



# **Journal of THE AUSTRALIAN NAVAL INSTITUTE**

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## The Australian Naval Institute Inc.

The Australian Naval Institute was formed and incorporated in the Australian Capital Territory in 1975. The main objects of the Institute are:

- to encourage and promote the advancement of knowledge related to the navy and the maritime profession,
- to provide a forum for the exchange of ideas concerning subjects related to the navy and the maritime profession, and
- to publish a journal.

The Institute is self-supporting and non-profit making. All publications of the Institute will stress that authors express their own views and opinions, which are not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute. The aim is to encourage discussion, dissemination of information, comment and opinion and the advancement of professional knowledge concerning naval and maritime matters.

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Cover Photograph - Naval Photographic Unit - Sydney

## FROM THE EDITOR

Dick Sherwood



It is now a little over twelve months since I took over the reins from Don Agar as the editor of the journal, and it has been a very rewarding one indeed. Like most things in life though the fruits that we get to enjoy are usually from the seeds so carefully sown by those who preceded us. In this respect I owe much to Don and the Editorial Board which oversaw the movement towards the new style journal and in trying to overcome some of the problems associated with obtaining suitable material for publishing and which had plagued the editor for some time.

The first journal that I saw to production contained material obtained from a variety of sources, and although excellent in its content was not specifically commissioned for the Journal, and in one case had been published elsewhere. Additionally, I lamented at the time of having no material for the next issue, February 1993.

Of course since February this year we have been lucky with material and this issue reflects articles that were written especially for the journal and

also reflects the balance that I highlighted I would try to achieve as editor. That said, however, I would still lament the fact that I receive very little input from the younger members of the naval fraternity, although hopefully that may change in the future, especially if the steady increase in younger members joining, continues into 1994 and beyond.

Turning to what this issue brings, I am confident we offer some good stimulating reading over the holiday period. There are two excellent papers of Maritime Force Developments in our region, one by the old ANI Journal veteran - James Goldrick, and the other by another past member who has returned to the fold - Captain Jack McCaffrie. But perhaps the most interesting and perhaps topical piece is the one by Peter Jones. It of course is about the issue of women serving in combatants. There is also a good article by a younger member on possible future directions for ship's husbandry and an historical piece on *HMAS Australia I*.

The Photographic Competition continues to run, but members should be mindful of the deadline date for entries (see the notice on page 5). We once again offer a Book of the Quarter in the form of the Navy Annual, and at a very competitive price to our members.

Finally, a reminder about the Annual General Meeting on Thursday 24 February 1994 and of the need to check the top left hand corner of the mailing label to ascertain financial state, with renewals due for those who have a figure less than 94. These should be paid by the end of March 1994.

To all our readers from all involved in putting together the journal in 1993 may we wish you a Merry Christmas and a prosperous 1994. I trust we have been able to bring to you some satisfaction throughout 1993, and I personally look forward to going back to being a contributor during 1994 and beyond.

## FROM THE PRESIDENT

Don Chalmers



This will be my last introduction as President of *The Institute*, for, as many of you will know, I relieved Rear Admiral Walls as Maritime Commander on 6 December, and due to the Council being Canberra based will of necessity had to resign.

Much has been achieved by a very vibrant Council during the last 2 years. Membership is growing, we are financially in a sound state, the coterie of *friends* is increasing, the journal is moving towards being a quality flagship and our involvement in maritime seminars as a co-sponsor has progressed.

There is much though to be achieved - we do provide a forum for debate - a forum in which I encourage you all to participate and one which all our members should encourage others to join.

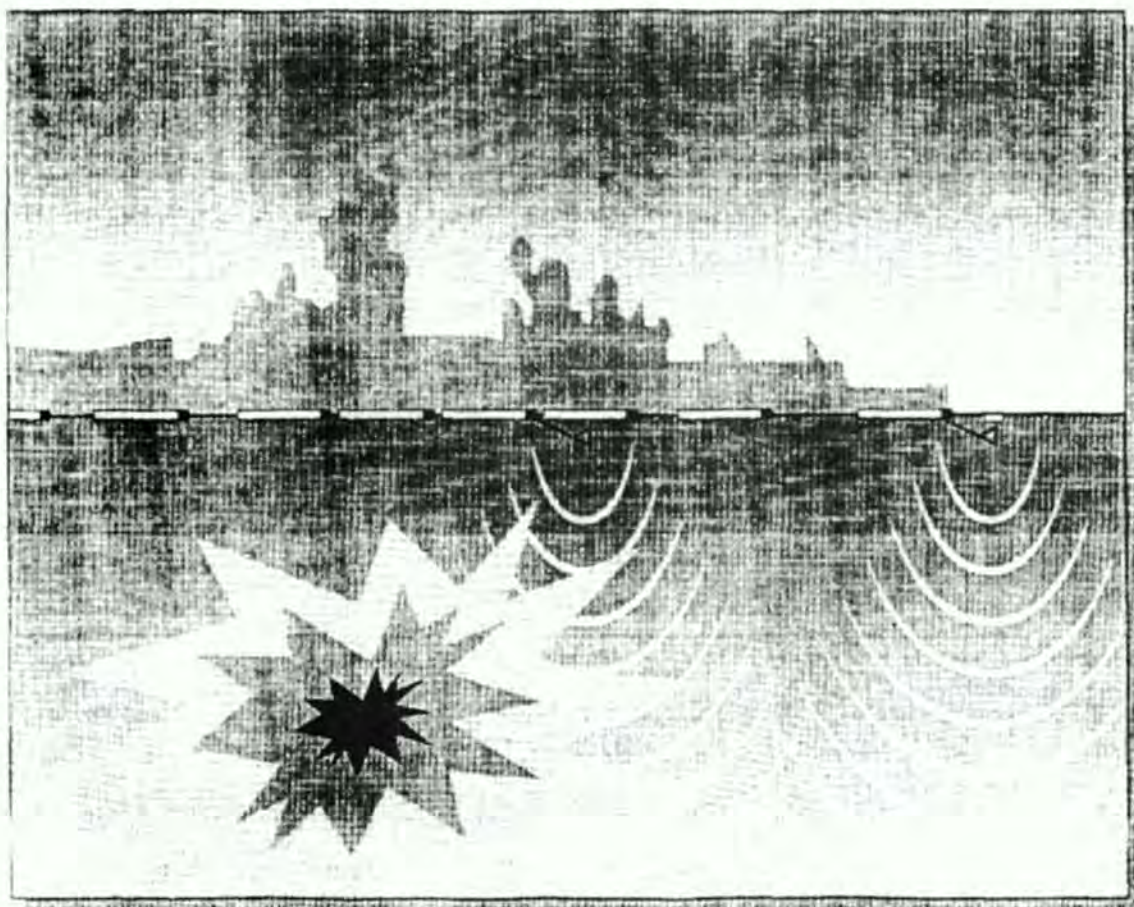
As the Asia Pacific region develops and aligns I wonder how we as a maritime trading partner and medium maritime force might become more actively engaged. Will our own self reliant journey provide us with a niche naval equipment market and can we use that to our advantage.

Are we going to see instability in the South China Sea? Do we need to be involved and in what sort of regime? Is there a place for UN maritime peacekeeping or will coalition maritime forces acting in loose association in support of UN Security Council Resolution be the future *modus operandi* and how might these concepts be applied in, say, the South China Sea?

Our region is becoming more maritime orientated, we have to build a *Maritime Bridge Into Asia* and we need to understand how we can best influence and be constructively engaged in the emerging maritime awakening of our neighbours to the North.

I look forward to *The Institute* making a significant contribution. I thank you all for having me as your President for the last two years or so and I thank the Council for their hard work.

Good luck.



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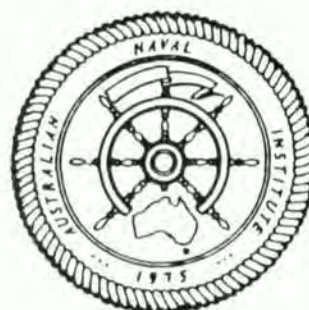
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The Australian Naval Institute and Film Australia are proud to cosponsor the inaugural Naval and Maritime Photographic Contest.

The contest is open to both amateur and professional photographers who are members of the ANI. The winning photographs will be published in a 1994 issue of *The Journal of the Australian Naval Institute*. Cash prizes will be awarded as follows:

1st Prize	\$500
2nd Prize	\$300
3rd Prize	\$200
Honourable Mention (5)	\$100 each

#### ENTRY RULES

1. Each photograph must pertain to a naval or maritime subject. (The photo is not limited to the calendar year of the contest).
2. Limit: 5 Entries per member.
3. Entries must be either black-and-white prints, colour prints, or colour transparencies.
4. Minimum print size is 127mm x 178mm.
5. Minimum transparency size is 35mm. (No glass mounted transparencies please.)

6. Full captions and the photographer's name, address, and ANI membership number must be printed or typed on a separate sheet of paper and attached to the back of each print or to the transparency mount. (Do not write directly on the back of the print. No staples please.)
7. Entries may not have been previously published, and winners may not be published prior to publication in the *Journal of the Australian Naval Institute*. Prior publication could result in relinquishment of prize awarded.
8. Only photographs accompanied by self-addressed, stamped envelopes will be returned.

**DEADLINE: 28 FEBRUARY 1994.**

Write for details or mail entries to:

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ANI  
PO Box 80  
Campbell ACT 2601

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## LETTERS TO THE EDITOR

The Editor  
Journal of the Australian Naval Institute

*HMAS Voyager* - Dr Tom Frame

While I have no wish to prolong the debate over my book *Where Fate Calls: The HMAS Voyager Tragedy* which was prompted in these pages by J.A. Robertson [*Journal of the ANI*, August 1992], I want to use Sam Bateman's unfortunate letter [*Journal of the ANI*, August 1993] attacking my rejoinder to Robertson [*Journal of the ANI*, May 1993] to make several points about the discipline of history that do need seem to be understood.

Sam Bateman alleges that in writing about the HMAS *Voyager* tragedy, I got 'two things wrong'. His description of what I got 'wrong' relates to two matters of opinion. This criticism is illogical. It seems to me that opinions are neither right nor wrong. We might say that one opinion is to be favoured over another because it is more compelling or persuasive. We might say the same thing in relation to judgements or assertions. Bateman should have said that he could not accept my conclusions because the opinions and judgement on which they were based were unconvincing, or whatever other ground he had in mind. But his criticism, albeit wrongly put, contains another issue on which I wish to comment.

The first matter of opinion criticised by Bateman concerns my alleged failure to have captured 'the 'scuttlebutt' of the period, particularly with regard to the veracity of the Cabban statement'. Does he mean by this that I should have given greater credence to mess deck buzzes, unverifiable hearsay and unsubstantiated innuendo? And from whom should I have elicited this 'evidence'?

In researching *Where Fate Calls* I made a point of immersing myself in the mood of the period. This included speaking with the majority of the *Voyager* survivors and with anyone else who had first-hand knowledge of *Voyager* 1963-64 commission. As J.A. Robertson departed

*Voyager* well before the arrival of Captain Duncan Stevens in January 1963, I judged that those who served in the ship throughout that period, such as Rear Admiral Sir David Martin, would be a much more reliable source of information. I do not agree that J.A. Robertson was in any special position to make judgements about the Cabban Statement other than the incident described in the statement which referred to him. And in that matter, as I have already written, it is purely a matter of accepting J.A. Robertson's word about what happened over that of Cabban.

As for the second matter of opinion mentioned by Bateman, that of disputed signal traffic between Melbourne and *Voyager* prior to the collision, I should mention that I was much persuaded in arriving at my conclusions by Captain John Robertson's own interpretation of this aspect. In Captain Robertson's private papers, to which I was given complete access by his family, there was a comprehensive analysis of what might have occurred on *Voyager*'s bridge. In developing a range of possible scenarios, Captain Robertson was assisted by a number of senior officers. As one of the most experienced communicators serving in the RAN at that time, I felt that Captain Robertson's opinions carried a great deal of weight which ought to be reflected in my conclusions. I was also able to explore more fully some of the technical details with the Fleet Communications Officer of 1964, the then Lieutenant Commander John Snow, whose knowledge and recollections of the period and the people was invaluable. Having canvassed the expert opinion of Captain John Robertson and Commodore John Snow, in addition to familiarising myself with the full range of theories which emerged during the four year life of the controversy, I felt entitled to make some strong conclusions about what might have occurred.

I do not believe that I would have varied those conclusions to any great extent on the basis of an opinion offered by J.A. Robertson. This is not to imply that he does not possess an expert opinion. He certainly does. But it is to say that every historian must choose his sources carefully as the constraints of time and travel makes some selectivity unavoidable.

There is one other aspect of Bateman's letter worthy of critique. Historians are always keen to refute the heresy espoused by people not trained in the discipline of history that the view of someone 'who was there' is to be preferred over the carefully researched and refined interpretation of the historian. I can detect this heresy in Bateman's letter. He inters that because J.A. Robertson was service in the Navy at the time of the Voyager tragedy, he is in a much better position to pass authoritative comment on any and every aspect of the collision and its aftermath.

It needs to be understood that personal involvement in an event is not a necessary precondition for being able to write about it as history. When this is appreciated the written record of the RAN will be freed from some of its earlier rather notorious subjectivity.

#### **ANI Silver Medal Essay - Martin Dunn**

Alchemy lives! The last issue of the Journal published the ANI Silver Medal winning essay (August 1993). Lead might be more appropriate for what is presumably the best the Navy can offer.

The essay is directionless and disjointed, toadies the official line, is devoid of innovation and, of course, is written in the driest style Service writing can provide.

Back in 1965, T.B. Millar observed that the unofficial slogan of the then only staff college was "cooperate to graduate". Millar explained: "As an officer rises higher in the service, the fruits of conformity become more attractive; the penalty for non-conformity or indiscretion so much greater". This essay lives up to that ideal. The enthusiasm for Government

policy is as sickening as it is uncritical. Senator Evans even gains accolades for attempting "to leave behind Australia's colonialist dependant and isolationist image".

It is too common to find papers reeking of the attitude that Australian strategic thinking began with Paul Dibb. It is a little surprising to find this in an essay that purports to provide a historical overview of an aspect of Australian strategic policy. There is no reference to a single Australian policy document or statement that predates the 1987 white paper.

According to the essay:

- "In the past the region has been characterised by relative stability...", a feature supposedly changed since the end of the Cold War. Which past? For most of the Cold War the region was rife with insurgency, rebellion and military confrontation.
- Recent changes in the "global security stage... have to consider their own security far more seriously than in the past". Strangely, I find it difficult to imagine that the end of the Cold War has had as large an impact on the region as the less recent withdrawal of British forces from east of Suez, the Guam Doctrine, or the fall of South Vietnam.
- "the central theme of the [1987] white paper is the adoption of a self reliant defence posture set within a framework of Australia's regional and international alliances and agreements". The innovation here must be particularly subtle as I cannot distinguish it from the concept of self-reliance described in the 1976 white paper.
- Before Gareth Evans, Australia's approach to regional security "was based on alliances with Britain and the United States", we were seen as "dependant and isolationist". Evatt, Spender, Hasluck, et al, must be turning over in their collective graves. Australia was

never a tail to be wagged by the great Western dog. On the contrary, much of our diplomatic effort aimed to make these otherwise uninterested allies pay attention to our region.

"Australia has abandoned equipment and substitutionary [sic] forces based assistance in favour of cooperative programs." There may be a change of emphasis, but it is hardly so dramatic. We still have equipment projects: the Pacific Patrol Boat and Iroquois to PNG, for example. We are still inclined to send expeditionary forces to Fiji, the Persian Gulf or Somalia when it suits us. In the past we provided cooperative assistance, and even supplied the Malaysians with their chief of naval staff for a period.

The essay concludes that "Australia's strategic guidance, in the form of DOAB7 and Senator Evans' 1989 regional security statement is clear. Integrate with the region, invest and commit resources." I'm sorry but it is not clear to me - I must have different copies of these documents. They deal solely with military and security relationships. Security policy is but a subset of foreign policy. There are many Government statements and reports on the *economic* importance of the Asia-Pacific, but the essay quotes none of them.

But enough of facts and their interpretation. What new thinking is added by this essay?

When Sir James Cable and Ken Booth were referred to early in the piece, I expected Australia's performance to be

compared to their theoretical models. I was wrong. They simply served to provide bibliography building.

The essay says that it "will provide historical evidence to suggest that Australia has used naval diplomacy in support of foreign policy objectives". After meandering through some current foreign policy and potted history of naval activity, including one longish case study where we didn't, the essay concludes that we did. The reader is thus left with only a suggestion.

At no point are the contemporary foreign policy and the associated naval activity discussed together, other than in the most general terms or the rather obvious case of the protest against French nuclear testing. The essay freely draws inferences: "This was clearly evident at the close of World War I... the expressed intent of arranging these visits is clear...! Mud might be clearer.

While ship visits might be a form of military diplomacy, they could also be driven by considerations of training, intelligence and morale. A ship visit does not in itself prove that naval diplomacy is being exercised. Sometimes a very long bow is being drawn: the inception of the colonial navies as a presence mission, the role of RAN ships in surrender ceremonies, etc.

Don't misinterpret me. I don't blame Lieutenant Commander Harling for this. He, after all, succeeded in his aim: having the RAN Staff College and the Australian Naval Institute proclaim his brilliance. The problem is systemic. Defence as an organisation wants to reward the compliant, the uninventive and the sycophantic.

## WASHINGTON NOTES

*Tom A Friedman in the United States of America*



I was browsing through the "Business Opportunities" section of *The Wall Street Journal* recently when an opportunity nestled amidst offers to sell a John Deere agriculture equipment business, a computerised bookkeeping and payroll processing service, a frozen food storage plant and "the ultimate monkey making machine" for "intelligent, dedicated people with a need to make a lot of money" caught my eye:

**FOR SALE** Complete Projectile Manufacturing Process & Equipment of NATIONAL DEFENCE CORPORATION...(3) Fully Automated Twin 105mm HE MI...Production Lines [Also Suitable for 80 to 120mm projectiles with tooling changes] (1) 8" HE M106 Projectile...Production Line [also suitable for 155 to 200mm projectiles with tooling changes]..**Rebuilt and reconditioned to New specifications at a cost of over \$32,000,000.** All Four Lines are Currently in a high state of readiness and available for inspection to qualified buyers.

For some reason, this small advertisement said a lot about the downsizing of the American defence establishment and

how it will continue to contract under the provisions of Secretary of Defence Les Aspin's "Bottom-up Review" of defence.

We needed a thorough review of our defence establishment. For almost half a century, defence planning and defence procurement were centred on countering the forces of the Soviet Union. While the full impost of the break-up of the Soviet Union has yet to be realised, we know that we no longer face its tremendous strength along with that of the Warsaw Pact. So plans have to be redrawn and procurement restructured to provide the forces necessary to counter new threats to peace that seem to be cropping up on a daily basis.

The review begun by asking the question of what we need defence for and what dangers face the United States now that there is no Soviet Union. The Pentagon identified four such dangers:

The first danger is from nuclear proliferation. Not proliferation in the old sense, namely how many nuclear weapons the Soviets could deliver by bomber or ICBM. The Defence Department now sees the nuclear threat as a small number of weapons in the hands of terrorist organisations or states delivered by unconventional means. Published reports have noted the failure of our intelligence agencies to discover the extent of the Soviet nuclear armory. If you couple the real inability to establish how many nuclear devices the known nuclear powers have, coupled with the instability in the former Soviet states, and combine this with the increasing capacity of other nations to create and export nuclear weapons, I would say the world is in at least an equal amount of danger---and possibly more so---than when the "good ol' Soviet Union" was around.

The second danger is the ability to deal with regional bullies. Iraq and North Korea are obvious examples.

Under the larger umbrella of threats to national security, dangers to democracy

are seen as the third danger to the United States. If the current democracy movement were to stall or be reversed, the national security situation of the United States would be considerably different.

The fourth danger Secretary Aspin identified is the danger wrought by a weak economy. The Pentagon finally linked the economic strength of the United States to its military strength. The arms race may have helped bankrupt the Soviet Union, but it did not do us a heck of a lot of good either.

The proposed size of the conventionally armed defence establishment is driven by the second danger, the risk of regional conflicts. The Pentagon determined that we need sufficient forces to meet an overseas presence in peacetime (primarily in Europe, Northeast Asia and Southwest Asia) plus a wide range of smaller scale operations that also will give us the capability to fight and win two major regional conflicts (MRCs) occurring nearly simultaneously. The plan will put us in a "win-win" situation instead of the current position of winning one MRC while holding the line in another MRC until forces can be re-deployed to bring battlefield victory ("win, hold, win").

The force structure under either the "win-win" or "win, hold, win" scenarios are very much alike. Under the former, the primary losses are two regular Army divisions and two fully active aircraft carriers. Under the latter, a reserve/training carrier and the maintenance of the strength of the Marine Corps somewhat redress the difference. In any event, to make all this work, the following is necessary: additional prepositioned equipment; additional airlift/sealift capability; improved anti-armour and precision munitions; and improved Army National Guard combat brigade readiness. Under "win-win", however, the importance of additional prepositioned equipment and particularly the expansion of lift capacity, is even more crucial because we will need to supply two major theatres of operations at the same time.

By 1999, the United States force structure will be as follows: 10 active and five-plus reserve divisions in the Army; 346 ships in the Navy, including 11 aircraft carriers plus one carrier that is manned 20 percent by reservists and carrying a reserve air wing, and 45-55 attack submarines; 13 active and seven reserve fighter wings plus up to 184 bombers; and the Marine Corps will have five active brigades and one reserve division.

I find it hard to criticise the overall plan as presented by Secretary Aspin. Many readers play the same war games and run the same computer programs for Australia that American planners worked with in designing the Bottom-Up Review. We can only hope that the games were not rigged and that the computers were virus free.

Only one section of the report really concerns me while two others are what I consider real steps forward for the services.

