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  - a. to encourage and promote the advancement of knowledge related to the Navy and the maritime profession,
  - b. to provide a forum for the exchange of ideas concerning subjects related to the Navy and the maritime profession, and
  - c. to publish a journal.
2. The Institute is self supporting and non-profit making. 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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## DISCLAIMER

Views expressed in this journal are those of the authors, and not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute.



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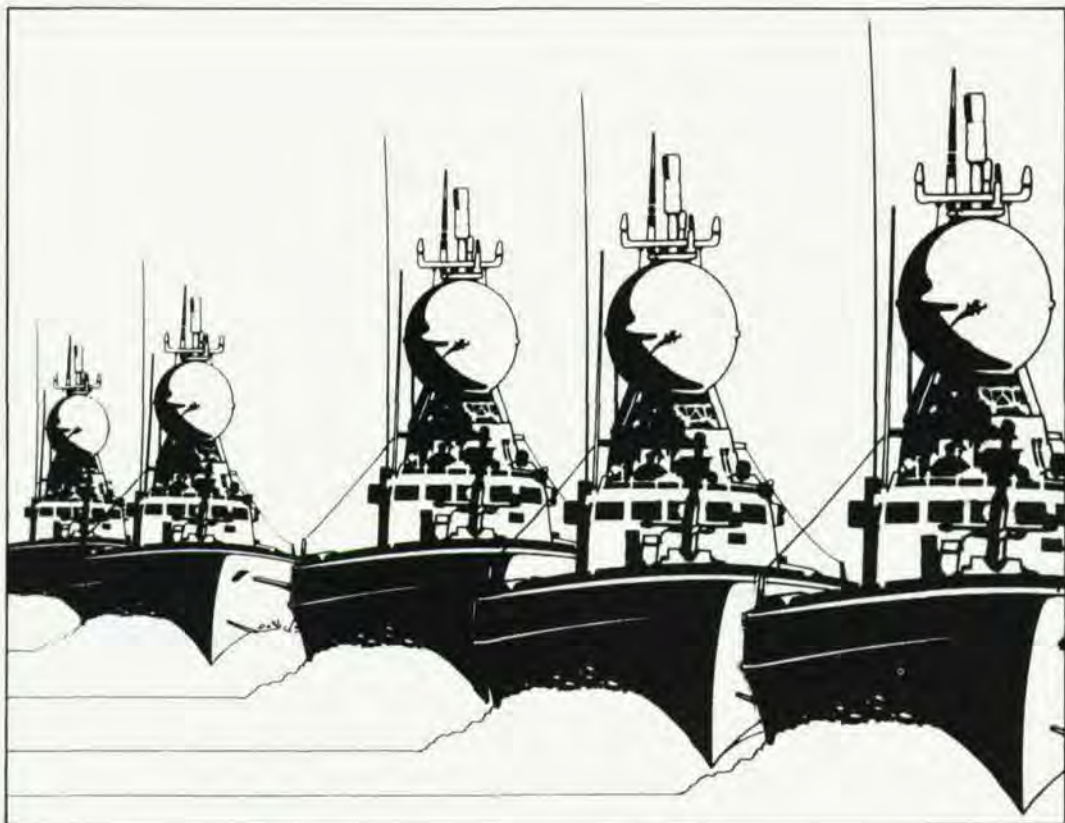
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## FROM THE EDITOR

For once, I will not be giving a precis of all the articles in this edition of the journal; suffice to say that they are all directly related to the theme of the seminar, which is Australia's maritime interests. However, I would like to draw your attention to two contributions — one by Admiral Awati, one of the principals at the seminar, and a provocative piece from Group Captain O'Brien.

And now for something completely different. I have recently completed the task of putting all the ANI membership records onto computer. Please check your address label with care and let me know if there are any errors — this is a once only offer to blame me if you have omitted to tell us of a change in rank or a change in address! If you have already destroyed the address envelope then think about your last submission and if you are in any doubt as to the accuracy of our records, then please drop me a line.

Whilst completing the task, I did a count of membership renewals for the treasurer and we were both aghast to find out that some 400+ members have not yet renewed for the financial year Oct 83-Sep 84. This amounts to some 60% of our membership, so if you are in this category then please renew immediately. If in doubt, pay again and we will credit you for next year! The first line of the address label shows your financial status — if you are current, it should show an '84'; if you are out of date, it will show an '83' (some may even show an '82'!)

Another count, purely for academic interest shows a breakdown of the membership as follows:

<lcd — 111  
lcmdr — 94  
cmdr — 117  
capt — 63  
>capt — 59  
  
RAN — 291  
RANR — 54  
WRANS — 16  
exRAN — 79  
Mr — 140  
other — 37 (Prof, Dr, Group Captain etc)  
(includes 6 sailors)

Total on the books at the time of going to print was — 621

Finally, I must apologise for the delay in the dispatch of the November '83 journal — needless to say, the circumstances were beyond our control. We did have some problems with proofreading at the printers' end but luckily, only one gremlin managed to get at the final copy: please amend the article by Captain Bateman, on p56, column 2, paragraph 2, line 11 to read:

'activities other than those incidental to their normal'.

See you at the Seminar.

Geoff Cutts

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## Correspondence

Dear Sir,

It would appear that my article *More Success* (Vol 9 No 3) has unwittingly touched the tender nerves of two members of the Naval Institute. I believe that both R. Humbley and Commander Zeigler in their letters (Vol 9 No 4) have read some inference into the article that was not there.

When I took up my posting in the Replenishment Ship/Patrol Craft (AOR/PC) Project Directorate in October 1975 there were two major contenders under scrutiny by the RAN, one of which was the *DURANCE* Class AOR. If memory serves me correctly a major milestone in the AOR project was delivery of the selected vessel in time to pay-off HMAS *SUPPLY* in 1980. On leaving the project some 13 months later a vessel had been selected, but the builder and country-of-build had not. These were to take further resolution within the Defence complex. However, I contend that my statement '*originally planned for delivery in 1980*' is in essence, correct. The established fact that an order was not placed until October 1979 is quite immaterial.

My statement that '*this vessel has been plagued by many and varied problems*' is also substantially correct. The time taken within Defence to reach resolution (on which I do not comment, nor should I) and R. Humbley's own statement of '*Delay and dislocation to the building programme*' bears this out.

I stand corrected on two counts for which I thank the two correspondents, namely the dates of *SUCCESS* being laid down and the envisaged delivery date.

In conclusion, to state that I wrote in a mischievous manner and that aspersions were cast upon Navy Office and VCD were I believe, somewhat emotive, especially when it is realised that I too was once a member of that particular team.

**Robin Pennock**

Dear Sir,

In 1979 you were kind enough to publish my letter which raised the question of membership of the ANI as presently open to the RANR. As nothing came of this in spite of subsequent supportive correspondence in the Journal, I would like to 'dust it off' and start again.

What I am suggesting is that members of the RANR be offered Full or 'Regular' membership of the Institute.

On the inside cover of the Journal you set out the main objects of the Institute. With these in mind it is not difficult to see that a more active participation by members of the RANR would be of benefit to the Institute whilst at the same time the RANR member would have a useful and regular source of information from which to draw.

A prerequisite is that members of the RANR come along and join the ANI but there is understandably a feeling that they are not 100% welcome under the present rules of membership. In correspondence other than mine, we have seen mention of 'discrimination', 'second class citizens', 'elite groups' and 'stigma'.

All of these have some relevance but perhaps we should address the matter more in terms of what is good for the Institute and ultimately the Navy. The RANR is presently not contributing sufficiently to the Institute discussions — chiefly because they are not members.

I believe that if they were offered Full Membership more Reservists would join and play a more active part in Institute affairs. This might then be extended into the development of regional activities possibly centred around Reserve Divisions. (Some would say that, as presently constituted, the Institute is very much a creature of Canberra.) There would certainly be more interest in the Journal.

A point which has been made before is the unique position the Reservists have with one foot in the Navy camp and the other in civil life. They are in a good position to put the Navy's case in the community. If they were also members of the Institute they would be better equipped to carry out this function on a properly informed basis.

**F G Swindells**  
**Capt RANR**

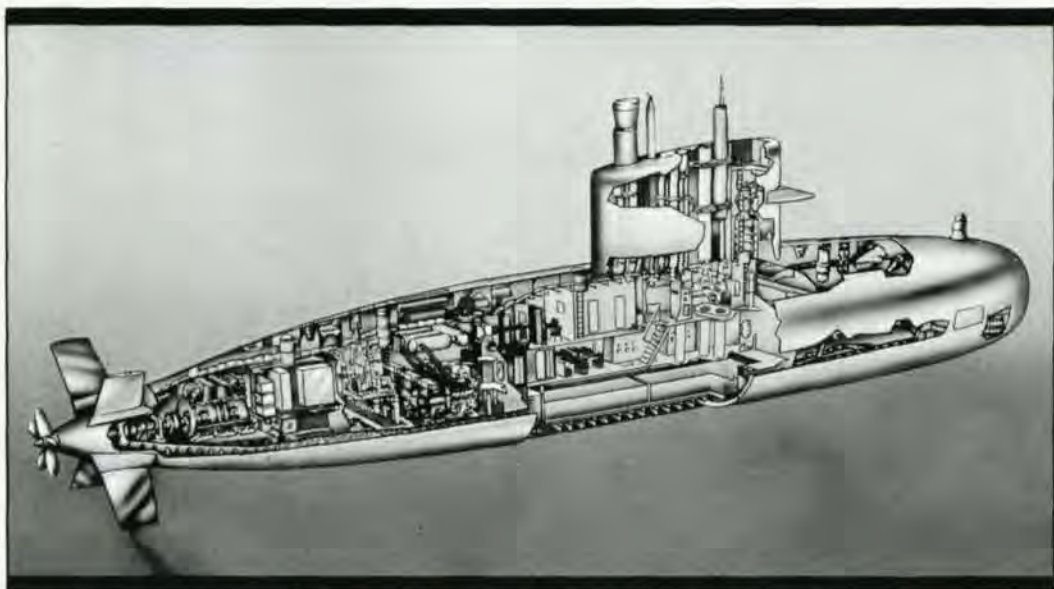
(By the Editor: This was the subject of a Special General Meeting — see Vol 7 No 4 p.6. The motion was not carried at the SGM on 19 Feb 82.)

Dear Sir,

In the last ANI Journal (Nov 83, p43), Commander Brecht writes as follows: 'Legally, the RAN is well protected against charges of enthusiasm or overstepping authority on the high seas'. This statement is misleading if it is meant to imply either that there are no legal restrictions on the degree of force to be applied at sea (say to prevent fishing vessels escaping) or that naval officers can perform any enforcement action without statutory authority. The issues raised are complex, and rather than detail them here I would direct interested readers to the careful treatment of this whole subject by Bill Edeson in his paper 'The Effect of Australian Maritime Legislation and Legal Constraints on Enforcement' reprinted in the proceedings of the eighth RAN Conference, 19-20 January 1983 HMAS *WATSON*.

**Anthony Bergin**  
**Lecturer in Politics,**  
**Royal Australian**  
**Naval College**





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AUSTRALIA'S MARITIME INTERESTSPROGRAMMEFriday, 27th April, 1984

1400-1430	Opening Remarks	Commodore I.B. James, AM, RAN. President, Australian Naval Institute.
	Introduction	The Hon. Gordon Scholes, MP. Minister for Defence.
	Patron's Address and Official Opening	His Excellency The Right Honourable Sir Ninian Stephen, AK, GCMG, GCVO, KBE, KStJ. Governor-General of the Commonwealth of Australia and Commander-in-Chief of the Defence Force.
1430-1515	The Strategic Setting	Dr T.B. Millar, AO. Australian National University.
1515-1600	A Legal and Diplomatic View	Mr R.L. Harry, AC, CBE. Former Diplomat.
1600-1630	Tea	
1630-1715	An Indian Ocean Perspective	Vice Admiral M.P. Awati, PVSM, Vrc, Indian Navy (Ret). Former Flag Officer Commanding-in-Chief Western Naval Command.
1715-1800	A Personal View	Mr W.B. Pritchett AO, Secretary, Department of Defence, 1979-1984.
1830-2030	Dinner	
2030-2130	After Dinner Address	Sir Charles Court, AK, KCMG, OBE. Former Premier of Western Australia.

Saturday, 28th April, 1984

0900-0945	Industry's View	Mr J.F. Kirk, Chairman and Managing Director, Esso Australia Ltd.
0945-1030	An Economist's View	Professor J.W. Freebairn, La Trobe University.
1030-1100	Tea	
1100-1145	The Naval View	Vice Admiral D.W. Leach, AO CBE, MVO, RAN. Chief of Naval Staff.
1145-1230	A Decision Maker's View	The Rt Hon I.M. Sinclair, MP. Opposition Spokesman on Defence
1230-1400	Lunch	
1400-1530	Open Forum	
1530-1555	Summing Up	Admiral Sir Anthony Synnot, KBE, AO, RAN (Ret). Former Chief of Defence Force Staff.
1555-1600	Closing Remarks	ANI President.

The programme set out above corrects that foreshadowed in the brochure previously distributed. Registrations are rolling in and arrangements are proceeding according to plan. To ensure the success of the seminar we wish to attract a wide cross section of the community.

MEMBERS ARE INVITED TO REGISTER NOW AND ARE REQUESTED TO ACTIVELY ENCOURAGE ATTENDANCE BY ASSOCIATES AND FRIENDS. THE LARGER THE AUDIENCE WE CAN ATTRACT, THE MORE EFFECTIVE AND INTERESTING THE SEMINAR WILL BE.



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# SINEWS OF INDIA'S SEAPOWER

By Vice Admiral M.P. Awati PSVM, VrC

It is a sad commentary on our ignorance and innocence in maritime-defence matters that persons who matter in public life in India and who are responsible for policy do not really understand the sea and the influence it has had on the lifestyle of the country over several millennia of history, and especially since the advent of the European in our seas from the turn of the fifteenth century.

The Portuguese and later the Dutch, the French and the English held us to ransom for long periods, until finally the English established suzerainty over the entire subcontinent on the strength of their navy and their maritime power for more than a hundred years — one hundred years of Pax Britannica in the Indian Ocean.

Since 1947 our defence strategy has been continental in both outlook and equipment. It is only recently, however, we have become aware of our seas and our almost total nakedness upon them and have wisely decided to give our navy the importance it deserves in the overall defence picture.

Before one considers our naval defence and posture, it is important to take cognisance of the situation in the Indian Ocean which has of late become an arena of confrontation between the two super powers, the instabilities around its periphery, the continuing importance of the oil trade, the changing regime of the Law of the Sea, and then see how India fits into the changing kaleidoscope as a nascent power.

## Vital Geography

Geography is the handmaiden of strategy. It is the geography of central and upper Asia, the contiguity of the Indian Ocean to it and the closed character of that ocean, which integrates the whole system in a dangerously compact manner.

When considered in relation to the tremendous advances made in mechanised and missile warfare in recent times, this geography has decisive implications for the central balance of power between the USA and the USSR.

From the northern part of the Indian Ocean, the modern missile, intercontinental in range, has access to all parts of Asiatic Soviet Republics, and beyond. The United States of America has used this geographical fact to great advantage by deploying its Trident nuclear submarines in this area. The Soviets are mortally afraid of this alliance between geography and technology.

The Indian Ocean could be described as an enormous gulf enclosed by the continents of Asia, Africa and Australia. The southern boundary of this ocean is the imaginary line between the Cape of Good Hope and Cape Leeuwin, the south-western tip of Australia. Beyond that is the Antarctic Ocean. The Indian Ocean's closed character to the north distinguishes it from the Pacific and the Atlantic Oceans which stretch from Pole to Pole. This situation, allied to the seasonal winds, has moulded the history of our region.

The northern portion of the Indian Ocean is, historically and geo-strategically, the most important. This portion of the ocean is accessible from the west and from the east only through narrow straits. In the west, these narrows, the Straits of Hormuz and Babel-Mandeb, lead to two blind alleys, the Persian Gulf and the Red Sea respectively. The latter lost its sacklike character in 1869 with the opening of the Suez Canal.

In the east, the Indian Ocean is separated from the Pacific by narrow passages between western Malaysia and Sumatra; the Indonesian Islands and Australia, the chief among which is the Straits of Malacca. It is a fact of history that since the advent of the European into this area, 500 years ago, the control of these strategic narrows or choke points, has been uppermost in the minds of those who desired to establish their hegemony over the region.

The sub-continent of India has attracted the attention of those outside powers which had designs initially on the rich trade and then on the strategic control of the ocean region. In point of fact, there has been a nexus between trade and



political control. Today the connection between aid and political control is not too difficult to discern.

The third feature of this ocean which needs to be stressed is the numerous islands which are strewn over its entire expanse — from Andaman and Nicobar in the east, Lakshadweep, Maldives and Socotra in the centre and Madagascar, the Seychelles, Zanzibar and numerous other coral and volcanic islands in the west. These island territories could quite easily become the active foci of outside powers, not necessarily friendly to us, in the future — as indeed some of them already are today.

The Indian Ocean is the smallest among the three main oceans of the world. It extends over only 77 million sq km compared to the Pacific's 154 million sq km and the Atlantic's 90 million sq kms. In its more usual, narrower bounds, this ocean covers only 40 millions sq km. Even so, it is not small enough to bind all the countries washed by its waters, culturally, economically or politically as for instance the Mediterranean Sea did in the past and still does.

Indeed, the political fragmentation of this region is another characteristic of the Indian Ocean region which distinguishes it from the Atlantic and the Pacific communities. For various reasons, therefore, the ocean has, in the past, divided rather than united the region. Today, however, there is a strong urge and desire amongst the Indian Ocean peoples to work together. The organisations and institutions to give expression to these aspirations and sentiments are as yet lacking. They are slowly taking shape, mostly at India's initiative.

In the days of the colonial empires, the trade of this region was principally with the metropolitan powers. Even today, 35 or more years after the political exit of these powers, the intra-Indian Ocean trade is a fraction of the trade with the outside countries.

This fact must be clearly understood when we consider the impact of the politics of this region on the outcome of the central balance of power between the US and the USSR or on the triangular equilibrium which is developing between the United States, Soviet Union and China.

Political disunity and fragmentation have resulted in the regional countries being pitched against each other and being used as surrogates by interested external powers. The recent war between Iran and Iraq is a case in point. One cannot exclude other similar wars by proxy in this region in the future.

The gigantic contest between the United States and the Soviet Union in the post-World War II period outside the Indian Ocean has had its inevitable impact here. In the past several

years, since 1968 to be exact, this contest has entered the arena of the Indian Ocean. The littoral states are frightened by this clash of giants. India in particular must recall, with not a little trepidation, its previous experience in this regard. It knows that the nation which controls the Indian Ocean today will control the Indian sub-continent tomorrow.

To a greater or lesser degree this is the predominant sentiment of almost all independent nations of the region. The clamour for a zone of peace has to be seen in this context. That this clamour has gone unheeded by the Soviet Union and United States alike is neither surprising nor out of character of the great powers.

China's endorsement of the aspirations of the Indian Ocean states is only a foreign policy ploy. In the long run, it has as much reason to be cynical about these aspirations as the two super powers. British and French attitudes, not unnaturally, are co-terminous with the American.

While the USSR will not permit a Pax Americana here, the western alliance is afraid that the Soviet Navy is poised to cut its oil lifeline at the appropriate moment.

### **Pax Britannica Ends**

After Britain lost India in 1947, it was natural that it should finally withdraw its presence from east of Suez.

India had been the lynchpin, the main base of British power in the East. 'Pax Britannica' was not a mere concept; for close on one hundred years, it was a way of life based upon the muscle of the British Indian Army, the seamanship of the Royal Navy and, of course, the propagation of English education among the middle classes.

