focus of ADF operations is joint in nature, the past 15 years demonstrates a continuing need for the RAN to operate jointly, in a combined force, and also independently.

Although the majority of maritime operations over the past 15 years have been constabulary or diplomatic in nature, many of these operations took place in a high-threat environment and could not have occurred without the naval forces being designed for military operations. This is the key flexibility of a balanced fleet: its ability to operate across the conflict spectrum and the trinity of naval roles, providing governments with the broadest range of naval force options.

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Notes

- ¹ Royal Australian Navy, *Database of RAN Operations, 1990-2005*, Working Paper No. 18, Sea Power Centre - Australia, Canberra, 2005.
- ² Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, pp. 55-57.
- ³ Department of Defence, *Defence 2000: Our Future Defence Force*, Canberra, 2000, pp. 52-53.
- ⁴ Royal Australian Navy, *Australian Maritime Doctrine*, pp. 48-51.

Maritime Security Regulation

Mr Andrew Forbes

The events of 11 September 2001 initiated a change in concepts of security and a reconsideration of the types of threats that States might face. While States had long been aware of the possibilities of attacks against transportation, September 2001 saw a reorientation from attacking transport toward the use of the transportation system itself as a weapon. What became clear was that the nature of the emerging security environment was not reflected in international law; at issue was the fact that international law was based on acting after the event to 'punish' the perpetrators, rather than allowing States to suppress or prevent such acts from occurring in the first place.

At the instigation of the United States, the international community through the International Maritime Organization (IMO), began considering in November 2001 how to improve the security of maritime transport worldwide to reduce the possibility of maritime terrorist attacks, and/or the importation of weapons of mass destruction (WMD). In December 2002, after 12 months of deliberation, the international community agreed to amendments to the *International Convention for the Safety of Life at Sea 1974* (SOLAS). A new chapter was included in SOLAS - Chapter XI-2 Special Measures to Enhance Maritime Security - and the *International Ship and Port Facility Security* (ISPS) Code was introduced.¹

In May 2003 State and Federal Transport Ministers agreed to implement the ISPS Code in Australia, and on 12 December 2003 the *Maritime Transport Security Act 2003* (MTSA) was passed, entering into force on 1 July 2004.² Under the MTSA, the owners of 300 port facilities in 70 ports and 55 Australian-flagged ships were required to conduct security risk assessments and develop appropriate security plans to manage those risks. These risk assessments and plans include an escalating security regime, whereby higher security levels require additional security measures to be put in place.

After reviewing Australia's maritime security arrangements in early 2004, the Secretaries Committee on National Security proposed the creation of a Taskforce on Offshore Maritime Security to examine security arrangements for Australia's offshore oil and gas facilities; this taskforce subsequently made a number of recommendations. Concurrently with taskforce deliberations, the government announced during the October 2004 Federal election campaign that two additional *Armidale* class patrol boats would be purchased for the RAN to conduct augmented patrols of the North West Shelf.³ On 15 December 2004, the Prime Minister announced that the Commonwealth would assume responsibility for all offshore counter-terrorism activity and the protection of offshore oil and gas facilities, with the States and the

Northern Territory Government assuming responsibility for port security. He also announced the creation of a Joint Offshore Protection Command (JOPC), comprising the Coastwatch organisation in the Australian Customs Service and elements of the Australian Defence Force (ADF), and the development of an Australian Maritime Identification System (AMIS).⁴ Under AMIS, it is envisaged that ships proposing to enter Australian ports will be required to provide comprehensive information such as ship identity, crew, cargo, location, course, speed and intended port of arrival at 1000 nm from Australia's coast. At 500 nm from the coast, information would be sought voluntarily from vessels proposing to transit Australian waters but not enter a port. Within Australia's 200 nm exclusive economic zone (EEZ), the aim would be to identify all vessels other than day recreational boats. JOPC is managing the development of AMIS, which will draw upon and fuse information from a variety of agencies. Flowing from the work of the taskforce, the MTSA was amended in June 2005 to extend Australia's maritime security regime to Australia's offshore oil and gas facilities, resulting in the MTSA being renamed the *Maritime Transport and Offshore Facilities Security Act 2003* (MTOFSA).⁵

While the ISPS Code established a framework for preventive security for ships and ports, there was acknowledgment internationally that more work was needed to develop a framework for responding to intelligence about planned attacks, and intervening, before such attacks could occur. To address this need, the international community turned to an existing maritime security instrument – the *Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation 1988*, which has become known as the SUA Convention.

In October 1985, four members of the Palestine Liberation Organization hijacked the Italian cruise ship *Achille Lauro* on the high seas off Egypt, and an American tourist was subsequently murdered. After jurisdictional wrangling between various governments, the perpetrators were eventually released without being charged with any offences. In reaction to this attack, the IMO developed the SUA Convention, aimed at ensuring that anyone committing unlawful acts against the safety of navigation will not be given shelter in any country, but will either be prosecuted or extradited to a State to stand trial.

After September 2001, the IMO developed amendments to the SUA Convention, to overcome the lack of an enforcement mechanism and to create new offences for acts of terrorism at sea, including for the transport of certain items that could be used to commit terrorist acts. These amendments (the 2005 Protocols) were agreed at a Diplomatic Conference in London during October 2005 and broaden the list of offences made unlawful under the treaties, so as to include the offence of using a ship itself in a manner that causes death or serious injury or damage, and the transport of weapons or equipment that could be used for WMD. They also introduced provisions for the boarding of ships where there are reasonable grounds to suspect that the ship or

person/s on board the ship is, has been, or is about to be involved in, the commission of an offence under the Convention.⁶ Ninety days after 12 member States have ratified the 2005 Protocols these new provisions will come into force.



RAN boarding party onboard one of three captured Iraqi vessels, laden with 86 LUG and MANTA mines

Linked to the development of the ISPS Code, the IMO plans to introduce a Long Range Identification and Tracking (LRIT) system, to enable countries to identify all vessels transiting their waters and particularly those intending to enter port. All SOLAS-compliant ships will have LRIT satellite systems that will provide the ship's identity and location. It has already been accepted that Flag States will be able to access the data from their ships anywhere in the world, while Port States will be able to access the data from a nominated port following a declaration from the ship of an intention to enter that port. Debate continues on when a Coastal State should be able to gain access to this information for ships transiting its waters but not intending to enter port. From an Australian perspective, the further from Australia this information is made available, the more time is available to identify a threat and develop response options.

Small ships (less than 500 gross tonnes) are not regulated under SOLAS and thus constitute a possible threat to shipping, or are at least a vulnerability. The threat is that these small ships can be used as a means to attack other ships. While the attacks on the USS *Cole* in October 2000 and the MV *Limburg* in October 2002 were by speed boat, these incidents highlighted force protection issues for both warships and international shipping. The vulnerability of small ships is that pirates and sea robbers may target them. Some members of the IMO are proposing to analyse and assess the vulnerability of small ships, and consider the appropriate security measures for them as well as implementation plans.

What does all this mean for the RAN? The impact of maritime security regulation is twofold: where it impacts on how the Navy undertakes its activities; and where it influences the roles the Navy might undertake.

The MTOFSA will have an impact on the RAN. First, warships are exempt from its provisions, and are therefore not required to submit security plans consistent with the ISPS Code when entering an Australian security-regulated port. However, through a process of close consultation with the Association of Australian Port and Marine Authorities, liaison procedures have been developed to ensure that when RAN ships visit Australian ports, the self-protection measures they implement are consistent with and avoid compromising the port security plans in force. This also extends to ADF member exemptions from carrying the newly introduced Maritime Security Identification Cards when going about their legitimate business in an Australian port. These measures avoid unduly hampering RAN operational activities, but conversely, in a heightened security environment, the RAN cannot utilise the MTOFSA to create security zones around its warships in security-regulated ports. Rather, it may have to rely on amendments to the *Control of Naval Waters Act 1918* to designate these zones when alongside or underway in a port. Second, in the normal course of events the RAN is not responsible for commercial port security, which is a State Government responsibility. However, under heightened security conditions, the Commonwealth may direct the RAN to assist State governments under the call-out provisions of Part IIIA of the *Defence Act 1903*. Finally, if a ship is deemed to be a threat, or its bona fides cannot be established, the RAN may be called upon to intercept the ship before it enters an Australian port.

The creation of JOPC, and the assignment to the Commonwealth of responsibility for offshore counter-terrorism and protection of oil and gas facilities, will impact on RAN responsibilities. It is likely that JOPC will make greater use of ADF assets to conduct surveillance, interception or boarding (visit, board and seizure) operations against suspect commercial shipping in Australia's EEZ, and the RAN will make a major contribution to these activities. When the LRIT system is agreed and implemented, the information provided will feed into AMIS, providing a more robust Common Operating Picture. This information will allow agencies to assess risks posed by certain ships in order to determine whether they may transit Australian waters, and/or enter Australian ports. The MTOFSA will allow Australia to deny port access to any ships identified as a risk, while the amendments to the SUA Convention, once ratified and implemented in domestic legislation, will provide the legal basis for the RAN and ADF to intercept, board and detain these ships if necessary, well before they enter Australian ports.

Notes

- ¹ International Maritime Organization, *SOLAS – Consolidated Edition, 2004*, London, 2004.
- ² *Maritime Transport Security Act 2003*, <[www.comlaw.gov.au/comlaw/Legislation/Act1.nsf/0/5ED0B1A0C30020B3CA256F720010C857/\\$file/1312003.pdf](http://www.comlaw.gov.au/comlaw/Legislation/Act1.nsf/0/5ED0B1A0C30020B3CA256F720010C857/$file/1312003.pdf)> viewed 21 November 2005.
- ³ *Securing Australia's North West Shelf*, The Howard Government Election 2004 Policy, 16 September 2004, <www.liberal.org.au/2004_policy/Securing_Australias_North_West_Shelf_Policy.pdf> viewed 21 November 2005.
- ⁴ Prime Minister of Australia, 'Strengthening Offshore Maritime Security', Media Release, 15 December 2004, <www.pm.gov.au/news/media_releases/media_Release1173.html> viewed 21 November 2005. After some confusion in the region over the purpose of the announced 'Australian Maritime Identification Zone', the terminology was subsequently amended to the 'Australian Maritime Identification System'.
- ⁵ *Maritime Transport and Offshore Facilities Security Act 2003*, <[www.omlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/0/F8311AC193742AF6CA257084001F6DB0/\\$file/MaritimeTransOffshoreFacilSecurity2003_WD02.pdf](http://www.omlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/0/F8311AC193742AF6CA257084001F6DB0/$file/MaritimeTransOffshoreFacilSecurity2003_WD02.pdf)> viewed 21 November 2005.
- ⁶ International Maritime Organization, *Revised treaties to address unlawful acts at sea adopted at international conference*, Briefing 42, 17 October 2005, <www.imo.org/newsroom/mainframe.asp?topic_id=1018&doc_id=5334> viewed 21 November 2005.

Welcome to the *Armidale* Class

Commander Wesley Heron, RANR, and
Lieutenant Commander Anthony Powell, RAN

Patrol boats have provided an important capability to Australia since 1967, when the first *Attack* class patrol boat was accepted into naval service. The *Attack* class was subsequently replaced with the *Fremantle* class patrol boats (FCPB) from 1980; which are in turn now being replaced by the *Armidale* class patrol boats (ACPB).¹

The *Attack* and *Fremantle* classes both made a significant contribution to Australia's national defence, particularly in border protection through their surveillance, patrol and response capabilities. However, the larger, more capable ACPB will provide an even higher degree of border protection capability because of their superior seakeeping, range and endurance, and state-of-the-art surveillance system.

The replacement for the FCPB had its genesis in 1993 when an initial proposal for a replacement capability took the form of a collaborative program with Malaysia (the Offshore Patrol Combatant/Joint Patrol Vessel). When the decision was subsequently made not to pursue this option, government approved a Life of Type Extension for the FCPB. In 1999, due to the high ongoing maintenance costs of the FCPB compared with developing a new design, it was resolved to commence a Replacement Patrol Boat (RPB) program, known as Project SEA 1444.

Keen to explore innovation in financing the RPB program, the Minister for Defence agreed to the development of a Private Financing Initiative (PFI) appropriate for Project SEA 1444. Consequently, a team was formed to examine the benefits of a PFI as against a more traditional acquisition. Based on their main finding that private financing offered a potential advantage over direct acquisition, the government agreed to test the market on the basis of a PFI strategy. Interested parties were required to bid on both a direct capital purchase and on a PFI basis. After due process the government decided against private financing for the RPB capability, because of uncertainty as to whether the required capability could be provided on a value for money basis.

Instead of the traditional Defence process of specifying detailed requirements, such as the number of vessels of a particular weight, length and construction, the ACPB tendering strategy followed a 'performance based' model. Thus, the tender sought a patrol boat system to provide 3000 days of operational availability of specified performance, with the capacity to surge to 3600 days to meet operational contingencies in any one year. Unlike previous patrol boat programs the emphasis was on a capability at sea to meet operational requirements, not on the number of boats purchased. It was left to the tenderers to meet the 3000 sea day requirement with a reliable patrol boat force rather than a predetermined number of vessels.

The tender detailed a range of specific performance requirements, including the ability for the platform to conduct surveillance and response boarding operations at the top of Sea State 4 (wave heights of 2.5 metres) and to maintain surveillance to the top of Sea State 5 (wave heights of 4 metres). Other requirements included a significantly longer range and endurance than the FCPB: a 42-day mission period; a doubling of the number of seaboats; and a 25mm cannon capability.

The overall tendering strategy for the ACPB linked through-life support costs with the purchase of the platforms. Thus the Commonwealth divested itself of the need to maintain and support this new capability by requiring the winning tenderer to also provide the logistic support package for the 15-year life of each patrol boat.



HMAS Armidale, HMAS Townsville (Fremantle class) and the former patrol boat Advance (Attack class)²

On 17 December 2003 a contract was awarded to Defence Maritime Services Pty Ltd for the *Armidale* class patrol boat with construction undertaken by Austal Ships at its Henderson yard near Fremantle, Western Australia. The \$553m contract was for the design, construction and in-service support of 12 patrol boats. During the October 2004 Federal election, the government announced that two additional patrol boats would be purchased to conduct augmented patrols off the North West Shelf.³

Following the naming convention that RAN ships emphasise the links between the Navy and the wider Australian community, boats of the *Armidale* class are named after Australian cities and towns with close links to our naval heritage. The first of class, HMAS *Armidale* is named after the original *Armidale*, a *Bathurst* class corvette, which served with distinction in World War II. The other 13 boats are named (alphabetically), *Albany, Ararat, Bathurst, Broome, Bundaberg, Childers, Glenelg, Launceston, Larrakia, Maitland, Maryborough, Pirie* and *Wollongong*.

The ACPB have a 25 per cent increase in range compared to the FCPB (3000nm at a cruise speed of 12 knots), which offers greater tasking flexibility as the ACPB will have the ability to remain on task for longer periods in more areas than previous patrol boats. Consequently, the ACPB can undertake sustained operations both in the northern waters and those as far south as 50 degrees latitude. The ACPB will be able to maintain operations in Sea State 5 to 1000nm offshore, be deployed for up to 42 days and will also be capable of surviving cyclonic conditions up to Sea State 9.

	<i>Attack</i>	<i>Fremantle</i>	<i>Armidale</i>
Length (m)	32.76	42	56.8
Beam (m)	6.2	7.15	9.5
Draught (m)	1.9	1.8	2.25
Weight (t)	146	230	270
Speed (kt)	24	28	25

Table 1: Comparison of Patrol Boat Classes

Increased range and seakeeping ability will enable the ACPB to conduct extended patrols further into Australia's exclusive economic zone (EEZ) than was possible with earlier patrol boats. As well as continuing with traditional tasking in the EEZ, the South West Pacific and into South East Asia, the ACPB will provide a sustained patrol and response capability around Christmas and Cocos Islands.

The ACPB are built to combined commercial and naval standards, have an aluminium hull, and are fitted with state-of-the-art systems optimised for their surveillance, patrol and response tasks. Propulsion is provided by two MTU 16V M70 diesel engines, giving the ship an operating speed of at least 25 knots and the capacity to conduct all surveillance and response tasking (including all boarding related evolutions) to the top of Sea State 4. Its two diesel jet propelled 7.2m Rigid Hull Inflatable Boats (RHIB), rapidly launched and recovered using the Vest davit system, essentially double the boarding and response capability of the FCPB. The fact that the RHIB are over-the-horizon capable, with stand-alone communications and safety systems, is a significant force multiplier for the ACPB.

The ACPB have an onboard surveillance and communications suite that underpins its patrol and response capability. This system comprises twin radars, a radar warning system (PRISM III), and an electro-optical detection system (TOPLITE) for short-range detection. The ACPB are also fitted with a fully calibrated and integrated Direction Finding system (WARRLOCK). A state of the art communications system complements the onboard organic sensors by providing both strategic and tactical communications capabilities in the HF, VHF and UHF bands. Utilising networked satellites to gain

access to the wider Defence common operating picture, the crew of an ACPB will have greater situational awareness than the crew of a FCPB.

In terms of armament, the ACPB are equipped with a Raphael Typhoon 25mm automated cannon, made in Australia by General Dynamics Land Systems in Adelaide, and two 12.7mm machine guns. The cannon has a rate of fire of 200 rounds per minute, and the weapon is interfaced with the Electro Optics Surveillance System and is controlled from the bridge. The cannon is the same as that fitted to the Australian Army's Bushmaster armoured personnel carriers, offering value for money maintenance benefits to the Australian Defence Force.

The ACPB will be multi-crewed with 21 crews each of 21 personnel rotating through 14 hulls. The crews will be divided into four Divisions with six crews each in three Divisions (two Red, White and Blue crews) and three crews in the 4th Division (one Red, White and Blue crew). Three of the Divisions will be located in Darwin and one in Cairns, to complement the homeporting of ten boats in Darwin and four in Cairns.⁴ Crews will remain together and will not be rotated through Divisions other than the one to which they are assigned. A single crew will man each of the first three ACPB until the fourth vessel is commissioned in June 2006. Six crews will then each be rotated through the four hulls.

At any given time, two of the crews in a Division will not be attached to an ACPB hull; during their non-operational time, crew will either be on leave, undergoing training or standing by to act as operational relief for another crew. In a mature state, the Patrol Boat Force Element Group will have between one and two crews changing out each week. It is envisaged that the multi-crewing concept will facilitate both maximum use of the ACPB in line with the 3000 sea day (plus surge) capability, while providing for adequate crew rest and balanced work/life commitments. In essence the multi-crewing model provides a 21-ship capability using 14 hulls.

Crew accommodation consists of modern two, three and four berth ensuite cabins – substantially better than the mess-deck style of the FCPB. The ACPB also have the capacity to embark an additional 20 personnel for specific missions, which significantly increases the flexibility and range of tasks that may be undertaken.

Construction of *Armidale* commenced in April 2004, she was launched on 5 January 2005, arriving later in Darwin on 10 May after completing most of her trials, and was commissioned into the RAN on 24 June 2005. After completing her Mission Readiness Evaluation on 16 October 2005, *Armidale* commenced patrolling and protecting Australia's coastline. HMA Ships *Larrakia* and *Bathurst* were commissioned on 10 February 2006, and the last of the 14 ACPB is scheduled for delivery to the RAN at the end of 2007.

The ACPB represent a significant improvement to the RAN's patrol boat capability and will greatly improve conduct of the range of constabulary tasks necessary to

protect Australia's maritime interests, particularly its natural resources and energy infrastructure.

Published as Semaphore Issue 4, 2006

Notes

- ¹ See 'Farewell to the *Fremantle* class', *Semaphore*, No. 17, Sea Power Centre - Australia, Canberra, October 2005; and SEA 1444 - *Armidale* class patrol boat, <www.defence.gov.au/dmo/msd/sea1444/sea1444.cfm> viewed 22 February 2006.
- ² Photo provided by Andrew Mackinnon.
- ³ *Securing Australia's North West Shelf*, The Howard Government Election 2004 Policy, 16 September 2004, <www.liberal.org.au/2004_policy/Securing_Australias_North_West_Shelf_Policy.pdf> viewed 21 November 2005.
- ⁴ *Armidale, Larrakia, Bathurst, Albany, Pirie, Maitland, Ararat, Broome, Glenelg* and *Maryborough*; and *Bundaberg, Wollongong, Childers* and *Launceston* will be based in Cairns.

The RAN and the 1918-19 Influenza Pandemic

Dr David Stevens

Media reports surrounding the dangers of a new influenza pandemic often refer to the global outbreak of ‘Spanish flu’, which struck suddenly at the end of World War I. But none have yet recalled how the crisis brought about Australia’s first overseas humanitarian assistance operation. Today, in the wake of tsunamis, earthquakes and cyclones, we have grown used to the international relief efforts of our Service personnel. However, 90 years ago it remained a novel expedition, but one that nonetheless remained as fundamentally dependent upon maritime capabilities as many still are today.

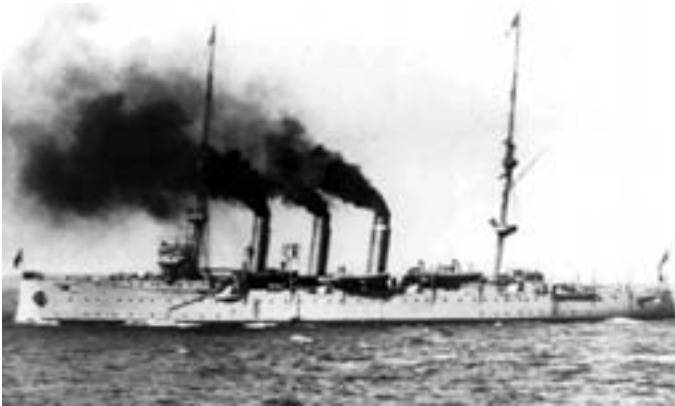
Between April 1918 and May 1919 influenza, or its secondary complications, caused up to 50 million deaths, far more than had been killed in four years of war. Many died within the first few days of infection, and nearly half of these were young, healthy adults. The speed with which it spread has been described as ‘Perhaps the most extraordinary feature of this extraordinary pandemic ...’,¹ for the easy transfer from shore to ship and ship to shore, meant that even communities isolated by sea were vulnerable. A rigorous maritime quarantine policy reduced the immediate impact in Australia, but by the end of 1919 the nation had still suffered more than 11,500 deaths.

The ships of the Royal Australian Navy (RAN), dispersed as they were around the world, were certainly not spared. The pandemic occurred in waves and the cruisers operating with the British Grand Fleet suffered several outbreaks in 1918, with up to 157 cases in a single ship. Outbreaks in the Mediterranean were even more severe with the cruiser HMAS *Brisbane* recording 183 cases between November and December 1918, of whom two died of pneumonia. In all, the RAN lost some 26 men to the disease. When the cramped mess decks and poorly ventilated living spaces of early 20th century warships are recalled, it is perhaps remarkable that the toll was not greater. The saving factor was largely the ready availability of professional medical treatment.²

Some of the most virulent outbreaks occurred in the islands of the South Pacific, where among the indigenous populations few escaped infection. The disease arrived on the regular cargo vessel SS *Talune*, which had sailed from Auckland on 30 October 1918, knowingly carrying sick passengers. Successively calling at ports in Fiji, Samoa, Tonga and Nauru, the steamer’s visits were marked by the first cases of influenza appearing ashore a few days after her departure. With local authorities generally unprepared, the infection spread uncontrollably; a situation aggravated both by the shortage of suitable drugs and the fact that local health workers were among the first to fall. Hardest hit was the former German territory of Samoa, where inept New Zealand administration resulted in no attempts at patient isolation and the rejection of medical assistance offered from nearby American Samoa.³ With the forced closure

of government institutions and stores, few people being in a fit state to assist with the distribution of food and medicines, and a growing number of uninterred dead, the Samoan situation rapidly became critical. On 19 November the military governor in the capital of Apia telegraphed Wellington for help, but had his request turned down on the grounds that all doctors were needed in New Zealand. Australia offered the only alternative source of aid.

The Commonwealth Naval Board was already aware of the developing regional crisis. The sloop HMAS *Fantome*, stationed at Suva in Fiji for police duties, had reported her first cases of influenza on 11 November, and soon had more than half her ship's company incapacitated. More importantly in terms of an effective Australian response, of all government departments, only the RAN had suitable assets at immediate readiness. On 20 November the board began gathering a joint relief expedition from among the available naval and military medical personnel, placing it under the command of Surgeon Temple Grey, RAN. The Commanding Officer of HMAS *Encounter*, Captain Hugh Thring, RAN, was then ordered to embark the expedition at Sydney and proceed at the earliest possible date to Samoa.⁴



The Second Class Cruiser, HMAS Encounter

Even today the speed of *Encounter's* response must be admired. Her sailing orders were telegraphed from Melbourne on Friday 22 November, and throughout the next day and night the cruiser's ship's company worked tirelessly to get in relief stores. Without any information from Samoa as to specific requirements, Thring loaded almost 150 tonnes of cargo ranging from blankets and tents through to drugs and dry provisions, expecting that these would meet any emergency. The weekend created further difficulties as shops were shut and some items not in stock had to be purchased. Nevertheless, on Sunday forenoon the medical teams embarked, the last of the stores were in by 1550, and ten minutes later *Encounter* sailed from Sydney.

Encounter was not a modern ship, but she had led an active service life, most recently involving convoy escort and patrol duties in the Malay Archipelago and Australian waters. Just the previous month she had suffered 74 cases of influenza while operating out of Fremantle, and now, as a precaution against further infection, all members of her crew (over 450) were doubly inoculated. *Encounter's* normal passage speed was only 13 knots, but this had to be regulated by coal consumption and navigational requirements. Without modern navigational aids, it was sometimes necessary to arrive at certain points in daylight, while fuel replenishment, and hence range, relied on an efficient logistics system. A coaling stop in Suva would be necessary, but naval stocks there amounted to only 300 tonnes, so the Naval Board arranged for a rendezvous with a collier. This vessel could not, however, reach Fiji until at least 5 December.

Arriving in Suva on 30 November *Encounter* took on half the available coal and, 'almost more important', 39 tonnes of water.⁵ With influenza still prevalent, Thring implemented a strict quarantine enforced by guards placed on the wharf. The ship's company completed all coaling, rather than the native labour normally employed. As no one could return from ashore, Thring communicated by letter with Britain's resident High Commissioner for the Western Pacific, C.H. Rodwell. The news was not good. The Samoan epidemic showed no sign of abating, with deaths in Apia reaching 50 a day. Moreover, a message from Tonga indicated that conditions there were at least as bad while the facilities for coping with it were worse. On his own initiative, Thring extended *Encounter's* mission to include Tonga, but to avoid further delay, landed a nine-man team under the senior Army surgeon, Major Alexander, to take immediate passage in SY *Ranadi*. Unfortunately, the yacht broke down soon after sailing and was forced to return to Suva.

Sailing from Suva on the evening of 30 November, Thring called for 80 volunteers from his own ship's company should it prove necessary to provide greater assistance ashore. Despite the dangerous and unpleasant nature of the work, and the fact that any party landed would be left behind – missing their first peacetime Christmas at home – all the officers and most of the ratings volunteered. It would be difficult to find a more telling example of the Australian Navy's tradition of 'service before self'.

Encounter anchored off Apia on the morning of 3 December. The harbour was small for a ship of her size and, when combined with a considerable swell and strong winds, made unloading extremely hazardous. Although the ship rolled through more than 20 degrees, within six hours the landing party (6 surgeons, 18 medical orderlies and 3 naval sick berth ratings) and their stores were safely disembarked. Ashore Surgeon Grey and his teams immediately set to work, yet the scale of the disaster remained daunting, and for many of those afflicted help came too late. A Sydney newspaper reported that the Australians 'with their motor trucks are doing wonderful service day after day gathering up the dead, who are simply lifted out of their houses as they lie on their sleeping-mats. The mats are wrapped around them, and they are deposited

in one great pit.⁶ Made worse by the deaths caused by exhaustion and starvation, the two-month epidemic eventually killed 25 per cent of the total Samoan population, and often more than half the male adults in individual communities. Economic and social collapse followed.⁷

Meanwhile *Encounter* had proceeded direct to Tonga reaching the capital, Nuku'alofa, on 5 December. Here the British Consul advised that, although subsiding, the epidemic had struck down 95 per cent of the indigenous population and left 10 per cent dead. The situation in the outlying islands was just as bad. Thring attempted to get *Fantome* to bring out Major Alexander's party, which had been doing good work in Fiji, but the sloop had experienced a fresh outbreak of influenza and remained unfit to go to sea. Rodwell had no other craft available for the task.

Thring landed his last surgeon together with five orderlies and the remaining drugs and stores, but there was little more he could do. Yet even this small contribution was of great relief to the European and indigenous community. In thanking Thring for *Encounter's* 'timely aid', the Consul remarked: 'Though conditions had greatly improved before the party arrived there was still a good deal of work to be done of a nature that required professional skill and knowledge.' The party, he added, 'has been indefatigable ... in efforts to eradicate the disease'.⁸

With *Encounter* running short of coal, Thring sailed for Suva on 7 December. Arriving two days later he received orders to return directly to Sydney. *Encounter* reached Sydney on 17 December and was immediately placed in quarantine. Only one member of her crew had shown any signs of illness during the voyage, and as testament to the effectiveness of the prophylactic and quarantine measures employed, none developed influenza.

Thus ended Australia's first overseas relief expedition. One which, although unusual for the times, foreshadowed the now regular employment of the RAN's assets to provide humanitarian assistance and demonstrate national interest in regional affairs. Indeed, in the context of the maritime doctrinal concepts of flexibility and adaptability, it should be noted that Thring's orders were not restricted to providing medical aid.⁹ Preserving order in the Pacific was among the many subsidiary duties undertaken by the early RAN, and warnings of trouble brewing among the inhabitants of the Gilbert and Ellice Islands (now Kiribati and Tuvalu) had been received by the Naval Board in the weeks before the expedition. While in Suva, Thring took care to discuss with Rodwell how best a warship might support his authority. On this occasion no immediate assistance was necessary, but *Encounter's* mission might easily have been extended to provide presence elsewhere, and back this up with a large landing force if necessary. It remains a poignant reminder that by their nature, seaborne forces possess a variety of characteristics and attributes that are not necessarily present in other tools of government foreign policy.

Notes

- ¹ A. Butler, *Official History of the Medical Services 1914-18, Vol. III, Problems and Services*, Australian War Memorial, Canberra, 1943, p. 191.
- ² Butler, *Official History of the Medical Services 1914-18*, pp. 394-395.
- ³ New Zealand formally apologised to Samoa in 2002.
- ⁴ 'Sailing Orders', HMAS *Encounter* file, Sea Power Centre - Australia, Canberra.
- ⁵ 'Report of Cruise to render assistance in the influenza outbreak', 14 December 1918, HMAS *Encounter* file, Sea Power Centre - Australia, Canberra.
- ⁶ Sydney *Daily Telegraph*, cited in Dr Seini Kupu, *Pacific Public Health Surveillance Network Influenza Guidelines*, Secretariat of the Pacific Community, 2005, p. 37.
- ⁷ H.J. Hiery, *The Neglected War*, University of Hawaii, 1995, pp. 172-75.
- ⁸ Letter, British Agent and Consul Tonga to Thring, 12 December 1918, HMAS *Encounter* file, Sea Power Centre - Australia, Canberra.
- ⁹ Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 50.

Positioning Navies for the Future

Commodore Jack McCaffrie, AM, CSM, RANR

The RAN's 2004 Sea Power Conference had as its theme *Positioning Navies for the Future: Challenge and Response*. The aim of the conference was to examine how navies were reacting to the emerging global security environment.

The wave of recent terrorist attacks, especially those in the maritime environment, has caused navies to question how and to what extent they must adapt to this threat. But navies have also recognised that many of their traditional challenges remain as potent reminders of the complexity of maritime affairs. These include the growing focus on littoral operations, technological developments and inevitably the perennial challenges of recruiting and retaining enough of 'the right people'.

All of these issues were examined in some depth during the 2004 conference by an impressive mix of foreign and Australian speakers; including internationally renowned scholars and analysts, as well as senior naval and marine corps officers from eight countries.

The proceedings of this conference have since been published. Each of the conference papers is included, together with transcripts of each of the discussion periods. Individual contributions are contained in five themed sections, with the first being a scene setter. It contains the keynote addresses by then Chief of Navy, Vice Admiral Chris Ritchie, and Professor Christian Reus-Smit, of the Australian National University's Research School of Pacific and Asian Studies.

Admiral Ritchie's chapter covers the full range of challenges confronting the RAN as it plans for the future. It deals, for example, with the strategic situation and also considers the dichotomy between the need for high-technology (and so, costly) ships and the plethora of less technologically demanding tasks now engaging the Navy. Predictably, Admiral Ritchie's chapter acknowledges the ongoing personnel challenges and plans in place to deal with them. Significantly, too, it puts the so-called new roles of the Navy in a most illuminating historical context.

The second chapter, by Professor Reus-Smit, examines the underlying sources of international security – and insecurity. It identifies five major factors shaping global security: globalisation, international opportunity structures, the domestication of war, the Revolution in Military Affairs and the nature of American power. This chapter provides some very thought-provoking and sometimes controversial views, leaving readers to consider a series of significant challenges.

How different countries approach maritime strategy – and their response to the security environment – is the subject of the book's second section. Four of its chapters

present United States (US), British, Australian and Singaporean views. Internationally recognised analyst, Dr Norman Friedman provides the American view. Not surprisingly, his chapter concentrates on the war against terrorism and specifically the US Navy's (USN) role in it. He articulates the USN's current strategy and its significant reliance on forward-based offensive operations. Dr Friedman's chapter also highlights what makes the USN such an important and flexible contributor to this war effort. Importantly for allies, too, he emphasises the USN's continuing reliance on coalition operations.

The British contribution, from Dr Eric Grove, reflects the Royal Navy's current and future planned concentration on expeditionary operations and power projection. Dr Grove also covers the British expectation that most operations will be both joint and combined. In making this point, he stresses the anticipated Royal Air Force contribution to the air groups of the forthcoming attack carriers and offers some fascinating views on network-enabled operations and the place of submarines in future maritime operations.

Retired RAN Commodore Lee Cordner provides the Australian chapter and asks two fundamental questions: does Australia have and need a maritime strategy, and, are Australia's security policy and military strategy matched? While providing answers – and several other questions – Mr Cordner invites readers to consider the nature of Australia's strategic environment and a range of characteristics that should feature in any Australian maritime strategy. This chapter concludes with some prescriptions for Australia's military strategy and for matching that strategy to the nation's security policy.

In his chapter, Mr Kwa Chong Guan gives a Singaporean perspective, one which might also resonate with other South East Asian states. He considers the major issues likely to impact on Singapore's maritime strategy: the rise of China as a regional power, globalisation, security of sea lines of communications, and, of the growth of military activities in exclusive economic zones (EEZ). Mr Kwa also offers some typically South East Asian solutions to these challenges.

The book's third section canvasses several important aspects of contemporary maritime operations. Dr Dewi Fortuna Anwar's chapter gives an Indonesian view of the competition for marine resources and the associated territorial and other disputes that make management of this issue difficult. She also indicates how the region is responding to this challenge and makes a particular point of Indonesia's predicament and need for external assistance. There is also a related chapter by Professor Martin Tsamenyi and Commander Barry Snushall, which analyses and assesses the emerging operational implications of the Law of the Sea Convention. This chapter covers many of the issues of concern to the world's navies, including their reliance on freedom of the high seas, and makes some pointed recommendations for navies on the matter of maritime dispute resolution.

In a very thoughtful chapter, Dr John Reeve considers what maritime forces can do to counter the current terrorist threat and how the relevant capabilities fit within established maritime strategic and operational theories. Dr Reeve considers historical parallels, the 'complex versatility' of sea power, and the value of maritime coalitions in dealing with today's most prominent threat.

The section concludes with chapters on littoral warfare and amphibious operations. Commodore Peter Jones, drawing on his recent Persian Gulf experience, argues that littoral warfare provides the most serious operational challenge to navies. He offers a range of technological and personnel solutions and highlights the need for interoperability among navies. Complementing this contribution is the chapter on the US Marine Corps' (USMC) approach to littoral warfare and amphibious operations, written by Lieutenant General Edward Hanlon Jr, USMC. As well as providing historical background to the development of USMC operational concepts, General Hanlon provides a comprehensive explanation of the still developing sea basing concept. He outlines how it is becoming central to both the Navy/Marine Corps and joint concepts of operations and why that is so.

Section four covers technology and its contribution to naval development. The first two chapters detail how the world's largest navy and one of the smallest are approaching 'transformation'. Vice Admiral Balisle's contribution is a reflection of the USN's unique capacity to apply resources to the challenges facing it. Equally, it illustrates just how difficult it will be for other navies to remain interoperable with the USN, despite that navy's stated desire for coalition operations. Vice Admiral Balisle explains the foundation of the USN's transformation processes, why it is committed to them and how it intends to achieve transformation. It is a stunning illustration of the technological superiority which the USN intends to maintain into the future, but with some concession to the need to ensure coalition partners and allies remain capable of meaningful operational contribution.

Another approach to naval transformation is provided by Rear Admiral Ronnie Tay, who was the Chief of the Singaporean Navy when the conference was held. It is both a contrast to and in places strikingly similar to the USN approach. The main contrast is provided by the reduced scale and the much more limited resources available. The main similarities come in the need to maintain current readiness while investing in the future and acceptance of the need to transform to meet future challenges. Admiral Tay also outlines the main elements of the Singaporean approach, which will rely on adapting force structure, organisation and personnel.

The third chapter in this section chronicles the Indian Navy's transition from being a buyer of ships and systems to becoming a builder and integrator. Mr Rahul Roy-Chaudhury, from the International Institute for Strategic Studies, explains the Indian Navy's gradual growth into a regionally significant force, its continuing reliance on technologies sourced from Western and Soviet or Russian firms and its growing

reliance on joint ventures with these firms to develop its future force structure. He also illustrates the extent to which the Indian Navy has invested in its own research and development, thus continuing that Service's tension between indigenous and foreign sourced equipment.

Ms Michelle Kelly of Australia's Defence Materiel Organisation completes the section by reflecting on the challenges confronting Australia's shipbuilding industry. She points especially to the need to maintain skills, the size and complexity of forthcoming naval ships, the need for industry consolidation and the need for Defence to manage its procurement activities. On the other hand, Ms Kelly also points to significant opportunities for local industry, including contributions to international building programs – such as the USN littoral combat ship – and participation in global supply chains.

The book's final section comprises the fascinating results of three panel sessions addressing the challenges facing navies and responses to those challenges. The first panel, the so-called 'Young Turks', presents the views of four junior RAN officers forecasting the shape and state of the RAN in 2022. They provide a most incisive and thorough 'preview' of fleet operations, network centric warfare, naval aviation, business management and personnel developments – what they expect to work well and what they expect to prove problematical. This chapter will be referred to again many times over the next 16 years.

The second panel considers the challenges confronting the navies of New Zealand, Chile, France and Canada, as presented by their Australia-based attachés. In the cases of Canada, New Zealand and Chile, we are presented with small navies faced with enormous maritime commitments. Each is dealing with increased operational tempo, the need for new or updated equipment and the need to solve significant personnel challenges. Each has also recognised the need for innovative solutions and in at least some cases has taken remedial action. The French Navy is presented differently. It is a large navy with global responsibilities and a substantial part of the national nuclear deterrent force. But it too has equipment and personnel challenges, similar in kind if not in scale to those of the smaller navies.

The final panel allowed senior officers from the navies of the United States, France and Australia as well as the Chief of the Royal New Zealand Navy (RNZN) to provide some definitive views on the challenges facing their navies and their responses to them. These views covered a very broad spectrum indeed, beginning with the very expansive USN approach, founded on 'Sea Power 21' and FORCENet and dedicated to greater interoperability within coalitions and across domestic law enforcement agencies. As with all other navies, the USN is very much focused on the personnel challenge for the future. The high level view from the French Navy is very similar, concentrating on the demands of global power projection – and force protection – the need for greater interoperability both internationally and domestically and of course, personnel. The

unique aspect of the French personnel problem and hence their approach to it is the recent change from being a conscript force to a fully volunteer one.

The fact that Australia's Navy faces many of the same challenges worrying other navies was underscored by the focus in this panel on personnel issues and the work being done to resolve them. There was also recognition of the continuing need to balance investment in current capability and in the navy of the future. One significantly different Australian concern, however, was the stated need to improve the performance of the Defence Materiel Organisation. Finally, the Chief of the Royal New Zealand Navy outlined the major changes taking place as his navy tries to embrace the extent of the maritime security task in the EEZ, Southern Ocean and South Pacific Ocean. He concludes by emphasising that the RNZN does intend to remain a blue water fighting force.

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Visual Signalling in the Royal Australian Navy

Mr John Perryman

Regular readers of the Sea Power Centre – Australia’s (SPC-A) newsletters will be familiar with its title of *Semaphore*. To many, the significance of this selection will be immediately apparent, recognising it as a form of visual signalling (V/S) that has been used by navies the world over for more than a century. To others it may well represent a somewhat archaic choice, at a time when the Royal Australian Navy (RAN) is embracing the tenets of network centric warfare and all that it promises for the future of naval communications. Regardless of the view taken, it seems appropriate to review the origins and history of V/S at a time when its continued use faces an uncertain future.

When Samuel Morse revolutionised signalling on land with the development of the Morse code and the introduction of the electro-magnetic recording telegraph in 1844, the wide possibilities of this system were quickly recognised by the Royal Navy (RN). Experiments and trials were subsequently carried out by Lieutenant (later Vice Admiral) Philip Colomb, RN, and Captain (later Colonel) Bolton of the East Suffolk Regiment, who developed their own simplified flashing light code and patented a flashing light signal system in about 1862.¹ The RN introduced Colomb’s system into service in 1867, with the complete Morse Code being adopted for flashing light purposes and inclusion in signal books in 1889.²

At the same time, other means of V/S were also being trialled and in around 1874, ships were first fitted with mechanical semaphore. This system, which had evolved from a French innovation, involved the use of a post fitted with mechanical arms that could be positioned to form various angles with the perpendicular to represent the letters of the alphabet. By 1880 it was realised that the position of the mechanical semaphore arms could just as well be replicated by signalmen using hand flags, and this new method of conducting short range semaphore was subsequently introduced.

Flag signalling too, continued to develop. In use by the Navy of England for centuries, it had by the early 20th century evolved from some basic signals appearing in the *Black*



Mechanical semaphore in use early in the 20th century³

Book of the Admiralty in the 1300s into an effective means of conveying manoeuvring instructions between ships. With the advent of steam propulsion, warships were able to function at increased speeds, perform more complex manoeuvres and operate in larger formations, generating a greater need to rapidly pass manoeuvring instructions. This increased dependence on V/S for manoeuvring, resulted in a nexus forming between ships' command elements and the signalmen who were responsible for conveying this information. From this point, V/S and tactical manoeuvring became inextricably linked, with signalmen developing a keen understanding of what later became known as fleetwork.

In 1905 the emergence of wireless telegraphy (W/T) revolutionised naval warfare.⁴ Ships' communications were no longer cut when out of V/S range and RN senior officers became convinced that wireless communication offered great possibilities. The enthusiasm shown for W/T over one hundred years ago in many ways mirrors the enthusiasm shown today for email and 'chat' services afloat. Notwithstanding this fervour, it did not prevent one naval officer submitting a post exercise report on the use of W/T that cautioned: 'the working of W/T was most inefficient, not because it didn't work, but because of the enormous number of useless and obsolete messages transmitted'.⁵ It was also recognised that while V/S and cable communications were reasonably secure, wireless messages in plain language were not, and could be read by anyone with receiving equipment.⁶ Consequently, far from falling into decline, V/S continued to be used widely, even as W/T was further developed and cryptographic codes introduced.

The developments being made by the RN in signalling during the late 19th and early 20th century coincided with the genesis of Australia's Navy. As such the RN's signalling procedures, codes and equipment were quickly adopted by Australia's colonial naval forces, with the first School of Signalling being established at Williamstown, Victoria, in 1900. The school later relocated to its current site at HMAS *Cerberus* in 1913 and by the time the 'Fleet Unit' arrived in Sydney on 4 October 1913 the RAN was already proficient in most aspects of signalling and fleetwork. The following year the RAN was relying heavily on these skills during its first wartime operations.

Throughout World War I, both V/S and W/T proved invaluable. Both RN and RAN signalmen had by now attained a high degree of efficiency and speed in signalling, and V/S had become the normal method used for tactical manoeuvring. It also provided a vital means of communicating with merchant ships using the *International Code of Signals*.

Although no RAN vessels participated in the Battle of Jutland in May 1916, many lessons in signalling flowed from this encounter. Poor visibility and battle damage impeded effective V/S during the action and ambiguity arose from instances of poor signal selection and ineffective enemy contact reporting.⁷ The RN was quick to review its V/S and manoeuvring procedures following the battle with a number of changes being

swiftly implemented in September 1916.⁸ One of the most important changes came when W/T 'ceased to be a byline of torpedomen and became instead the departmental and administrative property of the Signals Branch'.⁹

Technological advancements included the introduction of the hand-held Aldis signalling light followed shortly after the war by the introduction of the ubiquitous Admiralty Pattern 3860A 10-inch signalling projector, used in all Commonwealth navies until superseded in 1986.

In the lead up to World War II V/S changed little. Notwithstanding this, V/S and fleetwork were used extensively throughout the war in all theatres and in just about every facet of naval warfare imaginable. The application of V/S and fleetwork ranged from major surface actions to convoy work, amphibious assaults (notably D-Day), small boat work and clandestine operations, when the need for radio silence was paramount.

Following America's entry into the war, it did not take long for the RAN to begin operating with ships of the United States (US) Navy. Up until this point the RAN had used RN doctrine exclusively and new codes, signalling procedures and manoeuvring instructions had to be learnt by signals personnel. This was duly achieved and RAN units operated successfully as elements of the US Task Forces operating throughout the Pacific.

When the British Pacific Fleet arrived in Australia in February 1945, its personnel had to learn the US manoeuvring and V/S procedures. They also had to familiarise themselves with the extensive use of radio telephony (R/T) used by the Americans to manoeuvre the large and widespread formations by voice over tactical communication nets. This successful integration of the Anglo-American fleets in the Pacific theatre contributed greatly to the close relationship that was maintained and developed after the war.

V/S continued to play its part right up until Victory over Japan day when HMAS *Nizam* received by flag hoist the signals 'Cease hostilities with Japan' and 'Splice the Mainbrace'. As the signals were being repeated by the Australian destroyer a Kamikaze aircraft, intent on continuing



HMAS Nepal fills the sky with bunting when V/S was at its peak during World War II

the fight, was brought down over the fleet. The scene on *Nizam's* flag deck, with one signalman trying to hoist 'Splice the Mainbrace' while the other was hoisting 'Aircraft warning Flash Red' made for a memorable end to the second great conflict of the 20th century.¹⁰



*Flashing light signalling reached its peak during World War II.
Here two RAN ratings operate a 20-inch pattern 170 A
signalling projector*

Following World War II the proliferation of signal traffic stemming from the rapid development in technology introduced new challenges for the naval warfighter. The sheer volume of information being transferred today between allies and coalition partners via a myriad of hi-tech circuits is astounding. This is often compounded by the absence of brevity that underpinned all V/S and W/T transmissions. As early as 1955, Captain Jack Broome, RN, wrote in his book *Make a Signal*: 'Today information is poured, irrespective of distance, from brain to brain. The air is saturated with it. One day it will condense and paradoxically, form fog.'¹¹ Clearly he was a man of vision, which prompts the question: has that fog already formed?

V/S is still taught in the RAN and is still used within the fleet, albeit at a much reduced rate. In its heyday it was favoured for its brevity: those who used it became adept at ‘saying what they meant and meaning what they said’. Irrespective of the method used, the key to successful signalling has always been brevity.

As for *Semaphore*, which lends its name to the SPC-A newsletter, the mechanical semaphore remained in use in larger ships of Commonwealth navies until finally withdrawn in 1943,¹² while semaphore signalling using hand flags ceased to be used as a formal communications medium in the RAN on 24 November 2005.¹³

Published as Semaphore Issue 8, 2006

Notes

- ¹ Captain B. Kent, *Signal! - A History of Signalling in the Royal Navy*, Hyden House Limited, Hampshire, 1993, p. 9.
- ² Kent, *Signal!*, p. 10.
- ³ Image provided by John Perryman.
- ⁴ Royal Navy, *Admiralty Manual of Seamanship*, Vol. 1, Her Majesty’s Stationery Office, London, 1964, p. 348.
- ⁵ Kent, *Signal!*, p. 29.
- ⁶ Captain John Egerton “Jack” Broome, DSC, RN, *Make a Signal*, Puttnam, London, 1955, p. 23.
- ⁷ A. Gordon, *The Rules of the Game*, Naval Institute Press, Annapolis, 1996, p. 506.
- ⁸ Gordon, *The Rules of the Game*, p. 517.
- ⁹ Gordon, *The Rules of the Game*, p. 507.
- ¹⁰ L.J. Lind and M.A. Payne, *‘N’ Class*, Naval Historical Society of Australia, Sydney, 1974, p. 152.
- ¹¹ Broome, *Make a Signal*, Preface.
- ¹² Kent, *Signal!*, p. 12.
- ¹³ Maritime Commander Australia, *Semaphore as a formal fleet communications medium*, MCAUST SAE/BAS 240157Z NOV 05.