I continue to be concerned about the Army's (and to a lesser extent, the Marine Corps') reliance on reserve forces, particularly in combat arms. In a world where American foreign policy seems to be increasingly determined by what is broadcast on CNN, the pictures of reservists being repeatedly torn from their families and placed in harm's way could restrict the President's ability to deploy forces. How well, for example, would another mobilisation of Desert Storm veterans be received?

We have heard before how the Army planned to improve the training of combat reserves. The Army now plans to enhance the readiness of brigades rather than the whole National Guard divisions because it takes too long to improve readiness of full divisions. The Army may be on to something this time. We know the old way did not work. But the jury still out on this one and things do not look good for the defendant.

On a more positive note, and somewhat intertwined, is the provision for enhanced lift capacity and the creation of a defence industrial policy.

I have never understood how the American aircraft industry, which provides civilian aircraft on budget and on time to the entire world, has such a difficult time doing the same for its own government. A cynic might say that it is *because* the production is *for* the government.

The C-17 is scheduled to be a successor to the C-5 heavy transport. I say "scheduled to be" because as I write its fate is being determined by Secretary Aspin.

Billions of dollars over budget and years behind in development, the C-17 combines heavy lift capacity with the ability to take off and land on shorter runways than its predecessor (another aircraft plagued with cost overruns). The problem DOD now faces is that it needs more heavy air transports because the "win-win" scenario but we can afford to by fewer of them. On the other hand, with C-141s leaving service and C-5s ready to be replaced, we cannot afford to go through another design process. Instead, as part of the new defence industrial policy, Secretary Aspin should consider removing primary design and construction responsibilities from the current contractor, McDonnell Douglas, and assigning it to a competitor, like Boeing.

The American shipbuilding industry already has benefited from the new industrial policy. While it is expected that some of the ships initially needed to enhance our prepositioning and heavy lift capacity will be taken up from trade, other ships will have to be built and they will go a long way to save American shipbuilding capacity. Even more important, the Bottom-Up

review calls for the building of an additional *Seawolf*-class submarine by the Electric Boat Company in order to maintain two nuclear capable shipbuilding facilities (which assumes that Newport News will continue to build nuclear powered aircraft carriers) so that skills needed to build submarines are not lost while a new class of attack boats is being developed.

I give DOD high marks for creating a defence industrial policy. For the American government to create an industrial policy in any sector of the economy is a major change in direction.

As Secretary Aspin noted, the Defence Department's R&D budget allows it to develop amazing new technologies and it will continue to do so in the future. In the past, we have "weaponised" that technology while other countries have take-off products generated from our R & D---from the fax machine to the VCR---and commercialised it. From now on, DOD will actively work with civilian industry to see how American firms can capitalise on the commercial spin-offs of military R&D. This is a real "win-win" situation for the civilian and defence sectors of the economy.

Earlier this year, President Bill Clinton promised that "the men and women who serve under the American flag will be the best trained, best equipped, best prepared fighting force in the world, so long I am President." With tight budgets and "peace," this promise may prove hard to keep. But the Bottom-Up Review provides a firm foundation on which the President can build the solid, workable defence establishment he has promised.



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# The Development of Maritime and Maritime Air Forces in the Region.

Commander James Goldrick, RAN

## INTRODUCTION

This paper is a survey of the development of maritime forces in South and Southeast Asia. The focus is primarily upon the ships and aircraft themselves because they represent the most accurate measurement of directions in defence planning within the region. Nevertheless, this paper concentrates on trends rather than particular countries or systems. It is also important first, to establish the background to the developments in capability which we have seen in most, but not all countries in the region. They are best summarised as follows:

**Economics.** Most regional nations possess an improved and improving capacity to pay for capable and thus expensive armaments. There is a clear relationship between continuing economic growth and the acquisition of modern arms, just as there is a connection between stagnation and a failure to acquire modern weapons. Singapore, for example, has been able to expand its armed forces considerably without much accompanying increase in the *relative* amount spent on defence because of the rate of growth in the gross national product. The Philippines, on the other hand, have been hamstrung in achieving any modernisation at all, while India represents an example of a country which has over-reached itself with planned military programs out-running the capability of the economy to support them.

**Infrastructure.** Nations which have embarked upon the process of industrialisation possess an inherently improved capacity to man, maintain and repair sophisticated weapons. There are also motivations such as the desire to create a high technology industrial base which assist in promoting weapons and systems acquisitions. Dr Habibie's efforts in Indonesia with both

shipbuilding and aviation industries are a case in point.

**The Revolution in The Technology of Maritime Warfare.** This tends to receive the least emphasis amongst commentators on the subject of security development in the region but it is important nonetheless. Technological improvements have two important effects. First, information gathering and management systems, both in terms of individual units such as frigates or maritime patrol aircraft and of national strategic systems, have developed to the point where the ability to *gather* and the ability to *process* information are vastly improved. The operational horizon - the distance out to which it could expect to sustain a picture sufficient to make tactical decisions - of a frigate of 1963 was in the region of 25 miles. It is now approximately 200 miles and - dependent upon the systems to which it has real time or near-real time access increasing all the time. One apparently minor, but crucial element of this is the proliferation of artificial aids to position finding such as *GPS NAVSTAR*. To know where you are and where your consorts are is perhaps the most fundamental development in naval warfare since the invention of radar.

The second effect is the unseen element of *ease of use*. Not only do regional nations have an ever improving human ability to operate high technology equipment. In a hardware sense, that technology is increasingly easy to operate. A frigate built in 1963 combined high pressure steam turbine machinery and valve/analog based weapons and sensors to produce a fighting machine which was capable but intensely difficult to maintain and tune and impossible without large amounts of onboard stores and highly expert maintainers. A frigate in 1993 has gas turbines or diesels - easier to

maintain and operate - and solid state control systems for both machinery and weapons and sensors. It is true that the difficulties now come in the software, but it is also true that *turn key* contracts can offer much. The contemporary warship can thus not only do more than its predecessor of 30 years ago, it can do it much more easily.

**Security.** In the last twenty years, the focus in the region, particularly in Southeast Asia, has moved away from the threat of internal insurgency or over-land assault to the maritime dimension. The sea has become a permeable border and illegal immigration, refugees and smuggling are perennial problems. There is thus an increasing tendency to change the balance in regional defence budgets away from land forces to maritime and air. It is, of course, a tendency that is not wholly welcomed by the politically powerful armies of several regional powers, who have been used to regarding themselves as the premier service and the guardian of their developing states. It is particularly interesting to watch the strategies which are being developed by Armies to preserve their status - operational deployment forces and the United Nations are often mentioned. Malaysia is an example of this tendency.

**Resources and Boundaries.** The concept of and the ability to exploit the Exclusive Economic Zone have changed the nature of maritime strategy. Nations are now not interested only in coastal defence but in the surveillance and control of fixed assets (such as oil rigs) offshore and the dynamic resources within their EEZ, such as fisheries. The majority of the nations in the region have coastal or offshore territorial disputes with one or more of their neighbours. Most of these are minor questions in any context, but some - such as South Talpatty Island in the Bay of Bengal between India and Bangladesh and the vexed subject of the Spratly Islands in the South China Sea - are not.

## COMPARISONS

The accompanying graphs and tables focus on the tonnage and numbers of ships and aircraft within the orders of battle of each nation. The reader should look on these as indicating trends, rather than detailed facts. They are based wholly on open source material, notably *Jane's Fighting Ships* with a leavening of other references. The methodology for conducting a comparative examination of national armed forces is hard enough when looking at the countries of the West; it is almost impossible elsewhere in the world. For example, there is no attempt to employ budgetary information. The criteria by which various countries draw up their defence spending plans vary widely. In the case of nations such as China it has to be argued that the statistics are so unreliable as to be useless.

What these tables also cannot assess is the support infrastructure, the number days or hours spent at sea or in the air, the sophistication and frequency of operational exercises, the level of training of billet personnel - and so on. The list seems almost endless.

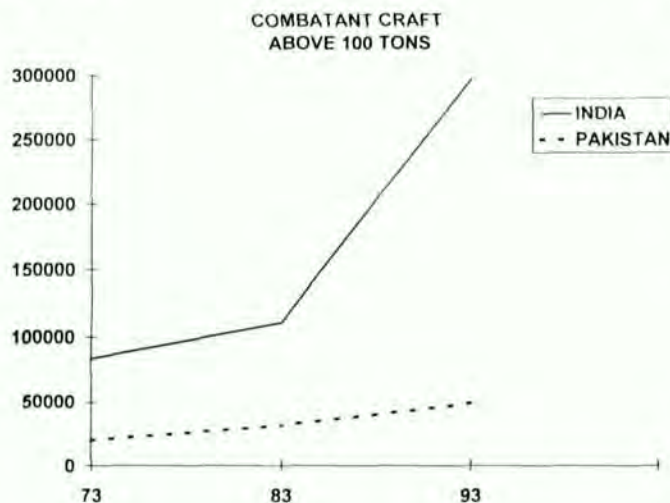
But they do indicate trends. Let us look first at the tonnage figures for combatant craft and for support craft. In order to include the important coastal element, the figure of 100 tons standard displacement has been taken as a lower limit for both combatant and support types.

Graph 1, dealing with India and Pakistan, highlights the expansion of the Indian Naval combatant forces from 1983. The total has nearly tripled to approximately 300,000 tons. By comparison, Pakistan has only undergone incremental, albeit substantial increases. That there is another side of the coin for India, however, which becomes clear when looking at the support craft figures (Graph 2). The Indian tonnage has diminished considerably.

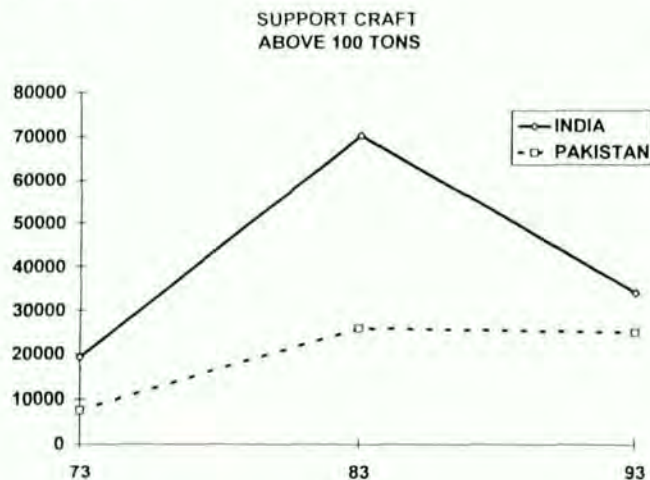
It is particularly notable, in view of the suggestions that India has ambitions to deploy task groups and forces far afield, that the underway

replenishment capacity has not developed in any significant sense. Only now, with one of only two fleet tankers some 26 years old, is a third unit under construction.

Graph 1



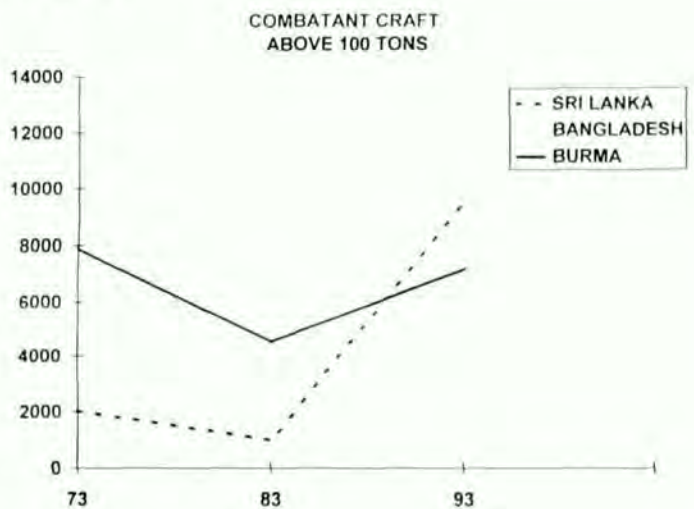
Graph 2



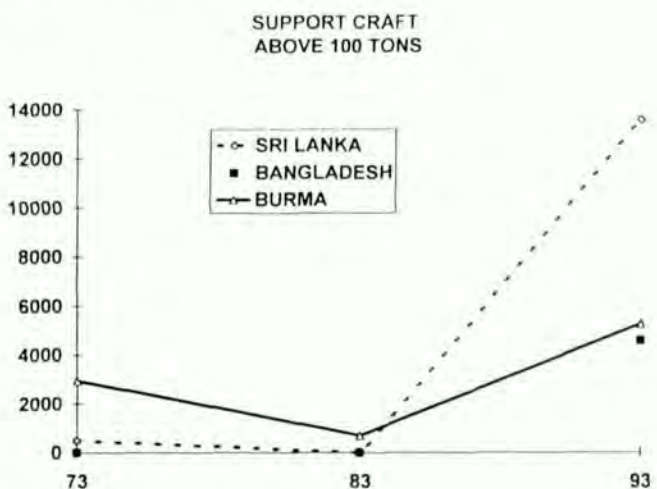
The other neighbours of India, have also expanded their forces. However, expansion, even in Sri Lanka with its insurgency problems, is progressive but not excessive. All these Navies, even Bangladesh with its frigates, are coastal/EEZ oriented (Graph 3). There is, however, a sensible balance between support and combatant elements (Graph 4).

There are similar characteristics in the expansion progress among the three leading powers of ASEAN (Graph 5).

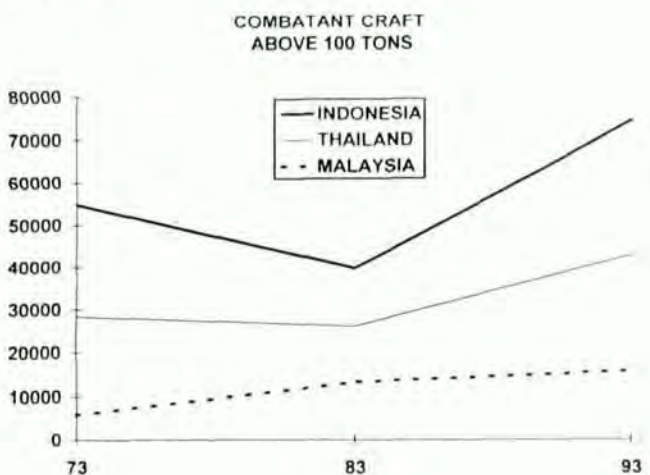
Graph 3



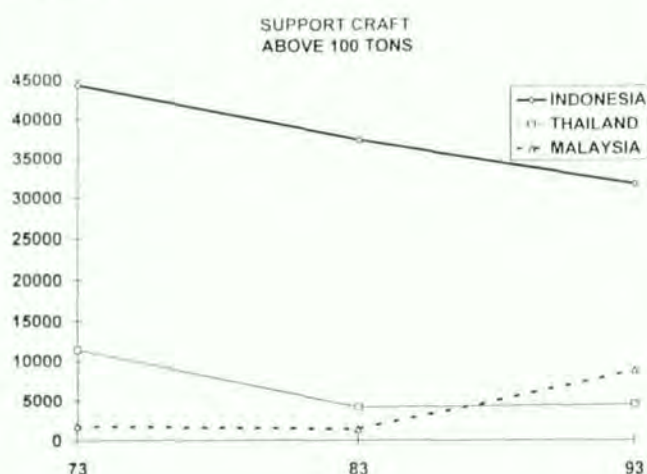
Graph 4



Graph 5



Graph 6

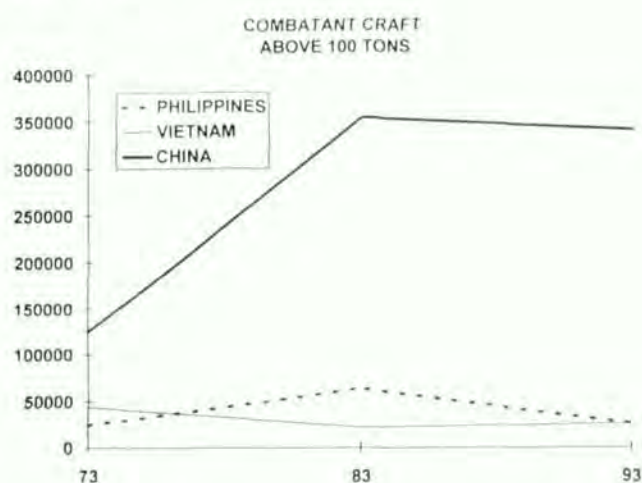


Indonesia has rebounded from the reductions which followed on the removal of the old Soviet ships from inventory, but its expansion has not been breakneck, nor has that of Thailand or Malaysia. Support craft (Graph 6), have not experienced the same sort of expansion. Despite some acquisitions, such as the two Malaysian logistic support ships or the recent purchase of a British *Rover* class tanker by Indonesia, none of these navies possess the capability to operate for long periods at a distance from their own waters. Not shown on this graph, because it is still building, is the Thai helicopter carrier from Germany. This certainly does represent a departure from previous ASEAN purchases. It may well be a prestige buy more than anything else, but the key to its use will be in its airgroup - both numbers and types. At the time of writing, there have been reports in the Bangkok press of a buy of up to eight second hand AV-8B *Harriers*.

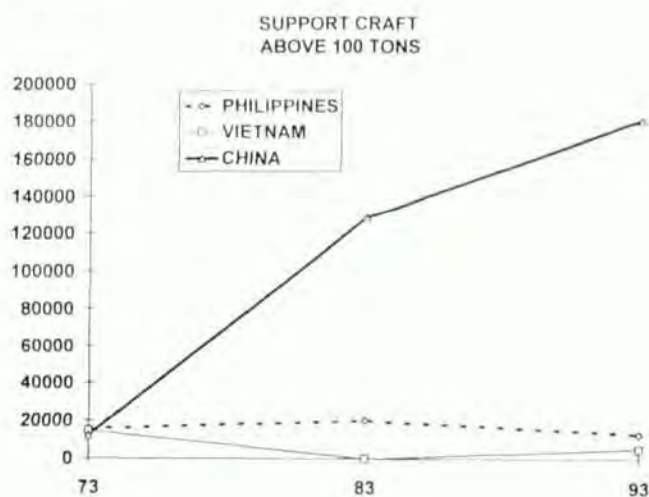
The picture is more mixed with three other actors in the region (Graph 7). China's tonnage is actually on the decrease, but this results from a slow removal of very large numbers of light craft matched against a rather slower construction of frigates and destroyers. In addition, the open source estimates of 'Old Ming' (such as the bloated Chinese submarine force

numbers) have recently been revised to show more reasonable figures. Starved of Russian support, Vietnam's Navy has got nowhere and the Philippines have yet to achieve a real start on their own long talked about naval reconstruction program. One point of interest is that Chinese support craft have increased in tonnage, but this is - so far - more in the wider areas of support (such as submarine rescue vessels) than in underway task group resupply (Graph 8). Indeed, not only has China disposed of one fleet tanker to Pakistan, but another has been put into commercial service.

Graph 7



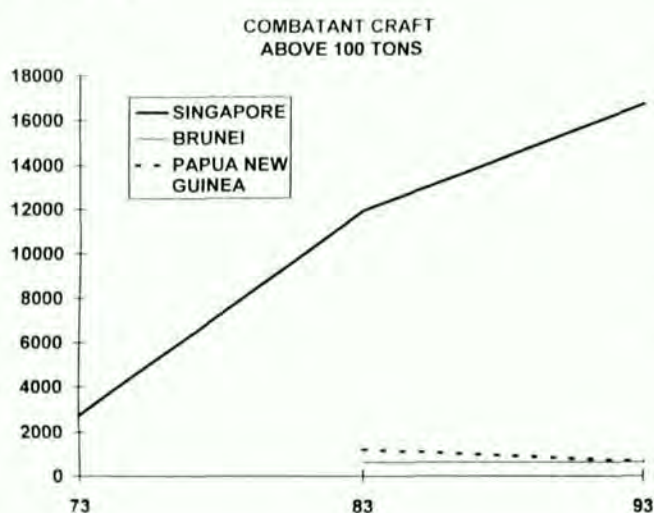
Graph 8



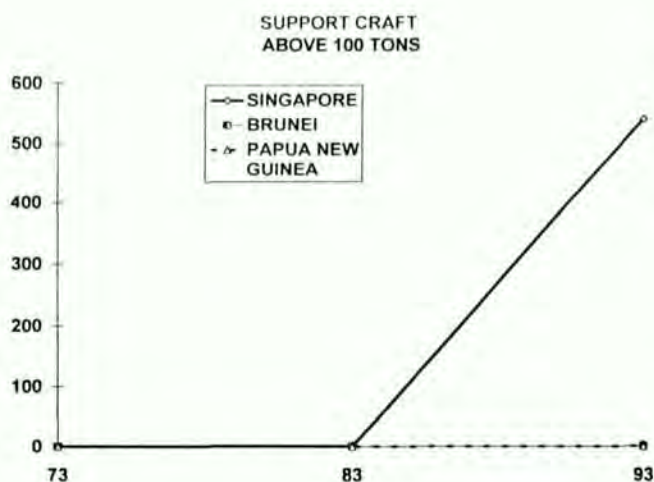
The final trio is Singapore, Brunei and Papua New Guinea (Graphs 9 & 10). The

most interesting actor is Singapore - steady increases in combatant strength and also steady increases in support strength. The other two nations have been relatively static in their force size. Singapore, of course, has adjusted its strategy from one of a *poisoned shrimp* - that is, focused purely upon territorial defence to a trade protection strategy that encompasses the length of the Malacca Straits and out to 500 miles in the South China Sea.

Graph 9



Graph 10



**Missile Numbers.** Tonnage figures give the reader some useful indicators of development. But we also have to look at some other methods of measurement. Firstly, the numbers of missile

equipped units. The accompanying tables divide up these into surface to surface missile equipped ships and surface to air units. The latter are significant because possession in any sort of numbers, particularly of area defence systems, implies a readiness to operate out from under friendly air cover and thus at a greater distance from home territory.

Table 1, highlights how few SAM equipped ships there are apart from India and China. The figures for Singapore are perhaps *warming the bell* a little on their plans to fit the *Victory* class corvettes with a point defence missile system. That will happen in the next couple of years.