Pax Britannica ended rather abruptly in 1947. The hurried withdrawal of the British from India created a power vacuum in the Indian Ocean. At least that is how it was viewed by most of the western allies of Britain including the United States. However, it took another 20 years for the final vestiges of British presence east of Suez to disappear. In fact it was only in 1971 that the British abandoned their last strategic staging post at Masirah, off the coast of Oman.

The USSR and the USA could see no local littoral power able to wield the shield and the sword abandoned by Britain. Even if there was one, or even if the British had not left, there is no doubt in my mind that both the Russians and Americans would have moved into this area as they have done elsewhere.

The stakes are now too high for this area to be left to the little ones, usually unstable and squabbling among themselves.

To help their allies to retain a hold at strategic points in the Indian Ocean the most far-reaching decision in this direction was the creation of a



British-Indian Ocean Territory (BIOT) established by an Order in Council in 1965, which detached the Chagos Archipelago from Mauritius and the Islands of Aldabra, Farquhar and Desroches from the Seychelles.

The British master stroke went unnoticed by the Indian Ocean communities, except in India, where it created some apprehension, but not enough to stop the British from acting as they did.

The creation of the BIOT acquired strategic importance because of the British base on Diego Garcia in the Chagos Group. Soon after the formation of BIOT, the United States entered into an agreement with Britain for the use of this base.

### US Grand Strategy

Washington has taken sufficient care to establish the infrastructure for its worldwide oceanic strategy in the water of the Indian Ocean. It has built a chain of staging posts and bases in this area. Bahrain and Oman at the mouth of the Gulf have entered into agreements with the US by which the facilities at Manama, the port of Bahrain, and the staging facilities hitherto enjoyed by the Royal Air Force on the island of Masirah, off the coast of Oman, can be used by the United States. Mombasa and Berbera can now be used as home ports for ships of the US Fleet.

On the west coast of Australia the United States Navy has a powerful, very low frequency transmitting station at the North West Cape which can cover the entire Indian Ocean for submarine communications. The United States Navy also has basing facilities at Cockburn Sound in Australia.

In South Africa, a clear six thousand miles westward, a computer complex, near Simonstown, tracks ocean traffic in the Atlantic and the Indian Oceans from the Venezuelan coast to Bombay and feeds back information to Washington and London.

The nexus between Australia and South Africa should be of interest: Australia and South Africa are the two richest countries in the South Indian Ocean, they have had old and extensive contacts, though little of coordinated naval planning of any substance has taken place after World War II; relations between South Africa and Australia are based on common cultural outlook and links with Britain; leaders of both countries think of themselves as outposts of European, and more particularly British culture, and there is a certain sense of kinship in the common 'World of Capricorn', which both nations share.

The Reagan administration has taken a policy decision to cultivate South Africa. South Africa's strategic role could increase if there is a

Soviet naval establishment in Angola. There have been reports in the press that South Africa has exploded two underground nuclear devices in collaboration with Israel.

A map shows clearly the Southern Ocean defence line which would encompass Diego Garcia and possibly Simonstown. At one time Nacala in Mozambique was considered for this purpose by the United States.

In this scheme of things Diego Garcia is the lynchpin. In the words of a naval strategist, 'the geo-strategic location of Diego Garcia is felicitous', it lies at the apex of an isosceles triangle, the base of which extends from the Cape of Good Hope to Cape Leeuwin. Maritime and other aircraft placed on this island can protect tanker lanes from the Gulf to the Cape on the one side, and the Gulf to the Straits of Malacca on the other.

For this reason, the US Government in 1972 submitted to Congress a plan for strengthening the capabilities of this lagoon. After considerable debate in which the need for the United States to deliberately opt out of an Indian Ocean presence featured prominently, Congress approved the plan which included deepening the harbour, the extension of the runway to 12,000 feet so that it can handle reconnaissance aircraft, aerial tanker planes, giant B-52s and can support a carrier task force operating in the Indian Ocean.

These facilities were completed in 1981. Further extension of base facilities is now in hand to support the Ready Deployment Force.

### Soviet Experience

The Soviet Union has always been aware of the importance of the Indian Ocean as the link in the East-West communications between their Baltic, Black Sea and Pacific Fleets. The experience of Admiral Zinovi Petrovich Rozhdetsvenski in 1905 in attempting to sail the Northern Fleet to reinforce the Pacific Fleet without suitable base facilities enroute and the subsequent disaster which befell it in the straits of Tsushima, are still fresh in the naval memory of Russia.

The Soviets, therefore, established viable political and economic links in several of the littoral states, particularly Iraq and Somali, and later in Yemen and Ethiopia.

Soviet naval presence in the Indian Ocean relies almost entirely on Underway Replenishment Groups. The Soviets have established open sea buoy moorings in the vicinity of the Seychelles, west of Diego Garcia and off Mauritius, as also in the Mozambique channel. Until 1977-78, the USSR enjoyed base facilities at Berbera in the Somali Republic. Now, in an apparent switch of alliances, the USSR has moved massively in support of Ethiopia. The Russian floating dock in Berbera has since been



towed to Aden in the PDRY. Soviet warships make frequent visits to many of the important harbours on the ocean littoral.

By and large, the significance of the Soviet naval presence in the Indian Ocean, however, is more political than military. It is to be seen in the overall context of Soviet ambition to contest the supremacy at sea with the USA. There is no doubt that in ship strength and other constituents of maritime power, the USSR Navy will remain second to the US Navy by a significant margin for several years to come, notwithstanding the persuasive and persistent propaganda one is subjected to in the media.

The point, of course, is that in the contest between the USA and USSR in the Indian Ocean, it is futile to try and establish who came first and who followed. The chicken and the egg argument has usually neither a beginning nor an end.

As far as the littoral states are concerned, this argument can only be at their cost. The regional countries realise that it is beyond their power to either reduce the intensity of the contest, let alone stop it altogether. Their only option is to countermand it through political and diplomatic moves, either within the United Nations Charter and if that is not possible, then from outside the UN through the mobilisation of opinion in the non-aligned groups.

The 36 countries of the region, in fact, chose the United Nations for lobbying and mobilising opinion. This has been going on since 1971 but to little effect so far. In these Zone of Peace negotiations, the super powers have somewhat paradoxically, but not surprisingly, found themselves on the same side in opposing the view of the littoral states.

On the land the situation is a little different. With the Soviet occupation of Afghanistan and the on-going Iran-Iraq war, the Soviets are now just a stone's throw away from the North Indian Ocean littoral. All they need to do now is to push through Iran or Baluchistan and they will have fulfilled their long cherished dream of a warm water port on the Indian Ocean. American policy at this juncture is presumably aimed at preventing this from happening. Personally, I discount any such Soviet ambition now or in the near future notwithstanding the constant concern of the British and now the Americans with it.

In mid-1980, one Francis Fukuyama of the Rand Corporation was sent to Pakistan to assess the situation arising out of the Soviet occupation of Afghanistan to determine whether or not the United States should support Pakistan militarily.

Copies of Fukuyama's report became available in India in 1981. The report makes very

interesting reading. In his report, Fukuyama stated that the advantages of military support to Pakistan would be:

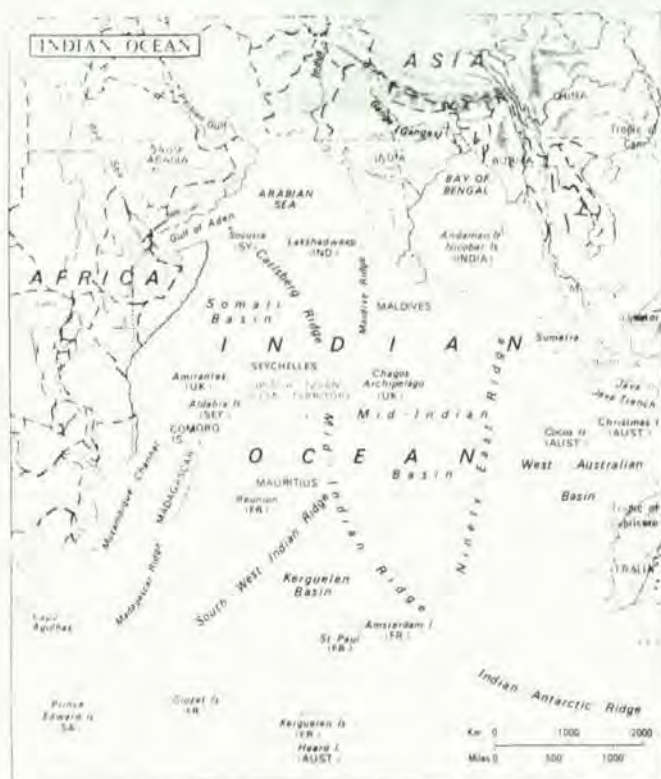
- denial of Pakistan territory to the Soviet Union;
- the possibility of aiding Afghan rebels militarily so as to raise the cost of the intervention for the Soviets and divert their attention from the Gulf
- the use of Pakistani facilities in connection with the planned Rapid Deployment Force; and finally
- the demonstration of American reliability, especially with respect to the Peoples' Republic of China.

As against these advantages, Fukuyama assessed that the drawbacks of military aid to Pakistan would be:

- adverse effect on US Indian relations. This, he feels, can be disregarded by the United States as being of little consequence since it has been over-estimated by many observers. In fact he goes on to state: 'It may be that the threat of arming Pakistan substantially will buy more Indian co-operation rather than less'. Fukuyama adds: 'The Indians over the years have not been made to pay a price for their closeness to the Soviets'
- the second disadvantage brought out by Fukuyama is a weakening of the credibility of the US' non-proliferation policy. This again he has dismissed as of little consequence because he states that no matter what United States does today, the Pakistanis will get their bomb. Therefore, disregard the Symington Amendment
- the other disadvantages are the high economic costs and the commitment to a Pakistani regime of questionable staying power.

The visit of Fukuyama was organised and conducted by no less a person than Maj. Gen. Mohammed Afzal Khan, Director Ministry of Intelligence at the Pak Army HQ. The US Administration has chosen to be guided by the Fukuyama report — or perhaps they had reached the same conclusion in their own appreciations! The upshot has been a US decision to arm Pakistan in a massive way. The oft quoted 2.5 billion dollars in military aid are only the tip of the iceberg. In my assessment this military aid will exceed 10 billion dollars supporting a supply of the most sophisticated arms in the US inventory to a country which has been called the bastion of Western interests in the Gulf and South Asia. It is axiomatic that the US is willing to pay the price of this aid to Pakistan in its relations with this country. India remains of marginal interest in US strategic thinking. Indo-





Map 1: INDIAN OCEAN

— Readers Digest

US relationship had become a subsidiary one. In this context the dialogue between President Reagan and Mrs Gandhi could open up new vistas in Indo-US relations. If we can persuade the US policy makers that their support of Pakistan as a bastion of Western interests in the Gulf and as a frontline state against the USSR, is geo-politically untenable, we would have succeeded to some extent.

Personally, I do not think that the US is as yet prepared to lay the ghost of Sir Olaf Caroe. His theory has a special appeal in the Anglo-Saxon world and its time immemorial aversion to the so-called Slavic hordes. General Zia has struck gold where he expected only peanuts during Carter's Presidency!

Incidentally, this Security Supportive Assistance to Pakistan ostensibly to bolster the pro-West Gulf regimes and against the Soviet Union in Afghanistan, can be used against India if Pakistan so chooses to.

### Focus on the Indian Ocean

The old and well established tenets of maritime strategy and sea power are today once again being tested out on our doorstep. In the 18th century, the contestants were France and England. Today the contestants are once again extra regional powers, the USA and the USSR.

To the West and to Japan, this ocean is vital for their survival as great consumer powers. The economies of these countries need the commodities, and, above all, the oil of the Indian Ocean region.

The Soviet Union looks upon the Indian Ocean as its soft underbelly, to be watched carefully for any hostile moves by the opposing camp. The Soviet Union knows that the ballistic missile firing nuclear submarines of the United States lurk in the depths of the Indian Ocean. It would, indeed, be hard for the USSR to hunt them down. The USSR's counter-strategy, therefore, centres upon interdiction of western oil routes and in establishing political influence in the region through the use of its naval, air and land forces and via persuasive diplomacy suitably bolstered by a low interest economic and military aid programme.

Regrettably Indian perceptions today are at considerable variance with the geo-strategic location of the country, its economic potential and its influence in the area. Not unnaturally, therefore, Indian voice and views do not play a part in the formulation of US policies and strategies in the Indian Ocean.

The USSR is a little more responsive only because this country borders the turbulent south eastern frontiers of the USSR. Basically, Russia sees India as a counter force to China and our



value to the Soviet Union will be in direct proportion to the degree of friendship or animosity between these two Communist giants. With the USA trying to make us pay a price for our so-called closeness to the Soviets and the Soviets slowly but surely inching closer to our borders and to the Indian Ocean, the future bodes ill for India, unless we can perceive the logic of our times and attempt to influence international affairs as opposed to merely playing with them.

### Strategy for India

India, therefore, has to blaze an exclusively Indian trail if she is to play the role that geography has cast for her. This means primarily a maritime trail based upon the sinews of maritime power of which the navy is only a small part. Indian policies, must compel us to look upon the development of our mercantile marine, the fishing industry, the scientific and hydrographic surveys of our territorial waters and the economic zone, development of the infrastructure and the industrial potential for ocean engineering, improvement of the cargo handling, repairing and docking facilities of our ports, as part of an integrated plan to project Indian maritime power in the Indian Ocean.

This is not a chauvinistic nor an over-zealous projection. These are the demands of geography and of the geo-strategic situation. We can ignore those demands only at the cost of our survival as an independent nation, increasingly dependent upon the seas not only for our livelihood but also for our very existence as a national entity.

By 1984 we will be pumping 20 million tonnes of oil annually from Bombay High alone, not to speak of the millions of cubic metres of gas. We have decided to go in for off shore oil exploration in a big way having signed contracts with many foreign firms.

Our annual trade of over 75 million tonnes valued at Rs.20,000 crores and oil imports of 20 million tonnes move across the oceans, and in the years to come, we will undoubtedly harvest the mineral and food resources of our exclusive economic zone.

India's dependence on the Ocean can, therefore, only increase.

Economics and politics are closely interlinked. Military strategy is the outcome of the interaction of politics and economics juxtaposed with geography.

A mention of what Japan imports from the Indian Ocean area by way of raw materials might be sufficient to show what the economic stakes are. Japan depends for almost its entire oil requirements on the Gulf, 90 per cent of it coming from this area, and the rest from Indone-

sia. Before the oil crisis, Japan imported 200 million tons of West Asian crude per annum carried in a fleet of 220 tankers. Similarly, Japan imports vast quantities of iron ore, manganese and other strategic raw materials from the Indian Ocean area and sends back large quantities of capital and consumer goods.

Japan, in its quiet but efficient manner, appears to be very close to fulfilling its World War II dream of establishing a Greater Asia Co-prosperity sphere, if she so wishes!

### Trade and Arms

Recently, unprecedented arms transfers have provided new markets to the arms manufacturers in the West. Billions of dollars worth of arms have flowed into this area. This arms transfer is bound to increase under the tensions prevailing and the uncertainty over detente.

A confidential guidance directive sent to US overseas missions indicates that US policies are moving away from the idea of arms control in strategic areas of the world. The directive states:

'Arms transfers should be viewed as a positive and increasingly important component of our global security posture and a key instrument in our foreign policy. This change reflects the administration's view that US industry is a valuable partner in promoting US security and that of our friends and allies.'

These policies are undoubtedly to ensure that the military-industrial complex of the West has enough markets in the Third World and other regions of the world and can use West Asian petrodollars for this purpose.

Besides oil, the Indian Ocean countries have strategic raw materials without which many of the industrialised nations of the West simply cannot sustain their production lines. Ninety per cent of the non-socialist world's cadmium, cobalt and chromium come from countries in Southern Africa which border the Indian Ocean. These are inescapable ingredients for the manufacture of rocket and jet engines using contemporary technology.

Already large quantities of sodium chloride, bromine and thorium are being extracted from the oceans. It is estimated that one square mile of seabed on the Indian continental shelf may contain 30,000 tons of manganese, 2,600 tons of aluminium and also some cadmium, iron, cobalt and nickel.

The National Institute of Oceanography (NIO) research vessel *Gaveshani* recovered polymetallic nodules on the Great Circle track between Port Louis in Mauritius and Goa. The metallurgical analysis report on these nodules indicates that they are rich in manganese, zinc, cobalt and nickel. The nodules are there for the taking. If we don't mine them, someone else will.



It is significant that during *Gaveshani's* voyage, she was twice challenged by warships of a country which has no littoral on this Ocean and asked what the NIO's vessel was doing in the Indian Ocean, so far away from home!

We have successfully mounted two expeditions to the Antarctic Continent in December 1981 and 1982. 'Dakshin Ganotri' is now a permanent Indian Antarctic station which will devote itself to research in seismic, meteorological and other ocean science areas.

### Law of the Sea Conference

With the realisation that the Oceans could yield vast riches, resources diplomacy came into play and it was realised that the riches of the oceans should be equitably shared. Accordingly, the third United Nations Conference on the Laws of Seas was convened in December 1973 and after eight years of bargaining and bickering almost complete agreement was reached in the ninth session in August 1980 and the proposals were likely to be finalised in September 1981. Unfortunately the new US administration felt that the protocol was discriminatory against the more advanced nations. The negotiations were renewed in March 1982. On April 30, 1982, the Law of the Sea Conference adopted, by an overwhelming majority, a comprehensive International Convention.

The most significant changes proposed in the new Laws of the Sea are the concepts of the extension of the 'territorial waters' to 12 miles,

the 'contiguous zone' for customs, fiscal, immigration and entry regulations to 24 miles and the 'exclusive economic zone' to 200 miles. These have brought approximately two million square kilometres under our regulatory jurisdiction and control, thus considerably increasing our maritime responsibilities. The concept of archipelagic waters have more or less been accepted and the right of littoral states to regulate traffic in international straits has been established.

Under the Treaty, India receives the status of 'Pioneer Investor' and becomes the only developing country to be accorded such recognition. USA, USSR, Britain, France, Germany, Japan and Italy are the others recognised as pioneers together with four International Consortia of industrialised states. We can now undertake seabed mining in the Indian Ocean. The site will be determined by Enterprise, the mining arm of the International Seabed Authority.

Industrialised states are now obliged to share their technology with Enterprise. This has been the issue of contention between the USA and the developing countries. On this issue the USA voted against the Treaty on April 30. Interestingly a number of western countries and all the East European countries and the USSR abstained! France voted for the Treaty.

We have been hearing the cry of the Group of 77 for a New International Economic Order, and for a North-South dialogue. The affluent have dismissed this as an irrational demand. As far as



INS BRAHMAPUTRA

— taken in 1977



the developing countries of the Indian Ocean are concerned, for historical reasons and also because they continue to be relatively weak and disunited, they lose an estimated 100 billion dollars each year in the unequal exchange, selling their own commodities cheap and buying finished goods rated at much above their value added prices.

This unequal exchange remains, notwithstanding the rise in oil prices, which ironically affects the poorer non-oil producing countries of the Indian Ocean more adversely. The industrialised West has attempted to counter this oil price rise by raising the prices of their exports especially those of sophisticated arms, many times over. To a great extent they have retained and in some cases even improved upon the terms of trade in their favour at higher aggregate values than they obtained before 1973.

Here, India can play a major role in this region by making a concerted effort to increase intra Indian Ocean trade through bilateral agreements, availability of technological know-how, lowering of trade barriers for Indian Ocean countries and so on.