Reading Our Way to Victory?

Dr Gregory P. Gilbert

A principal cracking down on students arriving late was standing at the school gate, when he saw Jason running down the street pushing his bike. 'Why are you late?' asked the principal. 'I didn't have time to get on my bike,' replied Jason.

The Chief of Navy recently approved the 2006 edition of the *Royal Australian Navy (RAN) Reading List*, encouraging the pursuit of individual knowledge and professional understanding by all members of the Navy.¹ The *RAN Reading List* is also intended for use by others involved or interested in maritime strategy, doctrine, history, and/or navies in general.

The RAN has traditionally encouraged professional and general reading among its officers and non-commissioned officers in the belief that the knowledge base for naval activities needs to be both broad and deep. This is especially important as members of the Australian Navy undertake diplomatic, constabulary and military tasks on a daily basis. All members of modern navies need to have good cultural, political and economic skills. They require a general knowledge in the humanities and liberal arts, in addition to their specialist skills and professional knowledge. This knowledge base has served the Australian Navy well in the past. Navies undertake wide-ranging tasks that often involve collecting and analysing complex information, and thinking about the problem, before making informed decisions. Officers and non-commissioned officers at sea often make decisions that impact on the fighting ability of their ship. Such decisions are critical because every person onboard a ship engaged in combat shares the risks that follow a tactical decision.

In the 21st century, however, we are increasingly confronted by situations where complex and rapid decisions need to be taken by all ranks, sailors as well as officers. Indeed, we are in the midst of a *revolution in human affairs*, where the Navy now has *strategic sailors* in rigid hulled inflatable boats making judgments of potential national significance. The potential for conflict in the littorals and the terrorist threat places individual sailors in positions where their responses may have strategic impact. In such situations, step by step detailed instructions often mean less than the breadth and depth of the decision-maker's professional knowledge of doctrine, history and strategy.

The *RAN Reading List* was first published in 1996 and has now been expanded to include both professional and general readings, while the range of subject areas has also expanded.² The new subjects include films, journals and electronic resources. The introduction on 'why we have the *RAN Reading List*?' provides grounding to what would otherwise be just another list of books, and has been written for the widest

possible audience. The selection of books and the preparation of reviews for the new *RAN Reading List* was very much a collaborative project, including both experienced officers and civilians, who recognised the importance of liberal education for the current and future Australian Navy.

At first glance, some of the books selected for the *RAN Reading List* may appear incongruous or somewhat odd. Be assured, however, that each selection was intentional. Whereas many books will be familiar to some readers of maritime strategy and naval history, a number of books offering alternative perspectives were added to challenge the Navy reader. Not all views presented by the listed authors are endorsed by the Australian Navy, nevertheless such views are offered to encourage critical review of what we read, and to help us understand alternative viewpoints. In such a manner we gain insight through knowledge, and we are in a better position to become our own advocates.



'Strategic sailors' from HMAS Melbourne during operations in the Persian Gulf

Although a number of fundamental works on maritime strategy and naval history remain on the list, the March 2006 edition of the *RAN Reading List* does reflect a number of significant changes that have impacted on the Australian Navy over the last ten or so years. Maritime strategists such as Alfred Mahan and Julian Corbett have retained their prominent positions on the list while new works by Geoffrey Till and Norman Friedman, amongst others, have been added to reflect recent developments in maritime strategy. David Stevens' history of the RAN is now considered by many

to be the best introduction to the subject. It was felt that as modern naval tasks increasingly involve joint and/or combined expeditionary forces and operations in the littorals, greater awareness of the military, political and social aspects of conflict is also required. Thus, Sun Tzu's *The Art of War* has bumped Clausewitz's *On War* in the new General Reading List, which also has been expanded to contain much more military, political and social material.

Anyone who may be thinking that recent technological changes have affected the world to such an extent that history or the humanities are no longer relevant, should read the ancient Greek histories of Herodotus or Thucydides. While technologies may change, the social, political and cultural constructs in which people live, act and fight, essentially remain the same. If a further example is required, one could read the classic novel *Mr Midshipman Easy* (published in 1836) to understand the difficulties that individuals have always faced while being transformed into disciplined crew members of navy vessels during times of rapid social change.

The United States Army and Marine Corps recommended reading lists identify reading material for each rank, with the more complex books listed for one-star ranks or above.³ The *RAN Reading List* philosophy differs in that it anticipates members of the RAN will both enjoy reading books in areas that interest them, as well as understand the importance of reading material for their specific professional development. An individual may decide to set aside more complex books until a subsequent phase of their career. The aim of the *RAN Reading List* is to encourage members in the process of thinking for themselves and using their initiative.

Reading should be fun. If you can't get into one of the books on the list don't torture yourself, just pick up another one that is more interesting or less complex. While some people would prefer to relax in a comfortable chair with a good book and glass of wine, others may prefer to share their thoughts with friends as part of a reading group. Whatever methods you prefer, it is important to think critically about what you read. Discussion with colleagues who have read the same book may highlight observations or interpretations that you overlooked. Remember the two most important methods to gain understanding about cultures, places and events involve either experiencing them yourself or reading about the experiences of others. One of the things that make us human is that we can learn from the experiences of others.

Even when you have read a book once, you may gain new insight if you re-read the same book. It may seem strange, but as circumstances change over time the reading often takes on a different meaning depending upon your outlook, knowledge and experience. For instance, a junior sailor may appreciate a book for reasons that differ significantly from a retired commodore. Both are equally valid. As your understanding of a subject grows so does your ability to absorb new ideas, and it is quite likely that when you re-read a book it takes on greater meaning. Reading helps one to generate new concepts and often inspires alternative explanations.

Some might say, 'I wish I did, but I don't have the time to read'. It is an unfortunate fact that in today's rapidly moving world it is difficult to find time to read. Buried in day to day minutiae, in administrative duties, or constantly on watch: who has the time to read? To turn the question around: how can we effectively do our jobs and make informed decisions without adequate professional and general reading? The answer is that everyone must make the time to read. If we try to determine the main characteristic common to great military leaders of the past, we see that they most were widely read in the humanities – they were serious students of history and international affairs.⁴ As modern maritime operations include diplomatic, constabulary as well as military tasks, we also have to become serious students of the humanities. To prevail in modern conflicts we have to have good human intelligence and cultural understanding, and it follows that reading becomes a capability advantage. Reading becomes particularly important as 'Warfare draws more intensely on all human skills than any other activity.'⁵

It is envisaged that the *RAN Reading List* will be published in book form once every five years. The new *RAN Reading List* is also promulgated in electronic form on the Navy website.⁶ The Sea Power Centre - Australia (SPC-A) aims to update the electronic version of the *Reading List* annually, in order to keep abreast of new publications and major works of importance.

Comments on the *RAN Reading List*, including suggested additions, are most welcome. In fact, the editors would prefer to include contributions from as many people as feasible, to minimise their own individual bias in the selection of reading material. Book reviews are welcome, for even if they are not selected for the reading list their potential may be closely debated within the Navy. As many more books are published each year than can feasibly be added to the list, contributors should also suggest a book that could be removed to make way for the new one. You might also suggest books on subjects that are not yet covered in this edition of the *RAN Reading List*. Such comments should be forwarded to:

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Sea Power Centre - Australia
Department of Defence
CANBERRA ACT 2600

or via email at the: seapower.centre@defence.gov.au

Don't be like Jason; find time to get on your bike.

All Sea Power Centre - Australia publications are available on the SPC-A website.⁷

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Notes

- ¹ Royal Australian Navy, *Royal Australian Navy Reading List, March 2006*, Sea Power Centre - Australia, Canberra, 2006.
- ² Maritime Studies Program, *Royal Australian Navy General Reading List*, Defence Publishing Service, Canberra, 1996; second edition 1997.
- ³ For United States Army, <www.army.mil/CMH/reference/CSAList/CSAList.htm> viewed 5 May 2006, and for the United States Marine Corps, <www.mcu.usmc.mil/reading> viewed 5 May 2006.
- ⁴ There are many examples including British leaders, such as Churchill and Montgomery, as well as Americans including MacArthur, Patton, Eisenhower, Nimitz and Halsey.
- ⁵ T.X. Hammes, *The Sling and the Stone*, Zenith Press, St Paul, Minnesota, 2004, p. 242.
- ⁶ <www.navy.gov.au/spc/readinglist/default.html>
- ⁷ <www.navy.gov.au/spc/maritimepapers/index.html>

The ‘Special Cruise’ of HMAS *Gayundah* – 1911

Dr David Stevens

Most people prefer their history presented within familiar and readily discerned constraints. Certainly conflicts and overseas deployments, and hence the more broadly ‘interesting’ of military operations, can usually be pegged down with convenient dates and end-states. But this approach is far less conducive to understanding ongoing constabulary tasks, those that have been underway for many years and where no end is possible. Yet, while their results are often difficult to quantify, these tasks can be among the most vital in signalling that our national interests extend far beyond the coastal fringe. A case in point is the protection of our maritime borders and the huge estate within; a mission gaining much media attention of late and whose growing importance has been the impetus behind several recent government initiatives.¹

Border protection is also a task that has, according to the most recent Defence Update, become far more difficult in the present strategic environment. Traditional threats, such as people smuggling, attempts to import prohibited goods, illegal fishing, illegal trafficking in flora and fauna, and environmental pollution, have been joined by a potent terrorist threat and the potential fallout from failing states. The latter are a significant concern because the insecurity they face can easily move beyond their borders. As an island nation Australia enjoys some natural protection, but as the Defence Update notes, it ‘cannot be assured that our borders will remain inviolate’.² Faced with this complex environment Australia has determined it needs a whole-of-government approach to deal with current challenges.

The idea that maritime security threats require a multi-agency response is not new. As far back as 1911, four out of the seven government departments then existing became involved when the Commonwealth Naval Forces (CNF) deployed the gunboat HMAS *Gayundah* on a constabulary operation to the remote north-west coast. Indeed, as one of the first such missions undertaken by the fledgling Australian Navy, the operation serves as a timely reminder that our political leadership has long relied on Australia’s sea power for domestic law enforcement, particularly when seeking a credible and flexible means of policing our sovereignty at a distance.

Acquired by the Queensland Government in 1885, *Gayundah* was thereafter actively employed on official service, providing a useful training platform for the Queensland Marine Defence Force and an effective demonstration of presence along the colony’s 1500-mile coastline. Following Federation, *Gayundah*, together with all other units of the four former colonial navies, became part of the CNF. Until Parliament could create the necessary legislative and administrative machinery, however, the various forces continued to be controlled under Colonial Acts and regulations. Not until December

1904 did the Defence Minister appoint Captain (later Vice Admiral) W.R. Creswell as Director of Naval Forces. Still the best example of an Australian navalist, Creswell had long argued that the priority given to landward defences did little to satisfy the Commonwealth's desire to be accepted as an independent sovereign nation. Pointing out that Australia's seamen were the natural guardians of a maritime state he maintained that 'sea efficiency' was the 'first and most urgent call upon responsible authority'.³



The gunboat HMAS Gayundah in 1912

As the CNF's professional head, Creswell struggled to maintain the bare minimum of a seagoing force. Even after the 1909 decision to acquire the nucleus of a balanced Navy – the Fleet Unit – he could count on few additional resources. Nevertheless, by 1910 the idea that a navy might be useful for more than warfighting had evidently taken root among other national agencies. Late that year the Minister for Trade and Customs, F.G. Tudor, asked the Defence Minister, Senator G.F. Pearce, whether a CNF warship could be found to make a 'special cruise' in northern waters. The novelty of this request needs highlighting. Australia's population, infrastructure and trade routes were all in the south, and few in power had ever needed to consider the security of the inhospitable and largely unknown northern coastline. But it was from the north that all threats must come, and here that foreign intruders already flouted the Federal Government's authority.

Pearce passed Tudor's request down to Creswell, whose responsibilities had yet to be defined in detail and who had to work within the limitations of the existing administrative and financial framework. The cost of sending a warship from the southern states would be too great, while Western Australia, whose waters were targeted for investigation, had nothing to offer as it had never developed its own maritime defences. This left only the vessels of the CNF-Queensland, of which *Gayundah* was the largest and appeared most suitable. Yet, while similar in size to today's *Armidale* class patrol boat, *Gayundah* was far less capable in terms of sustained patrol and distant response operations. Her

top speed was only 10 knots and her normal range 700 miles. Her readiness was also uncertain. The CNF had insufficient permanent personnel to keep *Gayundah* fully manned and lack of funds had restricted recent operations to short training cruises out of Brisbane. Creswell discussed the proposed cruise with her commander, Commander G.A.H. Curtis. A survey confirmed the gunboat's seaworthiness, but essential repairs required at least £700, and shortages of skilled labour meant further delays. Not until February 1911 did Creswell task Curtis with providing his specific requirements in fuel, stores, provisions and men. To cover the expenditure in excess of the 1910-11 estimates, Treasury eventually provided just £1190.

Lack of remote coal stocks and *Gayundah*'s limited range were fundamental considerations in planning. To provide space for additional coal stowage Curtis arranged to remove *Gayundah*'s 6-inch bow gun, which also allowed for the magazine to become an extra provision room. Curtis could still employ the gunboat's 4.7-inch and 12-pounder weapons if necessary, while the motor boat and whaler were each fitted for carrying a machine gun. With final preparations underway, Curtis proceeded to Melbourne for briefings from both Creswell and the Department of Trade and Customs. These must have been comprehensive for *Gayundah*'s sailing orders, issued on 10 April 1911, were a model of conciseness:

*At the earliest date after being ready for sea, you will proceed to Port Darwin and Broome. Information having been received of gross irregularities continuing on the coast and islands included between above Ports, involving breaches of the Fisheries, Immigration and Customs Acts – of which you have been fully and confidentially informed – you will take such steps, as may be judged best, to carry out the instructions of the Customs Department.*⁴

Curtis' authority came directly from the relevant sections of the legislation. Penalties for breaches ranged from heavy fines to forfeiture of vessel and cargo, and as an officer of His Majesty's forces he was entitled to 'seize any forfeited ship or goods upon land or water or any ship or goods which he has reasonable cause to believe are forfeited'. The limits of Commonwealth jurisdiction only extended for three miles from the shore, but should he find a foreign ship within this limit it 'must be brought to for boarding'. The Acts also provided appropriate rules of engagement, noting that a government vessel 'may chase any ship which does not bring to when lawfully signalled or required to do so and may (after having fired a gun as a signal) fire at or into such a ship to compel her to bring to'. Although a last resort, Curtis could be confident in judicial support for such action, as he 'or any person acting under his orders is relieved from any criminal or civil liability of any kind for any consequence of his act, even though his action result in loss of life'.

Departing from Brisbane on 22 April *Gayundah* coaled at Thursday Island and Darwin, before sailing again on 13 May. Curtis searched several reefs and islands during his passage west, but saw nothing of note until reaching Scott Reef on 25 May. Here he found two Dutch schooners at anchor. When tide permitted, *Gayundah*'s men boarded the vessels and discovered a quantity of trepang and trochus shell. Curtis informed the Dutch master that he was fishing illegally in territorial waters and, despite protests that Curtis was violating international law, he towed the vessels to Broome. To prevent escape and reinforce their status as seized vessels Curtis placed on each an officer and two men every night and one signalman during the day. *Gayundah* brought the two schooners into Broome on 29 May. They were handed over to civil authorities next day, but because her officers had to remain to give evidence at the subsequent court case *Gayundah* could not leave Broome until mid July.

The delay forced Creswell to seek an extension to the cruise, but permitted the Department of External Affairs to take an interest in the return passage. Additional tasking on Curtis included relocating a Federal scientific expedition from the Roper River to Thursday Island and intelligence surveys of some of the lesser-known bays and inlets. Creswell also gave Curtis liberty to take appropriate action should he acquire at Darwin other evidence of evasion of Commonwealth laws. Specifically he was to obtain 'all information relative to communications with the [Far] East' by any foreign fishing fleets encountered. In effect, Creswell had begun establishing a system aimed at preventing threats to good order from developing into something more dangerous. It is a task that continues still, and has most recently evolved into the Australian Maritime Information System.⁵

Gayundah finally returned to Brisbane on 25 August 1911, and although making no further arrests, all tasks were successfully completed. Presumably believing that they had received value for money, the Departments of External Affairs and Trade and Customs split the cost of the cruise equally between them. Creswell certainly thought the mission worthy of recognition. In writing to Pearce he noted that it had involved steaming 8000 miles and entailed almost continuous ocean work for over four months in a very small vessel. As this had called for strenuous service on the part of men used to far shorter voyages, and no allowances had been approved, Creswell suggested that each receive a gratuity of 14 days' pay. The total amounted to less than £200, but the reply would have caused no surprise. While fully sensible of the good services rendered, the Minister regretted that he could not see his way to approve 'monetary recognition'. Indeed, the only compensation received was by *Gayundah*'s three officers, who successfully argued for one shilling per day entertainment expenses on the grounds that the great rarity of a warship visit to northern ports made this aspect a considerable burden.

Gayundah continued to perform useful patrol service along the Queensland and northern coasts during World War I, and finally paid off in August 1918. Remaining in Brisbane

she began a long career as a sand and gravel barge, and after 74 years afloat ended her days as a breakwater off Redcliffe. Today the RAN allocates at least 1800 patrol boat days to the national support task each year. Although just one of the stakeholders involved in maintaining the security of Australia's borders, as *Gayundah's* cruise demonstrated, it has a longstanding interest in protecting our offshore resources. More importantly, it still offers a unique contribution to surveillance and response activities while remaining the ultimate enforcer of our laws in the maritime environment.

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Notes

- ¹ See for example: Prime Minister of Australia, 'Strengthening Australia's Border Surveillance', Media Release 1018, 28 July 2004; and 'Extra Armidale Boats to Boost Border Protection', Defence Media Release MIN 171/05, 15 October 2005.
- ² Department of Defence, *Australia's National Security: A Defence Update 2005*, Department of Defence, Canberra, pp. 4, 10.
- ³ Cited in G.L. Macandie, *Genesis of the Royal Australian Navy*, Government Printer, Sydney, 1949, p. 252.
- ⁴ All subsequent quotations come from the HMAS *Gayundah* file, Sea Power Centre - Australia, Canberra.
- ⁵ For details see 'Maritime security regulation', *Semaphore*, No. 3, Sea Power Centre - Australia, Canberra, February 2006.

Hot Pursuit and Australian Fisheries Law

Lieutenant Commander Penny Campbell, RAN

Hot pursuit, which permits a coastal state to extend its jurisdiction beyond its normal legal limits, is a longstanding maritime principle, which finds its modern expression in the *United Nations Convention on the Law of the Sea 1982* (LOSC). However, due in part to the challenges of policing its extensive maritime jurisdiction, the requirements of Australian fisheries law are considerably different to those of many other States.

As a general principle, one State cannot exercise its jurisdiction beyond the reach of its maritime zones over another State's flagged vessels. One of the most important exceptions to this general rule is the doctrine of hot pursuit, which allows a State to extend its jurisdiction over a vessel beyond the reach of its maritime zones. The doctrine permits a State to pursue a vessel that is fleeing from the maritime zone to which the legal jurisdiction applies. The rationale behind this doctrine is obvious: if a vessel has breached a coastal State's law (for example, by smuggling drugs ashore or fishing illegally) it should not be able to escape the legal consequences of its act simply by sailing into the high seas.



HMAS Bendigo returns to Darwin Harbour towing two Type III foreign fishing vessels caught fishing illegally off Cape Wessels, north-east of Darwin.

The first expression in treaty form of the doctrine of hot pursuit appeared in Article 23 of the *Geneva Convention on the High Seas 1958*. By this time, the hot pursuit doctrine had been recognised as customary international law¹ and a judge in one case noted that the Geneva Convention ‘was merely declaratory’ of this pre-existing right.²

The modern articulation of the doctrine of hot pursuit is found in Article 111 of LOSC. It states that:

hot pursuit of a foreign ship may be undertaken when the competent authorities of the coastal State have good reason to believe that the ship has violated the laws and regulations of that State. Such pursuit must be commenced when the foreign ship or one of its boats is within the internal waters, the archipelagic waters, the territorial sea or the contiguous zone of the pursuing State, and may only be continued outside the territorial sea or the contiguous zone if the pursuit has not been interrupted. It is not necessary that, at the time when the foreign ship within the territorial sea or the contiguous zone receives the order to stop, the ship giving the order should likewise be within the territorial sea or the contiguous zone.³

Hot pursuit may only commence after a visual or auditory signal to stop has been given at a distance that enables it to be seen or heard by the foreign ship.⁴ The pursuit must cease as soon as the pursued vessel enters the territorial seas of its own or a third state.⁵ Pursuit may only be exercised by warships or military aircraft, or other ships or aircraft clearly marked and identifiable as being on government service and authorised as such.⁶ Pursuit may be handed over between pursuing ships and aircraft provided that the pursuit is not interrupted.

Unlike some other Commonwealth countries, international law is not automatically incorporated into Australian domestic law unless it is specifically implemented by legislation. However, the High Court explicitly recognised that ‘the fact that [a] Convention has not been incorporated into Australian law does not mean that its ratification holds no significance for Australian law’.⁷ International law can help guide the interpretation of a domestic law and it can also play some part in the development of the common law in Australia.

The doctrine of hot pursuit has been implemented in certain Australian legislation dealing with maritime law enforcement. There are subtle differences between the Acts,⁸ however, only the *Fisheries Management Act 1991 (Cth)* (‘the FMA’) will be examined. The FMA contains a power to pursue under section 87, which enables an ‘officer’ to exercise certain powers over a vessel outside the Australian Fisheries Zone⁹ (AFZ) but not within another country’s territorial sea, provided:

(1)...

(a) one or more officers (whether or not including the officer exercising the power) have pursued the person or boat from a place within the AFZ to such place, and

(b) the pursuit was not terminated or interrupted at any time before the officer concerned arrived at such a place with a view to exercising that power.

(2) ... a pursuit of a person or boat is not taken to be terminated or substantially interrupted only because the officer or officers concerned lose sight of the person or boat.

(3) A reference in subsection (2) to losing sight of a person or boat includes a reference to losing output from a radar or other sensing device.

These provisions largely mirror the requirements under Article 111 of LOSC. However, there is one notable exception. Although section 84 of the FMA allows an officer to 'require the master to stop the boat' to facilitate boarding, there is no explicit requirement for an officer to give an order to stop.

Australia has immense maritime areas and these cover some desirable fishing grounds. The exclusive economic zone (EEZ) surrounding Heard Island and McDonald Islands (HIMI) in the Southern Ocean contains Patagonian Toothfish and other species that attract illegal fishing from distant nations. This has resulted in Australia undertaking some spectacular hot pursuits in its efforts to police its waters.¹⁰ Naturally enough, the flag states and masters of the fishing vessels have denied any involvement in illegal activity and these matters have come before Australian courts for adjudication.

The *Volga* litigation arose from a hot pursuit that took place near the HIMI AFZ in 2002.¹¹ A Russian flagged fishing vessel, the MV *Volga*, was detected on 7 February approximately 30 nm inside the AFZ. A Royal Australian Navy frigate, HMAS *Canberra*, was in the area but beyond visual range. *Canberra* launched her helicopter to investigate while altering course to intercept. By the time the helicopter was in radar range of the *Volga*, she was outside the AFZ. Only at that point did the helicopter inform the *Volga* that she was about to be boarded. *Volga* did not acknowledge but was subsequently boarded outside the AFZ. More than 120 tonnes of Patagonian Toothfish was found on board. The vessel and its catch were automatically forfeited to the Commonwealth under FMA provisions.

Olbers Co Ltd (Olbers), the Russian owner of the *Volga* prior to the forfeiture, commenced proceedings against the Commonwealth in the Federal Court. It challenged the forfeiture provisions of the FMA and argued that the boarding and seizure of the *Volga* outside the AFZ was unlawful.

Section 106A of the FMA automatically forfeits to the Commonwealth any vessel that is fishing illegally. There is no requirement to prove that the vessel was in fact conducting illegal fishing activities at the time though a judicial determination to this effect may be made later if the forfeiture is contested in subsequent proceedings. Thus:

While apprehension may not be immediate if there is evidence by aerial or other surveillance of the identity, activity and/or presence of the boat the Commonwealth may be in a position to assert that, under Australian law, it has become the legal owner of the boat. Escape to the high seas will not shed that status under Australian law or in any jurisdiction in which Australian title will be recognised.¹²

This judgment has far reaching implications. If any vessel engaged in illegal fishing in the AFZ is automatically forfeited to the Crown then it may be that there is no need to conduct hot pursuit at all. The Commonwealth could simply wait until the vessel reaches a port and then lay claim to it. Of course, seizing the vessel by means of hot pursuit may be administratively simpler than attempting to persuade a foreign State that it has a Commonwealth vessel in its jurisdiction. Nevertheless, this also gives considerable power to Australia as a port State. For any vessel that may have committed an illegal act in Australian waters the chance of being apprehended during a port visit is too great. In other words, the 'risk to the owner ... [is that] the boat will leave the AFZ with an insecure title'.¹³

The Court ultimately found that *Volga* had been fishing illegally, based on evidence from the Australian Fisheries Management Authority officer who boarded *Volga* and reconstituted data from *Volga's* computers.¹⁴

Olbers argued that the hot pursuit requirements under Article 111 for a warning to stop were not adhered to and thus the hot pursuit and apprehension of *Volga* was unlawful. The court rejected the argument on the ground that the vessel had been duly forfeited to the Commonwealth, and that therefore the hot pursuit requirements did not apply. The court found that the Commonwealth had merely followed and boarded its own vessel as a result.

However, the Court did turn its mind to the constitutional issue concerning the construction of the section 87 requirement to pursue a boat 'from a place within the AFZ'. Justice French noted that the term 'must have regard to the practical exigencies of the circumstances in which pursuit might have to be taken'. He concluded that the language in section 87 'cannot accommodate the requirement of a stop order specified in Article 111'.¹⁵ Nevertheless, because the Court found that *Volga* had been fishing illegally, and was thus forfeited to the Commonwealth, adherence to any hot pursuit requirements was not relevant.

The Federal Court approach to hot pursuit is logical based on the interpretation of the current legislation and the standing of international law in Australian law. If then, the forfeiture provision is unassailable, it is curious that the FMA requires a power of hot pursuit at all. Once a vessel is engaged in illegal fishing, it is automatically forfeited to the Commonwealth rendering the doctrine of hot pursuit little more than confirmation that the Commonwealth can pursue and seize its own property. Any claims by vessel owners that the requirements of hot pursuit have not been met will necessarily fail.

Likewise, appeals to the requirements of international law in the Australian context will likewise fail. Justice French noted that although legislation may be interpreted to accord with Australia's international obligations, where those obligations have arisen before the enactment of the relevant legislative provisions, 'such construction can only occur where the language permits it'.¹⁶ Here, the FMA does not permit recourse to the wording of Article 111 of LOSC.

It seems unlikely that the FMA will be amended to more closely align with the requirements of Article 111. Certainly the current construction is advantageous to Australian authorities trying to stem the trade in illegal fishing. Challenges to the law within the Australian legal system will not bring about the required change as the *Volga* litigation demonstrates. Such change may only be effected if an Australian hot pursuit is successfully challenged in an international forum. Interestingly, Russia, the relevant flag State, did take Australia to the International Tribunal for the Law of the Sea over *Volga's* capture. However, the challenge was not for the failure to conduct hot pursuit in accordance with international law requirements, but rather the bond and prompt release requirements under LOSC. The Tribunal noted that the circumstances of the seizure of the *Volga* were not relevant to the proceedings for prompt release.¹⁷ Unless the circumstances of a hot pursuit conducted in accordance with FMA provisions is found to be incompatible with international law, there is no reason for the Act to be amended.

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Notes

- ¹ See for example, 'Claim of the British Ship "I'm Alone" v United States', Reports of the Commissioners, *The American Journal of International Law*, Vol. 29, 1935, p. 327.
- ² J. Devonshire in R v Mills and Ors (unreported) cited in W. Gilmore, 'Hot pursuit: the case of R v Mills and others', *The International and Comparative Law Quarterly*, Vol. 44, No. 4, 1995, 949 at 954.
- ³ This principle is extended to the EEZ or continental shelf by virtue of Article 111(2).
- ⁴ Article 111(4).
- ⁵ Article 111(3).
- ⁶ Article 111(5).
- ⁷ C.J. Mason and J. Dean, Minister of State for Immigration and Ethnic Affairs v. Ah Hin Teoh [1995] HCA 20 at 26. The Teoh case involved the impact of Australia's ratification of the Rights of the Child Convention on the decision-making process in deciding to deport a convicted drug dealer who was the father of Australian children.
- ⁸ For example, section 184B of the Customs Act 1901 (Cth) allows a 'commander' to 'chase' a boat.
- ⁹ The AFZ is defined in section 4 of the FMA as: (a) the waters adjacent to Australia within the outer limits of the exclusive economic zone adjacent to the coast of Australia; and (b) the waters adjacent to each external territory within the outer limits of the exclusive economic zone adjacent to the coast of the external Territory; but does not include: (c) coastal waters of, or waters within the limits of, a State or internal Territory; or (d) waters that are excepted waters.
- ¹⁰ For example, the pursuit of the *South Tomi* in April 2001 was conducted over 15 days and 3300nm. In August 2003, the *Viarsa* was pursued for 21 days across 3900nm.
- ¹¹ The litigation involved five separate Federal Court decisions.
- ¹² *Olbers v Commonwealth of Australia* (No 4) [2004] FCA 229, per French, J, para 77.
- ¹³ *Olbers v Commonwealth of Australia* (No 4) [2004] FCA 229, per French, J, para 77.
- ¹⁴ *Olbers v Commonwealth of Australia* (No 4) [2004] FCA 229, per French, J, para 77.
- ¹⁵ *Olbers v Commonwealth of Australia* (No 4) [2004] FCA 229, per French, J, para 96.
- ¹⁶ *Olbers v Commonwealth of Australia* (No 4) [2004] FCA 229, per French, J, para 77.
- ¹⁷ The 'Volga' Case (*Russian Federation v Australia*), Application for prompt release, Judgment. International Tribunal For The Law Of The Sea, 23 December 2002, at paragraph 83.

Operation ASTUTE – The RAN in East Timor

Dr David Stevens

Operation ASTUTE, the ADF's recent deployment of 'troops to bring security, peace and confidence to the people of Timor-Leste',¹ has been accompanied by the expected flood of media analysis. With some 1300 soldiers once more facing a challenging mission on foreign soil, the tendency has been to focus on the land force contribution because, as one columnist put it, 'Whatever we do and wherever we do it the army is almost certain to be playing the central role.'² The danger associated with such themes is the often explicit dismissal of the force-enabling role played by other ADF capabilities. 'Our high-tech weaponry is useless in these [asymmetric warfare] situations', another writer opined, 'when the key to victory is boots on the ground'.³

Oversimplifications and misrepresentations such as these do nothing to enhance our understanding of current operational experience and little to address future security concerns. Regrettably, too few analysts comprehend that a credible ADF must necessarily be a flexible, balanced, joint force. That is, one in which the integrated capabilities of the three Services work together to provide operational synergy. Moreover, rather than structuring to meet a particular set of circumstances, the ADF must be sufficiently versatile to respond effectively across a wide spectrum of operations, at times preparing for threat levels that may ultimately never eventuate. Deterrence, after all, is far preferable to victory on an Australian battlefield.

This is not to suggest that the ADF can have it all: a limited budget must always be prioritised. But it is here that cost-effectiveness comes into play, and given the long lead times and service lives of modern defence hardware, it would be wise to procure inherently flexible assets. The propensity of some defence commentators to advance a few narrowly focused capabilities at the total expense of others carries the risk of strategic irrelevance, as the security climate inevitably changes. Such proposals would also upset the ADF's ability to apply credible power across a range of contingencies. Any increase to the size of a modern army, for example, brings with it the need to add joint force enabling capabilities in order to provide support and protection when deployed. Operation ASTUTE offers a salutary lesson in this context because, despite the ongoing media commentary, it began and continued as a joint operation and while publicised as a 'troop deployment', was in fact a textbook example of littoral maritime power projection.⁴

It is food for thought that the land forces were not simply assisted by naval elements during ASTUTE, but at a fundamental level relied upon the many and varied capabilities brought by one of the largest RAN task groups operationally deployed since World War II. Involving five major and three minor fleet units, ASTUTE's initial force allocation

was only slightly less than the number of warships assigned to the 1999 INTERFET (International Force East Timor) deployment, Operation STABILISE. In view of the planned acquisition of two large amphibious ships of the *Canberra* class from 2012, it is especially noteworthy that ASTUTE witnessed the first operational deployment of the ADF's Amphibious Ready Group (ARG), comprising the amphibious transports HMA Ships *Kanimbla* and *Manoora*, and heavy landing ship HMAS *Tobruk*. Acting together these units established an Army Battalion Group ashore within three days. Using either of the designs currently proposed for the *Canberra* class, a similar sized expedition could be transported in a single lift and landed in a matter of hours.



The Amphibious Ready Group off Dili, May 2006

The call for help from the government of Timor-Leste came on 24 May and crucial to Australia's rapid reaction was the readiness of the ADF's maritime assets and the effectiveness of individual and collective training regimes. Sailing from Darwin early on 25 May, *Kanimbla* was first diverted to the south coast of Timor, where she provided facilities to four Army helicopters unable to reach Dili due to poor weather. She entered Dili Harbour late on 26 May with an operational Primary Casualty Reception Facility, staff essential to initial operations, and priority military and humanitarian aid stores. Soon following *Kanimbla* into Dili were *Manoora* and *Tobruk*, which had sailed from Townsville on 24 May. Each carried several hundred troops and their equipment together with armoured personnel carriers and associated support vehicles.

The chaotic environment ashore required the land forces to be disembarked in a high state of tactical readiness, and with Dili port facilities unsecured this relied entirely on the over-the-beach capabilities provided by the ARG and its embarked helicopters. *Manoora*, for example, carried four Black Hawks in addition to a Sea King, and these conducted an air assault on 28 May. She also had on board a Deployable Geospatial Support Team, which surveyed the landing sites prior to the amphibious assault conducted by hard-worked RAN heavy landing craft (HMA Ships *Balikpapan*, *Tarakan*,

Labuan and later *Wewak*) and Army LCM8s. Some of these smaller units will likely remain until the ADF's final withdrawal for, as has been demonstrated time and again within our region's underdeveloped operational environments, scope for manoeuvre ashore can be highly constrained. The corollary is that an amphibious capability to provide inter- and intra-theatre lift is a vital enabler of land operations.

Furthermore, no military operation can be sustained without the necessary accompanying infrastructure. The Army Company group first deployed to East Timor by C-130 late on 25 May did not have the luxury of a prolonged build-up to create a base from which to operate, achieve operational mass and establish appropriate support mechanisms. The ARG not only brought these essential heavier and second level forces into theatre, but also offered an immediately functioning offshore base, thereby allowing the force ashore to maximise its effectiveness while minimising its footprint. Support roles are intrinsic to the design of amphibious ships and in addition to functioning as a large heliport, fuel dump and hospital, the ARG acted or could potentially have served as a communications centre, hotel, food service centre, port security force, and supply depot for items as diverse as toilet paper, clothing and ammunition.

However, the amphibious and logistic enabling activities of the ARG only touch on the totality of the naval role during ASTUTE's early phases. One of the critical naval tasks during Operation STABILISE in 1999 was to provide presence, and the RAN deployed several major surface combatants to ensure the area was safe during INTERFET's initial insertion. That the threat was of a different scale and nature in May 2006 did not lessen the importance of advance force operations,⁵ particularly since naval units operated in a dimension that potential antagonists were unable to oppose. As the Vice Chief of the Defence Force flew into Dili airport with the first troops, the FFG HMAS *Adelaide* appeared over the horizon.⁶ While tasked for border protection under Operation RELEX II, the frigate had been simultaneously poised ready to assist off East Timor, offering a range of combat, surveillance, command and control, and aviation capabilities. The ADF had 'to go in there with plenty of combat power', noted the Chief of the Defence Force, [and] 'demonstrate that we have very good capability'. *Adelaide*, he continued, was 'a very handy asset to have ... and of course as we all know, when a naval ship steams into port, it does have an effect that is good to creating a stable environment'.⁷

Allowing sustainment of the naval presence and adding her own not inconsiderable bulk was the replenishment ship, HMAS *Success*. Joining *Adelaide* on a patrol line close off Dili Harbour at dawn on 26 May, the highly visible and professional appearance of the two warships had a significant impact on perceptions ashore. Indeed, during the critical early hours, before sufficient troops were available to deploy throughout Dili, high-end maritime combat capabilities combined with the inherent mobility of warships went far towards making the Australian presence seem ubiquitous. The overt naval presence also brought a measure of reassurance to the few Australian forces then in

Dili; should the situation have become untenable, then an emergency extraction would not have been possible without the presence of the maritime component.

With the ARG's arrival *Adelaide's* mission shifted to providing cover,⁸ but by 28 May the security situation had clarified to the extent that it no longer warranted her presence. Testament to the ability of warships to successfully conduct wide-ranging activities over vast distances with little or no notice, *Adelaide* returned to her previous RELEX tasking, while *Success* was soon in the South China Sea replenishing a US Navy task group proceeding to provide humanitarian aid to the victims of an earthquake in Java. As her commanding officer related, in a matter of six days *Success*:

*had transited from one side of Borneo to the other. In between the ship conducted 'gun boat diplomacy' off one country in support of law and order and was then able to support another nation's aid efforts to yet a third nation.*⁹

Forecasting future global trends in an unpredictable world is an inherently uncertain process, but experience suggests that strategic choices should never be absolute. Recent operations in East Timor, the Solomons, Indonesia and Iraq have routinely illustrated the multifaceted tasks that navies perform in the littoral environment. In all these commitments amphibious units have played a vital part, yet only 16 years ago official policy dismissed these assets as 'inappropriate for Australia's force structure'.¹⁰

As Professor Andrew Lambert argued at a recent Sea Power Centre - Australia conference, our greatest danger is to allow the impulses of today to become an excuse not to think: 'Narrow prescriptionist approaches to national strategy do not work. Wise nations know their interests, and are prepared to defend them.'¹¹ Australia is a maritime nation, and as 'the littoral accommodates over three quarters of the world's population, hosts over 80 per cent of the world's capital cities and nearly all of the marketplaces for international trade',¹² only rarely will securing our national interests not involve a maritime dimension. Operating in an increasingly complex and at times more dangerous environment, the ADF must maintain its ability to function credibly and flexibly use its equipment at short notice. To argue that any one or other ADF capability 'is the single most important' or more 'central' than others, is to misunderstand the interdependency of joint operations, and to put the effectiveness of those operations at risk.

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Notes

- ¹ Operation ASTUTE webpage, Department of Defence, <www.defence.gov.au/opastute/> viewed 31 May 2006.
- ² G. Sheridan, 'We need soldiers and more firepower', *The Australian*, 25 May 2006.
- ³ N. Stuart, 'Stretching our forces too tightly is not the way to win the peace', *The Canberra Times*, 6 June 2006.
- ⁴ Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 156. Maritime power projection is defined as: 'the ability to project, sustain and apply effective military force from the sea in order to influence events on land'.
- ⁵ Royal Australian Navy, *Australian Maritime Doctrine*, p. 60: 'Advance force operations are conducted in advance of a main force, notably an amphibious force, in order to make acceptably safe the area in which the latter will operate.'
- ⁶ VCDF Doorstop Interview, 27 May 2006, <www.defence.gov.au/opastute/> viewed 31 May 2006.
- ⁷ CDF Media Briefing: 'Update on Op ASTUTE', 26 May 2006, <www.defence.gov.au/opastute/> viewed 31 May 2006.
- ⁸ Royal Australian Navy, *Australian Maritime Doctrine*, p. 56. Cover is 'the provision of support for less capable forces to ensure their protection and the completion of their tasking without interference from an adversary'.
- ⁹ HMAS *Success*, *Report of Proceedings*, May 2006.
- ¹⁰ D. Stevens (ed.), *The Royal Australian Navy*, Oxford University Press, Melbourne, 2001, p. 261.
- ¹¹ Professor A. Lambert, 'Sea Power Ashore and in the Air', presentation to the King-Hall Naval History Conference, Canberra, 21 July 2005.
- ¹² A. Tewes, et al., *A Foundation Paper on Australia's Maritime Strategy*, Parliamentary Library, Canberra, 2002, p. 16.

The Effects of Weather on RAN Operations in the Southern Ocean

Commander Andrew McCrindle, RAN, and
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Over the last ten years, the Royal Australian Navy (RAN) has been required to deploy into or near the Southern Ocean in support of fisheries patrols and the rescue of yachtsmen taking part in round-the-world yacht races.¹ Present trends indicate a further increase in the prevalence of illegal fishing of Patagonian Toothfish, with the potential for continued illegal fishing within the Heard Island and McDonald Island exclusive economic zones (EEZ).

Operations in or near the Southern Ocean present RAN personnel with the challenge of operating in some of the most severe weather conditions in the world. To mitigate the risk associated with these conditions, RAN Meteorological and Oceanographic (METOC) personnel provide weather forecasting advice to the command during such operations. Furthermore, when warships deploy in or near the Southern Ocean a METOC officer is embarked to provide meteorological advice.

The climatology of the Southern Ocean changes seasonally due to the annual heating and cooling cycle of sub-Antarctic waters. These temperature variations give rise to two distinct seasons. Winter extends from June to October and summer from December to May, with short transition periods between. Figure 1 shows the relevant synoptic pressure patterns.

An area of low pressure known as the Antarctic Circumpolar Trough lies between 55°S and 70°S. This system tends to generate particularly violent weather events because, unlike the Northern Hemisphere, there is a continuous corridor of open ocean, which allows circumpolar winds to create very high sea states. Frequent depressions, which vary in intensity and track, move generally west to east at 20 to 30 knots in the vicinity of this trough. They transit with their associated fronts at a frequency of three to five days with a 12 to 24-hour gap between systems when a weak ridge of relatively high pressure affects the weather. In general, the weather is highly variable and frequently wet and stormy, with cloudy skies and poor visibility for much of the time. Consistent strong to gale force south-west to north-west winds blow year round causing high seas with wave swell heights of 3.5 metres or more for 50 per cent of the time, particularly in the band between 45°S and 60°S. The most noticeable seasonal change in the Southern Ocean is sea ice, which extends to between 55°S and 60°S in September or October, before retreating towards the coast of Antarctica in February and March.

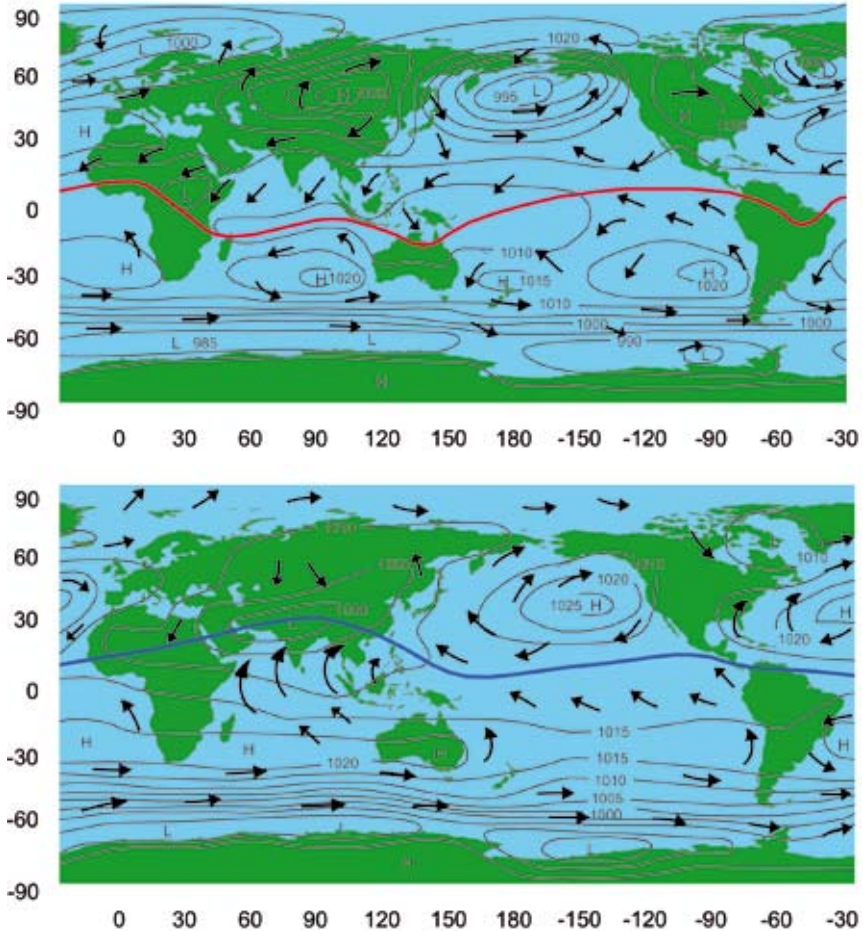


Figure 1: Summer (top) and winter (bottom) mean positions of pressure systems

Winds. Winds north of 60°S flow primarily from the westerly quadrant throughout the year. Due to the mobility of the weather systems, blocking patterns, which bring long periods of constant winds and weather in the lower latitudes, are rare. Mean winds show little variability from month to month, averaging between 19 and 24 knots over open ocean. However, maximum winds in excess of 80 knots are recorded each month. The variation in percentage of gale force winds does vary significantly between winter and summer, however, strong winds above 23 knots (Force 6 on the Beaufort scale) are persistent for more than 50 per cent of the time throughout the year. One minor but significant seasonal variation is the increase in much lighter north-easterly winds

in summer in the vicinity of Heard Island. Gales are frequent at most of the islands of the Southern Ocean with gusts of gale force being recorded at Kerguelen Island almost daily throughout the year. During the passage of a cold front, the strongest winds blow from the north-west with a heavy overcast sky and a falling barometer, followed by south-west winds, astern the front, as the barometer rises and the sky clears. Near the coasts of Antarctica and Heard Island, katabatic winds generated by sinking cold air over glaciers or radiative cooling can occur suddenly without warning and gust to over 100 knots.

High winds and associated turbulence adversely affect flying operations at winds of near gale force. Small boat operations become very hazardous in strong winds due to the associated sea state. Furthermore, periods of high winds are nearly always associated with periods of poor visibility due to precipitation and blowing spray.

Sea Conditions. Sea conditions in the Southern Ocean average rough to very rough throughout the year, but the swell regime shows some seasonal variation in the more northern latitudes. In this area, mean swells in winter are four to five metres, reducing to two to three metres in summer, as the severe swell generating storms become less frequent and the circumpolar trough of low pressure moves further south. Extreme conditions of sea and swell combining to over 12 metres occur in all months, with expected maximum wave heights occurring in most of the westerly wind region. At times extreme wave heights will rise to over 35 metres in the Indian Ocean sector and such waves have been encountered near the Kerguelen Islands in winter. The worst sea conditions are likely to occur between 50°S and 60°S in the Pacific Ocean sector and between 40°S and 50°S in the Indian Ocean and Atlantic Ocean sectors. High sea and swell caused by the persistent and often gale force winds centred around 50°S are a major concern for even large ships.

High combined sea and swell will abort replenishment at sea and small boat operations and the associated pitch and roll may leave flight decks out of limits for helicopter operations. Moreover, ship handling of frigate-sized ships becomes hazardous in waves over eight metres and a ship's speed of advance and ability to manoeuvre can be reduced significantly in such conditions.

Weather. In the vicinity of 50°S, the weather shows seasonal variability with the summer bringing more rain, snow, cloud and fog due to increased moisture from the higher sea surface temperatures. Days with precipitation increase from near 20 per month during winter to over 25 per month during summer. Precipitation that falls south of 50°S is usually frozen with exceptions to this in north-westerly flows ahead of cold fronts.

Typically, the weather associated with the passage of a cold front includes overcast conditions, with drizzle and rain/sleet ahead, clearing to partly cloudy with scattered snow showers astern. Weather associated with the following weak ridge of high

pressure is initially scattered snow showers, while in a south-west flow, it changes to fog/mist/sleet/drizzle as the next front approaches. Occasionally, these weak ridges lessen the sea state allowing an opportunity for some naval operations. Warm fronts are generally associated with overcast skies, light continuous rain and areas of fog. Fogs, which are brief and unusual in winter (one day/month) become more common and longer in summer (three to four days/month). They are most common in a northerly airflow and in the vicinity of the Antarctic Convergence Zone, which separates the very cold, and less saline, Antarctic water to the south from the warmer, more saline ocean to the north.

Operationally, a ship's navigation radar is a valuable tool for detecting approaching squall lines and fronts, and for monitoring precipitation in the immediate area. Radar is particularly useful in the final decision-making process for operations such as the launch of an aircraft or small boat.

Visibility. Visibility outside of precipitation is generally excellent in the cold, dry winter air and poor in the warmer, moister summer air. Heavy rain and thick drizzle with very low clouds reduce visibility quite frequently in the more northern latitudes. Extensive sea spray during periods where winds are stronger than gale force also creates visibility problems. There are many occasions when the visibility falls below the fog limit of 1000 metres in rain, sleet and snow.

