



ISSUE 131

# headmark

MARCH 2009

*What's Wrong with the Navy's Values?*

*Remilitarising the Australian  
Hydrographic Service*

*Virtual Memorial of HMAS Sydney*

*Sailing into History:  
The 1908 Voyage of the US Navy's  
Great White Fleet to Australia,  
As Seen Through the Eyes of the Media*

*The Influence of History Upon Sea Power*

*Maintaining Flexibility:  
Multi Role Vessels & Mission Based  
Modular Payloads*

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# President's Message

Welcome to the first *Headmark* for 2009. On the 25<sup>th</sup> of this month I will report to those of you at the AGM that I think we have had an outstanding year with strong membership growth and well attended functions in both Canberra and Sydney.

I think 2009 will be as busy as last year and I hope that you will support our activities as enthusiastically as you did last year. It was impressive that we had nearly 500 members and guests attend our functions in 2008. This year we will again be putting a deal of effort into our Midshipmen at ADFA through a series of breakfast presentations and other activities. In July we will be supporting the keynote speaker for the King Hall History Conference in Canberra and of course we will have the Vernon Parker Oration on a cold winter's night and the 3<sup>rd</sup> annual ANI Warfare Seminar at *HMAS Watson* in October. We also hope to have a major ANI event in Western Australia this year.

You will see a brief article by the Vice President outlining our plan to

publish a number of essays from the two essay competitions that were conducted last year. I hope that you find this a useful initiative which is aimed at exposing the views of our younger and more junior members and, of course, sparking some debate. I would like to take this opportunity to thank the Council members who devoted a considerable amount of their time in organizing and marking the essays for last year's competition. Through their efforts we have seen that our future leaders care about the Navy in which they serve and are passionate enough to put their thoughts down on paper. We are already running the two essay competitions again this year and I hope that they are now becoming well known amongst our more junior personnel. I would encourage all our Lieutenants, Sub Lieutenants and Midshipmen to enter for the chance to win one of two great overseas trips. The essay competitions close on the 3<sup>rd</sup> of July.

*Yours Aye,  
Davyd Thomas*

*HMAS Manoora ship's company fall in during the ceremony of HMAS Sydney II*



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*Front page:  
HMAS BETANO  
conducts an  
Aviation Sea  
Safety Assessment  
with a 109E  
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Helicopter from 723  
Squadron*

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## *New Directions for Headmark 2009*

This year in *Headmark* we are embarking on an aggressive campaign to get the views of our younger members into print. We have been able to achieve this through the vehicle of the two Essay competitions that were inaugurated last year. This has been a significant initiative for the Institute. The two overseas trips offered as prizes among the most generous of essay competition prizes anywhere and have had the right effect in stimulating interest. In our first year we attracted a combined total of 36 entries to the two competitions. The topics were wide ranging and the views expressed varied from considered to some that were less so. Some entries showed deep thought and research, some were provocative and others were written by those clearly in a hurry! Regardless, they have demonstrated what we always knew, that our younger members care about the Navy in which they serve and have a range of views worth being aired and listened to. We hope to publish around 15 of these essays during the year

Some of the views expressed will no doubt annoy some people or even sections of the naval community. We have already had some reaction even prior to publication. Some of the essays will not quite be what we would normally publish. However, the value of these essays is not how well written or referenced they are, but their freshness of thought and candour. They might not show that the author has the 'whole picture' but it has never been a crime to present ones views in these pages without the 'whole picture' - few of us have. This does not invalidate the contributions these essays make and in many ways the unencumbered views of our younger members provide a fascinating window into what our younger and more junior members think.

This Journal has historically been one where there was little fear in expressing strong views. Sadly the passion and energy in the debates that have raged at various times in the past has not been as evident in recent times. Our aim in the ANI remains, as it has always been, to foster debate. We hope that these essays will act as a catalyst to return to a more energetic debate in these pages. Because we have had a relatively lengthy period without strong debate it may take some time for people to get used to it again. It is some time since we have had letters to the editor or papers rebutting another or offering a counter view. I hope that all concerned will respect how difficult it is to put yourself 'out there' in print and applaud those who have. One of the risks in putting your views in print is that others can counter them, as long as this is done constructively and remains focused on the issues and not the author, this helps sustain the debate in a positive and robust way.

*Ray Griggs*

*Vice President*

*Armidale Class Patrol Boats HMAS Maryborough with Landing Craft Heavy HMAS Betano sail in company from Darwin Harbour*



# What's Wrong with the Navy's Values?

BY COMMANDER TONY MULLAN, RAN,

DEPUTY DIRECTOR OF THE CENTRE FOR DEFENCE LEADERSHIP STUDIES

Over the last couple of decades there has been considerable interest displayed by organisations around the world in the area of corporate values. This is primarily as the result of a school of thought advocating that values-based organisations are more likely to enjoy long-term success and a competitive edge over rivals in their sector.<sup>1</sup> Visit any corporate web site today and you will invariably find a list of their corporate values. Visit any relatively modern military organisation around the world and values statements are often very visible and prolific.<sup>2</sup>

In Australia, not only does Defence have values, but the three Services each maintain their own unique values sets that complement, expand and overlap Defence's. One only has to cast a cursory eye around the work environment to see visible evidence of the RAN's values program. Values posters adorn walls and publications such as the Serving in Australia's Navy booklet and the RAN Warfare Officer's Career Handbook specifically discuss values and the importance of developing a values-based culture. All

2002 and sees these as a vital for the shaping of its organisational culture, and ultimately the achievement of its mission.<sup>3</sup> RAN statements regarding its organisational values say that:

*'These values provide a basis for our personal and professional conduct and enable us to respond dynamically to new situations. They guide how we behave and how we treat each other. Our values determine what is important to us. Navy values are a source of strength and moral courage.'*<sup>4</sup>

Given the focus placed on values and values-based leadership in the various policy documents, high-level statements and marketing material produced by the RAN, it begs the question – are the values the organisation espouses optimised to get the best results for the Navy? If values can be considered 'organisational DNA'<sup>5</sup> are the RAN's values growing the right sort of culture and the right sort of sailor? After all – a small tweak to a DNA strand can turn a butterfly into a pig!

The aim of this article is to identify two vital areas in which the RAN's existing values could be significantly enhanced to the ultimate benefit of individual members and the wider organisation. Those areas being; the focus of the values and their actual content.

The Navy's values were developed as a part of the wider Serving Australia's Navy Program (SANP) which was set up as a direct result of a number of incidents of unacceptable behaviour within the Service and are primarily aimed at improving the RAN's organisational culture and preserving and enhancing its reputation.<sup>6</sup> Indeed,

reputation management still seems to be an important reason for the RAN's values program with the perceptions of serving members and the public as to how the RAN treats its personnel seen as very important for recruiting and retention.<sup>7</sup> In addition, when reputation is considered, the RAN also relies heavily on the public's perception of how successfully we undertake operations locally and around the globe.

The RAN's existing values program is essentially focused inwards, towards its members and how they treat each other and behave within the organisation. Currently there seems to be no conscious, explicit focus on the RAN's external behaviour – that is – how it conducts operations and interacts with 'outsiders'. It may be that this has been taken for granted for a long time and that the RAN's very good record in its behaviour during operations has created an environment in which it is simply assumed that the RAN will always 'do the right thing' without any further thought being given to the matter.

As Robinson points out in the book *Ethics Education in the Military*, most military values sets contain values that focus almost exclusively inwards, that is, the values that are espoused are primarily directed at making the military member more effective in a functional sense and concentrate more on how he or she should act and treat others within the organisation.<sup>8</sup> This certainly seems to be the case for the Navy's current values and this is understandable given their genesis.

What the RAN's values program lacks however, is an equally important focus outwards. That is; to also contain values that recognise the unique position that RAN members (and the



*Courage - HMS Hermes in WWII - Members of the crew carrying out the captain's last order to abandon ship*

of this gives the impression that values are something that the RAN sees as vitally important and integral to the future success of the organisation.

The RAN has maintained an explicit set of values since around

## What's Wrong with the Navy's Values?

Army and RAAF for that matter) hold in our society in that they are legally able to kill others and cause great destruction at the direction of the State. Expanding on the discussion Robinson has on this issue,<sup>9</sup> whilst society expects its military personnel to exercise appropriate restraint in the use of force, respect non-combatants, uphold basic human rights and so forth, the RAN has no explicit values dealing with these issues, nor does it mention these within existing values descriptors. Given the great responsibility the Australian people see fit to bestow upon members of the RAN, ignoring this fundamental requirement in the Navy's organisational values is potentially very dangerous and does not produce values that clearly explain a core part of what the RAN stands for.

Is this requirement for the RAN's values to also be outward looking really that important though or is it just a theoretical argument? If we asked the US Army whether they believed that they were in the business of producing soldiers capable of committing the atrocities that took place at Abu Ghraib, the answer would have been 'never' – and yet it happened, causing the US Army to go through a significant upheaval and fundamental re-examination of how its soldiers were being morally and ethically prepared for combat. The important things to note about this example is that it is recent and that it happened to a modern and professional Western military force (just as the RAN is). Unfortunately it is but one of many ethical failures recorded throughout military history that remind us that taking such things for granted can be very dangerous indeed.

In order to address this very significant blind spot the RAN's values should be rewritten and include explanations that have both an inwards and outwards focus. For example,

were 'respect' to be a Navy value, its explanation might be as follows:

***Respect is about treating people as you would wish to be treated yourself. In your day to day job, with the people you work and live with, respect is about acknowledging everyone's individual worth and giving them a 'fair go'. Respect means recognizing and appreciating the inherent dignity of all people and living up to Australian society's expectations about how we should treat each other.***

***On operations and in combat, we must above all, respect human life and recognise its supreme value. We must recognise that we place ourselves or others at risk solely to the extent required to carry out our mission. Respect for human life and human dignity must find expression in all of our actions and must permeate everything we do on operations, in line with the laws of armed conflict, Australia's international obligations and the expectations of Australian society. Without exception it must guide the way we fight, but it must also guide us in other areas such as how we treat enemy wounded or prisoners and how we interact with civilian populations and different cultures.***

Rewording appropriate values to have both an inwards and outwards focus can therefore remind personnel that the culture of the RAN is more than just about how people treat each other and act within the organisation. Reworded values can also reinforce to every member of the RAN their significant responsibilities as members

of the profession of arms and their fundamental duty to maintain the high standards the RAN has historically shown on operations. Importantly, during a time of high operational tempo against a new and often merciless foe it is maintaining these values that sharply differentiates the RAN from its adversaries and helps cement its excellent reputation in the public and international domain.

Moving onto the content of the existing Navy values, considerable scope exists for them to be rewritten to provide more useful products and guidance for RAN personnel. The RAN's current values are:

1. **Honour.** Honour is the fundamental value on which the Navy's and each person's reputation depends. To demonstrate honour demands honesty, courage, integrity and loyalty and to consistently behave in a way that is becoming and worthwhile.
2. **Honesty.** Honesty is always being truthful, knowing and doing what is right for the Navy and ourselves.
3. **Courage.** Courage is the strength of character to do what is right in the face of personal adversity, danger or threat.
4. **Loyalty.** Loyalty is being committed to each other and to our duty of service to Australia.
5. **Integrity.** Integrity is the display of truth, honesty and fairness that gains respect and trust from others.

There is a school of thought that says that any values program should confine itself to a small number of values critical to the organisation's long term success.<sup>10</sup> From a purely common sense point-of-view this is logical as a large number of values can invite confusion, overlap, and unnecessary values incongruence in personnel. In



*Loyalty – Germans warship FGS Braunschweig's crew at their 2008 Commissioning Ceremony-photo by Michael Nitz*

terms of the number of values the RAN has released, five would therefore seem to be a suitable number. In terms of the suitability of each of the existing values, however, the following comments are offered:

- a. There is an obvious and unnecessary overlap between the values of honesty and integrity. It would be perfectly reasonable to remove honesty as a stand-alone value, sharpening the focus of integrity and the overall values package.
- b. Honour is certainly a noble ideal but it is not a useful value. Integrity and courage clearly explain how the RAN wants people to think and act. Honour is a more nebulous concept and indeed it has to draw on the other Navy values in order to even have a semi-coherent explanation. The RAN would be better served by removing honour as a discrete value (it can always be talked about in a more general sense when discussing the values as a whole), and replacing it with another, more practical and understandable value.
- c. Loyalty is a divisive and dangerous value that is misused and

misunderstood and it often does more damage than good. As Olsthoorn notes in his paper *Loyalty and Professionalisation in the Military* (a paper that clearly identifies the danger of using loyalty as a military value) 'the fact that one can coherently speak of 'bad' or 'misplaced' loyalty, whilst it is more or less nonsensical to talk about 'bad' or 'misplaced' justice, might be seen as an indication that it is not a virtue in the first place'.<sup>11</sup> In a similar vein Professor Stephen Coleman at the Australian Defence Force Academy notes that during his ethics classes when cadets discuss situations where rules have been broken or the wrong thing done, what should be a simple application of the value of integrity, ie. 'What is the right thing for me to do?' becomes a significant moral dilemma whereby loyalty to their mate/colleagues/division, etc, is in direct conflict with their requirement to display integrity.<sup>12</sup> On a broader scale it is argued that this type of moral conflict, brought about by misplaced loyalty, happens far too often within the organisation.

Given the above comments, it is useful to quickly explore some alternative values that might better serve the needs of the RAN. It should be noted that there are many potential values that the RAN could use and there will always be quite justifiable arguments about which ones should be selected. With that in mind, the following is offered simply as a starting point for discussion.

First and foremost, 'respect' as it is defined earlier in this paper is suggested as a vitally important value that should be explicitly stated. Its intent is clear and it is able to be applied both inwards and outwards, making it a particularly powerful value. Secondly, noting that the RAN as attempted to define 'loyalty' as 'being committed to each other and to our duty of service to Australia'<sup>13</sup> possible values to replace 'loyalty' might be along the lines of 'duty', 'service' or 'discipline'. Whilst the exact wording of such values is open to debate, the Singapore Armed Forces (SAF) definition of 'discipline' provides a useful example:<sup>14</sup>

***'The essence of discipline is doing what we have to, even when it is difficult and demanding, and doing it to the best of our abilities. Discipline means inner strength, self-control, mental stamina, physical toughness and perseverance. No effective military can function with poor discipline. It is the glue that holds every member of the SAF together when threatened, giving them the courage and will to continue the mission under unforgiving situations.'***

Given that it would be unwieldy to explore every possible value and provide detailed explanations, suggestions for new and improved values to replace 'honour', 'honesty' and 'loyalty' will stop here. What is important to take away from the above

## What's Wrong with the Navy's Values?

discussion is that the existing values can be significantly improved, and viable alternatives exist that should be seriously considered.

Australia has been very fortunate to date. Our recent wars have been wars of choice rather than necessity, our personnel commitments have been relatively minor, our casualties very small and our personnel on operations have consistently performed to a high ethical standard. Were we to be faced with the situation of a war of necessity, large and extended personnel commitments and significant combat related deaths, would our people be as well equipped as they need to be to continue to 'do the right thing'? Are the Navy's values optimised to meet this challenge?

The organisational values the RAN seeks to inculcate into personnel must have two distinct but related purposes. Firstly, they must guide how personnel behave towards each other and how they go about our day to day business, whether that is in an office in Navy Headquarters, or at sea in a frigate. Secondly, they must guide how personnel conduct themselves on operations, most especially in combat. Values that ignore one or the other of these will only produce a semi-developed individual. For example, treating your mates with respect and consideration is a moot point if you then turn around and abuse a detainee or order an NGS mission without regard for civilian casualties.

The values the Navy chooses will have a huge impact on the culture that the organisation develops. The RAN's values need to be clear, unambiguous and relevant. They need to be carefully and consciously defined as the organisation's DNA. Unfortunately the existing Navy values are not optimised for this purpose. They tend to overlap, clash and confuse and as such must be reviewed and rewritten. In particular

the values of 'honour', 'honesty' and 'loyalty' should be removed, the remaining values reviewed and additional values such as 'respect' added as necessary.

If the RAN chooses to invest now in developing a strong and relevant values-based culture, built around more useful values, then not only will the organisation and the individuals within it benefit on a day-to-day basis, but the Navy may just prevent a future Abu Ghraib of its own. ✎



**Commander Tony Mullan joined the RAN in 1991 as a (then) Instructor Officer. During his 18 year career, Commander Mullan has undertaken postings to CDSC, HMA ships Cerberus, Albatross, Kanimbla, ADFA, NHQ, DNOP, ACSC and the Australian Defence College. Commander Mullan is currently the Deputy Director of the Centre for Defence Leadership Studies at the ADC.**

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# REMILITARISING THE AUSTRALIAN HYDROGRAPHIC SERVICE

(or 'Why the Droggies Need Disbanding')

BY LIEUTENANT CHRIS WALTER

At the conclusion of World War II, the hydrographic survey elements of the Royal Australian Navy had earned a richly decorated reputation for the conduct of tactical military geospatial data operations, especially in support of the Pacific amphibious campaigns<sup>1</sup>, and preceding the Normandy landings<sup>2</sup>.

The honours and decorations bestowed upon those engaged in hydrographic tasking numbered higher, by branch/category, than any other in the RAN during the 1939-45 period<sup>3</sup>, such was the inherent risk in collecting this data, and the subsequent tactical value of their final product.

Information was collected in a manner that proved tactically timely, in a format that was effective in comprehension, and exploited the battle space sufficiently to permit its operational first-use and grant an element of decision superiority. Hydrographic and oceanographic data was collected by surveyors deployed ashore clandestinely, in Crafts of Opportunity (COOPs), dedicated survey vessels or deployed in corvettes, minesweepers and frigates.

The legacy that begets today's Australian Hydrographic Service (AHS) is such that the question of comparison must be asked. The soft tasking of nautical charting that has been the *raison d'être* of AHS activities since 1954, coordinated by the Australian Hydrographic Office (AHO), has virtually denuded the operational focus needed of a contemporary military surveying force from its force-assigned ships, boats and aircraft. The ability to collect data and sustain the production of 'battle

bathymetry' as a completely integrated Task Unit of a larger warfighting force has largely vanished.

An evolved AHS with wartime antecedent would suggestively leave the extant, contemporary AHS wishing to evolve in its wake when comparing appropriateness of equipment, attitude of Officer, and maturity of doctrine, procedures and product.