Economic calculations have played an important part in the politics and the defence strategy of the big powers. It was economic interest that lured the maritime powers of the West to the Indian Ocean in the first place which eventually led to the establishment of colonial rule in Asia and Africa by them. Though decolonisation has led to an attenuation of these interests, the economic links of big powers with the littoral states are so strong that none of them, particularly the Western nations, can afford to leave the Indian Ocean alone, not until its wealth has been totally sucked dry and used for the benefit of those who are already rich and wealthy and who are fighting to keep their standards of living artificially high. The oil rich Arab countries have now joined this chase after artificiality in living standards.

The new colonialism of the Oceans is now well underway. The riches to be harvested from the ocean are immense. It is more than evident that only those who go forward in ocean engineering will reap the benefits. Others can only watch with their tongues hanging out. It will be a repetition of the debacle which our fishermen have been suffering for the past few years because they lack deep sea fishing technology and lose most of the harvest to fishermen from overseas. Every year, we arrest some ocean going trawlers belonging to non Indian Ocean countries, fishing in our waters. Several times that number are deployed every year in our waters.

## Conclusion

I would like to bring this into focus because navies are not built for security and for promoting foreign policies alone; they are essential for protecting the coastal and offshore assets of maritime countries to which they belong. In the poorer countries of the Indian Ocean, the commitment of large resources to the armed forces, and especially to their navies, requires that these naval forces comprehend the wider meaning of sea power of the state and take an overall view of the ocean business.

Navies must take on the role of lead agencies of the entire business of what is now termed Ocean Management. Navies which neglect this contemporary role cannot be expected to remain important national institutions as they would be deemed to have failed to grasp the significance of one of their principal roles, that of nation building. The Indian Navy must in particular take serious heed of this situation.

This situation in the Indian Ocean today, is not unlike the Vasco-da-Gama era. Though India is much stronger, many of the littoral states have struck military alliances with foreign powers, some of whom have established bases in this area. The nodal points, the major entry and exit points to the Indian Ocean, are either under direct control or indirect manipulation of these extra-Indian Ocean powers. The trade flow remains primarily external. The area is bursting with population and also with sophisticated arms. The Ocean has become the number one hot spot of the world and is the cockpit of modern day power politics.

It is stated that history has an uncanny habit of repeating itself, simply because human behavioural patterns have changed little since historical times. Unfortunately, every time history repeats itself, the price goes up especially for those who refuse to learn from it.

If India is to remain in the game and be among the winners in the end, then history tells us loud and clear that we Indians must be: politically mature and united; militarily strong, especially at sea; technologically avant-garde and innovative; and, finally, aware of the designs of Russia, China and the USA upon Asia, the Indian Ocean and India.

There never is, nor was there ever a shortcut to national security. Security is a function of strength — military certainly, but also economic and demographic strength.





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# AN AIRMAN'S PERSPECTIVE ON MARITIME WARFARE

By Group Captain T.W. O'Brien, AFC

Recent media comment has focussed on the Government's decisions not to replace *HMAS MELBOURNE* and to retire the fixed wing element of the Fleet Air Arm (FAA). Whatever a person's feelings might be about those decisions, we all must accept that for the foreseeable future the RAN at sea will not operate organic fixed-wing aircraft. A sober appraisal is therefore most necessary to ensure that future defence dollars are directed to providing the most suitable maritime deterrent force. The carrier issue must be set aside and with it the plethora of statements of varying worth on the matter. What must be said is that grasping at the straws of carrier re-instatement serves only to weaken the Australian Defence Force (ADF) by sustaining uncertainty, with the attendant adverse impact on morale and ADF solidarity.

Australia's physical size, unique geography and limited resource base combine to dictate the need for flexible multi-role forces to provide the level of deterrence and self-sufficiency needed to ensure national security. Pressures of future defence budgets will demand that all capital equipment proposals be set against these background criteria.

Arguments in favour of a fixed-wing carrier (CV) reiterate its contribution to deterrence, the maintenance of sea-control, and the protection of sea-lines of communication (SLOC). Fundamental to these roles is the capability for surveillance, reconnaissance, maritime strike, maritime air defence and anti-submarine warfare (ASW). Broadly speaking, a carrier is significant only because of the airpower it can concentrate — the 'Blue Water' operational task force concept endorsed by larger maritime powers survives on this premise. Not surprisingly, the resources needed to ensure the efficacy of such operations are considerable. For example, a typical USN Task Force has one or two large CV as the force nucleus, each with some 90 role-specialized aircraft embarked. Australia is not in this league nor, it can be argued, is there a sound strategic basis for such aspirations even at a much lower force level.

The capabilities that would have been gained by acquiring a new or re-vamped carrier fall far short of those needed to support autonomous task force operations. What then are the alternatives? Opponents of the acquisition of a carrier advocated that land-based airpower could meet the maritime defence roles proposed for carrier-based aircraft. Proponents of the carrier argued that there could be no guarantee that land-based airpower would appear when and where required. Each of these positions can be valid to the exclusion of the other. Suffice to say, in staff college terms, he who drafts the 'white', pre-judges the 'pink'.

With unrestrained resources, no thinking airman (RAN or RAAF) would argue against the desirability of a cross-section of naval organic air in the ADF structure. However, given such fortunate circumstances, the proposal would surely be for one or more medium carriers with a range of role-specialized aircraft including a fighter like the F/A-18. This is, of course, to be unrealistic. Resources are tighter than they have been in the recent past. Even so, the capability envisaged might be justified if the surface navy

## The Author

Group Captain Tom O'Brien, a pilot, joined the RAAF in 1957. He is a graduate of RAAF College, and the RAAF and Joint Services Staff Colleges. Air Force staff appointments in Canberra include Director of Coordination, Director of Project Coordination, and his current appointment Director of Operational Requirements B. He has extensive experience in flying instruction culminating in appointment as Flight Commander at Central Flying School for the introduction of the MB326 Trainer. He has qualified as Maritime Aircraft Captain on P2E Neptune and P3B and P3C Update II Orion aircraft. Executive appointments directly relating to maritime flying have been Operations Officer, Training Flight Commander and Operations Flight Commander at No 11 Squadron and inaugural Commanding Officer of Maritime Analysis and Training Squadron (MATS), now No 292 Squadron. Maritime executive appointments have included Staff Officer Air Operations at AJASS, and Plans and Readiness Officer on staff of Commander Patrol Wings US Pacific Fleet at Moffett Field CA. Group Captain O'Brien is selected to take command of the RAAF LRMP force as Officer Commanding No 92 Wing, RAAF Edinburgh, in January 1985.



was required to conduct operations far from the operational sphere of the remainder of the ADF. This is not the case; our defence capabilities must be developed along the lines dictated by our political position, which places primary importance on the development of effective regional defence capabilities. The time has come to concede that a CV class carrier is far out of our financial reach and beyond our political requirements. The question which must be answered is: how can we replace its special capabilities?

Our first task is to identify a suitable force structure that overcomes the deficiency. An even earlier step is to look to the ADF concept of operations as it applies in the maritime warfare arena. Unfortunately, such a definitive concept is difficult to locate. If it had been readily available, sailors and airmen would not have argued so much over the last decade; the ADF would have had clear direction on a way ahead rather than pitting the fighter against carrier in a battle for resources.

Regardless, one must have a modicum of pity for the planners. The environment of our area of primary strategic interest does not drive one towards a specific structure. Uncertainties allow individuals to interpret future needs according to their own perceptions, background and, dare I say it, personal bias. Having stated that, and not being tied to any direction except my own, let me set the scene for my perception of the probable conduct of maritime operations for the future, and describe how the force structure of today and the near future might support them.

## Maritime Scenario

Most local strategists assume that our maritime problem will evolve from a situation short of declared international conflict. Harassment, threats to sovereignty and freedom of passage, incursions and terrorism are foremost among the tactics that may be adopted by adversaries without incurring the odium associated with formal conflict. Accordingly, let me presume that Australia's defence strategy would be deterrence, and our military strategy would be to deny incursions onto Australian soil. The way in which a significant threat to Australia's interests could be expected to develop over time, suggests that ADF operations would embrace four overlapping levels of conflict representing escalation in both threat and scale. In my perception, these would be:

- preliminary operations of an intelligence nature
- maintenance of sea and air superiority within defined limits

- lodgement prevention, including lodgement on our isolated island territories
- lodgement containment.

In our favour, is the fact that any nation with hostile intentions, on whatever scale, will have to mount its operations across the maritime approaches. There is a degree of validity in the concept of the 'Australian Moat'. Depending on the phase and scale of the threat, the ADF's maritime elements could be required to operate in all or most of the following roles:

- intelligence gathering
- maritime strike
- maritime interdiction of SLOC, including mining
- ASW
- maritime air defence
- control and protection of national shipping.

Without a tangible threat against which to plan, the relative significance of each class of operations cannot be stated with confidence. Not all may prove relevant as the threat develops. In such circumstances, the principle of flexibility has particular relevance for the ADF. As a relatively small nation and force, Australia cannot afford too many role-specialized assets; where possible, the full potential of elements suitable for multiple applications has to be identified and exploited.

Recent history has emphasised the lesson that air superiority is a vital if not the vital element in maritime defence operations. The validity of this lesson is likely to be substantiated in future conflicts as technological advances in airborne stand-off weapons and target identification are fully exploited. Surface combatant and convoy operations in an unfavourable air superiority situation may come near to being unacceptable. In essence, if we wish our surface combatants to fight outside RAAF air defence cover, they had best be under the air umbrella of a USN Battle Group and its associated air force.

Now, before I declare my perspective of the way ahead, let me sum up my arguments. The structure of the RAN based around a CV flagship is no longer pertinent to Australia's strategic environment. I have difficulty envisaging a large element of the ADF being convoyed across a hostile ocean environment. I do see a need for defensive, coastal-oriented, surface naval operations, but more of that later. I see the potential for strategic operations to be the province of long-range strike aircraft and submarines, in support of the national strategy of deterrence. If deterrence should fail, the surface navy will be needed in support of sovereignty operations and coastal convoys. These convoys may also operate in PNG waters.



## Force Structure

Let us move on. The ADF force structure for the next decade is fairly much set. The replacement, modernization and new capability programmes are well developed and individual elements are simply waiting in priority turn for introduction as resources come available. Some 'to-ing and fro-ing' will occur as Defence personalities and government change, but the inertia (oh, that it were momentum) of the programme will prevent any significant change.

The RAN will probably develop on a flotilla basis. The present class organizations will give way to two, or at times three, flotillas comprising a DDG, and a mix of FFGs and River Class. The OBERONS will soldier (sailor?) on into the mid-nineties, and late in the period a limited MCM capability will exist. The various support ships will become more helicopter capable, and the lease or purchase of ANL ships as platforms for ASW helicopter operations will occur. VSTOL aircraft will not be introduced due to resource constraints. ASW will remain the primary role with the anti-ship missile (ASM) the primary threat. Display and surveillance will be the primary peacetime roles.

The air ORBAT will not change significantly as regards vehicles but capability enhancements will be significant. The F111C, P3C Update II, and F/A-18 will form a three-tiered anti-surface unit (ASU) force capable of a variety of operations from about 2000, into several hundred miles from land bases. All will be Harpoon capable and with the C130H are capable of mine-laying. This formidable deterrent force will be supported from early in the decade by a limited Air To Air Refuelling (AAR) capability and later by Over The Horizon Radar (OTHR) and Airborne Early Warning (AEW) aircraft. Within their individual operating radii, these aircraft provide capabilities well in excess of those lost with the demise of the small CV. They cannot, nor were they ever intended, to provide direct support to surface units operating as a distant task force.

It is appropriate at this time to reject the notion that command of the P3 Long Range Maritime Patrol (LRMP) Force should transfer to the RAN. Apart from the impractical aspects, the proposal pays little heed to the wide band of capabilities of the P3 aircraft. Many sailors, and some airmen, see the LRMP acting primarily in direct support to surface forces. While an important role of the aircraft, I will argue later that in our situation, it is one of the lower priority applications of this versatile weapons system. Ignoring the narrow perspective that the RAN deserves a *quid pro quo* for the loss of carrier-borne fixed-wing air, I contend that proven

operational (including command), logistic and training expertise exists within Air Force to conduct operations both independently and jointly with the RAN and our allies. Further, I doubt the wisdom of such a proposal considering the size of the LRMP Force and its total integration into the many-faceted RAAF infrastructure, of which LRMP support is but a part. There is much more involved than a simple transfer of manpower and physical assets. For the best benefits of the ADF, the status quo should be let stand.

## Maritime Command and Control

LRMP aside, let me introduce the difficult question of maritime command and control (C2). Present doctrine apes the Maritime Headquarters (MHQ) system developed jointly by the RAF/RN for Atlantic convoy operations more than forty years ago. Sydney MHQ exists to fulfil our responsibilities under the Radford-Collins Agreement. The agreement relates specifically to Naval Control of Shipping (NCS) which would be instituted at a level appropriate to the level of conflict occurring. This manpower intensive headquarters would only be relevant if the world-wide international strategic environment took a major turn for the worse. While for national military prestige, the processes of such a headquarters should be exercised on a regular basis, to use them as the foundations of future ADF maritime operations is to live in the past. Indeed, our whole national approach to joint headquarters needs review. Present doctrine ignores the size of our forces and the importance of timely, political, decision-making. To establish a major joint headquarters other than in Canberra is a wasteful duplication, or worse, of limited military manpower and the supporting infrastructure.

The primary function of the MHQ deserves close examination. Previously, the fleet commander has been embarked in the flagship. Another senior naval officer appointed by CNS became the Maritime Defence Commander (MDC) and ran the MHQ. With no flagship, the fleet commander will now remain ashore and be the MDC. The questions of who commanded and controlled in the previous situation are tricky to answer, and this applies too to the future situation. For the future, the MDC commands naval units, and controls assigned Air Force assets. Surely he should report to CDFS? Consequently, he is best placed in Canberra as warfare adviser to CDFS and the War Cabinet. The political decisions will always be made at Cabinet/CDFS level, and the tactical decisions at sea. Close control of a distant tactical situation is just not realistic.

If the MDC does not, or should not, make or control tactical decisions then what is the function of his headquarters? It does serve as an



intelligence gathering agency; it does monitor the war at sea (albeit after the fact); and it does task assigned air assets. I contend that a separate headquarters dedicated to the control of maritime operations is not justified unless a major implementation of the Radford-Collins Agreement is declared. Without a full scale NCS operation, the MHQ reverts to undertaking the functions currently undertaken by the staffs at Fleet and Operational Command Headquarters, and experience shows that the major operational activity conducted in the MHQ is the planning and tasking of strategic and tactical air operations. In a developing situation, direct support for a tactical commander at sea would not have much priority until late in the piece. Consequently, I see the balance of control within the present organization to be traditional, not practical, and deserving of searching review. An alternative control structure is needed, based on likely ADF operations and relevant to its size and capabilities. In short, the MHQ is not a suitable vehicle for control of ADF maritime operations.

The change in emphasis in the fleet to a destroyer navy provides an opportunity to resolve any problems. The swing of offensive maritime strike operations from the surface naval force to the land-based air force indicates that the command line from CDFS through CNS to FOCAF (the MDC) is not as appropriate as it once might have been. I am not proposing that AOC Operational Command should be the MDC, though it does not take much thought to identify scenarios where he would be an appropriate MDC. What I am proposing is that the traditional MHQ/MDC operation is less relevant today, and will probably be irrelevant in the future. Offensive operations will need a high level of political clearance and will always be conducted to strict rules of engagement. The expertise for this area of maritime operations is rapidly becoming more the province of airmen than of sailors and, ultimately, I would see the specialist knowledge resting with the joint operations staff serving CDFS. Consequently, I contend that we cannot afford to expend our most valuable asset manning up headquarters that act as the equivalent of post offices.

The requirement is for one, high-level, decision-making headquarters to control all operations, and a number of low-level headquarters with relatively junior staff officers to implement the tasking. The manpower saved in this way could be re-directed to operations and the vital administrative task of expanding and training the larger force needed in the longer term. This approach would require a headquarters complex to be built in Canberra. This ADF headquarters would require a full operational control infrastructure and would, perhaps, in-

clude facilities for a 'war cabinet'. In contingencies, its operational staff would be supplemented by the three Service operational headquarters to the level necessary for CDFS to conduct operations. The idea is not new, but it does have major advantages. It crosses the barriers of that inter-Service rivalry which often has, at least in exercises, far more of an impact on friendly operations than any ORANGE force activity.

One could go on at length on the vexed question of maritime C2. Suffice it to reiterate my major point that, while the present doctrine is workable, it is more suited to higher levels of conflict than can be identified from our strategic situation.

### Operational Application

While the force structure is fairly well set and its rationale understood, if not always agreed, the application of that structure to contingency operations is less well understood. Aircraft range and radius-of-action (ROA) have been key points of argument in almost all discussions on the matter. Proponents of the 'mobile airfield' pick ROA, in particular, as a prime determinant of capability. However, unless the same exercise is undertaken with the potential unfriendly air forces, the argument is incomplete. The range from sovereign airfields from which our aircraft can operate needs to be meshed with those of the potential opponent from his airfields. While maritime patrol aircraft (MPA) can operate far afield, strike and air defence aircraft have more stringent ROA constraints which can be used to the defenders' advantage as the Argentine Air Force found to its regret.

Well, what could be our air situation? In the self-reliant defensive posture I have predicated, the area at sea to be protected may not be as large as one might first think. If we place constraints on the 'Moat', such as Exclusion Zones, and further restrict the protective coverage to the tactical area surrounding the few coastal convoys the RAN could or would support simultaneously, and then overlay the ROA of possible unfriendly offensive aircraft, we gain some feel for the nature and dimensions of the problem. The range and ROA arcs drawn so conveniently about suitable airfields by critics of land-based airpower no more projects the area to be protected than would the surface navy be required to patrol all of the contiguous sea all of the time. To take this argument further would require threat assessments which are inappropriate. I will leave the argument at this point by making the broad statement that the ADF could protect little more than about two convoys transiting coastal waters and that these would need only ASW protection for much of their transits. Judicious routing, concentration of sur-



face assets and daylight transits of the more difficult areas of air threat are but the more obvious of the passive tactics available. Add to these the ability to air-refuel some aircraft types for more efficient on-station performance, and some time in the future the use of AEW aircraft for control of ADF units against unfriendly surface and air targets, and the situation becomes a little more promising.

A discussion such as this would be incomplete without some comment on the Pacific and Indian Ocean SLOCs. Only a major conflict would support the notion of open ocean anti-shipping operations. In all honesty, only Australian flag shipping would be targeted. In a worse case, focal areas around major ports could experience submarine and mining threats. However, such threats would more likely be applied to those forward ports in the declared Australian Exclusion Zone. The difficulty in dealing with quiet conventional patrol submarines is well understood. A case for fixed, passive, ocean surveillance systems and air transportable mobile arrays can easily be developed. The cost of such systems is also understood, but efficient

focal area ASW operations demand such support. Waiting for the 'flaming datum' is not an acceptable start point for solving the problem.

### Conclusion

In conclusion, may I comment that the foregoing thoughts are not intended to be a deep analysis but rather to be an alternative perspective of a very complex subject. I have suggested that, as our future offensive maritime operations may involve only one surface navy, the enemy's, maritime warfare expertise no longer resides solely with the Navy. Consequently, the current doctrine for Maritime C2 is not appropriate. We need to concentrate our decision-making resources at the seat of power and delegate tasking as a junior staff activity. Finally, and very importantly, naval and air staff officers should be provided with unequivocal guidance so that the detail of the ADF's actual maritime warfare capability may be jointly, soberly and precisely identified. Positive Defence Department direction is critical to the unity of purpose of the ADF. It must be given and we — all of us — must accept it; the nation has every right to expect nothing less of its military profession.