China is perhaps the most significant development. While the lack of afloat support, mentioned earlier must impact upon the Chinese Navy's ability to operate at long distances from China, the multiplication of Surface to Air missile equipped units on this scale is congruent with expressed intentions to ensure a capability to dominate the South China Sea. The difficulty, as China seems to be discovering, is that indigenous development of anti-air missiles designed against fast moving targets with any kind of electronic counter-measures capability is no easy matter.

The second point concerns surface to surface missiles. The numbers are expanding, and the sort of missiles which are at sea are increasingly more sophisticated and long ranged. But - note how long missiles have been out in the region. Several countries had them at sea 20 years ago (indeed, Indonesia had SSM at sea 30 years ago). The first *Exocet* missiles have been in the region for 20 years. So it is both untrue and unfair to simply add the numbers of missile sales to the region up into one huge mass and suggest that there is a proliferation problem.

On the other hand, it will be obvious from the figures that there has been an increased pace of acquisition of surface to surface missiles over the last decade. This can be taken as indicative of development of a range of

TABLE 1:

		SSM EQUIPPED UNITS	SAM EQUIPPED UNITS	HELO CAPABLE UNITS	SSM NUMBERS AT SEA
CHINA	1973	42			119
	1983	255	1	9	839
	1993	276	22	19	1176
INDIA	1973		2	6	
	1983	26	14	17	98
	1993	29	39	59	115
PAKISTAN	1973				
	1983	4	1	1	8
	1993	18	7	16	60
VIETNAM	1973				
	1983	8			32
	1993	9	3		34
BANGLADESH	1973				
	1983				
	1993	9			28
INDONESIA	1973	12		1	24
	1983	7		9	28
	1993	14	9	25	80
MALAYSIA	1973	8	1	1	40
	1983	8	1	2	24
	1993	10		9	32
SINGAPORE	1973				
	1983	6			30
	1993	12	6	6	84
THAILAND	1973		1		
	1983	6	1		27
	1993	13	7	5	83
BRUNEI	1973	1			8
	1983	3			6
	1993	3			6
PHILIPPINES	1973				
	1983				
	1993			3	

capabilities, the direction of which is indicated by another grouping included in the table - units with the capacity to operate a helicopter.

What is this direction of development? Simply put, the more sophisticated navies are increasing their abilities to conduct surveillance within their areas of military interest which match the increasing range of the weapons which they possess. This is both inevitable and logical. The requirement to control Exclusive Economic Zones, was mentioned earlier in the paper. To increase what can be loosely termed the 'radius of territorial imperative' from the 3 or 12 miles which were typical before the United Nations Convention on the Law of the Sea to 200 miles does require an order of magnitude improvement in the ability to gather and manage information and apply force. The same tendency exists with developments in maritime air forces.

There is a rider to this, however, which also modifies earlier comments in this paper about the ease of use of new systems. As Navies increase their reach and secure systems with longer range capabilities, the requirement for associated systems increases if such capabilities are to be properly exploited. Thus there is a question of cost and there is also the question of training and infrastructure development. For example: there is a world of difference in the tactics, and thus the systems and operating procedures, between what is required to exploit the 20 mile range *Exocet* missile and what is required to get the most out of the 70 mile range *Harpoon* missile. With the latter you must have a remote targeting platform to get the over the horizon firing range - hence the need for a helicopter/and or maritime patrol aircraft. You have to practise extensively with these aircraft to get the procedures right. The latter, to do their job properly, require (expensive) sensors such as infra red detection devices if they are to be sure of picking and keeping watch on the right target at night or in low visibility without risking themselves being shot down. A good rule of thumb

is that, as the area which a weapon can covers increases with the square of its range, the difficulty of hitting the right target increases as a cube.

Looking at some of the figures in detail, particularly those relating to the powers of ASEAN, it can be noted that Indonesia, for example, as with tonnage, displays less remarkable growth figures since 1973 because of the removal of the old Soviet built missile craft from inventory - but the numbers are on the increase, as are those of Singapore. Malaysia seems less remarkable, particularly in view of the SSM figures, but it should be appreciated that the very high figures for 1973 include the primitive and very short ranged *SS-12* missiles fitted to British built fast attack craft.

Again, we can see the correlation between national economic growth and the improvement of the armed forces. The Philippines can, as yet, boast no surface to surface missile armed craft. Even the three helicopter capable units included in the 1993 figures are conversions of American World War II built escorts.

Vietnam is clearly, as yet, not going anywhere very fast - although I will admit that the open source figures remain of somewhat doubtful reliability.

**Numbers and Ages.** Table 2, shows the numbers of vessels in major categories and, particularly important, the average age of combatants. Noting that the effective service life of a destroyer or frigate with half-life modernisation seems to be in the region of 25 years, it is fair to suggest that an average age of over 15 years in the combatant fleet suggests block obsolescence and funding problems for the Navy concerned. Force levels for the future will only be sustained through increases in spending or *running on* of service lives, with the accompanying problems of reliability. The categories of *surface combatants* used in this table are very broad ones - they include large amphibious ships. Thus the figures can be a little askew, but it does help indicate that there

TABLE 2.

		SUBMARINES	AIRCRAFT CARRIERS	SURFACE COMBATANTS OVER 1000 TONS	SURFACE COMBATANTS UNDER 1000 TONS	SUPPORT CRAFT OVER 1000 TONS	MCM
INDIA	1973	4 (5)	1 (28)	21 (25)	22 (10)	6	8
	1983	8 (12)	1 (38)	19 (23)	41 (19)	9	14
	1993	18 (11)	2 (44)	32 (12)	55 (13)	6	22
PAKISTAN	1973	3 (4)		7 (30)	7 (19)	2	7
	1983	6 (7)		8 (35)	25 (19)	4	6
	1993	9 (20)		15 (32)	18 (23)	4	3
BANGLADESH	1973				4 (11)		
	1983			3 (28)	14 (22)	1	
	1993			4 (26)	25 (23)	2	
CHINA	1973	44 (21)		17 (15)	282 (12)	9	7
	1983	121 (16)		64 (19)	615 (20)	32	23
	1993	87 (22)		83 (16)	675 (13)	59	181
VIETNAM	1973			21 (29)	44 (26)	3	2
	1983			5 (40)	34 (23)		1
	1993			5 (50)	52 (29)		15
THAILAND	1973			13 (24)	30 (22)	2	6
	1983			9 (33)	32 (19)		10
	1993			17 (25)	33 (33)	1	11
INDONESIA	1973	10 (22)		12 (28)	74 (22)	13	26
	1983	4 (18)		18 (24)	19 (21)	9	4
	1993	2 (12)		31 (27)	28 (15)	15	4
MALAYSIA	1973			2 (18)	22 (6)	1	6
	1983			4 (24)	38 (13)	2	
	1993			8 (24)	14 (17)	2	4
PHILIPPINES	1973			10 (30)	22 (25)	4	4
	1983			33 (40)	22 (25)	5	
	1993			12 (49)	13 (22)	5	
SINGAPORE	1973			1 (31)	11 (6)		
	1983			6 (39)	12 (12)		2
	1993			6 (46)	18 (17)		

NOTE: Numbers in ( ) indicate average age of vessels.

TABLE 3.

		ANTI-SHIP BOMBERS	ANTI-SHIP FIGHTERS	LONG RANGE MPA	MEDIUM/SHORT RANGE MPA	SHORE BASED HELICOPTERS	SHIP BASED HELICOPTERS	SHIP BASED ASW F/W A/C	SHIP BASED FIGHTERS
INDIA	1983			8			37	19	30
	1988		5	6	44		56		23
	1993		12	18	54		64		23
PAKISTAN	1983			4	10				
	1988			3		10			
	1993		5	10		10			
CHINA	1983	230	380	20		80	3		
	1988	35	880	13		40	26		
	1993	30	820	17		40	62		
VIETNAM	1983					10			
	1988					10			
	1993			4		18			
THAILAND	1983				6				
	1988			16	8		4		
	1993			11	8	4	7		
INDONESIA	1983		16	5	16	29			
	1988		16	8	16		53		
	1993		16	10	21		49		
MALAYSIA	1983			3					
	1988			3			6		
	1993			7			16		
PHILIPPINES	1983			3					
	1988			3	9		5		
	1993				8		7		
SINGAPORE	1983								
	1988		58	4					
	1993		58	4					

NOTE: Numbers in ( ) indicate average age of vessels.

may be fleet-wide problems for various navies, even if particular sections are in good order.

With India for example, although carriers do last longer than smaller ships, the two ships are steadily getting older. There is no replacement in sight because India cannot afford new construction and there are no good second hand ones on the market. Yet, India may however, secure an *Invincible* if the Royal Navy has to lose a carrier, or do a deal with the French to pick up *Clemenceau* or *Foch* when the latter leave French service at the turn of the century. The Indian point of view - and this is often glossed over when dealing with small navies - is that an old and inefficient carrier is vastly better than no carrier at all. Despite a reducing average age in the last two decades, the Indian Navy continues to have a middle aged fleet. With ships getting more expensive and budgets leaner, the prospects are not ideal.

China has similar problems; looking at the age of the submarine fleet and despite a 'cleaning out' in recent years of the oldest and most ineffective units, it is getting very old in total. The surface forces are improving but even they are middle aged - and it should be realised that the life of a wooden hulled fast attack craft is more like ten years than the 25 of a destroyer.

In fact, some Navies, particularly those of ASEAN such as Thailand, are in a much healthier condition than these figures would indicate, provide they can steel themselves to removing aged units from the effective list which seem to be retained there for reasons as much of personnel employment as any other cause. Singapore needs to spend some money replacing the old landing ships which are used for troop transport and support duties. This has started with the purchase of a third hand *Sir Lancelot* class landing ship, similar to the *Tobruk*. The Philippines needs to rebuild its entire fleet. Indonesia has attempted to short circuit the force structure problems it faces in providing adequate patrol and

surveillance forces for its vast archipelago by purchasing no less than 39 corvettes, landing ships and mine countermeasure vessels from Germany. The purchase price for these East German built vessels was tiny. It remains to be seen how expensive will be the processes of adapting them from the short distances and cold weather of the Baltic to the demands of the Archipelago. There is a possibility that the Indonesians are not going to achieve the improvements in operational capability which they wanted from the project. On the other hand, as with the case with India, perhaps good enough is the enemy of nothing at all. On a tight budget and otherwise bound to new construction in the yards of PT-PAL, it must have seemed that the Indonesian Navy had no other realistic means of achieving the numbers it wanted. The scale of the perceived force structure needs can be gathered by the fact that naval planners spoke openly about the requirement for 23 new construction frigates.

**Maritime Air Forces.** The last area of survey in this paper concerns maritime air forces. The role of shipborne helicopters in the surveillance and targeting mission has already being touched upon. It is important to note that credibility in maritime air operations effectively requires dedicated squadrons, trained and prepared for the role. For maritime air to intervene at distances greater than 50 miles from the coast, the need is first for capable maritime patrol aircraft which, if not armed themselves, are capable of providing a picture to headquarters ashore for the assignment of anti-shipping missions and of reporting the positions of the targets to the strike aircraft once the latter are airborne. If you are wanting to achieve strikes at more than 100 miles from the coast on any sort of consistent basis - unless you have ringed your shores with airfields - you need air to air refuelling.

The development of maritime air in the region as shown in Table 3, is, with some exceptions, still in its infancy. India presents as a country with

probably the best fleet air arm/air force structure. But there are limits on carrier borne aircraft, particularly fighters. A total force of 23 *Harriers* - and there are only 3 two seat trainers in addition - is not much to provide for operational conversion and two air groups. It is probably fair to say that India's most important strategic maritime air assets are its *Bear F* and *May* maritime patrol aircraft.

China presents a more complex picture. The number of air assets is impressive. Their sophistication and probably their expertise are variable. The Chinese Naval Air Forces probably attempt to make up in mass for what they lack in individual capability. What is of concern to other nations around the South China Sea is the efforts of the Chinese to acquire sophisticated long range fighters from the Russians, together with air-to-air refuelling. The attainment by China of the capability to maintain air superiority over the Spratly Islands must have implications for the future strategic balance in the South China Sea.

That concern must be part of Malaysia's rationale for the dual purchase of *MIG 29* and *F-18* aircraft. The packages are small, particularly for the American built machines, but they do confer a quantum increase in capability from anything ASEAN has possessed before. In anti-ship terms, however, it is other nations who have gone or are going further. Thailand already has *F-27* patrol aircraft configured to take the *Harpoon* missile; it is acquiring

updated *P3s*. The Indonesian Air Force operates some very sophisticated radar surveillance aircraft. Singapore is acquiring the latest *Fokker* maritime patrol aircraft. It already has the *E-2* airborne early warning aircraft.

The strictures mentioned earlier with regard to the complexity of seaborne operations apply just as much to Air Forces.

## CONCLUSION

In concluding it would be fair to say that in watching the region, it is not one of arms races. There are dangerous developments and there is certainly enough weaponry to serve a host of conflicts. But the great majority of that weaponry is being acquired within the context of reasonable security judgements and relatively limited budgets. Furthermore, the increasing sophistication of the defence outlooks of most nations in the region means that most systems are acquired with a realistic view as to the capability to support them and the associated requirements to employ such capabilities to proper effect. Even the most *bargain basement* buy in these days has some sound thinking behind it.

Commander James Goldrick is a past Councillor of the ANI and a prolific writer on matters of naval history and strategy. This paper was delivered at a recent Navy League of Australia and Company of Master Mariners sponsored seminar on *Developments in Maritime Power in East, Southeast and South Asia*.



# WOMEN IN SURFACE COMBATANTS

*Lieutenant Commander Peter Jones*

## BACKGROUND

It is approaching a decade now that women have served on RAN ships and nearly a year since HMAS *Sydney* became the first RAN surface combatant to have a mixed gender ship's company. The usual female complement on board is now around three officers, three POs and thirty junior sailors. Since the women joined the ship *Sydney* has completed a refit (SARA 3), a work-up (achieving the best result of any ship in 1992) and took part in Fleet Concentration Period 93-1 and TASMANEX 93. At the time of writing *Sydney* was preparing for another work-up and an operational deployment.



This article aims to give a feel for some of the issues surrounding the introduction and integration of women into the ship's company of an FFG. As such it contains subjective observations and is very much an Executive Officer's view of things.

## AN OVERVIEW

The introduction of women into the *Sydney* has been successful and given some unexpected positive spin-offs in the process. Importantly the integration has been accepted in a positive way by the vast majority of the ship's company.

The women on board have generally

approached the varied tasks and the high workload sailors must tackle in FFGs with enthusiasm and achieved most satisfactory results. This positive approach served to dispel any questions about whether they were up to the job and proved a major factor in their smooth integration into the ship.

There were however other important aspects to this integration. They included:

- Having accommodation and heads/shower facilities properly organised from the start. Indeed the only impediment experienced to full integration was having to initially accommodate female POs in the female junior sailors mess.
- Knowing the women were here to stay.
- Having women on board in sufficient numbers so that they did not attract special attention.
- Having women in all departments.
- Maintaining the behaviour protocols contained in various DI(N)s and Maritime Command instructions.

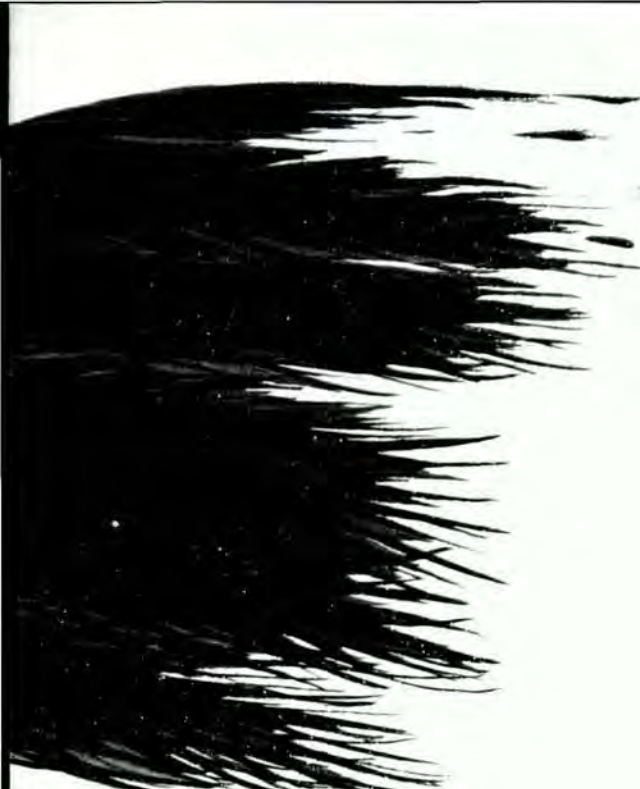
## THE POSITIVE ASPECTS OF INTEGRATION

In terms of peacetime operations the presence of women on board further contribute to the RAN's positive image abroad by making the ship's company more representative ambassadors of Australian society.

In operational terms the inclusion of women in boarding parties gives added flexibility when boarding merchant ships with crew and passengers of both sexes.

Less tangible, is the different atmosphere that exists on board a mixed gender ship. I believe such an environment encourages a more mature level of behaviour, particularly among the more junior members of the ship's company. *Sydney's* experience is that there are fewer incidents of extreme (and usually alcohol related) behaviour





# This is why Gaeta minehunters will survive time and time again.

Palm trees are amazing plants. With just shallow roots and sand for support, they hardly seem capable of surviving the explosive power of tropical cyclones.

Yet, once the torrential rains have stopped and the gale force winds died down, there they are. Right where they were.

Because rather than stand up to the elements, palms go with the flow. They absorb the force of the wind by bending with it.

Gaeta Class minehunters come uniquely equipped to do exactly the same thing.

Like most minehunters today, the Gaeta ships have fiberglass hulls, mainly because a lot of mines are activated by steel hulls.

But that's where the similarity ends.



The Gaeta design features a unique hull. Rather than rely on traditional transverse and longitudinal supports, these revolutionary ships have a single huge, solid piece of fibreglass which can actually flex far enough to absorb the shock waves from an exploding mine.

Which means Gaeta is much more likely to keep on surviving.

Just like palm trees.

Besides shock resistance and a low magnetic signature, there's a third factor of critical importance. The amount of noise the ship makes. That's because many mines use acoustic devices set off by sound waves.

Suffice to say, Gaeta has an exceptionally low noise signature. (Exactly how low is classified.)

Not all that surprising when you realise that the Gaeta Class minehunters that ADI and Intermarine are proposing to build in Australia for the Royal Australian Navy are the fourth generation of these revolutionary Italian ships designed by Intermarine.

And an improved version of the type that helped clear the waters off Kuwait after Operation Desert Storm.

Without a single mishap.



**intermarine**



**G A E T A     C L A S S**  
**THE PROVEN MINEHUNTERS WITH A BUILT-IN SAFETY FACTOR**

ashore.

## PRECONCEPTIONS

One of the interesting aspects about the introduction of women into the ship's company is the need to be prepared to cast aside long held preconceptions. As an example it was often said that women are not as strong as men and this will impact on seamanship evolutions. Certainly while the average lift capacity of women is less than men in practice this has not become an issue. The same numbers for seamanship evolutions are used as before and highlight that these numbers were traditionally based on men with a variety of lifting strengths. Clearly you still need some strong men to do certain jobs such as in the Dump Party - but that is as far as it goes.



I have also found female members of the ship's company to be more socially robust than expected. They are able to mix and converse well with the male sailors. Having said this, like their male counterparts, there are a wide variety of attitudes and approaches to life.

As with any change, the introduction of women into warships has led to a range of reactions from people. Certainly there has been the stereotype male chauvinist attitude among some of the more older members of the ship's company. This is to be expected and it should be accepted that many will not change their views no matter how well

women integrate into ship operations simply because to them "it just isn't natural". Provided individuals do not obstruct integration these views can be tolerated. On this issue one has to take the long term view and accept that these officers and sailors will leave the service in the fullness of time. More important is the attitude of junior officers and sailors.

But opposition to women at sea is not the sole preserve of males. A few women on board either did not think women should go to sea at all or that they should only serve in auxiliaries. Once again the rationale for these views was generally "because it does not seem right". It is therefore important to accept that both males and females are a product of a society that is culturally sexist, albeit it is rapidly changing.

## FRATERNISATION AND HARASSMENT

Fraternisation and harassment are the big issues and must be watched unremittingly. The key must be to:

- . adhere to the rules,
- . let people know where they stand from the outset,
- . set the example from the top, and
- . keep your finger on the pulse.



In addition to these actions the ship also instituted an education program on board and this has been backed up by recent presentations to supervisors by

the Chief of Staff to the Maritime Command. In the future the level of mixed gender awareness will improve further once the initiatives such as the Good Working Relationships Project bear fruit. Such education programs are considered vital to assist ships making mixed gender manning work.

While the *No Touch* rule is strictly enforced on board it is recognised that relationships will be formed by members of the ship's company. Everyone on board is made very much aware that these relationships cannot affect the *Sydney* and once they reach such a state then clearly they have no place in the ship. Fortuitously the advantages of de facto relationships and marriage between naval personnel are such as to encourage these relationships to be declared.

Part of attempting to keep a finger on the pulse is being able to recognise potentially disruptive actions or behaviour. This is not always obvious. As an example, this behaviour may be interaction between two of the ship's company that is similar to sister/brother clowning around. The question of "would this person be doing this if the other person was a male?" usually bowls out inappropriate behaviour. In such circumstances a word early on can stop problems later.

While the benefits of the Divisional system are long recognised it is important to be also alert to its shortcomings. Chief among them is its unsuitability for managing sexual harassment if the players in any such incident are also members of the same division. It is vital that victims of sexual harassment are encouraged where they think it appropriate to come straight to the Executive Officer (XO) or Commanding Officer. More effort is needed within the Navy to encourage a culture where all ranks know their human rights in addition to their privileges as service men and women.