An illustrative Concept of Operations to reinvigorate the provision of military geographic information (MGI), namely littoral bathymetry and oceanography, is required to roadmap the naval units of the AHS out of military irrelevancy and into professional obsolescence. This essay intends to provoke discussion by casting an informed, but now layman's, eye across the contemporary AHS, and offer recent examples of operational military surveying in a naval context, while integrating suggestions at how the RAN might proceed in bringing

about noticeable change to a unit monolith thus avoiding complete military hydrography bankruptcy.

## THE CONTEMPORARY AHS

**Existential context.** A core dysfunction of the RAN's Hydrographic Service's ability to appropriately auto-cater operational MGI is its relationship to the Australian Hydrographic Office. The preamble to the 'Roles and Responsibilities' contained in the AHS website advertising cites the AHS as

*"... part of the Royal Australian Navy. It is responsible for the conduct of hydrographic surveys, as well as providing Australia's national charting service under the terms of the UN Safety of Life at Sea (SOLAS) Convention and the Navigation Act. This role requires the coordination and determination of policy and standards which covers both hydrographic surveying and charting, as*

*Hydro: Survey vessel HMAS PALUMA during ex Kakadu 08-photo by Chris Sattler*



## REMILITARISING THE AUSTRALIAN HYDROGRAPHIC SERVICE (or ‘Why the Droggies Need Disbanding’)

*well as contributing to the coordination, exchange and standards related to geospatial data in general.”<sup>4</sup>*

The by-line to this statement states

*“The AHS is also responsible for providing direct support to the Australian Defence Force [...] for the provision of hydrographic, charting, oceanographic and meteorology services.”<sup>5</sup>*

While it is clear that ownership of the personnel, vessels and aircraft serving in the AHS is naval, the tasking is largely to fulfil civilian mercantile purposes, of which is coordinated by a quasi-civilian body, the Australian Hydrographic Office (AHO). The AHO’s overwhelming responsibility for charting almost 10% of the earth’s surface, combined with the competing asset allocation of AHS resources, will continue to commit military operational support to a lower priority in order to achieve accountable-to-Canberra measurable goals<sup>6/7</sup>, unless it is a short notice requirement<sup>8</sup>.

**Organisational structure.** A quick analysis of the organisational ‘wiring diagram’ will demonstrate clear conflict between military operations and Governmental agency responsibilities<sup>9</sup>. The understaffed and undertrained Hydrographic, Meteorological and Oceanographic Force Element Group (HMFEG), serves to discharge both functions effectively. An easy cleaving of military hydrographic, and allied, responsibilities would yield improved interoperability with the remainder of the RAN freeing personnel and assets for dedicated naval, and littoral, warfare service. The execution of national hydrographic governance, and progression of a national hydrographic campaign ought to remain the domain of the AHO only.

The Australian hydrographic paradigm is self-validating, with the AHO and the HMFEG collocated, and the majority of the RAN personnel who staff positions within the HMFEG having responsibilities to the AHO. While uniformed personnel are adept at applying surveying knowledge to maintain charter and policy momentum (the continual revision and development of HydrOcscheme, for example), the high percentage of civilian ‘augmentation’ dilutes the focus away from military support beyond the realm of nautical chart provision. Ironically, the sum total of personnel allocated to dedicated MGI support within the AHS/HMFEG/AHO is no more than three Australian Public Servants<sup>10</sup>. This is professionally suicidal and further dilutes organisational focus.

The cause for self-validation is easy to demonstrate. The AHS is, unwittingly, ‘caught-in-irons’ by its inability to swiftly exploit emerging data collection technologies, and processing and dissemination techniques; “nobbled” by the lethargy inherent within Governmental procurement programs; outsourcing of follow-on asset support to contracted agencies, and the binding to those roles and responsibilities stated already. When supported by civilian contractors who are motivated by financial frugality, a product that is riddled with intangible efficiency costs relative to civilian opportunities is produced: it is an end-product, however, wrought to international standards, deemed fit for service, and thus validating the entire process. *But that’s how it’s always been done.*

**Training and culture.** The paucity of other-than-AHS naval operations experience within the Maritime Geospatial Officer (Hydrography) (MGO(H)) branch virtually encourages

naive engrossment into trends, habits and attitudes that tend to reinforce the popular image of the ‘droggie’. The naval nomenclature applied to AHS Officers typifies the branch ethos: Maritime Geospatial Officer (Hydrography). One would suspect that *Military* Geospatial Officer would’ve been more apt. Those that are drawn to a career as a ‘Magoo’ (not unknown for being myopic) tend to trend four ways: those attracted to a tropical lifestyle; those attracted to the hands-on and scientific nature of hydrographic surveying; those looking for a ‘soft-touch’ career as a Warfare Officer, or those encouraged to pursue this path due to perceived or actual shortcomings in core warfare skills.

The inevitable cultural impact this produces needs to be reversed for the profession to remain militarily viable. While the foreseeable future of survey training will remain unchanged, the HMFEG leadership cadre needs to demand, and make training allowance for, a marked increase and emphasis upon warfare skills within its MGO(H) population. Conversely, the image of the MGO(M) (Meteorology and Oceanography - METOC) is one that is readily identifiable as a warfare enabler. The provision of frequent tailored weather forecasting, comprehensive operational and exercise area METOC briefs, provision of applications such as TESS2 and AREPS to forecast environmental impact on sensor performance, collocation within the HQJOC construct and frequent liaison with all Fleet units permits ‘face time’ and recognition of value-adding to the naval mission.

MGO(H), and the AHS, tends to play poor cousin to the MGO(M) during exercises due to the excellent manipulation of software to produce tailored and fused geospatial products, and the ability to generally liaise with other-than-AHS Command Teams in a

reasonably common language<sup>11</sup>. While acknowledged that steps have been implemented to provide more than just basic familiarisation with the same software, the MGO(H) is generationally astern of its MGO(M) brethren.

Training progression as a MGO(H) is in accordance with the accreditation standards of the International Hydrographic Organisation, achieving higher-order surveying skills to maintain organic production standards for safety-of-navigation charting. This expertise comes predominantly at the expense of a strong working knowledge of general naval operations; thus when integrating as a Task Unit or Group within a larger naval force, pauses in planning and execution can be experienced. The active encouragement of junior MGO(H), once consolidated, to undertake surface combatant familiarisation, with potential to proceed onto the Principal Warfare Officer training continuum cannot be underestimated for the professional longevity and relevance of the MGO(H) specialisation.

**Impacts upon procurement.** The multiple-order effects of delivering accredited IHO training and skills, only, can be found in the procurement of vessels and the development of their concept of operations for use. While able to appreciate the raw surveying potential of a particular asset (ship or aircraft), naval operational employment considerations appear wholly unappreciated. For example, the Laser Airborne Depth Sounder (LADS) aircraft, while a tremendous materiel capability, is restricted in its tactical employment. It is not permitted to operate outside Australia, nor in areas of warlike operations<sup>12</sup>. Due to the employment of civilian pilots, and leasing of a civilian aircraft, the true tactical exploitation of this asset remains a latent capability.



*ECHO class Rpyal  
Navy Survey Vessel*

A lack of operational appreciation can also impede future integration of assets. The present Pacific-class (Leeuwin) Hydrographic Ships (HS) have a dedicated compartment adjacent to the Communications Centre for use by an afloat Mine Countermeasures Tasking Authority (MCMTA). The deployment of such C2 functionality is hindered by a lack of appropriate organic communications and data exchange capabilities within the Ship, for example. The resultant is a degraded, or piece-meal C2 capacity which requires a large amount of support from RAN and (occasionally) USN IT and C3-support agencies. The recent tactical development in 'babysitter operations' with the HUON-class Mine Hunter Coastal (MHC) and Surface Combatants highlights the deficiencies that would befall potential force protection efforts of any AHS unit afloat, which at present lacks the very basic measures embarked in the MHC, such as chaff (or even a Close-In Weapon System), LINK 11 Receive, and a manned 30mm gun.

CONOPS considerations would be greatly enhanced, and hence the final acquisition more capable of

integration and self-defence, if those occupying project team positions had a broader naval knowledge to draw upon. Future naval survey vessel acquisitions have to be less myopic and include capabilities for complete systems and communications integration with other units, and comprehensive self-defensive suites to permit independent operations in a potentially hostile environment. The only sensible method to achieve this is to equip the MGO(H) with increased warfare knowledge, and be situated in a culture that is entirely devoted to supporting naval, and joint, operations.

### **ROYAL NAVY SURVEY FLEET MODERNISATION**

The requirement for a fused, high-definition assessment of local bathymetry and atmospheric conditions in near real-time, and requirement to provide a vessel capable of greater self-defensive capabilities were driving factors in the recent introduction into Royal Navy service of the ECHO class Survey Vessel (SVHO)<sup>13</sup>. The SVHO still requires close escort in a potentially

## REMILITARISING THE AUSTRALIAN HYDROGRAPHIC SERVICE (or ‘Why the Droggies Need Disbanding’)

hostile environment, especially with a prevalent air threat. Two 20mm cannons, and several 12.7mm guns, arm each Ship, however the class does not possess an organic softkill capability against Anti-Ship Cruise Missiles. The class is optimised to operate in the littoral in support of amphibious operations, and is presently deployed operationally to Sierra Leone, and has seen service in the Arabian Gulf.

While the mandate for the Royal Navy to support the British Antarctic Survey is extant, the recent transferring of nautical charting responsibilities from the Royal Navy to the Foreign Office has occurred in order to concentrate survey assets on amphibious and other operational support tasks<sup>14</sup>. The Royal Navy, admittedly, enjoys near blanket modern survey coverage of its home waters and can subsequently focus assets on the provision of MGI.

### UNITED STATES NAVAL SERVICE

The USNS operates all of the vessels dedicated to hydrography within the US Armed Forces, satisfying a more strategic approach to military hydrography, and revisits tactical surveys conducted by the US Marine Corps and the US Army (although to a much lesser extent)<sup>15</sup>.

### IMPLICATIONS FOR THE AHS

The introduction of the RN SVHO, and its shift away from nautical charting as normal operations; and the long established structure of the USN's organic capabilities within its Auxiliary fleet ought to have considerable implications for the future of the AHS. The requirement for near 100% survey coverage of the Australian coastline, to a commercially required standard will not be achieved in the

next ten average lifetimes, based on a cumulative 220-plus year rate of effort (notwithstanding the tremendous advances in survey technologies in that period). Common sense dictates that 100% coverage is not required, and that those commercial ports, their approaches and heavily trafficked coastal trade routes only ought to be surveyed; something easily achieved by contracted civilian surveyors working to the same IHO standards as the RAN's own survey units.

The AHO does not render survey data of its own accord; it is the national coordinating body for hydrographic data to ensure compliance with IHO standards. The divorcing of labour from the RAN to vessels tendered by the Department of Transport, for example<sup>16</sup>, would increase the availability of those same RAN units to military data gathering operations, and hence begin a gradual shift in culture back towards something resembling the one achieved at the conclusion of World War II. In turn, the AHS, as an entity, would become obsolete as practical operational planning and tasking returned to extant RAN arrangements.

### HEADQUARTERS JOINT OPERATIONAL COMMAND JOINT ENVIRONMENTAL CENTRE (HQJOC JEC)

The advent of the HQJOC, and establishment for the first time of a JEC, is a substantial improvement to previous C2 arrangements applicable to outlying military units, such as Army's 1 Topographic Survey Squadron, the RAAF's Air Information Services unit, Defence Imagery Geospatial Organisation, and the Navy's AHS. This further reduces the requirement for AHS' continuance. The 'raise, train, and sustain' functions by Commander Australian Fleet (COMAUSFLT) for all

Fleet units remain in place, to prepare for operational tasking and command by Commander Joint Operations (CJOPS). In this context the AHS is clearly an anachronism for obsolete functionality.

### DOCTRINE AND PROCEDURES

The cause for maintaining IHO standards for nautical charting when RAN units are conducting MGD operations needs to be considered. The release of Australian Defence Doctrine Publication 2.3 (*Geospatial Information and Services*) now provides more construct for the provision of military geospatial data, however is at a doctrinal level only. It allows for the existence for the present AHS however, as demonstrated, it is a body corporate that suffers from severe inertia and, from the author's own experience, one that is unlikely to adopt less accurate means of data collection for the sake of tactical timeliness. Despite a military doctrine impetus, the corporate culture will continue to plague real advancement.

Despite the intentions of the ADDP in defining current capabilities, consolidating procedures, detailing potential data sources, describing geospatial operations and ultimately shaping the expectations of the end-user: the tactical commander, it does not address the root cause of a lot of irrelevancy within the current geospatial architecture and largely serves to continue the self-validation described earlier. It does little in pursuit of a focused naval effort in providing timely and tactically relevant MGI.

In conclusion, the RAN's Hydrographic Service (AHS) has a proud history cemented in wartime activity. High risk activities were recognised through numerous awards for brave, distinguished and other service. The acquisition of survey data

was achieved in a tactically useful timeframe, from any and all available means, and gave the operational commander decision superiority in planning and execution of amphibious campaigns, particularly. At the completion of the Second World War, the integration of hydrographic survey elements into the RAN fleet was well established, seamless and proved invaluable its ability to force-multiply.

The AHS is the contemporary legatee of this wartime capability. As the requirement for MGI diminished and tasking refocused on nautical charting, the abilities of the RAN to undertake military hydrography faded commensurately. The subsuming of the RAN's survey assets into the AHS, which is subservient to the AHO's governing requirements, and laterally subjected to HMFEG's competing requirements, has created the situation where the skills, equipment, processes and culture are unsuitable for the conduct of integrated and sustained MDG, or independent, operations in a potentially hostile environment. This places additional demands on protective assets such as surface combatants to provide 'babysitter' support in units in an aggressive littoral theatre.

Restructuring of the RAN's survey force is required to bring about fundamental change to ensure the reclamation of these skills, and in time the procurement of suitable equipment, to conduct these operations. The AHS is unable to provide the appropriate corporate environment to effectively meet the needs of nautical charting and increasing naval operation participation. A divorcing of labour from the RAN survey force to contracted civilian companies, under Department of Transport et al jurisdiction, would realise opportunities to increase warfare and operational experience and training,

subsequently improve naval and joint integration at all levels.

Disassociation from the AHO, and staffing with personnel not concurrently posted to the AHO will increase the military objectivity and naval focus of the HMFEG, hence improve overall interoperability. The procurement of vessels capable of integrating seamlessly and comprehensively into a naval or joint task organisation is essential to capture and consolidate such a shift in cultural paradigm.

A redistribution of Australian hydrographic governance responsibilities, revised training to include heavy emphasis on warfare skills, increased or sole focus on naval/joint operations, and the acquisition of new vessels and equipment will effect the cultural change needed to reinvigorate the RAN survey force into an asset that can readily deploy and provide tactically relevant and timely hydrographic data, and reclaim the right to a proud, and militarily necessary, heritage. 🚢

***Lieutenant Chris Walter joined the RAN in 1996 and graduated from ADFA in 1998. After qualifying as an OOW, he spent several years in Cairns on Minor War Vessels and in Hydrographic Ships before qualifying as a MGO(H) in 2003. After two years consolidation in HS White with surveys conducted in Bass Strait, the Great Barrier Reef, and the Northern Territory, he undertook A/PWO familiarisation in HMAS Stuart in 2006 and subsequently completed both PWO and Surface Warfare specialisation training in 2007. At the time we went to print, Lieutenant Walter was deployed to the Arabian Gulf as part of OPERATION CATALYST,***

### ***serving in HMAS Parramatta as her Surface and Anti-Submarine Warfare Officer.***

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# APPLICATION OF GEOGRAPHIC INFORMATION SYSTEM & STATISTICAL METHODS FOR EFFECTIVE MARINE FISHERIES LAW ENFORCEMENT IN THE SOUTH CHINA SEA

BY HJ SUTARJI & NR HASHIM

The Fisheries sector is important to Malaysia because it generates revenue, provides employment and forms a major source of the dietary requirements of many Malaysians. For years this sector, especially the marine capture fisheries, has contributed about 1.5 percent of Malaysia's gross domestic products (GDP). The marine capture fisheries are comprised of coastal fisheries and deep-sea fisheries. With the exception of 2004, coastal fisheries made up more than 71% of the total fisheries production from 2000 to 2005. During the same period, the deep sea fisheries contributed between 11 to 17%. Details of the fisheries production for six years from 2000 to 2005 are shown in Table 1. Despite its importance, this sector, especially the production of the marine capture fisheries, has not been growing steadily.

In view of the importance of this industry, it is only proper that the marine fisheries activity in the maritime zones be controlled, managed, and regulated, so that these activities are carried out safely and the sea resources carefully exploited and utilized.

However, the protection, conservation and management of marine fisheries are problematic because the fisheries are continuously threatened with illegal fishing by both local and foreign fishing vessels and because of destructive fishing practices. The government has established several maritime enforcement agencies and enacted the Fisheries Act of 1985 to protect marine fisheries. For five



*Eurocopter Dauphin AS365 N3 of the MMEA (Courtesy Eurocopter Malaysia)*

**TABLE 1. MALAYSIA'S FISHERIES PRODUCTION FROM 2000 TO 2005**

| Year | Total Fisheries Sector (Tons) | Total Fisheries (Value in Million RM) | Marine Capture Fisheries (Tons) (% of Total Fisheries) | Marine Capture Fisheries (Value in Million RM) | Coastal Fisheries (% of Total Fisheries Production) | Deep Sea Fisheries (% of Total Fisheries Production) | Percentage of Contribution by Fisheries Sector to GDP |
|------|-------------------------------|---------------------------------------|--|--|---|--|---|
| 2000 | 1,453,590                     | 5,370.0                               | 1,285,696 (88.45 %)                                    | 4,400.0  | 1,114,669 (76.68 %)                                 | 171,027 (11.77 %)                                    | 1.6   |
| 2001 | 1,408,308                     | 6,450.0                               | 1,231,289 (87.4 %)                                     | 4,170.0  | 1,063,363 (75.5 %)                                  | 167,926 (11.9 %)                                     | 1.54  |
| 2002 | 1,463,921                     | 5,410.0                               | 1,272,078 (86.9 %)                                     | 4,210.0  | 1,081,357 (73.9 %)                                  | 190,741 (13 %)                                       | 1.5   |
| 2003 | 1,483,958                     | 5,310.0                               | 1,283,256 (86.48 %)                                    | 4,010.0  | 1,084,802 (73 %)                                    | 98,453 (13.37 %)                                     | 1.37  |
| 2004 | 1,537,988                     | 5,505.9                               | 1,331,645 (87 %)                                       | 4,241.4  | 1,060,150 (69 %)                                    | 271,485 (17.6 %)                                     | 1.73  |
| 2005 | 1,421,402                     | 5,245.68                              | 1,209,609 (87.1 %)                                     | 4,017.52                                       | 988,313 (71.17 %)                                   | 221,288 (15.94 %)                                    | 1.08  |

Source: Department of Fisheries Official Web Sites (<http://www.dof.gov.my>)

years, from 2000 to 2004, a total of 2,619 foreign fishing vessels were sighted fishing illegally in Malaysia's fisheries waters. 771 of these illegal fishing vessels were sighted the South China Sea off the east coast of Peninsular Malaysia.<sup>1</sup> However, during the same period, a total of about 120 foreign fishing vessels were arrested by various

Malaysia's maritime enforcement agencies for illegal fishing in the same sea areas. The data shows that only 15.6% of the foreign fishing vessels sighted for illegal fishing in the South China Sea were arrested.