## ANNUAL PRIZES

The ANI Journal sub-committee tasked with considering the annual prizes for Journal contributions to Volume 9 have decided the following section winners:

- Best major article (\$200) — Captain W.S.G. Bateman — Vol 9 No 1
- Runner-up major article (\$100) — Lieutenant Commander F.A. Allica — Vol 9 No 1
- Best minor article (\$25) — Mr Tom Friedmann — Vol 9 No 4
- Best letter to the Editor (\$25) — Commander G.L. Purcell — Vol 9 No 2

The President, the Council and the Editor congratulate the winners and look forward to more, stimulating, original contributions in Vol 10.



# A CHRISTMAS STORY — 1989

By Lieutenant Commander I.A. Gulliver, RAN

When it was all over, senior officers met at *HMAS WATSON* to discuss the lessons learnt. It had been a close run thing, where luck as much as anything had played a part. Whilst the country was breathing sighs of relief, many in the Navy were still very concerned at how close we had come. Although there were many obvious deficiencies in equipment that could be pointed to, the consensus was that the age old maxim had been overlooked during the period of peace: *si vis pacem para bellum* — if you wish for peace prepare for war.

The years leading up to the war had been relatively quiet ones for the Australian Defence Force. As with most conflicts in this century, the situation was on us before we knew its extent and nature, and we were to look back on this period of hostilities as the war that should never have been. The Navy had suffered the most in the severe financial restrictions of the early 80s. The carrier had not been replaced, the new generation patrol boats with capable weapon systems had been deferred, and close in weapon systems had not been fitted widely even though the Falkland Islands campaign had shown the need. By the time hostilities commenced in late 1989, the strength of the Fleet was at a low ebb. Two DDGs were undergoing a reduced modernisation and two of the River Class had been paid off. The new tanker was now available. There were no MCM forces.

Of course, in retrospect the warning signs had all been there. The slow building up of maritime forces, the acquisition of significant capabilities where none had existed before; these should have alerted the intelligence community. Particularly, the size of the amphibious forces should have caused concern. But Australia in the 80s was beset by internal

problems. The disastrous drought of the late 70s and early 80s had demanded a lot of the government's financial resources. The frequent changes of government during the decade had not made for stable planning.

In fairness, some progress was made. Some of the F18s, now reduced to 50 aircraft because of the cost which still exceeded \$5 billion, had arrived. There were two new frigates building at Williamstown, but cost overruns and delays meant the ships would not be available until the mid 1990s. Indeed, the first of the new corvettes with their tremendous fire power were just being laid down at Newcastle and looked like being ready sooner. The current FFGs had all been fitted with Squirrel helicopters as an interim helicopter, but the proper helo had not yet arrived. Also the minehunter catamarans were fitting out.

No one had considered that the two countries would act together. Foreign Affairs and JIO had for so long considered the countries in the Indian Pacific littoral in isolation, that their ability to act in concert had been overlooked. The timing of the attack was from their point of view shrewd. Most of the ADF was on Christmas leave and all the RAN ships but two patrol boats and the Antarctic Support vessel were in harbour. In fact so effective was the attack that news of it took sometime to reach the mainland.

## The Author:

LCDR Gulliver joined the Naval College in 1965 from school in Queensland. He served in a number of ships before qualifying Principal Warfare Officer in 1974. Then followed exchange in *HMAS DEVONSHIRE* during which the ship visited Russia. After the Advanced Warfare Officer course in 1977, he served at the RAN Tactical School. He was Gunnery Officer of *MELBOURNE* and *ADELAIDE* (commissioning crew). He is now Deputy Director Surface and Air Weapons — Navy.



First indications had been a mayday from an aircraft on patrol near there. Coastwatch and RAAF had then tried to communicate with the islands but with no result. The summer monsoon was causing frequent rain storms and these had provided the cover the attacks needed. It was learnt later that they had spent some years exercising in poor weather so as to be able to operate in those conditions. Cabinet and the Council of Defence met quickly and found that the first problem was the lack of a suitable committee for such decisions as may be required. This was overcome in the interim by expanding the Council with certain Ministers. One of the earliest problems that the Council faced was that no declarations had been received and if something had gone seriously wrong, who was responsible? The 'why?' was a lot easier to establish; apart from the oil, the strategic importance had become much greater as nations sought to extend their influence or to counter others.

The islanders had been campaigning for autonomy after the disastrous attempt to incorporate them into the ACT. The lack of a separate, understanding, governing body had meant that a plethora of regulations, applied in an ad hoc manner, together with tremendous costs, had descended on the poor unfortunates. Their cries had, of course, been championed by those countries that were the subsequent antagonists. But the warning signs had gone unheeded that summer. More attention was paid to attempts to regain the ashes than debates in the UN. There were still many people who had not realised that any regional advantageous capability had evaporated in the early 80s.

The first military effort was a reconnaissance flight by two RF 111s. The results were staggering. The photographs revealed the airfield full of F5s, MIGs and Harriers and quite a lot had been airborne to attempt to intercept the recce. The anchorage was full of amphibious ships and supply vessels, whilst it was presumed that at sea the main battle group were operating in support.

Of course the obvious next move was to approach the US for satellite coverage and intelligence, together with military assistance. The invoking of ANZUS caused great alarm in Washington. President Mondale and his Democratic administration was involved in a number of territorial disputes as arbitrators, and it did not suit the US to go to war over another one. Furthermore, the discussions concerning Antarctic jurisdiction and resources were at a delicate stage. CDFS then presented the government with a huge shopping list of weapons, missiles and ammunition which in many cases the US just could not supply even if they wanted to. Although

the Memorandum of Understanding of Logistic Support was some help, in the end it was realised that we were on our own. It was a come as you are party.

The ALP was back in power after being put out of government in 1986. The leadership was not strong. Considerable discussion took place about whether any response should be made at all. In the end the ramifications of no response and the strategic implications became clear and the Services were ordered to a war footing.

The F 111s attacked the runway and the ships at anchor with laser guided bombs. Harpoon could not be used effectively because of the proximity to land and in any event they were being held for the enemy battle group. This attack took place a week after the original assault and the defenders were prepared. Not only were there extensive defences of aircraft and SAMs, but the battle group organic aircraft attacked the mainland airfields putting the runways out. Another tanker could not be got there in time so in addition to the 5 aircraft lost in the raid another 2 had insufficient fuel to divert, and only 5 survived.

F18s deployed next using LGB and Maverick. It was considered too risky to use the closer airfields again. By use of all four tankers a force of 16 aircraft managed to reach the target and did achieve some damage: however, the attack was again anticipated and the tankers were taken out by enemy carrier aircraft resulting in the loss of all aircraft on the return leg. The remaining F18s were then reserved for defence of cities and airfields.

It became clear that if the enemy battle group could be dealt with, then control of the sea would follow. From there it would be a relatively easy matter to starve the defenders out. At last it became obvious to Australians what sea control and power projection meant. Control of the sea meant control of your destiny as far as Australia is concerned.

A task force eventually sailed on January 12. It included a modernized DDG, three FFGs, *SUCCESS*, three River Class, *TOBRUK*, *JERVIS BAY*, three merchant ships with stores and equipment, two Bass Strait ferries and three container ships with helos embarked. Two tankers fitted with kingposts taken from the old *SUPPLY* also joined the group. The total force for the assault consisted of:

- 3 battalions RAR
- 1 squadron SAS
- 15 M113A1 MRV with Scorpion turret
- 4 Field Pack Howitzers
- 4 155mm Howitzers
- 26 helos (Seaking/Chinook/Wessex)

It surprised many in Defence just how many



support ships and how many stores were required for such a mission. Fortunately, after the Falklands, the Naval Staff had calculated what was required and where it would come from. Great concern was felt at the small size of the force that the ADF could send. Enemy forces were estimated as four times greater. It was a most difficult mission.

The P3s had been trying to keep the enemy battle group under surveillance and provide ASW support to the task force. However, Australia only had 20 P3s and there were only 14 crews, 7 per squadron. One squadron took the ASW task and indirect support of the Fleet, whilst the other carried out surveillance, unescorted. Initially, each squadron kept one aircraft on task, but as the number of defects rose and losses occurred, big gaps appeared in the search effort. It was not completely one sided. Some Harpoon attacks were believed to have been carried out, but the enemy's organic air power generally provided protection out to 150m, well beyond the maximum range of Harpoon. However, with no post damage assessment and the failure of some aircraft to return the results were not known.

The submarines had been ready to sail very early and the Maritime Defence Commander deployed them whilst the government was still making up its mind. He even invented a few appropriate Rules of Engagement. The problem was as usual: it took the boats a long time to get there. They searched for the enemy surface forces, but the highly mobile battle group continued to elude them. The problems facing our task group were immense. The greatest problem was how to land the troops and their equipment. There was only one amphibious ship and no beaches. The only way to land them was by helo and there weren't enough of them. Eventually a plan was devised to assault one area, consolidate and then try for a domino effect. Suddenly, Naval Gunfire Support became popular with the Army and it was regretted that the number of NGS guns had been allowed to decrease. Not only that, the TG Commander considered that of his warships the DEs were a definite liability in a missile attack although their Ikara was a valuable asset. He was very concerned about defence against sea-skimming missiles. All his ships had large radar reflecting areas and huge infra-red signatures, particularly the FFGs. There was a great shortage of decoys and chaff and no electronic countermeasures. The merchant ships had only machine guns and 40mm. His best asset was Phalanx, but this was only in FFGs.

It was not until the task group left the area of possible shore based F/A18 support that the attacks came. The attacks were concentrated on

the warships, presumably because they could not be replaced. The closer the TG got to the island, the more damage was sustained. It looked at this stage as if it was going to be a long, difficult and very expensive business. It was about then that events underwent a major change. The big economic powers, Japan and the US, suddenly realised their interests were at stake. Japan had become very powerful economically and Australia was her storehouse of new materials, including oil. The US was concerned that a heavy Australian defeat would further encourage opportunism on the part of the aggressors and the US bases might be lost. Fortunately, with the Antarctic discussions taking place, the US and other allies had some very attractive bargaining items. These, together with threats of economic pressure caused the enemy to announce a ceasefire. There followed a prolonged period of diplomatic negotiation which resulted in the islands becoming autonomous states under the auspices of the UN. The proceeds of collection of resources from the economic zone was taxed by the UN to support the islanders.

Such were the events of early 1990. A bitter engagement was averted in a situation where the military solution was never really on. In overall terms, only history will show how much Australia lost. Suffice to say, some very hard lessons were learnt and quite a few home truths became apparent to the public. The poor amphibious lift capability and the inadequate support of shore based aircraft for the Fleet became obvious. The shortage of aircrews and fighting troops were highlighted. The lack of adequate self defence capabilities on warships and merchant ships was dramatically exposed. The overwhelming feeling was that the ADF was an unbalanced force without the right sort of equipment. Most observers agreed that it was not a case that insufficient money had been allocated to defence, but rather the money had been spent on the wrong things, such as glamour projects with high AIP. Force structure had been wrong mainly due to lack of attention to obvious scenarios.

So it was a very close thing which will take many years to redress. Let's hope we are better prepared next time.





# QUICK QUIZ FOR NAVAL STRATEGISTS

Compiled by LCDR I.R. Gulliver, RAN

The RAN is going through a turbulent period. At the same time, naval forces in our area of interest are changing rapidly. The following quiz is designed to help assess the relative strength of the RAN.

1. Which of the following countries has the largest number of naval personnel?  
a) India    b) Indonesia    c) Japan    d) Thailand
2. Which of the following countries first introduced the LM2500 gas turbine engine in its navy? (The LM2500 is fitted in the FFG-7 class)  
a) Singapore    b) Indonesia    c) Australia    d) Malaysia
3. How many Indonesian warships are fitted to carry four or more Exocet missiles?  
a) 4    b) 6    c) 8    d) 12
4. Which of the following nations have fewer submarines than Australia?  
a) Pakistan    b) India    c) Japan    d) Indonesia
5. Which of the following nations possesses the most number of missile armed patrol craft?  
a) Singapore    b) Thailand    c) Malaysia    d) Indonesia
6. How many LSTs capable of carrying a battalion of marines and 3 Super Puma helicopters have commissioned in the Indonesian Navy since January 1981?  
a) 4    b) 2    c) 5    d) 7
7. How many LSTs of all classes does Indonesia possess?  
a) 15    b) 9    c) 11    d) 7
8. Which of the following countries has the largest number of naval personnel?  
a) Sri Lanka    b) New Zealand    c) Singapore
9. Which of the following countries had the largest per capita expenditure on defence in 1982?  
a) Australia    b) Japan    c) New Zealand    d) Malaysia
10. In 1981, Japan spent 0.9% GNP on defence whilst India spent 3.2% and Indonesia 4.0%. What was the figure for Australia?  
a) 2.1%    b) 1.7%    c) 2.6%    d) 3.9%
11. Which of the following countries does *not* have voluntary military service?  
a) India    b) Indonesia    c) Malaysia    d) Japan
12. Indonesia spent \$2,926m on defence in 1982, India spent \$5,556m, how much did Australia spend?  
a) \$3,972m    b) \$5,791m    c) \$2,995m    d) \$4,497m
13. Which of the following navies do *not* operate HSA fire control equipment similar to M22/Mk92?  
a) Singapore    b) Malaysia    c) Indonesia    d) India
14. Which of the following navies has the most surface to surface missile firing platforms?  
a) Australia    b) Indonesia    c) Malaysia    d) India
15. Which of the following navies do *not* operate Sea King helicopters?  
a) Japan    b) India    c) Malaysia    d) Pakistan

Answers given at the back of the journal.

Scores: 12 — 15 Excellent — ask for posting to the Naval Staff

9 — 12 Good

6 — 9 Average

< 6 Apply for RAN Tactical Course

Sources — Janes. PDR.



# NAVAL IMPLICATIONS OF COASTAL SURVEILLANCE

## PART II

By Commander A.H.R. Brecht RAN

With great care, the Taiwanese fishing vessel *Yuan Tsuan* silently cast off the last of the lines which held her to the alongside yacht and drifted quietly with the tide down Trinity Inlet towards the mouth by Cape Grafton and the open sea beyond. The time was 0130K, the date Christmas Day 1981.

*YUAN TSUAN* had been apprehended by *HMAS BARBETTE* in the middle of the previous month and brought to Cairns for investigation into alleged illegal fishing in Australian waters. Her master decided not to wait for the outcome. Noticed by an alert resident who raised the alarm, the Taiwanese vessel started her engine when clear of the inlet and headed for Grafton Passage. Thus began a chase which was to have significant implications for the RAN as far as its mechanics were concerned, and perhaps serious connotations for the nation. Coastal surveillance had suddenly developed into hot pursuit. *HMAS TOWNSVILLE*, the duty patrol boat, was ordered to sea and sailed without delay at about 0330K having recalled her crew from the comfort of their beds and families in what amounted virtually to record time. An almost kaleidoscopic sequence of events followed: *YUAN TSUAN* ignored repeated calls to heave to; warning shots across her bows swayed the master not one iota; Ministerial approval to fire at her, with a positive intention to hit, was obtained after a long period of delay in which telephone lines to the Prime Minister and others ran hot; *YUAN TSUAN'S* crew eventually overruled their captain (presumably influenced by a fierce desire not to be hurt by the carefully aimed gunfire from *HMAS TOWNSVILLE*) and surrendered. She returned to Cairns under escort the following afternoon, Boxing Day, amid the glare of intense media interest and publicity.

For Australia, the incident was quite important. National interests and pride had to be preserved, and internationally the nation could not be seen to be a paper tiger in the enforcement of its fishing laws. Had *YUAN TSUAN* succeeded in

thumbing the proverbial nose at authority much face would have been lost. Fortunately for Navy, the relevant procedures for hot pursuit proved to be exactly what the situation called for and in the event *HMAS TOWNSVILLE* followed a path which, although dotted with potential hazards and pitfalls, proved in the final analysis to more than meet the requirement. Christmas Day 1981 was indeed a day to remember.

I have chosen to open this second article on coastal surveillance with the above account not only because it plainly illustrates the manner in which the practice can quickly develop from the mundane to the spectacular, but also because 'Operation Cold Turkey' as it became known generated some considerable discussion about the role of the Defence Force (and particularly the Navy) in such national activities. Media coverage was favourable to the RAN almost to an extreme, much being made of the way in which *HMAS TOWNSVILLE* was obliged to become the first RAN warship to fire upon another vessel on the high seas in peacetime (excluding small scale wars) since WWII. She acquitted herself well, but there were those who argued that she should never have been put into such a 'police keeping' role in the first place, that this work should be the responsibility of a coastguard, leaving the RAN to get on with its primary responsibilities concerning the maritime defence of Australia.

Two years later, after a change of government, fluctuating national economic experiences and expectations, and a series of bitter body blows to the RAN through the loss of organic naval air capabilities, considerable weight can be lent to the argument that the Defence Force can no longer afford to be mixed up in coastal surveillance. Those opposed, claim that our scarce resources in equipment and manpower can be much better utilised. My purpose in this contribution is to examine some of these claims and also to put the pro-surveillance case. In so doing, I shall attempt to enlarge upon relevant aspects of



the first part of this look at surveillance, published in the November 1983 edition of this Journal. The views expressed are my own.

## ARGUMENTS AGAINST

That coastal surveillance is like an iceberg is as close to a 'truism' as one could get; what you see is but a fraction of the whole. So it is with Defence participation. Behind the 15 Fremantle Class Patrol Boats (FCPB) which will be engaged in this work by the end of 1984 lies a large and complex naval organisation of people, bases, facilities, and stores. While I do not wish to turn this article into a facts and figures treatise, some costs are worthy of consideration at the outset, merely to give an indication of just what implications there are for the RAN budget through continued involvement in the surveillance scene.

### Costs

There can be no doubt that surveillance is expensive. The dedicated patrol boat base at Cairns cost more than \$12M to build and I suspect the Darwin facility would have been as much. RAN investment in FCPB construction is at least \$120M, plus spares and ancillary costs, while merely operating them around our enormous coastline can be daunting in fuel bills. Details of operating costs for the PTF force are available from appropriate Defence and parliamentary sources for those readers who wish exactness, but for the purposes of this discussion I shall merely estimate that the RAN has spent about \$200M setting up the coastal surveillance FCPB force and support bases. Several million dollars are expended each year just to keep the boats on patrol, including such items as fuel, spares, and contract maintenance. These figures do not account for any manpower element which, when added, raises the total cost quite significantly. About 600 personnel are directly employed in the surveillance force, afloat and ashore; using a fairly loose all-up costs figure of \$20,000 per man, this means an annual expenditure around \$12M not including associated infrastructure elements such as naval married quarters built in remote localities to house the families of PTF personnel. It may be argued of course that inclusion of manpower costings is inappropriate, observing that these are a permanent element of RAN budgets no matter where manpower is employed, but I believe any serious look at surveillance costs for the Navy must note this important factor.

All of the above cost items are admittedly estimations and may be inaccurate. In terms of capital equipment, they also exclude expenditure associated with acquisition and operation of *ATTACK* class PTF and bases such as *HMAS STIRLING*, but I wish to limit discussion to the 1980s and beyond and believe those costs are given a fair indication of what is involved. Summed up briefly, it appears that the RAN has spent around \$240M acquiring and operating the FCPB force to 1984 and is set to outlay approximately \$15-20M per year to keep it going. Given the tightness of past and predicted Defence budgets, coastal surveillance is indeed an important cost element, especially when one considers that quoted figures do not include aviation costs borne by RAN Trackers or RAAF P3 Orions. Small wonder that opponents claim the programme is too expensive in today's Defence economic reality, and that results do not provide good value for money, which (they say) could have been better spent.