Safe navigation, safe aircraft operations and effective air surveillance by land-based aircraft all rely on timely and accurate forecasts of visibility. However, at present, visibility can only be inferred from prognostic and forecast charts.

Temperatures. During February there is a gradual decrease of temperature with increasing latitude from 10°C at 45°S to 0°C at 60-65°S. The average August temperature over the same latitudes varies from 8°C to -12°C. For personnel with exposed skin the phenomenon of wind chill can cause severe frostbite. The wind chill factor reduces air temperature substantially, causing significant physical discomfort and greater chances of hypothermia.

Sea Surface Temperatures. Variations of 2°C or 3°C above or below the average may occur at any time of the year. Even greater differences are recorded near the Convergence Zone area where the sea surface temperature drops to zero. Sea survival times are very short for personnel without proper survival suits.

Icing. Though there are a number of types of icing that occur in the Southern Ocean, clear ice, freezing rain and freezing spray are of particular significance to naval operations. Clear ice can form when moisture in the air freezes onto either a ship superstructure or an airframe. This maritime version of black ice is difficult to detect and remove. Clear ice is rare and most commonly associated with outbreaks of extremely cold air over relatively warm water. This will be most common in the autumn transition. Ice can also accumulate due to precipitation falling as rain or drizzle and freezing

when it hits the deck of a ship or an airframe. Icing due to freezing rain is possible in all seasons, with a maximum in summer when moisture levels are higher. It quickly builds up on airframes increasing the all-up weight of aircraft; furthermore, in the absence of anti-icing measures it quickly collects on the leading edge of rotor blades reducing lift and aerodynamic stability. In the Northern Hemisphere, there have been a number of civil and military helicopter crashes associated with this phenomenon and all aircrews operating in such conditions take forecasts of freezing rain very seriously. The final type is ice formed by freezing spray. The rate of accretion depends on the water and ambient air temperatures and the wind speed, as they determine the droplet size. Superstructure ice accretion can occur in all seasons, being most common in the south of the area in winter. In extreme winter conditions, icing rates of four to six millimetres per hour are likely. Ice accumulation on ships' hulls and superstructures can create a significant rise in the vessel's centre of gravity, causing the vessel to become top heavy. Ship designs for vessels working south of the Convergence Zone need to account for the possible increase in weight to the superstructure. Most warship designs already have significant weight high in the superstructure due to the need to place radars and communications equipment as high as possible.

Sea Ice. Sea ice occurs in a belt around the Antarctic continent. In winter it extends a considerable distance north into the Southern Ocean, with about 85 per cent of the sea ice that surrounds Antarctica melting during the southern summer. The Antarctic



Severe ice accretion on the upper decks of a ship

sea ice reaches its maximum extent in late September or early October, when its northern limit extends as far north as 54°S in the Atlantic Ocean sector, 56°S in the Indian Ocean sector and 60°S in the Pacific sector of the Southern Ocean. The least extent is reached during late February/early March. At this time ice conditions show considerable variability, however, the sea ice is mostly restricted to the immediate coastline of the continent, with some regions remaining ice-free.

The Directorate of Oceanography and Meteorology provides expertise to mitigate the risks of Southern Ocean operations. The Fleet Weather and Oceanography Centre (FWOC) provides 24-hour forecasting support and routinely supplies numerical weather prediction model output, area wave and wind forecasts and Antarctic composite satellite pictures, which are interpreted by embarked METOC Teams to provide accurate aviation forecasts.¹

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Notes

¹ In 2000 the International Hydrographic Organization delimited the waters within the Atlantic Convergence to create a fifth world ocean – the Southern Ocean – which extends from the coast of Antarctica north to 60°S, and is a circumpolar body of water encircling Antarctica, encompassing 360° longitude. Not all nations agree with these boundaries.

The Western Pacific Naval Symposium

Mr Andrew Forbes

Naval cooperation is increasingly seen as one of the most useful means for countries to manage regional security issues, since maritime issues may affect a number of countries simultaneously, and because some threats are beyond the scope of one country to manage. The framework for this cooperation takes many forms, ranging from informal arrangements, bilateral and multilateral activities, to formal government-to-government agreements. The Western Pacific Naval Symposium (WPNS) is an example of a multilateral activity, set up during the Cold War, that is slowly adapting to the new regional security environment.

At the ninth International Seapower Symposium (ISS) held in 1987, the US Chief of Naval Operations raised the notion of separate regional meetings in alternate years to the ISS. Vice Admiral Mike Hudson, the Australian Chief of Naval Staff, took the initiative in relation to the Western Pacific, and invited a number of regional navies to the inaugural WPNS in Sydney in 1988. The rationale was to have the leaders of regional navies meet for frank and open discussions to promote mutual understanding and to discuss common challenges. It was recognised at this early stage that debate would be on common issues affecting naval professionals and not on political issues, nor on the maritime confidence and security building measures occupying the minds of those concerned with second track diplomacy.

Initial membership of the WPNS was based on those members who attended the ninth ISS (Australia, Brunei, China, Japan, New Zealand, South Korea, Singapore, Thailand and the US) and three additional members (Indonesia, Malaysia and Papua New Guinea). Membership grew progressively and membership criteria were developed, based on the applicant navy having the capacity to engage with current WPNS navies and contribute to the symposium. Two categories of membership were agreed. The criteria for member status required that the navy be from a State with territory in the Western Pacific area and have a strategic interest in the region. For observer status, criteria were somewhat more flexible, with an assessment of the likelihood of applicant navies being motivated to make a strong contribution to the WPNS. Critically, all existing members have to support the application for membership but there is neither lobbying nor a vote. There are currently eighteen members and six observers.¹

Importantly, the WPNS is a forum for naval professionals and aims to increase naval cooperation in the Western Pacific by providing a forum for discussion of professional issues, generating a flow of information and opinion leading to common

understanding and potential agreements. To achieve this, the WPNS has four major objectives:

- to discuss and elaborate cooperative initiatives, and identify those that warrant further consideration and development
- to explore new ways of enhancing friendship and professional cooperation
- to develop navy-to-navy relationships at a working level and maintain informal liaison among delegates between successive workshops and symposia, and
- to discuss professional areas of mutual cooperation.

It was originally envisaged that these objectives would be met primarily through successive symposia (attended by Service Chiefs), centred on briefings by navies on their activities or issues of concern. After the second symposium in 1990 the Chiefs established a work program, and in 1992 workshops were introduced to carry this work forward. Mid-level officers attend the workshops, where initial navy positions on issues are presented, debated and a consensus reached. These proposals are then referred to the next symposium for consideration and adoption. Importantly, however, WPNS decisions are non-binding and adoption of initiatives is voluntary. There have been nine symposia and fourteen workshops held to date.

Since its inception in 1988, WPNS has undergone a transformation in the issues it considers and the activities it undertakes. At the strategic level, the early symposia were concerned with identifying relevant programs of work, using small steps to explore the potential for cooperation. The WPNS has long been concerned with the threats posed by non-State actors, and sea robbery and transnational crime were the subject of seminal papers presented by Singapore in the 1990s.

At the 1992 workshop, members examined a number of concepts for documents that would inform and assist navies when dealing with each other. Australia proposed the development of a Maritime Information Exchange Directory (MIED) that would provide guidance on what information navies wished to have reported to them and how this information should be provided. The rationale for this proposal was to provide a ready means of reference on specific time-critical information participating navies would find useful when in the littorals of other navies. More recently Australia proposed the development of an interoperability matrix, outlining the equipment each navy could make available for humanitarian assistance and disaster relief, search and rescue, and mine countermeasures taskings, which will be incorporated into the MIED. Malaysia developed a Replenishment at Sea (RAS) Handbook, which detailed ships' layouts and RAS procedures. During the Cold War, the Soviet Union and the US had agreed procedures for the prevention of incidents at sea (INCSEA). Despite some suggestions that an INCSEA might be useful in the WPNS context, chiefs did not see the need for that type of document, principally because INCSEA related to bilateral tensions

and were agreements at a political level, whereas the WPNS related to multinational cooperation at a professional level. A cooperation at sea doctrine was then proposed and Australia was tasked with developing what became the Code for Unalerted Encounters at Sea (CUES). CUES was presented at a workshop in South Korea in April 1998 and later endorsed by the chiefs for voluntary adoption by members and any other navy. The US also sponsored the development and promulgation of a simple Tactical Signals Manual for use by all WPNS members, which was subsequently revised with input from other members.

At the fourth symposium, hosted by Malaysia in 1994, the WPNS continued to examine non-military security issues. This meeting saw the extension of the debate to include maritime security, rescue at sea, and environmental issues including prevention of sea pollution. Importantly, the WPNS avoided examination of confidence building measures, and developed the cooperative approach to issue identification through the Chiefs' Symposia and the work programs that would be produced during these meetings. Recently, symposia have also examined humanitarian assistance and disaster relief.

At the sixth workshop in 1997, Australia proposed that mine countermeasures (MCM) cooperation could be a significant area for cooperation, given the emergence of like capabilities in the region, especially in South East Asia. This initiative was also significant from the positioning of MCM as a common naval capability in otherwise quite differently structured navies. MCM cooperation was also significant as de-mining is seen as an important area for peaceful uses of naval forces. This was a major advance in WPNS activities leading to the provision of training seminars and more importantly to WPNS exercises. The concept was developed within the RAN and internationally through a workshop held at HMAS *Waterhen*, where the notion of an exercise based on international doctrine was explored. It was subsequently agreed to hold such an exercise and Singapore in conjunction with Indonesia co-hosted MCMEX and DIVEX 2001 during June 2001. The exercise involved 16 countries, 15 ships and 1500 personnel. The program included mine hunting and mine sweeping operations, MCM diving, sea riding and medical exchange programs. Singapore and Indonesia hosted MCMEX and DIVEX 2004 during April-May 2004, conducted in the Singapore Strait and off the Indonesian Island of Pulau Bintan, involving 18 countries, 20 ships and 1600 personnel. In addition to the 2001 elements, these exercises included: combined maritime explosive ordnance disposal training, live mine disposal charge firings at sea, and shore-based training on formation minesweeping tactics. In December 2005, Australia hosted an international MCM Seminar in Sydney.

Since its inception, WPNS has grappled with how to improve maritime cooperation and understanding at a practical and useful level. WPNS members have been keen to develop mechanisms for their personnel to learn from and train with other navies. This has taken four forms: personnel exchanges, attendance at overseas Staff Colleges,

study visits and tours (including visits by naval units), and senior officer visits. As WPNS members become more accustomed to working together, sea riding in foreign vessels is being introduced. All mechanisms are regarded as useful, but all require financing.

The key to naval cooperation is trust and understanding between navies. WPNS provides this in a number of ways. The symposia provide the opportunity for the Chiefs of Navy to meet and discuss issues. This occurs formally through presentations, where they gain an understanding of issues facing each navy as well as each country's respective views. More important, perhaps, is the personal contact, where chiefs can engage their counterparts and talk privately about specific issues. This allows each chief to brief his own government on regional concerns and how countries might react to particular events. Moreover, with the trust gained, chiefs are able to contact each other to forestall problems or quickly solve them on a one-to-one basis.

Collaboration through multilateral activities including disaster relief, and search and rescue, provides an understanding of how each navy thinks and operates, and of their capabilities. It also provides an opportunity for personnel to interact, exchange ideas and professional expertise, and gain an understanding of each other's cultures. Competency building through activities such as MCM seminars and exercises allows navies to train together to further enhance their skills. Cooperation and capacity-building allow more experienced navies to pass on knowledge and expertise to other members. Importantly, 'experience' is not limited to larger navies; rather it is based on specific skill sets across a range of navies.

There are, of course, constraints in any multinational activity. Notwithstanding the criteria for membership of WPNS, particularly 'the capacity to operate with other member navies', there remains the issue of whether members make an active or passive contribution to WPNS. The availability of funding remains the most critical issue: can members afford to host a workshop or symposium, can they fund personnel exchanges, and can they attend seminars and exercises? Some are unable to and therefore have to take a more passive role, resulting in a smaller core of navies actually 'driving' WPNS.

Interoperability was an early issue for WPNS. Given the disparate levels and broad origin of hardware capability across members, the harmonisation of procedures and development of manuals appears the most suitable option at this stage to evolve interoperability.

In the current regional maritime security environment of increasingly violent sea robbery and fears of a maritime terrorist attack, WPNS might need to reconsider the focus of some of its activities. Many regional countries possess coastguards for maritime law enforcement, yet the basic structure of WPNS with its naval focus may limit its ability to deal with such considerations. WPNS may therefore need to consider how the

maritime security environment is changing and how to adapt its processes to engage other civil agencies with responsibilities for maritime security, to find ways and means of engaging with them on regional maritime security issues in the future.

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Notes

- ¹ Members: Australia, Brunei, Cambodia, China, France, Indonesia, Japan, Malaysia, New Zealand, Papua New Guinea, Republic of the Philippines, Republic of Korea, Russia, Singapore, Thailand, Tonga, the United States and Vietnam. Observers: Bangladesh, Canada, Chile, India, Mexico and Peru.

Primary Casualty Reception Facility

Lieutenant Commander Meg Ford, RAN

Health support is an important consideration in any joint or combined operation. From a practical perspective, health support, both preventative and therapeutic, exists to conserve the fighting strength of the forces, ultimately contributing to the maintenance of operational capability and the success of the mission. Health support is also influenced by Australian societal expectations that injured members of the armed forces will have access to competent medical care from the time of injury until completion of the rehabilitation process.

The level of health support to any Australian Defence Force (ADF) activity is based on a hierarchical system of casualty management (from Level One to Five)¹ that may be affected by numerous factors, including the nature of the activity itself, weapon systems and other technologies, medical and physical fitness of the force, emerging disease patterns, the availability of other ADF health services and evacuation assets, and the extent and availability of civilian health infrastructure. It is a principle of health support that no patient should be evacuated further than their physical condition requires, and the provision of health support facilities as far forward as tactically possible helps to ensure that the treatment and evacuation process remains continuous and rapid.

An established Primary Casualty Reception Facility (PCRF) comprising a Level Three² health capability deployed in a ship, enables the early treatment of casualties afloat. A PCRF is only activated in anticipation of casualties and allows a 'window of opportunity' to effectively treat an injured member prior to the establishment and securing of health provision ashore. Operational planning may incorporate a reduction in levels of health logistic support ashore where an Afloat Level Three Medical Facility (AMF) is in the Area of Operations (AO). Importantly, the presence of such a well-equipped and safe AMF in the AO also assists in the maintenance of troop and crew morale.

The capacity to make available surgery and post-operative support in the AO also limits the requirement for dedicated platforms and personnel to perform strategic aeromedical evacuation (AME).³ Recent experience in Iraq (Operations IRAQI FREEDOM and ENDURING FREEDOM) has shown that the majority of wounded soldiers can be medically evacuated to definitive care, using helicopters for forward AME, within half an hour of initial injury.⁴

In December 1993, the Australian Government approved the purchase of two United States Navy *Newport* class Landing Ships Tank, which were commissioned as HMA Ships *Kanimbla* and *Manoora*. The ships underwent extensive conversion to meet the requirement for a joint amphibious capability, including the fitting of dedicated communications and operations facilities to support tactical commanders, a hangar

and flight decks capable of supporting up to four Army Black Hawk or three Navy Sea King helicopters, and two Army landing craft. Now classified as amphibious transports (LPA), the primary military role of each LPA is to transport, lodge ashore and support an Army contingent of 450 troops, their vehicles and equipment. In addition, they also contribute to a range of constabulary and diplomatic tasks, including peacekeeping operations, the protection and evacuation of Australian nationals within the region in the event of serious civil disturbance, and support to disaster relief operations both within Australia and the region.⁵

A fully equipped PCRf is an intrinsic capability in both vessels, incorporated in response to an anticipated increase in the need for the ADF to participate in a broad range of national and international tasks and to provide medical support for them. The PCRfs aboard *Kanimbla* and *Manoora* consist of a casualty reception area located forward of the hangar; a modern operating theatre; an eight-bed High Dependency Unit, with two of those beds able to be utilised as intensive care beds; a 36-bed Low Dependency Unit and X-ray and pathology equipment; while dental services can be provided when required. Casualties are usually accepted by helicopter, but sea transfer can also be used if necessary.

Staffing is determined using a modular capability system. Medical capability elements that can be deployed include AME, resuscitation, primary health, intensive care, operating theatre and command teams. Depending on the level of activation, up to 67 personnel will join the LPA, reducing troop carrying capacity by the same number.

The PCRf, although located adjacent to the ship's sickbay, is considered a separate entity, so the ship's senior medical sailor manages the routine medical care of the ship's company. To prevent deterioration of costly medical equipment and unit infrastructure when not activated, the facilities are each permanently staffed with a RAN Nursing Officer responsible for sourcing and maintaining the equipment and medical stores. This ensures that the facilities are ready for rapid activation when required.



PCRf in HMAS Kanimbla

A shore-based Operations Cell, which reports formally through the Amphibious and Afloat Support Force Element Group (AASFEG), supports the Nursing Officer. Logistic support for the PCRfs, when activated, is significant, and the vital components of a functioning medical facility are all provided, including waste disposal, laundry requirements, medical gases, drugs, and cleaning and sterilising agents. The PCRf

maintains sufficient consumable stores at all times to provide care to a significant number of personnel for approximately five days. This provides adequate lead-time to resupply should the activation be extended or conflict escalate, and for other appropriate contingency measures to be put in place.



Commander Maritime Task Group talks with PCRF medical personnel during Operation SUMATRA ASSIST

Balmoral Naval Hospital (BNH) provides the majority of personnel to fill PCRF billets when the facility is activated. The staff complement of the PCRFs is also augmented from time to time by active tri-Service specialists, usually orthopaedic or general surgery specialists and anaesthetists. In circumstances where only one PCRF has been activated, the Medical Officer in Charge (OIC) of BNH assumes the role of OIC PCRF for the duration of the operation wherever possible.

As a relatively new RAN capability, all aspects of the PCRF have matured and been further developed through operational experience. The PCRF Operations Cell was established formally in 2003 and provides dedicated personnel to examine logistic and personnel aspects of the units as their primary role, and to action recommendations from post-exercise/deployment reports. This cell moved from BNH under the OIC BNH to the AASG under the Capability Delivery section in October 2005.

Early lessons learned invariably focused on equipment, logistic supply of consumable items and a lack of allocated space to perform casualty triage. No medical equipment

on board was specifically marinised and certain adaptations have been required to ensure safety of the equipment in a moving environment. Various methods of logistic supply have been investigated, as management of medical consumables (often with a short shelf life) absorbs considerable time and is better handled by personnel with medical knowledge. Ship's Operating Procedures were required to detail the dual functionality of the hangar space to ensure both medical and aviation requirements could be met.

The LPAs have substantially boosted RAN amphibious, logistic and training capabilities and provided the first deployable Level Three medical capabilities since the decommissioning of the aircraft carrier HMAS *Melbourne* in 1982. The PCRFs have contributed significantly to the ability of the ADF to respond to national and regional commitments either independently, or as an element of combined operations.

From the first activation during Operation GOLD for the 2000 Olympics, the PCRf has been utilised in numerous major deployments since, including for combat operations in Iraq and Afghanistan (Operations CATALYST and SLIPPER), in peacekeeping operations in the Solomon Islands (Operations ANODE and TREK), in border protection (Operation RELEX) and, most visibly, in humanitarian assistance in the wake of the Indonesian tsunamis and earthquakes in early 2005 (Operations SUMATRA ASSIST I/II). Foreign nationals have been treated on board on two occasions (Operations RELEX and SUMATRA ASSIST I/II).⁶ Most patients, however, have been ADF personnel who have been treated, stabilised and medically evacuated to definitive care ashore, or returned to duty.

The utility of the PCRf and its proven efficacy in boosting medical capability in various operational environments, demonstrated once more during the recent deployment of *Kanimbla* to East Timor for Operation ASTUTE,⁷ has led to a similar requirement being identified in the planned acquisition of the two new RAN amphibious ships (LHDs) from 2012.

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Notes

- ¹ Department of Defence, *Health Support*, ADFP 53, Defence Publishing Service, Canberra, 1998, pp. 1-1, 1-2.
- ² A Level Three facility is staffed and equipped to provide resuscitation, initial surgery and post-operative treatment. Care at this level may be the initial step towards restoration of functional health as distinct from procedures that stabilise a condition or prolong life; ADFP 53, *Health Support*, p. 1-1.
- ³ Strategic AME is that phase of evacuation that provides airlift for patients out of the AO; ADFP 53, *Health Support*, Glossary.
- ⁴ Forward AME is that phase of evacuation that provides airlift for casualties, from the battlefield to the initial point of treatment within the AO; ADFP 53, *Health Support*, Glossary.
- ⁵ Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, RAN Doctrine 2, Defence Publishing Service, Canberra, 2005, pp. 104-108.
- ⁶ Royal Australian Navy, *Database of Royal Australian Navy Operations, 1990-2005*, Working Paper No. 18, Sea Power Centre - Australia, Canberra, 2005; and 'Operation Sumatra Assist Two', *Goorangai*, Occasional Papers of the Royal Australian Naval Reserve Professional Studies Program, Vol. 2, No. 1, April 2006.
- ⁷ 'Operation ASTUTE - the RAN in East Timor', *Semaphore*, No. 12, Sea Power Centre - Australia, Canberra, June 2006.

Ancient Egyptian Joint Operations in The Lebanon Under Thutmose III (1451-1438 BCE)

Dr Gregory P. Gilbert

Most people are aware that the Ancient Egyptians conducted military operations in Syria-Palestine, some may have heard mention of King Thutmose III at the Battle of Megiddo, but few will have heard about how Egyptian naval forces influenced events ashore during Thutmose III's subsequent operations in the Lebanon.¹

The history of Syria-Palestine aptly demonstrates the strategic advantage that lay with the maritime powers that controlled these waters. During the Late Bronze Age, Thutmose III's ability to maintain sea control in the Eastern Mediterranean enabled him to effectively project Egyptian military power ashore in the Lebanon. It is a truism, confirmed during the Crusades, World War I, and the 1973 Arab-Israeli War, that armies cannot operate effectively in the Syria-Palestine littoral without fleets controlling the adjacent Mediterranean Sea.

By the time of Thutmose III the Egyptians had a long established overland trade route across the Sinai, coupled with a strong influence over the cities of southern Palestine. They also had a mature maritime trading relationship with the coastal cities of the Lebanon, especially Byblos (about 32 km north of modern Beirut).

Thutmose III's first campaign (Year 23 of his reign) commenced with a long gruelling march through the Sinai and Palestine. His army subsequently defeated a coalition of city states and towns under Mitannian (north-east Syrian) leadership, at the Battle of Megiddo.² Much tribute was collected and local rulers made contributions that helped to supply the Egyptian armies in the field. Three mopping-up campaigns over subsequent years (Years 24 to 28) solidified Egypt's position as it paved the way for a more permanent occupation of Palestine.³ Stabilisation of the region remained elusive, however, as the Mitanni continued to exercise power and influence among the local princes of the Lebanon and Syria. One of these, the Prince of Kadesh, led an anti-Egyptian coalition based around the Orontes River and Naharin (the region around the upper Euphrates River in Syria). Indeed, following the Battle of Megiddo, the Mitanni and their supporters became formidable opponents whose insurgency tactics achieved local political successes against the less flexible Egyptian armies.

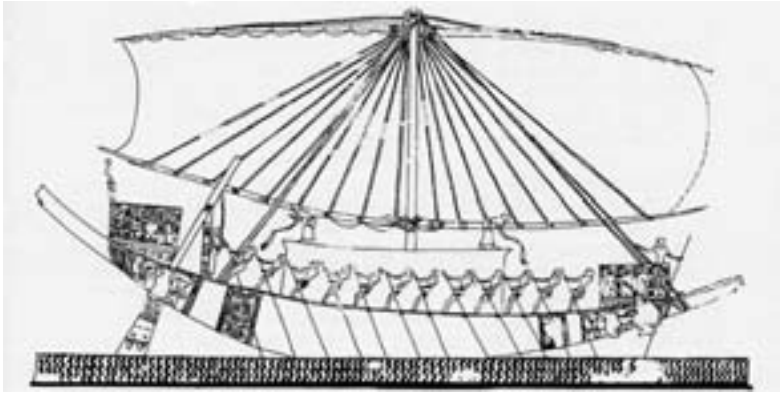
Thutmose III needed to change his strategy. Whereas the Egyptians could sustain small garrisons in Palestine and much larger forces from Egypt in order to coerce allies and defeat rebels, they were not capable of projecting Egyptian military power into the Lebanon or Syria over land. Not only would an army transiting through Palestine be a logistics burden for the cities and towns that it passed through, it was subject to



Eastern Mediterranean Area of Operations c.1450 BCE⁴

potential attacks from anti-Egyptian insurgents. In addition, the transit time through Palestine would reduce the effective campaigning seasons for the Egyptian forces to such an extent that they would be incapable of operating against the Mitanni heartland in north-east Syria. Sea power provided the answer.

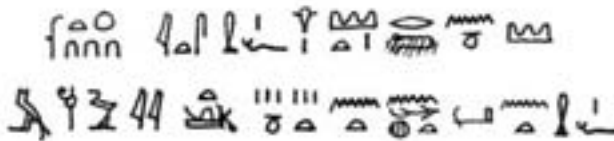
Thutmose III's fifth to eighth campaigns (Years 29 to 33) in Syria-Palestine are classic examples of expeditionary operations.⁵ While the Egyptians controlled the east Mediterranean Sea they were able to project power ashore, utilising mobility, access, flexibility and reach, to effectively 'fire' the Egyptian army at 'targets' on shore across the Lebanon and into north-east Syria. 'Fighting remained land-based, but was now dependent upon the sea routes off the coastline of Lebanon, with Byblos and other ports serving as major staging points and supply depots.'⁶



Sailing vessel from the Tomb of Rekhmire at Thebes⁷

The city of Tunip was sacked during Thutmose III's fifth campaign (Year 29). Some 329 of Tunip's soldiers were captured, with many to be hired later as Egyptian mercenaries. Large quantities of silver, gold, bronze and copper were taken as plunder. Two ships were also captured off the coast and their cargoes taken back to Egypt. 'Afterward his majesty returned [from the campaign] travelling by boat to Egypt, to his father Amon-Re [in Luxor], his heart in joy.'⁸ The Egyptian fleet was central to the successful conduct of this campaign.

On his sixth campaign, having established port facilities on the Lebanese coast, Thutmose III was able to travel from Egypt with his fleet and conduct expeditions to deter the rulers of Kadesh, Sumur and Arvad. Other cities were coerced to let their sons be raised in Egypt, to be 'Egyptianised'. The seventh campaign was directed at the coastal cities of the Lebanon, starting by capturing and plundering the port city of Ullaza. Thutmose III then sailed along the coast, obtaining the submissions and tribute from the princes of each city and town on route. 'Now every harbour at which his majesty arrived supplied sweet bread and other assorted breads, with oil, incense, wine, honey and fruit ... they were abundant beyond everything, beyond that which was known by his majesty's forces.'⁹ After assessing the harvest of Syria, and taking a proportion into the Egyptian treasury, Thutmose III sailed back to Egypt.



Year 30. Now his majesty was in the land of Retjenu (Syria) upon the sixth naval expedition of his majesty's victory¹⁰

Having subdued the coastal cities of the Lebanon, Thutmose III was now able to embark upon his eighth and perhaps his greatest campaign (Year 33). He led an Egyptian expedition to conquer the Mitanni strongholds in north-east Syria. After travelling by sea from Egypt through the port of Arvad, the expedition marched north to Aleppo and then into the land of Naharin. The king of Mitanni and the rulers of allied city states were defeated in a series of battles at Naharin, Wan (west of Aleppo), and Carchemish. 'Now his majesty travelled north capturing the towns and laying waste the settlements of that foe of wretched Naharin.'¹¹ Three princes, 30 of their wives, 80 warriors and 606 slaves (men, women and children) were taken prisoner.

The Egyptian expedition to Naharin included a bridge of boats that was used to cross the mighty Euphrates River.

Now my majesty travelled to the ends of Asia. I caused many ships to be constructed of cedar on the hills of the God's Land (Lebanon), in the presence of the mistress of Byblos, they being placed on chariots (carts) pulled by oxen. They travelled before my majesty to cross that great river that flows between this foreign land and Naharin.¹²

It is most likely that the Egyptian naval forces were responsible for this early feat in military engineering. Rapid movement of relatively small forces on land was the key to the successful conduct of these operations.

Thutmose III's campaign now turned south: sailing downstream on the Euphrates, the Egyptians attacked the cities of Niy, Sendjar, Takhsy and once again Kadesh.¹³ Travelling south through the Orontes valley, the Egyptian expedition returned to the Lebanese coast. Thus the capability of the Egyptian forces to project power deep into Mitanni territory was demonstrated. Not only did the king of Mitanni give tribute to Thutmose III, but the major powers of the day recognised the might of Egypt. The Babylonian, Assyrian and Hittite kings now sent tribute to the Egyptians in the Lebanon. The following year more Syrian cities surrendered to the Egyptians adding to the list of tribute, while tribute was also received from the ruler of Cyprus.

The campaigns of Thutmose III provide an early example of the problems that must be overcome when conducting expeditionary operations. Expeditionary operations are usually most effective when they are limited to distant campaigns of short duration, against varied opponents, and with clear aims. They are by their nature also politicised. They are not efficient if they are used as a substitute to the taking and holding of land by occupation forces. While the Egyptians, under Thutmose III, were able to garrison and occupy Palestine, they did not have the military or economic capabilities or the political will to permanently occupy all of Syria. After Thutmose III's eighth campaign, the forces of the Mitanni and their allies adopted a typical insurgency strategy against the Egyptians. They refused to pay tribute and revolted when and where the Egyptians were weak, while their rulers submitted when the Egyptian expeditions arrived in

force. Syria was neither in peace nor at war, while cities in revolt and Egyptian reprisal campaigns almost became annual events. Thutmose III's successors inherited this unsatisfactory strategic situation in Syria, with Amenhotep II having to fight at least two campaigns in the region.

The Mitanni rulers of city states may have been morally justified in opposing Egyptian political domination of trade in Syria-Palestine, but the Egyptians themselves most likely saw their intervention as one of creating order where there was chaos. Thutmose III probably thought he acted as a force for good in the region. Sea power underpinned much of the 'Egyptian Empire', while the associated control of sea trade generated the wealth and luxury that characterised an Egyptian 'Golden Age'.

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*Thutmose III smiting his enemies as depicted at Karnak Temple,
Luxor, Egypt¹⁴*

Notes

- ¹ King Thutmose III ruled Egypt for some 54 years, from 1479 to 1425 BCE. Historical background may be found in I. Shaw (ed), *The Oxford History of Ancient Egypt*, Oxford University Press, Oxford, 2000, pp. 218-271, and esp. 243-248.
- ² The campaigns are described in D. Redford, *The Wars in Syria and Palestine of Thutmose III*, Brill, Leiden, 2003, pp. 185-244.
- ³ A.J. Spalinger, *War in Ancient Egypt*, Blackwell, Oxford, 2005, p. 83.
- ⁴ Map created by Gregory P. Gilbert.
- ⁵ Expeditionary operations are military operations that can be initiated at short notice, consisting of forward deployed, or rapidly deployable, self-sustaining forces tailored to achieve a clearly stated objective in a foreign country. Royal Navy, *British Maritime Doctrine*, BR1806, 3rd ed, TSO, London, 2004, p. 257.
- ⁶ Spalinger, *War in Ancient Egypt*, p. 110.
- ⁷ N. de G. Davies, *The Tomb of Rekh-Mi-Re at Thebes II*, Egyptian Expedition Publications Vol. XI - Plates, New York, 1943, plate LXVIII.
- ⁸ Translations from 'The Annals of Thutmose III' are found in K. Sethe, *Urkunden der 18. Dynastie*, Hinrichs, Leipzig, 1907, pp. 684-734, translated from hieroglyphs by the author.
- ⁹ Sethe, *Urkunden der 18. Dynastie*, pp. 692-693.
- ¹⁰ Sethe, *Urkunden der 18. Dynastie*, p. 689.
- ¹¹ Sethe, *Urkunden der 18. Dynastie*, p. 697.
- ¹² From the 'Gebel Barkal stela of Thutmose III' in K. Sethe, *Urkunden der 18. Dynastie*, Akademie Verlag, Berlin, 1955, pp. 1227-1243.
- ¹³ The locations of many of these cities are disputed, but some scholars believe Niy was situated on the Euphrates. The cities of Sedjar and Takhsy would then have been located between the Euphrates and the Orontes Rivers. The Prince of Kadesh probably did not expect the Egyptian expedition to approach his city from the north.
- ¹⁴ Photo provided by Gregory P. Gilbert.

The RAN Band Ashore and Afloat

Lieutenant Commander Phillip Anderson, OAM, RAN

The Royal Australian Navy (RAN) Band is a ceremonial unit of the Australian Defence Force (ADF) tasked with the mission of 'promoting the RAN', and in fulfilling this mission, it continues a proud tradition of providing ceremonial, musical and public relations support in Australia and overseas. Its musicians promote awareness in the wider community of Navy's critical contribution to the nation and maintain one of the RAN's most consistent and significant public engagement profiles.

Music has had a long and distinguished association with the military, the band of the British Grenadier Guards having been formed over 300 years ago, and the Royal Marine bands 239 years ago. Although not sharing the same historical background as these British counterparts, the origins of the RAN Band can be traced back to the various bands of the colonial naval forces prior to Federation. The band of the Victorian Naval Brigade was a well known musical unit in the Melbourne area during the late 19th century. Indeed, this band journeyed to China in 1900 on the eve of Federation as part of the naval contingent that assisted in quelling the Boxer Uprising,¹ and was farewelled officially by the bluejacket New South Wales Naval Brigade Band. Later, the band of the Victorian Naval Brigade was also present as part of the Commonwealth Naval Force Band when the United States Navy's 'Great White Fleet' sailed into Port Phillip Bay in 1908.

Some months prior to the commissioning of HMAS *Australia* (I) at Portsmouth on 21 June 1913, six musicians from Melbourne were sent to England to join up with a number of ex-Royal Marine and British Army bandsmen. These musicians, who formed the first band of the infant Royal Australian Navy, arrived back in Sydney aboard *Australia* (I) on 4 October 1913. From the outset, the band was dressed in a uniform very similar to that of the uniform of the Royal Marines of the period, and their appearance at ceremonial parades greatly enhanced the spectacle.²

A second band was formed in 1927 for Flinders Naval Depot, now HMAS *Cerberus*. This band consisted of permanent musicians assisted by volunteers from all branches within the depot. In the late 1930s, there was a rapid expansion in musician recruitment with a total of five bands at sea, serving in the cruisers HMA Ships *Australia* (II), *Canberra* (I), *Hobart* (I), *Perth* (I) and *Sydney* (II), in addition to bands in shore establishments.

During World War II, musicians served in all theatres of war and, naturally, their operational responsibilities including complementing guns crews, handling shells in magazines, working in transmitting stations, assisting first aid parties and acting as lookouts through day and night watches, became the focus of their shipboard routine.

They took the same risks as their shipmates and were among those who lost their lives in the sinking of *Sydney* (II). After World War II, all musicians were posted to *Cerberus*, where in 1951 the RAN School of Music was formed. At the same time, a boy/junior musician scheme was inaugurated for the recruitment of boys over the age of 15 and a half years.



RAN Band members manning damage control stations

Bands were again posted to sea in the early 1950s and musicians saw action aboard the aircraft carrier HMAS *Sydney* (III) in Korean waters in 1953, patrolled Malayan waters during the Malayan Emergency, and performed two concert tours of Vietnam during the early 1970s. By 1973, the only band remaining afloat was serving aboard HMAS *Melbourne* (II), and this band transferred to HMAS *Stalwart* (II) on the decommissioning of *Melbourne* in mid 1982. In October 1984, the Defence Force School of Music opened in Simpson Barracks, Victoria, and took over the training of all navy and army musicians. As a consequence, the RAN School of Music ceased operating in 1985 and the junior musicians' scheme was also abolished. Shortly afterwards women were recruited into the band for the first time.

Today the RAN Band consists of two major detachments of full-time musicians stationed in Sydney at HMAS *Kuttabul* and in Melbourne at HMAS *Cerberus*, while a third detachment consists of reserve members stationed in Sydney, Brisbane, Adelaide, Hobart and Perth. All band members are required to perform in the main ceremonial ensemble of their individual detachments. However, to ensure versatility, other specialty capabilities are also maintained including a wind orchestra in Sydney, a concert band in Melbourne, as well as wind chamber ensembles, a show band and small jazz combinations in each detachment.

Since 2002, the band has re-established links with the fleet through regularly embarking small elements of musicians in ships departing on deployments. The RAN Band's operational role during such deployments is to entertain deployed ADF forces, as well as to add value to the fleet's engagement profile ashore. While embarked, band members are employed in a variety of roles, including general duties in the galley/cafeteria and laundry parties, as lookouts on the bridge, on the helm and as members of the ship's force protection teams. For instance, during Operations SLIPPER and FALCONER the musicians worked as members of flight deck teams in HMAS *Kanimbla* (II).

The deployment of 17 musicians to the Middle East Area of Operations (MEAO) during Christmas 2003, and a further 19 musicians for Christmas 2005, as part of the musical Tour de Force sponsored by the Forces Advisory Council on Entertainment (FACE), demonstrated to Australian and coalition forces the calibre of the RAN's musicians and the band's musical capability. During Anzac Day 2004, the band had 15 musicians at Anzac Cove and one of its buglers performed for the dawn service in Baghdad, Iraq. More recently, 15 musicians participated in another FACE tour; this time to the Solomon Islands in support of ADF and Australian Federal Police personnel committed to Operation ANODE. While in the Solomon Islands, the musicians presented a concert to an audience of more than 20,000 Solomon Islanders.

In Australia each year, the RAN Band completes more than 500 performances with audience numbers in the hundreds of thousands.³ Importantly, the RAN Band is able to keep Navy's image alive in communities far removed from any naval presence. Tasks range from supporting local community groups and ex-Service associations to supporting ceremonial, public relations and social activities for the wider naval family. For example, in June 2003 the Maritime Commander commented that the presence of the RAN Band at welcome home and departure ceremonies for RAN ships deploying to, and returning from, overseas operations 'has been superb, and added immeasurably to the importance of those occasions for our people and their loved ones'.⁴

Ship/Tour	RAN Band contribution
HMAS <i>Kanimbla</i>	5 musicians - Operation RELEX II (2002)
HMAS <i>Sydney</i>	8 musicians - North East Asian Deployment (NEAD) 2002
HMAS <i>Kanimbla</i>	4 musicians - Operation SLIPPER and Operation FALCONER (2003)
HMAS <i>Adelaide</i>	8 musicians - South East Asian Deployment (2003)
HMAS <i>Warramunga</i>	8 musicians - South West Pacific (SWPAC) Deployment 2003
HMA Ships <i>Tobruk & Arunta</i>	7 musicians - NEAD (2003)
FACE Tour de Force	17 musicians - Operation CATALYST (2003-04)
Anzac Day	15 musicians - Anzac Cove (2004) 1 musician - Baghdad (2004)
HMAS <i>Parramatta</i>	4 musicians - Exercise RIMPAC 2004
HMAS <i>Anzac</i>	8 musicians - NEAD (2004)
HMAS <i>Tobruk</i>	8 musicians - SWPAC Deployment (2004)
HMAS <i>Anzac</i>	8 musicians - Operation NORTHERN TRIDENT (2005)
FACE Tour de Force	15 musicians - Operation ANODE (2005)
HMAS <i>Kanimbla</i>	10 musicians for a short visit to Broome (2005)
HMAS <i>Stuart</i>	8 musicians - SWPAC Deployment (2005)
FACE Tour de Force	19 musicians - Operation CATALYST (2005-06)
HMAS <i>Tobruk</i>	11 musicians - South East Asian Deployment (2006)
HMAS <i>Manoora</i>	12 musicians - Exercise RIMPAC 2006 (2006)
FACE Tour de Force	3 musician technicians - Operation Catalyst (2006)

RAN Band sea and operational deployments June 2002 to August 2006

The RAN Band has performed at the Royal Tournament and in Disneyland, on the shores of Gallipoli, at the Pope's summer palace (Castel Gandolfo) and in the 'Big Egg' Stadium in Japan, while supporting RAN diplomatic activities and military operations overseas. The band also played a leading role during the Melbourne 1956 and Sydney 2000 Olympic Games.

Recent ceremonies that highlighted the importance of maintaining naval music were the repatriation ceremony, funerals, and national thanksgiving service to honour those lost in the crash of the RAN's Sea King SHARK 02, while providing humanitarian relief



Ceremonial Sunset in HMAS Anzac, Goa, 2005

as part of Operation SUMATRA ASSIST II. In carrying out these and other ceremonial functions, such as commissioning and decommissioning ceremonies, today's RAN Band continues the fine tradition established by the bluejacket bands; however, instead of playing 'Sons of the Sea' as was the case in 1900, today's musicians perform popular tunes such as 'I am Australian' and 'Waltzing Matilda'.

The performance of these duties, and many others like them, have firmly established the reputation of the RAN Band and demonstrated that its time-honoured traditions continue to be proudly upheld by its members today.

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Notes

- ¹ B. Nicholls, *Blue Jackets and Boxers*, Allen & Unwin, Sydney, 1986, p. 45.
- ² The band changed to the RAN sailor's uniform in 1960 after the 1956 Melbourne Olympic Games where the RAN Band's imaginative marching display during the opening ceremony was credited to the Australian Army, due to the similarities in the respective uniforms. This uniform change ensured that the band became clearly recognised as the musical ambassadors of the Senior Service.
- ³ RAN Band, *Annual Report 2004/2005*, July 2005, pp. 4-6.
- ⁴ 'Messages acknowledging the transfer to Australian Navy Systems Command', *RAN Band News*, No. 2, 14 July 2003, <www.navy.gov.au/ranband/documents/newsletter2.pdf>

RAN Activities in the Southern Ocean

Mr Andrew Forbes

The effect of the weather in or near the Southern Ocean and its impact on Royal Australian Navy (RAN) operations was considered in a recent *Semaphore* newsletter.¹ This *Semaphore* describes some RAN activities in the Southern Ocean since World War II (WWII).

RAN capabilities were vital to the creation of the Australian National Antarctic Research Expedition's (ANARE) scientific Research Stations on Heard and Macquarie Islands in the late 1940s. The RAN then conducted annual resupply of the stations for several years and undertook a number of emergency medical evacuations. More recently, the RAN has operated deep into the Southern Ocean, firstly to meet Australia's international Search and Rescue (SAR) obligations, and secondly, in fisheries protection operations around Heard Island and McDonald Islands (HIMI).

HMA *LST3501* had been selected to provide logistic support to ANARE for the establishment of research stations on Heard Island, about 2160 nm south-west of Perth, and Macquarie Island, about 810 nm south of Hobart. On 28 November 1947, *LST3501* left Fremantle arriving at Heard Island on 12 December. On arrival there were two tasks: identifying suitable landing sites to offload stores and personnel, and identifying the appropriate location for the Research Station. Small craft were used to ferry stores ashore in extremely difficult sea conditions, and *LST3501* beached to allow quick offloading of stores. After offloading all the stores, and leaving 14 ANARE personnel for their 12-month sojourn, *LST3501* departed for Kerguelen Island to land fuel for HMAS *Wyatt Earp* and then proceeded to Melbourne.² In late 1947, the RAN commissioned the motor vessel *Wyatt Earp* to explore King George V Island off Antarctica. It departed Melbourne on 8 February 1948, however, the pack ice was too dense to force a passage and after numerous attempts, *Wyatt Earp* set course for Macquarie Island.³

After repairs in Melbourne and re-storing, *LST3501* departed for Macquarie Island on 28 February 1948, carrying 13 ANARE personnel and 400 tonnes of stores. On 7 March, she arrived off Macquarie Island but could not beach herself as the shoreline was strewn with rocks, so small craft were used to reconnoitre and move stores ashore. The waters off Macquarie Island are quite rough, and these craft as well as pontoons were often damaged and in some cases destroyed. *Wyatt Earp* arrived on 20 March and both ships departed for Australia on 25 March.⁴

On 16 December 1948, *LST3501* was renamed HMAS *Labuan* (I) and under that name sailed to Heard Island three more times (January-February 1949, January-March 1950, and January-February 1951) and to Macquarie Island twice more (March-April 1949, and April 1950) to resupply the research stations and change-out the ANARE

personnel. However *Labuan* was severely damaged by weather on her final return from Heard Island in 1951, and was not used again. This caused some disruption to ANARE resupply operations and since then ANARE has relied on chartered civilian resupply ships.⁵ However, in October 1985, the ANARE supply ship MV *Nella Dan* became trapped in pack ice and could not resupply Macquarie Island, so HMAS *Stalwart* was diverted from South East Asia to provide essential supplies. This resupply effort involved the changeover of 39 research personnel, and offloading of 200,000 litres of fuel and more than 100 tonnes of general cargo, the bulk of which was transferred ashore by Sea King helicopter.

As there are no airstrips on Heard or Macquarie Islands, any medical evacuation must be done by sea, and the RAN has conducted four such operations. In July 1950, the Medical Officer on Heard Island self diagnosed himself with appendicitis and requested medical evacuation. After two civilian ships failed in their attempts to effect a rescue, the task fell to the RAN. On 27 July 1950 the heavy cruiser HMAS *Australia* (II) was dispatched on a lengthy mercy mission through gale conditions and blizzards. The crew of *Australia* had one day's notice of the impending mission and spent that time taking on fresh provisions, winter and Arctic clothing and special stores, while offloading all equipment, such as motor boats, the whaler and skiffs, from the upper deck. The major planning consideration was fuel usage and the principal factor affecting fuel usage was the weather. The need to sail at speed would deplete fuel quickly, and the possibility of poor weather at Heard Island would require *Australia* to loiter, demanding the extra fuel that would have been used in a rapid transit. Luckily the weather on the outward passage was better than expected and left enough fuel for the remainder of the task, while poor weather off Heard Island delayed *Australia* for a day before she could launch a boat to the island to collect the patient. *Australia* suffered some structural damage during this operation and the government decided the RAN would not be made available in future to attempt this type of rescue for ANARE.⁶

However, in October 1966 HMAS *Queenborough*, while on a training cruise in Tasmanian waters, was dispatched through 9 metre swells and up to 60 knot winds with blinding hail and snow, to effect an evacuation from Macquarie Island. Once there, it took 30 minutes for the ship's boat to get to shore, allowing the patient to be immediately loaded onboard. The weather then worsened and it became apparent that, had *Queenborough* arrived an hour later the weather would have been too poor to allow boat work, and the ship would have had to loiter offshore and use up valuable fuel reserves.⁷

In May 1967, HMAS *Perth* (II) evacuated a patient from Macquarie Island. In spite of icy conditions, gale force winds and rough seas, the patient was taken offshore in an inflatable life raft, thence to the ship's boat and then to Perth. Finally, in January 1979, HMAS *Hobart* (II) was dispatched to Macquarie Island to evacuate a badly injured patient. On this occasion, *Hobart* operated in conjunction with the Antarctic

Support Vessel *Thala Dan*. *Hobart's* crew constructed a makeshift helipad so that *Thala Dan's* helicopter could pick up the patient from the island and airlift him directly to *Hobart*.⁸

In the 1990s, the Australian Defence Force (ADF) conducted two well-publicised rescues of stranded yachtsmen deep in the Southern Ocean. In late December 1994, HMAS *Darwin* was directed to sail in search of the lone yachtswoman Isabelle Autissier, stranded some 900 nm off Adelaide. On 1 January 1995, *Darwin* launched its Seahawk helicopter and an hour later Autissier was safe onboard. Two years later, the ADF undertook one of the most complex ocean rescues ever attempted. On 6 January 1997 distress beacons were activated in the Southern Ocean, and the Australian Maritime Safety Authority ascertained that two yachtsmen were in trouble. HMAS *Adelaide* (II) sailed at 1600 that day and was in constant contact with Royal Australian Air Force (RAAF) Orion aircraft that had located each vessel and directed *Adelaide* to effect the actual rescues. Early on 9 January *Adelaide's* Seahawk helicopter rescued Thierry Dubois from a RAAF life raft dropped earlier near his stricken yacht. Shortly thereafter, *Adelaide* came to Tony Bullimore's overturned yacht, launched its boat and rescued him after he swam out from beneath the hull.⁹

Under the *United Nations Convention on the Law of the Sea 1982*, Australia now claims a 200 nm exclusive economic zone (EEZ) for its offshore territories, and also claims sovereign rights to manage and conserve associated fish stocks in those waters. The Patagonian Toothfish is a valuable fish found in the waters around the HIMI and is the target of illegal fishing. The RAN is occasionally tasked with patrols into the HIMI, and given the possible open-ended nature of each deployment, the major fleet units are accompanied by a tanker. The purpose of these patrols is to deter foreign fishing vessels (FFVs) or catch them in the act and then take them into custody. The RAN has undertaken four such deployments, supplementing civilian-chartered vessels by the Australian Fisheries Management Authority (AFMA) and been involved in two other interception activities.