Theoretically, increased enforcement activities should reduce or even prevent violations by fishermen.

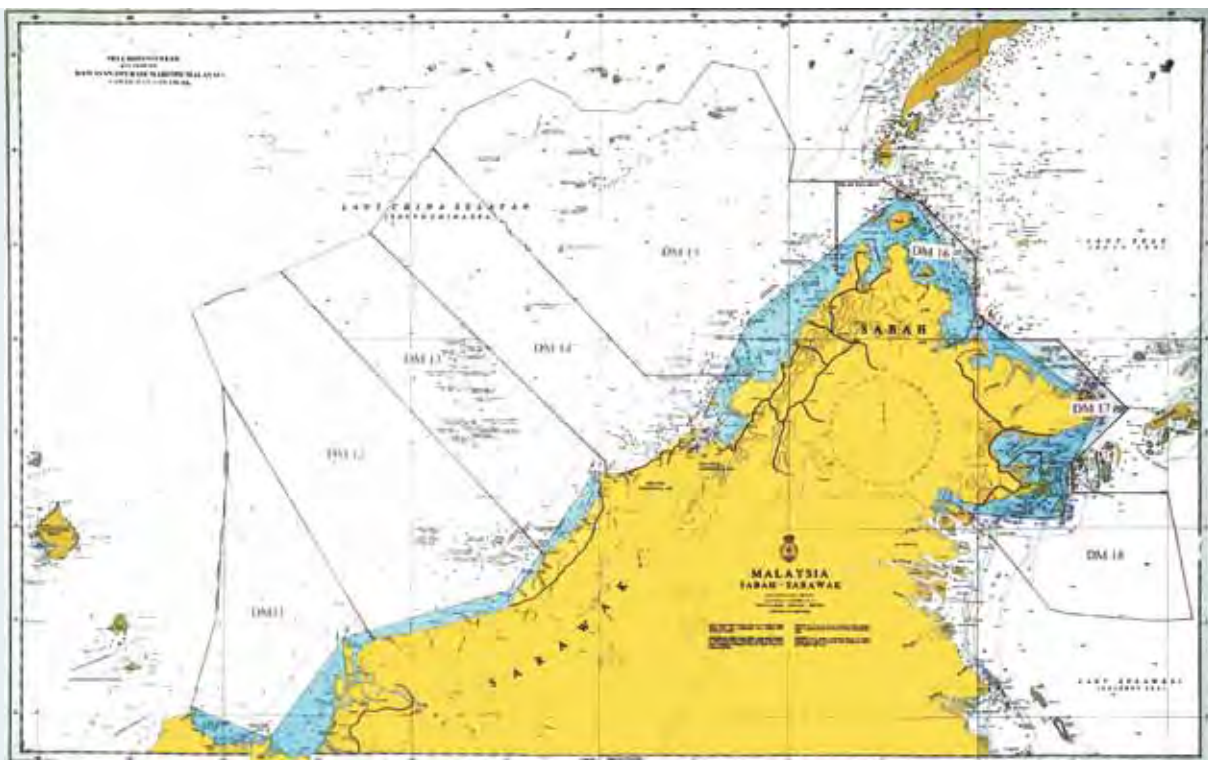
# APPLICATION OF GEOGRAPHIC INFORMATION SYSTEM & STATISTICAL METHODS FOR EFFECTIVE MARINE FISHERIES LAW ENFORCEMENT IN THE SOUTH CHINA SEA

Hence, the data in Table 1 suggests that, although a fisheries law exists to protect and manage the fisheries, substantial non-compliance with the law continues to occur. There are many reasons for non-compliance by these foreign fishermen, but data demonstrates that one of the reasons is ineffective enforcement.

This paper analyzes the trends of intrusion of these foreign fishing vessels into Malaysia's fisheries waters in the South China Sea (off the east coast of Peninsular Malaysia); the efforts made by the various Malaysia's maritime enforcement agencies to contain them; and proposes new approaches for more effective marine fisheries law enforcement. To achieve these objectives, data related to the arrests of foreign fishing vessels for illegal fishing in Malaysia's fisheries waters<sup>2</sup> in the South China Sea for three consecutive years, namely 2005, 2006 and 2007, were used. Both the geographical information system (GIS) and statistical approaches were used to analyze the data.

## FISHERIES LAW ENFORCEMENT IN THE SOUTH CHINA SEA

As stated in the Section 15 (1) of the Malaysian Fisheries Act of 1985, no foreign fishing vessels are allowed to fish or to attempt to fish, or to conduct techno-economic research, or to conduct a survey of any fishery in Malaysia's fisheries waters unless authorised by the government of



Malaysia.

To support efficient enforcement of the Act, the Director General of Fisheries, a Deputy Director General of Fisheries, a fishery officer, a port officer (as defined in the Merchant Shipping Ordinance of 1952), the Commanding Officers of any Government naval vessels or Government aircraft, the Commanding Officers of any Government marine police vessels, or any other person or class of persons are appointed to be an authorized officer in the enforcement of the Act. Hence, Commanding Officers of the Royal Malaysian Navy (RMN) vessels, the Malaysian Maritime Enforcement Agency (MMEA) vessels, the Marine Police vessels, and the Department of Fisheries vessels are authorized officers to enforce the Fisheries Act of 1985 by carrying out surveillance, monitoring and enforcement in the fisheries waters.<sup>3</sup>

Malaysia's fisheries waters in the South China Sea, off the east coast of Peninsular Malaysia, cover a vast area. These waters cover a total of 34,371 square nautical miles (about 117,892 square kilometers) of sea surface,

of which 7,095 square nautical miles (about 24,265 square kilometers) are territorial seas. The sea is blessed with prodigious amounts of demersal (bottom dwelling) and pelagic (surface dwelling) species.<sup>4</sup> This is a significant reason why the area has attracted foreign fishing vessels. However, during the northeast monsoon between the months of November and March annually, the sea condition is always very rough. It reduces local fishing activities to minimal but it does not deter foreign fishing vessels from encroaching into Malaysia's fisheries waters. Likewise, law enforcement

*East Malaysia Maritime Zone (courtesy MMEA)*

**TABLE 2. SIGHTING OF ILLEGAL FISHING ACTIVITIES OF FOREIGN FISHING VESSELS IN MALAYSIA'S FISHERIES WATERS BY GEOGRAPHICAL AREA (2000 – 2004)**

| Year/Localities | Straits of Malacca | South China Sea | Sarawak    | Sabah      | Total        |
|-----------------|--------------------|-----------------|------------|------------|--------------|
| 2000            | 72                 | 162             | 17         | 141        | 392          |
| 2001            | 135                | 88              | 109        | 541        | 873          |
| 2002            | 122                | 257             | 183        | 120        | 682          |
| 2003            | 110                | 264             | 184        | 114        | 672          |
| 2004            | NA                 | NA              | NA         | NA         | NA           |
| <b>Total</b>    | <b>439</b>         | <b>771</b>      | <b>493</b> | <b>916</b> | <b>2,619</b> |

Source: Annual Reports of the NMECC, the Prime Minister's Department (2000 – 2004)

activities by maritime enforcement agencies are also reduced.

As stipulated in the Fisheries Act of 1985, vessels of the RMN, the Marine Police and the Department of Fisheries are responsible to enforce the Act. The bulk of the maritime law enforcement is carried out by the MMEA since its formation in 2005. Prior to the MMEA's formation, the RMN deployed two Offshore Patrol Vessels, six Fast Attack Crafts (Guns) and 15 Patrol Crafts for law enforcement in the EEZ on opportunity basis. Likewise, the Marine Police deployed 15 PZ-class boats for law enforcement in the EEZ while a variety of smaller patrol vessels such as the PX-class, PA-class and the PC-class provided law enforcement in the territorial seas. On the formation of the MMEA, except for the six Fast Attack Craft, the RMN transferred all of its Offshore Patrol Vessels and Patrol Crafts to the MMEA. Similarly, the Marine Police also transferred all of its PZ-class boats to the MMEA. Since then, the Marine Police has concentrated its law enforcement efforts within

the 12 nautical miles of territorial waters. As for the Department of Fisheries, it has transferred all of its six P-series and six KPS-series boats to the MMEA leaving only smaller boats for use within the territorial seas.

In terms of assets, the MMEA owns 72 patrol vessels transferred from the RMN (two offshore patrol vessels and 15 patrol craft), the

RMP (15 PZ patrol boats), the Fisheries Department (six fisheries P-series patrol boats and six other smaller boats KPS series), the Royal Customs Department (six patrol boats of Bahtera K and KA-class) and the Marine Department (six boats and six other smaller boats).<sup>5</sup> On 15 February 2005, the Act went into force and the MMEA was formally established, and then officially launched on 21 March 2006. The MMEA is now the backbone of Malaysia's maritime law enforcement agencies, responsible to ensure the safety and security of lives and properties in Malaysia's maritime zones.

In term of assets available for deployment in Malaysia's fisheries



waters in the South China Sea, the MMEA deploys 10 ships that include two Langkawi-class offshore patrol vessels (ex-RMN's OPV 1,300 tonnes), two Gagah-class (ex-Marine Police's PZ 230 tonnes), four Sipadan-class (ex-RMN's PC 100 tonnes) and two boats transferred from the Marine Department (the Malawali ex-Bintang 63.5 ton and Nusa ex-Rajawali 53 tonnes). Based on the patrol classifications above, only the two Langkawi-class vessels can be deployed safely in the deep water zones (50 nautical miles and above from the coasts). These two ships are

*West Malaysia  
Maritime Zone  
(courtesy MMEA)*

**TABLE 3. SIGHTING OF ILLEGAL FISHING ACTIVITIES BY FOREIGN FISHING VESSELS IN MALAYSIA'S FISHERIES WATERS BY MONTH (2000 – 2004)**

| Year/<br>Month | 2000       | 2001       | 2002             | 2003<br>(Average) | 2004      | Total        |
|----------------|------------|------------|------------------|-------------------|-----------|--------------|
| January        | 2          | 37         | 26(2)            | 56                | NA        | 121          |
| February       | 6          | 36         | 14(2)            | 56                | NA        | 112          |
| March          | 39         | 159        | 41               | 56                | NA        | 295          |
| April          | 59         | 165        | 85               | 56                | NA        | 365          |
| May            | 12         | 73         | 41(27)           | 56                | NA        | 182          |
| June           | 36         | 63         | 56               | 56                | NA        | 267          |
| July           | –          | 54         | 173(99)          | 56                | NA        | 227          |
| August         | 49         | 26         | 24               | 56                | NA        | 155          |
| September      | 95         | 148        | 117(37)          | 56                | NA        | 416          |
| October        | 26         | 53         | 8(3)             | 56                | NA        | 143          |
| November       | 30         | 56         | 45(11)           | 56                | NA        | 183          |
| December       | 30         | 3          | 52(68)           | 56                | NA        | 141          |
| <b>Total</b>   | <b>392</b> | <b>873</b> | <b>682 (257)</b> | <b>672</b>        | <b>NA</b> | <b>2,619</b> |

Source: Annual Reports of NMECC, the Prime Minister's Department (2000 – 2004) (Figures quoted in brackets are the numbers of foreign fishing vessels sighted in Malaysia's fisheries waters in the South China Sea off the east coast of Peninsular Malaysia)

**TABLE 4. ARRESTS OF FOREIGN FISHING VESSELS FOR ILLEGAL FISHING IN MALAYSIA'S FISHERIES WATERS (2000 – 2007)**

| Tahun/<br>Lokasi | Strait of<br>Malacca | South<br>China Sea | Sarawak    | Sabah     | Total          |
|------------------|----------------------|--------------------|------------|-----------|----------------|
| 2000             | NA                   | NA                 | NA         | NA        | 62             |
| 2001             | 28                   | 34                 | 30         | 10        | 102            |
| 2002             | 44                   | 28                 | 38         | –         | 112            |
| 2003             | NA                   | NA                 | NA         | NA        | 103            |
| 2004             | NA                   | NA                 | NA         | NA        | 89             |
| 2005             | 41                   | 13                 | 25         | 15        | 94             |
| 2006             | 27                   | 19                 | 12         | 2         | 60             |
| 2007             | 29                   | 39                 | 12         | 15        | 95             |
| <b>Total</b>     | <b>169</b>           | <b>133</b>         | <b>117</b> | <b>42</b> | <b>461/707</b> |

Sources: Annual Reports of NMECC, the Prime Minister's Department (2000 – 2007)

# APPLICATION OF GEOGRAPHIC INFORMATION SYSTEM & STATISTICAL METHODS FOR EFFECTIVE MARINE FISHERIES LAW ENFORCEMENT IN THE SOUTH CHINA SEA

already more than 20 years old with economical speed of about 15 knots and are expected to patrol the sea areas of about 40,000 square kilometres all year. Likewise, there are only six patrol vessels, two of which are Gagah-class boats that are already more than 28 years old and four Sipadan-class boats that are already more than 40 years old). These boats are expected to continuously patrol a sea area of about 43,891.8 square kilometres. As for the RMN, it deploys three 230 tonne Fast Attack Craft (Missile) that are more than 30 years old. Due to their old age, these vessels have a limited speed of about 20 knots and limited to about 10 operational days at sea. The Marine Police's law enforcement capabilities for this region relies on the three steel PX-class boats (113 tonnes), two wooden PX-class boats (65 tonnes), five PA-class boats (48 tonnes), five PC-class boats (20 tonnes) and 10 two-tonne small fast boats. These boats, except for the steel three steel PX-class boats, are safe for law enforcement duties within the 12 nautical miles of territorial seas.

## INTRUSIONS BY FFVS

Malaysia's fisheries waters in the South China Sea off the east coast of Peninsular Malaysia are rich with both demersal and pelagic species. With a very small number of Malaysian-registered deep sea fishing vessels (there were only 505 vessels of 40–69 tonnes and 316 vessels of 70 tonnes and above registered in Kelantan, Terengganu, Pahang and East Johore in 2005)<sup>6</sup> operating in the South China Sea, it is unlikely that they could disturb the fisheries reproduction cycle that invariably leads to over-fishing. On the other hand, fisheries waters in neighbouring countries, especially the Gulf of Thailand, have already been over-fished in the last few years.<sup>7</sup> Yet demand for fish in neighbouring countries continue to increase resulting

in greater incentives for these foreign fishing vessels to fish illegally in Malaysia's fisheries waters.

The Royal Malaysian Air Force (RMAF) conducts aerial military surveillance over Malaysia's maritime zones daily, especially during daylight hours. However, due to its limited resources and the need to patrol vast maritime areas, the patrol is carried out on a selective basis, depending on the need specified by the Malaysian Armed Forces. As such, fishery surveillance flights are not a priority. During these flights, sighting of any unusual activities or intrusion by foreign fishing vessels into Malaysia's fisheries waters is reported. Details on the intrusion by foreign fishing vessels into Malaysia's fisheries waters from 2000 to 2004 are presented in Tables 2 and 3. Table 2 presents the sighting of illegal fishing activities by foreign fishing vessels in Malaysia's fisheries waters by geographical areas. During this period, a total of 2,619 intrusions by foreign fishing vessels were reported. Of those reported, 771 incidents occurred in the South China Sea off the east coast of Peninsular Malaysia. Table 3 present details on the sighting of illegal activities by foreign fishing vessels during the same period on a month to month basis. The table clearly shows in which months of the year intrusions have occurred.