### Other Resources

Few elements of the RAN are as simple as figures on a balance sheet may make them appear. The patrol boat force is no exception. Within the various costings briefly touched upon above lie many varied influences and demands upon naval resources. Support and maintenance of FCPB at Cairns, for example, requires much dedication, time and effort from people widely dispersed across the nation. FCPBs patrol using a cycle of six weeks at sea followed by 14 days AMP alongside at base, and although maintenance programmes are planned to provide defect rectification during the latter periods, in practice it is often quite different. Since FCPBs are new ships, many still under warranty, the resources of GOSIEAA are sorely taxed at times through the need for constant liaison and consultation with the shipbuilder, NQEA. Similarly, a significant proportion of Zetland's work is dedicated to provision of appropriate spares support for FCPB. In the cases of Cairns, Darwin, and Perth (bases which will operate two thirds of the entire FCPB force) such support involves long lines of communication with attendant supply delays. *HMAS CAIRNS*, for example, is supplied by weekly road trailer from Sydney, beset by the vagaries of road conditions and weather, particularly in the wet season. The financial costs of this and similar operations (for other bases) are not included in above breakdowns but, finance apart, these activities place considerable strains and obligations upon a supply organisation which some might say is already overloaded without worrying about patrol boats.



## Manpower

Operation of the patrol boat force in coastal surveillance is likewise imbued with particular manpower constraints. PTF personnel become highly skilled in their own professions very quickly, often as a direct result of the unique responsibilities placed upon them in these small ships. An FCPB carries only 23 men, each of whom needs to be an expert in a particular field. It can be claimed that the needs of such responsibilities cause (in general terms) high calibre persons to be posted into the surveillance world and that this practice denies the Fleet at large the services of a significant number of especially skilled personnel. Such contention raises wide issues beyond the scope of this article, and in any case there may be little evidence to support the claim, but it is true that coastal surveillance activities do occupy a meaningful proportion of RAN manpower at a time when resources are stretched to the limit, and perhaps beyond. The question posed asks whether PTF manpower could be used to greater benefit to the RAN as a whole if employed in the wider field of Fleet operations instead of inside the relatively narrow confines of coastal surveillance.

## BENEFITS

Although I shall address later in this article some of the advantages to the RAN from its participation in surveillance I wish to avoid any semblance of a 'For and Against' structure; accordingly it is worth mentioning now that dedication of what is actually a very small part of RAN manpower (about 3 percent) brings some definite benefits as well as alleged disadvantages. For officers, the training value at the junior level is most important and FCPB provide unique command experience for middle seniority lieutenant commanders. Despite the desires of some to become permanently PTF specialised I believe the majority of the sailors concerned go on to serve in bigger ships and shore establishments; therefore, any particularly valuable skills they may have acquired in patrol boats cannot be said to be lost to the RAN at large. Indeed, in some cases it is possible that skills and experiences gained in FCPB service actually increase the value of PTF sailors to larger ships.

There can be little doubt that naval participation in the Australian coastal surveillance organisation carries with it certain unavoidable costs. Also, in terms of money, manpower, facilities, and resources, the RAN is affected through the creation and upkeep of the patrol boat force. Viewed in this context, the arguments I have outlined against RAN involvement do indeed

have some substance. The main question to be answered though, is how much weight do such penalties carry? Does the Navy (and for that matter the Defence Force) gain more in return than it outlays? I contend that it does.

## Coastguard Service

As explained in a previous part of this article, the Defence Force has been involved in coastal surveillance for many years. Few would seriously contend that the work is unnecessary, thus the absence of a Coastguard or similar force has placed the onus of patrolling upon RAN PTF. Examination of whether Australia should or should not establish a Coastguard is beyond the aims of this article and will not be pursued other than in a very narrow context. If one accepts the existing national economic situation and constraints as an indication of the general status quo *throughout the 1980s, and many economists do, then it is unlikely that funds necessary to establish a separate Coastguard would be readily made available by Government. Nor would facilities and platforms appear quickly. It is probable, therefore, that were a Coastguard to be seriously considered, the RAN patrol boat force would form its nucleus with or without accompanying personnel as crewmembers. Alternatively, Defence might be instructed to take over complete control of coastal surveillance; this would probably require assumption of the responsibilities (and costs) borne now by the Department of Transport. If this did happen, it is most unlikely that Defence would gain appropriate budgetary compensation without protracted and bitter in-fighting. More likely, the costs would have to be borne solely by Defence, at least in the interim years, resulting in less money than we have now to meet Defence commitments outside coastal surveillance. Such a circumstance would leave Navy worse off than it is under present arrangements.*

## Role of PTF

Reference at this point to the functions and roles of RAN patrol boats in peacetime is probably worthwhile. If PTF are to be utilised effectively, what are they most suited for? My contention is that they do best what they do now; that is, patrol. It is perhaps significant that Coastal Surveillance is placed well up in the list of RAN Fleet objectives and is the primary role of FCPB. For this purpose these ships were designed and built, a factor which bears upon their somewhat limited weapons and sensors fit; indeed conversion to more aggressive capabilities would be neither simple nor easy. As a patrolling platform, the *FREEMANTLE* is fast yet sturdy, has sufficiently long legs to facilitate rapid



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response times, is seaworthy, safe, and modern. Until fitted with additional, expensive weapons and other equipment, the FCPB is a very limited platform for warlike operations and lacks the necessary command and control facilities to successfully integrate into major task units or groups. It may do well now in Fleet Support, firing simulated missiles under simulated conditions of war at sea, but its value under the parameters of shooting operations, without considerable upgrading of capabilities, is questionable to say the least. Use of the patrol boat force primarily for activities or operations not connected with coastal surveillance could therefore incur considerable added expenditure without any real offsetting benefit.

It is now time to see what the RAN gets for its surveillance dollar. As mentioned in the first part of this article, coastal surveillance is an essential national task. It could not be carried out with the existing degree of effectiveness unless Navy was involved, so it is certain that our first benefit is satisfaction in a job well done. Those concerned in this work also learn a great deal about many activities undertaken by a varied and wide ranging group of government employees outside Navy, bringing back to their naval occupations the rewards of such education. This can be of great importance in their careers when filling positions of higher responsibility. While some of the gains may be intangible, I believe, however, that the greatest is one of the most precious of all peacetime benefits: favourable public exposure.

### Public Relations

There is probably no other activity undertaken by Navy in peace which has more potential for good public relations than our present involvement in coastal surveillance. At a time of economic stringency within the community as a whole, Defence is never likely to much exceed its current share of government funds without general support among the public at large for its objectives. Day to day visibility creates opportunities for the RAN to keep its presence, its values, and its needs in the public eye, and the patrol boat force does all of this with good measure.

Those who have not experienced the community impact of a patrol boat visit to a small coastal town, overnight for fuel, may not be aware of the interest invariably shown by the townsfolk, and the attendant goodwill. For such people, coastal surveillance operations by the RAN may mean many things. In my experience, I have found that they see the Navy as security for their interests, financial or otherwise. A visiting patrol boat brings defence against illegal poaching of local fishing grounds upon which the economic viability of the town may depend, or

perhaps it is merely that a feeling of protection has been generated; just knowing that the Navy is about can be quite important to a small coastal community thousands of miles from a capital city. There is little doubt that such people identify with the patrol boat crew and see them as important persons doing a vital job. This sense of identification and awareness can be of great use to the Defence Force. For example, a significant level of media activity has been generated in north Queensland over the proposed withdrawal of RAN Tracker aircraft from service, with editorials and feature articles espousing the value of such assets to the surveillance cause, and advocating their continued Defence use. Public support such as this can be an invaluable aid to bring capital equipment acquisition programmes to successful fruition, there by furthering Defence interests.

Media awareness of the Defence Force is likewise enhanced by RAN surveillance activities, and PTF participation provides a vehicle through which the media can become familiar with Navy's achievements, learning of its needs at the same time. RAN involvement in coastal surveillance generates far more good publicity than bad and it can be argued that an educated media is the best means possible of getting Navy's message across to the population. Similarly, surveillance embraces cooperation with other government departments, combining to meet an important common objective, leading to a better understanding at the higher levels, of Defence needs. Such knowledge has the potential for Navy to better organise interdepartmental support for its programme and to dispel some of the myths which exist as to our needs and aspirations.

I have previously mentioned some manpower aspects of the patrol boat force, but it is worth repeating the training benefits it can bring to the RAN. The duties and responsibilities of FCPB in their daily operations create invaluable experience-gathering situations for their crews, particularly for senior sailors and junior officers who have demands placed upon them which might not necessarily apply in larger ships. It is true of course that naval personnel at sea are in fact always learning no matter what their ship, but the smaller communities in patrol boats lend themselves to a rather unique kind of training where personal involvement is often the order of the day.

### THE FUTURE

As I stated in the November 1983 edition of this journal, the patrol boat force is active, conspicuous, and effective. These facts gener-



ate the advantages to the RAN and the Australian Defence Force which have been described above but they do not in themselves mean that there is little more to be done. Greater aircraft participation is vitally needed to increase detection probabilities, and thought must be given to the future. Here one begins to delve into the fanciful, given current financial guidelines from government, but at least some of the following aids to surveillance should be considered in years to come. Over-the-horizon radar is almost a reality which could assist in target detection by supplementing airborne resources with shore based radar stations. These would also have a recognised Defence capability. Ocean surveillance sonar may need to be developed to enhance target identification, while satellite systems can provide perhaps the ultimate in the field. With satellites, however, costs are enormous, not the least being launching, and such an alternative would require extensive investigations by government over a number of years. In 1978, the approximate cost for a normal Cape Kennedy launch came to some fifty million US dollars and although the space shuttle might reduce this figure below expected inflation increases to the present time, it would take Australia at least to 1990 to arrange and build an appropriate surveillance satellite, by which time the price may well double. Future technology certainly holds attractions for the surveillance force but these will undoubtedly be expensive and slow to arrive, thus they are unlikely to prove a panacea for all our problems. As I see it, the present methods will be around for quite some time to come, foremost among them being the RAN patrol boat force.

Future patrol boats may merely emerge as improvements over the present *FREMANTLES* but innovation could also see different platforms. High speed military catamarans are already a reality and perhaps investigation into these may be worthwhile, particularly with a view to their potential for carrying a small surveillance helicopter. Combination of air and seaborne resources in a single platform is a challenging prospect to say the least, one which need not be prohibitively expensive given current Australian technology and capability.

### CONCLUSION

To summarise this two part article, I have tried to show that coastal surveillance is not a simple business, nor can it be carried out cheaply. It involves the efforts of many government departments and bureaus, combining together in cooperation with the COASTWATCH organisation to ensure adequate protection and coverage of Australia's enormous coastline. For the RAN,

surveillance means the commitment of a sizeable and significant part of scarce financial, manpower, and other resources to a task which can be as tedious and frustrating as it is important. Nobody can deny that such resources might be well spent elsewhere but it is my contention that their dedication to coastal surveillance is worthwhile. Among the most beneficial aspects that I note for the Navy is the degree to which our patrol boats, aircraft, and men are seen by the community to be participating in an essential national task, one which is vital to our country's continued prosperity. Coastal surveillance is complex, requiring probably more assets than now exist for all of its commitments to be fully met, and perhaps future platforms or systems will need to have a greater technological base than at present. It has been my experience that the current organisation works, getting the job done with minimum fuss and maximum effectiveness. Spectacular successes may be few but that is unimportant, for it is the routine and everyday activities which count most; in this respect, professionalism in the routine leads the way to success in the unusual and the banner headline about the latest fishing boat arrest actually has its background in the six weeks FCPB patrol periods mentioned earlier.

Surveillance commitments offer the RAN a chance to grasp a particular nettle of continued professionalism, combined with worthwhile training and adventure. Although a price must be paid for such participation, the community exposure and goodwill generated is immeasurable. For my part, these intangibles are of enormous value to the RAN at this stage in its history, perhaps leading the way to a resurgence of naval interest among the public at large. That may not happen, but coastal surveillance by RAN patrol boats at least keeps the image of Navy well to the fore around Australia's coastal waterways, and the crews concerned are sure of a welcome when they come ashore. Such warm relationships might not be everything that the RAN is seeking as it moves through the 1980s but they are not a bad platform upon which to build. Judged by past performances, the high regard in which the patrol boat force is held will continue for the foreseeable future, a state of affairs which has to be a major plus for the RAN in 1984.







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# IMPLICATIONS OF A SELF-RELIANT POLICY FOR AUSTRALIA'S MARITIME STRATEGY

By Lieutenant Commander R.J. Willis, RAN

The concept of self-reliance for the Australian Defence Force (ADF) is not new. The term first appeared in Australian defence literature after World War II, but did not become common parlance until the height of the Vietnam War in the late 1960s. Australian defence writers questioned the value of forward defence and began to look more closely at Australian regional interests and our capacity to defend the continent. The selfish attitude that a great and powerful ally would always come to our aid was debated and proponents of a self-reliant posture gained greater support to turn posture into policy. Self-reliance had provocative connotations, often being linked with the unpopular notions of isolationism, continental defence and Fortress Australia. The value of the ANZUS Treaty as a cornerstone of Australia's security was questioned, and defence planners came to the realization that such an alliance did not release Australia from its responsibility to provide for its own security. The 1976 Defence White Paper identified increased self-reliance as a primary requirement for Australia's security and defence policies.<sup>(1)</sup>

The Fraser Government did not pursue self-reliance to the extent that the 1976 White Paper intended. Mr Fraser himself appeared to pursue the globalist view, based on the assumption that Australia's security was dependent on a great and powerful ally. The Fraser Government took little account of the regionalist approach which assumes that:

'... the American alliance can no longer be related as closely to Australia's security as it was before the Vietnam War. It is based on the reasoning that ... our security priorities could diverge from those of the US and so it is prudent to develop a more self-reliant capability.'<sup>(2)</sup>

The recently elected Labor Government seems more firmly committed to a policy of self-reliance in accordance with its platform:

'Labor's defence policy is in essence to develop a more self-reliant strategic posture based on the principle of developing independent national defence capabilities to deter conventional attack on Australian territory.'<sup>(3)</sup>

The Labor Government has been quick to act since its election in seeking clarification of the provisions of the ANZUS Treaty and has sought better co-ordination of Australia's foreign and defence policies.

Regardless of the political nature of future Australian Governments, the self-reliant posture is likely to remain as an enduring concept in defence planning. Australia will probably never be able to achieve absolute self-reliance, so the likely enduring problem is to determine an appropriate level of self-reliance based on both the strategic outlook and budgetary constraints. The aim of this essay is to propose a maritime strategy for Australia based on a Government policy of self-reliance.

## The Author

Lieutenant-Commander Willis graduated from the Royal Australian Naval College in 1971. After a variety of sea postings, he specialized in hydrographic surveying in 1975 and served in HMAS MORESBY prior to studying for a degree in surveying at the University of NSW. LCDR Willis was Executive Officer of HMAS MORESBY from 1981 to 1983 and attended the RAN Staff College in 1983. His current posting is Staff Officer to the Hydrographer, Navy Office, Canberra.



## SELF-RELIANCE AS A POLICY

### Threat Perceptions

A refinement of the concept of self-reliance in defence is the consideration of two aspects: political self-reliance and defence industrial self-reliance. Each of these aspects will be considered in turn, but the political aspect cannot be fully explored without some mention of the perceived threat to Australia's security. The type, intensity and duration of the threat will dictate the ideal composition of the ADF.

Perceptions of the threat to Australia agree that invasion of Australia is a most unlikely contingency. Probably only the US and the USSR possess the capability to undertake such an invasion. To constitute a threat, an aggressor must possess not only the capability but also the intent, and it is unlikely that the US will develop any intent to invade Australia. The USSR is unlikely to invade Australia outside a general war situation without causing severe strategic consequences, against which it would have to weigh only limited benefits.<sup>(4)</sup>

The threats to Australia's security are usually classified as levels of consequence. A five level model is offered in this essay as it represents a non-Australian view. The five levels in order of escalation are:

- illegal acts against offshore oil, mineral or fishing resources
- attempts to sink or damage Australian shipping or shipping of Australia's trading partners
- seizure of remote portions of the Australian continent or island territories
- nuclear threat to US bases in Australia without direct threat to Australia
- overt threat to Australian national interests by the USSR, which may include any other threat levels.<sup>(5)</sup>

The general assessment perceived by most defence writers is that there is no foreseeable threat likely to arise over the next few years. However, the region is seen by some to be 'volatile and subject to change with little warning'.<sup>(6)</sup> This view was endorsed by the Joint Committee on Foreign Affairs and Defence when it concluded:

'Australia is more likely to suffer low level contingencies than the intermediate level threats . . . or an invasion. These low level threats could arise at short notice and could give rise to challenging problems. There is uncertainty regarding the extent and timing of allied support for several contingencies in the regional environment that may confront Australia. This calls for continuing emphasis on self-reliance by Australia and the possession of well-balanced defence forces.'<sup>(7)</sup>

### Political Self-Reliance

Political self-reliance stems from the recognition that the ANZUS Treaty no longer represents the same security blanket that it did when it was first signed in 1951. The Guam Doctrine of 1969 espoused by President Nixon, and the US withdrawal of forces from Vietnam in 1973 caused doubts to be expressed about the relevance of the ANZUS Treaty. The message from the US was that it would protect its allies against nuclear threats, but it expects its allies to bear a greater share of their own defence burdens.

The self-reliant policy recognizes that US military support may not be available for all levels of threat to Australia's security. But, the Treaty gives grounds for confidence that in the event of a major threat to Australia, US military support would be available. The Australian Labor Government sought to clarify its stance on the ANZUS Treaty through the Foreign Minister, Mr Hayden, at the annual ANZUS Council Meeting in Washington on 18 July 1983. The Council conducted the first review of the Treaty since it was signed in 1951. The Council agreed that although strategic circumstances had changed, the Treaty remained relevant and vitally important to the strategic interests of the signatories. The more forthright aspect of Mr Hayden's approach was evident in views he aired outside the conference room. In a press conference, Mr Hayden was reported to say in relation to a signatory of ANZUS being attacked, that there was no guarantee that the US response would automatically provide military forces. The US State Department rejected Mr Hayden's view and reaffirmed its commitment to ANZUS to provide military support if necessary.<sup>(8)</sup> Mr Hayden had the final word when addressing Parliament on 15 September:

'ANZUS is not a paper tiger but it is up to Australia first and foremost to look after itself.'<sup>(9)</sup>

### Defence Industry Self-Reliance

The other aspect of a self-reliant posture is the need for Australian industry to strive for self-sufficiency in production for the ADF. This aspect will dominate the level of self-reliance for the ADF. Ideally, Australia's industry should be capable of fully supporting the ADF if it is to achieve a high level of self-reliance in military operations.

For reasons of technological superiority and economy, the majority of capital equipment purchases for the ADF are made overseas. Australian industry cannot keep pace technologically with all requirements for the ADF. However, selectivity in areas of technological development



should be exercised to ensure that Australia maintains expertise in some fields. The economic argument is also open to question. Although the initial cost of equipment from overseas sources may be lower, manufacture of equipment in country should generate employment, increase local spending and conserve foreign exchange. In some cases, the nett cost to the taxpayer for local production of an item may compare favourably with the cost of overseas purchase of a similar item.