#### EQUAL EMPLOYMENT

Having integrated women into the ship it is important to ensure that they are employed on an equal basis. This is not always as clear and obvious as it

sounds. For example, there was at one time a disproportionate number of female junior officers at sea acting as the XO's Assistant. They may well have been good staff officers but they could have also been good Assistant Gunnery Officers. Similarly it is essential to ensure that female junior sailors have equal opportunity to do high profile jobs (provided they have the necessary training). It quite often takes time to discover such subtle and often unintentional discrimination is at work. It is important of course not to go too far the other way any give women high profile jobs just because they are female.

#### THE NUMBERS GAME

One problem *Sydney* did experience in 1992 was the inability of the Navy to provide sufficient trained women to fill billets. Even more critical was the inability to provide replacements at short notice. Clearly the tempo of mixed gender manning has to be tempered by the ability of the organisation to maintain numbers on existing mixed gender ships. Quality should not be sacrificed for quantity or to achieve perceptions of progressiveness.

Another point arising from this aspect is the close numbers management required in FFGs with mixed gender manning. For example in preparing for a possible DAMASK deployment the ship had only three spare bunks once billeted personnel (including Seahawk flight, CDs etc) were posted. It was therefore critical to get at least twenty seven billeted female sailors posted to the ship (which had not been achieved until April 93) otherwise there would not be accommodation for everyone.

It is also essential that there is good co-ordination between the ship and the Directorate of Sailors Career Management (DSCM) to ensure that the female mess is topped up. For example if a replacement female cook is not available then another category must take up the female bunk. The new DSCM organisation has proved well suited to be able to keep a cross-category finger on the accommodation pulse.

The final point on the numbers game is

that the Navy will over time get a better feel for actually how many women want to join the Navy knowing they will be liable for sea service. I believe there will never be a 50/50 male/female split at sea. This is due to cultural, social and physiological reasons. Research over recent years has shown there are differences between sexes in their thought processes and adaptability for certain tasks. Whatever progress is made in reducing sexual discrimination, these differences will no doubt still be reflected in numbers joining the Navy and applying for particular categories. This aspect of mixed gender manning is both controversial and sensitive. Clearly much has yet to be learned in this area and it is important the Navy keeps abreast of the associated research.

#### CONCLUSION

Mixed gender manning in the RAN's combatants workings. Importantly this

initiative does benefit the Navy and the defence interests of Australia. The integration process has been successful to date because the organisation was in place to facilitate it and the ship's company approached it in a positive manner.

As with any endeavour involving people there will be hiccups along the way, but it is important to approach them in a rational and considered manner. Whatever the eventual numbers of women at sea becomes it is important that the RAN gives women the opportunity to serve their country at sea should they desire. The Navy certainly benefits from their contribution.

Lieutenant Commander Peter Jones is the Executive Officer of HMAS Sydney. A past Councillor of the ANI he has contributed previously, especially in the areas of naval history.

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# STRATEGIC IMPLICATIONS FOR AUSTRALIA AND THE REGION OF DEVELOPMENTS IN MARITIME POWER IN EAST, SOUTHEAST AND SOUTH ASIA

*Captain Jack McCaffrie, RAN*

## INTRODUCTION

With the end of the Cold War, the consequent emergence of a buyer's market for conventional arms and the reassessment by the United States of her military posture throughout the world the attention of many defence and security analysts has turned to the apparently increasing potential for regional conflict. This is certainly the case in the Asia-Pacific region where internal security concerns are giving way to a growing desire to influence external issues, many of which have maritime connotations. Inevitably, this is leading to quantitative and qualitative developments in maritime power with implications for many countries, within the region and beyond it.

In drawing out the strategic implications for the region and for Australia of developments in maritime power in East, Southeast and South Asia one must first examine the reasons for the developments.

## WHY MARITIME POWER IS DEVELOPING IN SOUTHEAST ASIA

In Southeast Asia, the position is neatly encapsulated in Jacques Huntzinger's comment:

above all conventional arms are needed particularly by the newer states, for establishing a national defence... They facilitate, albeit at great cost, the satisfaction of many objectives of new states: prestige, independence, power, security, and the maintenance of domestic order. They will be sought for regional preponderance, influence, and expansion and for the preservation or restoration of balances of power in potentially unstable and conflict prone regions. Finally there are purely internal factors influencing new

states to acquire conventional arms... To satisfy budding military complexes... Whose support is vital to the survival of political regimes.

Specifically, some of the Southeast Asian states are either relatively newly independent, like Singapore, Malaysia and Brunei or have until recently enjoyed major power protection such that they could afford to neglect their own maritime forces—the Philippines for example. As new states, many had internal security problems to solve before they could comfortably shift their gaze outwards. So, early defence spending concentrated on land and air forces. Now, with insurgency posing significant problems in very few Southeast Asian states maritime forces are receiving more attention—either through modernisation (as in Thailand's case) or for expansion from a totally inadequate base as is the Philippines' dilemma.

This has coincided with a growing ability to fund more capable maritime forces, although the trend in rising defence spending is very uneven in the sub-region. Some figures, depending on which are used, show that Indonesia, Malaysia and the Philippines have all had fluctuations in defence spending in recent years.<sup>2</sup> Likewise, while overall spending by Asean states has been rising, spending as a proportion of GDP has actually declined: a reflection of rising economic prosperity and a greater capacity to fund the defence burden.

Closely linked to the ability of Southeast Asian states to attend more to external security demands is their need for more self-reliance following the Cold War and consequent declining interest of the former Soviet Union and the US in subsidising the defence efforts of regional states.<sup>3</sup> The

decline in superpower interest is becoming evident in other ways too as the USN withdrawal from the Philippines leaves it without any permanent maritime presence in Southeast Asia. Despite repeated commitments to regional security by the US the reality of reduced forward deployments is forcing Southeast Asian states to look more to their own maritime security needs.<sup>4</sup>

Greater emphasis on self-reliance is matched in Southeast Asia by uncertainty over security caused partly by the reduced US presence, and partly by a residual fear of Russia, potential instability in the Korean peninsula, a possible scramble to fill the gap left by the US and the existence of sub-regional maritime issues which could strain relations or even develop into crises.<sup>5</sup> Bilveer Singh of the National University of Singapore has recently written that some Asean states still see each other as threats and that this attitude has been a factor in the upsurge in arms procurement.<sup>6</sup>

One of the most intractable of maritime issues concerns boundary disputes. All Southeast Asian littoral states have overlapping claims in their respective 200nm Exclusive Economic Zones, such that many of the maritime boundaries in the South China Sea are in dispute.<sup>7</sup> There is also oil related contention between Indonesia and Vietnam over the Natuna Islands' continental shelf boundary, and between Thailand and Vietnam over boundaries in the Gulf of Thailand. Each of the claimants feels obliged to develop naval capabilities for extended patrol of its zone if it is credibly to enforce its claims.

There is the perceived need of Southeast Asian states to protect their sea lines of communication, a need generated by their desire to continue their already spectacular economic development which relies so much on seaborne trade. For example, Singapore's trade is worth some 323% of its GDP annually, Malaysia's is worth 121%, the Philippines' 41% and Indonesia's 35%.<sup>8</sup> The end of the Cold War and the demise of the Soviet Union as a threat to the SLOCs has not

diminished the perceived need for SLOC security in Southeast Asia, as is evidenced by Indonesia's commitment to patrolling and controlling them in some of the busiest routes in the world, and its admission that the task is beyond its present capabilities.<sup>9</sup> Threats to the SLOCs which have outlasted the Cold War include piracy, under control in Southeast Asia at least for the present, and ship sourced environmental damage.

The presence and growing value of offshore resources also require improved maritime force capabilities. The extension of territorial seas to 12nm and of Exclusive Economic Zones to 200nm have vastly expanded Asean maritime security responsibilities,<sup>10</sup> with offshore oil and gas fields very important to developing states otherwise dependent on imported energy, or dependent on export of energy for income. This affects the maritime force outlook of Thailand with some 50 rigs in the Gulf, and that of all other littoral Asean states with rigs or claims in the South China Sea.

Oil and gas apart, virtually all Southeast Asian states have extensive fishing interests, many subject to allegations of illegal activity or boundary disputes. There are, for example, bilateral fishing disputes between Malaysia and the Philippines, Malaysia and Indonesia, and Thailand and Vietnam.<sup>11</sup>

On a more sublime plane, Malaysia and Indonesia are in dispute over the Malaysian development of Sipadan and Ligitan Islands (particularly for tourism-skin diving). Malaysia is also using its claimed territory in the Spratlys for tourism.

Another explanation for growing maritime power is the prestige associated with having high technology weapons systems, especially where it involves keeping up with the Lee Kwan Yews. The attraction of financial reward for those involved in procurement is also a factor and without identifying any nation there are regional examples where prestige and "commissions" have influenced arms

procurement.

### WHY MARITIME POWER IS DEVELOPING IN EAST ASIA

In East Asia self-reliance is becoming increasingly important in the face of major power force reductions; although while tension remains relatively high on the Korean Peninsula and while full-scale Japanese rearmament remains politically sensitive throughout Asia the US presence will remain important and hopefully significant.

Japan's build-up has been motivated by the need to keep SLOCs open and by the threat of the hitherto powerful Soviet fleet. How it continues will depend largely on the US-Japan relationship and the maintenance of the US defence commitment. Japan's maritime power will also be determined partly by the availability of funds—a problem only since the recent recession which sees the FY 94 defence budget experiencing the smallest rise in 33 years—1.95% or \$US 896 million.<sup>12</sup>

Although East Asia is less troubled by boundary issues than Southeast Asia other tensions contribute to the growth in maritime power among its states. They include the relationship between China and Taiwan. With the latter no longer bent on recovering the mainland by force it is concentrating on building up its air and naval forces at the expense of the previously favoured land forces.

On the other side of the Formosa Straits China herself is expanding her maritime power in response to earlier inability to backup her South China Sea claims and to reducing tensions on her land borders.<sup>13</sup> Clearly, China has recognised the value of maritime power as a means of supporting foreign policy and expressing national will and power.<sup>14</sup>

Not all developments in maritime power in East Asia are positive; witness the reduction in readiness and activity levels of the Russian Pacific Fleet. Nevertheless, Japan is wary of the Russian Navy's potential to regenerate as and when the country's economy recovers. Japan is wary also of what

the Japanese Defence Agency sees as strengthening ties between Russia and China.<sup>15</sup>

### WHY MARITIME POWER IS DEVELOPING IN SOUTH ASIA

In South Asia the need for greater self-reliance is evident in the activities of the sub-region's maritime powers—not so much because of a reduced major power presence (it had been reducing prior to the end of the Cold War anyway) but in reduced availability of easy financing for arms purchases, especially in India's case as Russia is now desperate for hard currency.

India has also made no secret of its desire to engage in power projection with its maritime forces, and its plans for carrier based aviation reflect this. Ambitions have, however, been tempered by financial restraint in recent years, such that its new carrier will now be capable only of operating STOVL aircraft and not conventional take off and landing aircraft as had been planned earlier.<sup>16</sup>

Pakistan, India's chief rival as a maritime power in the Indian Ocean, has consistently had modernisation plans frustrated by both lack of funds and more recently American embargoes on the sale of military equipment.<sup>17</sup> None of the other South Asian littoral states are maritime powers in any meaningful sense, although Bangladesh has ambitions of attending to its offshore protection responsibilities and being able to make a meaningful contribution to any maritime conflict in which the country becomes involved.

### IMPLICATIONS OF MARITIME POWER DEVELOPMENTS IN SOUTHEAST ASIA

Having briefly considered some of the reasons for maritime power developments in the region it is now possible to suggest some strategic implications, for the region and for Australia. Taking Southeast Asia first one must be aware that it is becoming more complex, more multipolar and more volatile since the end of the nuclear balance inspired stability of the Cold War.<sup>18</sup>

Consequently, the most serious strategic implication is that maritime

disputes could become the next regional flashpoint.<sup>19</sup> This view held by some Indonesian officials, is also echoed by other writers who see the regional shift of emphasis towards naval and air forces indicating the salience of maritime security issues in the post Cold-War strategic environment.<sup>20</sup>

Listing just some of the maritime issues in dispute lends weight to this view:

- . 12 of the 15 maritime boundaries in the South China Sea,
- . Malaysia in dispute with every other Asean country.<sup>21</sup>
- . Pedra Branca (Horsborough Light) involving Singapore and Malaysia.
- . Sipadan and Ligitan Islands involving Malaysia and Indonesia.
- . Boundaries in the Gulf of Thailand involving that country, Cambodia and Vietnam.
- . The Spratly Islands in the South China Sea and China's claim to that sea as territorial waters.

Some of these disputes have already seen military action; such as the Philippine mobilisation in response to the arrest in 1988 of 49 Filipino fishermen by the Malaysian Navy, the occasional alert of Malaysian and Singaporean forces in response to intrusions by Malaysian fishermen into waters adjacent to Pedra Branca<sup>22</sup> and most significantly, the March 1988 naval confrontation between China and Vietnam in the Spratlys, which cost Vietnam three vessels and almost 100 lives.<sup>23</sup>

At present there appears to be no consensus as to just what potential these disputes have for developing into violent conflict, and setting aside the optimism of some commentators one cannot be too sanguine about the eventual outcome of disputes, however minor, (like Sipadan and Ligitan) which continually defy attempts by either side to reach an agreement. That particular matter has been simmering for 24 years<sup>24</sup> and despite a commitment on the part of President Suharto and Prime Minister Mahatir at their

Langkawi meeting in July to resolve the issue by the end of this year, such an outcome is unlikely.

The number of these relatively minor disputes does highlight the "high degree of mutual suspicion and fear among countries in the region".<sup>25</sup> Nevertheless, the potential for flashpoint over maritime disputes is not limited to intra-regional issues. In particular, China's claim that the entire South China Sea is territorial waters is disturbing; given her previous resort to armed force in the Spratlys and despite her recent commitment to seek resolution of sovereignty by peaceful means. Michael Leifer has put China's strategic position succinctly:

China has come to enjoy unprecedented latitude in regional affairs...That new-found latitude has permitted a steely rigidity in prosecuting regional interests, displayed in maritime policy.<sup>26</sup>

Japan and India also have the potential to be troublesome, with Japan's situation the legacy of World War Two more than the result of any recent activity. Still, the memory of her past aggression makes it most unlikely that any Japanese maritime foray into Southeast Asia would be acceptable to the sub-region except as part of a US-Japanese arrangement. Although India was seen as a potential threat some years ago, the slowdown of her naval expansion program has allayed fears-at least temporarily.

The presence of simmering maritime disputes in Southeast Asia combined with the improving capabilities of maritime forces can only add to the potential for conflict. Although the point may be almost simplistic one can argue that as forces become more capable then they may also become more willing to apply force.

Perhaps the greatest danger in the sub-region is that of the security dilemma in which states "by seeking to advance their individual national securities (through policies of arming, deterrence, and alliance) create and sustain an international environment of

decreased relative security for themselves and for the collective of states."<sup>27</sup> So, while initial arms procurements may be made for reasons of national security and to gain some technological edge, in the long run they might induce some kind of arms race in which military and technological inferiority could become politically and militarily untenable.<sup>28</sup>

This could emerge as a substantial problem following the likely settlement of the Cambodian crisis which provided some common security rationale, for ASEAN at least.<sup>29</sup> The absence of such a unifying threat could see maritime force capability improvement construed as being a mutually threatening activity. An example of how events could get out of hand is provided by the recent decision by Thailand to buy a helicopter carrier (and AV-8Bs with it)<sup>30</sup> a major change of direction for a nation which had previously been focussed on the threat to its land borders. Will this acquisition cause the Thai Navy to be more assertive in support of its maritime interests in the Gulf and the Andaman Sea? Will it cause Malaysia to review its lower priority for submarines? Activities like this make the prospect of Asean wide (not to mention Southeast Asian wide) defence cooperation doubtful for the foreseeable future.

External actors also add to the possibility that greater capabilities will lead to a greater willingness to use force in the maritime sphere. This is more so the case in the South China Sea than anywhere else in the sub-region, because of the many claimants to all or part of it. Recent history suggests that the most likely candidates for conflict there are China and Vietnam,<sup>31</sup> as does China's continuing naval modernisation and expansion. Only Vietnam's relative naval weakness suggests otherwise, for the moment at least.

Interestingly, regional political leaders consistently suggest that the Spratlys and other South China Sea concerns are being exaggerated and that the states concerned will resolve their

differences peacefully. At the same time, however, virtually all of the claimants are beefing up their military presence in the islands or islets claimed by them and are improving their maritime force capabilities with an eye to the possibility of conflict there. The failure of the four informal workshops involving Spratlys claimants, and hosted by Indonesia, to make any real progress thus far confirms the difficulties in changing entrenched views. Given the expectation of resource riches in the South China Sea maybe even Asian patience will be tested by the continuing inability to advance peaceful resolution of the claims.

Just as commentators and political leaders claim consistently that South China Sea disputes will be peacefully resolved they also claim that the maritime force developments in the sub-region are not an arms race. To the extent that the necessary element of competition has not been evident the claim is tenable. But because the arms purchases of one country can impinge on the security of another the competitive element may not be far beneath the surface. Furthermore, a military build-up could fuel interstate suspicions if it remains unexplained to its neighbours.<sup>32</sup> Again Thailand's helicopter carrier provides a good example.

Clearly, with maritime disputes gaining a higher profile in the sub-region and with maritime forces more able to contribute to national security there is a greater risk of disputes degenerating into crises, or even conflict. There is of course, another side to all this. There are also positive strategic implications to be drawn from the developments in maritime power.

The fact is that the developments in maritime power could lead to greatly improved cooperation among Southeast Asian states, for reasons involving the wider definition of security now generally accepted. These states do have significant common strategic interests including:

- . Maintenance of national

- sovereignty.
- Further development of national solidarity, free from any external interference.
- Economic growth leading to greater national and regional prosperity, and
- The progressive improvement of the social and cultural "quality of life" of the nation.<sup>33</sup>

Some regional security analysts argue that prospects have never been better for the emergence of a regional security community of all ten Southeast Asian states, based on the principle of non-interference and non-use of force.<sup>34</sup> That this could be the case is evident in the drive by all Southeast Asian states for continuing economic growth and development, and the realisation that funds diverted for security purposes will not necessarily contribute directly to this. There is also the realisation that more capable armed forces could lead to a strengthening of the entire sub-region and could even lead to an organised military network for Asean.<sup>35</sup>

The scope for greater cooperation arising from the development of maritime power appears widest where the question of economic security is considered. Southeast Asian economic development depends very heavily on international trade and so on the free access of merchant shipping to the world's sea lanes.

Perhaps of greatest concern is the continued freedom of those sea lanes connecting the Persian Gulf with Southeast and East Asia, involving passage through the Straits of Malacca and Singapore as well as the South China Sea. Despite the ongoing disputes in the South China Sea and Malaysian (as well as Singaporean and Indonesian) concerns about the management of shipping using the Straits it is in no regional state's interest to see the free flow of shipping interrupted.

This applies equally to external powers; especially China. The growth of her own economy and her increasing dependence on imported oil to lubricate

it should provide food for second thought. The Far Eastern Economic Review recently stated that by the end of the decade China could need to import up to one million barrels of oil per day, and was relying on good relations with Iran to ensure supply.<sup>36</sup> If maritime conflict is in no one's interest, cooperation to avoid it must be in everyone's interest.

The economic dimension is also apparent at other levels, not least in the reliance of Southeast Asian states on offshore resources—fish, oil and gas especially. The threats to them—illegal fishing, smuggling and piracy—are economically debilitating and create tensions affecting mainly the less developed states. The Philippines shows why, losing an estimated \$US3.1 billion per year to poaching, illegal fishing and smuggling, because it has no effective maritime force to prevent these illegal acts.<sup>37</sup> Regeneration of her maritime force, despite the high priority assigned to it will take a long time, thereby making a good case for the Philippines to develop workable cooperative arrangements with her neighbours.

The economic effects of piracy—lost cargoes and expensive re-routing—could also be reduced by cooperation among Southeast Asian maritime forces, as has been shown by Singapore, Malaysia and Indonesia.

While strategic implications suggest both an increased possibility of maritime conflict or a greater potential for maritime cooperation, many commentators are very optimistic as to the likely outcome in Southeast Asia. However this optimism maybe overstated, because little substantive progress has been made in resolving many longstanding disputes.

Yet, there is an undeniable desire for greater cooperation and an end to the disputes. Hopefully, a further implication of the growth in maritime power will be the establishment of a maritime confidence and security building regime determined to engage the real issues. The kind of regime needed is one that will increase the

amount of information flowing between regional navies and will foster genuine attempts to resolve disputes and to promote cooperation in exploitation of offshore natural resources.

#### IMPLICATIONS OF DEVELOPMENTS IN MARITIME POWER IN EAST ASIA

With fewer contenders the situation in East Asia is somewhat less complex than that of Southeast Asia-but potentially no less volatile. The Korean Peninsula apart, Japan is almost certainly the object of most concern in maritime terms. To date Japan's maritime capability expansion has not been opposed, primarily because of its self-imposed geographical limits, lack of a significant power projection capability and close relationship with the US. But, any expansion of Japan's maritime strength beyond these bounds would profoundly affect regional strategic planning, and arguably could lead to an almost immediate arms race based on historical experience.<sup>38</sup>

The importance of this issue is in the likelihood that the US military presence will be reduced somewhat and that by the turn of the century Japan will rely less on the US for its security than it has in the past.<sup>39</sup> Inevitably, it is emerging as a major power in an environment in which there is rising nationalism, but no longer any common unifying threat.

However, Japan is sensitive to the concerns of its neighbours and has forsworn the development of long range power projection forces, a position which is unlikely to change.<sup>40</sup> Even so, Japan, with her already considerable, and still growing maritime power can contribute significantly to regional security by:

- . Securing key strategic choke points in the Northwest Pacific.
- . By working more closely with South Korea towards peaceful reunification of the Korean Peninsula, and
- . Promoting multinational efforts to stabilise the Southeast Asian security environment, for example via confidence and security

building measures in the South China Sea.<sup>41</sup>

Japan shares the interests of her southern neighbours in the security of the sea lanes for the import of energy and raw materials as well as the export of manufactures. Consequently, her developing maritime power is more likely to add to the security of the region than to complicate it.