As discussed earlier, the agencies responsible for enforcing the Fisheries Act of 1985 are the RMN, the MMEA, the Marine Police, and the Department of Fisheries. Table 4 presents data reflecting the number of arrests of

**TABLE 5. ARRESTS OF FOREIGN FISHING VESSELS FOR ILLEGAL FISHING IN MALAYSIA'S FISHERIES WATERS BY MONTH (2000 – 2007)**

| Year         | 2000      | 2001       | 2002       | 2003       | 2004      | 2005      | 2006      | 2007      | Total |
|--------------|-----------|------------|------------|------------|-----------|-----------|-----------|-----------|-------|
| January      | –         | 1          | 1          | NA         | NA        | 4         | 8         | 4         | 18    |
| February     | 1         | 3          | 3          | NA         | NA        | 8         | 3         | 0         | 18    |
| March        | 9         | 12         | 21         | NA         | NA        | 18        | 7         | 7         | 76    |
| April        | 9         | 21         | 28         | NA         | NA        | 10        | 4         | 15        | 87    |
| May          | 16        | 11         | 15         | NA         | NA        | 12        | 2         | 8         | 64    |
| June         | 5         | 7          | 8          | NA         | NA        | 18        | –         | 11        | 49    |
| July         | 2         | 10         | 4          | NA         | NA        | 7         | –         | 14        | 37    |
| August       | 2         | 4          | 9          | NA         | NA        | –         | 7         | 5         | 27    |
| September    | 7         | 6          | 3          | NA         | NA        | 6         | 5         | 12        | 39    |
| October      | 7         | 7          | 14         | NA         | NA        | 6         | –         | 5         | 39    |
| November     | 2         | 20         | 5          | NA         | NA        | 2         | 16        | 13        | 58    |
| December     | 2         | –          | 1          | NA         | NA        | 3         | 8         | 1         | 15    |
| <b>Total</b> | <b>62</b> | <b>102</b> | <b>112</b> | <b>103</b> | <b>89</b> | <b>94</b> | <b>60</b> | <b>95</b> |       |

Sources: Annual Reports of NMECC, the Prime Minister's Department (2000 – 2007)

**TABLE 6. ARRESTS OF FOREIGN FISHING VESSELS FOR ILLEGAL FISHING IN MALAYSIA'S FISHERIES WATERS IN THE SOUTH CHINA SEA OFF THE EAST COAST OF PENINSULAR MALAYSIA (2005)**

| Month/Details of Arrest | RMN      | Marine Police | DOF      | MMEA     | Total Number of Arrests |
|-------------------------|----------|---------------|----------|----------|-------------------------|
| January                 | –        | –             | –        | –        | –                       |
| February                | –        | –             | –        | –        | –                       |
| March                   | 3        | 1             | 1        | –        | 5                       |
| April                   | –        | –             | –        | –        | –                       |
| May                     | –        | –             | 2        | –        | 2                       |
| June                    | –        | –             | 1        | –        | 1                       |
| July                    | 1        | –             | –        | –        | 1                       |
| August                  | –        | –             | –        | –        | –                       |
| September               | 2        | –             | –        | –        | 2                       |
| October                 | 2        | –             | –        | –        | 2                       |
| November                | –        | –             | –        | –        | –                       |
| December                | –        | –             | –        | –        | –                       |
| <b>Total</b>            | <b>8</b> | <b>1</b>      | <b>4</b> | <b>–</b> | <b>13</b>               |

Source: Annual Report of NMECC, the Prime Minister's Department (2005) Note: Data on the location and date of arrests for each of these vessels is kept separately by the authors.

foreign fishing vessels for illegal fishing in Malaysia's fisheries waters by the four maritime enforcement agencies from 2000 to 2007. The table shows that during that period, a total of 707 arrests of foreign fishing vessels for illegal fishing were made. Of these, at least 133 arrests (excluding those vessels arrested in 2003 and 2004 in which their numbers are not available) were made in the South China Sea, off

the East Coast of Peninsular Malaysia.

Table 5 shows details on arrests of foreign fishing vessels on a month to month basis from 2000 to 2007. However, there is no data on monthly breakdown for 2003 and 2004, except that the total arrests made are 103 and 89 respectively.

Arrests by each of the agencies during the same periods in the fisheries waters in the South China Sea are shown in Tables 6 through 9.

### METHODOLOGY

The above data was analysed using both a geographical information system (GIS) and statistical approaches. The GIS is a system for capturing, storing, analyzing, managing and presenting data and associated attributes which are spatially referenced to Earth. A GIS software, Arc View 3.x was chosen to chart out the location of arrests of foreign fishing vessels for illegal fishing in Malaysia's fisheries waters in the South China Sea off the east coast of Peninsular Malaysia for the three consecutive years, namely 2005 to 2007. Two important deductions from the GIS presentation were made. These are the locations of arrests in relation to the various limits of maritime zones and the extent of intrusion by these foreign fishing vessels.

On the other hand, statistical approach was used to analyze and interpret data as presented in the above tables. The expected information to be gained from the use of GIS and statistical methods include which agencies are most effective in carrying out law enforcement at sea, periods in which enforcement efforts are very minimal, and the specific vessels that have been most active in enforcing laws at sea.

Every detail of each arrest of a foreign fishing vessel for illegal fishing in Malaysia's fisheries waters in the South China Sea for 2005 to 2007



*KD Lekir of the Royal Malaysian Navy-photo by Chris Sattler*

was entered into the geographical information system (GIS) software. Extra caution was taken to ensure that the data entered was within the specified limits of Malaysia's fisheries waters in the South China Sea. Once data was entered, the entries were tested for accuracy and stability. The process was repeated three more times to avoid unnecessary error in data entry into the system.

### RESULTS AND ANALYSIS OF RESULTS

The GIS analysis revealed the following:

Almost all arrests of foreign fishing vessels for illegal fishing in the study area were made well inside the outer limits of Malaysia's EEZ boundaries. The furthest distance for an arrest was made at a location about 70 nautical miles from the outer limit of Malaysia's EEZ boundaries. No arrests were made in the vicinity of the outermost EEZ boundary limits, which are 200 nautical miles from the base line where Malaysia's territorial seas are measured.

There were three arrests made just outside Malaysia's territorial seas in 2006 and 2007 respectively.

In terms of the locality of arrests for the three consecutive years, the general areas where most arrests were made was about 40–80 nautical miles from the coasts.

Analyses using statistical methods

revealed the following:

In 2000 to 2004, there were 771 foreign fishing vessels sighted in Malaysia's fisheries waters in the South China Sea, which represents an average of 192 vessels a year. However, there was no data available on the similar incidents from 2005 onward.

During the same period, intrusions by foreign fishing vessels were occurring continuously and the peak period was April (365 cases). Intrusions occurred least often during the northeast monsoon season during December (141 intrusions), January (121 intrusions) and February (112

**TABLE 8. ARRESTS OF FOREIGN FISHING VESSELS FOR ILLEGAL FISHING IN MALAYSIA'S FISHERIES WATERS IN THE SOUTH CHINA SEA OFF THE EAST COAST OF PENINSULAR MALAYSIA (2006)**

| Month/Details of Arrest | RMN | Marine Police | DOF      | MMEA     | Total Number of Arrests |
|-------------------------|-----|---------------|----------|----------|-------------------------|
| January                 | –   | –             | –        | –        | –                       |
| February                | –   | –             | –        | –        | –                       |
| March                   | –   | 2             | 1        | –        | 3                       |
| April                   | –   | –             | 2        | 2        | 4                       |
| May                     | –   | –             | 2        | –        | 2                       |
| June                    | –   | –             | –        | –        | –                       |
| July                    | –   | –             | –        | –        | –                       |
| August                  | –   | 1             | –        | –        | 1                       |
| September               | –   | 1             | 1        | 2        | 4                       |
| October                 | –   | –             | –        | –        | –                       |
| November                | –   | –             | –        | 5        | 5                       |
| December                | –   | –             | –        | –        | –                       |
| <b>Total</b>            | –   | <b>4</b>      | <b>6</b> | <b>9</b> | <b>19</b>               |

Source: Annual Report of NMECC, the Prime Minister's Department (2006)

# APPLICATION OF GEOGRAPHIC INFORMATION SYSTEM & STATISTICAL METHODS FOR EFFECTIVE MARINE FISHERIES LAW ENFORCEMENT IN THE SOUTH CHINA SEA

incidents)

For the period of 2000 to 2004, there were at least 64 arrests made in the South China Sea. It should be noted that there was no data available for arrests made in 2000, 2003 and 2004. However during the period from 2005 to 2007, there were 71 arrests of foreign fishing vessels for illegal fishing in the South China Sea.

During the period of 2005 to 2007, the highest volume of arrests were made in March 2005 (5 arrests), November 2006 (5 arrests) and April 2007 (12 arrests). However, there were no arrests made in the months of January, February and December for each year.

During the same period, two ships, the *KM Jujur* (7 arrests) and *KM Sipadan* (6 arrest) were found to be the most active in terms of the number of arrests made on foreign fishing vessels for illegal fishing. Interestingly there are 11 ships and boats which each made only one arrest during the three-year period. One of these ships is *KM Langkawi*. Despite its capabilities, it made only one arrest and that arrest was in 2005 when it was still in the RMN.

The number of arrests made by the MMEA appears to be increasing. In 2006, the MMEA made nine arrests and in the following year the agency made 26 arrests.

The most important components of maritime law enforcement are: 1) the combination of patrol platforms or ships to carry out sea patrol and enforce law; 2) the legal power to enforce the appropriate acts; and 3) the manpower to carry out maritime law enforcement. Additionally, maritime enforcement agencies must be able to maintain continuous ships' presence in the required sea patrol areas to be able to provide a show of presence, to discover violations, and to provide deterrence. The agency that possesses

the best of these capabilities will be able to remain longer at sea and conduct patrols far away from its bases to the maximum distance of the outer limits of the EEZ boundaries.

The results of the GIS analyses revealed that most arrests were made closer to the outer limits of the territorial seas instead of the outer limit of the fisheries waters, which are also the EEZ boundaries. In other words, the foreign fishing vessels were not prevented from entering deep into Malaysia's fisheries waters. Or, it is possible these fishing vessels were not discovered earlier because there were no maritime enforcement agencies' vessels present in the areas.

There are several possibilities contributing to this less than satisfactory enforcement situation.

First, the agencies are short of suitable assets because most of their present assets are already too old and their capabilities are diminishing.

Second, besides old age, the patrol vessels may not have been operated to the full limits of their effectiveness and required efficiency. The patrol coverage gaps likely could have been minimised had the vessels of the enforcement agencies performed at the expected performance parameters after considering their limitations.

Third, possession of wide ranges of small vessels by the maritime enforcement agencies does not help to breach the enforcement gap in the deep water zones, yet the small vessels "eat

**TABLE 9. ARRESTS OF FOREIGN FISHING VESSELS FOR ILLEGAL FISHING IN MALAYSIA'S FISHERIES WATERS IN THE SOUTH CHINA SEA OFF THE EAST COAST OF PENINSULAR MALAYSIA (2007)**

| Month/<br>Details of<br>Arrest | RMN      | Marine<br>Police | DOF      | MMEA      | Total<br>Number<br>of Arrests |
|--------------------------------|----------|------------------|----------|-----------|-------------------------------|
| January                        | –        | –                | –        | –         | –                             |
| February                       | –        | –                | –        | –         | –                             |
| March                          | –        | –                | –        | 3         | 3                             |
| April                          | –        | 3                | –        | 9         | 12                            |
| May                            | –        | 2                | –        | 1         | 3                             |
| June                           | 2        | –                | –        | 3         | 5                             |
| July                           | –        | –                | –        | 6         | 6                             |
| August                         | –        | –                | –        | 2         | 2                             |
| September                      | 1        | –                | 1        | –         | 2                             |
| October                        | –        | –                | 2        | 1         | 3                             |
| November                       | 2        | –                | –        | 1         | 3                             |
| December                       | –        | –                | –        | –         | –                             |
| <b>Total</b>                   | <b>5</b> | <b>5</b>         | <b>3</b> | <b>26</b> | <b>39</b>                     |

Source: Annual Report of NMECC, the Prime Minister's Department (2007)

big slices" of the agencies' budgets.

The most glaring results of the statistical approach revealed that the number of arrests made by vessels of the maritime enforcement agencies is very low. Yet, as reported by the Royal Malaysian Air Force's maritime surveillance flight, there are many intrusions occurring daily. This phenomenon suggests several possible explanations.

First, the maritime enforcement

*MMEA patrol boat  
(courtesy MMEA)*



agencies' vessels may not be at sea as frequently as they are expected to be. For the layman, it is not easy to understand the fact that a patrol vessel of Malaysia's maritime enforcement agency made only one arrest of a foreign fishing vessel for illegal fishing in three years.

Second, these vessels may not be enforcing the law at the right place and at the right time. Despite the known patterns of illegal activities by foreign fishing vessels during monsoon season from December to February annually, and that fact that sea conditions are not likely to be very rough every day throughout the season, there were no arrests made during these three months for three consecutively years from 2005 to 2007.

### CONCLUSION

Malaysia's maritime zones are one of the main sources of Malaysia's wealth. Both living and non-living maritime resources have become the bedrock of Malaysia's maritime industries. The future of Malaysia's well being relies heavily on the well-being of the maritime industries. The analysis above focused on the need to protect one of the most important natural resources, namely the fisheries sector. The analysis revealed several shortcomings.

The maritime enforcement agencies, despite being provided with the necessary resources, appear, based on the data, to have not been performing as expected. Illegal fishing activities by foreign fishing vessels will continue as long as their activities are found to be lucrative. Malaysia will continue to lose RM 1.0 billion annually to illegal fishing by foreign fishing vessels as long as the maritime enforcement agencies are not able to convey the message to the foreign fishermen that their illegal activities are no longer worth the effort. Conclusively the data supports that the present management system and



operations patterns of the maritime enforcement agencies needs to be reviewed. 🚢

**First Admiral DR H. J. Sutarji, RMN (Rtd)**



*Dr H. J. Sutarji served the Royal Malaysian Navy for 35 years (1970 – 2005). He earned his Master of Arts in Policy and Security Studies from Universiti Kebangsaan Malaysia in 1995 and his PhD in Integrated Coastal Zones Management from Universiti Putra Malaysia in 2003. He is Associate Professor of the Strategic Management of Coastal and Maritime Zones, Faculty of Environmental Studies, Universiti Putra Malaysia*

**Royal Malaysian navy frigate Jebat at Lima 07**  
- photographed by Chris Sattler

**Dr. Nor Rasidah Hashim, FRGS**



*Dr. Hashim is an alumna of Duke University and holds a doctorate in geography from the University of Cambridge. She has been a lecturer on the Faculty of Environmental Studies, Universiti Putra Malaysia since 2006. Her current research interests include historical GIS, forest ecology and heritage conservation.*

### (Endnotes)

- 1 Annual Reports of NMECC, the Prime Minister's Department (2000 – 2004). There are no sighting reports of foreign fishing vessels fishing illegally in Malaysia's fisheries waters after 2004.
- 2 The fisheries waters of Malaysia as stipulated in the Fisheries Act 1985 as maritime waters under the jurisdiction of Malaysia over which exclusive fishing rights or fisheries management rights are claimed by law and includes the internal waters of Malaysia, the territorial sea of Malaysia and the maritime waters comprised in the exclusive economic zone of Malaysia.
- 3 The Fisheries Act 1985, Section 2.
- 4 Coulter, D. Y., (1996), "South China Sea Fisheries: Count Down to Calamity", Contemporary Southeast Asia, Vol 17, No 4, pp. 371 – 388.
- 5 Most of these boats, especially those boats that have been transferred from the RMN and the Marine Police are already more than 20 years old. The Sipadan-class boats (ex-RMN patrol craft) are already more than 40 years old.
- 6 The Annual Fisheries Statistics 2005 (Volume 1), Department of Fisheries, p. 48.
- 7 Mahfuzuddin Ahmed, Pongpat Boonchu Wongse, Waraporn Dechboon and Squires, D. (2007). "Overfishing in the Gulf of Thailand: Policy Challenges and Bio-economic Analysis". Environment and Development Economics. Vol 12 pp. 145–172.

# Virtual Memorial of HMAS Sydney

## Lest We Forget

The Finding Sydney Foundation (FSF) and the Naval Association of Australia (NAA) have launched a Virtual Memorial on the Internet to commemorate the 645 men lost with *HMAS Sydney II* on 19 November 1941.

This provides a unique experience accessible globally for those wanting to learn more about the human loss of *HMAS Sydney II* and honour the memory of the individual sailors through shared stories and images. The Foundation is very grateful to the Naval Association for accepting the task of carrying the *Sydney* banner into the future.

The website, located at <<http://www.sydney Memorial.com>>, features an Honour Roll with individual pages of information for each of the 645 sailors lost. Families are invited to submit stories, images and other related content to feature on each sailor's pages.

The website also houses *HMAS Sydney II* historical information and an extensive set of archival photographs courtesy of the Royal Australian Navy and the Australian War Memorial. Video footage can also be viewed. It includes previous commemorations; the search for the wreck; scenes of the ship and crew in Egypt (July 1940) after the successful engagement with the Italian cruiser *Bartolomeo Colleoni*; the triumphant ceremonial welcome home march in Sydney (Feb 1941) and scenes aboard the ship taken during the months before her loss.

The organisers would be grateful if anyone with their own web site could establish a link to this new effort. ✂

*Below: HMAS Sydney II in camouflage paint-courtesy John Ross*



*The Royal Australian Navy (RAN) bereavement pin recognising the valued contribution of all Navy personnel who lost their lives while in the service of the RAN, and the nation. Please go to <[http://www.navy.gov.au/Navy\\_Bereavement\\_Pin](http://www.navy.gov.au/Navy_Bereavement_Pin)> for more information.*

*Sydney in action as seen from the deck of the Bartolomeo Colleoni (author collection)*



# SAILING INTO HISTORY: The 1908 Voyage of the US Navy's Great White Fleet to Australia, As Seen Through the Eyes of the Media



Remarks presented on September 29, 2008, in Canberra, Australia, on behalf of the Australian Naval Institute.

By Kathleen M. Burns

As we celebrate the centennial of this globe-girdling voyage, it is interesting to observe the many parallels between the attitudes in 1908 and 2008, when viewed on the world stage.

This was no ordinary trip, when 16 battleships and 14,000 men began the first circumnavigation of the globe by a fleet of this magnitude as they sailed out of Norfolk, Virginia, harbor on Dec. 16, 1907. Few on board knew the ultimate destination of the cruise. When the trip ended, the fleet would have covered 46,000 miles over a 14-month period, and established the US Navy's reputation as an international sea power.

Both US President Teddy Roosevelt and Australian Prime Minister Alfred Deakin had specific goals in mind for this voyage. They included aspects of domestic politics, economics, international finance, diplomacy, pragmatism and security. The backdrop was a world – then as now – that was faced with global unrest, threats of war, ethnic racism, political posturing and competition for military spending.

One hundred years ago, both

*The "Great White Fleet" arriving in Port Phillip Bay, Melbourne on August 29th. (Courtesy RAN)*

leaders were also waging a battle for symbolism: to garner prestige, to actively shape public opinion and to win support for their policies. Roosevelt had no qualms about censorship and handpicked the embedded media who would give the coverage and he muzzled the seamen and officers who offered any dissent. There were threats of presidential impeachment by Congress for the costs and for the manpower that would be shifted from US shores to overseas for a lengthy period of time.

The trip also served as an incubator for future Navy talent during World War I and II, with several Ensigns eventually rising to the rank of

Admiral. This included: Husband E. Kimmel, who became chief of the Pacific Fleet; Harold R. Stark, who became Chief of Naval Operations and Kimmel's supervisor; and Raymond A. Spruance and William Halsey who became two of the Navy's most famous and respected Fleet commanders in the Pacific War against the Japanese that would occur more than 30 years later.