A major factor in retaining a base to expand Australian defence industry is the retention of skilled and efficient manpower. Some 3118 engineers graduated from Australian universities in 1975 whereas only 1850 were expected to graduate in 1983.<sup>(11)</sup> This apparent decline in production of skilled manpower may be a limiting factor in progress towards a self-reliant defence industry. Another manpower problem for industry may be the trade union movement. Traditionally militant waterfront and metal unions may disrupt production by strikes and withholding of labour, under the influence of an alien government.<sup>(12)</sup> A satisfactory agreement with the trade union movement will have to be negotiated by the Government to ensure worker co-operation in defence production.

Defence production will be the limiting aspect on the level of self-reliance for the ADF. This can not be achieved quickly but the initiative must be taken by the Government to ensure industry participation, research and development, education and training, union co-operation and other contributing factors, are identified and encouraged.

## DEFENCE PLANNING FOR SELF-RELIANCE

### Defence Expenditure

The development of any defence strategy for Australia must be considered within the constraint of financial resources. The cost of maintaining a viable defence force is high and all too often the defence vote is the initial target for Government to prune in order to fund some programme of greater political appeal. The view that no urgent threat is visible is used to justify cuts in defence. Of course, this view neglects the deterrent or peacetime function of a defence force:

'... it is much cheaper to prevent war, however expensive in peacetime, than to go to war.'<sup>(13)</sup>



HMS DUMBARTON CASTLE (see p 43)

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Self-reliance, to some, conjures up visions of increased defence spending to enable us to stand on our own feet. But, is an increase really likely to occur? The current ALP Government has already taken cost cutting measures in an attempt to reduce defence costs. The ADF is likely to experience great difficulty in maintaining current levels of defence spending in the face of increasing expenditures for health, education and social welfare.<sup>(14)</sup>

A commonly used measure of defence expenditure is percentage of Gross Domestic Product (GDP). In 1967-68, the height of the Vietnam conflict, Australia's defence outlay was 4.38 per cent, the highest since 1952-53. This percentage gradually decreased to about 2.6 per cent in 1973-74 and has remained almost static to 1982-83. A number of authors maintain that defence outlay should be kept at three per cent in order to provide an appropriate force structure. But, given that difficulty is likely to be experienced in maintaining even a 2.6 per cent level, a policy of self-reliance is unlikely to force a significant increase in the defence outlay. This implies that better value must be obtained from the present level of defence funding.

### Joint Operations

In previous conflicts, Australian single Services have joined forces with the equivalent Services of our allies. This historical joining of forces has tended to encourage separate development of the single Services which promoted an imbalance in the force structure. Logistic support within the ADF was neglected in the knowledge that it would be provided by our allies.<sup>(15)</sup>

Regional conflict involving single Service resources is unlikely to occur in the future. A key feature of self-reliance for the ADF will be the requirement for joint force operations and logistic support. The present emphasis on joint operations doctrine in the ADF, and joint exercises such as the Kangaroo series is going some way toward welding three single Services into a united ADF.

Logistic support for the ADF is a major factor for consideration in any regional conflict. The dependence on a major ally for supply and transport of equipment, fuel and ammunition has been too often highlighted by Australian defence writers. With the majority of Australia's population and industry in the south-east, supply and transport of defence assets and logistic support to theatres of conflict must be a major consideration for a self-reliant defence force.

## A MARITIME STRATEGY FOR SELF-RELIANCE

### A 3-D Approach

'If our Defence policy is to be effective, then we should be able to deter any potential enemy from mounting an assault against Australia or — failing deterrence — to develop — within the period of available warning — the capability to defeat any act of likely aggression. . .'<sup>(16)</sup>

This quote suggests the basis of a maritime strategy for a self-reliant ADF. The key words representing the 3-D approach are:

- deter,
- develop, and
- defeat.

Deterrence is the major peacetime strategy of any defence force. A potential aggressor must be aware of Australia's military capabilities to retaliate and to inflict losses which would be out of proportion to any gain. But, forces which are suitable as deterrents such as submarines and strike aircraft will not necessarily be suitable to combat lower level contingencies. Therefore, a sound balance of forces is required. This force-in-being approach must be relevant to the nature of a potential aggressor, and must be capable of maintaining a military advantage over that aggressor.

The second aspect of the 3-D approach is the possession of a capability to develop the existing force within the period of available warning. Because of this development approach, a core force concept is implied possibly contradicting the deterrence or force-in-being approach. This should not be so. A force-in-being should be backed up by reserve forces and an infrastructure to enable it to expand in time of conflict. In the Australian context, this essay prefers to see the development aspect in relation to industry. The possession of industries capable of equipping the defence force could act as a deterrent to any potential enemy.

Finally, in the 3-D approach, we must be able to defeat an aggressor. This capability flows from the other two 'Ds'. The force-in-being used as a deterrent and the capability of industry to supply and support the ADF, together with a demonstrated capacity to expand both the force-in-being and the industrial base, must give a distinct advantage to the possessor of such a strategy. Consequently, the 3-D approach is a sound basis for a peacetime maritime strategy. It also, like any sound military strategy, should be able to function equally well in wartime. But, if the peacetime strategy works, there will be no need to go to war.<sup>(17)</sup>



## Protection of Sea Lines of Communication

The nature of Australia's discovery, settlement and growth has made it highly dependent on keeping open vital lines of communication at sea. These lines of communication include coastal and international routes. These routes transit choke points on the coast such as Bass and Torres Straits, as well as international straits such as Lombok Strait and Jomard Passage. The establishment of the RAN, as an adjunct to the RN, was primarily for the protection of merchant shipping.

Australia is one of the world's largest trading nations and is heavily dependent on merchant shipping for conduct of this trade. Some 50 ports are involved in overseas trading, handling some 12,000 ships per year, over 95 per cent of which are foreign owned.<sup>(18)</sup> The capacity to effectively protect our shipping as well as that of our trading partners, must be the first priority in our maritime strategy. This capacity should be visible to our trading partners and owners of shipping carrying our trade, or there could be a loss of interest on the part of merchantmen to continue to come here.<sup>(19)</sup>

The run down state of Australia's defence industry; the absence of stockpiles of munitions and essential war commodities; and the dependence on overseas sources for some essential oil and mineral substances, all ensure that Australia will continue to be heavily dependent on imported goods in a wartime situation. Furthermore, the ability to export food, minerals and other natural resources to our allies in wartime will be a significant Australian contribution which will be dependent on merchant shipping.

The types of maritime assets likely to be required by Australia for protection of sea lines of communication are primarily self-contained escort forces which possess a capability for interoperability with a major ally. A self-contained escort force implies inclusion of a support ship capable of resupplying the force. The possession of organic air power for surveillance, air combat, maritime strike and anti-submarine warfare would be highly desirable, if not essential. Failing a capability for organic air power, shore-based cover is the next best option. But, distance is a problem for shore-based air cover at sea, so this is only a viable alternative for protection of coastal routes.

A suitable task group might then comprise four escorts, equipped with modern helicopters fitted for ASW, together with a replenishment capability. This is the minimum force that should be deployed to escort merchant shipping through hostile waters. Two such task groups should provide an adequate peacetime force. This is roughly in accordance with present force struc-

ture and level of defence spending, and provides a solid base of equipment and man power for expansion in wartime.

## The Sea-Denial Approach

There is a school of thought which says that Australia needs to maintain naval forces, only to deter and if necessary, defeat, an invader or trespasser. This is a sea-denial approach to maritime strategy. It is a reactive strategy but is thought by many to be suitable for Australia.

Australia is a large country free of common land borders with any other country. It is protected by large maritime frontiers on three sides and is still a long way from northern neighbours. A reasonable assessment might be that an invading force will come from the north and land in northern Australia. The sea-denial approach embodies maintenance of a force of offensive weapons readily deployable to northern waters; indeed it should be visible to potential aggressors.

The types of offensive weaponry would include submarines armed with anti-surface torpedoes and missiles; missile-firing fast patrol boats; a mining capability; and maritime patrol aircraft armed with air-to-surface missiles. This force and a strong surveillance capability using both the vessel mix and shore based sensors, together with good intelligence back-up would appear to be a capable force structure for a sea-denial approach to strategy. Such a force structure is a powerful deterrent, has an effective offensive capability, and might appear to some to offer naval defence on the cheap.

A sea-denial navy, however, has some significant shortcomings. Firstly, it has almost no defence against other sea-denial forces possessed by navies of regional powers. Countering of opposing sea-denial forces is a job for larger vessels capable of endurance and good sea-keeping, and equipped with sophisticated sensors, weapons systems and preferably, air power. A second disadvantage of a purely sea-denial approach is lack of sea training for officers and crews. Small ships are for young men. What happens to a naval officer in a sea-denial navy after he turns 35? He certainly will not have an all-round sea experience. Also, junior officers will be robbed of valuable sea time and training.<sup>(20)</sup>

Perhaps the greatest disadvantage of a sea-denial approach is the rationale for its employment by Australia. A significant aspect of sea-denial for potential aggressors against Australia is the distance barrier. Does Australia really need a large sea-denial force to cover this barrier? Probably not. What is needed is a suitable patrol and surveillance force, capable of





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carrying offensive weapons, backed up by larger ships capable of dealing with opposing sea-denial forces.

An additional myth of sea-denial forces is that of 'naval defence on the cheap'. Having discussed the 'deter' and 'defeat' aspects of the 3-D approach, the 'develop' aspect must be addressed. The cost of maintaining a sea-denial navy with sufficient strength to deter possible aggressors will still be expensive. Further, expansion in time of war will allow patrol boats and missile systems to be acquired at short notice. Unless a broad base of experienced manpower is maintained and trained in larger ships, manning of an expanded patrol boat force with experienced crews will be almost impossible.

### Appropriate Technology

Defence technology moves ahead at such a pace that only the superpowers are capable of remaining current. Advanced technology cannot be acquired without also acquiring the manufacturing and maintenance infrastructure. Australian industry is likely to be reluctant to keep pace with defence technology because of the ensuing short production runs. Consequently, the ADF should acquire equipment at an appropriate level of technology for Australian industry to participate in manufacture, and to wholly undertake lifetime maintenance support.

Self-reliance cannot mean technological self-sufficiency but Australian industry could be given a greater chance to participate in appropriate technology by obtaining reasonable production runs. This can be done by standardizing the inventory of vessel and equipment types. Such a policy also eases the logistic support burden.<sup>(21)</sup> A good example of standardization is the *FRE-MANTLE* Class Patrol Boats, fourteen of which are being constructed by a single manufacturer who will probably retain maintenance contracts for the class. A possibility for the future may be a replacement construction project for the destroyer escorts in the form of, say, eight smaller, well equipped offshore patrol vessels.

A further possibility for Australian technological development is the concentration on a project complementary to a major ally. That is, instead of concentrating on 'big pie' or high technology missiles and sensors, Australia should concentrate on what US interests regard as 'small pie'. Examples of such projects are the vertically-loaded gun and the guided gunnery projectile.<sup>(22)</sup> This concept has its roots in the *IKARA* project which was not only fitted to RAN ships but also was purchased by the RN. This complementary concept needs to be addressed by the Government in a supportive policy on Australian industry participation.

### The Mix and Match

Having examined the arguments for protection of merchant shipping and the sea-denial approach, a proposal must be made on the suitable mix and match of forces to support Australia's maritime strategy for a policy of self-reliance. It is worthwhile to recall the 3-D approach to maritime strategy: deter, develop and defeat.

As a deterrent force, capable of rapid development, it is unlikely that the recommended force will be vastly different in size to the existing force. But, to accord with resource constraints, standardization of equipment, and Australian industry participation, the structure of the force should be modified in two directions. Firstly, emphasis should be placed on the FFG class of ships to provide the mainstay of the naval force. Four of these ships have been acquired from the USA and two are projected for construction in Australia. A further two to four should be projected for construction in Australia as the DDGs are phased out of service.

The second major directional change should be the replacement of the DEs and some of the patrol boat force with a suitable class of offshore patrol vessel (OPV). A suitable design with which to start might be the *CASTLE* class of OPV in service in the RN. It is a high endurance vessel of 1450 tonnes carrying an automatic 76mm gun and fire control system, and capable of carrying a Sea-King helicopter. For RAN purposes, a smaller helicopter capable of delivering an air-to-surface missile might be preferable.

Supporting components of the force would be an enhanced mine warfare capability together with submarines, fast patrol boats, oceanographic and survey ships, and amphibious assets maintained at least at their present levels. Two replenishment ships should form an integral part of the force to support two task groups mentioned earlier. A substantial helicopter force must be acquired to enhance the effectiveness of the FFGs and OPVs.

Finally, the rationale for an aircraft-carrier needs to be addressed. It is unlikely that the Government will reconsider a carrier and indeed, after the Liberal Government procrastinated over a decision for so long, it is unlikely that such a Government, if elected, would reverse the carrier decision. That does not alter the fact that Australia is a maritime nation and maritime defence must be foremost in defence policy. The value of air cover in the Falklands provided further evidence to an already one-sided argument. To successfully protect shipping at sea and to be an effective deterrent force, the Navy needs organic air power.



## CONCLUSION

Self-reliance is an enduring determinant for Australian foreign and defence policy. Whilst the ANZUS agreement is likely to protect Australia from nuclear and other high level conventional conflict, the US requires its allies to bear the majority of the burden for their own defence. Australia's self-reliant policy stems from both the political aspect and the limiting aspect of Australian defence industry.

The major perception of threat to Australia is that low level contingencies may arise with little warning. This level of threat will have to be dealt with by Australia without assistance from the US. Consequently, the emphasis must be on a self-reliant, well-balanced defence force.

Increasing pressures on the social welfare aspects of Government expenditure are likely to take priority over the need for expansion of the ADF. The present annual level of spending of about 2.6 per cent of GPD is unlikely to increase. The ADF must look for ways to obtain better value for the defence vote such as inter Service co-operation through joint operations and joint logistic support.

Australian industry must be encouraged to take a greater share in defence equipment production. This will require time to develop a

manpower base and trade union agreements. Standardization of ADF equipments will encourage industry to set up research, manufacturing and maintenance facilities for long run production. Industry should be encouraged to undertake projects of an appropriate level of technology to support the ADF and to complement technologies of our allies.

Australia's maritime strategy should be based on a 3-D approach, that is: deter, develop and defeat. Adequate maritime assets must be visible to the mostly foreign owned merchant fleet to show that Australia's major interest lies in protecting its sea lines of communication and its ports. A standardized, balanced mix of forces must be maintained for interoperability with our allies, training of the uniformed manpower base, and establishing a comparative advantage over potential aggressors. To maintain the necessary balance, the RAN may have to examine foreclosing some of its options and developing some others. In summary, the 3-D approach to maritime strategy for self-reliance and the appropriate restructuring of the RAN proposed in this essay must go some way toward fulfilling the stated function of the Royal Australian Navy:

'The conduct of operations at sea for the defence of Australia and Australian interests.'<sup>(23)</sup>



IKARA

— Defence PR



## Acknowledgements

1. 'Australian Defence'. White Paper presented to Parliament by the Minister for Defence the Hon D.J. Killen. November 1976. p10.
2. Mediansky F.A. 'Australia's Security and the American Alliance'. Australian Outlook. V 37 No 1, April 1983. p22.
3. ALP Platform, Constitution and Rules as approved by the 35th National Conference. Canberra. 1982. p34.
4. Hamilton, R.N. 'The Strategic Basis for Defence Planning'. Journal of the RUSI of Australia. V 3 No 2, November 1980. p39.
5. Wagner, LCDR C.D., USN. 'Australia'. Proceedings of the US Naval Institute. March 1983. p86.
6. Mediansky. p23.
7. Parliamentary Joint Committee on Foreign Affairs and Defence. 'Threats to Australia's Security: Their Nature and Probability'. AGPS. Canberra. 1981. p54.
8. 'ANZUS Council Communique'. Australian Foreign Affairs Record. July 1983. p347.
9. Reported in Pacific Defence Reporter. October 1983. p9.
10. House of Representatives. Daily Hansard. 15 September 1983. p902.
11. Shann, Sir Keith. 'Regional Challenges for Australia in the Remainder of the Century and their Defence Implications'. Journal of the RUSI of Australia. V 4 No 1, April 1981. p25.
12. Millar, Dr T.B. 'Australia's National Objectives'. Lecture delivered to the Joint Service Staff College on 26 September 1978. para 38.
13. Robertson, CDRE J.A. 'The Fundamentals of Maritime Strategy'. Journal of the Australian Naval Institute. V 4 No 4, November 1978. p24.
14. Bateman, CAPT W.S.G. 'Does Australia have too much Defence?'. The YOLLA. Journal of the Australian JSSC Association. V 2 No 6 & 7, 1981-82. p13.
15. Sinclair, CDRE P.R. 'Strategic Basis for Defence Planning'. Journal of the RUSI of Australia. V 3 No 2, November 1980. p45.
16. Gray, CDRE (Rtd) K.D. 'Some Defence Concepts for Australia'. Journal of the RUSI of Australia. V 3 No 2, November 1980. p15.
17. Robertson. p22.
18. Australian Year Book, 1983
19. Robertson. p24.
20. Menon, Captain K.R., Indian Navy. 'The Sea-Denial Option for Smaller Navies'. Proceedings. March 1983. p122.
21. Synnot, Admiral Sir Anthony. 'Australia's Defence Force Structure Options for the Remainder of the Century'. Journal of the RUSI of Australia. V 3 No 2, November 1980. p29.
22. Gaul LCDR D.J. 'Let's Advance Australia'. Pacific Defence Reporter. October, 1983. p5.
23. JSP(AS) 1A. 'Joint Operations Doctrine'. Australian Joint Service Publication. p2-2.

## Bibliography

### 1. Books.

Babbage, Ross. 'Rethinking Australia's Defence'. University of Queensland Press, Brisbane, 1980.  
Till, Geoffrey. 'Maritime Strategy and the Nuclear Age'. MacMillan Press, London, 1982.

### 2. Government Publications

'Australian Defence'. White Paper presented to Parliament by the Minister for Defence, the Hon D.J. Killen. AGPS, Canberra, 1976.

Defence Report 1981-82. AGPS, Canberra, 1982.

'Joint Operations Doctrine'. Australian Joint Service Publications. JSP(AS) 1A.

'The ANZUS Alliance'. Report from the Joint Committee on Foreign Affairs and Defence. AGPS. Canberra, 1982.

'Threats to Australia's Security'. Report from the Joint Committee on Foreign Affairs and Defence. AGPS, Canberra, 1981.

### 3. Articles and Lectures.

Albinski H.S. 'Australia and US Strategy'. Current History. April 1982.

Bateman CAPT W.S.G. 'Does Australia have too much Defence?'. The YOLLA, Journal of the JSSC Association. 1981-82.

Journal of the RUSI of Australia. V 3 No 2, November 1980. The following articles:

Gray CDRE K.D. 'Some Defence Concepts for Australia'. Synnot ADML Sir Anthony. 'Australia's Defence Force Structure Options for the Remainder of the Century'. Sinclair CDRE P.R. 'Strategic Basis for Defence Planning'. Journal of the RUSI of Australia. V 4 No 1, April 1981. The following articles:

Henderson P.G.F. 'Regional Challenges for Australia in the Remainder of the Century'. Shann Sir Keith. 'Regional Challenges for Australia in the Remainder of the Century and their Defence Implications'. Kohli Admiral S.N. Indian Navy. 'The Concept of Maritime Strategy and its Evolution'. An address delivered to the USI, New Delhi, December 1979.

'Leeds Castle'. Maritime Defence. V 6 No 10, October 1981. Martin P.G. 'Offshore Patrol Vessels'. Defence Communications and Security Review. No 8213. 1982.

Mediansky F.A. 'Australia's Security and the American Alliance'. Australian Outlook. V 37 No 1, April 1983. Menon Captain K.R. Indian Navy. 'The Sea-Denial Option for Smaller Navies'. Proceedings. March 1983.