That judgment, of course, is not universally accepted: the US Ambassador to South Korea suggested in Washington in 1992 that Korea had no difficulty in identifying her post cold-war threat as Japan.<sup>42</sup> In fact, South Korea fears being caught between a Japanese and Chinese naval (and military) build-up. This fear and the gradual US decline will inevitably see a growth in the South Korean navy, hitherto limited to responding to the essentially coastal threats posed by the North Korean Navy. Even now the South Korean Navy is taking a broader view of its responsibilities, and is considering deterrence, sea control, protecting offshore resources and the value of presence.<sup>43</sup>

As with Japan, Korea's interests and the implications of her maritime power development lean very much to ensuring continuing freedom of the seas to facilitate economic growth and protect offshore resources.<sup>44</sup> Undoubtedly though, any significant naval development by South Korea would be watched by her neighbours with the same apprehension attending any independent Japanese build-up.

Taiwanese naval expansion has implications for East and Southeast Asia, as it relies hugely on the sea lanes for its livelihood and because it fears a Chinese imposed submarine blockade designed to strangle its economy slowly.<sup>45</sup> Its planned naval development is expected to allow it to challenge seriously China's ability to dominate the East China Sea-perhaps by the turn of the century. Fortunately, however, the gradual nature of the expansion means that it is not seen as provocative by China or by the region.<sup>46</sup>

The picture is somewhat different

outside the region as Taiwan is planning a bigger presence in the South China Sea, where she has claims on the Spratlys, and in support of her fishing and other resource interests.

Significantly, Taiwanese officials have indicated that they would help China to defend its claims in the South China Sea (and in the East China Sea where there is a dispute with Japan over the Senkaku Islands).<sup>47</sup> The destabilising nature of this claim needs no elaboration; adding quite substantial maritime strength to an already preponderant Chinese capability, especially in the South China Sea.

China's maritime developments are potentially the least benign in all of East and Southeast Asia; a fact underscored by Asean's determination to engage China in regional security dialogue as soon as possible.

One could conclude that the level of volatility in East Asia is at least as high as in Southeast Asia, but that the likelihood of tensions escalating into conflict is less because of the presence of US maritime forces. Nevertheless, the nature of the differences and of the contenders suggests that any conflict would probably be more intense and more costly.

#### STRATEGIC IMPLICATIONS OF MARITIME POWER DEVELOPMENTS IN SOUTH ASIA

Realistically, in South Asia the issue involves only India and Pakistan and their relations with neighbouring states. Strategically the sub-region is an acknowledged backwater, although that part bordering on the Persian Gulf is uniquely important with its concentration of much of the world's oil supplies.

The recent slowdown in India's naval expansion will be temporary if India's stated ambitions are to be believed. It professes that whoever controls the Indian ocean controls the sub-continent,<sup>48</sup> and in aiming to be that power it has no serious rivals. The strategic implication of such ambitions could be destabilising if India was to strike any opposition to its aims, but

it can claim control over a lot of the Indian ocean without infringing on the interests of others.

Pakistan is markedly inferior in terms of maritime forces and appears to have no ambitions to achieve superiority. According to one recent writer Pakistan is more or less resigned to little more than denying India control over its territorial waters.<sup>49</sup> At the same time Pakistan considers its defensive posture very strong because it is truly defensive and because India is unlikely to get a political pay-back commensurate with its acquisition of offensive capabilities.<sup>50</sup>

Even so, India's development plans could be destabilising, in the absence of any clearly articulated strategy and defence policies in a white paper or equivalent.<sup>51</sup> The potential for instability is further heightened by suggestions of "India's interests in the Malacca Straits" and "creative ambiguity as a driving force for Indian strategic policy".<sup>52</sup> Indeed, if India treated Southeast Asian and South Pacific countries in the same way that it treated its South Asian neighbours regional strategic concern would be heightened greatly.

India does, however, have some genuine (if inflated) concerns. For example it does fear Pakistan's ability to endanger it by restricting access to Persian Gulf oil—as much by recourse to Islamic solidarity as by any use of maritime force.<sup>53</sup> India also fears the possibility of high technology weapons transfers to Pakistan from Saudi Arabia and the possible use of Iran to give Pakistan strategic depth. Mutual suspicion between the two neighbours remains high.

Consequently, continuing development of each state's maritime power must be linked with some form of maritime confidence and security building forum, however low key, if their strategic implications are to be positive. Nevertheless, Pakistan's maritime power is very limited, both in naval and commercial terms. Its national merchant fleet comprises only 26 vessels which lift less than 10% of the nation's

cargo.<sup>54</sup>

An opportunity (and an enormous challenge) for both states to improve their maritime relationships could be provided by a recent BHP proposal. The big Australian wants to link energy hungry India with Iran's gas fields by underwater pipeline, the only practical route for which would traverse Pakistan's territorial waters.<sup>55</sup> An associated proposal that Pakistan also take some gas from the pipeline may soothe Indian concerns; but then again it may not.

That India realises the need for a more positive role in the region is suggested by the recent increase in Indian and Indonesian naval contact including joint exercises and a visit to India by the Indonesian CNS, in which he expressed concern at India's plans for a naval and air base on Great Nicobar Island- a plan subsequently shelved.<sup>56</sup>

In summary, while further improvements in maritime power in South Asia could add to existing tensions, both Pakistan's relative weakness and India's awakening to the need for a more cooperative approach provide some grounds for optimism.

#### STRATEGIC IMPLICATIONS OF DEVELOPMENTS IN REGIONAL MARITIME POWER FOR AUSTRALIA

**Southeast Asia.** Arguably, the most important factor in Australia's relationships with Southeast Asia is the policy of "comprehensive engagement" developed by the present government<sup>57</sup> and relying on mutual commitment between countries that are in every respect equals. In security terms the policy amounts to "security with Asia, not security from Asia" as articulated by Prime Minister Hawke in May of 1991. This being the case the strategic implications of our neighbours maritime power developments should be of little concern to us-nor ours to them. As Foreign Minister Evans has put it "there is no basis for us being overawed by them."<sup>58</sup> Undoubtedly, however, if our present satisfactory relations with Southeast Asia are to continue there is a need for both

parties to explain the rationale for their maritime power developments-transparency in other words.

If the continuing development of maritime power in Southeast Asia is to remain a positive factor in Australia's security there will be a need for a continuing dialogue; to reduce misapprehension, to share strategic perceptions, to assure others and be reassured ourselves, and to build a cooperative capacity to tackle mutually important issues like sea lanes security.<sup>59</sup>

Maritime developments can also benefit Australia's position in this sub-region through the ability of navies (everywhere) to establish and maintain cordial relations even when political relations are "based on mutual respect and shared interests, but without the intimacy of the earlier period" as our relations with Malaysia, Singapore and Brunei are now described.<sup>60</sup> Naval relations with these countries, especially the first two, are excellent; and if not intimate are certainly close and cordial.

As Southeast Asian countries develop more capable maritime forces, often with Australian technical help, our capacity to integrate with them for combined operations, involving say patrol and surveillance will surely increase. This should in turn permit the building of a more integrated, mutually understanding and generally secure region.

One could leave the issue without suggesting that there could be any potential dangers to Australia in a region comprising more capable maritime forces, but some caution is warranted if only in relation to Australia's "technological edge" which for so long has been a reassurance for us against the emergence of any military threat in or from the region. Over time regional advances could see our edge blunted and with it the implication that if relations ever deteriorated to the extent that conflict became a possibility our position may not be so sound. Save engaging in some form of arms race, for which there is at

present no justification, Australia need do little but monitor events and participating fully in regional security dialogue.

There are, however, opportunities which regional maritime capability improvements offer to Australian arms manufacturers-and in particular our born again shipbuilders. The chance of cooperative ship-builds and purchases is there but the competition will be fierce.

So, as Australia seeks ever closer relations with Southeast Asia developments in maritime power there seem to be almost wholly positive for Australia's interests, with the proviso that if comprehensive engagement were ever to develop a conflict dimension Australia would need to evaluate closely how it might wish to remain engaged.

**East Asia.** The strategic implications for Australia of maritime power developments in East Asia are mostly indirect. This is borne out in Garnaut's 1989 report which showed that a survey of Australians indicated little fear of an East Asian threat and East Asians showed equally little knowledge of or interest in Australia.<sup>61</sup>

But, while we have no direct security interests in the sub-region Australia would certainly be affected by disputes or conflict there. Any conflict in the Korean Peninsula which had maritime dimensions or any maritime conflict involving any of Japan, China or Korea could interrupt trade to and from East Asia, with implications for a number of economies, including Australia's. Although our interests could be affected Australia would be unlikely to become involved directly.

A more direct involvement could be forecast for Australia were China, as an East Asian state to become over assertive in the South China Sea. It could prove to be a nice test for our policy of comprehensive engagement.

Essentially, then although a continuing strengthening of East Asian maritime power could prove threatening to Australian (and other) trade we are too

geographically remote to be able to influence events in any significant way.

**South Asia.** In South Asia the most important strategic implication of maritime power development for Australia is the slow but sure realisation by India that her growing strength must be accompanied by more dialogue with her neighbours if both their security and her own are not to suffer.<sup>62</sup> This and a sense in the Vice President's recent Admiral Katari Memorial Lecture that India is feeling left out of the growing trend towards regional security groupings are very positive signs that her military development will not continue in a strategic vacuum.

An additional positive sign is that Australia, which has not had a consistently high profile in the Indian Ocean, is now well placed to help India integrate more fully into regional security groups. There are already indications that India might wish to take advantage of the RAN's excellent relations with the Indonesian Navy.<sup>63</sup> It is also in Australia's interest to assist because although only 1.3% of our trade in 1990 was with South Asia some 30% of our trade flows across the Indian Ocean.<sup>64</sup> The Australian and Indian navies exercised briefly off Port Blair in September 1991, and further exercises are planned. Reciprocal visits by high ranking naval officers are also being scheduled.

Despite having concentrated on India in this assessment there is a clear connection with the other South Asian states. If Indian maritime power can be shown to be benign in regional terms the other much smaller forces will not feel the need to develop their capabilities beyond those needed for their own self-defence and resource protection.

## CONCLUSION

For the most part maritime power developments in the Asia-Pacific region are in response to legitimate national security concerns and the growing capacity of regional nations to support

maritime forces. As well, with the regional concentration on economic development and the dependence on shipping for almost all of the associated trade there is also a clear need for secure trade routes, and there is the potential for the region's developing maritime forces to contribute to this security. Nevertheless, the developments do have the potential to fuel maritime disputes, some of quite long standing, especially in East and Southeast Asia.

The strategic implications for Australia of these developments in maritime power are predominantly positive, but they will require continuing effort on our part for them to remain so. On the one hand, maritime issues could provide the next regional flashpoint, but on the other hand, navies have an enviable record of maintaining good relations even in the absence of close political relations. Australia must, therefore, encourage the kind of regional dialogue which will foster reassurance and will lead to a cooperative approach to mutually important security issues. In this sense, the growth in regional maritime power provides Australia with both challenge and opportunity.

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Captain Jack McCaffrie assumed the position as Director General, Maritime Studies Program in September 1993 after six months as a visiting associate at ISEAS Singapore. This paper was delivered at a Navy League of Australia and Company of Master Mariners sponsored seminar on *Developments in Maritime Power in East, Southeast and South Asia*.



# HMAS RUSTBUCKET

Lieutenant Jon Sparks, RAN

Imagine your ship, the latest of a new class of frigate designed to replace the ageing FFGs, sitting proudly in the middle of Sydney harbour. As you look with some pride towards her you note her elegant low radar reflective lines and advanced weapon systems each covered with its own combination of grey paint and varieties of rusts and verdigris. Rusts and verdigris!

Economic times must be hard to permit such ships' husbandry practices to persist. Not necessarily so, say some, for while economic considerations are at the heart of corrosion control, such considerations cannot necessarily be applied in a straight forward manner, for corrosion control requirements must properly be considered in relation to other factors such as design characteristics, strength of structure to meet its intended purpose, the length of time and the materials available for construction and capital as well as through life costs. In this article some of these competing factors will be considered with the aim of showing that all that shines (or at least does not "rust") is not always cost effective nor appropriate for today's Navy.

## CORROSION PRODUCTS

While from a contemporary perspective, corrosion may be nothing but a Bosuns Party's nightmare, corrosion itself can in fact be an important factor in controlling the rate of metallic deterioration. For example, titanium is a very reactive metal which forms an extremely tenacious compact oxide film when exposed to air making it one of the most corrosion resistant commercial alloys available for marine structures.<sup>1</sup> Closer to home, aluminium and zinc both form protective coverings of metal oxides. Unfortunately for our purposes though, iron in water results in the formation of a layer of non-protective rust that can both impair operability and be most unsightly.

## COATING SYSTEMS

Having understood this, it is obvious then that rust in our steel ships must be controlled: in the usual course of Navy life this means by the application of an appropriate paint scheme to a properly prepared surface. Given its time tested use, painting thus seems to be the best solution to the problem of corrosion control. However, a more detailed look reveals that the side effects of preparation and painting can in themselves be very expensive. For example, when chipping back around a rusting bolt, in a plate, in the side of a *Fremantle* Class Patrol Boat's superstructure, the incidental marks left in the ships' aluminium plate can not only be unsightly (even when covered with several layers of paint) but also these dents can be in the order of 0.5mm thick. When this depth of surface penetration is compared to that of the thickness of the oxide film formed on aluminium in air, it can be recognised that a single blow by a chipping hammer causes about 500,000 times the amount of deterioration to the plate surface in question.<sup>2</sup> Even where the surface to be prepared is mild steel, chipping and other forms of manual preparations cause metal fatigue as well as pounding salts or oil residues in to the metal thereby increasing the rate of future paint scheme failures.<sup>3</sup>

Beyond this there is also the question of the cost of the sailor wielding the chipping hammer, grinder, metal sprayer or paint brush. In simple terms an Able Seaman costs our nation around \$265 per day.<sup>4</sup> Beyond this, the real cost per preparation or painting day, will be much higher, for this figure does not take into account the cost to the RAN of sourcing, transporting, storing, accounting and issuing the necessary stores, nor the cost of the man hours taken to schedule and oversee the required work. While some may rightly

respond to this by saying that the costs involved in many large surface preparation tasks have already been addressed through the use of (cheaper) contract labour (during such periods as dockings), or reduced via the use of modern paint removal and application technologies, the fact remains that each day hundreds of sailors undertake numerous small surface preservation tasks that in total are very expensive. Further, that the Navy employs these same sailors for the expertise they hold in other fields, by using them to chip and paint, it not only risks reducing their morale but more importantly, in reducing their ability to pursue excellence within their specialisations, the Navy is foregoing the greater efficiencies that can be achieved via the optimum use of their most expensive skills.

#### OTHER MATERIALS FOR RAN USE

Variations in the metallic composition of mild carbon steels produces little effect in terms of their corrosion resistance: the exception to this is when about 0.2% of copper is added, the result is a two to three times reduction in the corrosion rate. This is not to say copper alloy (and other types of low alloy) steels do not rust but rather that they corrode at a lower rate than unalloyed steels.<sup>5</sup>

Additionally the rust formed on low alloy steels is less permeable and more protective than on ordinary steels. As a result, rust on these steels proves less damaging to the final painted finish. These types of materials then are ideally suited for use on surfaces that (because of their position in the ship or their shape) are best left untouched between refits. Of course to do so would also require the acceptance of some "rust" marks forming that were not over-painted but rather left to form their naturally protective films of oxides.

Cast iron alloys (those containing silicon, chromium or nickel additions) are also generally highly corrosion resistant. Never-the-less, they are expensive, thus their use is normally limited to pumps, valves and water boxes.<sup>6</sup> Conversely, while unalloyed

cast irons have a corrosion rate similar to that of ordinary steels, it has been found that the scale produced on these irons during casting reduces corrosion by about 25% over a year.<sup>7</sup> Such "scaled" irons may thus be suitable for brackets, upper deck lockers and equipment protective housings. Again, as the corrosion protection property is provided by a scale coating, this advantage would soon be lost if items made of these materials were regularly chipped in preparation for re-painting.

Aluminium also has a part to play in the RAN's ships as evidenced by increasing amounts of aluminium used as a means of weight reduction in ships' superstructures. What is not always recognised is that while the corrosion rate of aluminium alloys in a marine environment varies, at no stage is it more than about 1000th of that of the rate of corrosion of mild steel. This then produces a good case for not only more aluminium in selected areas of our ships but more importantly, the use of more unpainted aluminium to save both weight and the large costs associated with paint surface maintenance. Further, where a particular colour of finish is desired, the anodising of aluminium can not only provide a durable pre-coloured surface, but also can extend the life of an aluminium article four fold.

#### DESIGN AND CORROSION PREVENTION

So far the discussion has centred on controlling corrosion by optimising the choice of materials used in construction. Equally important though is the initial prevention of corrosion through good design practices. Attention to features such as water catchment areas, the sighting and shape of drainage holes and ability to access a structure for proper maintenance will improve the performance of any metal or coating system. Along with this is also the need for sound fabrication procedures that help eliminate crevices (such as via welding quality control) which can lead to a concentration of salts, dirt or differential aeration in a particular spot and thus a highly corrosive localised environment around

that position.

Paralleling this emphasis on corrosion elimination in the design of individual items, effective corrosion control can also be progressed by a holistic approach at the design stage. Under this philosophy the combined effects of the physical design, materials and coating systems are considered with a view of optimising the corrosion resistant properties of an entire system (be it a shock absorbing mount of an entire aerial array) on not just a capital cost basis but also on a through life basis, including at least a realistic cost for of the manpower that will be required to maintain any corroding system).

### TRADITION

From the above brief description of the advantages that the right selection of metal and thoughtful design can play in the minimisation of rust, flows the real possibility of minimising the Navy's overall capital and maintenance costs. Never-the-less, if there were a few obviously superior alloys or superior design methodologies that would produce real savings, it is hard to envisage why such technologies are not already in service with the RAN. The answer to this lies in the dictates of naval tradition for our abhorrence of "rust" is at least equally an abhorrence of the visual appearance of rust as it is a concern for the operability of the object rusting. Similarly in terms of design, what constitutes the traditional visually appealing lines of warship may not be the most effective design for corrosion prevention or strength.

To overcome this traditional inertia, a review of what constitutes and acceptable through life appearance of an item in a warship (or a warship as a whole) will be needed.<sup>1</sup> For example, while it is demonstratively cheaper to anodise aluminium in ship side grey and then use these plates to build a largely maintenance free superstructure for FCPBs, to achieve savings in this manner minor damage to this anodised layer must be left un-repaired between dockings. While such an approach will

theoretically produce net present cost savings to the RAN, it will only do so in practice if the sight of an unevenly oxidising patrol boat is acceptable in the fleet. Taken to its logical conclusion, should cost savings be pursued via technologies where a layer of "rust" provides a protective barrier against serious deterioration, HMAS *Rustbucket* may indeed become an example of the state of the art efficacy in ships' husbandry.

### CONCLUSION

The above discussion shows that corrosion control is a combination of coating systems (the RAN's traditional approach) the selection of materials to suit the environment and the control of the environment via proper design. While in an ideal world all of these factors would be considered when ordering new or replacement equipment, constraints of tradition (and to lesser extent) time and capital, currently obviate such an approach.

Never-the-less, the magnitude of the potential savings available to the RAN through the introduction of a new holistic approach to ships' husbandry makes such an approach worthy of further investigation.

As an aside, in starting on this proposed transition to a more balance approach to through life ship maintenance, in the spirit of NQM, the time (and the economic constraints faced by the RAN) may be right to ask a sailor with a chipping hammer in hand, just which parts of the system they are maintaining take the most effort, and then go on to ask the operator of that system to help work out whether the part in question could, for example, be simply modified so as to help alleviate a build up of corrosive agents. Alternatively the maintainer/operator may be able to identify parts that could be replaced with alloy (or even plastic) components that not only do the same job but save the RAN money by requiring less maintenance.

### Notes

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- 5 Indeed there is little difference in the corrosion rates of alloyed and unalloyed steels over the first year of exposure but thereafter low alloyed steels show an increasingly marked drop in corrosion rates. For example, see Butler and Ison, *Corrosion*, pp.73-75.
- 6 A much cheaper cast iron alloy can be achieved by using copper additives. Indeed, the "addition of 0.5%-1.0% copper can effect a considerable improvement in cast iron's resistance to...sea water". J.G. Pearce and K. Bromage, *Copper in Cast Iron*, London, 1964, p.20.
- 7 Over time this difference reduces "but after 12 years there still was a marked difference [between scaled and de-scaled cast irons] in the corrosion rates. Chandler, *Corrosion*, p.107.
- 8 With ships now being actively prohibited from pretty coating their decks, such an approach has, in a small way, already occurred.

Lieutenant Jon Sparks joined the RAN in 1978. He holds a BA and has served in a number of RAN ships. This article was written during his tenure as Executive Officer, HMAS Geraldton.

## NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that the Annual General Meeting of the ANI will be convened in Canberra on Thursday 24 February 1994 at 1930 for 2000.

The venue is Legacy House, 37 Geils Court, DEAKIN, ACT.

Items for inclusion in the agenda should be forwarded to reach the Secretary no later than 14 February 1994.

# THE RATIONALE FOR THE NAVAL CONTROL OF SHIPPING IN NEW ZEALAND

Commander S.M. Duff VRD\* RNZNVR

*I consider the protection of our trade to be the most essential naval service that can be performed.*

Lord Nelson 1804

## INTRODUCTION

The term Naval Control of Shipping (NCS), describes the reporting, routing, voyage organisation and tactical diversion of merchant shipping, in times of tension or hostilities. It is conducted using a set of world wide procedures agreed by Allied nations. *The goal of NCS* is to ensure the safe and timely arrival of merchant convoys, or independent vessels, at their assigned destinations.