The Chesapeake farewell of Dec. 16, 1907, had the air of a festive national holiday. Reporters described the circus-like environment as "splendid cacophony," with 21-gun salutes, military bands and wild cheering. In addition to its human passengers, the fleet resembled Noah's ark with 70 animals on board, including 25 goats, 32 dogs, 12 parrots and a donkey, who would serve as mascots for the different ships.

One Baptist preacher proclaimed in



*A set of cards picturing the Captains and the Ships of the Great White Fleet at the time of departure from Hampton Roads were created by the American newspaper The Evening Post. They were printed with the statement: "How to get the complete set of the Battleship Fleet: Cut the coupon from the classified page of The Star and present same with 10 cents at the Star Office for complete set, including the battleship Nebraska. When sent by mail send 15 cents and coupon."*

## SAILING INTO HISTORY: The 1908 Voyage of the US Navy's Great White Fleet to Australia, As Seen Through the Eyes of the Media



his New York City sermon that the day heralded “the most momentous event in this country since the Civil War.”

Such hyperbole was focused on the ships, lined up in a three-mile-long parade formation, prior to departure. The hulls, glistening in the sunshine, were painted white for the occasion. (It had not been dubbed the Great White Fleet from the onset. “Only long after the cruise had ended would someone hit upon the catchy name which caught the public’s fancy and stuck. In contrast with the usual secrecy that surrounds movements of war ships, the fleet’s voyage was designed to attract the maximum notice of the news media,” according to historian Kenneth Wimmel.)

Initially, it was only announced that the Navy armada was to sail around South America and then stop in San Francisco. It was not until the cruise was well underway that the crew was

told of the extensive nature of the trip.

For Roosevelt, standing on the deck of the presidential yacht, the *Mayflower*, to observe the departure from the Hampton Roads harbor, this was a moment to be savored. The magnificent fleet was almost entirely his creation, tangible evidence of his devotion to the US Navy and his untiring years of service devoted to its strengthening and modernization. Prior to departure, Roosevelt quietly spoke to Rear Admiral

Robley Evans, commander of the Atlantic Fleet, away from the media’s attention. Both were aware of the international tensions bubbling below the surface on the eve of this historic venture. Said Roosevelt, as commander-in-chief, “Your cruise is a peaceful one, but you realize your responsibility if it should turn out otherwise.”

In his public face, the fleet commander, dubbed by the media as “quotable Evans” and described as “a favorite with the newsmen,” told his eager media audience: “You will not be disappointed with the fleet, whether it proves a feast, a frolic or a fight.”

### SETTING THE SCENE

Some media observers saw the cruise as a masquerade, with the ships sailing in peacetime but being fully cognizant of the portents of war that could engulf them in the course of the lengthy

voyage. Divided opinions prevailed. As reported in the *New York Herald* of Dec. 25, 1907, a Baptist minister claimed that “God has led us into the Pacific...I could see it in America’s assertion of her right to control

the Pacific in the interest of civilization and humanity.” But the *New York Times* of Dec. 26, 1907, cited a contradictory opinion from the Catholic Archbishop of St. Louis who noted that the cruise underway was “hypocritical...carrying the palm of peace in one hand while the other holds the key to wherein is stored the 35 million pounds of ammunition for the ‘fight or frolic.’”

Journalist John Scott Merriweather wrote: “No one in these last hours is aware of the massive destructive power of this fleet. The band plays, the ladies and gentlemen promenade and talk, the blue jackets make merry during the last hours in a home port and all this time the ships are ready to let loose a storm of destruction such as never before has been wrought by man on the face of the waters.”

Globally, the world was in a state of unrest.

Naval expansions were underway by Great Britain (then the dominant fleet) as well as naval expansions by Germany, France, Russia, Austria, Italy and Japan, which was emerging as the undisputed great power in the Pacific.

Kaiser Wilhelm II had coined the term “Yellow Peril,” to define Japan’s ambitions after the defeat of Russia in 1904-05. The phrase had ominous significance for West Coast Americans as well as for Australia, Europe and Asia.

In May 1907, Roosevelt spoke out against anti-Japanese riots in San Francisco and chastised “certain journalists” and editors who passed off rumors as fact. He added that “I shall continue to do everything I can by politeness and consideration to the Japanese to offset the worse than criminal stupidity of the San Francisco mob, the San Francisco press and such papers as the *New York Herald*.”

Said Roosevelt, “My own judgment is that the only thing that will prevent war is the Japanese feeling that we shall

Postcards celebrating the Great White Fleet

12 inch Guns on USS Louisiana – issued as a postcard





*Naval historical file photo of the Great White Fleet. In 1907, Theodore Roosevelt, 26th president of the United States, sent a portion of the Atlantic fleet on a world tour to test naval readiness, establish global presence and generate international goodwill. (US Navy photo)*

not be beaten, and this feeling we can only excite by keeping and making our navy efficient in the highest degree.”

### **ROOSEVELT AS A MAJOR PLAYER ON THE WORLD STAGE**

Daring, individualistic, self-confident, determined, bigger than life, domineering, at times belligerent, Roosevelt was an adventurer and sportsman, beholden to no one. When he assumed the presidency in 1901, the military in general and the Navy in particular were to be among the centerpieces for his administration.

For two years, Roosevelt secretly planned the launch of his Great White Fleet, sharing little with the Congress or his Cabinet. It was not until the spring of 1907 that he began to discuss his strategy more openly with his military advisers.

Roosevelt had very specific goals in mind for this historic trip:

**Politically:** to influence the 1908 US elections on behalf of his party and to generate increased moral and financial

support in Congress for funding for the Navy, so he could gain a dozen or so new battleships.

**FINANCIALLY:** to calm the panic that had ensued in 1907 when a stock market sell off had plunged values by \$2 billion, and triggered credit speculation, overexpansion and the unsound banking conditions. International banking panic was also

*Below: From Cremorne Heights the USS Minnesota in Sydney Harbour. Below: Crowd watching the Fleet from Centennial Park in Sydney*

occurring in London, Paris and Berlin.

**INTERNATIONALLY:** to create a diverting foreign adventure, such as the fleet's trip, to take the public's mind off the Depression, which had begun in 1907.

**ECONOMICALLY:** to focus on the fleet would be a boon for the US shipbuilding industry and a salvo to Wall Street magnates who were in steel and other similar industries.

**DIPLOMATICALLY:** to arrange courtesy calls by the fleet to Japan and China would help temper some of the simmering racial conflicts in the United States related to those countries.

**SECURITY-WISE:** to impress other countries with the might and power of the US fleet and to stave off swirling war sentiments while generating good will among allies such as Australia and New Zealand.

**GEOGRAPHICALLY:** to emphasize America's interests in the Atlantic and Pacific and to reinforce the expectation that the United States was to be considered a major player.

### **PATRIOTICALLY:**

to generate a groundswell of domestic support and to drown out critics and muckraking journalists.

### **PUBLIC**

**RELATIONS:** the strongest reason for Roosevelt was to garner prestige and to significantly influence public opinion. “One disliked admitting he wanted prestige for its own sake, would pay millions of dollars for it and risked thousands of lives and 16 battleships to gain it. For prestige adhered best as a



## *SAILING INTO HISTORY: The 1908 Voyage of the US Navy's Great White Fleet to Australia, As Seen Through the Eyes of the Media*



Roosevelt was taking no chances. Censorship was an absolute necessity -- never mind the First Amendment.

Mindful of some descriptions of the "highly exaggerated or even pure fiction" of the jingoist coverage inspired by Randolph Hearst and Joseph Pulitzer during

with a court martial who criticized the trip "as a waste of time."

Under Roosevelt's scenario, the voyage "was plotted as a romantic success story. No flaw or failure, no matter how minor, must be allowed to mar its inspiring effect upon America and the world," wrote Hart. Eager for international approval for its commanding fleet, Americans devoured the news coverage. "Never before had so much energy and money been invested in a search for prestige," echoed historian Kenneth Wimmel.

Some writers not on board spoke frankly, such as American humorist Mark Twain, who wrote that it was "'all for show' to make a great noise that would satisfy the president." *Harper's Weekly* called it "'an extravagant display of force' which caused uneasiness among its readers." A bit over the top, the *US Navy League Journal* called the cruise the "most remarkable [voyage] ever undertaken in the history of the world."

Historian Hart related the dire media predictions made during August and September 1907, when "almost all Eastern editors criticized Theodore Roosevelt [for the cruise.] Some even demanded an impeachment trial for sponsoring a project which would leave the Atlantic Coast unprotected. Cities would be bombarded and the White House burned. Storms, rocky coasts and hidden enemies would finish off the fleet long before it reached the Pacific." A *N.Y. Herald* poll revealed that "one-seventh of the American press was hostile to the cruise (largely for political reasons)."

Adding to the media frenzy were the openly "yellow press" and books on the "yellow peril." In May and June of 1907, both the *New York Times* and *Colliers Weekly* published fiction serials which described future fighting around Hawaii and the Philippines, while *Banzai*, a German novel, gave



byproduct, the unsought dividend of solid achievement," noted historian Robert Hart.

In the battle for symbolism in 1907, a battleship was the ultimate weapon. Hart described it as "a paradox of power and beauty [that] demanded attention--pride and affection of people whose flag it flew and the envy and fear of adversaries. Why hide it in a stock pile? Why not place it on display as one usually does with costly and beautiful possessions? The meaning of prestige was quite clear to anyone who watched a parade of ships." It was a proclamation to the world of such intangible virtues of honor, dignity, strength and respect.

And the harbinger of that prestige was tightly controlled positive publicity.

*Above top: USS John S. McCain Commanding Officer, Commander John Banigan and his ships were welcomed to Melbourne by the traditional land owners, the Boon Wurrung people. (Courtesy RAN)*

*Above bottom: HMAS Darwin, USS John S. McCain and HMAS Sirius participate in the 100th anniversary of the Great White Fleet entry into Sydney Harbour 1908 - 2008. (Courtesy RAN)*

the Spanish American War of 1898, Roosevelt hand picked the reporters who would travel on board the Great White Fleet. A press center was created aboard the ship, Connecticut, "to cater to the needs of a pool of newsmen invited to sail as passengers."

Roosevelt declared that "It is absolutely essential to have men whom we can trust entirely on such a trip, and, of course, every article they send must be submitted to an admiral... We will take no one whom we do not entirely approve." While he was willing to consult with the major press organizations about suggested names, he reserved the right to reject any name suggested.

Beyond the press, he also muzzled the Navy, with any officer threatened



*Seaman Combat Systems Operator Josh Little, Able Seaman Combat Systems Operator Daniel Antwis and Seaman Combat Systems Operator Luke Martin from HMAS Darwin after berthing alongside the Port of Albany for Great White Fleet celebrations. (Courtesy RAN)*

a fictional account of how “Japanese ships, equipped with secret weapons, would wipe out the US Navy in half an hour of battle and then land an army in California.”

Another book, *The World's Awakening*, published in early 1908, described a hypothetical world war in 1920, triggered by a visit by the Japanese fleet to Sydney. The fictional sailors caused a riot in the city, and then their fleet shelled the Sydney crowds. Next, Japan and Germany,

*Top: USS Shoup sails into the Port of Albany to come alongside with HMA Ships Darwin and Sirius for the Great White Fleet 100th Anniversary. (Courtesy RAN)*



*Midshipman Isabelle Collins, Second Class Petty Officer Boatswain's Mate John Parkowski and Leading Seaman Naval Police Coxswain Jamie Bowman study a map to find out Albany's hot spots, during the Great White Fleet visit. (Courtesy RAN)*

these dismissals kept quiet. They were justified, he felt, but might not read well in the papers,” noted historian Hart.

### **AUSTRALIAN PRIME MINISTER ALFRED DEAKIN**

Half way around the world, Roosevelt found an enthusiastic and vocal supporter of the American fleet. “A lawyer by training, a journalist by profession and a philosopher by inclination,” Deakin was the chief architect of the Australian defense and foreign policy framework from 1903 to 1910.

He shared Roosevelt's security concerns, noting that Australia's location was within striking distance of “no less than 16 naval stations.”

The countries headed by Roosevelt and Deakin also shared racial biases in the quest to spotlight the white race.

Our Navy” appeared in the January 1908 issue of *McClure's Magazine* and was sold out in hours. Roosevelt, who had coined the term “muckraker,” was furious when he found out Reuterdaahl was on board and had him kicked off the ship when it arrived in Peru.

Seven of the reporters, “either because of fatigue or disgust,” asked their papers to replace them before the end of the voyage. The Navy kicked out two others and “a jaded United Press colleague” also left.

It wasn't just the reporters who ran into problems on this voyage. Five of the 16 captains for the ships either died or were fired and “Roosevelt wanted

bound by “an unholy alliance,” invaded England. The book fueled Australia's growing sense of vulnerability and isolation in the Pacific.

The journalists who accompanied the Great White fleet in order to tell Roosevelt's story all insisted that “they were reporters, not publicity men.” Henry Reuterdaahl, described as “a muckraker in disguise,” came on board as an artist because his paintings of mighty ships were well known throughout the country. He was also the American editor for the British publication, *Jane's Fighting Ships*. Four days after he sailed with the fleet, his investigative article on “The Needs of

## ***SAILING INTO HISTORY: The 1908 Voyage of the US Navy's Great White Fleet to Australia, As Seen Through the Eyes of the Media***

"Yellow Peril" fears were rampant on both sides of the Pacific.

Australia and America also shared a bias against the black races, and this was reflected in the response to the US cruise's crew selection, with stories appearing in the Dec. 12 and 14, 1908, *N.Y. Herald*: "Negro volunteers, who had joined the Navy in good faith, were chosen to fill the gap as bus boys and stewards to replace the Japanese [sailors], some of whom had those jobs for 20 to 30 years and were let go prior to the voyage of the Great White Fleet, rather than sail into these foreign ports with Japanese recruits."

### **AMERICA'S INVASION OF AUSTRALIA'S FAVORED SHORES: AUGUST AND SEPTEMBER 1908**

Australia was the 13th stop of the lengthy itinerary of the Great White Fleet, which came to Sydney Harbor Aug. 20-28; Melbourne Aug. 29-Sept. 5; and Albany (Western Australia) Sept. 11-17, 1908.

It was an impressive convoy with the 16 ships carrying 360 guns. "Firing a single salvo from all the guns would have cost \$50,000, which many reporters noted, happened to be the size of the president's salary for one year. Cost for constructing the fleet was estimated at \$100 million (almost 100 years ago!) Weighing in at 250 million tons, the fleet was described as five times more powerful than any fleet America had yet assembled.

On shore, Australia's population had turned out for the historic moment. The government proclaimed two public holidays and many businesses also closed down. Sydney trams carried almost one million passengers on Aug. 20 alone. The city was decked out in elaborate decorations, flags, bunting, banners and lights. According to Australian Sen. E. Findley, it was a triumph for "gush, gore and guzzle!

On the front page of Aug. 20, 1908,



***Ships in company: HMA ships Darwin and Sirius along with USS JOHN S McCain in transit to Melbourne to celebrate the 100th Anniversary of the Great White Fleet. (Courtesy RAN)***

*New York Times*, an unidentified reporter wrote: "So intense was the interest in the American ships of war that half the populace had remained awake the entire night and thousands upon thousands of them long before the night was over were on their way to the hill tops outside the city limits, where they massed seemingly in unbroken lines along the coast from Bondi Beach to Manly...Hundreds of craft of all kinds moved up and down even at that early hour (5:30 a.m.), all the waters...being dotted with little and big vessels decorated in every conceivable manner with flags and buntings." The sight of the fleet "stirred Australians like a call to arms," the reporter noted.

Throughout its many pages, the *Sydney Morning Herald* of Aug. 21, 1908, covered the event with similar enthusiasm. "Never has Sydney Harbour presented such a picture by night. Each visiting battleship, together with the auxiliary ships attached to the fleet, were outlined in electric lights, and as they occupied a wide range of space, the scene was as extensive as it was brilliant."

And everyone was on their best behavior. "There was an absence of rowdiness. No ear-splitting yells made the night hideous, and there was no interference with women." (This was a welcome relief since there had been

riots at the previous stop in New Zealand between US sailors who wanted to stay versus the US Navy shore patrol who wanted them to leave--with local mobs taking sides. It received much newspaper coverage, including in the Aug. 15, 1908, *New York Sun* and the Jan. 16, 1909, *London Times*.)

Franklin Matthews, a correspondent for the *New York Sun*, regaled his readers back home with tales of the Sydney welcome. He estimated the crowds to be three times as large as those they had encountered in San Francisco: "no such enthusiasm has been witnessed by Americans in any parade since the day George Dewey [American naval hero for battles in the Philippines during the Spanish-American War] came sailing back to New York and his sailors and marines went swinging down Fifth Avenue."

Matthews coined the term, "Fleetitis," to describe the outpouring of emotion toward the fleet. "It is almost impossible to put in cold print anything that will tell fittingly the stories of enthusiasm and the sentiment that inspire a demonstration which simply overwhelmed not only those who received it but those who gave it... Fleetitis is raging all over the Antipodes now."

There was almost a "coverage competition," according to author

Robert Hart, who added that “Sydney’s newspapers claimed that the welcome was bigger, better and noisier than anything, California efforts included, thus far experienced by the Americans.”

Hart notes that “American newspapers reported tremendous gains in prestige...Editorialists assured Australians that they would some day be part of a new American empire” with the *New York Sun* going so far as to suggest that America admit Australia “as a state within our federal union.”

But the media was not unanimous in its support of the Australian love feast. The *US Navy League Journal*, quoted in the *New York Times* of Aug. 21, 1908, stated: “We watch the success of President Roosevelt’s mammoth Hurray Party with benevolence and amusement” even though “it consorts ill with the present engagements of the Empire.” The London *Daily Graphic* (quoted in the *New York Times* of Aug. 21, 1908) saw the trip as contributing to international tensions and the London *Times* (Sept. 1, 1908) expressed fears that a “spectacular display has valuable uses in impressing the masses, who will remember the sight for years and draw important political deductions therefrom.”

What Matthews didn’t write about were the things that went wrong, including the seven people injured who had been trampled in the streets or had fallen off buildings while watching the parades or fell when the grandstands collapsed. Two US sailors were killed by a rampaging trolley “whose motormen seemed infected by the general madness” and the victims couldn’t be buried because Melbourne had declared there were to be no funerals “to mar the happiness of the visit.”