Millar Dr T.B. 'Australia's National Objectives'. Lecture delivered to the JSSC, 26 September 1978. O'Neill Dr R.J. 'Strategic Concepts and Force Structure'. Paper presented to a Conference on Australian Defence Policy for the 1980s held at the ANU, Canberra, 7 July 1981.

Robertson CDRE J.A. 'The Fundamentals of Maritime Strategy'. Journal of the ANI. V 4 No 4, November 1978. Smith Dr W.H. 'The Determinants of Defence Policy'. Paper presented to a conference on Armed Forces and Australian Society at RMC Duntroon, May 1977.

Wagner LCDR C.D. USN. 'Australia'. USNI Proceedings, March 1983.

### 4. Newspaper Articles.

The Australian. Defence Supplement. 29 July 1983. The Australian Financial Review. 'Defence 83'. 17 October 1983.







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# THE FLEET AND ITS CONTRIBUTION TO AUSTRALIAN SOCIETY

By Rear Admiral M.W. Hudson, RAN

Having been Fleet Commander during a period which saw major reductions to the naval order of battle, it may come as a surprise to some of you that I don't intend to talk about aircraft carriers or the Fleet Air Arm. Nor do I intend presenting you with a gloomy picture of fuel cuts, manpower losses or inadequate logistic support. The message I want to get across to you all is that the fleet is alive and well; and I quote from my Haul Down Report to CNS when I say:

'I am pleased to report that the Fleet continues to meet the demands placed upon it with cheerful enthusiasm and dedicated professionalism. Our personnel are taking a positive approach to the future and are fully aware that the need for a navy has not diminished.'

This is not to say that I am blind to our weaknesses, but this is neither the time nor the place to go into such detail.

I have selected for my topic 'the fleet and its contribution to Australian society'. I do so because the Navy is inextricably part of Australia's heritage and I believe it is timely that the public was reminded of this fact. It was the Navy which discovered, founded and protected the infant colony of New South Wales; and also provided the early governors who ensured that the separate colonies which became the Commonwealth of Australia developed along the right lines. Those men, and the officers and sailors of the ships who transported supplies to them, were the product of naval training and discipline. They were more frequently than not called on to exercise their skills, not in the heat of battle, but as administrators and providers of assistance to a civil community.

In Australia today, I put it to you that history is being repeated as the Fleet of the Royal Australian Navy carries on the traditions of service to the community just as the Royal Navy did so long ago. And I also suggest to you that it would not be inappropriate for this Institute, as the RAN's 75th anniversary approaches in 1986 and Australia's bicentenary in 1988, to take a more active role in telling the public the full extent to which our Navy contributes to Australian society. Therefore, in developing my theme I want to talk about the men and women of the Fleet Command, the range of activities in which they are engaged and the way in which they contribute to the stability of our society and the projection of our government's policies, both at home and abroad.

This is done in a wide variety of ways, many of which are intangible and defy definition but, nevertheless, support the rationale for a defence force. I also want to talk about the people of the Fleet because I am very proud of them, and to that extent this presentation is my tribute to them after 19 months as their commander.

#### The Author:

RADM M.W. Hudson RAN joined the RAN as a 13 year old cadet in 1947. In a varied career, he has commanded HMA Ships *VENDETTA*, *BRISBANE*, *STALWART* and *MELBOURNE*. He was FOCAF for approximately two years before taking up his present posting as Assistant Chief of Defence Force Staff in October 1983.



To set the scene, the Fleet consists of some 7000 men and women. Most of them are in ships deployed around the entire perimeter of our country or overseas. Others are in the major shore establishments of *Waterhen*, *Platypus* and *Albatross*, or our bases in Brisbane, Cairns, Darwin or *HMAS Stirling*. The average age of our ships' companies is 22, with the bulk of them being less than that and a number not yet 18. It is a young Command and they come from every walk of life and strata of society in Australia. Their reasons for joining are as diverse as their social backgrounds. They include the obvious desire for travel and adventure, for mateship, for a love of the sea, to get away from parents, or to please parents. They join for the glamour, for security, because of unemployment or the desire to learn a trade. They are bound together, however, by the common thread of service to their country. It is not within the Australian character to acknowledge that publicly; but it is true nevertheless, and it is complemented by the naval concept of 'all of one company' which provides the strengths of our ships and the Fleet as a whole.

Like any large community, within the Fleet there is a range of skills which embrace, not only the traditional naval warfare skills, but also includes doctors, dentists, lawyers, clergymen, policemen, greengrocers, hardware store and wholesale merchants. We have senior and junior managers, foremen, motor mechanics, carpenters, computer operators and systems analysts. We have clerks, storemen, air traffic controllers and airline pilots. More and more of our officers have tertiary training in engineering, the sciences and a range of arts. They major in oceanography, higher mathematics, physics, accountancy, history and philosophy. They have all the hopes and aspirations of their civilian counterparts, but on top of that we train into them a self discipline that manifests itself in loyalty, integrity and courage; an ability to work cheerfully for long hours under arduous conditions; and, most importantly, a willingness to work for the common good as part of a team.

Well, what is it that the Fleet does that justifies an annual wage packet of \$152,000,000 and a fuel bill of \$34,000,000 for the last financial year? As a starting point, let's look at the Fleet's formal tasks. These are:

- First and foremost, the maintenance of a level of defence preparedness to support deterrence, ie, preparation for war.
- Second, by our presence and display, to support diplomacy, encourage regional stability and promote broad Western interests.
- Third, surveillance, reconnaissance and patrol in our area of interest.

- Fourth, hydrography and oceanography in Australia's area of strategic interest.
- Fifth, sea transport support.
- Very importantly — assistance to the civil community and aid to the civil power.
- And finally — search and rescue.

### **Maintenance of Defence Preparedness**

I am satisfied that within the level of our capability the Fleet is well trained and ready to react to whatever task we may be given. Morale, overall, is very good; the young men joining the Fleet for the first time are enthusiastic, and our officers are providing sound leadership. The training for war embraces every aspect of naval warfare and is conducted not only in the major exercise areas, such as Jervis Bay, but around the perimeter of Australia, to give experience in different environmental conditions. It is going on somewhere, every day of the year, be it in the middle of the Tasman Sea, the balmy seas off Queensland, or the gale swept waters of Bass Strait.

In addition to our own exercises, we carry out a whole host of multi-national or bilateral exercises with our major and regional allies. In the last 18 months we have trained with the Americans, Canadians and New Zealanders. We have conducted bilateral exercises with the Indonesians, Singaporeans, Malaysians, the Royal Navy off Hong Kong, and the Japanese Navy in their home waters. We have had contact with the navies of the Philippines, South Korea, Papua New Guinea, Sri Lanka, Pakistan and France.

These exercises and contacts serve many purposes. At the planning level, they permit personnel on both sides to exchange ideas on a whole host of matters. They permit our ships' companies to hone their operational skills in widely different geographic areas. They serve our defence aid programme by permitting us to pass on our knowledge to less experienced navies. And most importantly, they serve our deterrent position by demonstrating that we do have well trained, well disciplined, efficient ships capable of engaging in operations should the need arise.

### **Presence and Display (Showing the Flag)**

This leads me on to that much maligned phrase 'showing the flag'. There is a tendency for it to be scorned by the knockers as another excuse for an overseas cruise with lots of cocktail parties. But, let me assure you, every overseas visit is very carefully planned and orchestrated on the basis of priorities established by the Departments of Foreign Affairs and Defence.





*HMAS ADELAIDE*

— J. Mortimer



*INS NILGIRI*

*Taken in 1977*



Governments for hundreds of years have recognised that the presence of a warship is a visible sign that the owner nation is taking an interest, in some way, in the host country. It is a way of projecting the national image and expressing goodwill. It is, of course, also part of exercising our influence overseas. My total experience over many years has shown that heads of Australian missions abroad place great emphasis on the importance of RAN ship visits. They use them to increase the status of Australia in the host country and within local diplomatic circles; and they use them to further their contacts in the political, military and trade spheres.

To support my case I would like to quote from a letter I received from our Ambassador to Japan earlier this year:

'It is particularly pleasing to me after a visit by such a large number of young men that the impression they have left behind is one of friendship towards their host country and excellent standards of behaviour, which have reflected creditably upon the Royal Australian Navy and Australia.

I would like you and all personnel embarked in the four Fleet units which visited Japan in April 1983 to know that they were first class representatives of their nation.'

If anyone has any doubt about the impact of a warship visit, you have only to look at the diplomatic uproar that follows a visit which turns sour because of some untoward incident. Fortunately such occasions are rare.

### Defence Co-operation

'Showing the flag' takes many forms and one is the government's active defence co-operation policy which manifests itself in such fleet activities as:

- assistance to the Solomon Islands with reef and harbour clearances;
- the transport of agricultural machinery and school buildings in New Britain; and
- the transport of aid materials to Tonga after that island was devastated by a cyclone in 1982.

The first activity, in the Solomons, is, in my view, a classic example of how we can help the newer nations in our region with a minimum of outlay. In this case a small landing craft, with a team of clearance divers and a load of mortar bombs spent several weeks blasting boat passages through the reefs offlying a number of small villages. At the same time, this team helped construct schoolhouses, repaired diesel engines, rendered first aid and played naval PR films to capacity audiences.

The practical result of that activity was to

facilitate trade between villages, thus contributing to the country's economy. That, of course, is important to the Solomons. But the importance to Australia is that our men were seen to be helping the locals in a way that could be readily understood; and this in turn leads to the development of goodwill and a confidence in our country.

### Aid to the Civil Community

Moving closer to home, the Fleet, because of its assets and skilled manpower, is called upon to provide a broad range of assistance to the civil community.

You will all be aware of the aid the fleet provided to Darwin after it was ravaged by Cyclone Tracy in 1974, but how many know of the bravery and skill shown by our divers as they cleared the wreckage of the Tasman Bridge, or removed logs which had jammed the water intakes of Lake Eucumbene in the Snowy Mountains, or provided assistance during the Victorian fires.

The provision of naval decompression facilities in Sydney and Stirling has saved the lives of many victims of diving accidents, and Fleet ships and aircraft have performed numerous medevacs both locally and in the south west Pacific. The removal of unexploded World War II mines in the Barrier Reef and the recent provision of fodder to stock as a result of floods in northern New South Wales are two widely differing examples of the aid which the Fleet is ready to provide.

We are also becoming more and more involved in coastguard type work such as search and rescue, and civil coastal surveillance (or give it another name — sovereignty protection). It is now automatic that the Coastwatch organisation in Canberra immediately informs Fleet Headquarters of any real or potential SAR incident around our coast; and frequently we will have a vessel in the area able to help. We have recently taken the initiative in sponsoring major SAR exercises and I am confident that the presence of naval units around the coastal area provides an element of security to the professional and recreational users of sea and air space. All of our patrol boats are now involved in civil coastal surveillance. That means the provision of customs, immigration, health and fishery patrols. In Bass Strait, our patrol boats and Tracker aircraft provide daily cover of the oil rigs.

These activities all contribute to the preservation of our national sovereignty; and just as importantly they serve to give confidence to the more remote communities around our coastline. It is now firm Fleet policy that every port and settlement, especially in those isolated areas of the north and north-west, should be visited on at least an annual basis.



## Oceanography and Hydrography

The four ships of the Marine Science Force are engaged in activities which impact closely on the activities of the civil maritime community and civil scientific organisations both in Australia and overseas. Data is also provided for both the fisheries and oil exploration industries.

In particular, *HMA SHIPS MORESBY* and *FLINDERS* carry out extensive surveys from which new charts are prepared and existing charts are corrected by the RAN's hydrographic office in Sydney. These charts are used by all mariners in Australian waters both naval and commercial, and significant numbers are used by yachtsmen and pleasure craft operators to ensure their safety in inshore waters. These charts and their associated navigational publications are on sale throughout Australia through a network of 70 chart agents, and in 1982/83 provided revenue to the Commonwealth of nearly \$700,000.

In 1982, *HMAS FLINDERS* was largely responsible for the discovery and precise surveying of a new and important passage through the Great Barrier Reef which will be of considerable economic benefit to ships trading from Queensland, in particular those taking coal from Hay Point to Japan, for which the new passage (named Hydrographer's Passage) will reduce the round trip by 520 miles.

Oceanographic data gathered in the new research ship *HMAS COOK* and by the much older vessel *HMAS KIMBLA* is of considerable value to civilian oceanographers, the majority of this data being freely available both to Australian and overseas scientists. This year several projects have been conducted for the Sydney Museum and local universities.

## Community Support

In all the foregoing, I have talked about the service provided to the Australian community by the RAN; however, there is also a significant contribution made by the men themselves. Their individual and collective generosity and interest results in a broad support of many charities and community aid projects. The list of such voluntary help is very long, but the effort of two ships will give you the picture.

*HMAS PERTH* has undertaken the renovation of the Dr Barnardo's home for orphans at Lindfield NSW, undertaking such tasks as painting, replacing guttering, providing recreational areas, landscaping gardens and other tasks required to improve the outward fabric and appearance of the home. Members of the ship's company have volunteered to help in the project and have worked at the home twice weekly in their own time. The task is expected to take six months to complete. This ship also provides

drivers, home repairs and visitors to the King Cross community aid organisation which cares for elderly citizens in the Kings Cross area.

*HMAS HOBART* supports Clarendon Children's Home and each year raises substantial funds for them. In each of the last two years, \$2000 has been provided in addition to working bees to repair the home.

I must stress that these examples are not unique. Every ship in the Fleet contributes to its own special charity, donating manpower and finance right across the spectrum of community aid.

## Conclusion

So, what emerges out of all of this?

It means that this country has available to it a body of disciplined men and women, loyal to the government of the day and trained in a variety of skills which can be applied in direct defence of the country in war, the protection of sovereignty in peace and aid to the civil community in a multitude of ways. This not only gives the government a range of options on which to call, but it also contributes to the confidence of our Australian community and is instrumental in developing goodwill with our regional neighbours.

Ladies and gentlemen, I am satisfied that the Fleet serves Australia well. I would like to finish by exercising some journalistic licence and quote Charles II in the preamble to the old Articles of War:

'It is upon the Navy, under the providence of God, that the safety, honour and welfare of this realm do chiefly depend.'



## ANSWERS TO QUICK QUIZ

1. India — 47,000; Indonesia 42,000, Japan 42,000 and Thailand 32,200.
2. Indonesia.
3. 8 at present, soon to be 12.
4. Indonesia.
5. Malaysia. All are acquiring more.
6. 5.
7. 15.
8. Singapore.
9. Australia. Figures for 1982 (in \$US) were Australia \$299, Japan \$87, New Zealand \$156, Malaysia \$151.
10. 2.6%.
11. Indonesia.
12. \$4,497m.
13. Pakistan.
14. India.
15. Malaysia.



# WAR AND MORALITY

By M. Head

The question of the morality of war has been frequently raised in the media over recent years, and has appeared also in this journal. (Vol 9 Number 2, P 6) How should a naval officer approach this topic, or should he leave decisions to others? All he has to do, some might say, is to obey orders.

There are two considerations which, I think, urge a naval officer to be well informed on issues of morality and war. First, the naval officer is the principal public relations officer of the Navy and should be able to present a reasoned and reasonable reply to the anti-war and unilateral disarmament case. It is true that some members of the anti-war movement are so ideologically committed that the matter is beyond discussion and some are plainly pro-Soviet, but the majority, I think, are still open to having their ideas challenged. Secondly, the Nuremberg war trials, by denying the plea of superiors' orders, sheeted home the responsibility for individual acts to the man who actually carried them out. Every officer is legally and morally responsible for his own actions.

## 'Just' Wars

Regarding the 'morality' of war, the 'Just' war theories have their origin, in the Christian era, in the writings of Augustine. For Augustine, the main consideration was the preservation of public order within the Roman Empire. In a world 'corrupted by sin', force was a legitimate means for public authority to avenge an evil or to maintain order. (Strangely, he was very dubious about the right to kill in self-defence.) With the sudden break up of the Roman Empire in the West, Augustine's ideas were transferred to cover interstate warfare and developed into the full theory of 'Just' war by the high Middle Ages.

Thomas Aquinas refined the Augustinian ideas on a 'Just' war and named three main conditions which had to be fulfilled:

- The cause must be just
- The war must be undertaken by a legitimate authority
- The intention must be right.

These conditions were expanded a good deal to include a large set of principles among which, were: last resort, need for a declaration of war, reasonable hope of success, good hoped to be achieved, immunity of non-combatants from direct attack, and the proportionality of tactics and means to the end in view. On the surface, we would agree with these principles today; but working them out in practice is still difficult.

For Christians, warfare has remained a serious moral problem and can be justified only in terms of the common good. 'The purpose of the just war theory, therefore, was not to rationalize violence but to limit its scope and methods.' The purpose of the 'Just' war theory, therefore, has a lot in common with the purpose of modern international law. The practical effectiveness of the 'Just' war theory began to fall apart at the end of the Middle Ages when the rise of the nation-states and the Reformation fragmented the unity of Christendom and undermined the moral authority of the Catholic Church in the eyes of the kings of Europe. In practice, it became possible to justify any cause in terms of the 'Just' war theory, and the theologians had to admit that participants on both sides of a particular conflict could be in 'good conscience'. In spite of the difficulty of coming to objective judgements about the morality of a particular conflict, the 'Just' war theory did continue to provide some basis for a code of international behaviour.



## The United Nations

In the wake of World War II, the United Nations Charter tried to outlaw war altogether, except in those cases authorized by the UN or in self defence under Article 51. It is fairly obvious that the UN has failed in its attempts to stop war (there have been some 130 or more since 1945) but it has affected the public front given to a war, and has also affected the meaning of words and language.

Since 1945, most wars have been justified under the heading of one or other of the UN's exception clauses so that, as with the old 'Just' war theory, it is virtually possible to justify any conflict. A second method used is to deny that the war exists as a conflict between states and say instead that it is purely 'an internal struggle' between various factions of the country. These two trends have nothing to do with the morality or even with an objective scale of legitimacy, but are dictated by purely practical concerns — that is to say by propaganda. In western countries, we have free speech to a certain degree, and it is a value we want to retain. However, it also makes western countries vulnerable to misinformation in a political crisis, since it forces governments to publicise and justify their actions. The larger the involvement and the longer the conflict, the greater scope for the government to justify its actions. Statements such as 'the United States lost the Vietnam War in the pages of the Washington Post' do contain a germ of truth. Totalitarian governments, too, have to justify their actions to their people as there are many things (large-scale military operations, for example, and large casualty lists) that cannot be hidden.

The need to justify actions in terms of the UN charter has led to change in the use of words such as 'aggression', 'arms race', 'peace', etc. The Nazis hid the massacre of a people in the interests of genetic purity under the title 'the final solution to the Jewish problem'. We are all familiar with George Orwell's 'Newspeak' from his novel, 1984. Newspeak has been with us for a generation. A guide to political terms published in Moscow in 1982, describes 'aggression' as war carried out by imperialist powers. The examples given are the United States' war against the Vietnamese people and the Israeli actions against the Arab states. 'Peace' is the establishment of the socialist revolutionary state. (Therefore, the Soviet intervention in Afghanistan is not aggression, but a struggle for peace.) I am sure you could all think of other examples from all sides of the political spectrum of this abuse of language to justify particular actions.