In wartime, naval authorities provide the organisation for the control and protection of merchant shipping. The management, operation and crewing of merchant fleets, remains the responsibility of individual shipping companies, while specific cargoes and voyages are allocated to each ship by a government appointed committee. After evaluating the tactical situation, maritime commanders select the safest practicable route for merchant ships and if necessary assign military assets to protect their passage. The practice of coordinating the naval control of merchant vessels, with the forces assigned to their protection, is known as the Naval Control and Protection of Shipping (NCAPS).

## A BRIEF HISTORY OF NCS

The importance of Naval Control and Protection of merchant ships in times of tension, conflict or harassment on the sea, has been commented on extensively by eminent naval strategists, great war leaders, politicians and historians from earliest times. Many references to the Naval Control of Shipping, appear in

the accounts of the transfer of bullion from the Americas across the Atlantic Ocean to Spain. The trade routes utilised by these bullion ships became well known to pirates, or adventurers operating under *Letters of Marque* issued by unscrupulous governments. Single ship sailings were easy targets for these seagoing plunderers. To minimise losses, ships were grouped together in convoys for their mutual protection and were escorted by armed ships designed for the purpose, such as corvettes and frigates. Throughout history, convoys continued to be used whenever the movement of troops or trade was threatened during periods of conflict. Probably the best known examples in recent maritime history have been during the two World Wars.

Given the early losses of shipping in World War One, it is hard to understand why measures to convoy merchant ships trading to and from the United Kingdom, were not introduced until early 1917. The impetus for the introduction of the convoy system, seems to have been the policy of *Unrestricted Submarine Warfare* announced by Germany in February 1917. In the first six months of that year, 3.5 million tons of Allied shipping, representing over 1,000 vessels, was lost to enemy action. After the introduction of convoys, this was reduced by more than a million tons in the subsequent six month period. It was to control the sailing and coordination of thousands of Allied merchant vessels, that the British Admiralty Convoy Section began to develop the concepts of what we know today as the Naval Control of Shipping. The Convoy Section operated in close liaison with the British Ministry of Shipping who prioritised cargoes, allocated merchant ships to tasks and formed the vital link between the Navy and the shipowners.

In the Second World War, the Admiralty

assumed control of all British merchant shipping two weeks before the outbreak of war and the Trade Division and Ministry of Shipping began the introduction of measures for prioritising ship employment and controlling voyages. At the outbreak of war, the well proven convoy system was immediately implemented, but because of a shortage of naval escorts, ships faster than 15 knots were sailed independently. It is significant that losses of independent ships, were twice those of the convoyed vessels.

It is an interesting point that no effective alternative to convoying has yet been found for the protection of merchant ships in wartime. This is borne out by the fact that the British, Americans and Canadians, still charter ships or use their prepositioned merchant fleets to exercise live convoy operations at sea on a regular basis.

The structures and methods put in place by the Royal Navy during the two World Wars, formed the foundation of Naval Control of Shipping Organisations of today. Although NCS procedures evolved in Britain have now been widely disseminated throughout the world, the Royal Navy still takes a lead in the development of new NCS policy.

NCS doctrines developed over many years, were tested in a modern context during the Iran/Iraq war when merchant ships were threatened, damaged and even sunk. When convoy and controlled protection tactics were used, with the instigation of the Armilla Patrol, losses were eliminated. More recently, a form of NCS was introduced during the Gulf War, when merchant ships were boarded and briefed from Coalition naval vessels on entry into Gulf waters.

Postwar, it was clear to Naval planners that a core capability for Naval Control of Shipping needed to be maintained. It was recognised that the Naval Reserve with its special affiliation to the Merchant Navy, was ideally placed to undertake this important role. Also, the necessary link between the shipowners and the Navy, could be more effectively

maintained in peacetime, by civilian recruited reserves. This concept of vesting responsibility for NCS in Naval Reserves, was widely adopted throughout the world.

#### THE CURRENT RATIONALES FOR NCS

There is no doubt that the historical case for NCS is well made, but why do we need a Naval Control of Shipping capability in New Zealand today? There are three very compelling reasons. Firstly, and most obviously, New Zealand is totally reliant on maritime trade for her economic well-being. Despite the improvement in air transport since the Second World War, over 90% of imports and exports by value, and 99% by volume are still carried by sea. Twenty two million tons of New Zealand trade, worth around 30 Billion Dollars, moved to and from our overseas markets last year. This trade was transported by over 4,000 individual merchant ship voyages. Coastal vessels made almost 16,000 voyages around New Zealand, shifting some 13 million tons of cargo. Over 35% of New Zealand's GDP is derived from its imports and exports.

New Zealand is heavily reliant on imported goods. Eighty five percent of crude oil, almost all motor transport, electronic equipment, fertilisers, rubber and heavy electrical equipment are imported. Not only would the interruption of maritime trade deprive New Zealand of vital goods, but its effect would be felt in the manufacturing, banking, insurance and retailing sectors, resulting in high levels of unemployment and social disruption.

A recent independent survey conducted by the Ports of Otago, showed that 18,600 people in that province alone depended on the ports for their livelihood. A similar study conducted in the Ports of Auckland, found that 13% of New Zealand's GDP, depended on maritime trade through the ports. That report also claimed that 87,000 people were employed in the Auckland region, as a direct result of port throughput.

The second important rationale for NCS in New Zealand, has to do with its

position on the globe. New Zealand's geographic location deep in the southern oceans, means that its Sea Lines of Communications (SLOC) are some of the longest of any maritime trading nation in the world. Apart from Australia and the South Pacific nations, the majority of New Zealand's trading destinations are in the Northern hemisphere. This entails voyages of 10,000 miles to the European Community, 5,000 miles to Japan and 6,000 to the USA. Even taking into account the higher speed of modern merchant ships, voyages of 2 to 4 weeks are not uncommon. Over 75% of New Zealand's trade, utilises voyages averaging 6,500 miles and 18 days duration. By contrast, the voyage from New York across the Atlantic to Liverpool, takes an average of only 8 days, and much Northern Hemisphere trade is carried on voyages which are shorter than that.

Not only do the merchant ships carrying New Zealand trade travel vast ocean distances, but most of them pass through restricted waterways at some point during their passage. The Suez and Panama Canals, Cape Horn, the confined waters and straits to the north of Australia and the Gulf region, form natural *choke points* where the geography makes the potential interdiction of merchant trade easily achievable. More than 50% of New Zealand's trade passes through the choke points to the north and east of Australia, European trade comprising 20%, goes via Suez, Panama or Cape Horn, while 85% of crude oil imports, are sourced from ports in the confined waters of the Persian Gulf. In recent years acts of piracy and terrorism against merchant ships have grown at an alarming rate particularly in South East Asian and West African waters. Today's smaller merchant crews, which can mean there is only one person on watch, have left merchant ships vulnerable to this sort of attack when sailing in confined waters. In 1991 there were 150 such acts reported and it is well known that many other attacks do not come to official notice. While many of these incidents, and the threat of them, are more of a nuisance

than a direct threat to ships and cargoes at this time, they nevertheless could be easily escalated into a very effective form of economic warfare.

The third and arguably the most important NCS rationale of all, is the fact that New Zealand is almost totally reliant on the ships of other nations to transport her trade. Less than 1% of ships serving New Zealand trades are registered in that country. Although there are over 2,000 vessels on the register of New Zealand Shipping, only 19 are trading vessels exceeding 500 tons. Of these, only 6 regularly trade overseas the remainder are employed on coastal services. In terms of total overseas trade, New Zealand's merchant fleet is insignificant.

New Zealand is not alone in this. By 1985 the national fleet of that great maritime nation Britain, had reduced to such an extent that it would have been virtually impossible for the Government to find enough ships to mount a campaign similar to the Falklands. In that conflict, 53 British registered merchant ships of various types, were taken up from trade (STUFT). And although it would seem the requirement has now disappeared, it is doubtful if the US could have found enough US registered merchant vessels, if the resupply of Europe had become a reality at any time during the past decade. Because the majority of New Zealand's trade is carried in foreign flag vessels, the owners and operators of these ships are represented by either a New Zealand office of an overseas company, or a separate New Zealand shipping agency. At present there are seventeen major shipping agencies of whom only seven represent New Zealand owned companies. Takeovers, mergers and management contracts have resulted in one company, the P&O Group, being now involved in the carrying almost 80% of all non bulk cargoes to and from New Zealand.

Bulk cargoes, such as oil, logs and fertiliser are carried in vessels chartered from a wide variety of overseas companies. Many of these are registered in countries whose political systems and ideologies, are vastly

different from New Zealand. A considerable proportion of trade is carried in ships registered under *flags of convenience* to avoid taxes in their own countries. Many of these have complex ownership and their crews can be comprised of the nationals of many countries. New Zealand's trade is therefore maintained almost exclusively by foreign shipowners, whose capital investment in the New Zealand trade is very high.

A typical container vessel on the New Zealand run would cost up to NZ \$200M to replace. The daily costs of servicing such a vessel and its cargo, could be as high as NZ \$150,000. Its cargo capacity is five times that of a WW II merchant ship and it is capable of twice as many voyages in a given period. So in comparative terms, one modern container ship has replaced ten conventional merchant vessels. Today New Zealand's trade is therefore concentrated in fewer but larger hulls, owned by fewer companies. This concentration of high value cargo in foreign owned hulls, constitutes an unavoidable but significant risk to the nation's economy.

So it is these three factors; New Zealand's total reliance on maritime trade, the sheer length of its SLOC and its total dependence on the merchant hulls of other nations which form the very powerful reasons why we should maintain the ability to take speedy and effective control of merchant shipping should the need ever arise.

#### POSSIBLE THREATS TO MERCHANT SHIPPING

But what of the need? What could possibly threaten merchant shipping in New Zealand waters. The answer is probably nothing more sinister than bad weather, or the bogey of a mechanical breakdown. The policy paper *The Defence of New Zealand 1991* makes it quite clear there is no perceived threat to New Zealand or her sovereign waters. However, this assessment, while it is undoubtedly correct, does not in itself remove the potential threats to New Zealand's maritime trade. Because of the length of its trading routes, its total reliance on the ships of other

nations and the necessity for them to pass through most of the major maritime choke points of the world, it is possible to envisage a number of scenarios where New Zealand's trade may still come under threat.

The possibility of a minewarfare threat in waters where New Zealand trade originates or terminates. The ever increasing acts of piracy and terrorism against merchant shipping. Political upheavals in states lying across or adjacent to New Zealand's trading routes, are just some of the potential threats to its maritime trade. Clearly, any such threats would occur many thousands of miles from its shores and one may well ask what the New Zealand NCSORG could do about that? Actually, it can do quite a lot!

#### HOW NCS WORKS

A merchant ship voyage can only be effectively controlled, if the directions for its voyage can be coordinated between the countries of arrival and departure, as well as the areas through which it will pass enroute. This is achieved by means of an agreed set of international procedures, common to all Allied nations. NCS procedures are designed to be implemented in stages, according to the severity of the perceived threat. NCS publications delineate the boundaries of NCS control areas and establish a command and control structure, designed to operate in parallel with Allied military command structures. The key to the effectiveness of international NCS procedures, lies in an agreed worldwide system of signals, utilising universally agreed procedures.

In an emergency where national interests are affected, NCS doctrine expects governments to consign their national fleets to naval control. Although this allows for broad coordination of strategic shipping assets and for the transfer of control from one NCS area to adjacent areas, this worldwide form of naval control is becoming less and less relevant. New NCS procedures are being developed, in response to the changing world

political environment. It is anticipated these will allow regional commanders to implement NCS in quite limited geographic areas. Such regional policies would have been valuable in the Gulf War for instance, where the worldwide NCS policies current at the time, were not suited to the limited geographic nature of that conflict.

The coordinated utilisation of Allied merchant ships, during periods of tension or hostilities, is the responsibility of a National Shipping Authority (NSA) in each country. The NSA is charged with the most efficient use of available merchant shipping, to meet the economic and military objectives of their government. In New Zealand, there is no legislation for the formation of an NSA committee. However, a committee comprising senior managers from all shipping companies serving New Zealand trades, meets voluntarily once or twice a year, at the invitation of the Chief of Naval Staff. This informal NSA committee, contributes significantly to the training of NCS personnel, by ensuring maximum cooperation from their ships during NCS exercises. Members of the committee also provide valuable advice to the Naval Staff, on a wide range of maritime issues.

It is clear from this, that provided New Zealand maintains the capability to operate international NCS procedures and has appropriate structures in place, then it is maintaining the ability to contribute materially to the safety of its merchant shipping. The fact that nearly all merchant ships on New Zealand trades are owned by other nations, also means it has a responsibility to provide them with Shipping Control services, when they are in New Zealand ports and waters. If it does not have that capability, many foreign owners may not be prepared to risk their valuable vessels on its trades.

#### CAPABILITY OF THE NZ NCS ORGANISATION

What of the capability of the shipping control organisation? From the foregoing it is clear that the

effectiveness of NCS is based on standardised international control procedures, put into practice by means of secure military communications systems. Most nations practice these procedures by participating in international NCS exercises each year. These exercises are controlled by NATO in European, Mediterranean and Atlantic waters and by CINCPACFLT in the Pacific and Indian Ocean areas. New Zealand last took part in a CINCPACFLT sponsored NCS exercise in 1984. Although it is not difficult to train personnel in the core NCS disciplines of navigation, communications and merchant shipping knowledge, international NCS procedures can only be adequately tested, by exercising them in a multinational exercise environments. In recent years, the Australian NCS organisation have provided New Zealand with limited NCS procedural training, by manning some of their eastern and southern ports during the TASMANEX maritime exercise. However useful this is, it does not supply the multinational procedural exposure which is essential for the effective training of any NCS organisation.

However, New Zealand's exclusion from international NCS exercises has not been all bad. After an initial period of readjustment in 1985, the NCS organisation began to refocus its priorities on the *sharp end of NCS*, that is on merchant ships and the shipping industry itself. This has resulted in an improved understanding of the whole shipping industry and in a very high level of cooperation from the merchant shipping community. Also, the lack of international exercises has encouraged the integration of the NCS function into regular force maritime exercises such as the TASMANEX series. In truth however, the effectiveness of the Shipping Control organisation in New Zealand today, will not be absolutely confirmed until it can once again participate in multinational international NCS exercises.

#### FUTURE DIRECTIONS FOR NCS

What are the future directions for the Naval Control of Shipping in New Zealand? Looking first of all at the

ANZUS situation. The ANZUS irritation would instantly disappear if there was ever any question of the merchant ships of New Zealand's trading partners being seriously threatened. In the event that NCS was required, New Zealand's trading partners would insist that New Zealand was involved, to ensure the safety of their valuable vessels and cargoes. Commercial reality, and the need for the Governments of all nations to place a high priority on the maintenance of their trade and economic security, would have to prevail. If that argument is accepted, as it surely must be, it seems pointless to continue to deny New Zealand the means to train to keep the ships of other nations safe!

The future of NCS is also being influenced by the massive changes resulting from the disintegration of the Warsaw Pact. Existing international NCS policies and procedures, have been largely developed by NATO to support the concept of the resupply of Europe. With that potential scenario removed, both NATO and CINCPACFLT are beginning to concentrate on the development of doctrine for regional NCS relationships, as opposed to the world wide policies of the past. Viewing that in the New Zealand context, we need to consider the fact that seventy to eighty percent of New Zealand's trade is now concentrated within Asia and the Pacific Basin. Many in the New Zealand shipping industry feel that trade with the European Community is unlikely to grow significantly, because of the high cost of shipping and the increasing trend toward protectionism of European markets.

Because of these factors, it is reasonable to contend that New Zealand's primary NCS focus, should be on areas where our seaborne trade is increasingly concentrated. The forging of regional NCS links with other countries within our trading sphere, will undoubtedly be governed by mainly political considerations. However, as trade continues to develop with these nations, a defence priority should be given to regional understandings, which will facilitate control of the ships carrying our mutual trade in an

emergency.

Changes have also been forced on most of the major NCS nations, in response to reductions in world Defence budgets in recent years. This has encouraged the US, and the UK to recognise the inherent ability of their NCSORGS to form mobile NCS teams in response to needs in specific theatres, rather than maintain large numbers of shadow posted personnel against all eventualities. An effective NCS operation is after all primarily based on its trained personnel. Provided they have access to NCS procedural manuals, navigational charts and a military communications system, NCS personnel can set up and operate anywhere. This concept, aptly named *NCS in a Suitcase* is currently being seriously studied by the UK. They envisage rapidly deployable NCS teams, perhaps operating under United Nations auspices, being accommodated on board naval support vessels in areas such as the Persian Gulf, utilising shipborne military communications as a method of providing a rapid NCS response to future threats.

The operating and training philosophies of the NZ NCSORG, already include the ability to react speedily to any foreseeable NCS scenario within the New Zealand's area of NCS responsibility. It therefore lends itself ideally to the flexible and mobile concepts now being developed by other nations. Because of this ability, the NCSORG can be viewed as an effective part of New Zealand's peacekeeping assets, able to contribute speedily and at very low cost to United Nations initiatives anywhere in the world.

The future of NCS is also inextricably tied to Naval Reserves. NCS is a low technology task, which employs much knowledge and skills found widely in the civilian sector. The combined requirement for civilian skills and the part time nature of the peacetime NCS task, are ideally matched to the skills and commitment of the naval reservist. It has been estimated that the cost of maintaining New Zealand's NCS capability in the regular Naval Forces, would be five times higher than for the same capability provided by naval

reserves.

#### CONCLUSION

Naval Control of Shipping will always be required by a maritime nation such as New Zealand. The low cost infrastructure, based on naval reserves, and the minimal capital asset they employ, belies the value of the NCS contribution, not only to the defence of New Zealand, but to the economy of this country as a whole. The

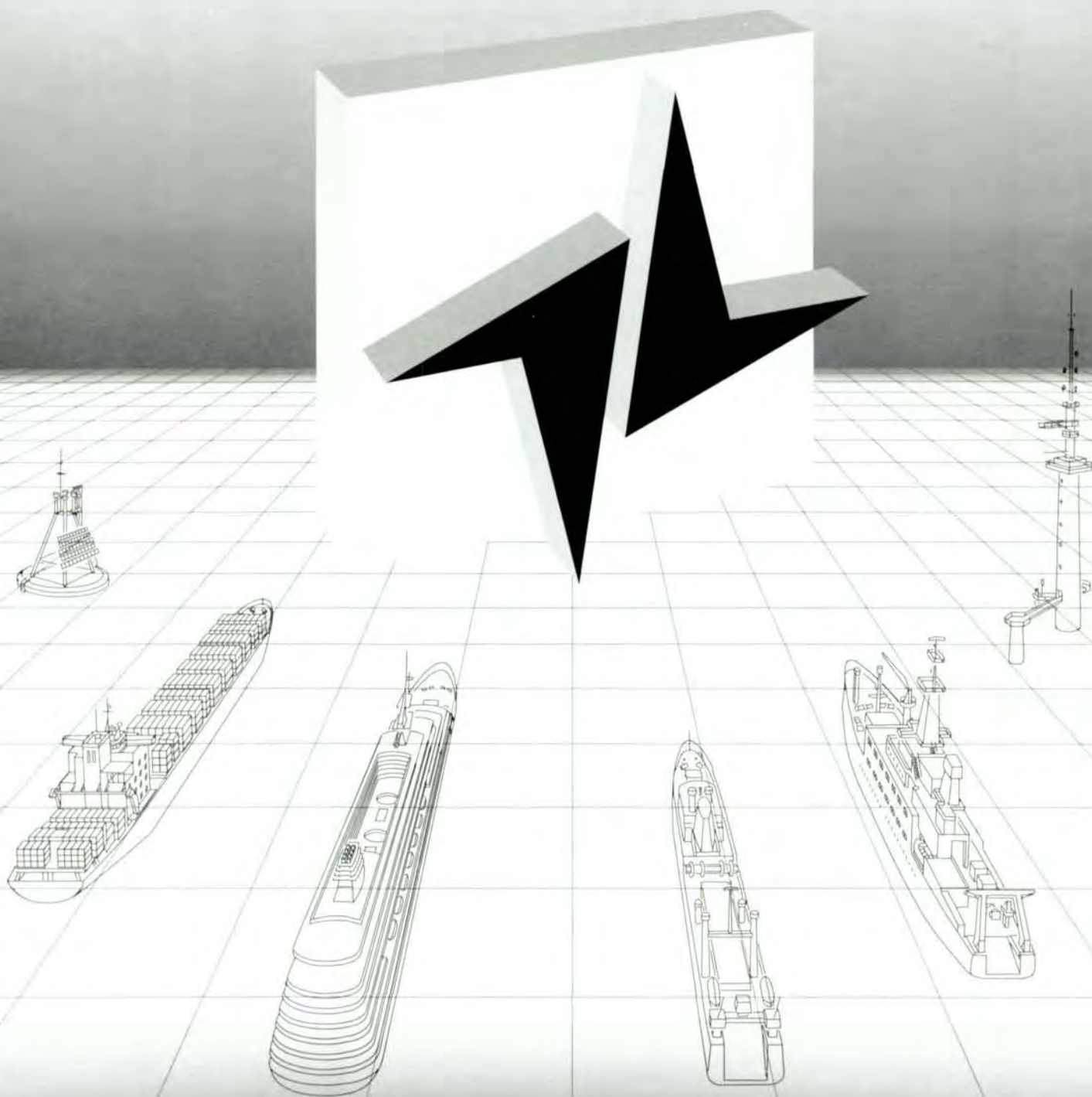
maintenance of a minimum credible peacetime NCS capability is a very low insurance premium for such a large pay-back should the need ever arise.

Commander Stuart Duff joined the RNZNVR in 1962 and his involvement with Naval Control of Shipping began in 1978. From 1987 to 1992 he served on the New Zealand Naval Staff as Director of Shipping Control and in 1991 to commenced fulltime service as the Director Naval Manpower Training and Reserves.