In October 1997 HMAS *Anzac* (III) deployed from Fremantle with the tanker HMAS *Westralia* (II) in support as part of Operation DIRK. On 15 October, *Anzac* sighted a FFV on radar, subsequently identified her as the *Salvora*, shadowed her and then attempted a boarding, but bad weather intervened. Later that day, the *Salvora* was boarded, a steaming party embarked and she was directed to make passage to Fremantle. On 17 October, *Anzac* inserted a boarding party by Seahawk aboard another FFV, the *Aliza Glacial*, and a steaming party was left on board while *Anzac* escorted both FFVs to a rendezvous with *Westralia* on 18 October. *Westralia* subsequently took charge of both FFVs while *Anzac*, after refuelling from *Westralia*, continued patrolling, but no further FFVs were sighted.¹⁰

In February 1998 HMAS *Newcastle* and *Westralia* deployed as part of Operation STANHOPE. On 19 February, the *Big Star* was boarded and apprehended 9 nm inside the

EEZ. During the boarding operation, the Rigid Hull Inflatable Boat (RHIB) overturned, requiring a 'rescue' by the Seahawk helicopter. *Westralia* and *Big Star* detached from the area on 22 February to make passage for *Fremantle*, while *Newcastle* continued patrolling until poor weather led to her being recalled. *Newcastle* rendezvoused with *Westralia* on 28 February to refuel, and then all returned to Fremantle.¹¹

In April 2001, a Togo-registered but Spanish owned FFV was caught fishing illegally in the HIMI by the AFMA chartered vessel *Southern Supporter*. When challenged, the *South Tomi* initially headed towards Fremantle, but once on the high seas it turned towards Africa. The AFMA vessel chased the ship across the Indian Ocean for 14 days, while RAN personnel flew to South Africa and with the assistance of the South African Defence Force, boarded the ship, which was subsequently returned to Australia for the crew to face court. The skipper of the *South Tomi* was fined \$136,000, the illegal catch of 116 tonnes of Toothfish was sold for \$1.4m and the boat was forfeited. Similarly in Operation GEMSBOK, the ADF operated in conjunction with AFMA, Coastwatch and the Republic of South Africa to apprehend the *Viarsa I* as it fled from the HIMI EEZ across the Indian Ocean in late 2003.

On 29 January 2002, HMAS *Canberra* (II), which had been preparing to deploy to the Arabian Gulf, and *Westralia* deployed as part of Operation SUTTON to apprehend up to three fishing vessels. On 6 February, the *Lena* was discovered early in the morning but bad weather delayed boarding until the afternoon. *Westralia* subsequently escorted the *Lena* while *Canberra* investigated a contact to the north, and later that day the *Volga* was boarded and apprehended.¹² *Westralia* escorted the *Lena* and the *Volga* outside the HIMI EEZ while *Canberra* continued patrolling, but there were no more sightings so all ships returned to Fremantle.¹³

In January 2004, HMAS *Warramunga* (II) deployed as part of Operation CELESTA. *Warramunga* boarded and apprehended the *Maya V* and two days later HMAS *Success* (II) rendezvoused with *Warramunga*. *Warramunga* returned to Fremantle with the *Maya V*, and *Success* continued patrolling. *Success* subsequently discovered two sets of fishing buoys that had been layed by *Maya V* as part of her long line fishing; they were recovered and proved to be crucial prosecution evidence against the *Maya V*. During *Warramunga*'s return to Hobart, she sighted a suspect FFV 350 nm south-east of Heard Island and warned her off as there was no other reason for the vessel to be in the vicinity unless she planned to fish illegally.¹⁴

The RAN's activities in the Southern Ocean emphasise a number of characteristics of naval forces. The reach of naval forces is considerable and is further enhanced through the use of tanker support. To place the distances inherent in Southern Ocean operations in perspective, the transit from Fremantle to Heard Island exceeds the breadth of the North Atlantic Ocean; a WWII Atlantic Ocean convoy would have travelled, at a minimum, 1740 nm from Londonderry in Northern Ireland to St Johns in Newfoundland in Canada.

Sea conditions in the Southern Ocean are treacherous, yet naval forces are resilient in the face of weather damage and able to continue with their assigned tasks. Importantly, multi-rolled naval forces seamlessly transition between roles and are able to be retasked quickly, usually without any need for further resupply or specialised crew training.

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Notes

- ¹ 'The effects of weather on RAN Operations in the Southern Ocean', *Semaphore*, No. 13, Sea Power Centre - Australia, Canberra, July 2006.
- ² HMA *LST3501, Report of Proceedings - Voyage to Heard Island, 1947-1948*.
- ³ HMAS *Wyatt Earp, Report of Proceedings*, 1 April 1948.
- ⁴ HMA *LST3501, Report of Proceedings*, 1 April 1948.
- ⁵ T. Bowden, *The Silence Calling: Australians in Antarctica 1947-97*, Allen & Unwin, St Leonards, 1997, pp. 82, 86.
- ⁶ HMAS *Australia, Report on Mission to Heard Island, July-August 1950*; and T. Bowden, *The Silence Calling*, pp. 77-80.
- ⁷ 'Straight from the queen bee-hive', *Navy News*, Vol. 9, No. 24, 9 December 1966, p. 3.
- ⁸ 'RAN in second mercy dash to Antarctica; sailor's icy swim', *Navy News*, Vol. 10, No. 10, 12 May 1967, pp. 1, 3. HMAS *Hobart, Report of Proceedings*, January 1979. This rescue is covered in more detail in 'Naval ingenuity: a case study', *Semaphore*, No. 18, Sea Power Centre - Australia, Canberra, November 2005.
- ⁹ HMAS *Darwin, Reports of Proceedings*, December 1994, January 1995; HMAS *Adelaide, Report of Proceedings*, January 1997.
- ¹⁰ HMAS *Anzac, Report of Proceedings*, October 1997.
- ¹¹ HMAS *Newcastle, Report of Proceedings*, February 1998.
- ¹² The pursuit of the *Volga* raised interesting legal questions that are examined in 'Hot pursuit and Australian fisheries law', *Semaphore*, No. 11, Sea Power Centre - Australia, Canberra, June 2006.
- ¹³ HMAS *Canberra, Report of Proceedings*, January 2002.
- ¹⁴ Peter Chase, 'Antarctica Success' in Royal Australian Navy, *Australia's Navy 2004*, Canberra, 2005, pp. 9-11.

Women in the RAN: The Road to Command at Sea

Lieutenant Andrea Argirides, RANR

The Royal Australian Navy's (RAN) mission is 'to fight and win in the maritime environment...'.¹ This *Semaphore* highlights the achievements and contributions by RAN women while ashore and at sea from World War II (WWII).

On 21 April 1941, a Navy Office letter to the Commodore-in-Charge, Sydney, authorised the entry of women into the Australian Navy as 'The Women's Royal Australian Naval Service' (WRANS). This initiative was in response to increased wartime demands for naval personnel. Hence, on 28 April 1941, 12 wireless telegraphists and two other telegraphists who had volunteered to serve as cooks, accompanied by their friend and mentor Florence McKenzie,² arrived at the RAN Wireless/Transmitting (W/T) Station, Canberra. Kitted out in their hunting green Women's Emergency Signalling

Corps uniforms they embarked on their watchkeeping careers. They represented the first wave of women in the RAN; and on 1 October 1942, they were sworn into the Navy as enlisted personnel. On 1 July 1943, the W/T station was commissioned as HMAS *Harman*.

By October 1942, 580 female volunteers had been recruited and enlisted,³ and four months later the number had increased to 1000.⁴ However, they were not permitted to serve at sea or overseas and were limited to 27 naval occupations.⁵ By the end of WWII, the Australian Navy had more than 2500 serving WRANS in its ranks, which made up 10 per cent of the entire naval strength; and by 1945, a total of 3122 women had enlisted in the WRANS.⁶ Postwar rationalisation led to the Service being disbanded and the last wartime WRANS were discharged in 1948. By 1951, however, the need for female sailors and officers was once again recognised and the Service was reconstituted. In 1984, the two separate women's services were abolished, the WRANS regulations repealed, and the WRANS were incorporated into the Permanent Naval Forces (PNF).

The WRANS served in all naval establishments performing the equivalent duties of their male counterparts, except that the WRANS were not



permitted to serve at sea. The main fields of employment for the WRANS officers were administration, training, recruiting, communications, supply and secretariat, medicine, dentistry and law. Conditions of service and employment opportunities (except for pay) for members of the WRANS were aligned as closely as possible with those of male naval personnel. Variations in the conditions of employment stemmed from government policy of the day that Service women were not to be employed in combat duties. This policy effectively precluded members of the WRANS from seagoing employment. Nevertheless, some WRANS officers volunteered for up to three weeks sea experience (while under training) in the RAN's then training ship, HMAS *Jervis Bay*.

Captain Joan Streeter, OBE, joined the WRANS in 1943 as a Writer, before enlisting in the second intake of officers at HMAS *Cerberus*. She led the WRANS between 1958 and 1973, becoming known as 'Ma'am Wrans' throughout the RAN. She is best remembered for bringing about the changes in 1968 that allowed the retention of women in the RAN after marriage.⁷ She spent a total of 23 years in the Service. Another prominent figure of that time was Captain Barbara McLeod, AM, who joined the WRANS as a Direct Entry Officer Candidate in 1953, at a time when the conditions of service for women in the Australian Navy were improving. She was the first WRANS officer to be posted to the Staff of Flag Officer Commanding East Australia, becoming Commander of WRANS, HMAS *Kuttabul*, and she served in every establishment where the WRANS were posted, including Navy Office, Canberra.⁸ In 1970, she also became the first woman in the RAN to have completed a senior management course at the Australian Administrative Staff College. After 25 years of service, Captain McLeod became the longest serving member of the WRANS to that time.

Quite independent of the WRANS, the RAN Nursing Service (RANNS) was inaugurated in October 1942, when 23 qualified nursing sisters began duty in RAN hospitals. Superintending Sister Annie Laidlaw commanded the RANNS from its formation until 1946,⁹ and at its peak there were 56 nursing sisters in the RANNS working in RAN hospitals across Australia, as well as at Milne Bay in Papua New Guinea. Nurses entering the RANNS were registered with at least 12 months of nursing experience. They undertook familiarisation at the RAN Medical Training School at HMAS *Cerberus*. Upon completion of training they were initially posted to billets in RAN Hospitals in either HMAS *Penguin* in Sydney, or *Cerberus* in Victoria. In 1948, the RANNS was disbanded; however, the demand for nurses was too great, and the RANNS was subsequently reformed in November 1964. In June 1984, the *Naval Forces (Women's Services) Regulations* were repealed, and the designation RANNS was abolished, leading to the nurses being incorporated within the Nursing Branch of the RAN. By this stage, qualified nurses wanting to join the RAN as nursing officers were enlisted with the rank of sub-lieutenant on probation, while undergoing training as officers at HMAS *Creswell*.

By 1985, when the RAN first made billets available for women at sea, approximately five per cent of all RAN personnel were females. It was during this time that women first served in afloat support vessels. There were very few female role models, especially in the seaman branch or in high-ranking positions. Although all women recruited after 1984 were advised that they were eligible for service at sea, substantial numbers of women did not get to sea until the early 1990s. Since the mid 1980s, women in the RAN have held a number of key appointments. For example, in 1988 Commander Liz Cole was the first female Commanding Officer (CO) of a naval shore establishment. By 1990, the proportion of women in the RAN reached 12 per cent, and as Table 1 illustrates, the total number of women in the PNF has steadily increased since 1975.

Year	Female Officers	Total Women
1975	49	808
1985	146	1085
1995	507	2116
2005	543	2209

Table 1: Women in the PNF: 1975-2005¹⁰

Other prominent figures of this era include Commander Sue Jones who had an exceptional 30 year career, including command of the Naval Communications Station Harold E. Holt in Exmouth; and Captain Carolyn Brand who was the first female Commander of Australian Mine Warfare Forces and CO of HMAS *Waterhen*, from 1992-93. Another appointment of merit is Commander Allison Norris who is now Staff Officer to Chief of Navy. Her previous position was the Director of Navy Workplace Planning. She recalls when she joined the RAN in 1987 that ‘women could not serve in combat related roles, and it was a big step to change this. There was a lot of debate leading up to the decision and a lot afterwards.’¹¹ Other developments include the deployment of women in combat related duties to the Middle East from 1990, and the introduction of female submariners in June 1998. Up until the 1990s, most of the female senior sailors onboard ships were voluntary, and it was not until then that women in the RAN had a seagoing obligation. In 1992, HMAS *Sydney* was the first warship to permanently post women into the ship’s company, followed by HMAS *Canberra* in 1994.

Today, women are employed as Directors and Deputy Directors of various departments within naval establishments, as Principal Warfare Officers (PWOs), Pilots, Observers, Engineers and Intelligence officers, as well as participating in information technology and systems related employment. By the end of 2005, for example, there were 21 qualified female PWOs in the RAN. Equally, women in the RAN have now reached the pinnacle of a seagoing career – sea command – and have been able to shine in the glory of the title ‘Captain’. One such appointee is Commander Jennifer Daetz, who

became the first female to assume command at sea when she joined the survey vessel HMAS *Shepparton* in 1997, while holding the rank of lieutenant. In 2001, she was appointed as Executive Officer of Hydrographic Ship White crew, and in 2005 she was promoted to the rank of commander, assuming command of HS Red crew.¹² Through a rotational crewing program, Commander Daetz has been Captain of both HMA Ships *Leeuwin* and *Melville*. After 20 years of service, Commander Daetz is still serving at sea, and in December 2006 she will take command of the shore establishment HMAS *Cairns*. The next milestone on the 'road to command at sea' is the appointment of the RAN's first female CO of a Major Fleet Unit, Commander Michele Miller, who will assume command of the *Anzac* class frigate HMAS *Perth* in mid 2007.

In 2005, Commodore Robyn Walker became the first female in the RAN to reach the rank of commodore. She qualified as a medical practitioner in 1982, and in 1991 she joined the RAN as a direct entry medical graduate with the intent of continuing her career in diving medicine. In January 1996 she assumed the position of Officer in Charge of the Submarine and Underwater Medicine Unit and remained there until promotion to commander in July 2000. She was then posted to Maritime Headquarters as the Deputy Fleet Medical Officer, where her duties included significant Sea Training Group responsibilities.

Apart from military operations, women in the RAN have also contributed to ongoing constabulary and diplomatic operations in Australia and across the globe. Over the last 65 years it is instructive to consider how far we have come in the Defence Force and the extent to which women have been integrated into the various positions and categories across the RAN. As the role of women in society continues to change, so will opportunities for women



SMNCIS Lancia Marshall and SMNBM Robyn Fox keep a look out on HMAS Manoora's gun directing platform during Exercise OCEAN PROTECTOR

in the Australian Defence Force continue to increase. Women in the RAN are moving through the ranks, with many excelling in their chosen fields, and setting a fine example for other young women wanting to enter the Service. Women in the RAN now serve in almost every area of day-to-day naval operations at sea and ashore.¹³ Female officers now command RAN ships and establishments and many have seen active service abroad. There have also been considerable developments in naval personnel and training in the last decade that has further enabled women in the RAN to tread the 'road to command' ashore and at sea.

In conclusion, it is worth remembering how far the Australian Navy has come since WWII. Between 1941 and 1968 women were compelled to leave the Service on marriage, and it was only 30 years ago that women gained equal pay with their male counterparts.¹⁴ In 1979, just half of the military positions were open to women in competition with men. Today, the selection is wide and varied, and a path that leads to command at sea or ashore is increasingly well travelled.

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Notes

- ¹ Royal Australian Navy, *Plan Green 2005-2015*, Canberra, 2005, paragraph 3.5.
- ² In 1924 Florence McKenzie, OBE (1892-1982), became Australia's first certificated woman radio telegraphist, and the only female member of the Wireless Institute of Australia. In 1939 she founded and directed the Women's Emergency Signalling Corps, which was the genesis of the WRANS, <www.womenaustralia.info/biogs/AWE0386b.htm> viewed 24 November 2006.
- ³ D. Stevens (ed), *The Royal Australian Navy in World War II*, second edition, Allen & Unwin, Sydney, 2005, p. 211.
- ⁴ S. Fenton-Huie, *Ships Belles: The Story of the Women's Royal Australian Naval Service in War and Peace 1941-1985*, Watermark Press, Sydney, 2000, pp. 67-70.
- ⁵ J. Beaumont, *Australian Defence: Sources and Statistics, The Australian Centenary History of Defence*, Vol. VI, Oxford University Press, Melbourne, 2001, p. 352.
- ⁶ Fenton-Huie, *Ships Belles*, p. 356.
- ⁷ Fenton-Huie, *Ships Belles*, p. 263.
- ⁸ Fenton-Huie, *Ships Belles*, p. 266.
- ⁹ P.C. Vines, 'Laidlaw, Annie Ina (1889-1978)' in G.P. Gilbert (ed), *Australian Naval Personalities: Lives from the Australian Dictionary of Biography*, Papers in Australian Maritime Affairs No. 17, Sea Power Centre - Australia, Canberra, 2006, pp. 123-124.
- ¹⁰ Data taken from past Defence Annual Reports.
- ¹¹ Personal communication, 23 June 2006.
- ¹² The two RAN hydrographic ships, *Melville* and *Leeuwin* are operated by three ships' companies on a rotational basis. Royal Australian Navy, *The Navy Contribution to Australia Maritime Operations*, RAN Doctrine 2, Defence Publishing Service, Canberra, 2005, p. 174.
- ¹³ The single exception is that women cannot become Clearance Divers.
- ¹⁴ K. Sourling and E. Greenhalgh, *Women in Uniform: Perceptions and Pathways*, Australian Defence Force Academy, Canberra, 2000, p. 5.

The Long Memory: RAN Heritage Management

Commander Shane Moore, CSM, RAN

The Royal Australian Navy (RAN) is justly proud of its history, particularly the notable individuals, actions and ships that are well known to most: Glossop and HMAS *Sydney* (I) and the *Emden*, Stoker and HMAS *AE2* in the Dardanelles, Waller and HMAS *Perth* (I) in the Sunda Strait, and Teddy Sheehan's courage protecting his shipmates in HMAS *Armidale* (I). These names echo through time, however, heritage is more than significant individuals, events and developments. The cook in *Sydney*, a torpedo rating in *AE2*, the writer in *Perth* and the stoker in *Armidale* also have their stories, which are just as important to the heritage of the RAN. The RAN's heritage represents a physical link with what it has meant, and what it does mean to serve in the RAN.

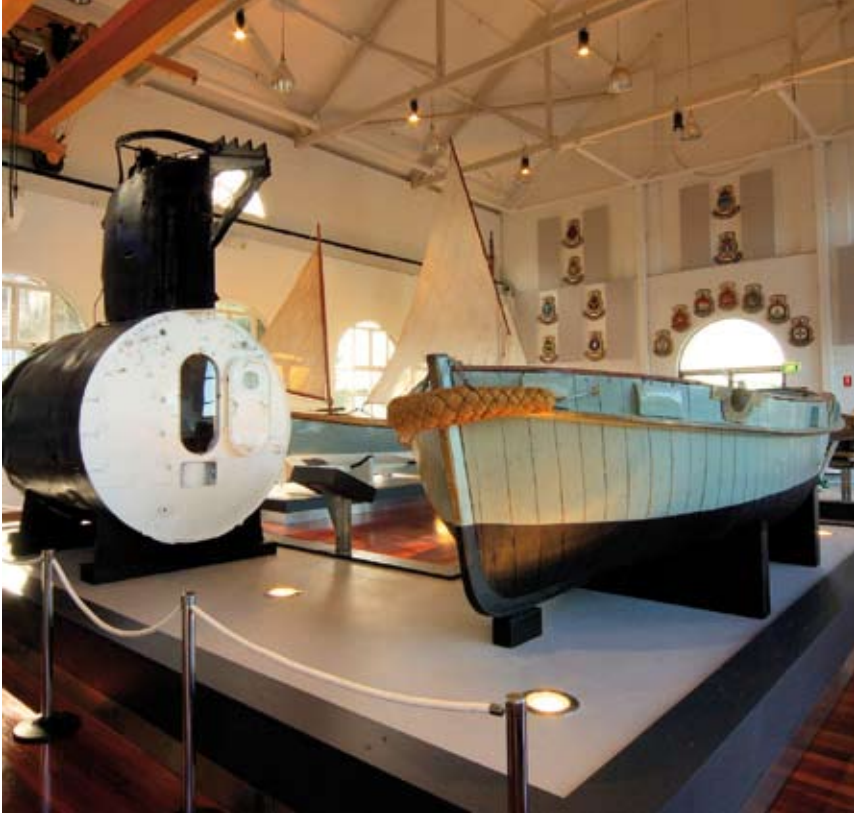
In over a century of service, the RAN has collected a large range of artefacts, relics and items that speak of duty, Service and a unique lifestyle as well as battles and wars. Through the medium of collected artefacts and the stories associated with them the RAN's heritage is nurtured, protected and preserved for future generations.

The Naval Heritage Collection (NHC) has existed in one form or another since the late 1970s. Previously the RAN's artefacts were managed more as obsolete store items. In the period from the end of World War I (WWI) up to the 1970s, the RAN looked to others to preserve its heritage. In the 1930s and 1950s ownership of large numbers of RAN artefacts were transferred to institutions such as the Australian War Memorial. Many significant artefacts were also lost, destroyed, stolen or simply deteriorated due to the effects of time and lack of preservation.

The initial aim of the NHC was to manage the heritage artefacts still held by the RAN and to provide a storage location at Spectacle Island, Sydney Harbour, in which to concentrate the collection as a protective measure. A lack of resources and curatorial expertise posed significant problems in the early years of the NHC. That NHC was only responsible for Spectacle Island artefacts while artefacts held by ships and establishments elsewhere were the responsibility of individual commanding officers, proved to be a further structural weakness for management of the collection.

By the late 1990s it was apparent that the rationale for and the way in which heritage management occurred in the RAN was ineffective by almost any heritage industry measure. By then the NHC had even been excised from the RAN, having been transferred to the Corporate Support and Infrastructure Group under the 1997 Defence Reform Program. In 2001, the Chief of Navy (CN) directed that a review examine all aspects of RAN heritage management and make recommendations for the collection's long-term future.

A driving factor for the review was proposed amendments to the *Protection of Movable Cultural Heritage Act 1986* and the *Environmental Protection and Biodiversity Conservation Act 1999*, which would require Commonwealth departments and agencies to conserve and exhibit the Australian heritage they hold. Both Acts were amended in 2003 and included heavy financial and criminal penalties for organisations and senior managers should heritage items not be managed appropriately.



'Battle of Sydney' Display at the RANHC - a midget submarine conning tower and a Sydney Harbour boom boat

In February 2003 CN endorsed the 24 recommendations made by the Naval Heritage Management Study (NHMS). This study was based on the concept that heritage supported the RAN's goals of internal ethos, recruiting, retention and public reputation, in addition to the RAN's moral and legislated obligation to preserve national heritage. The study concluded that this heritage supports RAN capability. Significant outcomes

included: the RAN 'owning' and being responsible for its heritage; return of the NHC to RAN control within Navy Systems Command; a centrally managed and controlled single collection; the appointment of a Director NHC at commander level; retention of Spectacle Island as the NHC HQ and Main Repository; implementation of modern 'best practice' curatorial and museum management processes; and development of a facility to exhibit the collection – the RAN Heritage Centre (RANHHC).

The opening in 2005 of the RANHHC at Garden Island, Sydney, is the most significant physical outcome so far of the RAN's rejuvenated heritage management regime.¹ The centre provides the RAN with a multi-function capability for displaying its heritage to the public; however, it is only used for exhibition and public interaction. It is the NHC's Main Repository at Spectacle Island that is the central pillar of the RAN's heritage management process.

Until the advent of the RANHHC the only way to view the collection was to visit the Main Repository. For that reason the NHC provided a display of artefacts at Spectacle Island in addition to performing its heritage storage functions; this is no longer the case and now Spectacle Island staff focus only on the museum cycle – accessioning, conservation/restoration, storage, exhibition planning and disposal. New collection management policies, operating procedures, storage methods and artefact handling processes have or are being introduced. Additional revenues being generated by the RAN Heritage Centre and allocations from the Navy Systems Command have had a significant and immediate positive effect on NHC conservation outcomes. Irreplaceable Navy artefacts, such as the 'Rabaul Gun' – the first enemy weapon captured by Australian Forces (the RAN Brigade) in WWI – and the Battle Ensign from HMAS *Perth* (I) from the Battle of Matapan in 1941, that were in great danger of total loss have been conserved and restored to exhibition standard.

The ex-munition depot buildings on Spectacle Island provide an ideal environment for collection storage and, with planned improvements, even finer temperature and humidity control will be introduced, further assisting collection preservation. Additional environmental controls will also be progressively introduced to the NHC Regional Collections and Exhibitions at HMAS *Cerberus* and HMAS *Creswell*.

Since 2003, major improvements across the NHC have been achieved but significant work remains to meet the approved outcomes of the NHMS. The RAN's inconsistent approach to the management of its movable heritage is over but past neglect does mean the RAN is behind the other two Services and equivalent public institutions in achieving its heritage aims, and meeting its obligations.

The collection management and exhibition gap is, however, closing with the RAN continuing to extend its heritage capabilities. On 1 September 2006, ownership of Australia's Museum of Flight transferred to the RAN and came under the management of the NHC. Renamed the Fleet Air Arm Museum (FAAM), it will provide the RAN with

an aviation conservation and exhibition institution of superior quality and, with the RAN Heritage Centre, provide further access for all Australians to view the heritage of their navy.

Over the coming months and years the exhibition spaces at the FAAM will be 'navalised' and updated with greater emphasis being placed on the history of Australian naval aviation rather than the general aviation exhibition that the RAN inherited from Australia's Museum of Flight. The FAAM collection of 35 aircraft is quite impressive and ranges from a Sea Fury and Firefly to an A4 Skyhawk and Wessex. The collection also includes many artefacts from individuals who have served in the Fleet Air Arm since its inception in 1948.

A future addition to the NHC is planned in 2007. The RAN's intention is to transfer the management and heritage functions of the RAN Historic Flight (RANHF) from Maritime Command to Navy Systems Command. The Maritime Commander and Commander Australian Navy Aviation Group will retain authority for airworthiness and flying approval while the NHC will be responsible for daily management and the conservation/restoration processes. The prospect of flying RANHF aircraft is an attractive option on many levels, not least of which is for Navy public relations. In order to minimise the risks attached to flying heritage aircraft, a full evaluation of the aims, processes, ongoing costs and procedures will be conducted prior to any recommendation to fly aircraft in this Flight.



Fleet Air Arm Museum

The size and scope of Navy's collection makes it one of the largest single collections held by any public institution in Australia. Containing some 250,000 items, the collection includes elements from all periods of the RAN's history and includes all aspects of naval service. Ranging from large weapon and engineering systems to small personal items, some of the artefacts would be considered icons of the RAN, while others tell poignantly of the experience of individual members during their service. Some of many examples include the diary of Able Seaman Weat, written during *AE2*'s transit of the Dardanelles on 25 April 1915, itself a remarkable story of how an individual can overcome personal fear when facing a common threat as part of a united Ship's Company. Other artefacts with poignant stories to tell include the sword carried by Lieutenant Bond (2IC and later CO of the RAN Bridging Train) during the Gallipoli Campaign; and one of HMAS *Canberra*'s (I) life rings that was recovered from the water after *Canberra*'s loss and presented to Miss Estelle Clancy, whose fiancé was lost with the ship – she never married and kept the life ring for 60 years.

The collection is never static, acquisitions from decommissioning ships or gifted items from individuals and families occur frequently. Disposals from the collection also take place. For an acquisition or a disposal certain criteria must be met to ensure that the items received are of historical, cultural or intrinsic value to the RAN, and that items deleted are not. This selective process has been established by the NHC to avoid ongoing storage issues and to allow closer control of the collection.

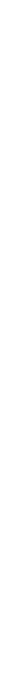
The recent and unprecedented developments in heritage management are a result of a changed perception within the RAN towards its heritage. This heritage supports RAN goals and also preserves the 'long memory' of the RAN's role in the history and development of the nation and of the men and women who have served their country in peace and war.

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Notes

¹ 'The Royal Australian Navy Heritage Centre,' *Semaphore*, No. 14, Sea Power Centre - Australia, Canberra, September 2005.

PETER MITCHELL
ESSAY
COMPETITION



About the Competition

Peter Stuckey Mitchell was born in Victoria in 1856. He grew up in the rural industry and, like his father, became a grazier on inheriting Bringenbrong Station, Upper Murray, New South Wales. During his lifetime he became a successful cattle and racehorse breeder, and at his death in 1921 left an estate valued at £215,000, from which his wife was left an annuity of £5000.

Through his Will he directed that on his wife's death the net income remaining from his estate be formed into a trust account to be known as the 'Peter Mitchell Trust Fund'. The purpose of the fund was to provide prizes 'to encourage and help the capable, healthy and strong to develop ... their natural advantages'. This section of the Will made provision for part of the income obtained to go to the navies and armies of the British Commonwealth of Nations. Due to lengthy legal proceedings that followed the death of his wife in 1954 it was not known until 14 December 1970 that an agreement was made to compete for the awards as they are known today.

The Chief of Navy has been authorised by the Trustees of the Peter Mitchell Trust Fund to use the income available for various prizes. One of these is the prize awarded for the Peter Mitchell Essay Competition. This is an annual competition, open to members of British Commonwealth Navies of commander rank or below, who are full-time members, or reservists who have served at least 20 days in the 12 months prior to the closing date of the competition.

Under the auspices of the trust arrangements, three prizes are awarded each year:

- Winner Open Section, which can be awarded to a sailor or an officer
- Winner Officers' Section, and
- Winner Sailors' Section.

Editor's Note

The information contained in the essays published in this volume was current at the time the essays were submitted for judging. Some minor editorial amendments have been made to the essays, primarily to correct typographical or grammatical errors, and to apply a standardised format. In all other respects, particularly with regard to facts, style and opinions, the essays are published as they were submitted by the authors.

Regional Alliances in the Context of a Maritime Strategy

Commander Jonathan Mead
Royal Australian Navy
2004 Winner Open Section

Australia's maritime task is significant. With over 37,000 kilometres of coastline and 11 million square kilometres of declared exclusive economic zone (EEZ), Australia's area of immediate maritime interest poses real challenges. Admiral Singh, Chief of the Indian Naval Staff, labelled it the 'largest unregulated area in the world'.¹ From a classical sense, Australians have historically felt vulnerable to invasion due to their strategic isolation from Britain. Max Teichmann observed that 'the Pacific has meant an invasion route, by water'.² Professor Blainey cited the example of the city of Perth, which was settled due to 'fear of Indonesian pirates on the north coast and fear of French ambitions on the West Coast'. Moreover, a number of present day Australian cities owe their origins to the fear of French colonisation in the early 19th century (Hobart and Western Port).³ In order to shore up Australia's security and mitigate this sense of strategic vulnerability, Canberra entered into a complex alliance arrangement in the second half of the 20th century. The *Security Treaty between Australia, New Zealand and the United States of America 1951* (ANZUS); the Five Power Defence Arrangements 1971 (FPDA), the *Southeast Asia Collective Defense Treaty and Protocol 1954* (SEATO); and the Agreement on Maintaining Security were born out of this need to garnish global, regional and local allies.⁴ The degree to which these institutions are compatible with Australia's national interests of the 21st century will be analysed in this paper. That said, regional and sub-regional security mechanisms such as the Association of South East Asian Nations (ASEAN) and the ASEAN Regional Forum (ARF) may offer a more relevant medium by which Australia's national interests could be strengthened.

This paper will start with an examination of alliance theory; this is important because it will serve to highlight some of the reasons why some States align better than others. Following will be a review of Australia's traditional threat perceptions, the role of ANZUS, the FPDA and of emerging regional alliances. Australia's national interests and more importantly, the emerging threats of the new millennium will then be examined with specific reference to the future missions and capabilities of the Royal Australian Navy (RAN).

Alliances

Alliances are a central element of interstate politics. Thucydides' famous account of the Peloponnesian War in 431 BCE described the intricate alliance arrangement between Sparta and the Peloponnesian League. Since that time, States have demonstrated a penchant for alliances as a way of enhancing their own security. Of late, a more progressive movement led by Steven Walt has argued that alliances were in fact a response to threats and were not a function of structural politics. Alliances offer more than deterrence, as 'neo-realists' would contend, they offer a means of defeating an adversary. This is a key point to note, and is relevant to the discussion later in this paper, as the emerging global and regional threat to Australian security can, and should be, fought through an alliance network. In one of the most detailed expositions of alliance formation, Walt highlighted the relevance of ideological alliances; whereby States sharing political, cultural or other traits are more likely to ally.⁵ Again, this is pertinent to the debate as the longevity and utility of ANZUS can be traced back to this ideological commonality.

Australia's Traditional Threat Perceptions, ANZUS and FPDA

Alan Dupont recognised that it was possible to identify four distinct phases in the evolution of Australia's perception of external threats. The first phase encompassed the period up to the 1890s and was focused on European nations that were seeking to extend their influence throughout the Pacific. The next period saw the rise of Japanese Imperial power; strikingly evident during World War II (WWII). The third phase was characterised by a fear of Communist China, while the fourth phase from 1970 to 2000 was marked by a less discernible and a more problematic threat source.⁶

These threat perceptions were derived from a combination of sources, rational and irrational, including: a fear of foreign invasion, apprehension of communism, a paranoia over Japanese imperialism and a growing awareness of Soviet/Chinese regional hegemony. Common to all these perceptions was what Evans termed the 'gravity theory'.⁷ No matter what the threat, its origin was to the north and invariably this threat would move southward toward Australia. Renouf's masterpiece comment of Australia being 'the frightened country', encapsulates the long psychological history of our vulnerability to external threats.⁸

ANZUS is often classified as a Cold War alliance, however, for Australia, its desire to forge an alliance with the United States (US) in 1951 was less to do with communism and bipolarity and more to do with Japanese re-armament.⁹ With the experiences of WWII still at the forefront of most Australians' minds, Menzies and Spender both saw a rearmed Japan as a direct threat to Australia's interests. A subset of ANZUS was the Radford-Collins Naval Control of Shipping Agreement, which allowed for direct, bilateral naval planning under the ANZUS Treaty and which delineated specific 'areas

of maritime responsibility'.¹⁰ To date, ANZUS has been sufficiently flexible to permit the re-orientation of Australia's security interests.¹¹ Accordingly, the value of ANZUS has been less in countering specific threats than as a hedge against many possible threats; put simply, the alliance has been 'threat insensitive'. Notwithstanding the debate on what ANZUS has and has not delivered, one enduring and indisputable fact is that Australians have a deep-rooted emotional dependency on the Treaty.¹²

The FPDA incorporating Malaysia, Singapore, Britain, New Zealand and Australia was concluded on 1 November 1971. The FPDA requires these nations to consult in the event of a threat to Singapore or Malaysia. Again, the origins of the FPDA stem less from Cold War structural dynamics and more with Indonesia's campaign of 'confrontation' against the new State of Malaysia in 1963.¹³ Lewis-Young, a frequent commentator on the FPDA noted that 'quite clearly the constituent nations see an ongoing role for the FPDA'.¹⁴ As the discussion in the next section will illustrate, multilateral security forums in the Asian region are in short supply and those that have been established are largely ineffective. Clearly, an advantage in maintaining the FPDA is that 'it provides an established structure in which the five members can operate effectively'.¹⁵

Regional Alliances

Despite their collective colonial identity, Asian (and in particular South East Asian) States have resisted the urge to create a regional alliance framework. Political, economic, cultural, ideological and societal diversity evident within the region has militated against the establishment of a strong collective security identity such as found in the North Atlantic Treaty Organisation (NATO) member States.

Notwithstanding, ASEAN, formed on 8 August 1967, represented the first phase of a sub-regional security community.¹⁶ ASEAN States have typically been focused toward counter-insurgency scenarios, which have resulted in no clearly defined external threat.¹⁷ Of late, ASEAN + 3 has emerged, incorporating the peripheral states of China, Japan and South Korea.

The formation of the ARF in 1993 represented a step forward towards a security community. ARF is a multilateral security forum covering the wider Asia-Pacific region. Acharya claimed that this 'multilateral forum has been viewed in some quarters as a desirable long-term alternative to "balance of power" security concepts'.¹⁸ Germane to this discussion, the influence of both ARF and ASEAN should not be overestimated. Both organisations have displayed a sense of inertia in dealing with complex security issues. ARF was ineffectual during East Timor's move to independence in 1999 and ASEAN only played a limited supporting role. As Tang noted, ASEAN's experience 'as a model for multilateral sub-regional cooperation in East Asia is a qualified success, but they have yet to share a common perception of security needs'.¹⁹

Complementing ARF are the economic and political organisations of the Asia-Pacific Economic Cooperation (APEC) and the Group of Eight (G8) nations. APEC has brought together a range of disparate economies in an era of globalisation, while the G8 is a political body centred on the Atlantic with a fringe in the Asia-Pacific region. Both forums offer little in the way of tangible security mechanisms for the region.

Indicative of the problems facing Asian multilateral security forums was the collapse of the 'Four Party Talks' in the mid 1990s, which sought to resolve the issue of North Korea's nuclear program and, of late, the stagnation of the 'Six Party Talks' over the same issue. More recently, of all the ASEAN States only Singapore has agreed to sign up to the US-led Proliferation Security Initiative (PSI). In sum, ASEAN, ASEAN + 3, ARF, and agreements such as the Treaty of Amity and Cooperation in Southeast Asia (TAC) and the *Zone of Peace, Freedom and Neutrality Declaration 1971* (ZOPFAN) make a positive contribution to trust building. However, these organisations appear ill-equipped to tackle external and/or pervasive security issues. In particular, some of the hurdles facing ARF include: the presence of non-democratic states, the impact of democratisation on selective states, an inability to deal with political or territorial issues, inconsistent security perceptions and the debate over China's future regional role.²⁰

Australia's Future National Interests

It has become trite to say that we live in a time of strategic change. Much has been made of the events of the last four years, though one thing is certain: Australia has passed through the crucible of the 1990s and into a new era of uncertainty. In 2000, the government released *Defence 2000: Our Future Defence Force*, where Australia's national interest was 'to ensure the defence of Australia and its direct [maritime] approaches'.²¹ This has been an enduring strategic theme since the early 1970s and one that has had an important impact on the Australian psyche since colonisation. In response to the ever-changing strategic landscape, the Australian Government released *Australia's National Security: A Defence Update 2003* in 2003. *Defence Update 2003* focused on two areas that have assumed prominence in contemporary defence and strategic planning: terrorism and weapons of mass destruction (WMD).²² In dealing with the latter problem, *Defence Update 2003* concentrated on the prospect of Iraq using WMD. It is axiomatic to conclude that after the 2003 Iraq War this specific threat has been somewhat resolved. Notwithstanding that the proliferation of WMD at a State level has been ameliorated, the threat posed by non-State actors using WMD remains extant. Thus, the real issue is not WMD per se, but the provocateurs who may use them: terrorists.

Most countries, even those that are strongly authoritarian and militant, are headed by leaders whose bellicosity is tempered by a strong sense of self-preservation. They do not deliberately court the possible destruction of their country or their own ability to rule by pursuing a temporarily unattainable goal. They generally accept that it

would be better to live to fight another day. This unfortunately is not the true spirit of the 'new threat' who is absolved by his or her righteousness. In an earlier period this 'threat', like Gandhi, might have turned to preaching. Today, his chosen path is that of the terrorist. Since 11 September 2001, Australians have been witness to a series of terrorist attacks. The Bali nightclub bombing on 12 October 2002 and the Australian Embassy bombing in Jakarta on 9 September 2004, signified a tectonic shift in the regional security construct. Immediately after WWII, Dean Acheson noted that we 'are present at the creation'. While he was referring to the Cold War and the subsequent shift to bipolarity, his expression is useful to highlight the uncertainty that this 'new threat' brings to Australian national interests.

From this discussion a number of themes emerge. First, that ANZUS as an ideological alliance has been fundamental to Australia's security thinking. Second, the new millennium has been witness to a new threat to Australian security – a threat that is shapeless, amorphous, undefined, stateless and mobile – a threat that the government noted was 'a critical strategic and security dimension for Australia'²³ – underscoring the complexity of this threat is the adage that 'one man's terrorist is another man's freedom fighter'. Third, regional alliances such as ASEAN and ARF have demonstrated a limited capacity for dealing with this 'new threat'. Despite the presence of a number of Jemaah Islamiah (JI) nodes within the region, there has yet been no concerted move to form an alliance framework or mature security community to combat such threats. From this preliminary analysis, one can conclude that Australia's best security option is to preserve the ANZUS alliance and the FPDA. As the government stated in 2003, 'the problem cannot be managed by one country alone; a targeted, regional and global approach is needed'.²⁴

Maritime Strategy

From a naval perspective it is timely to reassess the role that the RAN might play in combating regional terrorism. Traditional maritime strategy is defined as 'the comprehensive direction of all aspects of national power to achieve national strategic goals by exercising some degree of control at sea'.²⁵ Theorists such as the Colomb brothers, Captain Alfred Mahan, Admiral Sergei Gorshkov and Professor Geoffrey Till have put forward such concepts as sea command, sea control, sea denial and a balanced fleet.²⁶ These concepts are premised on the notion that both navies (friend and foe) have a similar *modus operandi*: that is, navy against navy. Accordingly, maritime concepts, such as decisive battle and blockade, could be said to be inappropriate for dealing with such a newfound shapeless threat.²⁷ It would be presumptuous to conclude, however, that a maritime strategy would be ineffective against terrorism. The sources of sea power that Till referred to (a maritime community, resources, government and geography) remain as pertinent in dealing with this 'new threat' as they were in dealing with Soviet irredentism during the Cold War.²⁸

The Threat and RAN Missions

There is no quick fix to terrorism. Indeed their modus operandi is a 'war of attrition'.²⁹ In order to sustain this perpetual war, their maritime missions might include: transporting arms, explosives and WMD through shipping lanes to a final destination for offload; transporting personnel from one State to another, and the conduct of a maritime terrorist attack in densely populated ports (for example in Sydney and similar in style to USS *Cole* in Yemen) or shipping lanes using hijacked or chartered merchant ships.

One of the difficulties facing Australia is South East Asia's porous borders and the great volume of sea trade through this area. Sidney Jones, the regional director for the International Crisis Group, observed that historic trade between Malaysia, Indonesia and the Philippines, as well as the ease with which such groups as JI and the Philippines-based Moro organisations can move from state to state, poses considerable challenges in combating regional terrorism.³⁰ How then does one target such an asymmetric threat? Previously, naval warfighting sought to target an adversary's centre of gravity and subsequently a maritime strategy of 'concentration of force' might have been used; however, terrorism is unique in that its real power resides in the many tentacles that hang from the body of the organisation. Thus, from a maritime perspective, the mission is made more complex. Combating an unconventional threat, which has a diffused centre of gravity, might lead to a strategy of 'dispersion of forces'.

Missions the RAN might be involved in to combat this threat include: the interdiction of shipping suspected to be involved in the trade of arms, explosives and WMD, as well as intelligence gathering and sharing with regional States and the US. This should not be construed as a 'brown water' maritime policy. In fact, to the contrary, this mission should be seen as a layered approach consisting of a ring of maritime perimeters. At the core would be local police vessels conducting interdiction and surveillance out to Australia's territorial seas. Emanating outwards, the *Fremantle* class patrol boats (FCPB), the *Armidale* class patrol boats (ACPB) and/or the Australian Customs Service operated *Bay* class vessels could be tasked with patrolling an area from the territorial sea out to the edge of the EEZ. Finally, Major Fleet Units (MFUs) could be tasked to operate further afield.

These roles presuppose that a range of diplomatic and naval objectives have been achieved. Diplomatically, it would be necessary to initiate bilateral security agreements for interdiction in archipelagic and international straits. While the previous examination highlighted the inability of regional States to effectively participate in multilateral fora, these same states have shown a willingness to engage Australia on bilateral arrangements. The 1995 Agreement on Maintaining Security between Australia and Indonesia is a notable example. Nevertheless, while ASEAN States have shown a disdain for the US-led PSI, there is scope through the FPDA to initiate a regional or even local PSI involving member States. Indeed, in this current geostrategic climate the *modus vivendi* of the FPDA would appear to be somewhat obsolete. In its place

could be the development of doctrine, training and multilateral exercises aimed at interdicting terrorists.

Combating a highly mobile enemy, such as terrorists, through interdiction and intelligence gathering will require the RAN to be similarly mobile. In this case a 'Fortress Australia' mentality would be ineffective. RAN ships will need to be able to conduct surveillance, shadowing and boarding operations. The navy's experience in the Middle East Area of Operations (MEAO) since 1990 and more specifically in the last three years has provided the RAN with invaluable experience in these constabulary type operations. Continued engagement with the US will be central to the success of these operations. Not since the heady Cold War days of the 1960s have both Australia and the US shared such a common enemy and thus this commonality lends itself to sharing the burden with the United States Navy (USN). This could take the form of mutually agreed upon spheres of maritime responsibility as the Radford-Collins agreement 50 years earlier had delineated. If for no other reason, ANZUS should be maintained over other alliances because of the sense of surety it brings. As Professor Ian McAllister observed, 'the public is generally positive in their attitudes towards the US, and trust in the US to defend Australia increased significantly after the September 2001 attacks'.³¹

RAN Capabilities

These new roles would require a range of capability enhancements. First, merchant ships entering Australian waters would need to be equipped with a maritime style Identification, Friend or Foe (IFF) system in order to allow Australian Defence Force (ADF)/Customs/police authorities to interrogate the nationality/nature of these vessels. Second, a bilateral maritime information exchange network between Australia and Indonesia should be enacted. Third, an improvement in the intelligence collection capability for RAN ships would be essential. Fourth, linguists would need to be deployed on most RAN ships. Fifth, Command, Control, Communications, Computers and Intelligence (C4I) compatibility with the USN would need to be progressed. Finally, unified interdiction doctrine and standard operating procedures between State, Federal and ADF agencies would need to be developed.

Conclusion

Modern warfighting is not just an instrument of policy; it is an experience in itself.³² It does things to the practitioner, irrespective of whether he wins or loses. To that end, it is time we stopped judging this warfare just in terms of formal victory or defeat. Globally and regionally the omnipresent impact of such events as 9/11, Bali, Madrid and Jakarta have forced a reorientation in Australia's security thinking. In 1996, Kim Beazley stated that 'we have faced harder times, but never such uncertain times'.³³ I would argue that his comment is more relevant today. These uncertain times are

a manifestation of the seemingly impossible task of detecting and halting terrorist activity. Complicating Australia's national interests has been the lack of either a mature regional security community or a strong multilateral alliance mechanism. ASEAN and ARF have had only limited success in dealing with external threats. The best one could say about these institutions is that preventive diplomacy, confidence building measures and Track II dialogue (such as the Council for Security Cooperation in the Asia Pacific) have helped to damp down tensions between regional states. Their efforts to combat the emerging threat of the new millennium, however, have been met with only limited success.

As a way of enhancing Australia's security, a 'layered approach' toward terrorism appears the best option. These layers would consist of: Australia's organic resources to defend the homeland, a bilateral treaty with Indonesia to defend the local area, continued persistence with FPDA members in order to 'shape' the regional environment, and engagement with the US through ANZUS in order to tackle the issue globally. Moreover, ANZUS provides Australia with a degree of psychological and strategic reassurance. In essence, ANZUS and FPDA are as central to Australia's national interests as they were in 1951 and 1971 respectively.

An alarmist could argue that asymmetric threats require a profound re-evaluation of traditional maritime strategy – that the principles of Mahan or Till are obsolete. This approach would be wrong. The missions that the RAN might be called upon to undertake include denying terrorists the ability to use Australia's seas for their own purposes; this is strikingly synonymous with the concept of sea denial. Central to the RAN's success will be the role played by the US. The USN's influence, technological superiority, mass and reach needs to be capitalised upon. Moreover, because both Canberra and Washington now have congruent threat perceptions, this lends itself to greater maritime cooperation between the two States.