In his public dispatches back home, Matthews failed to disclose that “many of the lads fell under the influence of Melbourne’s uninhibited ways. Often

they went off to live with the girls who had kissed them. Others turned the week into a drunken spree which shore patrols could not control. A half a million Australians watched the disastrous parade of Aug. 31...

Trumpet notes

wavered and broke and trombones meandered over history’s worst playing of ‘Columbia the Gem of the Ocean’...Bleary-eyed seamen lurched, reeled and collided...An infuriated Roosevelt took a personal interest in the courts-martial which followed, stiffening punishments already imposed by the Navy.” Indeed 300 sailors went AWOL in Australia and 221 successfully eluded return to the US ships. “Several dozen” also stayed behind in Auckland.

For Roosevelt, he never doubted that the Fleet’s visit to Australia and the other stops would be anything but an unqualified success. The journey had lasted 434 days, without a serious breakdown, and returned to home port on Feb. 22, 1909. He succinctly stated: “My purpose was to impress the American people. This purpose was achieved.” Another goal was generating favorable media coverage from his handpicked writers and that also occurred.

Less optimistic in his overall assessment of the Great White Fleet’s voyage, author Hart noted that “while the fleet was a study in sound and fury in its progress from nation to nation, it was a failure as an instrument of diplomacy. Where practical international issues were concerned, it lost more than it gained.” Roosevelt certainly would have disagreed. 🚩



## GREAT WHITE FLEET ROUTE AROUND THE WORLD

*The Fleet departed Hampton Roads  
December 16, 1907, and returned there  
on February 22, 1909*

### Punta Arenas

- February 1-7, 1908 (at the tip of South America)

### Honolulu

- July 16 to 23, 1908  
Auckland, New Zealand  
- August 8-15, 1908

### Sydney, Australia

- August 20-27, 1908

### Melbourne, Australia

- August 29 - September 3, 1908

### Albany, Australia

- September 11 - 17, 1908

### Yokohama, Japan

- October 19-23, 1908

### Colombo, Ceylon

- December 14-20, 1908

### Port Said

- January 5-7, 1909

### Gibraltar

- February 6, 1909



*A writer and academic  
based in Washington, DC,  
Ms. Kathleen Burns spent  
five years in Canberra as a  
reporter accredited to the  
Parliamentary Press Gallery.  
Returning to the USA, she  
was the inaugural program*

*director for the Center for Australian and New Zealand  
Studies at Georgetown University and served the first four  
directors.*

# The Influence of History Upon Sea Power

ASSISTANT PROFESSOR CHUCK STEELE

Alfred Thayer Mahan's *The Influence of Sea Power Upon History* was one of the most important pieces of navalist propaganda ever produced. Political leaders, industrialists, naval professionals and enthusiasts of the late nineteenth and early twentieth centuries saw Mahan's seminal work as a testament to the adamant link between world power and the possession of a respectable fleet. Despite being published in 1890, *The Influence of Sea Power Upon History* has retained its place as one of the great works of strategic thought and Mahan remains America's best known strategist. Most importantly, the fundamental connections that he addressed over a century ago remain important to the considerations of naval planners in the modern era. Specifically, finding historic examples to justify the enormous expenses associated with the accumulation of the means by which a nation might demonstrate its ability to wield sea power remains a pressing concern to statesmen and naval professionals.

In the 1986 publication *The Maritime Strategy* General P.X. Kelley, then Commandant of the United States Marine Corps, sought to inform his readership of the continuing importance of "amphibious forcible entry operations."<sup>1</sup> According to the Commandant's contribution to the

document, "The Amphibious Warfare Strategy," this particular form of amphibious operation was not antiquated. Rather, it was timely and deserving of a prominent place in American defense planning. In initiating his case, Kelley recollected the remarks of General

Omar N. Bradley, who as Chairman of the Joints Chiefs of Staff in 1949 testified before Congress that large-scale amphibious operations would "never occur again."<sup>2</sup> Thirty-six years after the invasion at Inchon proved General Bradley's judgement to be in error, General Kelley invoked the episode to reiterate the timelessness of such operations. Yet, whereas General Bradley had given too much heed to developments occurring in but a few years, General Kelley set about justifying the continued prominence of the amphibious assault by failing to note the advances attendant upon the passage of decades.

Before the Second World War, the future of amphibious operations was in doubt. The utter failure of British led forces at Gallipoli made it seemingly apparent that to attempt landings in

the vicinity of a rapacious foe was to court certain disaster. As demonstrated so dramatically in the battles of the Great War, the technological advances of the twentieth century bolstered the prospects for success of those fighting defensively. As amphibious assaults were essentially frontal attacks hindered by the added difficulties of ship to shore transit, there was little wonder that consideration for their future conduct drew criticism.

In the interwar years, amphibious assault operations seemed doomed to all but the most steadfast or desperate of adherents. Falling into the latter category were a few members of the US Marine Corps who, after seeing their service act as an adjunct to the Army during the Great War, sought to carve out a niche for their service by establishing it as the appropriate means to further trans-oceanic campaigns through the seizure of advanced naval bases. Building upon the prescience of men such as Major Earl H. Ellis, the Marines began to develop the doctrine that would prove instrumental in delivering victory to the Allies in the Second World War. Indeed, former Commandant of Marines, Alexander Vandergrift, contended that, beyond



*Photo: V Beach at Cape Helles, Gallipoli, 6 May 1915. View is from the bow of the collier SS River Clyde. Credit: British Official photographer*



their impressive record on the battlefields of the Pacific, the Marines Corps' greatest contribution to victory in World War II was its pioneering efforts in shaping amphibious doctrine.<sup>3</sup>

The Second World War was the heyday of the amphibious assault. Not only had doctrine come into existence and been given a wide range of applications, but so too had new technologies to support that doctrine. In order to fight this special brand of warfare, requirements emerged for special vehicles to convey troops to assault staging areas and then on to shore. In many instances there were physical obstacles to overcome, such as coral reefs, and hence the need to create machines that could surmount these obstructions. The development of means of conveyance such as landing ships, assault landing craft, and amphibian tracked vehicles provided the physical means by which doctrine could be implemented. The successful marriage of doctrine to technology gave the Americans and their allies the tools they needed to achieve victory more than a half-century ago. The ingenuity of Marine planners and contractors, coupled with the determination of the Marines at the war's sharp end, produced a record that became legendary. Unfortunately for future generations the glory achieved in the Second World War overshadowed considerations for technological advances that took place in the decades following its conclusion.

For 45 years following the Second World War, the primary concern for American defense planners was the prospect of military confrontation with the Soviet Union. Until the Cold War came to its unexpected end, the United States developed its force structures and capabilities, including those of the Marine Corps to counter the threat of Soviet expansion. Having risen to

a position of full partnership with the other armed services of the United States in the aftermath of World War II, it was little wonder that the Marines sought a major stake in the planning for a U.S. Soviet showdown.

*The Maritime Strategy* of 1986 contained clear expression of the Marine Corps' desire to play a major role in any combat with the Soviets and to replay the role that had made them most famous. The "Amphibious Warfare" portion of the strategy advanced a three-phase program by which the Marines would deal with the anticipated threat. In the first phase the Marines would respond to Soviet aggression by transporting amphibious forces to the periphery of the crisis area, which was, according to *The Maritime Strategy*, regarded to lie in Europe.

The deployment of amphibious task forces from the United States, movements of MPSs (Maritime Prepositioned Shipping squadrons), to crisis areas, and the commitment of a MAB (Marine Amphibious Brigade) to the defense of Norway will materially assist other Western efforts to dissuade the Soviets from launching a general war. If the Soviets attack despite these efforts, however, we will be deployed to engage the aggressor far forward and to blunt his assault.<sup>4</sup>

If war had erupted the framers of the "Amphibious Warfare Strategy" envisioned the Marines to be used more actively in the succeeding two phases. Phase II represented the time when NATO forces were to have seized the initiative. It was in this phase that the proponents of the amphibious assault would have sought their first large-scale employment.

Amphibious forces could play many parts in this phase. One likely mission could be the seizure of advanced naval bases. Amphibious raids of MAB size or full-scale MAF (Marine Amphibious



Force) amphibious assaults could be conducted for the follow-on introductions of U.S. and allied forces.<sup>5</sup>

In the third and final phase, that which was intended to carry the fight to the enemy, the proponents of amphibious forcible entry would have sought a prominent place in winning the war. Their ambitions, coupled with their firm grounding in the history of amphibious operations in World War II, prompted them to envision a grand scale revisiting of the battle for the Pacific:

Exhausted and contained by a stout NATO defense in the central region, stripped of his naval forces through a bold and decisive allied maritime campaign, and barred by NATO pressure on his flanks, the Soviet invader will now be pounded by a succession of NATO sea, air, and land counteroffensives. . . . Amphibious forces will once again play a prominent part in the final phase. Massed amphibious task forces, together with supporting battleship surface action groups, will now undertake landings to retake conquered territory and to

*Caption: Marines show their appreciation to the Coast Guard during the invasion of Guam during World War II*  
Source: US Coast Guard

## The Influence of History Upon Sea Power

seize key objectives in the Soviet rear. Operating as a component of the naval campaign, MAGTF's (Marine Air Ground Task Forces) could land on the North Cape, the Eastern Baltic or the Black Sea coasts in the Kuriles, or on Sakhalin Island thereby adding crucial leverage to the successful conduct of the maritime campaign.<sup>6</sup>

This bold vision of how World War III might have been fought was one that did not withstand close scrutiny. Beyond Soviet plans to initiate a campaign of conquest with a first resort to nuclear weapons, something not considered in *The Maritime Strategy*, a major problem was that developments in the field of amphibious forcible entry had not kept pace with the ambitions of those who would have employed them.<sup>7</sup> As demonstrated in the reference to amphibious task forces, coupled with battleship action groups, the framers of the "Amphibious Warfare Strategy" were making an appeal to an outdated approach to battle. Just as the battleship exemplified a bygone era in naval warfare, so too did the large-scale amphibious assault.

The proliferation of advanced weapons systems by the Soviets, their clients, and other nations created an environment in which the viability of large-scale amphibious assaults was placed in great doubt. Ten years prior to the formulation of *The Maritime Strategy* the Brookings Institute crafted a report declaring the advent of precision-guided munitions (PGMs) a grave threat to the conduct of amphibious operations. The report made note of the obvious vulnerability of landing craft and helicopters as they made their way to landing zones. Furthermore, the naval assets necessary to support the assault were exceptionally good targets for weapons "whose probability of making a direct hit at full range upon a tank, ship,



radar, bridge, or airplane (according to its type) is greater than half."<sup>8</sup> The threat posed by PGMs did not diminish in the later years of the Cold War-- rather, it grew stronger. According to one defense commentator writing the year before *The Maritime Strategy* was published, the Marines were facing an increasingly "hostile" environment in which there was "wide spread diffusion of advanced weapons which have a high single-shot probability-of-kill (SSPK)."<sup>9</sup>

By the mid 1980s the Soviets had developed and deployed a wide range of coastal and ship borne anti-ship missile systems that could strike an invasion force well before it was within sight of shore. The Styx family of conventional missiles had been proven at ranges not exceeding 40 nautical miles in battle by the Egyptian Navy in 1967 and again by India in 1971. Styx missiles included variants that could be launched from ship or shore to threaten the most prominent vessels in any invasion force.<sup>10</sup> Furthermore, with the ability to deliver conventional and/or nuclear warheads, Soviet missiles threatened not only individual ships, but also entire invasion fleets. For longer ranges the Soviets could rely on

weapons such as the Shipwreck missile that was capable of carrying nuclear or conventional warheads 300 nautical miles.<sup>11</sup>

This increasingly dangerous environment provoked a drive within the U.S. amphibious community to seek ways to mitigate the effectiveness of Soviet weaponry. The need to operate from over the horizon (OTH) became a necessity as modern shipping assets were seen as both more precious than during the Second World War and more vulnerable. As a result of having to husband irreplaceable resources, it became imperative to keep ships out of range of the enemy.

In the 1982 Falkland's War, the British were introduced to the dangers posed by PGMs when they were attacked by Argentine aircraft firing French Exocet missiles. Although the British emerged victorious, their troubles indicated the vulnerability of amphibious forces to a new generation of weapons. With a combination of Exocets and conventional bombs, the Argentines sank five British ships and damaged an additional twelve. Indeed, the British had been limited in their amphibious operations by the capabilities of their opponents.

*Komar missile boat of the 1960s (Courtesy Tom Lewis)*

Fortunately for the British, they had dodged the bullet of conducting an amphibious assault and were able to come ashore without meeting prepared defenses. According to one Soviet Admiral, the British were successful in their landings because speed and the effective use of darkness disallowed the Argentines the chance to mass their forces or bring in air support.<sup>12</sup>

The British fought smart in the Falklands, but how well would the operation have fared if they had attempted a World War II style assault? What would have been their prospects for succeeding if they had faced a foe as sophisticated as the Soviet Union? In consideration of these daunting prospects, there was little reason to think that if American forces had been compelled to act in accordance with the vision of *The Maritime Strategy* they would have been as fortunate as their British allies had been in 1982.

The problem for the U.S. was that

amphibious warfare doctrine and technology in the 1980s were too closely akin to their Second World War predecessors. A Marine officer writing in 1985 reflected on how then current doctrine supposedly represented the developments of 50 years, yet differed little from the original doctrine of the 1930s.<sup>13</sup> One former Marine noted the incongruities between capabilities and doctrine in 1989 writing that to attempt landings reminiscent of those conducted in World War II against a "first-rate enemy," would meet with "almost certain defeat."<sup>14</sup> However, the Marines continued to conceptualize a return to the mode of warfare that won them everlasting renown. While the Navy scrambled to win approval for the construction of the greatest fleet in peace-time history, the Marines sought their share of appropriations to make possible a grand scale revisiting of the brand of fighting they made famous.

Regardless of the intentions of

Reagan era appropriators, the Navy and Marine Corps would have been hard pressed to have enacted the program envisioned in *The Maritime Strategy*. As a result of neglecting such vital components of assault capabilities as mine sweeping, a shortcoming that would be impressed upon the Navy during the 1991 Gulf War when both the USS *Tripoli* and USS *Princeton* struck mines on the morning of 18 February, the Navy and Marines were not materially prepared to conduct assault landings in a modern setting. Assuming that U.S. amphibious forces had been pressed into service against the Soviets and managed to find a clear path to the shore, their means of transit from ship-to-shore would have exposed a wide gap between objectives and capabilities.

As a result of the proliferation of PGMs and the increased hazards of the modern battlefield, American planners set about developing a better

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means to reach the beach. Specifically, the United States created the Landing Craft Air Cushion (LCAC) that was capable of carrying from 60 to 75 tons at speeds up to 50 knots while providing access to a purported seventy percent of the world's shoreline.<sup>15</sup> Not only did the LCAC become the first U.S. landing craft to appear physically different from the original bow ramp boats of Andrew Higgins, but it was also the first craft to perform in a greatly improved manner.

Republic of Korea (ROK) Marines assigned to the 7th Marine Regiment, 2nd Battalion, 1st Marine Division, disembark from a US Navy landing craft air cushion (US Navy photo)

While the LCAC represented a significant qualitative improvement over the older and more numerous forms of landing craft, as late as 1989 there were only fifteen that were operational.<sup>16</sup> Furthermore, during the 1991 Gulf War the Navy found that even the LCAC was saddled with its own set of operating limitations when two landing exercises had to be canceled due to difficulties associated with inclement weather.<sup>17</sup>

Even if there had been sufficient numbers of LCACs to expend in the conduct of an amphibious assault there remained two other problems that would have proven insurmountable. First, the LCAC is a fairly large vehicle that throughout the 1980s had little means of transport in the fleet. If it had been employed as the primary means of conveyance for an OTH assault of major proportions it would have been



incumbent upon the Navy to provide a veritable armada of transports solely for the purpose of moving assault craft to the objective area.<sup>18</sup> Secondly, the LCAC lacks defensive armament and, when stopped, presents an inviting target. By coupling limited numbers of LCACs with the high risk of having those craft destroyed, either en route to the beachhead or upon unloading, the ability to sustain a major frontal assault, for example in the retaking of conquered territory as envisioned in *The Maritime Strategy*, would have been tenuous at best. Thus, without the LCAC, the implementers of *The Maritime Strategy* would have been forced to rely on a variety of landing craft that generally traveled no faster than 8 knots and could reach no more than seventeen percent of the world's shoreline.<sup>19</sup>

When consideration is given to the other means available for conducting an amphibious assault, the prospects for success were not greatly enhanced. If tracked amphibious vehicles, such as the LVTP-7, were the planned means of conveyance the assault would have

been subject to even greater risks. While the LVT is truly amphibious, being capable of fighting its way ashore and providing mobility and protection for assaulting troops, its use entailed numerous drawbacks. Moving at speeds under 10 knots, the LVT could not be used in an OTH assault. Its slow speed coupled with the limitations of human endurance required that transit should not greatly exceed a half-hour and that launch distances remained about 4,000 yards from shore.<sup>20</sup> Thus, in conducting an assault using LVTs the amphibious task force would have been denied the safety of operating from over the horizon and in such circumstances would have run the greatest risk of meeting harm from enemy PGMs and mines.

The LVT and other landing craft that filled America's amphibious arsenal during the Cold War differed little in appearance or performance from their World War II forbearers. Even though LVTs carried their Marines completely enclosed, they were thin-skinned and made slow, methodical approaches to shore.

*Republic of Korea (ROK) Marines assigned to the 7th Marine Regiment, 2nd Battalion, 1st Marine Division, disembark from a US Navy landing craft air cushion (US Navy photo)*

The similarities between Donald Roebling's first LVTs and the tracked landing vehicles of the Cold War were substantial indicators of how little progress had been made in the preparation for amphibious assault missions from the time of the Second World War to that of *The Maritime Strategy*.