## MEMBERSHIP RENEWAL

Members are reminded that renewal is due on 1 January 1994. Current financial status is shown in a two figure style (ie 93) in the top left hand corner of the mailing label on the back cover of the journal. Members whose current status is shown as 93 are due to renew their membership on 1 January 1994. Payment may be made by completing the credit card authorisation slip on the enclosed reply paid envelope or by forwarding a cheque to the *Institute* by the end of March 1994.

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## A Fall From Favour: HMAS *Australia*, 1913 to 1924

Ray Jones



Early in October 1913 the battlecruiser HMAS *Australia* led the newly established Australian Fleet into Sydney Harbour. This fleet was the culmination of years of development in Australian naval thought; it gave Australia naval power to dominate the region and ensure national security in an increasingly unsettled world. *Australia's* heavy armament and high speed were a crucial component of Australian 1913 naval strategy and the battlecruiser was hailed as a powerful symbol of naval power. Yet in 1920 that ship was reduced to a limited harbour training role and in 1924 was sunk off Sydney Heads after being stripped of anything considered useful.

The transition in such a short time from publicly acclaimed centre-piece of naval defence into a scuttled derelict is unusual for the RAN which tends to retain large ships for several decades

(the second HMAS *Australia* commissioned in 1928 and paid-off for scrapping in 1954; the aircraft carrier HMAS *Sydney* commissioned in 1948 and finally paid-off 25 years later in 1973). The assertion is often made that the Treaty for the Limitation of Naval Armament of 1922 (generally known as the Naval Limitations Treaty) required that *Australia* be scrapped and there was no choice in the matter, but close analysis of events shows many more factors than this Treaty contributed to the end of the battlecruiser's service life.

*Australia* had been built during the transition of Australian naval forces from the coastal defence Commonwealth Naval Forces to an ocean-going Australian Navy designed to exercise sea-control over wide areas and to protect the British Empire's maritime trade routes. This Imperial role fitted

well with Australian self-perceptions of growing importance in the Pacific region.

The new RAN comprised cruisers, destroyers and submarines organised in a Fleet Unit – a term coined to describe a group of ships with complementary capabilities expected to control oceanic areas remote from Europe where battle-fleets dominated.

This Fleet Unit concept can be traced to an Admiralty planning team sponsored by Admiral Sir John Fisher (First Sea Lord) in 1907.<sup>1</sup> This group stressed that the British battle-fleet existed to counter the enemy battle-fleet while the navy's main business was protecting British maritime interests around the world and the cruiser was the means of exercising that control.

The 1907 planning group recommended that light cruiser effectiveness be enhanced by having support ships carrying supplies to cruisers so they would not have to interrupt patrolling when returning to base for supplies. As well, the light cruiser's recognised weakness in guns and armour (compared with equivalent German warships) was offset by having a fast, heavily-gunned, armoured cruiser nearby guarding the supply ships and serving as rallying point for light cruisers which chanced upon enemy warships too strong to sink unaided. Wireless communications between ships ensured that several light cruisers working with an armoured cruiser could dominate wide ocean areas. Armoured cruisers were designed to be fast and heavily gunned but were not particularly well armoured in the expectation they would be in action against light cruisers where speed was more important than armour.

The Admiralty's proposal during the 1909 Imperial Conference that Australia should form a navy based on the Fleet Unit was enthusiastically accepted and quickly implemented. On 9 December 1909 the Australian Government asked the Admiralty to order an armoured cruiser immediately and Prime Minister Alfred Deakin approved the tender by John Brown and Company to build an

*Indefatigable* class ship (the future HMAS *Australia*) some time later.<sup>2</sup>

Before the ship was launched on 25 October 1911 the term 'armoured cruiser' was replaced by 'battlecruiser' reflecting the adoption of the dreadnought principle of a single size of main gun. Australia had eight 12-inch guns in four turrets, one forward, one aft and two amidships. Secondary armament of four-inch guns and 24-inch searchlights was distributed over the fore and aft superstructure for defence against torpedo boats and destroyers but the 12-inch guns were the main armament.

Using the term 'battlecruiser' had the unfortunate effect of blurring the distinction between this type and the battleship. The battleship carried large-calibre guns and heavy armour intended to provide protection against equally heavy guns fired by an enemy battleship. The battlecruiser was lightly armoured in comparison with its guns; it was not intended to stand up to the guns of an equally armed opponent and relied on speed for survival; a battlecruiser unable to use speed and manoeuvrability in action could not rely on its relatively thin armour to protect it against equally armed ship. The original HMS *Dreadnought*, first of the modern British battleships, was armed with ten 12-inch guns and had 11-inches of armour protecting her guns with side armour up to 11-inches thick; the first British battlecruisers (*Invincible* and *Indefatigable* classes, including *Australia*) carried the same size of main armament (eight 12-inch guns) as *Dreadnought* but with much less protection; the battlecruisers carried a maximum of 7-inches of armour protecting parts of the gunnery system with side armour up to 6-inches thick and much thinner armour elsewhere (thinnest was the 2.5 to 1 inch thick armoured deck). The battlecruiser was capable of 25 knots, while the battleship was rated at 21 knots.<sup>3</sup> In theory (and, as events were to confirm, often in practice) a battlecruiser had less chance than a battleship of surviving action with an equally gunned

enemy if the battlecruiser could not use speed to escape.

Distinguishing the two types of ship was difficult because there was little external visual indication of the difference; an Admiralty campaign to 'talk-up' the battlecruiser by encouraging over-estimates of guns and armour resulted in the *Indefatigable* class' capabilities being regarded as much greater than they really were. This propaganda concealed the Admiralty's failure to take account of events in other navies when designing the ship. When *Invincible* (the first British battlecruiser) was designed, the fast, heavily-gunned, lightly armoured ship had a place in the British naval order-of-battle because the German navy did not operate equivalent ships. British battlecruisers would be much more powerful than German cruisers they found on distant stations and could be expected to win an action. By the time *Indefatigable* was designed this situation had gone, the German Navy had commenced the *Von der Tann* class battlecruiser with similar guns and thicker armour than the British battlecruisers,<sup>5</sup> and an *Indefatigable* class battlecruiser could no longer expect to be more powerful than any German ship on a remote station.

In October 1913, when *Australia* led the Australian Fleet into Sydney Harbour, these were lesser considerations for most people. Australians were not interested in (and few understood) distinctions between battlecruisers and battleships and were content with reassurances that they had an effective navy built around a powerful flagship.

When the First World War broke out in August 1914 the battlecruiser was a vital strategic asset. Australia co-operated with Britain in implementing an imperial strategy aimed at depriving Germany of its colonial empire and of the means of making war on Britain's maritime trade routes. This required the destruction of Germany's radio network and occupation of German colonial administrative centres in the South West Pacific. The Australian and New Zealand governments

agreed to despatch expeditions to capture Rabaul and Samoa respectively; they began assembling invasion forces and planning their movements.

Both expeditions could be disrupted, or even destroyed, by the German East Asia Squadron. This German squadron under Admiral Count von Spee reflected similar strategic thought to that expressed in the Australian Fleet Unit. The German squadron comprised the armoured cruisers *Scharnhorst* and *Gneisenau* with several light cruisers. These older armoured cruisers were well armed and armoured but were recognised as not being a match for *Australia* although they were a real danger to any other RAN warships (and especially to troopships).

Defence against these German armoured cruisers would rely on *Australia* and her movements became crucial to the planned landings.

Admiral Patey, commanding the Australian Fleet, decided to take the offensive and seek out the German squadron at Rabaul. Before moonrise on the night of 11 August 1918, a week after the outbreak of war, and while landing forces were still being assembled in Australia and New Zealand, three black-painted Australian destroyers slipped into Rabaul harbour intending to torpedo German warships. The light cruiser *Sydney* lay at the mouth of the harbour ready to assist while *Australia* waited further out to sea ready to engage with her 12-inch guns. The German East Indies Squadron was not at Rabaul but the scene had been set for Australia's battlecruiser to provide overwhelming naval power supporting the expulsion of Germany from the south west Pacific.

After this operation, *Australia* escorted New Zealand troops to occupy Samoa then hurried to join up with the Australian invasion force bound for Rabaul as it passed through the Coral Sea.<sup>6</sup> This Australian invasion force divided into several sections as it approached Rabaul. Three destroyers and the cruiser *Sydney* led the way, followed some miles astern by *Australia* with the auxiliary HMAS *Berrima*

carrying the Australian Naval and Military Expeditionary Force.

Some miles further astern was a convoy of storeship, tanker and three colliers escorted by the cruiser HMAS *Encounter* and the submarines AE1 and AE2.<sup>8</sup> A hospital ship and the cruiser *Melbourne* formed the last group. The advance destroyers entered Rabaul harbour and confirmed German warships were not present before the landing force was deployed to take over the administration and find the radio communications stations which were the naval strategic objective for the operation.<sup>9</sup>

When the German administration was reluctant to negotiate surrender, Admiral Patey was able to write from his battlecruiser flagship to the Governor of German New Guinea, "I will point out to Your Excellency that the force at my command is so large as to render useless any opposition on your part, and such resistance can only result in unnecessary bloodshed".<sup>9</sup> *Australia's* guns were a significant part of this force. In the event, only *Encounter's* guns were used in the role now known as naval gunfire support<sup>10</sup> but *Australia* was available for that task.

*Australia's* presence was a crucial element in Patey's threat to the German Governor and her superiority to the German armoured cruisers gave the RAN and the Australian government freedom of action in dealing with the German colonies. Australian and New Zealand government leaders knew that only *Scharnhorst* or *Gneisenau* could effectively interfere with a convoy or landing operation but that *Australia* deterred Von Spee from doing so. This deterrent was not absolute. Under favourable conditions Von Spee was prepared to attack *Australia* and went 1,600 miles out of his way to approach Apia after he heard *Australia* had arrived there escorting the New Zealand landing force. He hoped to close the port undetected in the morning half-light and catch the battlecruiser at anchor and off guard.<sup>11</sup> This single incident does not alter the conclusion that Von Spee had a great respect for *Australia's* guns and her presence

influenced his decisions in the first months of war.

Von Spee's respect for *Australia's* speed and 12-inch guns was well founded. A few weeks after the German East Asia Squadron left the South West Pacific, both *Scharnhorst* and *Gneisenau* were engaged at the Battle of the Falkland Islands by two Royal Navy battlecruisers (*Invincible* and *Inflexible*) with 12-inch main armament similar to that in *Australia's* flagship. The British battlecruisers used superior speed to dictate the fighting range and their heavy guns to sink both German armoured cruisers while the British battlecruisers sustained little damage.

With the departure of the German squadron from the South West Pacific, and the take-over of former German colonies completed, *Australia's* power was no longer needed. When *Scharnhorst* and *Gneisenau* were sunk the RAN flagship was guarding the Pacific Ocean end of the Panama Canal. She did not return to Australian waters but joined the Royal Navy's Second Battlecruiser Squadron in Britain remaining until the end of the war. Her role in Australian waters in the opening months of the war, brief as the service was, had been crucial.

Accounts of the decision making surrounding the annexation of the German colonies show the dependence on *Australia* to ensure that the German squadron would not interfere with the Australian/New Zealand operations. Although she did not need to fire a shot, her presence made possible the whole operation from the time of the first assault on Rabaul harbour, hoping to sink *Gneisenau* and *Scharnhorst*, to the movement of the Samoa and Rabaul invasion forces.

There must be doubt whether the Australian government would have sanctioned the despatch of the Rabaul invasion force without the confidence drawn from *Australia's* presence. We need only look at the way troopships enroute from Australian capital cities to Albany to form into the First Convoy carrying Australian and New Zealand

troops to Europe were ordered by the Australian Cabinet, acting on Naval Board advice,<sup>12</sup> to shelter when reports were received that *Scharnhorst* and *Gneisenau* may be approaching Australian waters while *Australia* was in New Guinea waters and unable to protect shipping on the Australian coast.<sup>13</sup> Convoy assembly resumed only after *Scharnhorst* and *Gneisenau* were confirmed as being far away from Australian waters when they were sighted at Tahiti.

This suspension of activity was entirely an Australia/New Zealand initiative, the Admiralty remained convinced the operation could proceed without "undue risk"<sup>14</sup> but Australian leaders were concerned at the German threat to ships carrying AIF troops and suspended the operation. Australian reluctance to mount the Rabaul landing if *Australia* had not been available to provide overwhelming naval power can be confidently deduced.

Reliance on Australia as a counter to the German armoured cruisers was significant and there is no doubt that, during those busy weeks at the end of 1914, the battlecruiser provided the dominant naval power which Australia sought when the decision was taken to establish the RAN. She provided naval power allowing the Australian Government to co-operate with Admiralty global strategy in the Australian waters.

After the German East Asia Squadron was destroyed, and the German colonies in the Pacific were occupied, the RAN's considerable naval strength became superfluous in Australian waters. The primary strength, of battlecruiser and light cruisers, was despatched to European waters and absorbed in Royal Navy squadrons in Britain.

In April 1915, Australia collided with HMS *New Zealand* (a sister ship which had been paid for by New Zealand) and was in dry dock being repaired during the Battle of Jutland. This battle exposed grave weaknesses in battlecruisers working in the battle line. HMS *Indefatigable* (another of *Australia's* sisters) was engaged in a

gunnery duel with the German battlecruiser SMS *Von der Tann* when a German 11-inch shell penetrated *Indefatigable's* deck aft; flash from the explosion reached a magazine which blew up sinking the ship with heavy loss of life - additional 11-inch shell hits forward caused more damage but the primary cause of her destruction is attributed to the initial hits aft.<sup>15</sup> HM Ships *Queen Mary* and *Invincible* (both battlecruisers) also blew up. The news was not all bad for battlecruisers (HMS *New Zealand* survived 11-inch hits on her armour) but there was sufficient evidence that battlecruisers had insufficient horizontal armour and were vulnerable to heavy guns.<sup>16</sup>

After the Battle of Jutland, war at sea deteriorated into a stalemate as far as capital ships were concerned. Some failings at Jutland were studied and an additional inch of horizontal armour was installed around the RAN flagship's midships turrets.<sup>17</sup> Otherwise, *Australia* spent the remainder of the war as part of the remote blockade of Germany waiting fruitlessly for the High Seas Fleet to give battle.

After the Armistice, *Australia* returned to Australia where conditions were very different to those prevailing before the war, especially in the level of Government interest in naval defence. Despite grandiose plans for naval expansion, including one prepared by Viscount Jellicoe,<sup>18</sup> Australia did not have a consistent naval policy and expenditure was difficult to plan. Conditions were so unclear that Admiral Grant, after two years as Chief of the Naval Staff, complained to the Minister for the Navy that '...I have been unable to obtain any information or any decision as to the policy to be pursued...'.<sup>19</sup> Naval policy was extremely unsettled while financial and political factors worked against real expansion in the RAN.<sup>20</sup>

The post-war RAN was no longer designed around *Australia* for several reasons, not least the changed power balance in the world. Pre-war competition and hostility between Germany and Britain had been a significant factor in *Australia's* decision to establish an

ocean-going navy to defend Australian and British maritime interests. Ships in the Fleet Unit had been conceived, designed and built to defeat specific German naval capabilities and there was no longer such a clearly defined threat to plan against.

As well, the Australian government insisted that Naval expenditure be reduced to the same level as in pre-war years. This required harsh reductions in a navy which had grown considerably during the war. *Australia's* complement of 840 men and heavy coal consumption (192 tons per day at economical speed)<sup>21</sup> imposed a heavy load on a Naval budget already under pressure as two light cruisers could be manned with the same total complement as *Australia*.

There were more immediate problems including the impending non-availability of main armament ammunition. The Admiralty had decided, as part of post-war rationalisation, to phase out 12-inch guns entirely and stop manufacturing ammunition of that size. Despite progress during the war towards producing ammunition in Australia this size of naval ammunition could not be made locally and cessation of British production meant the service life of the guns would expire when ammunition stocks reached the end of their storage life.

In addition to this downgrading of the Australian battlecruiser, the battlecruiser as a type had dropped out of Australian naval planning. The Admiralty no longer mentioned battlecruisers in advice to Australia (other than to suggest in mid-1920 that *Australia* was expensive to operate and could possibly be placed in reserve<sup>22</sup>). Admiralty advice had begun to follow the theme common in the 1920s and 1930s that Australia should build cruisers, submarines and shore facilities.<sup>23</sup>

In a list of twelve priorities adopted by the Naval Board on 9 August 1920 the battlecruiser was listed eleventh as an example of a ship with nucleus crew.<sup>24</sup> In response to cuts in Naval funding, the Board allocated *Australia* to *Flinders* Naval Depot for drill and training. She would also act as a fixed

battery defending the Depot against raids from the sea. The Board explained to the Minister that the ship should not be considered as being in reserve; she could not be fully manned and sent to sea at short notice because a full crew could not be trained sufficiently rapidly to competently operate and fight the ship.<sup>25</sup>

Although financial shortages are often blamed for downgrading the battlecruiser there was a more important loss of interest in the ship within the Naval Staff and Naval Board. An interesting comparison can be drawn between the battlecruiser and the submarine arm. The RAN was eventually forced by economic conditions to abandon the submarine arm in the early 1920s but there were repeated reviews and discussions in an attempt to find some way to continue operating RAN submarines.<sup>26</sup> Nothing similar happened in *Australia's* case. In August 1920 the Minister for the Navy advised the Prime Minister that as far as *Australia* was concerned, '...I am convinced that it would not be advisable to keep the above-mentioned ship in full commission, as money can be more effectively used in other directions...'.<sup>27</sup> This assessment accurately reflected the Naval opinion of the ship which had undergone a complete change since the RAN was established.

In the opening months of the First World War the RAN battlecruiser had given the Australian government strategic freedom to act in support of national and Imperial objectives; this was the role envisaged when the decision had been taken to establish the RAN<sup>28</sup> and the RAN's valuable service in the Australian region during those weeks is too often overlooked. But subsequent events, especially the Battle of Jutland, tarnished the battlecruisers' reputation and exposed its unsuitability for the battle-line.<sup>29</sup> The Admiralty decision, taken well before the Naval Limitations Treaty, to cease making the 12-inch ammunition used by many battlecruisers is a clear pointer that the Admiralty planned a short life for battlecruisers found

wanting in the battle line at Jutland. Experience at Jutland had led to different design requirements for post-war battlecruisers.

The first post-war battlecruiser class planned for the Royal Navy was vastly different to the *Indefatigable* class and even different to HMS *Hood* which was regarded as a particularly powerful battlecruiser. Known as the 1921 Battlecruiser this 31-knot ship was to be armed with nine 16-inch guns (HMS *Hood*, widely regarded as a powerful battlecruiser, carried eight 15-inch guns) and armoured with far thicker armour than *Hood* (her side armour varied from 152 to 307mm while the 1921 Battle Cruiser's side armour varied from 305 to 356 mm) and armour in other parts of the ship was similarly thicker than that in *Hood*. Four ships of this new class (to be named *Indefatigable*, *Inflexible*, *Indomitable* and *Invincible*) were authorised for construction and design work began in 1921.<sup>30</sup>

There is no record of Admiralty suggestions that Australia should acquire one of these ships. Design of the 1921 Battle Cruiser had barely begun when the Naval Limitations Treaty led to the project being scrapped but preliminary sketches show a ship which was far bigger, faster, more heavily armed and far more expensive to buy and operate than *Australia*. Political and financial conditions in Australia in the 1920s were such that it is difficult to conceive the circumstances under which Australia would have seriously considered ordering such a ship.

In the Naval Limitations Treaty signed at Washington in February 1922 the major naval powers accepted strict limitations on major warships. The RAN was included in treaty deliberations as part of the British Empire's naval strength and became subject to these limitations which included agreement not to build capital ships for ten years and for maximum total tonnages of ships larger than 10,000 tons. Signatories agreed to dispose of ships to bring national tonnages down to treaty limits. *Australia* was among the ships of the British Empire listed for

disposal.<sup>31</sup> The treaty required *Australia* to be scrapped within eighteen months of ratification (on 17 August 1923).<sup>32</sup>

*Australia* paid off in December 1921, before the Naval Limitations Treaty was signed. There was considerable speculation on the best way to dispose of her while complying with the Treaty. Use as a breakwater was quickly ruled out because she could theoretically be refloated and put back into service.<sup>33</sup> The remaining alternatives were to convert the ship to a gunnery target, to break her up, or to sink her in deep water.<sup>34</sup> Conversion to a gunnery target was not a legal option because the British Empire was limited by treaty to one target ship and a Royal Navy ship had been selected for this role. Breaking her up economically was not possible in the time available, leaving sinking as the only way to dispose of the ship.<sup>35</sup>

There was some interest in re-deploying *Australia*'s guns to shore defence batteries (as was later done when the light cruisers were scrapped and their 6-inch guns were distributed around Australian shore defence installations) but the idea came to nothing. This was partly because 12-inch ammunition would not be available after Britain ended manufacture but at least as important was the extent of the engineering work needed to mount a heavy naval gun, designed to be served from magazines and powder rooms below and relying on hydraulic power for routine operation, in a land installation. The decision was taken to sink the guns, turrets and spare barrels with the ship (photographs of the ship under tow to be scuttled show the spare barrels on deck).

On 12 April 1924 the stripped hull of the battlecruiser was sunk in deep water off Sydney Heads.

By the time she was sunk in 1924 *Australia* was obsolete; although only ten years old, events of the First World War had overtaken her. Formal agreement in the Naval Limitations Treaty that *Australia* would be made unusable was the official reason for

getting rid of her but the Admiralty had decided, well before that conference and treaty, that ships with 12-inch guns would not be retained. That decision ensured the Australian battlecruiser had to be scrapped or substantially modified. Not only would her guns have to be replaced, but she needed conversion from coal-burning to oil-burning to be considered as a modern warship. This large-scale modification was economically out of the question in post-war Australia, especially when the Naval Board had lost interest in the ship.