Notes

- ¹ Executive Summary, *Jane's Fighting Ships 2004-05*, Jane's Information Group, London, p. 1.
- ² M. Teichmann, 'Clogs to clogs in three decades' in C. Clark (ed), *Australia Foreign Policy Towards a Reassessment*, Cassell, Sydney, 1973, p. 37.
- ³ G. Blainey, *The Tyranny of Distance*, Sun Books, Melbourne, 1966, pp. 92-93.
- ⁴ The Agreement on Maintaining Security, signed between Australia and Indonesia in December 1995, was subsequently abrogated by Indonesia on 16 December 1999 in response to Australia's role in INTERFET.
- ⁵ S. Walt, *Origins of Alliances*, Cornell University Press, New York, 1990; S. Walt, 'Alliance Formation and the Balance of World Power' in M. Brown, S. Lynne-Jones and S. Miller (eds), *The Perils of Anarchy, Contemporary Realism and International Security*, Massachusetts Institute of Technology Press, Massachusetts, 1995, pp. 223-224.
- ⁶ A. Dupont, *Australia's Threat Perceptions: A Search for Security*, Canberra Papers on Strategy and Defence No. 82, Strategic and Defence Studies Centre, Australian National University, Canberra, 1991, p. 1.
- ⁷ G. Evans and B. Grant, *Australia's Foreign Relations in the World of the 1990s*, Melbourne University Press, Melbourne, 1991, p. 110.
- ⁸ A. Renouf, *A Frightened Country*, Macmillan, Melbourne, 1979.
- ⁹ See W. Tow's appreciation of the origins of the ANZUS alliance in W. Tow, 'ANZUS as viewed from Southeast Asia: asset or irritant' in H. Albinski and R. Dalrymple (eds), *The United States - Australian Alliance in an East Asian Context*, Proceedings of the Conference held 29-30 June 2001, University of Sydney, 2002, pp. 107-126; and C. Bell, 'Australia, America and East Asia' in Albinski and Dalrymple (eds), *The United States - Australian Alliance in an East Asian Context*, pp. 127-158.
- ¹⁰ T.D. Young, *The Radford-Collins Naval Control of Shipping Agreement, The Graduate Institute of International Relations*, University of Geneva, Geneva, 1985, pp. 3, 300.
- ¹¹ A. Shephard, *Auditing ANZUS*, Background Paper No. 22, Parliamentary Research Service, Canberra, 1992, p. 24.
- ¹² In 1985, two researchers conducted opinion polling in Australia on ANZUS. Seventy-three per cent of all respondents strongly agreed for the need to have a defence alliance with the US. See T. Matthews and J. Ravenhill, 'ANZUS, the American Alliance and external threats: Australian elite attitudes', *Australian Outlook*, Vol. 41, No. 1, April 1987, p. 10.
- ¹³ P. Lewis-Young, 'Towards a wider scope of the Five Power Defence Arrangement: the view from Australia', *Asian Defence Journal*, Vol. 4, 1983, p. 62.
- ¹⁴ P. Lewis-Young, 'The Five Power Defence Arrangement: a review', *Asian Defence Journal*, Vol. 5, 1983, p. 9.
- ¹⁵ G. Toremans, 'The Five Power Defence Arrangement: a Defence Treaty in South East Asia', *Navy International*, Vol. 99, No 9/10, 1994, p. 260.

- ¹⁶ For the most complete analysis of security communities see E. Adler and M. Barnett, *Security Communities*, Cambridge University Press, Cambridge, 1998.
- ¹⁷ A. Acharya, *Regionalism and Multilateralism*, Times Academic Press, Singapore, 2002, p. 17.
- ¹⁸ Acharya, *Regionalism and Multilateralism*, p. 184.
- ¹⁹ J. Tang, *Multilateralism in North-East Asia International Security: An Illusion or a Realistic Hope*, Working Paper No. 26, North Pacific Cooperative Security Dialogue Research Programme, York University, 1993, p. 11.
- ²⁰ C.M. Lee, 'Reconfiguring East Asia's strategic architecture: the road toward a Pacific Alliance' in Albinski and Dalrymple (eds), *The United States - Australian Alliance in an East Asian Context*, p. 220.
- ²¹ Department of Defence, *Defence 2000: Our Future Defence Force*, Defence Publishing Service, Canberra, 2000, p. x.
- ²² Department of Defence, *Australia's National Security: A Defence Update 2003*, Defence Publishing Service, Canberra, 2003.
- ²³ Department of Defence, *Defence Update 2003*, p. 11.
- ²⁴ Department of Defence, *Defence Update 2003*, p. 13.
- ²⁵ Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 156.
- ²⁶ Defined as 'the ability to use the sea in its entirety for one's own purposes at any time and to deny its use to an adversary', *Australian Maritime Doctrine*, p. 144. Defined as 'that condition which exists when one has freedom of action to use an area of sea for one's own purposes for a period of time and, if required, deny its use to an adversary', *Australian Maritime Doctrine*, p. 162. Defined as 'that condition which exists when an adversary is denied the ability to use an area of the sea for his own purposes for a period of time', *Australian Maritime Doctrine*, p. 162.
- ²⁷ G. Till, *Maritime Strategy and the Nuclear Age*, St Martins Press, New York, 1982, pp. 91, 121.
- ²⁸ Till, *Maritime Strategy and the Nuclear Age*, p. 75.
- ²⁹ A. Borgu, *Strategic Insight 10 - Understanding Terrorism: 20 Basic Facts*, Australian Strategic Policy Institute, Canberra, September 2004, p. 3.
- ³⁰ These Moro organisations include: the Moro National Liberation Front, its splinter partner the Moro Islamic Liberation Front, and Abu Sayyaf, *The Sydney Morning Herald*, 2-3 October 2004.
- ³¹ I. McAllister, *Attitude Matters: Public Opinion in Australia Towards Defence and Security*, Australian Strategic Policy Institute, Canberra, August 2004, p. 4.
- ³² This view goes against the grain of traditional military thinking. It was the 18th century Prussian military strategist Karl von Clausewitz who famously declared, 'war is the continuation of policy (politics) by other means ... it is clear that war is not a mere act of policy but a true political instrument'.
- ³³ K. Beazley, 'Asia Pacific Security - The Challenges Ahead', Speech presented at the Australian College of Defence and Strategic Studies, Weston Creek, 1996.

An Effects-Based Approach to Technology and Strategy

Lieutenant Commander Mark Hammond
Royal Australian Navy
2004 Winner Officers' Section

I must confess that my imagination ... refuses to see any sort of submarine doing anything, but suffocate its crew and founder at sea.

H.G. Wells, *Anticipation*, 1902

As demonstrated by H.G. Wells, predicting the impact of new technology on future naval operations and strategy is problematic. The industrial revolution heralded an unprecedented arrival of new technologies. Steam propulsion replaced wind. The aircraft carrier and submarine added new dimensions to maritime warfare. These new designs found many navies unprepared for their impact, essentially because they revolutionised the maritime battlespace by providing the Means for wars to be fought in unprecedented Ways.

Today, the Defence Science and Technology Organisation (DSTO) suggests that the driving factor in 21st century ship design will be emergent technologies.¹ Given that ship designs dictate their capabilities, and that naval operations are both enabled and limited by these capabilities, it may be possible to draw conclusions about how future naval forces will operate, by interpreting the impact of forecast technologies on future vessels. Furthermore, an examination of the past 30 years may yield insights that enhance our understanding of developments expected in the next 30 years.

This paper discusses how forecast technological developments in hull forms, propulsion systems, sensors and weapons might impact on how medium power navies operate over the next 30 years. First, forecast developments or emergent technologies² are reviewed and interpreted using effects-based philosophy – a prism that enables clear articulation of the impact that new technologies on naval capabilities. Trends are then summarised and assessed to determine dominant developments. Second, a medium naval force of 1974 is glimpsed to provide insight into what has really changed during the technology revolution of the past 30 years. Finally, the essay summarises the likely impact of future technologies on medium power naval operations over the next 30 years.

Effects-Based Interpretation of Emergent Technologies³

Effects-based philosophy describes physical, functional or psychological outcomes, events or consequences that result from specific actions.⁴ The Australian Defence Force (ADF) will operate its future forces within a national effects-based construct.⁵ The Royal Navy (RN) also embraces effects-based operations.⁶ As shown in Figure 1, the philosophy views military units (Means) as providing a variety of military options (Ways) for achieving strategic objectives (Ends). In this manner, technological changes to naval forces (Means) impact the effects⁷ that they can generate and, therefore, the Ways in which Ends can be achieved. Hence, the close relationship between strategy and technology. It is therefore appropriate to use this philosophy to interpret the impact of emerging technologies upon future capabilities.



Figure 1: ADF Command, Effects-Based Operations and Technology⁸

Emergent technologies ‘... may impact on future naval ship design and construction’.⁹

Typically, this genre is constrained to relatively mature, prototype proven or funded technologies. While other concepts and ideas exist, it is difficult and perhaps premature to attempt qualitative description of their potential impact until they have made the difficult transition from theory to prototype.¹⁰ For the purpose of this essay, therefore, forecast developments will be limited to emergent technologies in four areas: hull forms, propulsion systems, sensors and weapons.

Hull Forms

Today's modern warship is typically a mono-hull vessel designed to maximise capabilities in terms of payload, seakeeping ability, power projection and survivability. Forecast developments in hull design include advanced mono-hull¹¹ and multi-hull designs.¹² To gauge their impact on naval operations, these developments should be interpreted in the context of the effect created by the technology upon the platform.

All of these developments increase vessel speed¹³ and efficiency.¹⁴ As such, it is possible to predict a trend toward faster, more efficient naval vessels that have greater endurance. It is also noteworthy that the majority of designs inherently reduce vessel draught and acoustic signature.¹⁵ These attributes were examined in the context of High Speed Vessels (HSVs) in the Royal Australian Navy (RAN) 2003 *Headmark* Experiment. The experiment demonstrated that HSVs provide excellent manoeuvre warfare capability in shallow littoral environments while producing significant targeting problems for air, surface and sub-surface opponents.¹⁶ A sea experimentation assessment conducted in the US, however, discovered HSV effectiveness is attenuated by poor seakeeping in seas greater than 2.5 metres.¹⁷ This deficiency might be overcome by advanced trimaran designs.

Trimaran designs reduce hull-drag by 20 per cent or more while simultaneously enhancing the seakeeping qualities over conventional mono-hull designs.¹⁸ Similarly, surface effect designs permit a catamaran hull to 'ride' over a cushion of air maintained between the hulls, reducing drag and noise signature and permitting beaching in some conditions.¹⁹ Clearly, the trend is toward faster, quieter and more efficient shallow draught vessels.

There will also be advances in submarine hull design. While propeller and propulsion changes account for the majority of speed improvements in current diesel-electric and nuclear submarines, advanced streamlining is becoming increasingly important. Vortex control devices and eddy break-up devices were used to counter hydrodynamic flow and noise issues on both the RAN *Collins* and USN *Seawolf* class submarines.²⁰ Effects include reduced acoustic signature and fuel consumption and increased speed and endurance.

In summary, potential improvements in hull design produce the physical effects of improved fuel efficiency/endurance, reduced acoustic signatures, increased vessel speeds and improved access to shallow water. This bodes well for tempo-based strategies, such as manoeuvre warfare, especially in the littoral. These trends may be further enhanced by propulsion system developments.

Propulsion Systems

Propulsion systems include propellers, propulsors and associated fuel and auxiliary systems. Forecast developments include enhanced electric propulsion, fuel cell technology, water-jet propulsors and supercavitating propellers. Again, these developments seek to increase vessel speed, efficiency/endurance and/or to reduce acoustic signatures. It is important to note, however, that propulsion efficiencies can also enable greater power generation to support weapons and sensors.

Conventional marine propulsion systems convert mechanical, gas or steam energy into rotational propeller or directional water jet motion, while separate power generation sources provide for sensor, weapons and ancillary demands. Enhanced electric propulsion systems, as envisaged by the US Electric Ship concept, centre on Integrated Power Systems that use electric motors driven by a common power generation system to provide simultaneously power for sensors, weapons and auxiliary demands.²¹ This reduces the size and complexity of the power generation/propulsion system, freeing up space for other capabilities while improving fuel economy by 15-19 per cent.²² Developments in battery technology are evidenced by improved performance amid reduced size/weight of mobile phone batteries in recent years. Translated to the maritime environment, this has produced more effective conventional submarines with greater endurance and increased stealth. Just as the automotive industry is increasing the amounts of money being spent on electric propulsion and hybrid car designs, it can be expected that hybrid ship designs will follow. Perhaps the RN's Type 23 frigates and Type 45 destroyers represent a portal to the future of quiet, fuel efficient ship design.²³

Fuel cell technology and air independent propulsion are also likely to become more common.²⁴ German Type 212 submarines are at sea today, propelled by fuel cells. The technology has also been tested in a USN surface vessel.²⁵ Fuel cells create electrical energy from chemical reactions without moving parts, generating less heat and acoustic noise than conventional combustion processes,²⁶ however, there are associated speed limitations.²⁷ Overall, the technology provides increased stealth, endurance and efficiency.

Water jets provide increased efficiency for vessels in the range 25 to 40 knots.²⁸ Located near the surface, they also reduce draught. Supercavitating propellers also improve vessel efficiency by increasing thrust,²⁹ allowing speeds measured in hundreds of miles an hour. The cavitation effect does increase noise signature, however, supercavitation technology may yet revolutionise naval power in the same way that the supersonic jet impacted on air power.³⁰

To summarise, advances in propulsion technology are likely to increase naval vessel stealth, speed and efficiency, with some technologies enhancing shallow water efficiency and access. These improvements appear to reinforce hull design advances,

potentially auguring an era of more efficient naval vessels that are faster, quieter and with reduced draught. Manoeuvre warfare concepts are reinforced, however, future naval forces will require an array of intelligent sensors to maintain situational awareness, to exploit enhanced battlespace access and manoeuvre.

Sensors

DSTO notes that 'sensor development appears to be growing at an exponential rate in miniaturisation, sensitivity and applications'.³¹ Furthermore, predicting future sensor capabilities out to 30 years is significantly problematic because '... unpredicted technological advances can render systems obsolete mid development'.³² That said, it may be possible to draw some relatively robust conclusions by reviewing current developmental efforts.

Some remote-controlled and autonomous sensors are already mature, particularly Uninhabited Aerial Vehicles (UAVs) and Uninhabited Underwater Vehicles (UUVs). HMAS *Warramunga* (II) has controlled, tasked and received sensor information from a UAV.³³ The USN has completed more than 300 UUV missions including mine warfare operations in Umm Qasr during Operation IRAQI FREEDOM.³⁴ Future developments may include submarine launched UUVs³⁵ capable of conducting reconnaissance, mine laying, inshore photography and beach survey work. UAVs similarly permit operations behind enemy lines, or in contested air space where the risk of human casualties is unacceptable. Further advances in robotics and miniaturisation of power sources, will increase the endurance, dexterity, reliability and flexibility of these platforms, perhaps rendering current maritime aircraft redundant.

Communication data rates have steadily increased in the past 30 years and this trend is likely to continue. Directional Extra High Frequency and Super High Frequency communications now enable platforms to transmit high volumes of information (including video) instantaneously, rendering forward deployed units (e.g. submarines and special forces) almost undetectable by today's interception technology. Furthermore, there have been advances in covert underwater communications that enable submarines to communicate with other submarines, ships, bottom sensors or sonobuoys without being detected.³⁶ This technology may eventually control UUVs, or switch on/off remotely activated mines. The effect created by this technology is one of enabling and exploiting covert, integrated operations in hostile environments; again, enhanced battlespace access.

Sonar technology is also proceeding apace. Multi-beam technology has enabled three-dimensional seabed mapping for commercial purposes. An early derivative called Petrel³⁷ is now being fitted to RAN frigates.³⁸ The equipment enables real-time seabed analysis for mine avoidance, navigation and submarine detection. Similarly, submarines will be able to exploit this technology to aid navigation in shallow water,

opening safe access to previously unsurveyed (or poorly surveyed) archipelagic waters, and enabling inshore minelaying operations without the need to return to periscope depth to receive satellite navigation data. Other submarine detection advances include Explosive Echo Ranging, Low Probability of Intercept Sonar and Low Frequency Active Passive Sonar.

Medium navies, embracing the network enabled concept, are also realising the theatre level surveillance opportunities afforded by satellites using a range of detection, classification, communications and intelligence collection capabilities. Other technological advances, however, are decreasing platform vulnerability by improving stealth, counter-detection, early warning and decoy systems.

It is therefore difficult to quantify the gains that might be realised in the next 30 years as improvements in related fields vie for ascendancy in detection capability on the one hand, and stealth on the other. The net effect on the future maritime battlespace might be, however, networked forces informed by a diverse array of advanced organic and remote sensors,³⁹ enabling greater access to the maritime battlespace and greater certainty in the maritime picture than is currently available. Naval forces will consequently demand longer-range, more responsive and increasingly accurate weapons systems to maintain a reach advantage over their adversaries.

Weapons

Weapon systems can be broadly categorised as either above-water or below-water. Above-water weapons are employed against surface vessels, aircraft, and, increasingly, land targets. Below-water weapons target a vessel on or below the sea surface; primarily submarines and ships. The objective is usually to destroy or damage the target, although in effects-based philosophy the right terminology might be to 'neutralise the effectiveness of' the target. Future weapon systems will also exploit emergent technologies, and increasingly target them too.

Naval gunnery now employs rocket-propelled munitions, improved computer aided targeting and rapid-fire technology such as Metal Storm (one million rounds per minute or more).⁴⁰ Railguns and pulsed power systems are now being developed for electric ships that should still be in service in 2034.⁴¹ Missile technology, whether ship, submarine or air launched, arguably demonstrates the same trends. Terminal homing capabilities now exploit third party guidance (e.g. laser designation) as well as providing options to home on to heat or infra-red signatures.

Similarly, laser technology continues to produce potential weapon applications, including missile defence. Solid-state laser technology will permit efficiencies that allow employment on naval vessels.⁴² High power microwave weapons are also on the horizon (2010),⁴³ and variants called Microwave Amplification by Stimulated Emission of Radiation (MASER) may permit the employment of multi-megawatt pulses of radio

energy against the electronics in missiles, UAVs or aircraft.⁴⁴ The effects of these developments include extended range and improved rate of fire of weapons and, in some instances, improved accuracy and lethality.

Advances in below-water weaponry, like sonar, continue relatively unabated. The 2034 generation of torpedoes and mines may be able to: recognise and counter most decoy systems; recognise and target specific vessels; exploit bottom topography to aid stealth while homing; engage at extended ranges that negate improvements in counter-detection technology, while remaining undetected until a point at which the kill probability approaches certainty; while other advances may provide new challenges. Supercavitating bullets could produce an underwater Close-In Weapons System (CIWS) capable of engaging torpedoes during their terminal homing phase.⁴⁵ Anti-torpedo torpedoes and Submarine-Launched Anti-aircraft Missiles (SLAM) may also mature before 2034.⁴⁶ In fact, Dunk suggests that submarine technology advances will outpace anti-submarine developments, citing a reduction in effectiveness of maritime patrol aircraft as one likely result.⁴⁷

Again, the pace, complexity and diversity of developments render it difficult to predict a resultant 'balance of power' between stealth and detection. Perhaps it is more productive to simply surmise that weapon engagement ranges and accuracy are likely to improve. A significant shift in the balance, however, could result from a revolutionary development, such as the ability to 'see' underwater to a range of 30 nautical miles or more, or the ability to consistently destroy torpedoes or mines prior to impact/detonation. Similarly, electromagnetic interference technologies, including MASERS, may find significant utility against a network enabled opponent.

Hypotheses aside, the net effect of naval weapon development seems to point toward increasingly accurate, longer range, more reliable systems with greater rates of fire and lethality. The arrival of laser and microwave weapons, as well as highly advanced underwater systems, may shift the focus from attrition of equipment to neutralisation of systems through targeted electromagnetic interference. The continuing battle between development of detection and targeting systems versus counter-detection and counter-targeting systems render it difficult to predict revolutionary impacts in this field.

Observed Trends and Their Likely Impact on Medium Power Naval Operations

Interpreting forecast technological developments in terms of the effects they might have on naval platforms yields several conclusions. First, future platforms will benefit from hull and propulsion improvements that provide more speed, stealth, endurance and efficiency. In many instances, they will also be increasingly effective in shallow water. Future platforms will exploit improved situational awareness provided by a diverse

array of advanced organic and remote, intelligent and survivable sensors, enabling greater certainty in the maritime picture than is currently available.

All of this points toward forces that are increasingly 'aware', more integrated and, therefore, more difficult to effectively neutralise or defeat. Superficially, it would seem that survivability, efficiency and effectiveness are the big winners, particularly in shallow water. Perhaps this indicates improved capacity to exploit high-tempo manoeuvre warfare in littoral environments.

Improvements in sensors, however, must be weighed against increased platform stealth, and extended-range, stealthier weapons. New missile and torpedo technology may yet be countered by new defence systems (e.g. underwater CIWS). While increasingly accurate, longer-range, more reliable systems with greater rates of fire, and perhaps greater lethality, are being developed, so are more effective countermeasures and anti-weapon weapons. In short, apparent gains must be taken in context. It may therefore be prudent to contemplate how technology has historically impacted the way naval forces operate.

In broad terms, the RAN of 1974 consisted of: a light carrier, submarines, destroyers, frigates, logistic support ships, amphibious ships, patrol craft, mine warfare vessels and hydrographic vessels. Based on current plans, the fleet of 2034 is likely to include modern equivalents of all these classes of ship.⁴⁸ It appears that the force structure will remain relatively static.

Since 1974, the RAN has engaged in operations in environments ranging from benign (e.g. humanitarian assistance) to hostile (e.g. 1990-91 Gulf War and 2003 Iraq War). The RN has had a similar history. Today's RAN employs advanced weapons and sensors, compared to the fleet of 1974, and its current ships and submarines are quieter and more tactically 'aware' than their predecessors were. Although technology has improved communication and cooperation between units, the RAN and RN still operate their units in much the same way that they did 30 years ago. That is, collectively or independently to project force in order to protect or disrupt sea lines of communication, to provide sealift, and to exercise/contest sea control. In war, they still detect, classify and engage targets.

Emergent technologies will enhance detection, classification and engagement capabilities, undoubtedly impacting on the way some naval operations are conducted, but these impacts appear predominantly marginal and consistent with past experience. Barring massive development of uninhabited platforms, such as UAVs and UUVs, there are potentially no revolutionary inventions (that would rival the invention of the submarine or aircraft carrier) on the immediate maritime horizon. Therefore, if the past 30 years are any indication, force structures and roles will not change significantly as a result of forecast technological possibilities.

That said, new weapons (e.g. MASERs) are being developed that can target the technology that enables Network Centric Warfare (NCW). This may create an opportunity to shift strategic focus from attrition of equipment or platforms, to neutralisation of the systems that enable them to see, hear, fly, float, move and fight, using targeted electromagnetic interference weapons. We may yet witness the emergence of new battlespace effects and therefore options, or Ways, as a result of technological changes to the Means.

Put simply, although the RAN and RN have evolved during the information technology revolution that continues today, their force structure has remained relatively static. Apart from a trend to greater internal and external interoperability and joint/combined operations, the battlespace effects they generate and the way in which these forces operate have not fundamentally changed as a result of new technology. Noting the continuing technology trends, the same might also be predicted for the naval forces of 2034.

Conclusion

Technological changes to naval platforms impact their capabilities, adding, subtracting or altering the combat effects that they can create within the maritime battlespace. These 'effects' contribute to providing various military options for achieving strategic objectives. In this manner, technology impacts on strategy through the Ends, Ways, Means construct of effects-based operations.

Medium power naval forces have changed little in terms of force structure in the past 30 years despite the variations in tasking and operational tempo that now range from benign humanitarian assistance roles to war in the Falklands and the Persian Gulf. These insights have been gleaned during the information technology revolution that continues today. It therefore serves a useful pointer to the potential impact of technology in the future.

Objective effects-based analysis of emergent technologies, coupled with a retrospective appreciation of the past 30 years, yields several conclusions. First, forecast technological improvements will continue to impact on medium power naval forces in much the same way as during the past 30 years: evolutionary, rather than revolutionary. Trends toward improved stealth, speed, efficiency, endurance and effectiveness will be enhanced by greater computer power and communications, enabling unprecedented battlespace awareness. Future forces will be reliably networked but they may be vulnerable to new weapons. High-tech uninhabited vehicles will increasingly permeate the battlespace, bringing with them new opportunities and new threats. Access to the littoral will be improved. These new capabilities may enable battlespace effects that yield new options for achieving warfare objectives. Technology will therefore continue to impact on naval strategy through the Ends, Ways, Means construct.

Although the way that naval forces operate over the next 30 years will gradually evolve as a result of forecast technologies, unless revolutionary changes render entire platforms obsolete, these changes are unlikely to be revolutionary.

Notes

- ¹ G.A. Clarke and I.A. Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, DSTO Aeronautical and Maritime Research Laboratory, May 2001, p. 1.
- ² Today's inventions often take in excess of 10 years to be translated into seagoing capability as medium power navies today largely 'lever' technology from the private sector, rather than the other way around. Logically then, the capabilities that will influence naval strategy in the next 30 years are probably emerging now. Besides, 'crystal ball gazing' could prove comparatively counter-productive.
- ³ This section draws heavily on DSTO's authoritative report: Clarke and Burch, *Emergent Technologies*.
- ⁴ Department of Defence, *Future Warfighting Concept*, ADDP-D.3, Defence Publishing Service, 2003, p. 11. EBO goes further, talking about decisive and enabling effects and maintains a predominantly strategic focus. However, it is the battlespace effects generated by military units that conspire to provide the military capabilities that underpin naval operations.
- ⁵ Department of Defence, *Future Warfighting Concept*, p. 11.
- ⁶ Royal Navy, *British Maritime Doctrine*, BR 1806, The Stationery Office, London, 2004, p. 203.
- ⁷ Such as firepower, manoeuvre, stealth.
- ⁸ Department of Defence, *Joint Planning* (Provisional), ADDP-5.01, Defence Publishing Service, Canberra, 2003. Figure 1 is based on this reference, modified to articulate the technology input. ADHQ-Australian Defence Headquarters, HQJOC-Headquarters Joint Operations Command, JTF-Joint Task Force.

- ⁹ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 1.
- ¹⁰ Some Australians will remember the paperless, fully integrated *Collins* class submarine combat system designed in the 1980s to take advantage of 'foreseen' technology that even today remains elusive.
- ¹¹ Planing hulls, hydrofoils, wave piercing and Deep Vee hulls.
- ¹² Catamaran and trimaran, wave piercing, Small Waterplane Area Twin Hull (SWATH) and Surface Effect Ships. See also Clarke and Burch, *Emergent Technologies*, p. 45.
- ¹³ Clarke and Burch, *Emergent Technologies*, pp. 47-48. Hydrofoils > 60 knots, Deep Vee > 55kts, Wave Piercing Mono-hulls: sea transport > 30 knots.
- ¹⁴ Less fuel consumption/less hydrodynamic drag.
- ¹⁵ The notable exception is SWATH vessels.
- ¹⁶ Author's observations as Staff Officer during *Headmark* 2003.
- ¹⁷ G.M. Stewart, 'At sea experimentation with *Joint Venture*', CNA Corporation, 2003, p. 48. The project leased a catamaran hull HSV, *Joint Venture*, for assessment on behalf of the US Army, US Marine Corps, US Navy and Naval Special Warfare Command to 'explore the concepts and capabilities associated with commercially available advanced hull and propulsion technologies', p. 1.
- ¹⁸ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 46.
- ¹⁹ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 47. Subject to propulsion system.
- ²⁰ Similarly, hull designs and coatings are increasingly targeting fouling from marine growth as well as temperature-related corrosion issues, both of which are particularly important in Australia's northern environments.
- ²¹ C. Petry, 'The Electric Ship and Electric Weapons', Presentation to National Defense Industrial Association 5th Annual System Engineering Conference, Tampa, Florida, 22-24 October 2002.
- ²² Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 54.
- ²³ Other electric propulsion possibilities include advanced permanent magnets and low temperature superconductors, although the scope of this essay does not permit all developments to be covered in detail.
- ²⁴ G. Dunk, 'Technological and operational trends in submarine warfare' in J. McCaffrie and A. Hinge (eds), *Sea Power in the New Century*, Australian Defence Studies Centre, Canberra, 1998, p. 182.
- ²⁵ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 52.
- ²⁶ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 52.
- ²⁷ N. Friedman, 'Operational and technological developments in underwater warfare' in McCaffrie and Hinge (eds), *Sea Power in the New Century*, p. 161; usually below four knots.

- ²⁸ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 53.
- ²⁹ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 53.
- ³⁰ K. Lavell, 'New Technology Transforming Naval Power', <www.signonsandiego.com/news/op-ed/techwar/20030301-9999_mzle2newtech.html> viewed 7 September 2004. Kit is a retired US naval aviator and veteran of 243 combat missions over Vietnam.
- ³¹ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 61.
- ³² Royal Australian Navy, *Australia's Navy for the 21st Century 2002-2031*, Department of Defence, 2002, p. 16. This is the unclassified synopsis of the RAN's Plan Blue (Long-Range Strategic Plan).
- ³³ D. Nandagopal, 'Maintaining the Technology Edge in Maritime Warfare for the 21st Century', Presentation to Pacific Technology Forum, 2004.
- ³⁴ T. Schoor, 'Uninhabited Systems Technology for Mine Warfare', Presentation to Association for Unmanned Vehicle Systems International's (AUVSI) Unmanned Systems Program Review 2004, Office of Naval Research, Department of Navy Science and Technology, 12 February 2004.
- ³⁵ N. Friedman, 'Operational and technological developments in underwater warfare' in McCaffrie and Hinge (eds), *Sea Power in the New Century*, p. 160
- ³⁶ Hydro-Acoustic Information Link (HAIL) technology by Nautronix Pty Ltd, Fremantle, WA.
- ³⁷ Provided by Thomson Marconi Sonar Pty Ltd.
- ³⁸ As part of the RAN FFG upgrade program.
- ³⁹ Defense Advanced Research Projects Agency (DARPA), 'Strategic Thrusts', <www.darpa.gov/body/strategic_plan/strategci_text.htm> viewed 8 September 2004.
- ⁴⁰ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 31.
- ⁴¹ Petry, 'The Electric Ship and Electric Weapons'; Clarke and Burch, *Emergent Technologies*.
- ⁴² Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 32.
- ⁴³ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 32.
- ⁴⁴ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 32.
- ⁴⁵ Clarke and Burch, *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, p. 34.
- ⁴⁶ Dunk, 'Technological and operational trends in submarine warfare' in J. McCaffrie and A. Hinge (eds), *Sea Power in the New Century*, p. 185.
- ⁴⁷ Dunk, 'Technological and operational trends in submarine warfare' in J. McCaffrie and A. Hinge (eds), *Sea Power in the New Century*, p. 188.
- ⁴⁸ RAN, *Australia's Navy for the 21st Century*, pp. 18-20.

Medium Sized Navies and Sea Basing: Brave as Lions and Cunning as Foxes

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The 21st century will witness the advent of unique and powerful capabilities delivered by global sea-based forces. In the decades ahead, the seas will comprise the most independent and secure manoeuvre space for joint military operations.¹

Vice Admiral C.W. Moore, Jr, USN and
Lieutenant General E. Hanlon, Jr, USMC

Recognising the challenge for medium sized navies is quite simple. Maritime warfare is inherently technologically sensitive and capital intensive. This creates an imperative to manage change.² As the Argentine junta invaded the Falkland Islands in the early morning of 2 April 1982, the Royal Australian Navy's (RAN) aircraft carrier capability was to be eradicated. Britain would withhold the offer for the sale of HMS *Invincible* and subsequently remove a substantial element of the RAN's maritime power projection capability. Just over two decades later, aircraft carriers would prove one of several key assets in the United States Navy's (USN) development of a sea basing framework, brought on in response to a rapidly changing strategic environment. For medium sized navies, some tough choices need to be made to manage the winds of change in maritime warfare and, more specifically, how to embrace the concept of sea basing. For the RAN, the demise of the aircraft carrier and the fixed wing aspect of the Fleet Air Arm may have significantly limited its ability to project and sustain military operations from the sea without coalition assistance, and presented some complicated force structure issues in satisfying strategic interests and objectives.

This paper will determine what issues medium sized navies need to consider when examining the concept of sea basing for military forces. The paper will outline the concept of sea basing, consider its future relevance to medium sized navies, and critically examine the challenges presented to these navies in satisfying strategic objectives and influencing force structure for their military forces. Through this analysis, an assessment will be made whether the concept of sea basing is relevant to the RAN.

Sea Basing and Medium Navies

Sea basing is a concept that rests its foundation on placing at sea, to a greater extent than ever before, capabilities critical to operational success for military forces.³ It hinges on the inherent mobility, security, and flexibility of naval forces to overcome access limitations,⁴ and support joint and combined offensive and defensive firepower, manoeuvre forces, command and control, and logistics.⁵ It aims to reduce the vulnerability of a forward deployed, shore-based logistic footprint by shifting such support offshore and subsequently improving the reach, persistence and sustainability of forces afloat. It should come as no surprise that sea basing is an operational concept driven by the world's most powerful naval force, the USN, with the potential to help transform it into a fleet tailored for the ambiguous threats of the 21st century.⁶ But is it achievable, or even relevant for medium powers, that is, those nation-states today, commonly characterised by medium sized navies?

First, what is a medium sized navy? Significant debate surrounds this question in terms of definition. Appropriately it should be viewed not only quantitatively, but also qualitatively, in terms of a medium power. A medium power being a nation-state 'with the ability to influence events'.⁷ In this context, the definition is not limited to 'size' in terms of strength of platforms, personnel and operating budgets, but also qualitatively in terms of operational capability and proficiency, interoperability and employment. The combination of both quantitative and qualitative factors produces military leverage, which is reflected in the degree of national power a nation-state can exert through sea control.⁸ Consequently, a medium navy can be defined as one limited (medium) in resources, yet has a credible capacity to project sea control well beyond its region (blue water), in cooperation with other navies, to influence events – a reflection of government willing to deploy it abroad to satisfy strategic objectives. Australia, Canada and the Netherlands are examples of medium navies, whose definition may be best encapsulated by the term 'Medium Global Force Projection Navies'.⁹ Notwithstanding, the term is relative, whereby a navy may be medium on a global scale, however, considered a far more powerful force within its own region.

Despite its direct relevance to, and reliance on, navy capability, the concept of sea basing influences more than just the naval service. The commitment of medium navies to the full scope of the concept must then be approached in light of a broader whole-of-government strategy when satisfying strategic objectives through military means. Sea basing must be reflected in strategic policy, force structure and doctrine. Effective sea-based operations would impact not only the full spectrum of military services, but also government agencies and defence industry. Sea basing presents some significant issues and challenges for medium navies examining the concept, however, the question many medium powers are forced to contemplate: is the concept 'scalable' to complement the numerous constraints that characterise their navies? Furthermore, the medium power must ask itself, is the integration of the concept, or aspects of it, cost effective?

The Development of Sea Basing

The concept of sea basing is not revolutionary, but evolutionary. Despite emerging recently as one of the USN's three fundamental concepts within 'Sea Power 21', its Global Concept of Operations for the 21st century,¹⁰ many elements of sea basing have been developed and routinely exercised throughout seafaring times. Captain Alfred T. Mahan wrote of the time-honoured principle of 'position', stating emphatically that mobile forces can determine a war's outcome through position, and that the sea itself becomes a central position – like a highway – where lines of communication are assured and forces are moved. During distant operations and maritime expeditions, Mahan noted, forces need to 'establish a second base near the scene of operations'. Although referring to a port of shore facility, the modern concept was nonetheless being conceived.¹¹

'Poise and persistence' is one of the common and unique characteristics of modern seaborne forces, and best describes a navy's ability to be 'almost wholly self-contained and able to operate without recourse to the shore for periods of weeks or even months'.¹² Add to this the impact of technology through the development of larger, more capable ships, such as the aircraft carrier and amphibious lift ships, and their ability to project air and amphibious forces from, effectively, a floating (sea) base. To provide context, the conquest of Okinawa by US and Allied forces in the spring and summer of 1945 was conducted from a large sea base located approximately 800 miles away in the Marianas Islands.¹³ This sea base laid the foundations for the planned invasion of Japan's home islands. More recently, US and Coalition air and ground forces established a formidable presence in Afghanistan in support of Operation ENDURING FREEDOM, forced to being supported from the northern Arabian Sea by ships some 600 miles or more from the battlefield.¹⁴ Such examples provide evidence of the evolution and need for sea basing that would help shape today's concept towards a future reality.

Prior to examining the issues for medium navies when examining the sea basing concept, it is important to understand the dimensions and complexities of sea basing in terms of its relevance and structure for the USN.

The future strategic environment, against which sea basing is being developed, is shaped by today's political antagonism towards the US and other coalition nations. The onset of growing political and military barriers to US access to foreign shores for forward installations and the conduct of military operations, particularly over the past 15 years, have provided the US military with numerous and sometimes poignant lessons on the significant impact of restricted access.¹⁵ Recently, several nations in the Middle East and South West Asia have refused to provide direct combat support for US strike aircraft during Operation ENDURING FREEDOM. Turkey also decided not to allow the movement of the US Army's 4th Infantry Division through its territory during Operation IRAQI FREEDOM. Due to such changes in political mindset, the US military has recognised the increasing relevance and value of sea basing to meet

their government's strategic intent, ensuring unrestricted access around the globe by maximising operational freedom and movement on the high seas.¹⁶

For the US military to satisfy this intent, conceptually the evolution of the sea base is to broadly comprise distributed forces of numerous types, including:

- Carrier Strike Groups (CSG) – consisting of aircraft carriers, fixed and rotary wing squadrons, surface combatants and submarines
- Expeditionary Strike Groups (ESG) – consisting of large amphibious assault ships and heavy lift docking vessels supported by surface combatants and submarines
- Combat Logistics Force (CLF) ships – comprising stores and underway replenishment ships
- Maritime Prepositioning Force (MPF) platforms for sealift, and
- high speed support or 'connectors' to support theatre operations from the US mainland.

These high speed connectors will not only provide support from outside the theatre, but also conduct intra-theatre and direct combat support operations.¹⁷ As the future sea base evolves, the product of several developmental programs will provide enhanced joint capability, such as the integration of Short Take-off/Vertical Landing (STOVL) Joint Strike Fighter (JSF) to provide formidable combat air power.

Sea basing is more than just military platforms en masse. Command and control (C2), advanced sensor and communications systems, and joint logistics are all pieces of the sea base jigsaw puzzle. As the major contributor of capability to the concept, the USN must be cognisant of developing extensive doctrine to support a significant change in the conduct of maritime operations. Importantly, it must nurture its vital international strategic relationships by enabling coalition integration into such operations. Clearly, a navy examining an organic sea base capability of this magnitude requires commitment to a robust force structure strategy supported by significant long-term funding. The goal of the USN is to evolve its contribution to the sea base concept by 2020.

Issues Arising for Medium Navies

One of the defining aspects of a medium navy is its limited resources. Consequently, it is highly unlikely for medium navies, like the RAN, to consider implementing the sea base concept of a magnitude equivalent to the US national effort in the near future. Nonetheless, examining the concept on a reduced scale can provide medium navies with the potential for significant leverage through the reduction in logistic footprint ashore and consolidation of joint power projection, while also improving access to and understanding of the USN's sea basing aspirations and capabilities. So what are the key issues that medium navies must consider when examining this concept?

Relevance

The first and most significant issue is for medium powers to challenge the relevance of sea basing as a concept to satisfy their strategic objectives and vital interests. While a common security interest to medium powers is the condition of 'stability' both within the global and regional strategic environment, their primary force development priorities focus on the exertion of sea power at the regional level, significantly different to US strategy.¹⁸ For example, this is reflected in Australia's military capability development priorities in the order of: Defence of Australia, Contribution to the Security of the Immediate Neighbourhood (regional security), followed by Supporting Wider Interests (global security).¹⁹ Consequently, Australia must decide if a comprehensive, yet reduced level of organic sea base capability is in their vested interest (relevant) to satisfy future strategic objectives and determine force development.

Medium navies have just as much of an imperative as larger powers to create and sustain a full range of capabilities to conduct power projection.²⁰ In general, however, medium (democratic) powers today are unlikely to undertake unilateral military action that necessitates a comprehensive sea base capability. Furthermore, they do not attract the degree of political antagonism and subsequent military barriers, which have driven the need for the US sea basing concept. Rather, shared national security interests and objectives drive medium powers to be involved in alliance or coalition operations. For Australia, these operations are imperative and likely to be in conjunction with the US. This ensures that interoperability and a detailed understanding of sea basing maintains significant relevance to the RAN today.²¹

The willingness of medium powers to commit to a US-led coalition operation demonstrates broad international support for the operation's objectives and underscores the measure of international legitimacy the US seeks for operations today and in the future. Medium power coalition partners will therefore seek opportunities presented by the US to satisfy national interests by providing key niche capabilities to sea-based operations – a trend that is likely to continue.

Concept Development and Experimentation

Having concluded that sea basing is relevant to medium powers from the perspective of integration of niche capabilities as part of future alliance or coalition operations, and to lesser degree for an organic capability on a much reduced scale, medium navies must consider how they might develop the necessary future capability. While sea basing is not yet an Australian development concept,²² the Australian Defence Force's (ADF) *Future Warfighting Concept* (FWC) recognises the need to rigorously explore such concepts through experimentation to provide better advice for decision-makers within the Australian Defence Organisation on capability development. For the RAN, a balance between close liaison with the USN and an objective approach from within

Australian industry will provide the RAN with the best opportunity to shape future capability requirements. Unfortunately, for medium navies, limited resources will drive the debate over sea basing capability.

Interoperability and Joint Effectiveness

As we move further into the 21st century, the materiel challenges facing medium navies are not insignificant. In an environment characteristic of complex new technologies, reduced budgets and manpower, and new operational challenges, medium navies have a difficult task in ensuring they achieve the right materiel choices to meet their strategic priorities and capability goals, while ensuring interoperability with coalition forces, particularly the US.²³ In the ADF, the need for interoperability is widely reflected in policy and more recently as one of four external benchmarks for the FWC – warfighting advantage, cultural relevance, affordability and interoperability.²⁴ For a majority of medium navies, current and future integration into US-led coalition operations is mainly through the provision of surface combatants or underway replenishment ships within the CSG, ESG or CLF. To sustain this, interoperability needs to be further developed and crafted into respective shipbuilding platforms. For military forces such as the ADF, the future of integration into US sea-based operations is greatly enhanced through the provision of three new Air Warfare Destroyers (AWD), two replacement amphibious ships and potentially the STOVL JSF.

Medium powers have an imperative towards joint operations that is much stronger than large nations. To exploit the full potential of an organic sea base capability, medium navies must therefore consider joint effectiveness. Other military Services must become confident in the utility of the sea basing concept, which must not be simply about satisfying maritime naval operations. However, with limited resources, medium powers need to carefully manage change. Joint effectiveness requires significant focus on common doctrine, effective command and control, joint logistic resupply, common communications and information systems, and significant training opportunities.

The scale of sea basing applicable to medium navies may equate to sustained support for a regional operation similar in magnitude to the ADF's involvement in East Timor in 1998. During the Australian-led coalition operation (INTERFET),²⁵ the RAN exercised many elements of sea basing through the establishment of sea control and use of naval vessels positioned offshore Dili and across the Timor Gap, providing logistic support and joint power projection ashore. The use of the high speed catamaran HMAS *Jervis Bay* to transport troops rapidly from mainland Australia to Dili demonstrated the USN's current concept development of the high speed 'connector' operating between theatres. The RAN's operational procedures during the INTERFET operation provided a good example of a sea base capability framework that can be further developed to generate more effective and sustained joint operational manoeuvre at and from the sea.

Cost Effectiveness

With most medium navies, there is a clear trade-off between strategic requirement and affordability. Whether developing an organic sea base capability or ensuring procurement of platforms that are interoperable with coalition sea base operations, cost matters. The complexity of sea basing development will be determined by budgetary constraints. Like most medium navies, the RAN would be faced with the problem of funding a relevant and versatile concept within available resources. Accordingly, medium navies view experience with the USN's concept as a means 'to influence rather than dominate [our] equipment programs in the future'.²⁶ Medium navies are limited to developing modest sea base capabilities comprising few, but effective, platforms with supporting joint offensive capabilities, and would have to adapt other approved projects to suit the concept in the future. Again, a future Royal Australian Air Force (RAAF) STOVL JSF could potentially provide combat power to augment and sustain US-led sea-based operations.²⁷

The other cost medium powers need to consider is that of 'strategic cost'. Medium powers aligned with aspects of US foreign policy – such as Australia, Canada and Japan's support for the International War on Terror (Operation ENDURING FREEDOM) – have been subjected to a degree of political antagonism and access barriers in the conduct of military operations. Such strategic cost, through restricted access to conduct operations offshore, may prove to be an increasing trend that medium navies, as well as the USN, need to contend with in the future. Such fallout from aligning with US foreign policy may trickle down to become an issue with regards to regional diplomacy. Medium powers may be forced to adopt sea basing to achieve greater operational freedom when addressing regional hot spots. Conversely, the basing of forces at sea can support and enhance diplomatic effectiveness through a reduced footprint ashore, mitigating cultural sensitivities and force protection issues.

Is sea basing just another term for doing what medium and large navies currently do well? At the end of the day, medium navies must consider a cost-effective analysis against current capability satisfying their strategic intent and that of significant time and investment in additional capability to develop and sustain sea basing operations. Parity with the US is clearly not viable nor relevant, however, development of niche capabilities to bolster current force structure and provide interoperability with US operations may prove a worthwhile investment.

The Case for Australian Sea Basing

The international security environment has undergone a transformational change. Since the Australian Government released the *Defence Update 2003*, increasing tensions between the US, China, North Korea and Japan;²⁸ global terrorism; and ADF operations in the Solomon Islands, Bougainville, Banda Aceh, Afghanistan and Iraq all have the

potential for repercussions on Australia, thereby shifting national security to the 'centre of national attention'.²⁹ A majority of these events have arisen from two major trends that are shaping the future strategic security environment – global interconnectedness (globalisation) and US supremacy.

Where globalisation is generally considered as helping to strengthen global security through the promotion of economic, social and political developments that align with Australia's interests, it has emerged that one country's political or cultural instability may in fact quickly become another country's security crisis.³⁰ For all the benefits we draw from an interconnected world, the traditional geographic and conceptual boundaries of security that Australia has rested on for decades have eroded significantly. The Australian Government has recognised that greater emphasis on 'pro-active operations' is required, with an ability to generate military leverage further abroad.³¹ Despite a decline in state-on-state conflict since the end of the Cold War, the determination of the US and supporting coalition forces to democratise several areas of the world has fuelled significant anxiety amongst regions.³² Consequently, the importance that the Australian Government has placed in supporting the relationship with the US has exacerbated security concerns for Australia.

The Royal Australian Navy and Sea Basing

Given the transformed strategic environment, the future concept of sea basing is relevant to Australia as a medium power to satisfy strategic objectives amongst our wider interests. This can be achieved twofold: through the need for interoperability with coalition forces on the global stage, in particular the US; and by generating operational flexibility through evolving a limited, but expanding organic sea base capability that can be exercised primarily within the Asia-Pacific region. Sea basing, however, is not a panacea in addressing Australia's perceived threats and challenges for the future strategic environment. The RAN must carefully consider the issues of maturing the concept further through experimentation and weighing up the cost-benefit analysis for what is considered an attractive concept to reduce the ADF footprint on foreign shores and generate greater operational freedom of manoeuvre to achieve the desired national effects.

Conclusions

Despite evidence of an evolution of sea basing throughout military operations and campaigns over history, today sea basing remains a future concept. A concept driven by the USN that hinges on the inherent mobility, security and flexibility of naval forces to overcome access limitations to foreign shores, and supports joint and combined offensive and defensive firepower, manoeuvre forces, command and control, and logistics from the sea. It aims to mitigate the threat to forward deployed forces through a reduction in the shore-based footprint, and subsequently improving the

reach, persistence and sustainability of forces afloat. For medium navies, the concept requires considerable consideration to ensure the key issues behind sea basing are examined in detail; in particular, the concept's relevance to satisfying medium power strategic interests and objectives. The RAN, like other medium navies, must have a clear strategic rationale for the pursuit of the sea basing concept. There is a danger in chasing sea basing for its 'buzz word' reputation. Furthermore, interoperability with US sea base operations or the development of a limited organic sea base capability requires substantial cost both financially and politically. Medium navies therefore face a tough challenge. They need to be as bold as lions to commit to a concept that has the potential to influence force structure and doctrine significantly, and be as cunning as foxes in determining what platforms and systems must be developed to balance present and future capabilities.

Notes

- ¹ C.W. Moore, Jr and E. Hanlon, Jr, 'Sea basing: operational independence for a new century', *Proceedings*, January 2003, p. 80.
- ² G. Smith, 'Stating the problem: facing the challenge' in D. Wilson (ed), *Maritime War in the 21st Century: The Medium and Small Navy Perspective*, Papers in Australian Maritime Affairs, No. 8, Sea Power Centre - Australia, Canberra, 2001, p. 5.
- ³ Sea basing is one component of the USN's 'Sea Power 21' operational concepts.
- ⁴ J. Patch, 'Sea basing: chasing the dream', *Proceedings*, May 2005, p. 38.
- ⁵ Moore and Hanlon, 'Sea basing: operational independence for a new century', p. 80.
- ⁶ T. Truver, "'Sea Power 21": international partnership for the common good', *Naval Forces International Forum for Maritime Power*, Vol. 25, No. 1, 2004, p. 23.
- ⁷ R. Hill, *Medium Power Strategy Revisited*, Working Paper No. 3, Sea Power Centre - Australia, Canberra, March 2000, p. 3.
- ⁸ 'Sea control' is defined as the situation that exists when one has freedom of action to use a maritime area for one's own purposes for a period of time and, if required, deny its use to an adversary. See Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, RAN Doctrine 2, Defence Publishing Service, Canberra, 2005, p. 252.
- ⁹ As referred to in 'Leadmark: The Navy's Strategy for 2020'.
- ¹⁰ 'Sea Power 21' consists of three fundamental concepts – Sea Strike, Sea Shield and Sea Basing – all linked in a seamless 'FORCEnet' web of secure communications and information. See Truver, "'Sea Power 21": international partnership for the common good', p. 23.