The "Amphibious Warfare Strategy" concluded in a manner that was hauntingly reminiscent of a state of mind that existed on the eve of the First World War. The authors of the "Amphibious Warfare Strategy" concluded their portion of *The Maritime Strategy* by making the following assertion:

Though some military commentators regard World War II to be the high point in the development and conduct of amphibious warfare, we take a different view. We believe that there is ample evidence to suggest that we have entered a renaissance period in the evolution of amphibious operations. . . . Indeed the incremental advances we have experienced in the art of amphibious warfare will soon be giving way to an exciting era – in which the rapid pace of strategic, operational, and tactical improvements will transform the current renaissance into nothing less than an amphibious revolution.<sup>21</sup>

The Marines defense of amphibious assault was remarkably similar to the defenses offered by cavalry officers at the turn of the last century. After the military critic Ivan Bloch had described how advances in small arms technology and the use of trenches would hasten the cavalry's departure from the battlefield, one British colonel responded by stating that " . . . the sunset of the cavalry has not come yet, but that it is its full noonday."<sup>22</sup> While the Cold War never turned hot enough to put the "Amphibious Warfare Strategy" to the test, this comparison

remains relevant. Just as certain technological breakthroughs made it impractical or moreover too dangerous for men to press home an attack while mounted upon horses, so too had it become unacceptably hazardous to launch massive frontal assaults from the sea.

### EPILOGUE

While the U.S. Navy and Marine Corps never had the opportunity to put the resources sought in *The Maritime Strategy* to direct use against the Soviets, in 1991 the services played a significant role in achieving victory in the Gulf War. However, the Marines' contributions to victory in 1991 took the forms of a well executed land based assault, participation in an air campaign, and merely providing the threat of an amphibious assault. General H. Norman Schwarzkopf's use of amphibious forces as a decoy, while effective in keeping Iraqi attention split between multiple fronts, fell far short of the vision of amphibious operations offered by the Marines in the "Amphibious Warfare Strategy." Indeed, the damage to the *Tripoli* and *Princeton*, the threat of PGM strikes close to shore, coupled with the inability to successfully conduct rehearsals involving LCACs suggested that the desire to reconstitute an ability to engage in the types of operations that had propelled the Marine Corps to its greatest renown was out of step with the passage of time.<sup>23</sup> 🐉



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- 23 For a more comprehensive examination of the difficulties attendant on staging amphibious operations in the run-up to the Gulf War see Pokrant, 150, 151, 155, 156, 197, and 200.



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# MAINTAINING FLEXIBILITY: MULTI ROLE VESSELS & MISSION BASED MODULAR PAYLOADS

BY COMMANDER STEWART DUNNE

*"The tempo of operations is not expected to decrease significantly in the future. Flexible, versatile and rapidly deployable forces will be required"*

- Plan Blue 2006

*"We first survey the plot, then draw the model; then must we rate the cost of erection; which if we find outweighs ability, what do we then but draw again the model"*

- Shakespeare — King Henry IV Act 2

Maritime Forces are sensitive to technological change and quick to exploit the opportunities it offers. Although platforms represent a progressively smaller part of the costs of acquisition, their useful lives have been increasing progressively over the past fifty years.<sup>1</sup> This has meant that ships acquired within one strategic context have been utilised under completely different circumstances, often carrying different weapon and sensor packages than those with which they were first commissioned.<sup>2</sup> While there is a need for contemporary capability to ensure preparedness, often this is at odds with the requirement to acquire sufficient future capability. Multi role vessels, utilising mission based modular payloads, may go some way to providing a contemporary capability while providing a reasonably easy method to address system obsolescence issues, therefore protecting future needs. Arguably, the minor warship fleet could best accommodate this new concept and with further development, applicability to the major fleet could be realised over time.

The Future Maritime Operating Concept (FMOOC 2025) is the Australian Defence Force capability

guide pinpointing future requirements for the maritime environment. It identifies drivers in the Future Security Environment (FSE) as being political/diplomatic, economic, environmental, societal, technological and military.<sup>3</sup> These drivers are subsumed into the Maritime Mission Space, reflecting the complexity for the future warfighter with the boundaries blurred between assistance and diplomatic operations, law enforcement operations, combat operations and security operations. All identify a level of uncertainty and pressure in the future. The prospective maritime force must have the capability to continue with the traditional requirement to protect the nation's borders and sea lines of communications. This role has (and will again) be expanded to include assistance to civilian authorities in environmentally driven security and humanitarian events, involvement with forces domestically, regionally and internationally and participation in law enforcement operations.

The primary role will remain that of warfighting, with the challenging threat posed by the developing increase in capacity, complexity, applicability and availability of technology.<sup>4</sup> Till, in his work *Seapower: A Guide for the Twenty First Century*, highlights the need for, "a new mentality and way of thinking that goes beyond traditional warfighting and its professional skills".<sup>5</sup> Flexibility in approach will not only protect the warfighter from his opponent's use of technology but may also hedge against their own capability shortfalls, be it due to economic or visionary deficiencies. As Australia becomes more a partner in the international community, the likelihood of involvement in UN, regional or US led coalitions will increase. This will often involve joining

at short notice, needing a flexibility to deploy quickly, multi task in theatre and switch rapidly between these tasks.<sup>6</sup> Till's use of the UK Ministry of Defence definition of expeditionary operations better symbolises this: "Military operations, which 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".<sup>7</sup> The RAN is a key stakeholder in future ADF maritime forces and has a key responsibility to maintain a capability in meeting these complex needs.

Can the traditional specialist ship, whether acting individually or in concert with a larger force, meet these complexities or is the ship of the future multi-rolled with the identified threat determining the mission payload? Plan Blue 2006, the Chief of Navy's strategic guidance for the evolution of the Royal Australian Navy and transition to the Future Navy, states that naval platforms must continue to be flexible and multi mission capable. Within this context, autonomous vehicles and the associated technology has a recognised increasing role to play such that, "they will act as force multipliers by varying and better matching ship capability to assigned missions".<sup>8</sup> The littoral environment, arguably the purview of the future modular vessel, will increasingly become the focus for future operations. With this, there is a need to be able to manoeuvre and force project into this challenging environment. The successful attack on the Israeli corvette by the Hezbollah militia using a radar guided missile from a shore installation shows how dangerous the littoral zone has become. For large forces there may be the need to maintain an over the horizon

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presence but still project a military force in the littoral zone.<sup>9</sup> Unmanned vehicles may fill this need. Rear Admiral Ulrich, in his previous role as USN Director of Surface Warfare, envisages the use of modularity and unmanned vehicles as revolutionary and transformational concepts for the future US Navy.<sup>10</sup> He further expounds the mantra of 'Get Connected, Get Modular, and Get Unmanned', highlighting important determiners in reshaping the surface Navy.

Plan Blue has the Future Navy adopting a strategy of layered and multi-dimensional defence to operate in the littoral environment. The US Navy in coming years will invest a huge amount of resources into three key areas of advanced computer networks, modular design and unmanned vehicles.<sup>11</sup> New classes of ships will support this future influx of technology and the associated evolving capability. The *USS Independence*, the first of class of the Littoral Combat Ship (LCS), was launched in 2007 to meet this need. The LCS embraces the modular concept and will embark and integrate differing mission configurations. The USN approach, to modularise systems for rapid re-role in theatre, is still some years off, maturing when both the LCS platforms and their modular mission systems are fully delivered into service. Admiral Ulrich moves some way from the traditional concept of the naval warship, whereby the warship of the future is purely seen as a hull to carry capability into the battle zone. In the case of the LCS, it will contain a collection of the latest warfighting tools packaged into a toolbox, or module, for employment in littoral zones. This modular framework is designed to give greater flexibility and support to the envisaged primary mission requirements of mine, surface and antisubmarine warfare. There is also scope to develop intelligence,



surveillance and reconnaissance systems and equipment specific to Special Forces operations.

The ability to deploy various mission modules onboard a fast, shallow-draft ship is the cornerstone of the LCS concept.<sup>12</sup> The LCS will be a fast, stealthy, shallow draught core vessel with an open combat systems computing architecture. A platform of similar design would meet the challenges posed by our vast, often uninhabited coastline. Using a "system of systems" approach, it will include networked sensors, modular mission payloads, a variety of manned and unmanned vehicles and an innovative hull design.<sup>13</sup> Modular mission capability sets it apart from every other class of US surface combatant. As a focused mission ship, the LCS will complement other multi mission members of the surface combatant Family of Ships as an integral element of a carrier strike group or expeditionary strike group.<sup>14</sup> In an Australian context, one or more of these modules could be embarked in a multi role platform to support Advance Force operations before the arrival of the Amphibious Task Force,

much in the same vain as the LCS is conceptually about sustaining access to the littoral zone for US operations.

The Royal Danish Navy (RDN) employs a modern force of Multi Role Vessels (MRVs) capable of performing patrol, limited anti-surface, anti-air and mine countermeasures (MCM) operations in regional and coastal waters.<sup>15</sup> From the late 1980s, the RDN took delivery of fourteen Flyvefisken class MRVs. Purpose built as versatile ships capable of deploying specific mission packages, the concept (also known as Standard Flex) grew out of the necessity of replacing large numbers of smaller mission specific ships during a fleet reduction period, with the view to accessing through life cost savings. An open architecture C4ISR-system is the hub, connecting all permanently fitted and containerised systems.<sup>16</sup> The mission specific modules are interchangeable on a common platform to induce an element of individual flexibility in missions and capabilities. During the process, the RDN reduced a fleet of 24 units (eight Fast Attack Craft, eight patrol boats and eight mine countermeasures vessels) with a force

*Austal Independence ship under build*

of fourteen MRVs adaptable for specific missions.<sup>17</sup>

Diverse modules were developed providing differing capabilities ranging from anti-air defence (AAW), anti-surface warfare (ASuW), anti-submarine warfare (ASW), electronic warfare (EW), mine countermeasures (MCM) as well as a myriad of other roles, including patrol and surveillance, oil pollution control and hydrographic/oceanographic survey.<sup>18</sup> The core premise of the concept hinges on the use of technology, and in this case the modules can be updated in order to adapt newer systems in the coming decades rather than replace a large number of ship fitted systems or indeed the whole platform. Sensors and systems common to all roles are permanently fitted on each platform. Mission based payloads, transportable either over land by trucks or be ferried by sea, can be changed out in less than eight hours and require only cranaage.<sup>19</sup> Following an operational review of the class, the concept of changing the role of the platforms via mission based modules has been re-examined and has been put on hold, with the platforms taking on a more permanent fit.<sup>20</sup>

Similarly to the RDN, Australia is a small-medium navy constrained by budgetary allocations and the problem of choosing military capability against a predicted need, which sometimes lies well into the future. Recognising these drivers, Plan Blue asserts that the, "Future Navy will employ a multi dimensional manoeuvre approach for the conduct of operations... (requiring Maritime force elements, that are inherently adaptable and flexible, are required to conduct combat missions and are able to adapt to concurrently support other activities such as law enforcement missions."<sup>21</sup> The Royal Australian Navy's (RAN) 26 minor fleet units (two Leeuwin Class Hydrographic Ships, four Paluma Class



Survey Motor Launches, 14 Armidale Class Patrol Boats and six Huon Class Mine Hunter Coastal) could well be amalgamated to fulfil this role. This will support the Plan Blue mantra of remaining flexible and multi-mission capable. It is also in line with the desire to maximise affordability of the platform. This capability requirement is important also in the minor war vessel context, noting the recognition that the Future Fleet will have/need a greater capability to project power into the littoral region.<sup>22</sup> Further guidance is provided later in the document detailing the need to reduce costs, identifying likely savings in reducing numbers of personnel, automation and commonality of systems and platforms.<sup>23</sup> Employment of unmanned air, surface and subsurface vehicles will further extend sensor coverage and power projection with the expectation that in the relatively near future, task force members will launch and link to a number of unmanned vehicles, carrying sensors and weapons over and under sea and land.<sup>24</sup> These platforms may be employed in a threat environment, but whereas in the past they have been highly specialised, with its specific role limiting commonality

and in some instances flexibility, the multi role vessel of the future will be mission capable through the modular payload embarked.

Project Venator, an in house study by BMT Defence Services, examines how a minor warship platform, sized and powered for global deployment, can be reconfigurable for differing operational taskings, including mine countermeasures (MCM), MCM support, hydrographic survey, maritime security operations (MSO) and offshore patrol missions.<sup>25</sup> While the platform concept has design enablers developed from projected employment its true flexibility lies in the modularity and interchangeability of the mission based payload. No doubt the proposal hinges on technology employed in these payloads. For example, the MCM suite is largely based on unmanned systems such as minesweeping unmanned surface vessels (USV), reconnaissance automated unmanned vehicles (AUVs), one shot mine disposal vehicles and a self defence fit (search radars, gun, obstacle avoidance sonar). To elucidate the reconfiguration modular concept further, compare this with a possible Patrol Boat suite of rigid inflatable

*Armidale under construction*

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boats, a USV, a helicopter, electronic warfare systems, an unmanned aerial vehicle (UAV) and a self defence fit (surface search radars, gun, obstacle avoidance sonar).<sup>26</sup>

The American vision, allowable by huge defence budgets and technical innovation through vast defence industry research and development, is worth highlighting in that, "The LCS is also about exploiting unmanned systems. From the first ships constructed, LCS will host a variety of unmanned vehicles. Imagine several LCS platforms deploying unmanned vehicles above, on, and below the surface, uncovering mines, detecting submarines, and even reaching ashore to image or strike a terrorist camp. And imagine these ships doing all of this for weeks or months at a time, providing the joint force commander much clearer insight into the murky littoral environment. Unmanned systems that will be integrated in the first LCS mission modules include the Remote Minehunting System (RMS), a vertical take-off unmanned air vehicle (VT-UAV) and an unmanned surface vehicle".<sup>27</sup>

The Venator study sought to develop solutions for the contrasting and difficult problems associated with providing platforms that could deliver a quality capability rather than presenting as a 'jack of all trades'. The concept is broadly based around the UK Ministry of Defence Sustained Surface Combatant Capability initiative, in which it hopes to define the requirements of the future Ocean Capable Patrol Vessel and is linked to the emerging unmanned technologies now being tested and brought into service throughout the world.<sup>28</sup> The overarching Future Surface Combatant program aims to replace the Royal Navy's older Type 22 and Type 23 frigates, plus existing mine countermeasures (MCM) vessels and

survey ships. Following the Ministry's 2008 planning round (PR08), it has now become an umbrella program for three tiers of ships known as the Force Anti-Submarine Warfare Combatant (C1), the

Stabilisation Combatant (C2) and the Ocean Capable Patrol Vessel (C3). The designs focus on adaptability and an ability to be rapidly reconfigured for military and non-military roles and duties ranging from benign and constabulary to Task Group warfare functions. The Ocean Capable Patrol Vessel is envisaged to have low running costs and the ability to operate in shallow, coastal areas and be able to deploy worldwide to fulfill tasks including minehunting, survey work and patrol duties.<sup>29</sup> Overall, the vessel will be a low cost platform that has great flexibility.

As discussed previously, much of the advantage of modularity and the multi role concept is derived from the technological driver that is brought by autonomous vehicles. Dr. Patrick Hew, in an *Australian Defence Force Journal* article, states that, "Technology, and its progress, is widely regarded as being a driver on the conduct of war".<sup>30</sup> The move from a traditional, specialist functionality is not without risk, particularly, combining the disparate capabilities of patrol, hydrographic survey and MCM over the one common platform underpinned by modular based technology. Air Vice Marshall Tony Mason (RAF), cited in *Seapower Ashore And In The Air*, has warned against the military tendency



*Austal Independence ship under build*

to favour all things technological, stating that, "the concentration of high technology should not lead to the disparagement of the simpler or even obsolescent weapons. The ultimate measure of a weapons effectiveness is its value as a political instrument, which may not equate to its operational impact".<sup>31</sup> The skills to operate modern weapons and systems may also take a considerable period to develop. It is clear that possession of an inventory of technologically capable weapons systems does not directly equate to capability. Using the Iran-Iraq War of the 1980s as an example, each side had an arsenal of technologically competent systems that did not realise their full potential due in some part to lack of training and proficiency.<sup>32</sup>

Dr. Hew rightly identifies that with all technology there are problems and challenges that he characterises as 'technology bottleneck issues'.<sup>33</sup> In particular, he identifies the following challenges with respect to automated unmanned technology:

- Communications and programmability;
- Navigation within the physical environment;
- Monitoring of physical status;
- Location of other entities in the physical environment; and
- Target modelling

The Project Venator study recognises that while modularity will be the way of the future the nature of reconfiguring capability and its technology enablers is not fully understood and will require further analysis. Put simply there is still the dilemma of, when we get it, how are we going to use it?<sup>34</sup> Of note, is that unmanned technology (particularly underwater units) is developing exponentially, driven largely by commercial offshore resource exploitation and increasingly, demands from the military establishment. Modular mission payloads and the feasibility of multi role vessels in support of this concept are being assessed by other Navies and by the time the ADF is in a position to fully embrace this notion, lessons learned from others could be incorporated to lessen risk. This will also add some weight to acquiring capability without a need to reinvent the wheel, noting that it is already in service further afield. There is also the need to better understand the modular concept and its effect on future vessel design. For example, in order to support the number and size of vessels required, plus their storage and manoeuvrability of embarked payloads, future platforms would require a reasonably large deck area and suitable material handling equipment.<sup>35</sup>

Apart from design requirements, modular needs of the future multi-role vessel may see more efficient reconfiguration, modernisation and maintenance, contributing to greater operational flexibility and availability.<sup>36</sup> Future multi role vessels could achieve these efficiencies, not only through the use of mission based modular payloads, but also through a commonality of platform design, common permanent fitted systems and even common training and manning aspects.

The concept invests heavily in the

offboard systems, with the view of leaning towards simpler and more affordable platforms. In the MCM role, autonomous vehicles will identify and prosecute threats at a distance from the host platform. Unmanned or semi-autonomous technologies are now being developed by a myriad of maritime equipment suppliers and many examples of this technology are now in service or entering service with Navies around the world and are expected to reach a fuller maturity in the next five to ten years. Since 2001, the Royal Norwegian Navy (RNoN) has experimented with AUVs in a number of different military roles around Europe. A dedicated military AUV system was delivered in January 2004 operating from a RNoN mine hunter and has been deployed in the NATO Immediate Reaction Force MCMFORNORTH since October 2004. Various missions have been performed, ranging from route surveys to covert mine reconnaissance and Rapid Environmental Assessment (REA) tasks. The equipment has the advantage of being modular in itself, allowing different systems to be fitted as required and in its MCM/ REA role high quality, high resolution imagery and bathymetry with reliable position accuracy can be provided. This long association with AUV technology has seen lessons learned during the course of operational military use incorporated into the current generation of vehicles with the latest variant, delivered in 2008, now undergoing evaluation. The systems are used on a regular basis by the Navy and operated from the Oksøy class MCMVs, as well as from other vessels using a ramp or containerised launch and recovery system. USVs and sweep systems are likely to follow this level of development soon with research programs already underway in several countries (certainly the US and UK).