More importantly, the pre-war battlecruiser had not performed well at Jutland where fundamental design weakness had been exposed. Modification to armour to make her an acceptable capital ship required complete rebuilding and was not an economic proposition. *Australia* was not unique in this respect. The Battle of Jutland had a tremendous impact on battleship and battlecruiser design; the terms 'pre-Jutland' and 'post-Jutland' were commonly used after the war to indicate the value of a capital ship in any navy. The Naval Limitations Treaty includes tables of capital ships to be scrapped or retained in which ships are listed as 'pre-' or 'post-' Jutland to indicate effectiveness.

This down-grading of pre-Jutland battlecruisers must have been an important factor in fashioning RAN attitudes when funds were short after the war. The Australian flagship belonged to a type of ship which was perceived as having grave design weaknesses seriously inhibiting its employment and there was little justification for continued expenditure on her.

By 1922, when means of disposing of *Australia* were being discussed, the transition in status from the newly commissioned main strength of the RAN in 1914 to a cast off vessel ready for scrapping was complete. The underlying reason for *Australia* being transformed so quickly from the centre-piece of the new Australian Navy to a scuttled hulk arose from fundamental changes in technology and global power balances.

These are not unusual reasons for any warship reaching the end of its service life, the unusual element in *Australia's* case is the rapidity of the process. This was partly because the First World War precipitated new global power balances but there is also a strong element related to the performance of battlecruisers in action.

In many respects the Australian battlecruiser's career reflects the story of British battlecruisers of that period. They were designed to defend imperial lines of communications in wartime and did that with some success, as demonstrated by *Australia* in the South West Pacific or *Invincible* and *Inflexible* in the South Atlantic. Once Germany's colonial possessions had been taken and her distant squadrons eliminated, battlecruisers were pressed into roles for which they were not designed and which they did not perform well. The Battle of Jutland thoroughly exposed their defects and ensured that navies of the world would modify or scrap pre-Jutland ships, such as *Australia*, as quickly as possible. The Naval Limitations Treaty ensured that the RAN had to dispose of the battlecruiser but she had been downgraded in Australian naval planning well before that Treaty was negotiated.

## Endnotes

- 1 'War Plans 1907' in *The Papers of Admiral Sir John Fisher*, P. Kemp (ed), p.335.
- 2 The Admiralty's full plan was for three Fleet Units (including the Australian one) in the region. These would combine in time of war to form a Far Eastern Fleet. The Admiralty's failure to execute this plan did not alter the balance and strength of the Australian Fleet Unit for its intended role of exercising maritime power in the Australian region.
- 3 Siegfried Breyer, *Battleships and Battle Cruisers 1905-1970: Historical Development of the Capital Ship*, London, 1973, p.115.
- 4 Oscar Parkes, *British Battleships*, London, 1973.
- 5 Antony Preston, *Battleships of World War 1: An Illustrated Encyclopedia of the Battleships of all Nations 1914-1918*, London, 1972, p.129.
- 6 A.W. Jose, *Official History of Australia in the War of 1914-18: Vol IX, The Royal Australian Navy*, Sydney, 1943, p.79.
- 7 S.S. Mackenzie, *Official History of Australia in the War of 1914-18: Vol X: The*

- Australian at Rabaul*, (3ed), pp.34-35.
- 8 Naval operations at this time were influenced by conflicting aims. The Naval Board and Admiral Patey were primarily concerned with finding and neutralising the German Squadron, while the British Government and Admiralty appear to have been more concerned with gaining control of German colonies in the South-West Pacific.
  - 9 Patey to German Governor, Mackenzie, *Official History of Australia in the War of 1914-18: Vol X*, p.51
  - 10 *ibid*, p.79.
  - 11 *Australia* had left Apia before von Spee reached there.
  - 12 A.W. Jose, *Official History of Australia in the War of 1914-18: Vol IX*, p.153.
  - 13 *ibid*, pp.100-110.
  - 14 *ibid*, p.155.
  - 15 John Campbell, *Jutland: An Analysis of the Fighting*, London, 1986, pp.60-61.
  - 16 Erble Bradford, *The Great Ship*, London, 1986, p.141.
  - 17 *Conways All The Worlds Battleships: 1906 to the present*.
  - 18 R.M. Jones, 'Jellicoe and the RAN', *Defence Force Journal*, Number 18, Sep/Oct 1977, pp.44-51.
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  - 20 The RAN expanded by the addition of destroyers, sloops and submarines surplus to British requirements but their addition to the RAN was not the result of any Australian policy decision or long-term plan.
  - 21 R.A. Burt, *British Battleships of World War One*, London, 1986, p.91.
  - 22 Colonial Office to Governor-General, Australia, 13 Aug 20, 20/0215, MP1049/1, AAV.
  - 23 *ibid*.
  - 24 Extract from Naval Board Meeting of 9 Aug 1920, 20/0251, MP1049/1, AAV.
  - 25 Paper entitled 'The Effect on the Royal Australian Navy by (sic) the Reduction of Naval Estimates', from Naval Board to Minister, Sept 1920, 20/0251, MP1049/1, AAV.
  - 26 Michael W.D. White, *Australian Submarines: A History*, Canberra, 1992, Chapter 11.
  - 27 Minister for Navy to Prime Minister, 26 August 1920, 20/0215, MP1049/1, AAV.
  - 28 M. Briggs, *The Too Vast Orb: The Admiralty and Australian Naval Defence 1881-1913*, PhD thesis, University of Tasmania, 1991.
  - 29 Erble Bradford, *The Great Ship*, pp.120-141 outlines battle-cruiser performance, strength and weakness.
  - 30 Breyer, *Battleships and Battlecruisers*, pp.168-174.
  - 31 Treaty between the British Empire, France, Italy, Japan and the United States of America for the Limitation of Naval Armament, Washington, February 6, 1922, (i.e. Naval Limitations Treaty), Section II - Replacement and Scrapping of Capital Ships.
  - 32 Naval Limitations Treaty, Chapter II, part II, article IV.
  - 33 Bowden (Minister for Defence) in reply to question, 4 April 1924, Commonwealth Parliamentary Debates, Vol 106, p.401.
  - 34 Naval Limitations Treaty, Chapter II, Part II, Article II.
  - 35 Bowen (Minister for Defence), 4 April 1924, CPD, Vol 106, p.401.

Ray Jones served in the RAN, mainly in aviation postings, until 1983 when he resigned to undertake full-time tertiary study majoring in Australian History. He now works in administration at the University of Tasmania and writes on naval and defence history as time permits.



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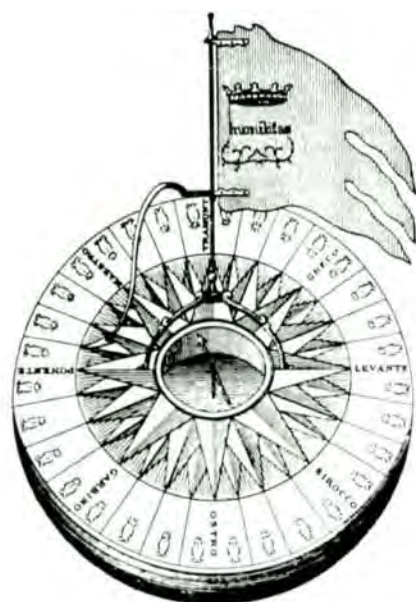
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## BOOK REVIEWS

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### HOSTAGE ON THE YANGTZE: BRITAIN, CHINA, AND THE AMETHYST CRISIS OF 1949

By Malcolm Murfett

Reviewed by Dr Tom Frame

Malcolm H. Murfett, *Hostage on the Yangtze: Britain, China, and the Amethyst Crisis of 1949*, US Naval Institute Press, Annapolis, 1991, pp. 300, maps, tables, figures and b&w illustrations, hardcover A5, ISBN 0-87021-289-3, RRP \$US34.95.

When I was aged fourteen and expressed an interest in joining the Royal Australian Navy, I was given to read an account of the dramatic escape of HMS *Amethyst* down the Yangtze River in 1949. I was led to believe that this sort of incident was indicative of the excitement inherent in seagoing naval service! Naturally, I was keen to join the Navy as soon as possible. The *Amethyst* story is a swashbuckling tale resplendent with displays of courage, gallantry and skill performed in the context of close-quarters naval combat. But there is much more to the 'Amethyst crises' as Malcolm Murfett explains in his excellent book, *Hostage on the Yangtze: Britain, China, and the Amethyst Crisis of 1949*.

This book is an important study which breaks new ground in British naval and East Asian diplomatic history. The narrative is woven around the 100-day long 'Amethyst' crisis which began on 20 April 1949 when the 1,300 ton Modified Black Swan Class frigate, *Amethyst*, was sent upriver from Shanghai to relieve the embassy guardship, HMS *Consort*, at Nanking. It was earlier intended that *Consort* would be relieved by the Australian frigate *Shoalhaven* on 12 April. But as *Shoalhaven* was required for service in Japan at the end of April 1949, her place was taken by *Amethyst*.

As *Amethyst* made her way to the north west through the Yangtze, Chinese

Communist forces were preparing to cross the river, the Kuomintang (KMT) forces of Chiang Kai-shek had retreated from Manchuria and North China and were suffering heavy losses in the Yangtze Valley as the Chinese civil war was moved steadily towards a Communist triumph. Murfett's opening chapter on Anglo-Chinese naval relations from the seventeenth century is superb and provides a clear description and assessment of the context in which the Amethyst crisis was played out.

Although Britain sought to avoid playing an active military role in Chinese internal affairs after World War II when KMT-Communist tensions escalated into violence, Communist gun batteries on the northern shore of the Yangtze River began to shell both *Amethyst* and *Consort* as the relief of the latter was in progress on 20 April 1949. Both British ships rapidly returned fire and more Chinese than British were killed in the exchange. *Consort* managed to escape down river but *Amethyst* ran aground and was temporarily stuck fast. When an attempt to rescue *Amethyst* the following day was unsuccessful, it became apparent after the ship was refloated that she would sail only if the Communists allowed her passage. After weeks of intense negotiation and in the face of Communist intransigence, her Captain's options were gradually reduced to one - planning a daring escape. However, the frigate's communications were severely restricted and only cryptic plain language messages could be sent to her administrative authority for fear of the Communists becoming aware of British intentions. With the skill of a seasoned novelist in the thriller genre, Murfett very skilfully brings the story to its tense climax. By the end of July 1949, *Amethyst* was low on food and fuel. Her men would have one chance of escaping although the prospect of success was not great.

When all of the prevailing conditions suited her captain, *Amethyst* sailed down river under cover of darkness on 30 July and managed to arrive safely in Shanghai after engaging a number of shore batteries and completing a difficult navigational passage. The unlikely hero in all of this was Lieutenant Commander John Kerans, a very ordinary seaman officer by all previous accounts who enjoyed the pleasures of naval life to the full. But virtually overnight, Kerans was transformed from an officer destined to being passed over for promotion, to the newest in a long line of celebrated British naval heroes. He was subsequently decorated, promoted and later served as a member of parliament.

Assuming command after *Amethyst* captain, Lieutenant Commander B.N. Skinner, died of wounds sustained during the initial 20 April engagement, Kerans had originally been posted to China as Assistant Naval Attache in Nanking. Despite trying conditions, enormous hardship, constant frustration and little prospect of an unopposed escape against a determined adversary, Kerans' leadership in *Amethyst* was exemplary. The officers and men under his command responded to their plight with enthusiasm and without complaint. They combined the sailor's seemingly endless capacity for improvisation with a solid reliance on thorough individual and group training to achieve what seemed impossible. Using his evidently well-developed initiative and navigational and shiphandling knowledge, Kerans' executed *Amethyst*'s escape down river with great precision. According to the Admiralty, the entire ship's company upheld the finest traditions of the Service'.

Yet, Murfett is not uncritical of the Royal Navy's performance throughout the crisis. He remarks that the decision to deploy *Amethyst* in such a manner was a curiously benighted and...grossly irresponsible decision. Indeed, Harold Macmillan in an attack on the Atlee Labour Government described the crisis as an absolute gem, a little cameo of incompetence, a miniature masterpiece of mismanagement. However, Murfett

emphasises that senior British naval officers and the British Government were able to avoid making the crisis a full-blown disaster in every respect. The Chief of Naval Staff, Lord Fraser, stressed the importance of allowing the man on the scene' to make his own appreciation of the situation and to respond with whatever action he considered appropriate. This gave Kerans and the Commander-in-Chief of the Far East Station, Admiral Sir Patrick Brind, plenty of scope for independent action. Similarly, the British Government relied properly upon the advice of the British Ambassador, Sir Ralph Stevenson, who tried valiantly to ensure that this essentially isolated affair was seen more as a local incident than as a major stumbling block which might later inhibit development of long-term diplomatic and economic relations between Britain and the new China.

*Hostage on the Yangtze* is not the first account of the *Amethyst* crisis. But it has superseded two earlier works: *Escape of the Amethyst* published in 1958 by C.E. Lucas Phillips; and *Yangtze Incident* by Lawrence Earl which appeared in 1973. These were written without the substantial body of official sources which were available by Murfett who has used them to treat effect. But the *Amethyst* story will only be fully told when the Chinese publish their account of the incident. This will be an important addition to the historical record. As Murfett has shown, there is insufficient evidence available from the Chinese side to determine with any certainty the intentions of the People's Liberation Army in attacking *Amethyst* and *Consort*, and in prolonging the crisis and risking direct British involvement in the civil war on the side of the KMT. One suspects that we will be waiting some time yet to hear from the Chinese.

*Hostage on the Yangtze* is an excellent book. It will appeal to both the general and specialist reader, and find an interested audience among students of naval and diplomatic history. It comes highly recommended.

Finally, a word on the author. Malcolm

Murfett is presently senior lecturer in modern history at the National University of Singapore. He obtained his doctorate from Oxford University in 1980 and was elected a Fellow of the Royal Historical Society in 1990. While studying for his doctorate, Murfett served as principal research assistant to the Earl of Birkenhead, working on the officially commissioned one-volume biography of Sir Winston Churchill. He has also been a senior associate member of St Anthony's College, Oxford, and a visiting associate professor in modern history at York University in Toronto, Canada. Dr Murfett's earlier publications include *Foolproof Relations: The Search for Anglo-American Naval Co-operation During the Chamberlain Years, 1937-1940*, and *The Limitations of Military Power* (coedited with John B. Hattendorf). His edited volume on the British First Sea Lords (to which this reviewer contributed the chapter on Lord Fraser) is due for release in mid-1994.

For the first half of 1994, Dr Murfett will be a visiting lecturer in the Department of History at the Defence Force Academy where he will teach a semester-length undergraduate course on naval history. There is no doubt he will be in great demand as a speaker during his time in Australia. He will certainly receive a warm welcome from the small but enthusiastic naval historical community in this country.

#### BRITISH NAVAL DOCUMENTS 1294 - 1960

Edited by John B. Hattendorf, R.J.B. Knight A.W.H, Pearsall, N.A.M. Rodger & Geoffrey Till Published by Scholar Press for The Navy Records Society

Reviewed by Commander A.W. Grazebrook, RANR

The title of this book should not deter those who seek to be politically correct and decry all things British.

For there is much for professional defence personnel to learn from the study of well researched and presented naval military history, whatever the identity of the nations involved in the period covered the publication

concerned.

British Naval Documents 1204-1960 is certainly an excellent example of this fact.

The book is published by The Navy Records Society to mark its one hundredth anniversary and complies with the purposes of the Society, including "...the editing and publication of manuscripts illustrating the history, administration, organisation and social life of the Navy..."

As such, this 1196 page book is a work published primarily for the serious historian. However, that should not deter any defence professional from reading it.

To undertake this massive task, the Society appointed five superintending editors, each responsible for parts of the book and each free to delegate work to contributing editors. The result is a work well up to the high standards set by the Society.

The book is divided into seven periods: 1204-1485, 1485-1603, 1603-1648, 1648-1714, 1714-1815, 1815-1900 and 1900-1960. For each period, there are is a general introduction, with sections on policy and strategy, tactics and operations, administration, materiel and weapons and personnel.

The wide variety of material presented offers something for a range of interests. Thus the 1900-1960 personnel section includes extracts from the diary of a discontented ordinary seaman serving in the elderly battleship *Canopus* in the South Atlantic in December 1914, the reflections of a chaplain at much the same time, Admiral Sir John Fisher's (remarkably progressive and positive) 1902 views on careers for engineer officers, the causes and remedies of the 1931 Invergordon Mutiny (in civilian terms a strike against badly handled pay cuts) and manning problems and methods of entry in the 1950s.

A study of the causes and handling of the Invergordon Mutiny has much to offer today's military leaders, for whom it is all too easy to become absorbed in ever increasing technology

at the expense of leadership and relations with personnel.

The personal letters include some remarkably frank statements. Thus Captain W.E. Parry, RN, of the New Zealand Squadron of the Royal Navy's cruiser *Achilles* at the Battle of the River Plate, writes in a letter shortly after the event "At first one felt awfully frightened at least I did..."

There are letters written by a topman in an 1805 ship of the line and family letters written by officers and sailors in a cruiser at the Normandy landings.

A number of Articles of the 1922 Washington Treaty on Naval Armament Limitations are reproduced verbatim. As such, they are of interest to students of disarmament needing to determine why the Washington Treaty failed.

Another subject on which the book contains significant material of interest is the 1930s debate on naval versus land based air power. Even today, a popular error is to assign to narrow minded admirals of the day all blame for the Royal Navy's lack of effective air power in 1939. In reality, as the book's documents show, as early as 1934 the official view of the Board of Admiralty was that "we have with the Fleet too few aircraft for reconnaissance and spouting, too few fighter aircraft for defence and too few striking aircraft for attack." At the time, the RAF were responsible for providing aircraft for the RN and had failed by 51 aircraft to supply the

agreed total number of aircraft. At the time, the RAF were querying the need to build the aircraft carrier *Ark Royal*. In 1934, the Admiralty forecast that by 1938 Japanese Naval Air Arm would have 584 first line aircraft, compared with the British Fleet Air Arm's planned 456.

There is an intriguing series of 1921 Admiralty minutes on the care of an office cat. The docket starts with a binder asking the office keeper for an increased allowance for the care of the cat. Ultimately, the matter is considered (sometimes with levity) by the Accountant General, the Permanent Secretary and so on. One assumes the whole series was a joke.....or was it?

Then there is a 1914 memorandum from First Lord of the Admiralty Winston Churchill demolishing by detailed analysis a (British) Treasury paper on manpower. If recent British decisions are anything to go by, their Treasury still presumes to have a greater professional knowledge and judgment than the Ministry of Defence. Of course, such a thing would never happen in Australia.

The book includes much information of interest to the naval and military professional and historian. It is certain to whet the appetite of students of particular periods or aspects of naval history.

It can be obtained from Ashgate Publishing Group, Gower House, Croft Rd., Aldershot, Hampshire GU11 3HR, UK.



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*Australia's Navy 1993-94* is the third edition of the Navy Annual and it is, to date, the best in this series of impressive books. The standard of the written contributions is very good and the photographs contained in the book are excellent. The production quality of the book has remained very high. The book has taken on a much more modern design and should appeal to all interested in the Navy.

The major theme of this year's Annual has been the movement of half the Fleet to the west coast of Australia and the subsequent development of HMAS *Stirling*. Vic Jeffrey has written an interesting piece on the history of the Navy in the west while also providing an update on the major developments occurring at HMAS *Stirling*.

This is followed by Sub-Lieutenant Wesley's article on HMAS *Adelaide's* home-porting to the west. HMAS *Adelaide* is the first guided missile frigate to be home-ported at HMAS *Stirling* and has experienced some unique difficulties but, on the whole, seems to have coped well with the move. The article on defence industry in the West certainly supports the view that industry can cope with the new work.

The theme of defence and industry has also been highlighted in Dr Williams article on the *Collins* submarine project. Australia now has the most advanced conventional submarine in the world. The project is on time and on budget - a great achievement for all Australians. A very striking picture of HMAS *Collins* is featured on the front cover.

It has also been an exciting year for the operational side of the Navy. The deployments to Somalia by HMAS *Jervis Bay* and HMAS *Tobruk* showed the nation the importance of Australia maintaining its amphibious capability. It also demonstrated the Navy's ability to react quickly to international situations as they develop.

Not only have RAN ships been involved in UN operations in the Gulf and Somalia but they continue to patrol the waters around Australia and participate in exercises throughout the region. Fleet Concentration Period *Kakadu One* proved a great success with participants including New Zealand, Malaysia, Singapore, Thailand and Hong Kong (UK) while Indonesia and the Philippines sent observers.

Of course, operations do not only occur at sea. This year's "Day in the Life of . . ." feature was particularly exciting. It focused on CPOCD John Voorham of Australian Clearance Diving Team Four in WA. The article was well written and Scott Connolly's photographs accompanying the article, and throughout the book, were superb. In fact, the overall quality of the photography this year was excellent. There is clearly a great deal of talent in the Navy photographic world.

There are many, many more articles in the Annual - indeed, some 33 in all. As a book it is great value and would make an excellent Christmas gift and is a wonderful reminder of the year that has been.

Particularly pleasing is the Annual's special price. This year the Navy and

the AGPS came to an arrangement whereby pre-ordered copies of the Annual would be available to serving personnel and ANI members at the bargain price of \$6-00 which includes a \$1-00 donation to the Sir David Martin Foundation.

Remaining copies at this price are very limited so be early with orders. It is a book that anyone associated with the Navy over the past twelve months would be happy to keep as a memento or receive as a gift.

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Articles of any length up to approximately 6 000 words are welcome and the Institute will pay for original material at \$10 per 1 000 words published. The ANI also awards prizes from time to time for material published.

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Articles should be submitted under a cover sheet containing the author's name, address, present position and brief biographical particulars. If material has been published previously, details should be given and any assistance in preparing the article acknowledged.

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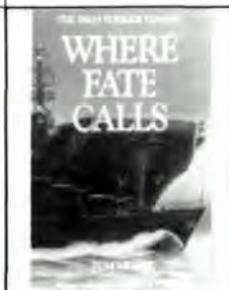
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