- ¹¹ J. Klein and R. Morales, 'Sea basing isn't just about the sea', *Proceedings*, January 2004, derived from A.T. Mahan, *Naval Strategy Compared and Contrasted with the Principles and Practice of Military Operations on Land*, Little Brown, Boston, 1911, pp. 99, 200.
- ¹² Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 50.
- ¹³ The 'sea base' that assaulted Okinawa consisted predominantly of naval assets, including fast aircraft carriers, battleships and amphibious vessels. There were approximately 1200 medium to large warships, increasing to 1500 with the addition of smaller landing craft. See T. Hone, 'Sea basing and the lessons of Okinawa', *Armed Forces Journal*, May 2005, p. 44.
- ¹⁴ K. Jacobs, 'USN amphibious programmes: the future is bigger', *Asia-Pacific Defence Reporter*, May 2003, p. 38.
- ¹⁵ Over the past 20 years, the US has withdrawn from major bases on the periphery of the European, Asian and African continents for both economic, political and strategic reasons, for example, Subic Bay in the Philippines. Refer AMI, 'Sea basing program: sea basing perspective within the triad of Sea Power 21', *AMI International Sea Basing White Paper*, November 2004, pp. 1, 5-8.
- ¹⁶ The concept of 'freedom of the high seas' is one of the foundation stones of international law and is based on the characteristics of ocean space being indivisible and available to all.
- ¹⁷ AMI, 'Sea basing program: sea basing perspective within the triad of Sea Power 21', pp. 12-16.
- ¹⁸ Richard Hill surmises medium power security interests as 'Stability', derived from *Medium Power Strategy Revisited*, p. 5.
- ¹⁹ Department of Defence, *Defence 2000: Our Future Defence Force*, Defence Publishing Service, Canberra, 2000, pp. 46-53.
- ²⁰ Smith, 'Stating the problem: facing the challenge', p. 5.
- ²¹ Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, p. 11.
- ²² Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, p. 11.
- ²³ R. Walmsley, 'Medium challenges facing small and medium sized navies' in Wilson (ed), *Maritime War in the 21st Century: The Medium and Small Navy Perspective*, p. 13.
- ²⁴ Interoperability with the US is referenced throughout *Defence 2000*.
- ²⁵ International Force East Timor.
- ²⁶ A. Roosevelt, 'Interoperability: the sea basing issue for allies', *Defence Daily International*, Vol. 6, No. 3, 21 January 2005, p. 1.
- ²⁷ A. Shorter, 'STOVL JSFs put teeth in sea basing', *Proceedings*, September 2003, p. 32.
- ²⁸ The rise of China and tensions between US, China and Japan have and will continue to impact on Australians through world economic markets and trade. Defence planners watch North Asia with great concern.
- ²⁹ H. White, 'The 2005 White Paper', *SDSC Newsletter*, January/June 2005, pp. 6-7.
- ³⁰ A. Dupont, 'Transformation or stagnation? Rethinking Australia's defence', *Australian Journal of International Affairs*, Vol. 57, No. 1, 2003, pp. 57-58.
- ³¹ Department of Defence, *Defence 2000*, p. 47.
- ³² 'Global Conflict Trends', CSP Global Conflict Trends, <www.members.aol.com/CSPmgm/conflict.htm> viewed 21 September 2005.

Sea Basing and Medium Navies

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Royal Australian Navy
2005 Winner Officers' Section

Since men live upon the land and not upon the sea, great issues ... have always been decided ... by what your army can do against your enemy's territory and national life or else by the fear of what the fleet makes it possible for your army to do.¹

Sir Julian Corbett

Sea basing is defined as the basing of certain land force support elements aboard ship to decrease shore-based presence.² The concept of sea basing was incorporated in the United States Navy (USN) transformational plan – 'Sea Power 21' in 2002. 'Sea Power 21' contains three key concepts: Sea Strike, Sea Shield and Sea Base. Sea Strike is concerned with the direct application of offensive force in the littoral by a combination of carrier aircraft, cruise missiles and naval gunfire. Sea Shield is concerned with defending navy ships and national assets from threats (which may eventually include national missile defence). The assets for both Sea Strike and Sea Shield are currently in the inventory of the USN, however, Sea base is far more conceptual in nature and will require considerable effort to reach its full potential.

This paper will identify the issues that medium sized navies need to consider when examining the concept of sea basing for military forces, and will address the following issues:

- the sea basing concept
- the components of the sea base
- the strategic implications of sea basing for the medium sized navy
- the value of sea basing to the medium sized navy.

The Sea Basing Concept

The concept of sea basing had its genesis in 1997 when the Commandant of the United States Marine Corps (USMC) released the concept paper 'Maritime Positioning Force 2010 and Beyond'. This paper focused on supporting the USMC concept of Operational Manoeuvre from the Sea (OMFMS). At its heart was the requirement to have all logistic support to come from the sea, rather than from a large land depot. Traditionally, logistic

bases provided by host nations or seized during initial lodgment have supported land operations. However, the US sea base concept foresees that USMC troops operating from the sea base will conduct initial seizure of an objective and be sustained for 20 days of operations. Second echelon troops will be flown to the sea base, equipped and forwarded to the area of operations. In theory, sea-based units will no longer be reliant upon the 'iron mountain' of supplies maintained in rear operational areas but rather upon a complex network of ships, aircraft, lighterage and logistic management systems to provide the logistic support required of modern warfare.

The sea-based force is still developing as a concept but the US Navy Transformation Roadmap (a subordinate document to 'Sea Power 21') states that sea basing will provide sustainable global projection.³ While most medium powers see little need for the ability to project power globally in a pure military sense, the basic elements of sea basing will be necessarily common. These include large flight decks, extensive command and control facilities, lighterage for onload/offload, enhanced cargo-handling equipment, enhanced maintenance facilities, ammunition and stores, fuel and medical support to name just a few.

The Components of the Sea Base

Most medium sized navies currently operate strategic sealift and amphibious ships of varying sizes, however, these are generally limited to operating in commercial ports or close inshore. For this reason, traditional amphibious forces are unable to meet the stand-off requirement of the sea base. At this stage only the US is close to developing the sea base concept into an operational reality. In 2008 the US will commission the first of its Maritime Prepositioning Force (Future) (MPF (F)) ships. These proposed ships are over 1000 feet long, displace almost as much as a *Nimitz* class aircraft carrier, can carry more than 6000 20-foot shipping containers and will cost an estimated US\$1.5 billion each.⁴ These dimensions and price tag are far beyond the requirement and budget of most medium sized navies.

One suggestion for the provision of sea basing is the use of chartered civilian vessels. This system has been suggested to the USN by the Maersk Line with an option to convert existing merchant vessels for use as seabases, thus reducing the financial risk to the chartering government.⁵ However, many medium sized navies belong to nations who have reduced their merchant fleets to a minimum level and would, generally, be unable to charter a nationally flagged vessel to support military operations of the type envisioned by the sea base concept.

Traditional amphibious units are loaded to enable assault waves to be discharged in accordance with a tactical plan; once loaded it is usually impossible to manoeuvre loads internally. During the Falklands War the British Amphibious Task Group was required to unload and then tactically reload their equipment at Ascencion Island before sailing

for the assault at San Carlos. The sea-based force will generally be required to provide the initial assault waves in the traditional tactical manner, however, once on station will be required to manage its cargo internally and be responsive to demands for support ashore. Current technology does not permit selective cargo movement at sea and thus presents one of the most significant technical hurdles and risks of the sea base concept. Further, sea-based units will need to have the ability to conduct cargo discharge to lighterage and other support craft up to sea state 4 or 5, however, technology to enable such a difficult evolution to be conducted does not currently exist.

While its distance from the shore may enhance the security of the sea base it also offers a level of complication not encountered by traditional amphibious forces. This complication is primarily encountered in the difficulty of effectively bridging the gap between the sea base and the troops in the field. Thus the sea base concept places a much larger reliance in long-range transportation in the form of both air and watercraft.⁶

Air support is critical to the success of the sea base concept and must fulfil three functions: provide ship-to-shore logistic support, combat mobility and firepower. These tasks will require two separate capabilities: an armed helicopter or STOVL aircraft to provide fire support, and an aircraft capable of providing tactical mobility and logistic support to ground forces. While the attack helicopters and STOVL aircraft are operated from the existing amphibious units of many medium navies, the tactical mobility/logistic support aircraft is more problematic. A helicopter designed to provide rapid battlefield mobility is unlikely to be suited to long-range logistic support, and the reverse is probably also true. Even the US MV-22 Osprey tilt rotor aircraft is unable to provide the combination of battlefield speed and heavy lift.⁷ Simply put, without the ability to field a large range of aircraft to meet all purposes, the medium navy must accept a compromise solution: slower battlefield response, slower logistic support, or move the sea base closer to shore and increase its vulnerability to shore-based attack.

Lighterage will also provide a critical element of the sea base concept. Like the aviation component, the lighterage component will be required to provide fast effective ship-to-shore support. In traditional amphibious operations this task has been conducted by small landing craft or self propelled barges operating close to shore, however, with the sea base remaining over the horizon the need for a faster more seaworthy watercraft is required. Additionally, the sea base needs to be able to discharge cargo to the lighterage in higher sea states than is currently expected of traditional amphibious forces. This capability will be critical for effective open water operations envisaged by the sea base concept.⁸

The cost of sea basing will be high. It will require highly specialised heavy lift aircraft and high speed lighterage/watercraft to maintain the just-in-time logistic system that is at the heart of the sea base concept. Finally it will require a vessel(s) that will be able to carry and discharge the troops, maintain command and control and medical services, as well as manage the logistic 'iron mountain' required by modern military forces.

Strategic Implications of Sea Basing

Sea basing will strengthen international stability by reducing force protection requirements and demands on allied and coalition partners' infrastructure, will enhance deterrence, and will provide the nation with unmatched operational freedom of action.⁹

US Naval Transformation Roadmap

Between 1991 and 2000, USN amphibious ships conducted 55 operations globally, including disaster relief, evacuating US citizens or government personnel from unstable countries, as well as normal combat operations.¹⁰ Likewise, medium sized navies conducted operations ranging from natural disaster evacuation operations in the Caribbean, to rescue missions in sub-Saharan Africa, and to peace enforcement and monitoring in the Asia-Pacific region. Thus for most medium sized navies the ability to deploy and sustain forces on operations is of strategic importance. The US sea base strategy is centred around the '10-30-30' principle: 10 days to deploy to a hot spot, defeat the enemy in 30 days and be ready to fight again in 30 days.¹¹ This principle provides a very clear message of both intent and ability and while this may present a siren call to many military planners, the strategic implications of sea basing are significant.

The sea base has no clear connection with operations related to the defence of a national border but rather sends a very clear message of expeditionary intent.

For the medium military power, and particularly nations such as Australia, the possession of an asset such as a sea base is likely to be viewed with considerable regional suspicion and could easily complicate diplomatic initiatives.¹²

Sea basing potentially provides military strategists with the reach and persistence not possessed by most nations. By providing its military with strategic reach a nation is able to position a decisive force off another nation's coast as a means of coercion. While the use of maritime power to coerce is not new, the power that is inherent in a sea-based force is significant and overt.

For the medium navy the use of coercive force is problematic as it relies upon a credible force to be effective. This means that the medium navy needs to ensure that its forces are professional, well-equipped, well-armed and have the ability to strike where directed. This capability comes at a cost. This cost extends not only to the cost of the platforms used for sea basing, which we have seen could be considerable, but also to the cost of developing, training and equipping the force.

The sea-based unit requires large stockpiles of logistic stores to be held at sea, and these stores would generally be unable to be utilised by units other than those being directly supported. This requirement incurs a large opportunity cost, as the national requirement to retain stores may increase as the sea-based stores become effectively

embargoed from issue. This opportunity cost may also have a significant effect on the availability of funds to equip, train and support follow-on forces if required. Thus military strategists are presented with the classic dilemma: either use funds to sustain readiness or invest in capability that may not be utilised. Ironically, the costs incurred to support the sea-based force may have a negative effect on the overall national defence preparedness.¹³

In terms of permitting the formation of broad international coalitions, sea basing may diminish the ability of some nations to provide a meaningful contribution. Many nations are unwilling to provide combat troops to coalition operations but rather prefer to provide support personnel to serve in land bases and facilities. With sea basing moving the majority of these functions to sea and having limited ability to embark additional personnel, the sea base may actually prevent smaller nations being able to provide meaningful contributions to coalition operations.¹⁴ The reliance of coalition forces upon a sea base potentially limits the assets that can be deployed to those which are common to the coalition force and thus supportable from the sea base.¹⁵ This requirement to provide a homogenous force could lead to a tendency to single (probably US) source defence equipment purchases resulting in an inability for the medium powers to consider defence acquisition program sourced from non-US companies.

The sea base must necessarily be large to be effective, thus increasing its vulnerability to detection and attack by hostile forces.¹⁶ If developed to its full potential the sea base would be a strategically critical asset and would require significant protection either in the form of self-protective measures or escorts and air support in all but the most benign environments. Additionally, seabases may be more vulnerable than land bases from threats such as cruise or ballistic missiles. Due to the high concentration of stores, fuel, and command and control assets, the loss of a single sea base may have a disproportionately adverse effect upon land operations than an attack against a land base.¹⁷ The loss of the *Atlantic Conveyor* during the Falklands War of 1982 shows that a sea-based force can be almost crippled by a single strike successful against a strategically critical unit.¹⁸ Thus the sea base becomes both a critical strength and vulnerability that can be exploited by an adversary. Any navy operating a sea base must be able to provide it with a substantial protective force, which again will come at a substantial cost. The medium power needs to consider what is the opportunity cost lost to the provision of protecting the sea base as opposed to the cost of providing protection to a logistic node ashore.

The sea base concept would provide any medium sized navy with significant strategic reach. However, the development of a sea base capability will come at a significant cost in terms of diplomacy, the ability to build coalitions and opportunity costs. Additionally, the vulnerability of the sea base, as well as significant risks of attempting to develop the untried technologies required for the sea base to reach its full capability, makes any decision to develop a sea base a difficult one to justify.

The Value of the Sea base to the Medium Power?

During operations in the Pacific Campaign of World War II (WWII), some commentators argue that sea basing provided 'mass' in defeating the Japanese during the closing stages of the war. This may be correct, however, it should be noted that the provision of this mass required almost all the assets of the Allied nations to achieve. Thomas Hone notes that during WWII 'the sea base was terribly expensive. Only a mobilised and dynamic economy could produce one, and only in a grave emergency.'¹⁹ Hone also notes that cheap, disposable, mass-produced ships and military hardware supported the sea base of WWII. It is unlikely that the expense of modern military equipment would permit the disposable techniques of the 1940s to pervade today's military environment, where most medium sized defence forces are limited to a budget of less than 2.5 per cent of Gross Domestic Product.²⁰

While sea basing is a tempting mantra for nations who seek to either protect their forces or to minimise their operational footprint, sea basing is unable, in anything more than a low threat/operational tempo environment, to provide 'strategic mass' due to the inability to provide force sustainment. Some commentators point to the use of USS *Kitty Hawk* as a pseudo sea base for Special Forces operations during Operation ENDURING FREEDOM in 2001 as proving the feasibility of sea basing.²¹ What these commentators do not mention is that the 'strategic mass' of forces in Afghanistan was provided by strategic airlift and by road convoys from neighbouring nations.²² Likewise British forces in the 1990-91 Gulf War required 19,000 tonnes of stores to be delivered into theatre per week during operations in addition to the 270,000 tonnes of stores and ammunition that had been pre-deployed.²³ Thus the sea base should be considered to be an asset with limited operational viability and not suited to large scale or extended operations.

So where can the medium navy foresee the need for sea-based forces? As previously discussed it is unlikely that the sea base will be able to support large scale or intense military operations.²⁴ This is particularly the case with medium navies that would be unlikely to be able to afford the cost of placing strategic mass at sea. With its limited capacity and operational viability without external support the sea base is probably not suitable for the medium power to use in high-end warfare. Reinforcing this belief the British Naval Attache to Washington stated that 'we believe sea basing will never replace conventional methods of deployment and sustainment'.²⁵

Many European navies appear to consider this comment to be of considerable validity and have embarked on numerous strategic sealift and amphibious force projection modernisations. NATO has also agreed to establish a common European sealift capability of between 12 to 14 merchant vessels under charter or assured access contract.²⁶ Critically the Europeans appear to have avoided the sea base concept and chosen the low risk option of existing technologies and traditional methods of supporting land-based forces. This approach may also have been influenced by the

reality that for most medium sized navies, such as those of Europe, the requirement to support a large scale amphibious assault against a protected shore is unlikely. Instead, the Europeans have reinvigorated capabilities that will permit the rapid delivery of personnel, vehicles and equipment to shore across a beach or to a port, while still retaining the ability to use traditional amphibious forces to conduct small amphibious raids, support special operations missions and deliver humanitarian assistance.²⁷ This operational realisation may be a response to the belief that the large scale amphibious operations of WWII and the Korean War are no longer possible due to the potential of high casualty rates and would make such an operation politically unpalatable.²⁸

Noting this pragmatic European view, should the medium sized navy consider sea basing, if the expense would permit, to meet national strategic objectives or are there less risky and available platforms and alternatives to meet national requirements? Would it be more profitable for medium sized navies to retain traditional amphibious forces and strategic sealift to support military operations other than war and low-level amphibious operations, rather than expend considerable funds on the unproven sea base concept that may bring with it significant strategic limitations while providing limited operational effect?

Conclusion

By developing the sea base concept the US seeks to develop the ability to conduct large-scale global military operations without the requirement for the establishment of a large logistic footprint. Sea basing is bold in conception but currently lacks the essential tools and the considerable funds to develop the platforms and systems required to make it a reality. The concept is risky from both a technical and financial perspective.

For the medium sized navy, sea basing raises several issues at the strategic level, including the ability of medium navies to fund such a bold scheme within existing military budgets. Likewise, the medium power needs to establish a method for measuring the opportunity costs that may be incurred by the expense of establishing a sea basing capability, particularly with respect to overall military capability. This opportunity cost may also include the funding and development of the defensive platforms that will be required to protect what will be a strategically important asset.

Noting the stores required by modern military forces when conducting high-end warfare the sea base is unlikely to be able to provide the level of support required by front-line troops. Thus one of the key aims of the sea base concept appears to be unattainable. For the medium sized navy the sea base is unlikely to be able to provide the strategic mass required to achieve national military objectives. This presents one of the most significant limitations for the medium navy and is one that cannot be easily overcome.

In considering sea basing, the medium power must consider the usefulness of the sea base in meeting likely national strategic requirements, when in all likelihood those requirements can be achieved by the use of less radical and costly operational concepts. When considering the sea base concept it may be of some value to consider the apparent European view point, which seeks to meet national strategic aims through the use of traditional strategic sealift and amphibious platforms.

Sir Julian Corbett was correct when he said that he linked land operations to the ability of the fleet to support the army. However, the modern medium sized navy should be cautious when considering the strategic and operational risks and expense of the sea base to support the army as it may actually become a capability of excessive expense, great vulnerability and limited utility that hinders a nation's overall military capability.

Notes

- ¹ J. Corbett, *Some Principles of Maritime Strategy*, Naval Institute Press, Annapolis, 1988, p. 53.
- ² US Department of Defense, *Dictionary of Military and Associated Terms* (JP1-02), Washington DC, 2004.
- ³ United States Navy, *Naval Transformation Roadmap: Power and Access from the Sea*, Department of the Navy, 2002, p. 4.
- ⁴ J.P. Patch, 'Sea basing: chasing the dream', *Proceedings*, May 2005, p. 39.
- ⁵ S.M. Carmel, 'A commercial approach to sea basing – afloat forward staging bases', *Proceedings*, January 2004, p. 78.
- ⁶ A.W. Burke, 'The creation of the sea base', *Marine Corps Gazette*, September 2002, p. 82.
- ⁷ Burke, 'The creation of the sea base', p. 82.
- ⁸ Patch, 'Sea basing: chasing the dream', p. 40.
- ⁹ USN, *Naval Transformation Roadmap*, p. 4.
- ¹⁰ US Congressional Budget Office (CBO), *The Future of the Navy's Amphibious and Prepositioning Force*, Washington DC, 2004, <www.cbo.gov/showdoc.cfm?index=6003&sequence=2> viewed 23 September 2005.
- ¹¹ R.C. Barnard, 'Sea basing: concept promises a revolution in power projection', *Sea Power*, Washington DC, June 2004, p. 10.
- ¹² J.J. Klein and R. Morales, 'Sea basing isn't just about the sea', *Proceedings*, January 2004, p. 32.
- ¹³ A.J. Hinge, *Australian Defence Preparedness*, Australian Defence Studies Centre, Canberra, 2000, p. 8.
- ¹⁴ Klein, 'Sea basing isn't just about the sea', p. 32.
- ¹⁵ Klein, 'Sea basing isn't just about the sea', p. 32.
- ¹⁶ CBO, *The Future of the Navy's Amphibious and Prepositioning Force*, p. 12.
- ¹⁷ CBO, *The Future of the Navy's Amphibious and Prepositioning Force*, p. 12.
- ¹⁸ Patch, 'Sea basing: chasing the dream', p. 40.
- ¹⁹ T. Hone, 'Sea basing and the lessons of Okinawa', *Armed Forces Journal*, May 2005, pp. 44-45.
- ²⁰ M. Thomson, *Pay Your Money and Take Your Pick: Defence Spending Choices for Australia*, Australian Strategic Policy Institute, Canberra, 2004.
- ²¹ M. Annati, 'Strategic force projection and sealift ships', *Military Technology*, August 2005, p. 88.
- ²² D. Cintron, 'MTMC surface shipments sustain troops in Afghanistan', *Army Logistician*, September/October 2002, p. 26.
- ²³ G. Till, *Seapower: A Guide for the Twenty-First Century*, Frank Cass, London, 2004, p. 253.
- ²⁴ R.E. Harkavy, 'Thinking about basing', *Naval War College Review*, Summer 2005, p. 16.
- ²⁵ A. Roosevelt, *Defence Daily International*, 21 January 2005, p. 1.
- ²⁶ Annati, 'Strategic force projection and sealift ships'.
- ²⁷ Annati, 'Strategic force projection and sealift ships'.
- ²⁸ Annati, 'Strategic force projection and sealift ships'.

Generation X and Navy Workforce Planning

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A human being is the most precious resource any organisation can have, and the essence of existence of any organisation depends strictly on good and able human beings. Therefore, management of this human resource is a great challenge to the civilised society. Its success needs careful planning, implementation and periodic review.

*Manpower planning has been defined as having the right number and the right kind of people, at the right place and at the right time, doing things which result in maximum long-term benefits for both the organisation and the individual.*¹

*Demands upon organisations for responsiveness to individuals have generated an important new facet in manpower planning, i.e. career planning as a means of integrating the relationship between the individual and the organisation.*²

Background

The reason for any nation to raise its navy remains common for all nations. How well one is able to create and maintain depends upon the financial, social and technological position of that country. Although the structure and personnel policies of all the navies remain common, we can find slight differences in methods adopted to achieve the ultimate results. Further, maritime interests and strategic aspirations of a country also drive its policies. This again depends largely on the above factors.

The world is polarised and the new world order is emerging. Nations want to occupy ambitious position and a say in world affairs. With the advent of newer sophisticated equipment and weapons, the arms race is fierce to demonstrate muscle power. Yet it is the person behind the machine who will actually set the battle course and influence the outcome. Therefore it is pertinent to mention that policies affecting these personnel will have direct implications.

The trend of government employment is being metamorphosised nowadays. The corporate sector has grown in a big way, and potential recruits have many options that they may wish to explore before making it to the Services.

Further, handsome pay and perks and excellent work environment attract one and all and the creamy layer gets through. Knowingly or unknowingly, everyone tries to grasp one's pie; the less fortunate ones must be satisfied with something lesser. Not realising the very role of an individual for his/her great nation, to serve the motherland, is the centripetal force for the younger lot to adopt this strict and disciplined life.

There is certainly a radical change in the work culture and one wants to be financially secure in the future, but also does not want to just let go of the present. Today's youth want to enjoy and explore all the opportunities within their reach. Thus there is the contrast. The defence forces cannot swallow this culture as the work environment is totally different, and the requirement of security or threat perception does not wait for daylight to come or weekends to finish. Therefore, the responsibilities on the shoulders of personnel in uniform are enormous and there are bound to be certain limitations to one's freedom.

On one hand there is a young generation struggling for work, and on the other there are millions of highly experienced ex-Servicemen who, after quitting their career, are queuing up for work.

The intensity of the problem is different in different countries. Perhaps development has taken its toll whereas the scenario is not so grim in developing and underdeveloped countries. A call for one can get thousands. However, the signs have started showing in these countries as well that the entry level into the Services has certainly declined. The saying 'pay peanuts, get monkeys' is perhaps relevant there too.

Direction of the structures and policies

A fighting force needs to be young enough to retard exertion; at the same time this young force needs correct guidance and blessings of the older and experienced. The organisations have to have a perfect balance between young and experienced. Thus policies do assume a long-term career for the development of its human resources.

Here we can take the topic in two slightly different categories: that is, officers and sailors. Within the Services there is a difference in the career progression of the two categories. After fulfilment of the basic needs of food and shelter, the need for recognition and esteem in society has its effect on the two categories differently. An officer can take the Service as his full-time career as his further needs are also met to some extent, whereas in sailors' cadre there is a continuous struggle to go beyond basic needs. Thus most sailors take the Services as a ladder to climb and look beyond Service for further career progression. Therein lies the challenge to retain the creamy layer of these experienced sailors for the benefit of the Services. The tendency will grow with time and thus policies have to be formulated that support this struggle so that people willingly join and remain in the Services.

Clear-cut understanding of policies is an essential element of military administration. It helps in correct evaluation of the worth of a policy, and flaws detected can be suitably corrected. Prolonged discussions and red tape have resulted in invisible long-term adverse effects.

In the US Navy there is a debate on whether to integrate navy reserves with the active forces.

Now some Navy regular and reserve officers are proposing the same bad idea of disbanding most naval reserve units and having the vast majority of its personnel serve part time in active duty commands. Many of these proponents are very senior officers who apparently can afford to spend an inordinate amount of time on active duty without negative consequence to their civilian occupation. Most reservists are not as fortunate, and are now paying a steep price with frequent and lengthy occupations.³

To overcome manpower crunch, one of the options adopted is to hire Private Military Companies (PMCs).

PMCs are successful because military requirement and retention continue their downward spiral. As the lure of military service declines, PMCs fill the void. But quality over quantity is on the verge of diminishing returns, even as technological demands increase. These companies recruit qualified warriors using lots of money. But money cannot buy patriotism, selflessness, a sense of duty and national security.⁴

However, there are other legal, security and intelligence implications of relying on PMCs.

Origin of other distracting market forces

One of the main reasons the younger generation have a reluctance to join naval service is the comparison of the working conditions in the forces with that of the other opportunities in the market.

The existing work conditions of the Services were commensurate with the social structure a few decades ago. Over a period of time the thinking and status of societies have changed drastically. Darwin rightly says, 'Struggle for existence and survival of the fittest'. There is difference in selection and adoption. Hence, when the young generation started selecting careers, in this process the navy ranked lower.

The purchasing power of the individual has increased with corporatisation of the world, and there is an attraction towards high-end luxury items, which are easily available in the market.

Flow of ideas, cultural beliefs and lifestyle from one place to another throughout the world has resulted in liberalisation of economy. Rise in literacy and economic status has enhanced awareness amongst the masses. The commoner has started to realise the importance of life. It is therefore essential to have a more scientific and logical approach to recruitment.

Remedial measures

Every country has millions of ex-Servicemen with rich experience looking for appropriate job opportunities. Why is the lure of military services declining? Why is the need for integrating naval reserves with active forces being felt? What are the reasons for a great country such as the US having to rely upon private agencies to meet its military needs? All these symptoms converge at a point where the planners are advising that, in the future, personnel will seek a variety of jobs rather than a lengthy naval career. It is evident from the above example of PMCs that a person is willing to serve in these privately managed military companies. Although patriotism and ideology may influence some individuals, money and benefits are often the greatest attractions.

The colonial era of bonded labourers is over with the liberation of countries. Societies are moving towards more liberalised culture and traditions. The value of life is gaining importance and states are wanting to be welfare states. The rulers and the ruled are the same countrymen. Therefore the approach to creation and maintenance of forces has radically changed. It is not possible to forcibly raise forces as it once was during the colonial period. Therefore, joining defence forces had already been made conducive to the needs of the citizens and people looked at it as a career, but not for the long term if the forces do not mould according to the aspirations of the citizens. How and what can be thought of is discussed in succeeding paragraphs.

The policies should be such that officers and sailors are able to take up naval service as a full-time career. A person should have confidence and faith in the system that, in case one wishes to adopt a new career in the future, they are well equipped and the system supports them. This will give them freedom to choose a naval career without much hesitation; at the same time there should be certain motivating factors that should keep these individuals attracted towards the Services once they have joined. There can be many such factors and it will depend upon the individual navies. A few such factors that may seem common and can be helpful in retaining the workforce or keeping the charm in the navy are enumerated below.

Tenure Planning: Planning of short-term tenures will help navies to assess its actual manpower requirements. The study of inflow and outflow of personnel shall lead to

better management of human resources. The problem of overstaffing can be efficiently tackled; at the same time personnel can have the option of planning their career and to migrate to other jobs conveniently. These short tenures should be extendable if required by the individual.

The practice of short service commission exists in a few navies in officers cadre. The same can be considered for sailors cadre as well. This entry will provide well-qualified human resources and the training time will also be reduced. Once created, there lies a need to monitor the ratio of these short service to the permanent service personnel. The modalities of such creations should be very carefully worked out, as reduced motivation in forces will have its own cascading effect on the overall efficiency. A few motivators besides the remedial measure discussed in succeeding paragraphs can be adopted to attract personnel to a short service career so that one does not feel deserted at the middle of the career:

- Definite job specifications
- Fix service billets, choice of station to the individual as much as possible and less/fixed transfers thereafter
- Golden handshake (a substantial lump sum) at the time of release from Service
- Continuous performance monitoring and provision of conversion to permanent service to individuals in merit (selected lot).

Inter-Services/department deputation/assignments: An organisation has a triangular hierarchical administrative structure. If the maximum personnel recruited are promoted to the top positions then it becomes parallel and inflated, and will eventually become heavy on that organisation financially. Therefore provision of deputation (for sailors and officers) to other Services in between the Service career should be considered a remedy. It will also help maintain the ratio of young and old or the perfect blend of new and experienced.

Post-retirement provisions: After completion of a fixed period of service in the defence forces, an ex-Serviceman should have reservation in other civil jobs so that there is motivation for personnel to continue the fixed tenure, and after that they are assured a civil career.

Attractive pay, perks and other benefits: A potential recruit surely compares the Service benefits to other civil jobs. Therefore facilities, pay and perks for naval personnel should be enhanced or made equivalent if not better than other contemporary jobs so that the younger people retain some amount of attraction towards the navy. There also remains the big question of providing these benefits to the rank and file.

Overall training policy: During the Service tenure, personnel acquire vast experience in their field and also in managing staff and materiel. Therefore, it will be in the interest

of the Service and the individuals if their educational qualifications are enhanced during the Service tenure. If the qualification is updated or enhanced over time, the individuals will not lag behind their civilian counterparts and they will still possess the required qualification for their next career.

Feel the Pulse: Defence Attitude Survey.⁵ A few navies conduct a survey of the attitude of their personnel in order to carry out effective changes in their policies. The surveys can also be conducted on potential young recruits in high schools/colleges, which will definitely be helpful in understanding the thinking of the youth and trends in society.

Channelling the Youth Power: The youth of a country is its greatest asset, for it holds the key to the future. Initial mindset influences an individual to such an extent that one may set their whole lifetime target at a young age. It is reflected in an individual's complexion and personality. This natural phenomenon can be exploited by the administrators to develop in an individual a sense of belonging towards their country. The effects can be demonstrated by the example of Adolf Hitler (although negative). It is reflected in history by way of his complexion and personality. He was so heavily influenced by the suffering of his fellowmen during his youth, it laid the foundation stone to his atrocities. He observed:

*I am firmly convinced today that, generally speaking it is in youth that men lay the essential groundwork of their creative thought, wherever that creative thought exists. I make a distinction between the wisdom of age - which can only arise from the greater profundity and foresight that are based on the experiences of a long life - and the creative genius of youth, which blossom out in thought and ideas with inexhaustible fertility, without being able to put these into practice immediately, because of their very superabundance.*⁶

Mercenaries and terrorists are other examples of wandered youth. Therefore channelling the youth in the right direction will not only create a motivated personnel, but also prevent youth from going astray.

Redressal of Grievances Mechanism: It is a most important element in human resource development. Grievances are bound to arise in an organisation, therefore organisations should have some kind of mechanism to address these. However, mechanisms to seek redressal of grievances are stringent and must be approached 'through proper channels', which is not satisfying at all times. Prestige of forces and other inherent deterrents prevent one from approaching judiciary, but soldiers are no longer shy of going to court.⁷ It is therefore needed for navies to set up a more transparent and neutral grievance redressal mechanism so that a sense of fairness is instilled in the forces.

Policies are formulated for achieving certain targets. These may be relevant at one particular time, but with passage of time these policies must be evaluated for their effectiveness or relevance. There have been many policies on making good the manpower shortages in navies in the past. These have shown mixed results.

Conclusion

Rapid adoption of Western ideas and culture without supplementing it with the overall growth rate of the country will surely prove disastrous to the newer generation. Therefore, navies will have to cope with the deep gorge between the virtual and the real and will have to formulate the policies and environment that suitably balances between the two and keep their personnel focused towards the overall purpose of their creation.

To summarise in a nutshell, the various options highlighted in the above paragraphs: planning a short-term career extendable at a later stage; provision of deputation to other organisations intermittently during the Service career; reservation for ex-Servicemen in various other jobs post-retirement after a fixed tenure; enhancing the facilities/privileges and ensuring they reach even the most junior person; enhancement in educational qualification while in Service to facilitate easy transition to civil employment; conduct of attitude survey of the personnel before formulation of policies so that they yield desired results; creating favourable waves in the mind of youth towards forces; establishing an effective and efficient grievance redressal mechanism; can surely help naval administrators in minimising the problem.

The measures discussed in the previous paragraphs are not new to any navy. A few of these must be in practice in many navies the world over, but the need of the hour is an aggressive containment of the problem. Therefore, adoption of these measures will expose the reserved attitude of the administration and enable it to make significant improvements.

Mere acknowledgment of downward spiral in retention and induction into the military is not enough. There is still much to be done. The policies need to be suitably modified to suit Service requirements as well as the individual's requirements. A more welfare centric approach is needed, without compromising on the security.

Can we not create similar attraction in our naval services to lure and retain the best, just like the PMCs? Thus the planners need to really think or innovate ideas that work. Perhaps success of these policies may influence the results of future warfare.

Notes

- ¹ H.M.F. Rush, 'The behavioral sciences in training and development' in R.L. Craig (ed), *Training and Development Handbook*, McGraw-Hill Book Company, sponsored by American Society for Training and Development, pp. 8-11.
- ² J.E. McMahon and J.C. Yeager, 'Manpower and career planning' in Craig (ed), *Training and Development Handbook*, pp. 11-12.
- ³ D.O. Anderson and J.A. Winnefield, 'Navy's reserve will be integrated with active forces', *Proceedings*, February 2005, pp. 26-27.
- ⁴ P. Marx, 'Private military companies: handle with care', *Proceedings*, February 2005, p. 30.
- ⁵ J. Wellfare, 'All about attitude', *Navy News*, Vol. 48, No. 9, 2 June 2005, <www.defence.gov.au/news/navynews/editions/4804/topstories/story11.htm>.
- ⁶ A. Hitler, 'Years of study and suffering in Vienna', *Mein Kampf*, 9th Edition, Houghton Mifflin Company, Boston, 1999, p. 32.
- ⁷ R. Pandit, 'Soldiers are no longer shy of going to court', *Times of India*, Ahmedabad edition, 23 December 2003, p. 8.

The Relevance of Sun Tzu's *The Art of War* to Contemporary Maritime Strategy

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Introduction

*Sun Tzu provides a cookbook guidance for statecraft, rather than a comprehensive theory of war.*¹

Colin Gray

Sun Tzu's ancient Chinese treatise *The Art of War* has become one of the most well known guides on strategy, but its guidance has been used mostly by grand-strategists and land warfare specialists, not maritime strategists. Today, the scope of maritime strategy has widened with an increased emphasis on littoral operations and maritime power projection. Modern Western militaries have become so technologically advanced that few can, or will, oppose them directly. Concurrently, global economic interdependence and the value of maritime resources create a complex arena in which maritime strategists must operate, and policing and diplomacy are becoming critical in managing maritime affairs in peace and in war. All of these factors have led to change in emphasis in maritime strategy away from pure naval warfighting.

As a result, the statecraft in *The Art of War* mentioned by Gray above is a benefit for maritime strategy, and the military concepts within also should be relevant in coping with a changing maritime strategic environment. To exhibit this, three broad components of maritime strategy will be selected, and the four most relevant principles of *The Art of War* will be distilled. The two sets will then be compared, and a detailed analysis be made on the relevance, or not, of Sun Tzu's work to contemporary maritime strategy. Not every one of the four principles selected from *The Art of War* is relevant to each component of maritime strategy, and so only a few will be compared in each case. This approach will show the coherent strategic methodology of *The Art of War* in addition to the timeless strategic concepts that are applicable to the maritime world.

Contemporary Maritime Strategy

Gray succinctly describes strategy² as: 'the bridge that relates military power to political purpose'.³ A subset of this higher national strategy is maritime strategy, and a number

of famous theorists have used various methods to explain it, such as Mahan,⁴ Corbett, Castex, Gorshkov and Turner. The thrust of contemporary maritime strategies generally reflect the broader approach of Corbett,⁵ who argued maritime strategy is about the control of maritime communications for military and commercial purposes.⁶ Simply put, a definition of contemporary maritime strategy is controlling the sea and using the sea for one's own uses, and it exists in war and peace.⁷

Although experts such as Till, Hill and Friedman have produced comprehensive models of maritime strategy,⁸ a simple but broad model that displays the scope of contemporary maritime strategy is required to effectively analyse the relevance of Sun Tzu. Mirroring models of others, such as Booth,⁹ Stevens divides maritime strategy into three components: military roles, constabulary roles and politico-military roles.¹⁰ The military component covers warfighting and includes the concepts of sea control, sea denial and force projection. The constabulary role is protecting the economic and legal aspects of maritime affairs.¹¹ Finally, the politico-military component includes the use of maritime forces for diplomacy, presence and strengthening alliances. Although these are modern terms, *The Art of War* contains a number of stratagems that are relevant to them.

Analysing *The Art of War*

The Art of War was written in the 6th century BC, and although used by Chinese strategists since then, it has only become well known in the West during the last century.¹² Today, some of the more useful translations of *The Art of War* are by Ames,¹³ Sawyer and Huang,¹⁴ as they use newly found original texts.¹⁵ *The Art of War* provides a strategic overview on how to approach conflict from a land-based viewpoint, and uses 13 'books' to explain different arguments on strategy,¹⁶ although a number of central themes appear throughout. One of these is the Chinese concept of *Shih*, or strategic advantage,¹⁷ which implies that conflict first centres around gaining an advantage, and that war is just part of gaining this advantage.¹⁸ As such, the book deals with both statecraft and warfare,¹⁹ and this overall theme of how warfare is just one tool will be shown to be very relevant to contemporary maritime strategy.

The most effective method to display the relevance of *The Art of War* is to distil several critical principles from it, but the views of translators and historians differ on which of the principles in *The Art of War* are more important.²⁰ Also, not every component or principle of *The Art of War* can be coherently matched to contemporary maritime strategy; for instance, the sections on personnel and leadership are not critical to strategy. On analysis, the four themes that provide the best cross-section for analysis against maritime strategy are: avoiding conflict, manipulation, avoiding strength and foreknowledge. Some detail on each of these is necessary for successful analysis.

Avoiding Conflict

Probably the most quoted principle in *The Art of War* is: 'neutralising an adversary's forces without battle is absolute perfection'.²¹ The concept is that due to its cost, war is a last resort, and a better strategy is to adopt the following incremental steps: first attack the enemy's strategy, then diplomatic relations and finally, only if required, the military forces.²² Importantly, this implies that diplomacy and war are 'seamless',²³ and it is better to skilfully use one's own alliances and break those of the enemy.²⁴ Hence Sun Tzu's wider focus is very useful in today's global strategic environment where military, political and economic factors mix.²⁵

Manipulation

Another significant principle of *The Art of War* is 'deceit is the art (Tao) of warfare',²⁶ but it has been interpreted in a number of ways.²⁷ At a basic level it seems Sun Tzu meant deceiving and manipulating the enemy was one way of hiding one's own strategy.²⁸ However, Sun Tzu also writes: 'The ultimate skill in taking up a strategic position is to have no form',²⁹ and Sawyer argues being 'formless' gives your enemy no chance to locate you and find your true intention,³⁰ which is to strike them by avoiding their strength.

Avoiding Strength

Related closely to the principle of remaining 'formless' is what Sun Tzu called 'irregular'³¹ action and *The Art of War* states: 'A force's victory avoids superiority and strikes inferiority'.³² *The Art of War* implies that one should manoeuvre past strength, use direct methods to engage the enemy, but use indirect (irregular) methods to gain victory by surprise.³³ It is arguable whether Sun Tzu's stratagem meant indirect in a military sense, or terrorism and what is today called asymmetric warfare.³⁴ Placed in context of his time, it unlikely Sun Tzu was implying terrorism, but this does not mean terrorists today would not identify with the concept.

Foreknowledge

The Art of War details the need to 'know the enemy and yourself',³⁵ particularly as it relates to good intelligence on the enemy. Sun Tzu used the term 'foreknowledge', and it is undoubtedly one of the more important principles,³⁶ as in order to avoid the enemy's strengths one must have very good information on them. He detailed the importance of spies to intelligence,³⁷ but today the message can be interpreted as simply gaining good intelligence.

In summary, it is evident the above four ancient themes are similar in a number of ways to general modern concepts. The relevance of these concepts can now be analysed against the three components of maritime strategy: military, constabulary and politico-military.

The Art of War and Military Aspects of Maritime Strategy

Sea control, sea denial and maritime power projection

The first of the three divisions of maritime strategy to be analysed with Sun Tzu's themes is the military, or warfighting component. This component is divided into three sections: sea control,³⁸ sea denial and power projection. Sea control involves the gaining of control of a specific section of the maritime area for a specific amount of time,³⁹ and is usually required in order to conduct other missions on the ocean. The concept of sea denial is a component of sea control,⁴⁰ and is a strategy that aims to stop an opponent using the sea for their purposes.⁴¹ Finally, maritime power projection, or simply power projection, is the use of maritime and military assets from the sea to affect events ashore.⁴² But projecting power ashore involves operations in the littoral environment, which is a complex mix of jurisdictions, environments and threats, and exposes maritime forces to additional military strategies.

These three general concepts figure prominently in current maritime strategies and doctrines of most nations, and three dissimilar examples are the US, China and Australia. Contemporary US strategy focuses on presence to prevent war and the need for littoral dominance.⁴³ The current US maritime approach is enshrined in 'Sea Power 21', which concentrates on a strategy of achieving sea control in order to project power ashore.⁴⁴ Australia's approach is marked by an emphasis on sea denial/sea control of its maritime approaches and an ability to operate small force projection overseas.⁴⁵ The example of China provides a different concept in its 'active offshore defence' strategy⁴⁶ that can be summarised as defensive sea control over defined geographical areas of the coast. The common trend in most maritime strategies is an emphasis on control and power projection in the littoral environment.

Strengths and weaknesses

Advanced maritime states have placed much emphasis on technology to carry out the military roles of sea control, sea denial and power projection,⁴⁷ to the point where some describe the US military as almost 'omnicompetent'.⁴⁸ But the strategy of these advanced countries also includes casualty limitation and 'cautious exit strategies'.⁴⁹ It is therefore likely that most opponents will not challenge such modern maritime forces at their strengths, and will instead attack weaknesses.⁵⁰ Because of these factors, *The Art of War* has much relevance for military roles, as will be explained using the tenets of Avoiding Strength, Manipulation and Foreknowledge.

Avoiding Strength and Manipulation

As applied to sea control and sea denial

Firstly, Sun Tzu's overall strategy of Avoiding Strength, or using direct and indirect methods, is reflected in a number of more modern concepts that relate to attaining sea control or sea denial. Castex used the term 'manoeuvre',⁵¹ and Friedman defines it as manoeuvring 'out of contact of the enemy'.⁵² A modern Chinese interpretation of *The Art of War* in Liang and Xiangsui⁵³ discusses a modern variant of Sun Tzu's concept of Avoiding Strength,⁵⁴ and argues both Nelson and Nimitz used this method of surprise and indirect attack.⁵⁵ To complicate matters, *The Art of War's* principle of Manipulating the enemy by using deceit can be an adjunct to Avoiding Strength. Combined, they produce a psychological effect that has a number of names today, such as 'dislocation',⁵⁶ manoeuvre warfare, or the manoeuvrist approach.⁵⁷ Associated directly with Sun Tzu,⁵⁸ this approach aims to dislocate the coordination and strength of an opponent,⁵⁹ and Hughes argues the maritime environment is well suited to it.⁶⁰

Avoiding strength can also be used against those attempting sea control or sea denial. The political will of casualty-averse nations attempting these becomes a target for the indirect approach, as the expensive and valuable trained personnel involved are vulnerable to loss and casualties. Also, the use of indirect means could also include bypassing battle at sea. Instead, a fleet could be neutralised before sailing by attacking its fuel reserves and manufacturing, or disabling it in port, as was attempted at Port Arthur, Taranto and Pearl Harbor.

As applied to power projection

As with sea control, *The Art of War* is relevant for both those projecting force and those opposing it. The indirect approach is highly suited to projecting power, as manoeuvre can be used to bypass stronger defences, and place amphibious lodgments at weak points that permit access to objectives. Australian strategy, as reflected in doctrine, mentions Sun Tzu in describing power projection.⁶¹ But due to the characteristics of the littoral, the indirect approach is also useful in countering power projection. As well as conventional attacks by submarines, aircraft and land forces, maritime forces involved in power projection in the littoral are exposed to a number of more indirect threats such as mines and terrorist or suicide attacks. Again, casualties in this environment are likely, and again political will is very vulnerable in many nations.

Foreknowledge

As applied to sea control, sea denial and power projection

The need to 'know your enemy' and the resulting requirement for good intelligence are central components of *The Art of War*. The advantage of good maritime intelligence was shown by such Allied victories of World War II at Midway and in the Atlantic U-boat campaign.⁶² Gray argues the US agrees with Sun Tzu today on the primacy of 'information',⁶³ and this is obvious in the numerous information warfare strategies and theories developed in the last decade utilising new sensor and communication technology, with Australia's Network Centric Warfare concept being just one example.⁶⁴ Due to the unpredictable and complex warfighting environment of the littoral, it will require great foreknowledge to successfully conduct an indirect approach by power projection.

Gray provides an interesting counterpoint in that the fog of war will prevent information dominance.⁶⁵ As Donald Rumsfeld has mused on intelligence: 'But there are also unknown unknowns, the ones we don't know about.'⁶⁶ Once involved in the complex multidimensional littoral, the possibility of having full intelligence reduces significantly, particularly if fighting in urban environments, as has been shown in Iraq. Although a worthy aim, it can be argued that too much reliance on foreknowledge may prove misplaced, and imperil complex and ambitious plans.

As has been shown, the three principles selected from *The Art of War* for comparison so far are relevant to the military component of contemporary maritime strategy. The fourth, avoiding conflict, is particularly useful for the next two components of maritime strategy, constabulary operations and politico-military operations.

The Art of War and Constabulary Operations

The constabulary component of maritime strategy, also known as 'good order at sea',⁶⁷ is simply the manner in which maritime forces may be used to protect the non-warlike uses of the sea. This includes protection of living and non-living offshore resources, ports, sea lines of communication (SLOCs) and maritime borders.⁶⁸ All of these ocean uses are valuable and so are good indirect targets for opponents, from such threats as illegal fishing, piracy and terrorism.⁶⁹ The economic importance of many ocean resources, particularly oil and gas, makes constabulary operations important, although Till reminds us that sea control is still critical to conduct any of these other roles.⁷⁰ *The Art of War* stratagems of Avoiding Conflict and Avoiding Strength should be useful in conducting and attacking constabulary operations.

Avoiding Conflict

Sun Tzu's concept of avoiding war by attacking strategy, or thwarting it, is very relevant to the constabulary component of maritime strategy. The importance of protecting economic resources played a critical role in the development of aspects of the Law of the Sea, particularly the exclusive economic zone (EEZ). The creep towards greater security jurisdiction associated with EEZs may provide a method with which to restrict access to littoral regions.⁷¹ This is a legal and peaceful method of keeping potential opponents at arm's-length. A number of maritime powers, especially the US, are opposed to such measures,⁷² but such objections have not stopped nations from attempting to restrict military access to EEZs.⁷³ Any successful attempts to restrict navies from EEZs would greatly restrict the ability of maritime powers to project power, and in no small way would help achieve Sun Tzu's 'perfection' of avoiding conflict.