Efficiencies can also be realised by the ability to add to and update new generation technologies as they develop, quickly, without long integration problems and without the need to find a space within an already crowded interior. Here the Venator concept diverges from the LCS approach, in that, there is no operational requirement for rapid re-role of platforms in theatre. The premise identifies the ability to reconfigure payloads to maximise a platforms overall utility and at the same time provides flexibility in the platforms capability mix over the vessels life time. Configuration will be task oriented or dependant on the predominant threat at the time. Using the current Australian situation, more platforms could be used for border protection operation but with a future change in threat, platform tasking could be slewed towards MCM, without having to procure new hulls. Flexibility is provided and in addition affordability of the platform is maximized.

It is also necessary to consider the requirements for global deployability, particularly, as a member of a larger Task Force or Advance Force. Seakeeping ability, endurance, self protection measures and speed have been limitations marked by all classes of minor vessels in the current inventory. On a cautionary note, any advantages provided by a future larger hull must be tempered by the realisation that the larger the hull, the lesser numbers will be likely acquired due to affordability issues. Project Venator has identified that the optimum design length is around 110 meters (to afford global deployability and payload embarkation and manoeuvrability) and the LCS design settles on 127 metres.<sup>37</sup> In terms of hull design, like the Venator solution, the LCS will balance mission

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payload capacity, manoeuvrability, stealth, and survivability and be able to economically loiter or conduct high-speed sprints up to 50 knots.<sup>38</sup> This combination will provide the flexibility to transit in advance of other forces or quickly respond to operational requirements once in theatre.

As alluded to previously, the multi role mission based approach in some ways challenges traditional conventions. Again, using the MCM role as an example, the Flyvefisken Class MRV is of a fibreglass build and utilises fixtures, fittings and equipment constructed of non-magnetic materials (similar to the Australian MHC) to maximise the advantages provided by the low magnetic signature to operate in or around minefields. Future MCM platforms, relying on technological advances, will in all likelihood be totally different. A common platform may invariably move away from the fibreglass build using familiar building materials (steel, aluminium) to maximise cost savings, use readily available construction techniques and ensure commonality in fitted systems. Obviously with this move away from the traditional MCM platform, the modular mission based approach would have to be fully embraced. With the increasing use of unmanned technologies to conduct autonomous or semi autonomous MCM or REA tasks in other Navies, this method is slowly being proved. Negating the need for highly specialised platforms, it will allow the removal of the manned MCM platform from the high risk area and lead to a relaxation of the stringent signature requirements.<sup>39</sup>

Plan Blue recognises the need for multi-mission platforms comprising adaptable, flexible, multi mission systems and as always identifies that there is a need to lessen costs through reduction in crew numbers, increased automation and system and platform

commonality. The current minor warship fleet could lend itself to this concept without assuming the 'jack of all trades' mantle. Think of operations in the recent past and today where Hydrographic Survey Force platforms and MHCs have been involved in border protection operations under the auspices of Operations Relex and Resolute. These units have contributed enormously to the desired outcomes, arguably in platforms not best suited to this role. Conversely, envisage the multi role platform with its mission based modular payload. When identified to deploy to a border protection operation the Multi Role Ship (Survey) would crane its survey related modules onto the wharf, embark two large high speed RHIBs and a module containing boarding party equipment. The Multi Role Ship (Patrol) would then deploy for its border protection duties after conducting a short readiness evaluation. Table 1 details some payloads that may be used in the reconfiguration process.

Force 2020 is a visionary document that looks to the future. It highlights the need to maintain an idea of flexibility, adaptability and resourcefulness and importantly not be bound by dogma. Conventional forms of military power obviously have their limitations, showing a need for diversification and flexibility in future. This adaptability and flexibility allows involvement across the spectrum of operations.<sup>41</sup> Continued urbanisation will see the littoral environment increasingly accessed by more and more people and will take on growing importance in future maritime operations. In

TABLE 1: POTENTIAL MISSION PAYLOADS<sup>1</sup>

| Role  | Equipment  |
|---|--|
| MCM   | Reconnaissance AUVs<br>Sweep equipped USVs<br>Shallow Water AUVs<br>One Shot Mine Disposal Systems<br>Self Defence Fit |
| Hydrographic / REA                          | Survey AUVs<br>Survey Motor Boats<br>Self Defence Fit  |
| Patrol / Surveillance/<br>Border Protection | Reconnaissance / Surveillance UAVs<br>Surveillance USVs<br>RHIBs<br>Helicopter<br>Self Defence Fit                     |
| Training                                    | As Required  |

1 A. Kimber, W. Giles and T. Dinham-Peren, 'The Globally Deployable Minor Warship – A Conceptualisation of Future Solutions', Paper presented at INEC 2008, Hamburg, Germany, 2008, p.3.

recognition of this, all ADF documentation espouses the need for a flexible force to deal with this challenging environment. Other risks exist in the form of budgetary constraints and expensive acquisitions to meet identified threats. All of these issues will see traditional concepts of operation challenged not only in the future but now.

The multi role vessel carrying its mission based payload challenges these traditional concepts and provides exciting options for the makeup of our future force. In the next decade all the RANs 26 minor fleet units could arguably be replaced by a multi role vessel, similar in all likelihood to platforms already in service around the globe, conducting their operations via a mission based payload. However the Future Navy develops, getting the balance between strategy and technology right will continue to be one of the most important determinants of twenty-first century seapower. 🚢



Flyvefisken class MRV

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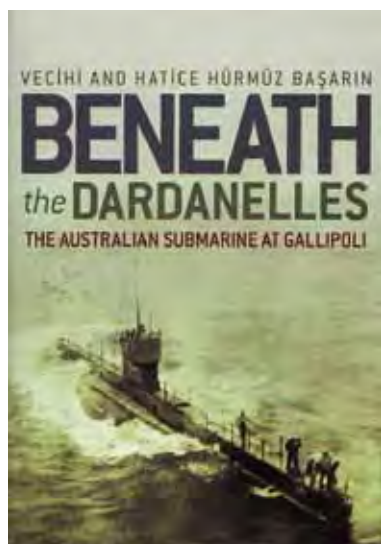


One of the RAN's more unusual vessels was the antarctic exploration vessel *HMAS Wyatt Earp*. Built as *Fanefjord* in 1919 for the Norwegian herring fishing trade, she was acquired in 1933 by an American millionaire, renamed *Wyatt Earp* and used for several runs to the Antarctic. In 1939 she was purchased by the Australian government for Antarctic exploration, but the with the outbreak of war was employed as an examination vessel using the name *HMAS Wongala*. Paid off in 1944, she was then used as a training ship for sea cadets. Interest in Antarctic exploration reignited with the end of the war, and in November 1947 she

was recommissioned as *Wyatt Earp* under the command of Commander Karl Oom, RAN. After various delays caused by mechanical troubles she sailed for Antarctica on 8 February 1948. Her objectives included evaluating the prospects of establishing an Australian base in Commonwealth Bay. She survived a severe buffetting from heavy seas and gale-force winds, but dense pack ice frustrated attempts to reach her objective. She instead turned east and carried out a running survey of the Balleny Islands. On the return voyage she called in at Macquarie Island, where she met up with LST 3501 (later named *HMAS Labuan*), which had sailed

from Melbourne on 28 February, and assisted with the setting up of a scientific station. *Wyatt Earp* returned to Melbourne on 1 April, but her exploration days were over and she paid off on 30 June. On occasion *Wyatt Earp* used sails to augment her diesel engine and was thus one of the few sizeable ships of the RAN to ever use sail power. 🚢

# Book Reviews



## ***Beneath the Dardanelles: The Australian Submarine at Gallipoli***

**by Vecihi and Hatice Hürmüz  
Basarın,  
Allen & Unwin 2006,  
211 pages, soft cover, illustrated  
ISBN 978-1-74175-595-4.**

This book provides a fascinating look into one of the little known or talked about actions of the Gallipoli campaign: the first-time transit of a submerged submarine, the Australian *AE-2*, through the Dardanelles on April 25, 1915. In essence the book is in two parts, with the first and most substantial portion describing the transit of the Straits, the chase and the loss of the *AE-2* from the perspective of both captains, while the second looks at the modern search for, and triumphant re-entry into, the *AE-2* in its resting place in September 2007, following its re-discovery in 1998.

The book uses the diarised recollections of *AE-2*'s captain, Lieutenant Commander Henry Stoker, as well as a first-time English translation of the memoirs of the captain of *AE-2*'s nemesis *Sultanhisar*, Captain Ali Rizar, along with editorial additions and

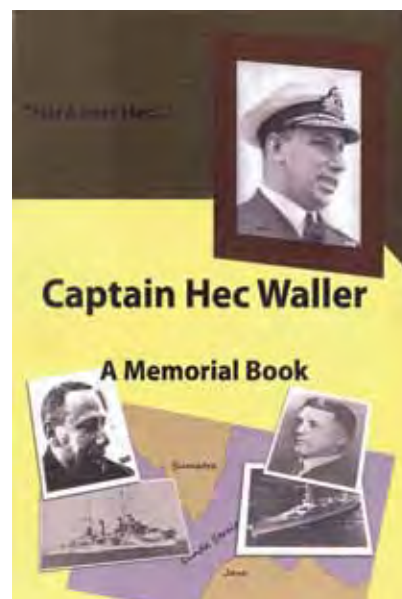
comment to provide an enthralling view of both sides of the almost personal battle that developed between these two men and their vessels. I found this narrative engrossing reading that gave an interesting and balanced perspective on the action. As I read this part of the book and contemplated Stoker's achievements, I wondered what additional impact there might have been across the Peninsula if Stoker's luck and torpedoes had been a little better.

As Australians we have a natural pride in the actions of Stoker and his crew and in the way they performed in this pathfinding operation. But we have rarely if ever given thought to the elation that must have been felt by the Turkish people, and in particular the crew of *Sultanhisar*, after their victory over the Australian submarine. This delight comes through in Ali Rizar's description of the battle and the reaction of local authorities when he reached port. We are left with little doubt that Ali Rizar was extremely conscious of the significance of his victory.

The latter section of *Beneath the Dardanelles* is devoted to the story of the expedition in late 2007 to visit, search and catalogue the condition of the *AE-2*. It appears that the years have been kind to the *AE-2* and salvage is an option that might be feasible should there be a desire to pursue it, while protection and preservation of the wreck in place is yet another path. The book leaves us with the thought that the rapidly approaching 100<sup>th</sup> anniversary of the Dardanelles campaign might present both Australia and Turkey with an opportunity to establish a long-term future for *AE-2*.

I found *Beneath the Dardanelles* to be a compelling and interesting read, and recommend it.

***Reviewed by Captain Peter J.  
Murray, RAN***



## ***Captain Hec Waller - a Memorial Book***

Hec Waller is perhaps Australia's most famous fighting naval leader. Much has been written about him, but it is scattered across many books. A submarine has been named after him.

The book under review was written by Dr Tom Lewis and two family members, as a memorial book to Hec and his beloved wife, Nancy. In addition to describing Hec's naval life, his family life forms an important part of the book. Hec's ancestors and descendents are included, as are the activities of Nancy and the part she played as a surrogate mother to many returned POWs. Samples of Hec's letters home, many of them adorned by his sketches and poems, are prominent.

Hec entered the Royal Australian Naval College in 1914, the second year of its existence. He generally performed well in the period between the World Wars, although with occasional negative reports. In late 1939 he took command of *HMAS Stuart I* and was leader of the 10<sup>th</sup> Destroyer Flotilla, whose members comprised the five RAN ships of the Scrap-Iron Flotilla together with various RN destroyers, operating in the Mediterranean.

There under the greatest British admiral since Nelson, Admiral Andrew Cunningham, Hec and his destroyers performed with great credit. Cunningham referred to Hec as "one of the greatest captains who ever sailed the seas".

On returning to Australia in September 1941, Hec took command of *HMAS Perth I*. The attack on Pearl Harbor took place in December, and the Japanese forces swept all before them through the first half of 1942. This included the assaults on the Dutch East Indies (now Indonesia) with the intention of capturing the rich oil fields therein.

Hec was part of the ill-fated ABDA (American, British, Dutch, Australian) naval force that attempted to oppose the Japanese advances in the south-east Asia region. Nearly all the ABDA ships were lost in the Java Sea and the Japanese invasions were delayed only a few hours.

The cruisers *Perth* and *USS Houston* survived the Java Sea battle but were trapped and sunk in Sunda Strait attempting to escape to the Indian Ocean. Hec and Captain Albert H. Rooks USN were both killed in the early hours of 1 March 1942. The sinking marked the beginning of the

RAN's shift from dependence on the RN to looking out for itself.

At the time of his death Hec had already been awarded two DSOs and was mentioned in dispatches twice. Many have thought it scandalous that all he was awarded for the last battle was a posthumous mention in dispatches. The book addresses this issue.

The book also covers naval technology, especially where it affected Hec and the operations he took part in. The issue of radar, with Hec a direct witness of its efficacy in the Mediterranean, is described. *Perth*

was supposed to have received radar before sailing for the Java Sea, but none arrived in Sydney. The profound advantage of Japanese air superiority in the Java Sea is another crucial issue mentioned, as is the marked superiority of Japanese torpedoes.

*Reviewed by "Snoz"*

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*The crew of the HMAS Parramatta were honoured today when they were visited by The Prime Minister of Australia, the Hon Kevin Rudd MP and Chief of the Defence Force, Air Chief Marshal Angus Houston, AC, AFC, who came aboard the ship to personally thank the sailors for their efforts, dedication to Australia and self sacrifice during the Christmas holidays.*

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## ANI On-line: A guide to the new website.

*Our new website is now on-line! In addition to the features available on the previous site, the new site also features a library of past journals, a discussion forum, a news section and member list. This short guide is designed to help you take full advantage of the new features.*

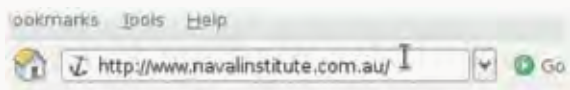


Figure 1

### OBTAINING AN ACCOUNT

In order to access the new features of the site you must have a user account for the website. If you have a current subscription to the ANI, navigate to the website [www.navalinstitute.com.au](http://www.navalinstitute.com.au) using your web browser (figure 1), click the “Members Login” menu item (figure 2), then click the link to download an application form. Fill in the form, then fax or post it to the ANI Business Manager. Once your account has been created, you will receive an email that outlines your member ID and password.



Figure 2



Figure 3

### LOGGING IN TO YOUR ACCOUNT

Once you have your account details, you are ready to login and access the new features of the site. In order to login, navigate to the website (figure 1) and click the “Members Login” item (figure 2). Enter your member ID and password as they were provided to you, then click the “Login” button. The case of the member ID and password are important: i.e. “CaSe” and “case” are considered entirely different words by the authentication system. Each letter of the password will appear as a single “\*” to prevent others from seeing your password as you type. If you have entered your details correctly, you will be presented with the news page. The grey status bar at the top notifies you of the account you are using (figure 4). You are now able to access all of the new features of the site.

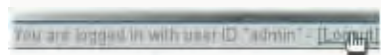


Figure 4

### LOGGING OUT OF YOUR ACCOUNT

In order to protect your identity and to prevent malicious use of your account by others, you must log out of the site when you are finished browsing. This is especially important on public computers. In order to log out, click the “Logout” link in the grey status bar (figure 4).

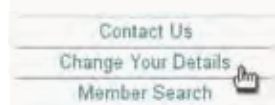


Figure 5

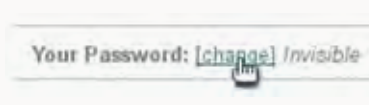


Figure 6

### CHANGING YOUR DETAILS

When your account is created, only your member ID and password are stored in the system for privacy reasons. However, you may provide other details that are visible to other ANI members. In order to change your details, login and click the “Change Your Details” menu item (figure 5). Then select the “change” link (figure 6) next to either your personal details or password. Change the text appropriately and click the “save” button (figure 7).

The personal information that you provide will be visible to other members of the ANI but will be hidden from members of the general public. You may provide as much or as little detail as you wish but none of the fields are compulsory. However, you may not change your member ID as it is the link between the on-line database and our off-line records.

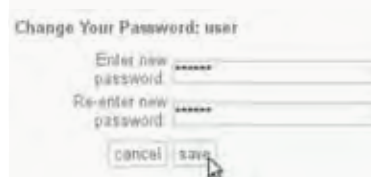


Figure 7

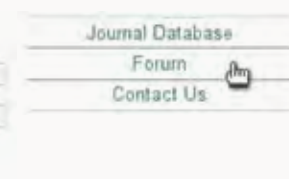


Figure 8

### PARTICIPATING IN THE FORUM

In order to post topics and replies in the discussion forum, first login and click the “Forum” menu item (figure 8). Then select a forum that you would like to view by clicking its “View Topics” button (figure 9). Select a topic that you would like to read by clicking its “View this topic” link (figure 10). If you are not interested in any particular topic, you may add your own by clicking the “Add New Topic” button (figure 10). Similarly, once you are viewing a topic, you may post a reply by clicking “Add New Post”. Fill in the heading and body of your reply and click the “Submit” button to add your reply to the topic. If you change your mind while writing your reply, you may click the “Cancel” button and your reply will not be added to the topic.

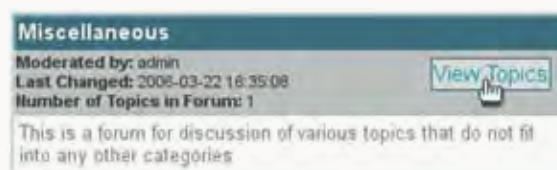


Figure 9

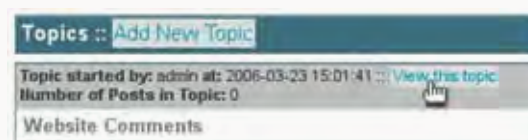


Figure 10

### FURTHER QUESTIONS

If you have specific questions regarding website features or even a feature request, post a topic in the “Website Questions” forum and a site administrator will reply. Otherwise, happy browsing!

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