Avoiding Strength

The Art of War's indirect approach is an increasingly likely method with which to attack the economic wellbeing of maritime nations. Today, uses of the sea such as shipping, maritime trade and resource development are critical to many economies such as Australia and Japan. They also have an increasingly international character, and are therefore critical to global economic wellbeing. By damaging a maritime nation's economic life at sea by indirect means, the nation may not be able to continue a military course of action, and be faced with a failure of strategy.

Liang and Xiangsui again provide a modern model of this, with their 'combination' method of using various indirect means to damage civilian infrastructure.⁷⁴ Although not foreseen by Sun Tzu, modern maritime terrorists have attempted to take his indirect approach a step further in their attacks on the MV *Limburg*, which was an attempt to disrupt oil flows at sea. Protection of such assets as oil and gas infrastructure is a crucial role in contemporary maritime strategy, and *The Art of War* again reinforces the need for comprehensive intelligence to protect important assets, highlighting the need today for whole-of-government management of such operations.

The Art of War and Politico-military Operations

It is in the final area of maritime strategy that *The Art of War* may have the most to offer in original and comprehensive advice for maritime strategists. The politico-military arena, or diplomatic role, is suitable for navies as maritime forces can move internationally with ease, and hence project force in a number of diplomatic roles in support of higher foreign policy objectives. Again, Till explains this diplomatic role as the main concepts of presence, followed by coercion, which he divides into deterrence or compellence.⁷⁵ The presence of powerful maritime forces may help contain or deter a crisis, and at the same time not be as escalatory as using land forces.⁷⁶ But using diplomacy in the

maritime environment can work both ways, and stratagems from *The Art of War* of Avoiding Conflict and Manipulation combine to exhibit this important point.

Avoiding Conflict and Manipulation

General maritime strategy places some emphasis on using politico-military operations at sea to influence events ashore.⁷⁷ The focus today is more towards using presence at sea to prevent smaller conflicts, and using political alliances at sea to achieve international and national aims. In the 1980s US Admiral Turner conceptualised 'naval presence missions' to achieve political objectives, and these became important concepts in US strategy.⁷⁸ In the last year, the US has acknowledged the need for proactive or 'transformational diplomacy',⁷⁹ and the US National Strategy for Maritime Security in 2005 outlined the new concept of 'deterrence, influence and shaping operations' aimed at using maritime power to assist friendly nations and deter nations from becoming 'unfriendly'.⁸⁰ Other nations such as the UK place much importance on such presence operations,⁸¹ which displays again the relevance of attacking an opponent's strategy before fighting them.

Alternatively, the second component of Sun Tzu's Avoiding Conflict was the dividing of enemy alliances, and this provides lessons on how fragile maritime power strategy may be in certain areas of the world. Current multinational strategies, such as the Proliferation Security Initiative (PSI)⁸² or security operations in the Persian Gulf, rely on cooperation between nations, but the clever use of diplomacy and deception can break them apart. Today, the international media and Western public opinion provide potential unwitting tools for such a strategy. Additionally, the construct of the United Nations (UN) allows nations to use diplomacy and discussions as a means to delay and confuse action. Stopping international cooperation at the UN offers a realistic method of avoiding the use of maritime strategy, particularly in the form of power projection.

Conclusion

Today, the protection of the economic life of the oceans, and the need to support diplomacy and alliances in peace and war, seem almost as critical in maritime strategy as traditional military roles. When this traditional military role is required, it is likely to have a power projection and littoral focus, which opens modern maritime forces to a number of opportunities and threats. The resultant wide scope of maritime strategy in military, constabulary and politico-military roles requires guidance that contains more than a combat-specific focus. The breadth of *The Art of War* matches this wider focus of contemporary maritime strategy. Its relevance lies in the mixture of approaches that are available, both to nations attempting to carry out a maritime strategy, and to state and non-state actors attempting to oppose such a maritime strategy.

The Art of War's strategy of Avoiding Conflict opens maritime powers to legalistic attempts to restrict ocean access, diplomacy to delay international action, or to damage to their maritime alliances. But *The Art of War* also supports the politico-military use of navies in deterring conflict before it can begin. If required to fight, Sun Tzu's battle for Foreknowledge will be critical to maritime forces, but may not provide the clarity required, particularly in the littoral. The indirect approach and the use of manipulation described throughout *The Art of War* offer ways to circumvent the power of modern militaries, but also gives the latter clues on the smarter ways to achieve victory without incurring strategically damaging losses. *The Art of War* does not provide all the answers for maritime strategists, but it does provide the lesson that a wider approach to maritime strategy is not a luxury, but a requirement for success.

Notes

- ¹ C. Gray, *Modern Strategy*, Oxford University Press, Oxford, 1999, p. 84.
- ² Doctrine is a more detailed analysis of strategy developed for military organisations.
- ³ Gray, *Modern Strategy*, p. 17. Liddell Hart describes it as 'the art of distributing and applying military means to fulfil the ends of policy', B. Liddell Hart, *Strategy: The Indirect Approach*, Faber & Faber, London, 1967, p. 335.
- ⁴ A century ago Mahan argued maritime strategy revolved around command of the sea, and that an enemy was best defeated at sea so that the sea could be used for one's purposes. N. Friedman, *Seapower and Strategy: Navies and National Interests*, Naval Institute Press, Annapolis, 2001, p. 89.
- ⁵ G. Till, *Seapower: A Guide for the Twenty-First Century*, Frank Cass, London, 2004, p. 57.
- ⁶ J. Corbett, *Some Principles of Maritime Strategy*, AMS Press, New York, 1972, p. 90. He added that warfare at sea is not about the main strength of the enemy, p. 158.
- ⁷ A concise description is: 'The way of influencing or controlling behaviour in the maritime environment'. D. Sherwood, 'Oceans governance and its impact on maritime strategy' in D. Wilson and D. Sherwood (eds), *Oceans Governance and Maritime Strategy*, Allen & Unwin, St Leonards, 2000, p. 28. Also, 'Maritime strategy is the direction of all aspects of national power that relate to a nation's interests at sea'. J.B. Hattendorf, 'What is a maritime strategy?' in D. Stevens (ed), *In Search of a Maritime Strategy*, Canberra Papers on Strategy and Defence No. 119, Strategic and Defence Studies Centre, ANU, Canberra, 1997, p. 13.
- ⁸ Till divides maritime strategy thus: 'The winning of command of the sea by decisive battle, fleet in being, and blockade; and the use of the command of the sea, such as coastal, trade, power projection, naval diplomacy and strategic deterrence', G. Till, *Maritime Strategy and the Nuclear Age*, MacMillan Press, London, 1982, p. 15. Although first enunciated by Corbett almost a century ago, Till makes the important point that maritime strategy must relate to foreign policy. G. Till, 'Sir Julian Corbett and the Twenty-First Century: ten maritime commandments' in A. Dorman, M.L. Smith and M.R.H. Uttley (eds), *The Changing Face of Maritime Power*, MacMillan Press, Basingstoke, 1999, p. 20.

- ⁹ Booth divides maritime strategy into military roles, policing and supporting foreign policy. Summarised in Sherwood, 'Oceans governance and its impact on maritime strategy' in Wilson and Sherwood (eds), *Oceans Governance and Maritime Strategy*, p. 27; and J.B. Hattendorf, 'What is a maritime strategy?' in Stevens (ed), *In Search of a Maritime Strategy*, p. 16.
- ¹⁰ D. Stevens, 'Introduction' in D. Stevens (ed), *Maritime Power in the 20th Century: The Australian Experience*, Allen & Unwin, St Leonards, 1998, p. 3.
- ¹¹ Such as protecting sea lines of communication (SLOC) and offshore resources.
- ¹² *The Art of War* was not read in the West until after it was first translated in the 18th century into French, and then into various English translations. After such notaries as Liddell Hart discussed its contents, *The Art of War* became more popular.
- ¹³ These more modern translations differ slightly in their nuances, and so it is valuable to use all three.
- ¹⁴ In his 1993 review essay, Waldon describes the new translations by Huang, Ames and Sawyer, and how there are subtle differences in their translations. There are indeed differences, and to gain a full appreciation, at least these three versions need to be read. A. Waldron, 'China's military classics', *JFQ*, Spring 1994, <www.dtic.mil>.
- ¹⁵ In the 1970s Chinese archaeologists uncovered the earlier and supposedly more original Linyi version, discovered at Linyi in 1972. J.H. Huang, *The Art of War: The New Translation*, William Morrow and Company, New York, 1993, p. 21.
- ¹⁶ These are: assessments, on waging battle, planning the attack, strategic dispositions, strategic advantage, weak points and strong points, armed contest, nine contingencies, deploying the army, the terrain, nine kinds of terrain, the incendiary attack and using spies. Taken from R.T. Ames, *Sun Tzu and the Art of Warfare*, Ballantine Books, New York, 1993.
- ¹⁷ Ames describes it as the Chinese Shih (or Ch'i in other translations). Ames, *Sun Tzu and the Art of Warfare*, p. 71. Huang states the central theme is simply gaining an advantage. Huang, *The Art of War: The New Translation*, 1993.
- ¹⁸ Huang, *The Art of War: The New Translation*, p. 23. Handel argues the focus on diplomacy and the psychological are critical components of Art of War. M.I. Handel, *Masters of War: Classical Strategic Thought*, Frank Cass, London, 1996, p. 19.
- ¹⁹ M. McNeilly, *Sun Tzu and the Art of Modern Warfare*, Oxford University Press, New York, 2001, p. 6.
- ²⁰ For example, McNeilly summarises *The Art of War* in five strategic principles. These are: winning without fighting, avoiding strength, using deception and foreknowledge, using speed and preparation, and shaping the enemy. McNeilly, *Sun Tzu and the Art of Modern Warfare*, p. 7. Liddell Hart uses a number of the principles to start his indirect approach. The first five quotes at the start of indirect approach are *The Art of War* principles: deception, ensuring a short war, not fighting if possible, using the direct but winning by the indirect method, and attacking weakness. Liddell Hart, *Strategy: The Indirect Approach*, p. 11. The Chinese authors Liang and Xiangsui divide it into three major themes. These are: knowing your enemy and yourself, striking where the enemy is unprepared, and avoiding the solid and striking the weak. Q. Liang and W. Xiangsui, *Unrestricted Warfare*, Pan American Publishing, Panama City, 2002, p. 175.
- ²¹ Huang, *The Art of War: The New Translation*, p. 49.

- ²² Huang, *The Art of War: The New Translation*, p. 49; and Ames, *Sun Tzu and the Art of Warfare*, p. 93.
- ²³ Handel, *Masters of War: Classical Strategic Thought*, p. 31.
- ²⁴ McNeilly summarises Sun Tzu's approach to alliances in six lessons: prevent enemies from combining, avoid attacking powerful alliances, separate one's enemy from its allies, make skilful use of allies, do not choose the wrong allies, and know when to end an alliance. McNeilly, *Sun Tzu and the Art of Modern Warfare*, pp. 130-131.
- ²⁵ Handel, *Masters of War: Classical Strategic Thought*, p. 37.
- ²⁶ Ames, *Sun Tzu and the Art of Warfare*, p. 104.
- ²⁷ Ames argues deceit is the central theme of *The Art of War*: Ames, *Sun Tzu and the Art of Warfare*, p. 95.
- ²⁸ J. Minford, *The Art of War*, Penguin Books, New York, 2002, p. 113.
- ²⁹ Ames, *Sun Tzu and the Art of Warfare*, p. 126.
- ³⁰ R.D. Sawyer, *The Complete Art of War*, Westview Press, Boulder, 1996, pp. 25, 31.
- ³¹ Huang, *The Art of War: The New Translation*, p. 58.
- ³² Huang, *The Art of War: The New Translation*, p. 68.
- ³³ As explained by Sun Tzu: 'apply regular actions to initiate combat and apply irregular actions to defeat them'. Huang, *The Art of War: The New Translation*, p. 58.
- ³⁴ As Rupert Smith argues, asymmetry is a euphemism used by those that see any method they are not ready for as asymmetric. Smith argues that all warfare is asymmetric in some way. R. Smith, *The Utility of Force: The Art of War in the Modern World*, Allen Lane, London, 2005, pp. 4, 373.
- ³⁵ Ames, *Sun Tzu and the Art of Warfare*, p. 96.
- ³⁶ Huang, *The Art of War: The New Translation*, p. 112; and Ames, *Sun Tzu and the Art of Warfare*, p. 169.
- ³⁷ 'Prescience ... must be gained from what is learned by men', Huang, *The Art of War: The New Translation*, p. 112.
- ³⁸ The concept of sea control developed during the Cold War after a realisation that with modern weapons and nuclear weapons, the Mahanian concept of command of the sea was no longer realistic.
- ³⁹ J.R. Hill, *Maritime Strategy for Medium Powers*, Croom Helm, London, 1986, p. 81.
- ⁴⁰ Admiral Turner in Till, *Seapower: A Guide for the Twenty-First Century*, p. 156.
- ⁴¹ Till, *Seapower: A Guide for the Twenty-First Century*, p. 158.
- ⁴² This definition is a combination of Australian maritime doctrine and Till's definition. Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, RAN Doctrine 2, Defence Publishing Service, Canberra, 2005, p. 246; and Till, *Seapower: A Guide for the Twenty-First Century*, p. 193. Power projection includes amphibious assault, logistic support, or attacks by gunfire support, missiles or aircraft.
- ⁴³ Having evolved significantly from the US Cold War blue water Mahanian maritime strategy. G. Baer, 'Alfred Thayer Mahan and the utility of US Naval Forces today' in Dorman, Smith and Uttley (eds), *The Changing Face of Maritime Power*, p. 15.

- ⁴⁴ 'Sea Power 21' has three major components: Sea Strike, which is the carrier and expeditionary capability; Sea Basing, which aims to preposition ground forces at sea; and Sea Shield, the advanced sea control component of the plan. M. Mullen, 'What I believe: eight tenets that guide my vision for the 21st century navy', *Proceedings*, January 2006, p. 16. In parallel to the USN, the US Marines have developed their power projection concept into 'Operational manoeuvre from the sea/expeditionary manoeuvre warfare' of March 2006. S. Gourley, 'Briefing: adapting to change - The future of the US Marine Corps', *Jane's Defence Weekly*, Vol. 43, No. 36, 2006.
- ⁴⁵ Department of Defence, *Defence 2000: Our Future Defence Force*, Defence Publishing Service, Canberra, 2000, p. 47. This narrow focus has been criticised, for example by A. Tewes, L. Rayner and K. Kavanaugh, *Australia's Maritime Strategy in the 21st Century*, Research Brief, Parliamentary Library, 2004, <www.aph.gov.au>, p. 19.
- ⁴⁶ B.D. Cole, *The Great Wall at Sea: China's Navy Enters the Twenty-First Century*, Naval Institute Press, Annapolis, 2001, p. 166. Also called the 'Active green water defence strategy', Y. Ji, *The Armed Forces of China*, Allen & Unwin, St Leonards, 1999, p. 165.
- ⁴⁷ Till argues that modern technology makes influence on land easier. G. Till, 'A review: maritime power in the twentieth century' in Stevens (ed), *Maritime Power in the 20th Century: The Australian Experience*, p. 17.
- ⁴⁸ Colin Gray quoted in D. Chau, 'Political warfare: an essential instrument of US grand strategy today', *Comparative Strategy*, No. 25, 2006, p. 110.
- ⁴⁹ M. Evans, 'Clausewitz's chameleon: military theory and the future of war' in M. Evans, R. Parkin and A. Ryan (eds), *Future Armies; Future Challenges: Land Warfare in the Information Age*, Allen & Unwin, Crows Nest, 2004, p. 30.
- ⁵⁰ A. Ryan, 'Conclusion: Early 21st century armies and the challenge of unrestricted warfare' in Evans, Parkin and Ryan (eds), *Future Armies; Future Challenges*, p. 295.
- ⁵¹ He described manoeuvre as 'moving intelligently in order to create a favourable situation'. W.P. Hughes, 'Naval Maneuver Warfare', *Naval War College Review*, Vol. 50, No. 3, 1997, p. 38.
- ⁵² N. Freidman, *Seapower and Strategy*, Naval Institute Press, Annapolis, 2001, p. 223.
- ⁵³ Liang and Xiangsui, *Unrestricted Warfare*, p. 141.
- ⁵⁴ They use the theory of 'side-principal' of victory, a concept somewhat similar to Avoiding Strength. The explanation is complex, but it essentially combines the direct and indirect components at the same time. Liang and Xiangsui, *Unrestricted Warfare*, p. 147.
- ⁵⁵ Liang and Xiangsui, *Unrestricted Warfare*, p. 144. Hughes agrees on Nimitz's central Pacific campaign being an example of maritime manoeuvre: 'Naval maneuver warfare', p. 33.
- ⁵⁶ R.R. Leonard, *The Principles of War for the Information Age*, Presidio Press, Novato, 1998, p. 66.
- ⁵⁷ Till, *Seapower: A Guide for the Twenty-First Century*, p. 69.
- ⁵⁸ Till, *Seapower: A Guide for the Twenty-First Century*, p. 69.
- ⁵⁹ Hughes, 'Naval maneuver warfare', p. 33; and Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, p. 247.
- ⁶⁰ Hughes, 'Naval maneuver warfare', p. 27.
- ⁶¹ *Australian Maritime Doctrine* quotes Sun Tzu as espousing the 'indirect approach to strike key enemy vulnerabilities'. Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, p. 99.

- ⁶² It has also been argued the US used Sun Tzu's strategy with regards to intelligence in the bombing campaign of the first Gulf War in 1991. I. MacFarling, 'Asymmetric warfare: myth or reality?' in Evans, Parkin and Ryan (eds), *Future Armies: Future Challenges*, p. 156.
- ⁶³ Gray, *Modern Strategy*, p. 35.
- ⁶⁴ Other examples are numerous, such as J.H. Miller, 'Information warfare: issue and perspectives' in R.E. Neilson (ed), *Sun Tzu and Information Warfare*, National Defense University Press, Washington DC, 1997.
- ⁶⁵ Gray, *Modern Strategy*, p. 95.
- ⁶⁶ M. van Crevelde, 'Strategy and the transformation of warfare' in *Global Forces 2005: Strategic Change*, Australian Strategic Policy Institute, Canberra, 2006, p. 1.
- ⁶⁷ Till, *Seapower: A Guide for the Twenty-First Century*, p. 310.
- ⁶⁸ A more detailed list is provided in Till, *Seapower: A Guide for the Twenty-First Century*, p. 310. Opinions differ on where to place some naval roles in strategy, for example Stevens places sanction enforcement in constabulary roles. Stevens, 'Introduction' in Stevens (ed), *Maritime Power in the 20th Century: The Australian Experience*.
- ⁶⁹ Till, *Seapower: A Guide for the Twenty-First Century*, p. 310.
- ⁷⁰ Till, *Seapower: A Guide for the Twenty-First Century*, p. 161.
- ⁷¹ A number of commentators, including Sherwood, point to increased jurisdictional control over portions of the oceans. Sherwood, 'Oceans governance and its impact on maritime strategy' in Wilson and Sherwood (eds), *Oceans Governance and Maritime Strategy*, p. 29.
- ⁷² Sherwood, 'Oceans governance and its impact on maritime strategy' in Wilson and Sherwood (eds), *Oceans Governance and Maritime Strategy*, p. 29.
- ⁷³ For example, Japan and China oppose military survey collection and unauthorised military exercises in their EEZs.
- ⁷⁴ Liang and Xiangsui, *Unrestricted Warfare*, p. 123.
- ⁷⁵ Till, *Seapower: A Guide for the Twenty-First Century*, p. 276. He also states that diplomats now take Sun Tzu seriously in this aim of coercion to avoid war, p. 285.
- ⁷⁶ Friedman, *Seapower and Strategy*, p. 6.
- ⁷⁷ Till, *Seapower: A Guide for the Twenty-First Century*, p. 276.
- ⁷⁸ Till, *Seapower: A Guide for the Twenty-First Century*, p. 272.
- ⁷⁹ D. Chau, 'Political warfare: an essential instrument of US grand strategy today', p. 109.
- ⁸⁰ Mullen, 'What I believe: eight tenets that guide my vision for the 21st century navy', p. 19. Additionally, to control new threats, stability operations have become a core military mission for the US military. Chau, 'Political warfare: an essential instrument of US Grand Strategy today'.
- ⁸¹ Till, *Seapower: A Guide for the Twenty-First Century*, p. 278.
- ⁸² According to DFAT, core participants of the PSI include Australia, Canada, France, Germany, Italy, Japan, the Netherlands, Norway, Poland, Portugal, Russia, Singapore, Spain, the UK and the US. There are a number of nations that support PSI, <www.dfat.gov.au/psi>.

The Relevance of Maritime Forces to Asymmetric Threats

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*The enemy who appeared on September 11 seeks to evade our strength and constantly searches for our weaknesses.*¹

George W. Bush

Introduction

When George Bush made the above statement, it seemed he had grasped the full extent of the problem that terrorism presented to a large conventional defence force. Yet as 2006 draws to a close, the United States (US) and its allies appear no closer to solving this problem. The large and powerful conventional forces of the US and its 'Coalition of the Willing' allies seem powerless to prevent terrorist and asymmetric attacks and even provide America's enemies with high profile targets to attack.² In an environment where the enemy is neither a recognised government, nor prepared to engage in conventional warfare, how effective, or relevant, are conventional maritime forces?

Defining the terms conventional maritime forces, terrorism and asymmetric threats is the first step in addressing this question. There are important distinctions between terrorism and asymmetric threats that need to be articulated before analysis of the question can commence. Once the key components of the question are understood, this essay will then examine the eight 'characteristics of maritime power',³ listed in the *Australian Maritime Doctrine*,⁴ to determine their relevance and value in responding to terrorism and asymmetric threats.

Definitions

Despite the term being used frequently, it is difficult to find a definition for 'conventional maritime forces'. *The Macquarie Dictionary* describes conventional war as that which does not involve nuclear, biological or chemical weapons.⁵ Does this mean that a British or US warship with a nuclear capability is an unconventional warship, or that a suicide boat packed with explosives is a conventional warship? For the purpose of this essay the term 'conventional maritime forces' will apply to ships and capabilities designed to operate in a blue water environment.⁶

Most definitions of terrorism agree with Clive Williams' definition that it is 'politically (including ideologically, religiously or socially – but not criminally) motivated violence, directed generally against non-combatants, intended to shock and terrify, to achieve a strategic outcome'.⁷ This essay will adopt Clive Williams' definition with two caveats: first, terrorism will be attributed only to stateless organisations; and second, attacks against military targets will not be considered true acts of terrorism. This essay will focus on the value and effectiveness of conventional maritime forces in defeating terrorism directed against civilians, not military targets.

Asymmetric threats are really threats that a conventional force was not designed or prepared to combat. A century ago submarines were considered asymmetric threats,⁸ however, today they are very much conventional weapons. For the purpose of this essay, asymmetric threats will be defined as those presented by nations, or organisations, possessing weak conventional forces, utilising non-military or unsophisticated military equipment to achieve a military goal, as opposed to a political goal.

Analysis of the Eight Characteristics of Maritime Power

The navy, like the air force and the army, has distinct characteristics or attributes that can be utilised by governments.⁹ *Australian Maritime Doctrine* lists eight characteristics that are displayed more predominantly in the RAN than in the other two branches of the Australian Defence Force.¹⁰ These characteristics are Mobility of Mass, Reach, Access, Adaptability, Flexibility, Poise and Persistence, and Resilience and Readiness. Conventional maritime forces possess all of these characteristics. Hence, assessing the importance of each characteristic in combating terrorism and other asymmetric threats makes it possible to assess the overall effectiveness of a conventional maritime force.

Mobility of Mass

The ability to easily transport large amounts of men, material and 'combat power'¹¹ has been a much valued attribute of conventional maritime forces. How relevant is this attribute in combating terrorism? Currently, the Persian Gulf contains an enormous number of warships, many directly supporting troops in Iraq and Afghanistan, yet terrorists, insurgents or patriotic fighters (depending on the point of view) still appear capable of conducting large scale attacks on the civilian populations of those countries. While mobility of mass was crucial in overthrowing the governments of those countries, it appears ineffective when the enemy does not provide static targets to attack. Mobility alone appears more important¹² in current operations against terrorism. Accepting that terrorists will avoid fighting with a stronger conventional maritime force, concentrating such a force loses its appeal.

Fighting terrorism is only one aspect in a war aimed at defeating it. Countries engaged in fighting terrorism must accept that in doing so, they become a target, if they are not already, for retaliation. The US, in particular, have been examining a number of maritime terrorist scenarios, including a nuclear device in a container ship,¹³ and have deduced that the navy's ability to transport large amounts of equipment, particularly medical equipment, would be crucial in any response. Many navy vessels are also designed to withstand weapons of mass destruction (WMD), particularly chemical and biological weapons. If WMD were used in a terrorist attack on a major population centre, the navy's ability to provide vessels to safely house emergency crews and survivors would be useful.

Mobility of mass has been more successful in combating other asymmetric threats, particularly in the maritime environment, although it remains 'vulnerable to superior asymmetric maneuvering in time, space, and materials'.¹⁴ The Liberation Tigers of Tamil Eelam's (LTTE) 'Sea Tigers' have had considerable success, mainly due to their ability to attack isolated Sri Lanka Navy units, while avoiding Sri Lanka's main forces. However, if an opponent elects to conduct asymmetric warfare in a region where it is possible to muster a superior naval force, the superior naval force usually prevails. Certainly asymmetric warfare will have some successes, such as Iraq's use of mines in the previous Gulf Wars,¹⁵ but had little overall effect against the large number of coalition warships. While an enemy engaging in asymmetric warfare may retain the initiative,¹⁶ a large navy's ability to exercise mobility of mass will enable it to prevail in any area its forces can reach.

Reach

Reach is defined as the 'distance from home bases at which operations can be carried out'.¹⁷ Much has been made of the importance of this characteristic, particularly in conducting the War on Terror in Afghanistan,¹⁸ where naval units launched missiles at suspected terrorist bases, and supported marines and Special Forces on the ground. Another important factor was the ability of US forces to attack terrorist bases from naval platforms, rather than invading Afghanistan with large numbers of troops.¹⁹ These platforms not only provided safe havens to interrogate prisoners, but also denied the enemy the ability to strike back. Importantly, it did not give the impression that it was an invasion by US forces, even if it probably was.²⁰ It enabled US and coalition forces to attack terrorists on their home soil, which proved extremely popular politically. The extended reach of conventional maritime forces made all this possible.

The reach possessed by conventional naval forces can also be effective against asymmetric threats. Many weapons used for asymmetric warfare, such as speedboats, mines and mini-submarines, have a limited range. To defeat these threats using conventional maritime forces, it is necessary to concentrate a significant force in locations where asymmetric tactics and weapons are being used. Once again, it is

the ability of conventional maritime forces to extend their reach into these locations that makes them effective. By fighting in their opponent's own territory, conventional maritime forces can contain the problem, if not defeat it.²¹ Coalition forces patrolling in the Persian Gulf, including Australia's HMAS *Kanimbla*, played a crucial role in limiting Iraqi tugs attempting to lay mines in the region. Reach provided by conventional maritime forces is a real asset to any government tackling terrorism or asymmetric threats, although it does not ensure complete success. Reach cannot be decisive without the ability to access all areas utilised by an adversary, and this is a characteristic that has proven more difficult to exploit.

Access

Traditionally a strength, the characteristic access is actually a real weakness of a conventional maritime force combating terrorism and asymmetric threats. While conventional naval forces can access nearly 70 per cent of the world, most terrorist activities occur either on land or, at best 'in the internal waters and territorial seas of other countries',²² where conventional forces are restricted either by international law or basic things like a ship's draught.²³ In other words, terrorists tend to operate in the remaining 30 per cent of the world where conventional maritime forces have difficulty accessing. International law also impacts on operations on the High Seas. Conventional maritime forces are unable to board vessels behaving suspiciously unless the vessel is in violation of Law of the Sea, Article 110,²⁴ or approval of the Flag State has been obtained.²⁵

Probably the biggest limitation that conventional naval forces have in combating terrorism is that they have either no, or limited, access into many areas crucial to terrorists. With the exception of enforcing naval blockades, navies have little ability to intercept funds being channelled to terrorists, critical to financing their operations.²⁶ Navies cannot access many of the impoverished areas that act as recruiting grounds for terrorist organisations. If anything, a warship visible off the coast may even assist the recruitment process. Conventional maritime forces are unable to access the complex environment that sustains terrorism²⁷ and hence are of limited value to governments.

Conventional maritime forces face the same problem when dealing with other asymmetric threats. Access to the littoral region, where most future conflicts are expected, is limited.²⁸ The US is currently re-establishing its Navy Riverine units,²⁹ last used in Vietnam, in an attempt to control the internal waterways of Iraq, currently a haven for insurgents.³⁰ The US is also developing a destroyer designed for the littoral region in order to reassert itself in areas where forces are prepared to use asymmetric means. Until these vessels come into service, conventional forces will continue to face significant obstacles in accessing the areas needed to combat terrorists and other

asymmetric threats. Other than providing a platform for forces that can access these areas, conventional maritime forces will be of little value to governments.

Adaptability

It is not possible for governments to provide specialist personnel and material for all contingencies. This has required navies to be able to respond to numerous government requirements, other than conventional warfighting. The ability to adapt to changing circumstances has become a valued characteristic of naval forces, and the War on Terror certainly is a war where circumstances change frequently. Patrolling sea lines of communication (SLOC),³¹ maintaining blockades in areas where terrorists operate, supporting Special Forces and assisting in disaster relief do protect the global economy and make things more difficult for terrorists. These, however, are still very much traditional roles. In reality, the inability for conventional forces to adapt in order to access areas where terrorism can be combated has proven to be a significant weakness. Even the weapons that conventional maritime forces carry seem inappropriate. The 'collateral damage to unrelated property'³² and lives very often hands victory to the terrorists. Not maintaining a significant materiel infrastructure also means that terrorists can adapt quickly to any new measure that a conventional force introduces.³³ While people with little infrastructure can adapt quickly, it is not as easy to do the same with highly specialised equipment, such as an AEGIS-equipped destroyer designed for air warfare.

Conventional maritime forces face similar problems when combating an enemy using asymmetric warfare. The fact that the US is reinstating a river patrol capability and designing a destroyer to fight in the littoral region is a clear indication that current naval platforms are unable to adapt to asymmetric warfare. Even once these capabilities are introduced, there is no guarantee that their opponents will not have devised a means of countering them at a significantly cheaper price. Despite the lessons learned from the attack on the USS *Cole*,³⁴ and the fitting of new weapons technology,³⁵ vessels in the Persian Gulf, particularly in port, have been unable to adapt to remove this risk. Adaptability is an advantage that belongs to terrorists and others utilising asymmetric warfare, not conventional forces, who will remain playing catch-up.

Flexibility

Australian Maritime Doctrine defines flexibility as being 'immediately responsive and sensitive to government direction'³⁶ and claims that naval forces are more flexible than the other branches of the defence force.³⁷ Its major emphasis is that warships can be moved more easily from one part of the world to the next, either covertly or overtly.³⁸ The US capitalised on this flexibility of warships in the opening phase of the War on Terror by using them as excellent bases for Special Forces and carrier-based aircraft. This advantage was useful while Al Qaeda provided targets that could be engaged

conventionally; however, how does one manoeuvre a warship to counter terrorists, and their activities, who do not possess bases? Would the appearance of a warship off a city's coast have any impact on terrorists planning an attack? The answer is probably not. Warships are still bound by the limits of the sea and remain relatively easy for terrorists to avoid. They can certainly provide a number of services in response to a terrorist attack, such as hospitals,³⁹ but it is only their ability to extend the reach of Special Forces that adds any combat value against terrorists.

In countering other asymmetric threats, the flexibility of warships does provide some benefits in addition to supporting Special Forces. Despite the low level of sophistication found in many of the paramilitary organisations and countries that practise asymmetric warfare, they do still provide targets⁴⁰ vulnerable to surprise attacks from warships. Iraq's fleet of fast patrol craft and merchant ships used for laying mines was targeted by the coalition fleet. Having warships that can appear suddenly in a conflict zone also creates a level of insecurity for those engaging in asymmetric warfare, impacting on recruitment. The appearance of Australian warships off Bougainville encouraged the separatist group to seek a peaceful resolution. Despite this, warships still have limited access once the conflict moves away from the coast. Hence this characteristic is rarely decisive in countering asymmetric threats.

Poise and Persistence

The claim that combating terrorism will take a long time,⁴¹ makes the characteristic poise and persistence fundamental to the US strategy in the War on Terror. The US aim of preventing homeland terrorist attacks is based on preventing terrorists entering the US by blockading and interdicting them.⁴² In addition to this, the US plan aims to engage terrorists in their own territory, denying them the freedom to plan attacks against the US.⁴³ Even if this does not defeat them, it should 'manage and contain'⁴⁴ them. This strategy depends upon the US Navy's ability to remain poised to intercept any threat, and persist with this task for a considerable time. To combat terrorists who hold the initiative and hope to outlast a conventional force, persistence is the key.

Even if terrorist organisations are denied the opportunity to attack Western countries directly, there are other avenues they can target. Acknowledging that the Western economy is highly dependent on sea trade,⁴⁵ terrorists in recent times have turned their attention to targeting oil tankers and even ferries. As always, terrorists have the advantage of choosing what, where and when to attack. The only defence in the absence of accurate intelligence is to remain constantly at sea protecting the SLOC. Conventional forces have done this reasonably successfully in the Persian Gulf.⁴⁶ The fact that tankers, like the French tanker *Limburg* are now targeted outside the Persian Gulf indicates that coalition forces within the Gulf are denying terrorists freedom to manoeuvre there. This has only been possible due to the poise and persistence that the coalition forces have been able to maintain in that area.

Poise and persistence are equally important in combating other asymmetric threats. The Sri Lanka Navy's inability to apply constant pressure on the LTTE enabled the Sea Tigers to develop a significant asymmetric capability, including naval bases and sophisticated tactics.⁴⁷ It is natural that countries and organisations engaged in asymmetric warfare will look for ways to increase their capabilities. Maintaining a tight and persistent blockade can stifle such growth. As Admiral John Nathman, USN, stated 'presence is 90 per cent of the battle'.⁴⁸ There is no doubt that a conventional maritime force's ability to remain poised and persistent will continue to be utilised by governments in the future.

Resilience

Warships are designed to take damage.⁴⁹ However, the fact that they are designed to take damage from modern weapons, delivered by an opposition that hopes to survive, is a weakness. Terrorists and those engaged in asymmetric warfare have been able to inflict real damage on sophisticated warships, such as the USS *Cole*, by employing simple explosives and people willing to die.⁵⁰ In addition to this, many of the sensors and weapon systems fitted to conventional maritime forces are not designed to detect or combat the speedboats frequently used in maritime terrorist attacks. The biggest problem that this presents to Western nations combating either terrorism or other asymmetric threats is that expensive warships can be disabled, at minimal loss to the opposition.⁵¹

Another problem with the resilience of modern warships is the high degree of complexity required to repair their equipment. Previously, while warships may have represented the best that technology could offer, most equipment was still repairable by the ship's company. Today much of the equipment fitted to a modern warship can only be repaired by contractors,⁵² some of whom may refuse to work in an environment where ships can be easily attacked. Even if they are not attacked, much of the equipment these ships carry is designed to operate on the High Seas. Operating in the littoral region has caused significant problems to reverse osmosis equipment⁵³ and equipment requiring sea water for cooling. Resilience alone is no longer a reason to deploy warships to counter-terrorism and asymmetric threats.

Readiness

So far this essay has identified few characteristics that conventional maritime forces possess that assist governments in combating terrorism and other asymmetric threats. So why are naval forces so prominent in the current War on Terror? Readiness is one of the reasons. Few military assets retain their readiness like a warship. Once the Australian Government decided to commit forces to the first Gulf War, it took only 48 hours to deploy a naval task force.⁵⁴ In reality, Western countries have deployed naval forces in response to a terrorist or asymmetric threat because it was the only

means of responding quickly. It sent a message of resolve to those behind the threat, and satisfied the public's requirement for action.

Conventional warships also maintain a high level of readiness, irrespective of their actual tasking. They may have already been deployed to a region where a threat has emerged and be able to intervene more quickly than the enemy anticipates. Coupled with some of the other attributes discussed above, deploying warships probably presents a better option than doing nothing until a correct response is identified and dispatched. This stance is likely to remain unchanged in the future.

Conclusion

The analysis of the eight characteristics of maritime power, and their ability to contribute to the War on Terror, shows that conventional maritime forces are of only limited value. Certainly characteristics such as reach and poise and persistence enable maritime forces to support prolonged operations aimed at destroying the enemy in their own territory. But once the operations move from the High Seas to the littoral region and land, access for conventional maritime forces is limited and many of the platforms are unable to adapt to the new environment and tactics required to combat terrorism. Mobility of mass has not proven as decisive as it has in conventional wars. In many cases mobility of mass provides terrorists with targets that are neither designed to absorb or easily defeat suicide bombers with large amounts of explosives. Conventional maritime forces are heavily utilised, not because of their ability to decisively defeat terrorism, but because they are ready, easy to move and can persist with a task for long periods of time.

Conventional maritime forces have been somewhat more successful against other asymmetric threats, particularly paramilitary organisations. Massing a large number of naval assets in the Persian Gulf for a long period of time successfully limited the effectiveness of Iraqi attempts to employ asymmetric tactics. Problems continue to exist in adapting to new threats and conventional maritime forces access to vital areas is still limited. In recognition of this problem, the US is introducing new platforms that will hopefully extend their ability to access the sources of asymmetric threats. In the time it takes for the US to introduce the new destroyer designed to operate in the littoral, however, their enemies may devise a much cheaper means to counter it.

Notes

- 1 George W. Bush, Speech at the Citadel, South Carolina, 11 December 2001, <www.whitehouse.gov/news/releases/2001/12/20011211-6.html>.
- 2 The result of Al Qaeda's attack on the USS *Cole* was broadcast around the world.
- 3 Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 48.
- 4 RAN, *Australian Maritime Doctrine*, pp. 48-51.
- 5 A. Delbridge, J.R.L. Bernard, D. Blair, P. Peters and S. Butler (eds), *The Macquarie Dictionary*, 2nd Edition, The Macquarie Library Pty Ltd, Sydney, 1991, p. 391.
- 6 RAN, *Australian Maritime Doctrine*, p. 11.
- 7 C. Williams, 'Terrorism' in R. Ayson and D. Ball (eds), *Strategy and Security in the Asia-Pacific*, Allen & Unwin, Sydney 2006, p. 72.
- 8 RAN, *Australian Maritime Doctrine*, p. 123.
- 9 RAN, *Australian Maritime Doctrine*, p. 48.
- 10 RAN, *Australian Maritime Doctrine*, p. 48.
- 11 RAN, *Australian Maritime Doctrine*, p. 48.
- 12 R. Steele, 'The asymmetric threat: listening to the debate', *Joint Force Quarterly*, Autumn 1998, p. 79.
- 13 E. Mills, 'Terror threats at water's edge', *Proceedings*, July 2006, p. 31.
- 14 Steele, 'The asymmetric threat: listening to the debate'.
- 15 A number of US ships were damaged by mines both prior to, and during, the two Gulf wars.
- 16 N. Brown, 'Sails of the unexpected - UK trains for asymmetric threat', *Janes*, <intranet.defence.gov.au/jrl/janes/jni2005/jni02020.htm>, p. 1.
- 17 RAN, *Australian Maritime Doctrine*, p. 50.
- 18 N. Friedman, 'Sea power and navies: an American view' in J. McCaffrie (ed), *Positioning Navies for the Future: Challenge and Response*, Halstead Press, Sydney, 2006, p. 43. 'Without a long maritime reach, the war would probably have been unfightable.'
- 19 Friedman, 'Sea power and navies: an American view', p. 43.
- 20 Friedman, 'Sea power and navies: an American view', p. 43.
- 21 Williams, 'Terrorism' in Ayson and Ball (eds), *Strategy and Security in the Asia-Pacific*, p. 86.
- 22 RAN, *Australian Maritime Doctrine*, p. 49.
- 23 A. Klumper, 'River War', *Sea Power*, February 2006, p. 12. Admiral Mike Mullen notes that 30 per cent of the North Persian Gulf is inaccessible to ships with draughts of more than 20 feet.
- 24 United Nations, *Convention on the Law of the Sea*, United Nations, New York, 1997, p. 59.
- 25 W.R. Hawkins, 'Interdict WMD smugglers at sea', *Proceedings*, December 2004, p. 50.
- 26 Williams, 'Terrorism', p. 84.
- 27 P. Cerny, 'Terrorism and the new security dilemma', *Naval War College Review*, Vol. 58, No. 1, Winter 2005, p. 12.

- ²⁸ V. Sakhuja, 'Contemporary piracy, terrorism and disorder at sea: challenges for sea-lane security in the Indian Ocean', *Maritime Studies*, November-December 2002, p. 7.
- ²⁹ Klamper, 'River War'.
- ³⁰ Klamper, 'River War'.
- ³¹ T. Campbell and R. Gunaratna, 'Maritime terrorism, piracy and crime' in R. Gunaratna (ed), *Terrorism in the Asia-Pacific: Threat and Response*, Times Media Private Limited, Singapore, 2003, p. 79.
- ³² Y. Ya'ari, 'Fighting terrorism...from the sea', *Proceedings*, August 2003, p. 64.
- ³³ Williams, 'Terrorism', p. 86.
- ³⁴ Campbell and Gunaratna, 'Maritime terrorism, piracy and crime', p. 80.
- ³⁵ Mini-Typhoon, effectively a .50 calibre gun with a sophisticated tracking system, is now fitted to all Australian ships deploying to the Persian Gulf and is designed to counter attacks by small, fast moving craft.
- ³⁶ RAN, *Australian Maritime Doctrine*, p. 50.
- ³⁷ RAN, *Australian Maritime Doctrine*, p. 50.
- ³⁸ RAN, *Australian Maritime Doctrine*, p. 50.
- ³⁹ Mills, 'Terror threats at water's edge'.
- ⁴⁰ M. Murphy, 'Maritime threat: tactics and technology of the Sea Tigers', *Jane's Intelligence Review*, June 2006, p. 8. The Sea Tigers, the maritime arm of the Tamil Tigers have several naval bases including radar stations.
- ⁴¹ G. Butler, 'Noble Eagle is not your average operation', *Proceedings*, August 2003, p. 51.
- ⁴² Friedman, 'Sea power and navies: an American view', p. 40.
- ⁴³ Friedman, 'Sea power and navies: an American view', p. 40.
- ⁴⁴ Williams, 'Terrorism', p. 86.
- ⁴⁵ G. Luft and A. Korin, 'Terrorism goes to sea', *Foreign Affairs*, November/December 2004, <www.iags.org/fa2004.html>, p. 2.
- ⁴⁶ S. Bateman, 'Costs and benefits of increased maritime security', *Asia-Pacific Defence Reporter*, April 2005, p. 17.
- ⁴⁷ Murphy, 'Maritime threat: tactics and technology of the Sea Tigers', pp. 7-8.
- ⁴⁸ J. Nathman and C. Harris, 'Shaping the future', *Proceedings*, January 2006, p. 20.
- ⁴⁹ RAN, *Australian Maritime Doctrine*, p. 51.
- ⁵⁰ Campbell and Gunaratna, 'Maritime terrorism, piracy and crime', p. 70. This paper quotes from a terrorist manual detailing the small amounts of explosives required to disable a ship.
- ⁵¹ Campbell and Gunaratna, 'Maritime terrorism, piracy and crime', p. 75.
- ⁵² Steele, 'The asymmetric threat: listening to the debate'.
- ⁵³ This equipment produces fresh water from salt water by reversing the process of ions diffusing through a membrane.
- ⁵⁴ RAN, *Australian Maritime Doctrine*, p. 49.

The Importance of Constabulary Operations

Chief Petty Officer Robert Brimson
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2006 Winner Sailors' Section

Control of the sea by maritime commerce and naval supremacy means predominant influence in the world.¹

Livezey

Introduction

Without conventional maritime forces, such as the Royal Australian Navy (RAN), our sea lanes would be vulnerable: we would be defenceless from the sea, our people unprotected and homeland security threatened. It goes without saying that being an island nation, Australia is reliant on sea trade for its economic livelihood and needs a navy to serve the people and protect the nation.

The relevance and value that conventional maritime forces offer governments in responding to the threat of terrorism and other asymmetric threats; is clearly mandated in the Navy Mission Statement, which states:

*To fight and win in the maritime environment as an element of a joint or combined force, to assist in maintaining Australia's sovereignty and to contribute to the security of our region.*²

The RAN is empowered by the Australian Government and has a clear mandate to protect and defend both the people and the country. The RAN together with Coastwatch and Customs have a 'duty of care' to ensure that our sea lanes are kept open, the supply chain maintained and two-way trade unchallenged.

Economically, the nation's lifeblood consists of merchant ships steaming to and fro across the oceans that surround this island nation, and I cannot overemphasise the importance of our international export and import trade. According to other sources, in 2003-04 seven of Australia's top ten export commodities were primary products. Australia's leading commodity export by value was coal followed by gold, iron ore, crude petroleum, meat, aluminium, wheat and passenger motor vehicles.³

When it comes to maritime safety and maritime security, the relevance and value that conventional maritime forces, such as the RAN, comes to the fore – particularly as the Navy fulfils a constabulary role and is also empowered to protect our sea lanes and

ensure the safety and security of all ships, including offshore installations and port facilities. Vice Admiral Chris Ritchie, AO, RAN (Rtd), said:

*Control of the sea is not only axiomatic to the protection of trade but for the projection of power from the sea.*⁴

We can ill-afford for our security to be threatened by terrorists, or for that matter pirates and other would-be radical religious fanatics, power hungry zealots or self-centred deranged martyrs. Based on the vastness of our oceans and potential littoral hiding places for terrorists, locating, prosecuting or terminating the threat of terrorists will be an ongoing battle.

Our maritime forces and other members of the Australian Defence Force (ADF), as well as Australian Federal Police (AFP), Customs and Coastwatch, must have the personnel and be well-equipped with the latest weapons, technology, hardware and software to combat the threat of terrorism and other asymmetric threats.

Command and control (C2) will play a vital role in responding to the threat of terrorism, and the government should ensure that the ADF and other relevant security and protection forces such as the Australian Security Intelligence Organisation (ASIO), Defence Intelligence Organisation (DIO) and Office of National Assessment (ONA), have the personnel and resources at their disposal to combat, neutralise and respond to the threat of terrorism and other asymmetric threats.

It is impossible to provide complete homeland security or border protection to this island nation, however, ongoing vigilance, reviewing and implementing anti-terrorist procedures and protocols including training and joint exercises will, in the long run, deter terrorist attacks and minimise damage.

Background

*Although the term 'terrorist' dates from the late 18th century, terrorism has been used for thousands of years.*⁵

By the same token, terrorism on the high seas or other asymmetric threats, such as piracy, have been occurring in oceans around the world since the days of the Vikings. More recently, however, and closer to home, was the sinking of the *Rainbow Warrior* (Hobson's Bay Auckland Harbour, 10 July 1985) – a one-man operation under the cover of darkness in an inflatable zodiac dinghy in stealth mode.

We should not forget the *Achille Lauro* hijacking (Mediterranean Sea, October 1985), where an American citizen in a wheelchair was executed.

Recent acts of maritime terrorism include the suicide attack on USS *Cole* off Yemen in 2000, MV *Limburg* in 2002, and the attack on the Philippine passenger ferry *Superferry 14* in Manila on 27 February 2004.

South East Asia, and in particular Indonesia, our neighbours north of Darwin, are home to modern-day pirates. A recent article in *The Economist* stated that around 30 per cent of all seaborne goods and about half the oil traded internationally pass through the Malacca and Singapore Straits. Until recently, piracy was rising in the straits. A few mysterious incidents – such as one off Sumatra in 2003, in which hijackers experimented with a ship's steering before abandoning it – suggested that terrorists too may be rehearsing attacks there.⁶

Pirates in the vernacular wish for maximum profit, maximum stealth, minimum exposure and minimum damage, as the ultimate prize is to capture the ship in one piece, thus securing the goods and chattels, and depart with little or no trace that they had been there.

The difference between piracy and terrorism at sea is that modern day pirates prefer to stay close to the littoral coastline, using very fast boats and in most cases, under cover of darkness.

Land-based terrorists who carried out the attacks on September 11 not only had the flexibility of choosing their form of transport, but also chose the time, the target and the method of operation. Maritime terrorists, just like their aviation 'brothers in arms', subject to careful and meticulous planning, will be able to pick and choose the type of target ship, the sea lane or course, and the time of attack.

As stated in an article by Michael Richardson, the pirates are becoming bolder. They are now turning their attention to much bigger ships. While there is no indication that terrorists might team up with pirates, the deputy commander of the US Coast Guard, Vice-Admiral Terry Cross, said on a recent visit to Malaysia:

*the pirates might be showing the terrorists where opportunities exist.*⁷

Based on the number and types of vessels entering and departing Australian ports – for example, liquified natural gas (LNG) and iron ore tankers – and the number of containers being offloaded daily, Australia is vulnerable and a weak link in the supply chain, and could easily give would-be terrorists the means and the opportunity to carry out attacks on ships in transit or alongside.

International Supply Chains and Cargoes

According to the International Organization for Standardization (ISO), 'supply chain' is used to describe an overall process that results in goods being transported from the point of origin to destination. It includes the movement of the goods, the shipping

data, and the associated processes and consists of a series of dynamic relationships, rather than a series of fixed links.⁸

Delivering the keynote speech at the RAN Sea Power 2006 conference, former Navy and ADF Chief Admiral Chris Barrie (Rtd) stated:

Just for counter-proliferation operations we are going to need the ability to track cargoes comprehensively from point of origin, through transition facilities, transport links and ports of arrival – case by case, container by container and vehicle by vehicle ... there will be no such concept as the free use of the high seas.⁹

Maritime terrorism is fairly new, and terrorists now see warships, super tankers, LNG carriers, bulk carriers and ocean liners as a means to their ends. These types of ships provide an alternative form of transport that not only complements their ongoing Jihad or ambitions, but enhance their ulterior motive of maximum death and destruction by way of acting as an extension to the explosive device.

Hijacking of merchant ships by persons on board or with the assistance of other vessels. All vessels are potential targets for hijacking, the most likely being passenger ships and ships transporting hazardous cargo. The attractiveness of passenger ships arises from the possibility of capturing a large number of people with the intention of either holding them hostage or executing them.¹⁰

It poses the question: how do we protect our ships, shipping lanes and port facilities, and what countermeasures do we employ to combat the threat?

Exclusive Economic Zone and Joint Offshore Protection Command

With an Exclusive Economic Zone (EEZ) of 200 nautical miles, Australia does have a buffer zone to detect, intercept and destroy any offshore terrorist attack before they come close to the littoral coastline.

On 15 December 2004, the Prime Minister announced:

... Australia's offshore maritime security is to be further strengthened through a series of linked initiatives that will be implemented progressively through 2005 ... To ensure an integrated approach that can draw, as necessary, on the full range of Australian Defence Force and Customs capabilities and make the best use of available resources, a Joint Offshore Protection Command, will be established by March 2005.

The Prime Minister went onto say:

... the Australian Government also intends to establish a Maritime Identification Zone. This will extend up to 1000 nautical miles from Australia's coastline. On entering this Zone vessels proposing to enter Australian ports will be required to provide comprehensive information such as ship identity, crew, cargo, location, course, speed and intended port of arrival. Within Australia's 200 nautical mile exclusive economic zone, the aim will be to identify all vessels, other than day recreational boats.¹¹

Command and Control

Working with Joint Offshore Protection Command (JOPC) and increasing our security capabilities with the full intent of combating the threat of terrorism will be the job of the Headquarters Joint Operations Command (HQJOC) Project, a new integrated operational-level joint headquarters. This new facility will provide the Chief of the Defence Force (CDF) with a more effective means of commanding the ADF.

The new headquarters will bring together for the first time in an integrated environment, the Chief of Joint Operations and strategic staff in Canberra, the Deputy Chief of Joint Operations and joint staff, Component Commanders (Maritime, Land, Air and Special Operations) and their staff, the Joint Operations Intelligence Centre, and 1st Joint Movement Group located in Sydney, and a portion of the Headquarters Joint Logistics Command staff currently in Melbourne.¹²

The RAN will play a pivotal role in monitoring and fighting the threat and will work closely with Customs and Coastwatch.

Customs and Coastwatch

Customs is responsible for patrolling Australia's maritime area – more than 12 million square kilometres. Customs' civil maritime surveillance and response service is provided by its Coastwatch division. Customs detects and deters a wide range of illegal activities under a variety of legislation, such as customs, fisheries, quarantine, immigration, environment and police laws in this area.

It uses a combination of its own assets, contracted aircraft and the resources of the Australian Defence Force to provide a whole-of-government service to protect the nation's interests.¹³

Customs Coastwatch has a fleet of fixed and rotary wing aircraft. It has the ability to respond quickly to incidents and adapt its surveillance program as operational conditions demand. It can coordinate response activities by Customs' own fleet of ocean going vessels or Australian Navy vessels.¹⁴

Weapons of Mass Intelligence and Other Anti-terrorist Countermeasures

Combating the threat of terrorism and other asymmetric threats by conventional maritime forces will require not only the relevant hardware such as ships, planes and helicopters, but will also include other appropriate military assets and systems from our arsenal of weapons.

Weapons of mass intelligence and other anti-terrorist countermeasures include, but are not limited to, enhanced electronic communications links, intelligence gathering and analysis utilising Geospatial Imagery as well as satellite technology.

The fight against terrorism and intelligence gathering is ongoing and ASIO and DIO will continue to monitor and disseminate information to the ADF accordingly. Other countermeasures and systems would include fast patrol boats; Over the Horizon Radar (OTHR), for example, Jindalee; and Uninhabited Aerial Vehicles (UAVs).

Senator the Hon Sandy Macdonald, Parliamentary Secretary to the Minister for Defence, announced:

A Defence trial, using an Unmanned Aerial Vehicle (UAV) and an Armidale Class patrol boat, will be conducted across Australia's North West Shelf in September 2006. The trial is being led by the Defence Science & Technology Organisation (DSTO) in collaboration with the Navy, RAAF, Army and other areas of Defence, as well as the Joint Offshore Protection Command (a partnership between Defence and the Australian Customs Service).¹⁵

Complementing the above is the ongoing close cooperation between the RAN and the Australian maritime industry, provided via Naval Cooperation and Guidance for Shipping (NCAGS - formerly Naval Control of Shipping).

Naval Cooperation and Guidance for Shipping

The mission of NCAGS is:

to provide the coordination capability between the Australian Defence Force and the Australian maritime industry to facilitate the protection of merchant shipping.¹⁶

*NCAGS became operational for the first time in many years during the 1999 East Timor Crisis (Operation WARDEN). NCAGS officers were continually rostered through HQNORCOM for the period September 1999 until February 2000 when OP WARDEN ended.*¹⁷

NCAGS officers have an excellent track record when it comes to contributing to operational and exercise planning, none more so than Exercise TALISMAN SABRE (formerly Exercise TANDEM THRUST) and Exercise BELL BUOY.

It is important that joint exercises, such as those mentioned above, involving both merchant and RAN personnel continue, particularly in the areas of communications and security. Furthermore, because of the wealth of experience and knowledge of the maritime and merchant shipping industry, NCAGS officers are in an ideal position to provide advice on matters pertaining to the security of our ports and associated infrastructure, thus filling a major void when it comes to protecting ships and vessels from any terrorist attacks.

Tinkers, Tankers, Containers, Ports ‘o’ Call and Terrorist Bomb-Makers

We live in an ever-changing world where globalisation knows no boundaries. When on the Internet, the tyranny of distance has no meaning, planes fly faster to overseas destinations, and ships move more goods more quickly from one country to another.

It is easy nowadays to move goods and people quickly and efficiently, and with the help of the right mode of transport and technology, movement can be achieved either legally or by stealth.

The means of transporting and complementing terrorists’ tools of trade such as bombs and other explosives devices, by way of hijacking modern-day shipping vessels, is unlimited.

Detecting, let alone combating and destroying, the terrorist threat with minimum damage to human life and minimal destruction of property, will take a concerted effort by members of the maritime fraternity as well as the ADF, the AFP, counter-terrorist organisations and alike.

The Olympic Games in Sydney was a classic example of how the RAN together with other members of the ADF, SAS, and federal agencies, such as the AFP, played a pivotal role in providing security in a domestic role in support against terrorists or other asymmetric threats. This support included divers, communications (command and control) and response to chemical, biological, radiological and nuclear attacks.

Maritime Regulations, Conventions and Standards

I do not intend to elaborate too much on maritime regulations, conventions and standards, as brevity does not afford me the luxury of space. Suffice to say that:

*Suppression of Unlawful Acts (SUA). About a dozen international conventions deal with the threat of terrorism, but only the SUA Convention and its protocol relate to terrorism at sea. The purpose of the SUA Convention was to close the gap created by the limited definition of piracy (for example, the international anti-piracy regime doesn't apply to internal waters, the territorial sea and archipelagic waters, or to incidents in which people already aboard the ship as passengers, crew or stowaways are the perpetrators of the crime).*¹⁸

*International Maritime Organization (IMO) has given priority to the review of international legal and technical measures to prevent and suppress terrorist attacks against ships and to improve security on board and ashore.*¹⁹

Despite the changes and guidelines to maritime regulations, conventions and standards, when dealing with terrorists and the threat of terrorism, perhaps the RAN should take on a more aggressive constabulary role.

Constabulary Role

Australian Maritime Doctrine defines constabulary operations as:

*The use of military forces to uphold a national or international law, in a manner in which minimum violence is only used in enforcement as a last resort and there is some evidence of a breach or intent to defy.*²⁰

From a security point of view, as well as maintaining good order and upholding democratic principles, it is in our national interests to assist our neighbouring countries with humanitarian or military aid when confronted with terrorist activities (Bali bombing) or civil unrest.

Recent political unrest and civilian hostilities close to our shores – for example, Timor and the Solomon Islands – has necessitated the dispatch of RAN ships, police and Army personnel to quell violence and restore law and order. We need to be proactive in providing this type of assistance as well as humanitarian aid (e.g. to victims of the Tsunami in Aceh – 2004), in order to eradicate any possible haven or breeding ground for terrorists.

The constabulary presence of the ADF in an international police/ peacekeeping role in another country so close to home is paramount. Military presence acts as a deterrent and reduces the potential for would-be terrorists to gain sympathy from the local population who could easily be manipulated and corrupted with terrorist ideology.

The *Australian Maritime Doctrine's* definition of constabulary operations does not cover terrorism and is considered to be out of date. The carnage, death and destruction caused by terrorists in New York on 11 September 2001, Bali in 2002, and the attack on USS *Cole*, clearly reflect that our maritime forces as well as other members of the ADF and the AFP should have the same resolve as terrorists, that is, dispense extreme prejudice.

If a ship is in Australian waters, that is, within the 200 nautical mile EEZ, and is suspected of carrying terrorists, or if terrorists have hijacked a ship with intent to enter an Australian port, then lethal force should be used to neutralise the threat. If the navy is not allowed to show positive aggression, then perhaps the formation of a coastguard is another option.

Coastguard

Many would argue that another way of combating and meeting the terrorist challenge head-on is introducing a coastguard.

On paper, many of the new initiatives contained in the 2006/07 Federal budget appear designed to progressively evolve Australian Customs Service (ACS) more towards the US 'Coast Guard' model.²¹

The US Coast Guard works very well in the USA, so well that they are embarking on building two new types of maritime security ships as part of its Integrated Deepwater Project.²²

This proposal is not new. The Leader of the Opposition, The Hon Mr Kim Beazley, said last year in a press release:

We need reform to improve our maritime security capability. The only practical solution to this mess is Labor's plan for a Coastguard.²³

The word coastguard sends out the positive connotation that they are the professionals when it comes to interdiction, boarding ships, conducting maritime searches and constabulary duties.

There is no doubt that due to the length and remote areas of coastline, Australia's border protection is lacking and credence could be given to bringing Coastwatch and Customs under the auspices of the Coastguard, thus freeing up RAN ships and personnel-intensive crews.

The coastguard could concentrate on maritime security including oil rigs and gas platforms in the Bass Strait, WA North West Shelf and the Timor Sea.

The coastguard could exercise interdiction rights with illegal fishing boats, people smugglers and drug runners; provide another conduit to the RAN by means of maintaining and enforcing maritime safety; and assisting in protection of offshore natural resources and national security.

Taking cognisance of the current operational commitments of the RAN, combined with an ageing population and the inability to meet recruiting targets, further impetus on implementation of an Australian Coastguard could be justified. Monies saved in freeing up ships and personnel could easily be directed to a coastguard, thus allowing the RAN to get on with the job at hand, namely:

*To fight and win in the maritime environment.*²⁴

Conclusion

The political instability and civil unrest in our smaller neighbouring Pacific nations combined with hostilities in the north and South East Asia reaffirm the insecurity in our region, and that there is still a lot of work to be done in combating terrorism and other asymmetric threats. Areas that need to be addressed or reviewed include:

- monitoring ship movements and cargoes,
- upgrading port security,
- surveillance of our offshore oil and gas platforms,
- screening of seafarers as well as screening of shipping containers, and
- possibility of forming a coastguard.

Vigilance and intelligence-gathering will be key elements in combating the increasing danger of terrorist attacks and asymmetric threats. Ongoing training and exercises will also play a vital role in the continuing fight against terrorism.

Our history clearly shows that Australia was discovered by sailors, founded by sailors and protected by sailors. There should be no doubt that the relevance and value that conventional maritime forces offer governments in responding to the threat of terrorism and other asymmetric threats in today's hostile environment is extant. However, it is based on the premise that our maritime forces and the ADF, together with other agencies, have the relevant resources, namely personnel, ships and equipment to get on with the job of protecting the nation and its people.

Notes

- ¹ W. Livezey, *Mahan on Sea Power*, Revised Edition, University of Oklahoma Press, Norman, 1980, pp. 281-282.
- ² Royal Australian Navy, *Our Mission: Navy 2001-2002*, Department of Defence, Canberra, 2001, p. 1.
- ³ Royal Australian Navy, 'Maritime trade protection' in *Navy Contribution to Australian Maritime Operations*, Sea Power Centre - Australia, Canberra, <www.navy.gov.au/spc/ncamo/chap.16.html> viewed 15 September 2006.
- ⁴ C. Ritchie, 'Sailing into the future', Summary of a presentation to the Royal United Services Institute of Australia, published in *Australian Maritime Issues 2004 - SPCA Annual*, Papers in Australian Maritime Affairs, No. 12, Sea Power Centre - Australia, Canberra, 2004, p. 41.
- ⁵ A.J. Smith, 'Combating terrorism', *Military Review*, January-February 2002, p. 11.
- ⁶ 'From talking to doing - Singapore', *The Economist*, 10 June 2006, p. 30.
- ⁷ M. Richardson, 'The threats of piracy and maritime terrorism in Southeast Asia', *Maritime Studies*, No. 139, Nov/Dec 2004, pp. 18-21.
- ⁸ S. O'Malley, 'Maritime security', *Focus*, International Organization for Standardization (ISO), July/August 2006, p. 8.
- ⁹ J. Kerr, 'Australia's influence warning?', *Australian Defence Magazine*, April 2006, p. 56.
- ¹⁰ K. Kubiak, 'Terrorism is the new enemy at sea', *Proceedings*, December 2003, p. 68.
- ¹¹ Prime Minister of Australia, 'Strengthening Offshore Maritime Security', Media Release, 15 December 2004, <www.pm.gov.au/news/media_releases/media_Release1173.html> viewed 18 September 2006.
- ¹² Headquarters Joint Operations Command Project, 'Project Purpose', <www.defence.gov.au/id/hqjoc/pages/purpose.htm> viewed 15 September 2006.
- ¹³ Australian Customs Service, 'Protecting our Shores', <www.customs.gov.au/webdata/resources/files/protecting_our_borders1.pdf> viewed 18 September 2006.
- ¹⁴ Australian Customs Service, 'Protecting our Shores'.
- ¹⁵ Senator the Hon Sandy Macdonald, Parliamentary Secretary to the Minister for Defence, Media Release, 22 May 2006, <www.minister.defence.gov.au/Macdonaldtpl.cfm?CurrentId=5661> viewed 18 September 2006.
- ¹⁶ Naval Cooperation and Guidance for Shipping (NCAGS), *An Introductory Brief* (Unclassified), Maritime Headquarters, NSW, 2003, p. 3.
- ¹⁷ NCAGS, *An Introductory Brief* (Unclassified), p. 6.
- ¹⁸ A. Bergin and S. Bateman, *Future Unknown: The Terrorist Threat to Australian Maritime Security*, Australian Strategic Policy Institute, April 2005, p. 41.
- ¹⁹ Bergin and Bateman, 'Future unknown: the terrorist threat to Australian maritime security', p. 37.
- ²⁰ Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000, p. 144.
- ²¹ *Australian Defence Business Review*, April-May 2006, p. 8.

- 22 B.B. Stubbs, 'Smarter Security for Smaller Budgets: Shaping Tomorrow's Navy and Coast Guard Maritime Security Capabilities', ROA National Security Report, *The Officer*, July/August 2005, p. 54.
- 23 The Hon Mr Kim Beazley, Media Release, 10 October 2005, <www.alp.org.au/media/1005/msloo110.php> viewed 13 September 2006.
- 24 Royal Australian Navy, *Our Mission: Navy 2001-2002*, p. 1.

BIBLIOGRAPHY

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Books and Papers

- Acharya, A., *Regionalism and Multilateralism*, Times Academic Press, Singapore, 2002.
- Adler, E. and Barnett, M., *Security Communities*, Cambridge University Press, Cambridge, 1998.
- Albinski, H. and Dalrymple, R. (eds), *The United States – Australian Alliance in an East Asian Context*, Proceedings of the Conference held 29-30 June 2001, University of Sydney, 2002.
- Ames, R.T., *Sun Tzu and the Art of Warfare*, Ballantine Books, New York, 1993.
- AMI International, 'Sea Basing Program. Sea Basing Perspective Within the Triad of Sea Power 21', *AMI International Sea Basing White Paper*, Bremerton, November 2004.
- Australian Strategic Policy Institute, *Global Forces 2005: Proceedings of the ASPI Conference*, Australian Strategic Policy Institute, Canberra, 2006.
- Beaumont, J., *Australian Defence: Sources and Statistics, The Australian Centenary History of Defence*, Vol. VI, Oxford University Press, Melbourne, 2001.
- Bergin, A. and Bateman, S., *Future Unknown: The Terrorist Threat to Australian Maritime Security*, Australian Strategic Policy Institute, April 2005.
- Blainey, G., *The Tyranny of Distance*, Sun Books, Melbourne, 1966.
- Borgu, A., *Strategic Insight 10 - Understanding Terrorism: 20 Basic Facts*, Australian Strategic Policy Institute, Canberra, September 2004.
- Bowden, T., *The Silence Calling, Australians in Antarctica 1947-97*, Allen & Unwin, St Leonards, NSW, 1997.
- Broome, J., *Make a Signal*, Puttnam, London, 1955.
- Brown, M., Lynne-Jones, S. and Miller, S. (eds), *The Perils of Anarchy, Contemporary Realism and International Security*, Massachusetts Institute of Technology Press, Massachusetts, 1995.
- Butler, A., *Official History of the Medical Services 1914-18, Vol. III, Problems and Services*, Australian War Memorial, Canberra, 1943.
- Chatfield, Lord, *It Might Happen Again*, William Heinemann, London, 1947.
- Clark, C. (ed), *Australia Foreign Policy Towards a Reassessment*, Cassell, Sydney, 1973.
- Clarke, G.A. and Burch, I.A., *Emergent Technologies for the Royal Australian Navy's Future Afloat Support Force*, DSTO Aeronautical and Maritime Research Laboratory, May 2001.

Clifford, B., *Proconsul: Being Incidents in the Life and Career of the Honourable Sir Bede Clifford*, Evans Brothers, London, 1964.

Cole, B.D., *The Great Wall at Sea: China's Navy Enters the Twenty-First Century*, Naval Institute Press, Annapolis, 2001.

Corbett, J., *Some Principles of Maritime Strategy*, AMS Press, New York, 1972.

Corbett, J., *Some Principles of Maritime Strategy*, Naval Institute Press, Annapolis, 1988.

Corbett, J.S., *History of the Great War, Naval Operations*, Vol. III, Longmans, London, 1923.

Craig, R.L. (ed), *Training and Development Handbook*, McGraw-Hill Book Company, sponsored by American Society for Training and Development.

de G. Davies, N., *The Tomb of Rekh-Mi-Re at Thebes II*, Egyptian Expedition Publications Vol. XI – Plates, New York, 1943.

Delbridge, A., Bernard, J.R.L., Blair, D., Peters, P. and Butler, S. (eds), *The Macquarie Dictionary*, 2nd Edition, The Macquarie Library Pty Ltd, Sydney, 1991.

Department of Defence, *Australia's National Security: A Defence Update 2003*, Defence Publishing Service, Canberra, 2003.

Department of Defence, *Australia's National Security: A Defence Update 2005*, Defence Publishing Service, Canberra, 2005.

Department of Defence, *Defence 2000: Our Future Defence Force*, Defence Publishing Service, Canberra, 2000.

Department of Defence, *Future Warfighting Concept*, ADDP-D.3, Defence Publishing Service, 2003.

Department of Defence, *Health Support*, ADFP 53, Defence Publishing Service, Canberra, 1998.

Department of Defence, *Joint Planning* (Provisional), ADDP-5.01, Defence Publishing Service, Canberra, 2003.

Dorman, A., Smith, M.L. and Uttley, M.R.H. (eds), *The Changing Face of Maritime Power*, MacMillan Press, Basingstoke, 1999.

DuPont, A., *Australia's Threat Perceptions: A Search for Security*, Canberra Papers on Strategy and Defence No. 82, Strategic and Defence Studies Centre, Australian National University, Canberra, 1991.

Evans, G. and Grant, B., *Australia Foreign Relations in the World of the 1990s*, Melbourne University Press, Melbourne, 1991.

- Evans, M., Parkin, R. and Ryan, A. (eds), *Future Armies: Future Challenges*, Allen & Unwin, Crows Nest, 2004.
- Fenton-Huie, S., *Ships Belles: The Story of the Women's Royal Australian Naval Service in War and Peace 1941-1985*, Watermark Press, Sydney, 2000.
- Fraenkel, J., *The Manipulation of Custom: From Uprising to Intervention in the Solomon Islands*, Pandanus Books, Wellington, 2004.
- Freidman, N., *Seapower and Strategy*, Naval Institute Press, Annapolis, 2001.
- Gilbert, G.P. (ed), *Australian Naval Personalities: Lives from the Australian Dictionary of Biography*, Papers in Australian Maritime Affairs No. 17, Sea Power Centre - Australia, Canberra, 2006.
- Gordon, A., *The Rules of the Game*, Naval Institute Press, Annapolis, 1996.
- Gray, C., *Modern Strategy*, Oxford University Press, Oxford, 1999.
- Gunaratna, R. (ed), *Terrorism in the Asia-Pacific: Threat and Response*, Times Media Private Limited, Singapore, 2003.
- Hammes, T.X., *The Sling and the Stone*, Zenith Press, St Paul, Minnesota, 2004.
- Handel, M.I., *Masters of War: Classical Strategic Thought*, Frank Cass, London, 1996.
- Hiery, H.J., *The Neglected War*, University of Hawaii, 1995.
- Hill, J.R., *Maritime Strategy for Medium Powers*, Croom Helm, London, 1986.
- Hill, R., *Medium Power Strategy Revisited*, Working Paper No. 3, Sea Power Centre - Australia, Canberra, March 2000.
- Hinge, A.J., *Australian Defence Preparedness*, Australian Defence Studies Centre, Canberra, 2000.
- Hitler, A., *Mein Kampf*, 9th Edition, Houghton Mifflin Company, Boston, 1999.
- Howarth, S. (ed), *Men of War*, St Martin's Press, New York, 1992.
- Huang, J.H., *The New Translation: The Art of War*, William Morrow and Company, New York, 1993.
- International Maritime Organization, *Safety of Life at Sea (SOLAS) – Consolidated Edition, 2004*, London, 2004.
- Jane's Fighting Ships 2004-05*, Executive Summary, Jane's Information Group, London.
- Ji, Y., *The Armed Forces of China*, Allen & Unwin, St Leonards, 1999.
- Jose, A.W., *The Royal Australian Navy*, Angus & Robertson, Sydney, 1928.

Kent, B., *Signal! – A History of Signalling in the Royal Navy*, Hyden House Limited, Hampshire, 1993.

Kerr, G. (ed), *Australian Maritime Issues 2004 – SPC-A Annual*, Sea Power Centre - Australia, Canberra, 2004.

Kupu, S., *Pacific Public Health Surveillance Network Influenza Guidelines*, Secretariat of the Pacific Community, 2005.

Leonard, R.R., *The Principles of War in the Information Age*, Presidio Press, Novato, 1998.

Liang, Q. and Xiangsui, W., *Unrestricted Warfare*, Pan American Publishing, Panama City, 2002.

Liddell Hart, B., *Strategy: The Indirect Approach*, Faber & Faber, London, 1967.

Lind, L.J. and Payne, M.A., *'N' Class*, Naval Historical Society of Australia, Sydney, 1974.

Livezey, W., *Mahan on Sea Power*, Revised Edition, University of Oklahoma Press, Norman, 1980.

Macandie, G.L., *Genesis of the Royal Australian Navy*, Government Printer, Sydney, 1949.

Mahan, A.T., *Naval Strategy Compared and Contrasted with the Principles and Practice of Military Operations on Land*, Little Brown, Boston, 1911.

Malloy, I. (ed), *The Eye of the Cyclone: Issues in Pacific Security*, PIPSA and the University of the Sunshine Coast Press, Sippy Downs, 2004.

Maritime Studies Program, *Royal Australian Navy General Reading List*, Defence Publishing Service, Canberra, 1996; second edition 1997.

McAllister, I., *Attitude Matters: Public Opinion in Australia Towards Defence and Security*, Australian Strategic Policy Institute, Canberra, August 2004.

McCaffrie, J. (ed), *Positioning Navies for the Future: Challenge and Response*, Halstead Press, Sydney, 2006.

McCaffrie, J. and Hinge, A. (eds), *Sea Power in the New Century*, Australian Defence Studies Centre, Canberra, 1998.

McLachlan, D., *Room 39: Naval Intelligence in Action 1939-45*, Weidenfeld & Nicholson, London, 1968.

McNeilly, M., *Sun Tzu and the Art of Modern Warfare*, Oxford University Press, New York, 2001.

- Minford, J., *The Art of War*, Penguin Books, New York, 2002.
- Neilson, R.E. (ed), *Sun Tzu and Information Warfare*, National Defense University Press, Washington DC, 1997.
- Nicholls, B., *Blue Jackets and Boxers*, Allen & Unwin, Sydney, 1986.
- Redford, D., *The Wars in Syria and Palestine of Thutmose III*, Brill, Leiden, 2003.
- Renouf, A., *A Frightened Country*, Macmillan, Melbourne, 1979.
- Royal Australian Navy, *Australian Maritime Doctrine*, RAN Doctrine 1, Defence Publishing Service, Canberra, 2000.
- Royal Australian Navy, *Australia's Navy 2004*, Canberra, 2005.
- Royal Australian Navy, *Australia's Navy for the 21st Century 2002–2031*, Defence Publishing Service, Canberra, 2002.
- Royal Australian Navy, *Database of RAN Operations, 1990–2005*, Working Paper No 18, Sea Power Centre - Australia, Canberra, 2005.
- Royal Australian Navy, *Our Mission: Navy 2001–2002*, Department of Defence, Canberra, 2001.
- Royal Australian Navy, *Plan Green 2005–2015*, Defence Publishing Service, Canberra, 2005.
- Royal Australian Navy, *Royal Australian Navy Reading List, March 2006*, Sea Power Centre - Australia, Canberra, 2006.
- Royal Australian Navy, *The Navy Contribution to Australian Maritime Operations*, RAN Doctrine 2, Defence Publishing Service, Canberra 2005.
- Royal Navy, *Admiralty Manual of Seamanship*, Vol. 1, Her Majesty's Stationery Office, London, 1964.
- Royal Navy, *British Maritime Doctrine*, BR 1806, The Stationary Office, London, 2004.
- Sawyer, R.D., *The Complete Art of War*, Westview Press, Boulder, 1996.
- Sethe, K., *Urkunden der 18. Dynastie*, Hinrichs, Leipzig, 1907.
- Sethe, K., *Urkunden der 18. Dynastie*, Akademie Verlag, Berlin, 1955.
- Shaw, I. (ed), *The Oxford History of Ancient Egypt*, Oxford University Press, Oxford, 2000.
- Shephard, A., *Auditing ANZUS*, Background Paper No. 22, Parliamentary Research Service, Canberra, 1992.

- Smith, R., *The Utility of Force: The Art of War in the Modern World*, Allen Lane, London, 2005.
- Sourling, K. and Greenhalgh, E., *Women in Uniform: Perceptions and Pathways*, Australian Defence Force Academy, Canberra, 2000.
- Spalinger, A.J., *War in Ancient Egypt*, Blackwell, Oxford, 2005.
- Stevens, D. (ed), *In Search of a Maritime Strategy*, Canberra Papers on Strategy and Defence No. 119, Strategic and Defence Studies Centre, Australian National University, Canberra, 1997.
- Stevens, D. (ed), *Maritime Power in the 20th Century: The Australian Experience*, Allen & Unwin, St Leonards, 1998.
- Stevens, D. (ed), *The Royal Australian Navy*, Oxford University Press, Melbourne, 2001.
- Stevens, D. (ed), *The Royal Australian Navy in World War II*, 2nd edn, Allen & Unwin, Sydney, 2005.
- Strachan, H., *The First World War*, Simon & Schuster, London, 2003.
- Tang, J., *Multilateralism in North-East Asia International Security: an Illusion or a Realistic Hope*, Working Paper No. 26, North Pacific Cooperative Security Dialogue Research Programme, York University, 1993.
- Temple Patterson, A. *Jellicoe: A Biography*, McMillan, London, 1969.
- Temple Patterson, A. (ed), *The Jellicoe Papers*, Vol. II, Navy Records Society, London, 1968.
- Tewes, A., et al., *A Foundation Paper on Australia's Maritime Strategy*, Parliamentary Library, Canberra, 2002.
- Thompson, M., *Pay Your Money and Take Your Pick: Defence Spending Choices for Australia*, Australian Strategic Policy Institute, Canberra, 2004.
- Thomson, P.D., *How to Become a Naval Officer, and Life at the Royal Naval College Dartmouth*, Gieves Ltd, London, 1937.
- Till, G., *Maritime Strategy and the Nuclear Age*, St Martins Press, New York, 1982.
- Till, G., *Seapower: A Guide for the Twenty-First Century*, Frank Cass, London, 2004.
- United States Navy, *Naval Transformation Roadmap: Power and Access from the Sea*, Department of the Navy, 2002.
- US Department of Defense, *Dictionary of Military and Associated Terms* (JP1-02), Washington DC, 2004.

Walt, S., *Origins of Alliances*, Cornell University Press, New York, 1990.

Wilson, D. (ed), *Maritime War in the 21st Century: The Medium and Small Navy Perspective*, Papers in Australian Maritime Affairs No. 8, Sea Power Centre – Australia, Canberra, 2001.

Wilson, D. and Sherwood, D. (eds), *Oceans Governance and Maritime Strategy*, Allen & Unwin, St Leonards, 2000.

Wilson, L.G., *Cradle of the Navy*, Victoria, 1981.

Young, T.D., *The Radford-Collins Naval Control of Shipping Agreement, The Graduate Institute of International Relations*, University of Geneva, Geneva, 1985.

Articles

Anderson, D.O. and Winnefield, J.A., 'Navy reserves will be integrated with active forces', *Commentary, Proceedings*, February 2005.

Annati, M., 'Strategic force projection and sealift ships', *Military Technology*, August 2005.

Australian Defence Business Review, April-May 2006.

Barnard, R.C., 'Sea basing: concept promises a revolution in power projection', *Sea Power*, Washington DC, June 2004.

Bateman, S., 'Costs and benefits of increased maritime security', *Asia-Pacific Defence Reporter*, April 2005.

Brown, N., 'Sails of the unexpected – UK trains for asymmetric threat', *Jane's Navy International*, December 2005, <intranet.defence.gov.au/jrl/janes/jni2005/jni02020.htm>.

Burke, A.W., 'The creation of the sea base', *Marine Corps Gazette*, September 2002.

Butler, G., 'Noble Eagle is not your average operation', *Proceedings*, August 2003.

Caldicott, D.G.E. and Edwards, N.A., 'The tools of the trade: weapons of mass destruction', *Emergency Medicine*, Vol. 14, No. 3, 2002.

Carmel, S.M., 'A commercial approach to sea basing – afloat forward staging bases', *Proceedings*, January 2004.

Cerny, P., 'Terrorism and the new security dilemma', *Naval War College Review*, Vol. 58, No. 1, Winter 2005.

Chau, D., 'Political warfare – an essential instrument of US grand strategy today', *Comparative Strategy*, No. 25, University of Reading, Routledge, Reading, 2006.

Cintron, D., 'MTMC surface shipments sustain troops in Afghanistan', *Army Logistician*, September/October 2002.

'Claim of the British Ship "I'm Alone" v United States', Reports of the Commissioners, *The American Journal of International Law*, Vol. 29, 1935.

'CNO calls for more international naval cooperation', *Navy Newsstand*, <www.news.navy.mil>, 21 September 2005.

Cranston, F., 'Unaccepted boat saves man', *The Canberra Times*, 6 November 1979.

Davies, G., 'HELPEM FREN Op kicks in', *Navy News*, 31 July 2003.

Dupont, A., 'Transformation or stagnation? Rethinking Australia's defence', *Australian Journal of International Affairs*, Vol. 57, No. 1, 2003.

'Farewell to the *Fremantle* class', *Semaphore*, No. 17, Sea Power Centre – Australia, Canberra, October 2005.

'From talking to doing – Singapore', *The Economist*, 10 June 2006.

Gilmore, W., 'Hot pursuit: the case of R v Mills and others', *The International and Comparative Law Quarterly*, Vol. 44, No. 4, 1995.

Gourley, S., 'Briefing: adapting to change: the future of the US Marine Corps', *Jane's Defence Weekly*, Vol. 43, No. 36, 2006.

Harkavy, R.E., 'Thinking about basing', *Naval War College Review*, Summer 2005.

Hawke, S., 'Together as one', *Army*, 28 August 2003.

Hawkins, W.R., 'Interdict WMD smugglers at sea', *Proceedings*, December 2004.

Hone, T., 'Sea basing and the lessons of Okinawa', *Armed Forces Journal*, Washington DC, May 2005.

'Hot pursuit and Australian fisheries law', *Semaphore*, No. 11, Sea Power Centre – Australia, Canberra, June 2006.

Hughes, W.P., 'Naval manoeuvre warfare', *Naval War College Review*, Vol. 50, No. 3, 1997.

Jacobs, K., 'USN amphibious programmes: the future is bigger', *Asia-Pacific Defence Reporter*, May 2003.

Kearney, S., 'RAN joins the '1000 Ship' Navy', *The Australian*, 20 November 2006.

Keith-Reid, R., 'So what now for the Solomon Islands? 2004 will be a year of reconstruction', *Pacific Magazine*, January 2003.

- Kerr, J., 'Australia's influence warning?', *Australian Defence Magazine*, April 2006.
- Klamper, A., 'River War', *Seapower*, February 2006.
- Klein, J.J., and Morales, R., 'Sea basing isn't just about the sea', *Proceedings*, January 2004.
- Kubiak, K., 'Terrorism is the new enemy at sea', *Proceedings*, December 2003.
- Lavell, K., 'New technology transforming naval power', <www.signonsandiego.com/news/op-ed/techwar/20030301-9999_mzle2newtech.html>.
- Levett, C., 'Home-grown terrorism', *The Sydney Morning Herald*, 2 October 2004.
- Lewis-Young, P., 'The Five Power Defence Arrangement: a review', *Asian Defence Journal*, Vol. 5, 1983.
- Lewis-Young, P., 'Towards a wider scope of the Five Power Defence Arrangement: the view from Australia', *Asian Defence Journal*, Vol. 4, 1983.
- Luft, G. and Korin, A., 'Terrorism goes to sea', *Foreign Affairs*, November/December 2004, <www.iags.org/fa2004.html>.
- 'Maritime security regulation', *Semaphore*, No. 3, Sea Power Centre - Australia, Canberra, February 2006.
- Marx, P., 'Private military companies: handle with care', *Proceedings*, February 2005.
- Matthews, T. and Ravenhill, J., 'ANZUS, the American Alliance and external threats: Australian elite attitudes', *Australian Outlook*, Vol. 41, No. 1, April 1987.
- Mills, E., 'Terror threats at water's edge', *Proceedings*, July 2006.
- Moore, C. and Hanlon, E., 'Sea basing: operational independence for a new century', *Proceedings*, January 2003.
- Morgan, J.G. and Martoglio, C.W., 'The 1000-Ship Navy: global maritime network', *Proceedings*, November 2005.
- Mullen, M., 'What I believe: eight tenets that guide my vision for the 21st century', *Proceedings*, January 2006.
- Murphy, M., 'Maritime threat: tactics and technology of the Sea Tigers', *Jane's Intelligence Review*, June 2006.
- Nathman, J., 'Shaping the future', *Proceedings*, January 2006.
- 'Naval ingenuity: a case study', *Semaphore*, No. 18, Sea Power Centre - Australia, Canberra, November 2005.

O'Malley, S., 'Maritime security', *Focus*, International Organization for Standardization (ISO), July/August 2006.

'Operation ASTUTE - the RAN in East Timor', *Semaphore*, No. 12, Sea Power Centre - Australia, Canberra, June 2006.

'Operation Sumatra Assist Two', *Goorangai*, Vol. 2, No. 1, April 2006.

Pandit, R., 'Soldiers are no longer shy of going to court', *Times of India*, Ahmedabad edition, 23 December 2003.

Patch, J., 'Sea basing: chasing the dream', *Proceedings*, May 2005.

Richardson, M., 'The threat of piracy and maritime terrorism in Southeast Asia', *Maritime Studies*, No. 139, Nov/Dec 2004.

Roosevelt, A., 'Interoperability: the sea basing issue for allies', *Defence Daily International*, Vol. 6, No. 3, 21 January 2005.

Royal Australian Navy, *Navy News*, 9 December 1966.

Royal Australian Navy, *Navy News*, 12 May 1967.

Royal Australian Navy, *Navy News*, 26 January 1979.

Royal Australian Navy, *RAN Band News*, No. 2, 14 July 2003, <www.navy.gov.au/ranband/news.html>.

Sakhuja, V., 'Contemporary piracy, terrorism and disorder at sea: challenges for sea-lane security in the Indian Ocean', *Maritime Studies*, November-December 2002.

Sheridan, G., 'We need soldiers and more firepower', *The Australian*, 25 May 2006.

Shorter, A., 'STOVL JSFs put teeth in sea basing', *Proceedings*, September 2003.

Smith, A.J., 'Combating terrorism', *Military Review*, January-February 2002.

'Solomon Islands: the Pacific's first failed state', *The Economist*, 13 February 2003.

Steele, R., 'The asymmetric threat: listening to the debate', *JFQ*, Autumn/Winter 1998-99.

Stewart, G.M., 'At sea experimentation with *Joint Venture*', CNA Corporation, 2003.

Stuart, N., 'Stretching our forces too tightly is not the way to win the peace', *The Canberra Times*, 6 June 2006.

Stubbs, B.B., 'Smarter Security for Smaller Budgets: Shaping Tomorrow's Navy and Coast Guard Maritime Security Capabilities', ROA National Security Report, *The Officer*, July/August 2005.

- 'The effects of weather on RAN operations in the southern ocean', *Semaphore*, No. 13, Sea Power Centre - Australia, Canberra, July 2006.
- 'The Pacific patrol boat project', *Semaphore*, No. 2, Sea Power Centre - Australia, Canberra, February 2005.
- 'The Royal Australian Navy and the restoration of stability in the Solomon Islands', *Semaphore*, No. 13, Sea Power Centre - Australia, Canberra, August 2005.
- 'The Royal Australian Navy Heritage Centre,' *Semaphore*, No. 14, Sea Power Centre - Australia, Canberra, September 2005.
- Toremans, G., 'The Five Power Defence Arrangement: a Defence Treaty in South East Asia', *Navy International*, Vol. 99, No. 9/10, 1994.
- Truver, T., "'Sea Power 21": international partnership for the common good', *Naval Forces International Forum for Maritime Power*, Vol. 25, No. 1, 2004.
- Waldron, A., 'China's military classics', *JFQ*, Spring 1994, <www.dtic.mil>.
- Welfare, J., 'All about attitude', *Navy News*, Vol. 48, 2 June 2005.
- White, H., 'The 2005 White Paper', *SDSC Newsletter*, January/June 2005.
- Woods, C., 'Bikfala Sip: Aussies come to help our Pacific friends', *Navy News*, 14 August 2003.
- Ya'ari, Y., 'Fighting terrorism...from the sea', *Proceedings*, August 2003.

Websites

- Australian Antarctic Division (Australian Antarctic Data Centre), Antarctic Names and Gazetteer, search 'for Barker', <www.aad.gov.au/default.asp?casid=5364>.
- Australian Customs Service, 'Protecting our shores', <www.customs.gov.au/webdata/resources/files/protecting_our_borders1.pdf>.
- Australian Women's Archives Project, entry for 'Florence McKenzie', <www.womenaustralia.info/biogs/AWE0386b.htm>.
- Biological and Toxin Weapons Convention website, <www.opbw.org>.
- Defence Advanced Research Projects Agency (DARPA), 'Strategic Thrusts', <www.darpa.gov/body/strategic_plan/strategci_text.htm>
- Department of Defence, Operation ASTUTE web page, <www.defence.gov.au/opastute/>.

'Developing a New Maritime Strategy', US Navy Office of Information, <www.navy.mil>, 12 September 2006.

'Global Conflict Trends', CSP Global Conflict Trends, <www.members.aol.com/CSPmngm/conflict.htm>.

Headquarters Joint Operations Command Project, 'Project Purpose', <www.defence.gov.au/id/hqjoc/pages/purpose.htm>.

Organisation for the Prohibition of Chemical Weapons <www.opcw.org>.

Republic of Albania Assembly, Law Nr 8875, dated 4.4.2002, Establishment of Coast Guard, <www.faolex.fao.org/docs/pdf/alb60863E.pdf>

SEA 1444 – *Armidale* class patrol boat, <www.defence.gov.au/dmo/msd/sea1444/sea1444.cfm>

The Military Strategy of the Republic of Albania, July 2002; an updated version (May 2005) can be found at <www.merln.ndu.edu/whitepapers/Albania_English-2005.pdf>.

United States Army, <www.army.mil/CMH/reference/CSAList/CSAList.htm>.

United States Marine Corps, <www.mcu.usmc.mil/reading>.

US Congressional Budget Office, *The Future of the Navy's Amphibious and Prepositioning Force*, Washington DC, 2004, <www.cbo.gov/showdoc.cfm?index=6003&sequence=2>.

Reports, Presentations and Media Releases

Bush, G.W., Speech at the Citadel, South Carolina, 11 December 2001, <www.whitehouse.gov/news/releases/2001/12/20011211-6.html>.

CDF Media Briefing, 'Update on Op ASTUTE', 26 May 2006, <www.defence.gov.au/opastute/>.

Defence Annual Report 2001-02, Department of Defence, 2002.

Department of Defence, 'Extra *Armidale* Boats to Boost Border Protection', Media Release MIN 171/05, 15 October 2005.

Downer, A., 'Our Failing Neighbour: Australia and the Future of Solomon Islands', <www.foreignminister.gov.au/speeches/2003/030610_solomonislands.html>.

Duelfer, C., *Comprehensive Report of the Special Advisor to the Director of Central Intelligence on Iraq's Weapons of Mass Destruction*, 30 September 2004, <www.cia.gov/cia/reports/iraq_wmd_2004>.

HMA *LST3501*, *Report of Proceedings - Voyage to Heard Island [1947-1948]*.

- HMAS *Adelaide*, *Report of Proceedings*, January 1997.
- HMAS *Anzac*, *Report of Proceedings*, October 1997.
- HMAS *Australia*, *Report on Mission to Heard Island*, July-August 1950.
- HMAS *Canberra*, *Report of Proceedings*, January 2002.
- HMAS *Darwin*, *Reports of Proceedings*, December 1994, January 1995.
- HMAS *Hobart*, *Report of Proceedings*, January 1979.
- HMAS *Newcastle*, *Report of Proceedings*, February 1998.
- HMAS *Success*, *Report of Proceedings*, May 2006.
- HMAS *Wyatt Earp*, *Report of Proceedings*, 1 April 1948.
- International Maritime Organization, *Revised treaties to address unlawful acts at sea adopted at international conference*, Briefing 42, 17 October 2005, <www.imo.org/newsroom/mainframe.asp?topic_id=1018&doc_id=5334>.
- Lambert, Professor A., 'Sea Power Ashore and in the Air', presentation to the King-Hall Naval History Conference, Canberra, 21 July 2005.
- Maritime Commander Australia, 'Semaphore as a Formal Fleet Communications Medium', MCAUST SAE/BAS 240157Z NOV 05.
- Nandagopal, D., 'Maintaining the Technology Edge in Maritime Warfare for the 21st Century', Presentation to Pacific Technology Forum, 2004.
- Naval Cooperation and Guidance for Shipping (NCAGS), *An Introductory Brief* (Unclassified), Maritime Headquarters, NSW, 2003.
- Navy Project Brief 31, *Ten Patrol Boats*, September 1970.
- Olbers v Commonwealth of Australia* (No. 4) [2004] FCA 229, per French, J.
- Petry, C., 'The Electric Ship and Electric Weapons', Presentation to National Defence Industrial Association 5th Annual System Engineering Conference Tampa, Florida, 22-24 October 2002.
- Prime Minister of Australia, 'Strengthening Australia's Border Surveillance', Media Release 1018, 28 July 2004.
- Prime Minister of Australia, 'Strengthening Offshore Maritime Security', Media Release, 15 December 2004, <pm.gov.au/news/media_releases/media_Release1173.html>.
- RAN Band, *Annual Report 2004/2005*, July 2005.
- Report of Admiral of the Fleet Viscount Jellicoe of Scapa on 'Naval Mission to the Commonwealth of Australia', Vol. IV, Chapter 1, ADM116/1834.

Schoor, T., 'Uninhabited Systems Technology for Mine Warfare', Presentation to AUVSI Uninhabited Systems Program Review 2004, Office of Naval Research, Department of Navy Science and Technology, 12 February 2004.

Senator the Hon Sandy Macdonald Parliamentary Secretary to the Minister for Defence, Media Release, 22 May 2006, <www.minister.defence.gov.au/Macdonaldtpl.cfm?CurrentId=5661>.

Tewes, A., Rayner, L. and Kavanaugh, K., *Australia's Maritime Strategy in the 21st Century*, Research Brief No. 4, Parliamentary Library, November 2004, <www.aph.gov.au>.

The Hon Mr Kim Beazley, 'Asia Pacific Security - The Challenges Ahead', Speech presented at the Australia College of Defence and Strategic Studies, Weston Creek, 1996.

The Hon Mr Kim Beazley, Media Release, 10 October 2005, <www.alp.org.au/media/1005/msloo110.php>.

The Howard Government Election 2004 Policy, 'Securing Australia's North West Shelf', 16 September 2004, <www.liberal.org.au/2004_policy/Securing_Australias_North_West_Shelf_Policy.pdf>.

The White House, *The National Strategy for Maritime Security*, September 2005.

US Department of State, 'Background Note: Albania, Bureau of European and Eurasian Affairs', October 2006, <www.state.gov/r/pa/ei/bgn/3235.htm>.

US Navy Office of Information 'Edited Remarks by Admiral Mike Mullen', RUSI Future Maritime Warfare Conference, London, England, 13 December 2005.

VCDF Doorstop Interview, 27 May 2006, <www.defence.gov.au/opastute>.

Acts and Conventions

Maritime Transport and Offshore Facilities Security Act 2003, <[www.comlaw.gov.au/comlaw/Legislation/ActCompilation1.nsf/0/F8311AC193742AF6CA257084001F6DB0/\\$file/MaritimeTransOffshoreFacilSecurity2003_WD02.pdf](http://www.comlaw.gov.au/comlaw/Legislation/ActCompilation1.nsf/0/F8311AC193742AF6CA257084001F6DB0/$file/MaritimeTransOffshoreFacilSecurity2003_WD02.pdf)>.

Maritime Transport Security Act 2003, <[www.comlaw.gov.au/comlaw/Legislation/Act1.nsf/0/5ED0B1A0C30020B3CA256F720010C857/\\$file/1312003.pdf](http://www.comlaw.gov.au/comlaw/Legislation/Act1.nsf/0/5ED0B1A0C30020B3CA256F720010C857/$file/1312003.pdf)>.

United Nations, *Convention on the Law of the Sea*, United Nations, New York, 1997.

Unpublished Documents

HMAS *Gayundah* file, Sea Power Centre – Australia, Canberra.

Letter, British Agent and Consul Tonga to Thring, 12 December 1918, HMAS *Encounter* file, Sea Power Centre – Australia, Canberra.

Melville-Anderson, M.A., *An Account of the Movements of HMAS Pioneer during the Great War*, August 1919, Sea Power Centre – Australia, Canberra.

Morgan, Admiral Sir Vaughan, Diary, 1919, Imperial War Museum.

‘Report of Cruise to render assistance in the influenza outbreak’, 14 December 1918, HMAS *Encounter* file, Sea Power Centre – Australia, Canberra.

Ramsay, B., Diary, 1919, Churchill College Cambridge Archives, RMSY3/1.

‘Sailing Orders’, HMAS *Encounter* file, Sea Power Centre – Australia, Canberra.

Stebins, A.A., *Can Naval Surface Forces Operate Under Chemical Weapons Conditions?* Thesis, Naval Postgraduate School, Monterey, California, June 2002.