Is the United Nations Organization, therefore, a failure in its search for a code of legitimacy for

war? Certainly not! It has taken over from the old 'Just' war theorists in its efforts to minimize the ill-effects of war by means of international agreements, peace-keeping forces and neutral zones. More importantly, it has helped to prevent minor wars escalating into major ones by providing a 'face-saving' way for nations to back down and by providing a forum which enables each side in a dispute to keep talking to the other though they might be at war. However, the proceedings of the UN General Assembly give no indication that the members are interested in questions of morality or even legitimacy, except in so far as to legitimize their own point of view. On important issues of east-west relations, most countries vote along party lines. Morality and legality do not necessarily have much in common, and majority votes do not determine the rightness or wrongness of any question, especially a moral question.

## International Law

Parallel with and closely related to the work of the United Nations is the large body of international law and agreements built up over the last hundred years or so. The operation of this customary international law is presided over by the International Court of Justice but, as with the UN, the court's rulings are acted on only when it suits both parties. In the land-mark Corfu Channel case, Britain was awarded damages of £843,947 precisely. Not a penny was ever paid. To the sceptic, it seems that breaches of international law, like the crime of treason, are only enforceable against losers. However, the international agreements and the opinions of the International Court still provide a guide for action in this rather confused world. They have to be taken into account when a particular country tries to justify its actions before the world community.

## The Morality of War

It is possible to come to a conclusion about the morality of warfare as such, or about a particular war? If you are a pacifist, there is no problem: all war is wrong. If you are not a pacifist, then you hold that some wars are permissible. That is, the evil done by fighting the war is less than the evil that would occur if the war were not fought. Presumably, most officers of an Armed Service are in the second category. In a world of totalitarian governments, the Final Solution, Idi Amin, the massacres of Pol Pot, it is certainly a reasonable position to hold. The problem comes when applying it to a particular conflict at a particular time. Is it possible to say that war A is justified and moral, and war B is not? It is my belief that in the complex situations of our times, it is not usually possible. Competent



moralists of good will are still divided over a war such as the Vietnam war. The average naval officer, in considering whether a particular war is moral or immoral, has to presume it is, and has to rely on the good sense and good will of his own government.

Is it, therefore, possible for an officer to avoid facing moral questions about war, by simply saying 'It's not my decision; I just do what I am told'? Obviously not, from what has gone before. The naval officer should be able to justify the possibility of a 'Just' war in general terms for his own peace of mind and for the public standing of the Navy. Secondly, he may, in a war situation, be faced with making a decision about the morality of a particular act.

On what grounds does someone come to a conclusion about a moral question in the context of war? There are the international agreements and laws. But basically, there are no hard and fast rules and, indeed, in the heat of battle, there may be very little time for thought. Particular contexts will vary so much that all that can be suggested are a number of values which should be considered at the time:

- The sacredness of all human life
- The utter gravity of taking another human life
- The inherent moral limits on every use of force

There may be other values you would like to add to these three, but I think these are the most critical.

There are considerable difficulties in applying these criteria to concrete situations, as there are difficulties in all levels of moral decision making. The situation of modern war and modern science simply complicates the position a little further. But it also raises the further difficult question of how a modern Service should react in the matter of an order refused on the grounds of inherent immorality. To take a simple example. Captain X, a submarine commander, is ordered to sink a ship in position Y at a particular time. When he arrives, he finds that the ship is a hospital ship. He questions the order and is again ordered to sink the ship. He refuses. A court-martial is held. I do not know if guidelines or standing orders for courts-martial contain any guidelines for such a situation. Who is at fault? The captain of the submarine or the commander who reissued the order? To complicate the situation a little more. At Captain X's court-martial, it is revealed that the hospital ship was actually an important transport in disguise and that the area commander knew this but did not pass it on. What is the position of the modern Service in this type of situation? Of course, senior officers issuing orders in the heat of conflict must expect that they will be obeyed without question. A Service could not be run any other way.

The three values listed above, embody the basic values of human life and civilization. I know of no government in history which has gained power by means involving the rejection of these values, that has used its power benevolently. The object of stating these values is the same as the old 'Just' war theories, and the UN declarations — that is to say, to try to minimise the evil of war.

There may be times when war is a necessary evil, but by keeping in mind the great value of human life we reduce the risk of being worse off after a war than we would have been if it had never been fought. Let us hope we are never placed in a position where we have to make such choices.



## ADDITIONS TO THE LIBRARY

1. Non Technical Briefs — R.L. Baron (Sperry Corp.) 1983  
— Donated by CMDR G.P. Martin, RAN
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6. A Nest of Corsairs — Seton Dearden, John Murray 1976  
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7. Bay Steamers and Coastal Ferries — Jack Loney, Reed 1982
8. Australian Coastal Shipping — Barry Pemberton, Melbourne University Press 1979
9. Australian Shipwrecks — Charles Bateson, Reed 1972
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# THE ROAD BEYOND MONTEGO BAY — A COMMENT

by A. Bergin

Given the significance of Australia's ocean interests, Captain Bateman's recent paper on the 1982 Law of the Sea Convention was indeed timely. <sup>1</sup> Australia was an important player in the negotiations leading to the adoption of the 1982 Montego Bay Convention and fared extremely well in obtaining those objectives it laid down prior to the commencement of the Law of the Sea Conference. <sup>2</sup> I would like to comment on a few of the issues raised in Captain Bateman's recent article: first, the navigational implications of the LOS treaty; second, the issue of seabed mining; and third, questions arising out of the Convention that must be addressed by Australia in the near future.

## Navigation

I would like to agree with the broad thrust of Captain Bateman's comments on the navigational articles in the Convention — that is, despite the fact that it puts 40 per cent of ocean space under the management of coastal states, the outcome of the Convention was very favourable as far as naval mobility is concerned. The most important features of the Convention here are

- a maximum width of the territorial sea of 12 miles with a right of innocent passage (as Bateman points out, the definition of innocent passage in the 1982 LOS Convention is of greater clarity than that contained in the 1958 Convention)
- a suitable provision of transit passage through international straits
- provisions providing for an exclusive 200-mile economic zone where all states enjoy the high seas' freedoms relevant to navigation and overflight
- new concepts of 'archipelagic state', 'archipelagic waters', and 'archipelagic sea lanes passage' which 'should ensure the freedom of mobility of Australian naval and air forces through and over the archipelagos in our region'. <sup>3</sup>

While all the major legal rights that affect the operations of the world's navies are incorporated in the Montego Bay Convention, Captain Bate-

man's paper may perhaps leave some with a belief that naval strategists will not face too many problems with regard to the effects of the Convention on naval planning. I would argue that this would be misleading for three reasons. First, the expansion of national jurisdiction in the oceans that is permitted with the introduction of 200-mile zones means that coastal states will feel very protective about preserving their piece of ocean space. There will be tensions, perhaps spilling over into actual conflict, as coastal states, particularly third world coastal states, try and come to some form of working relationship with the world's naval powers. As Commander Neutze, Judge Advocate General's Corps, US Navy, has pointed out 'it is unrealistic to believe that all states will roll back their excessive maritime claims. Undoubtedly, many will attempt to exploit what are frequently described as the "creative ambiguities" of the treaty. Alternatively, many states may exploit some loophole or argue that their claim is a special exception not covered by the treaty'. <sup>4</sup>

Second, the US has refused to sign the LOS Convention because of its opposition to the seabed mining provisions of the Convention. It has, however, argued that the navigational articles are part of customary international law. As Captain Bateman notes, this argument will not be accepted by many states. <sup>5</sup> The developing countries and the Soviet Union argue that the Convention is a carefully negotiated package and that one cannot claim rights of third parties by reference to provisions of the Convention unless the state was itself a party to the Convention. Similarly, and this is the important point, the developing countries argue that states who became parties to the Convention are under no obligation to apply its provisions to states that are not parties.

Third, naval planners will have to recognise that with the acceptance of 200-mile zones, the movement of warships across these zones will often carry great political significance. Naval diplomacy may, therefore, increase in importance with unforeseeable risks.



## Seabed Mining

The LOS Convention places the wealth of the ocean floor, 42 percent of the earth's surface, under the management of a new UN agency — the International Seabed Authority. Based on rather dogmatic free-enterprise beliefs, the Reagan Administration has refused to sign the LOS Convention because it sees the seabed mining provisions as not meeting US objectives.<sup>6</sup> Captain Bateman summarises the US objections to the seabed mining provisions but it should be noted that the US succeeded in getting extremely detailed financial and administrative details included in the Convention, and at the last session of the conference the Group of 77 accepted several modifications which met US objectives.<sup>7</sup>

Captain Bateman rightly observes that seabed mining is unlikely to be commercially attractive for the time being and quotes one mining expert as predicting that seabed mining is unlikely to be placed on a healthy commercial basis for another 20 to 30 years.<sup>8</sup> What should also be stressed within this context, however, is that the value of the common heritage of mankind, particularly manganese nodules, has been affected by other developments. First, as Elisabeth Mann Borgese has noted: 'the discoveries of sulphide deposits offshore the Galapagos Islands and off the West Coast of the United States, with metal contents in concentrations far superior to those of the manganese nodules, have defused interest in the manganese nodules which are the only type of resources covered by the text, and thus the Convention is already obsolete in this respect.'<sup>9</sup> Second, rich nodule deposits have already been found within the 200-mile zones of Chile and Mexico, France has nodules in Polynesian waters and there are commercially exploitable nodules offshore from Hawaii.

Captain Bateman points to the fact that six nations have already enacted legislation on seabed mining and others are in the process of legislating. If no LOS treaty enters into force, deep seabed mining would be a high-seas freedom, but any move to exploit these resources would create very grave political problems. (The developing countries regard the notion of the 'common heritage of mankind' as part of customary international law.) What appears more likely than no LOS treaty is a situation where a number of the deep-seabed mining states will not join in the Convention and proceed with deep sea mining under a mini-treaty. It is not too difficult to imagine the problems, both practical and political, that would flow from two competing regimes for nodule mining.

## Australia and the Los Convention

I would agree with Captain Bateman that 'ratification of the Convention by Australia would best serve our defence and maritime interests'.<sup>10</sup> (In terms of the extension of coastal state jurisdiction permitted under the Convention, Australia was one of the big winners from the law of the sea negotiations.) There are, however, a number of policy questions that arise from Australia's signature of the Convention and these issues deserve attention very quickly. The following issues seem to me of greatest importance:

- Should Australia declare a 200-mile EEZ and if so when? (Australia has a 200-mile fishing zone.)
- When and how should Australia move to redefine the outer edge of our continental shelf?<sup>11</sup>
- How best can Australia meet its obligations with respect to fisheries management as required under the Convention?
- Should Australia declare a 12 mile territorial sea? (Australia is one of only 22 states that claim a 3 nm territorial sea.) How will such a move affect state-federal management?

As Australia has a diverse range of ocean interests, the LOS Convention will be of great significance to Australian ocean policy-makers. We will need to watch carefully to ensure that Australian practice conforms to the provisions of the Convention. Captain Bateman's article will have served a very useful purpose if it prompts policy-makers to review existing ocean programmes to see whether they are influenced by the Convention and how future programmes may be affected by the impact of a widely accepted Law of the Sea Convention.

## NOTES

1. WSG Bateman 'The Road Beyond Montego Bay: Progress with the 1982 UN Convention on the Law of the Sea', *Journal of the Australian Naval Institute*, Vol 9 No 4 (November 1983) pp 53-58.
2. See Anthony Bergin 'Australia and UNCLOS III', *Australian Journal of Politics and History* (forthcoming).
3. Bateman *op cit*, p 56.
4. Dennis R Neutze 'Whose Law of Whose Sea?' *US Naval Institute Proceedings* (January 1983), p48.
5. Bateman *op cit*, p57.
6. *loc cit*.
7. See Keith Brennan 'The History of the Third United Nations Conference on the Law of the Sea', Paper delivered at the eighth RAN Legal Conference 19-20 January 1983, p 27.
8. Bateman *op cit*, p 57. See also A.A Archer 'Marine Mineral Resources Effect of the Law of the Sea Convention', *Resources Policy* Vol 9, No 1 (March 1983), pp 23-32.
9. Elisabeth Mann Borgese 'Law of the Sea: the next phase', *Third World Quarterly* Vol 4, No 4 (October 1982), p 711.
10. Bateman *op cit*, p 58.
11. See J R V Prescott 'An Agenda of Political Maritime Issues for Australia' in WSG Bateman and Marion Ward (eds) *Australia's Maritime Horizons in the 1980s* (ACMS, Canberra, 1982) p 53.



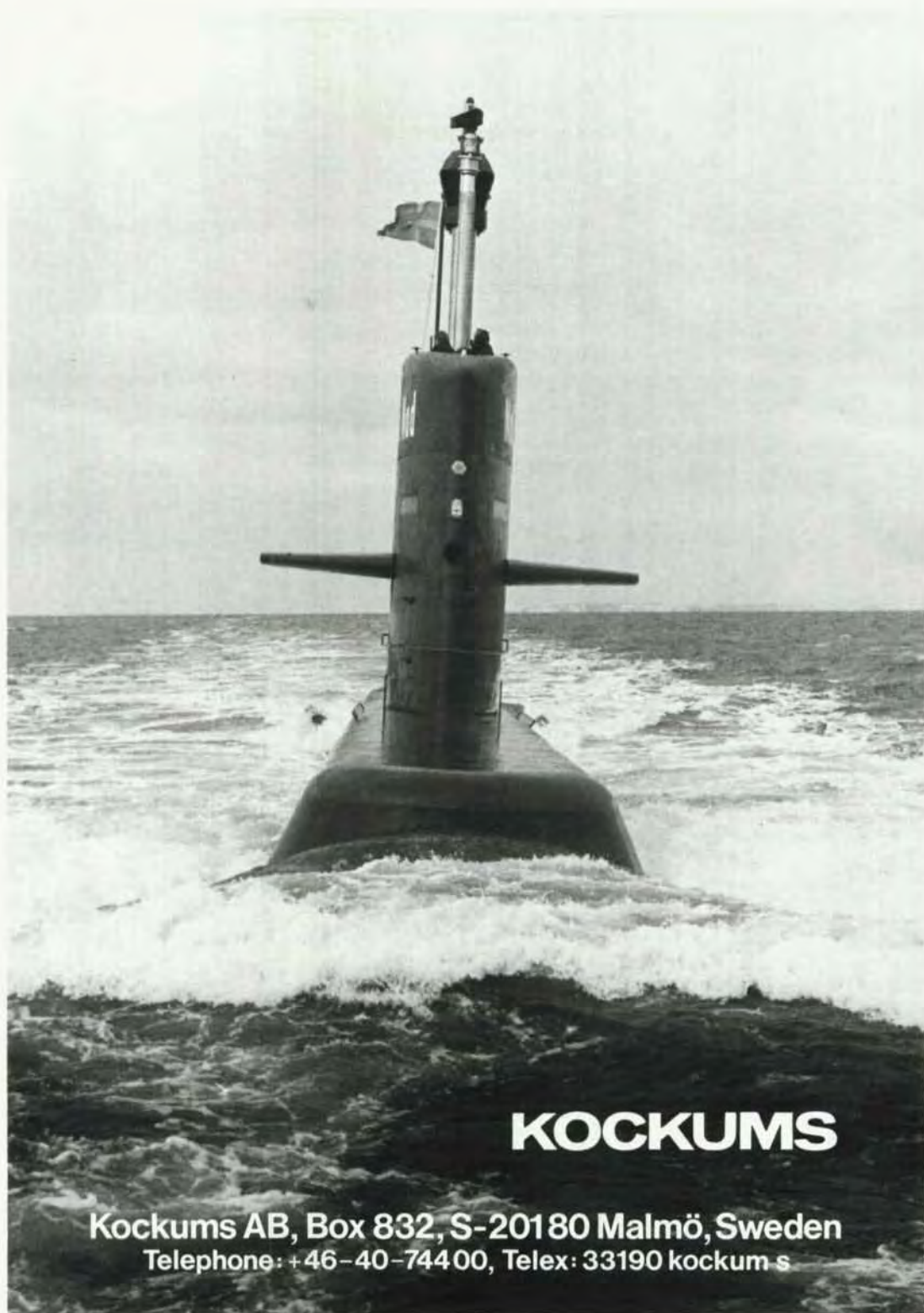


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## WASHINGTON NOTES

*by Tom Friedmann*

On October 23, 1983, the largest non-nuclear blast ever investigated by the United States Federal Bureau of Investigation destroyed the Marine Battalion Landing Team headquarters of the United States component of the Multinational Forces in Lebanon (USMNF) at the Beirut International Airport. Even as the earliest dispatches on the disaster reached this country, it became obvious that the death of 245 Marines and sailors had to be at least partially the result of failures within the American military establishment as well as the civilian directors of our military and diplomatic policy.

When the Pentagon appointed the inevitable investigation committee, however, few expected as forthright, and in many aspects damning, a document as has been presented by the so-called Long Commission. The ramifications from what has been called the most important public document published since the Pentagon Papers have already started a wide ranging review of American diplomatic and military policy by the President and Congress.

The Long Commission consisted of many distinguished serving and retired military officers and a civilian well versed in defense matters. The members were Adm Robert L. J. Long, USN (Ret), a former Vice Chief of Naval Operations, Chairman; Robert J. Murray, a faculty member at Harvard University and a former Under Secretary of the Navy and former Deputy Assistant Secretary of Defense (International Security Affairs); Lt Gen Joseph T. Palastra, Jr, USA, currently deputy commander in chief and chief of staff, United States Pacific Command; Lt Gen Lawrence F. Snowden, USMC (Ret), former chief of staff, headquarters, US Marine Corps; and Lt Gen Eugene F. Tighe, Jr, USAF (Ret), former director of the Defense Intelligence Agency.

Naturally, Congress felt it necessary to set up parallel investigation, but when the House Armed Services Committee report was issued in December, it did not attract the same media attention, despite conclusions that were very similar to those of the Long Commission. This was because the Long Commission finding came from a panel established by the Department of Defense and was also due to the way the White House handled the issuance of the report. President Reagan had the Long Commission report for five days before releasing it to the general public. Obviously, the President and his advisors had to digest its very unflattering conclusions. The means the President chose to diffuse the issues raised by the report was to summon an early morning press conference on December 27, 1983 to accept full responsibility for the losses in Beirut:

'The (Long Commission) report draws a conclusion that the United States and its military institutions are by tradition and training inadequately equipped to deal with the fundamentally new phenomenon of state-supported terrorism. I wholeheartedly agree. The local commanders on the ground, men who have already suffered quite enough, should not be punished for not fully comprehending the nature of today's terrorist threat. If there is to be blame, it properly rests here in this office and with this President. And I accept responsibility for the bad as well as the good.'

President Reagan left for a vacation in California the next day and therefore was unavailable for comment when the report was released later that same morning, and then only a very few copies were released.

'That kind of pre-emption of the conclusions of any military court-martial investigation is serious interference in the chain of command. It says, in



effect, the death of those Marines was not in vain just because Mr Reagan says so' observed *The Kansas City Star*.

*The New York Times* called the President's statement a 'stylish response' but one with some merit as long as lessons were learned. Nevertheless, *The Times* continued, it detracted from the main issue of whether the Marines should be kept in Beirut even now that their illusive role as 'peacekeepers' has evaporated. Fortunately, the President's remarks, which seemed to this and other observers to absolve all officers involved from any disciplinary proceedings, was 'clarified' by the White House as only ruling out court-martial. It seems that there might still be banishings to Greenland and the Canal Zone.

The dignified and professional response of the military to the Commission's findings has reflected great credit on the armed services. Published reports have shown the great reluctance many in the military establishment felt about the Marine deployment to Lebanon, which was seen as a 'mission impossible'. A former member of the Joint Chiefs of Staff found the President's actions 'very, very unfortunate' since it could prevent the system from correcting itself, a 'blow to military professionalism'. These sentiments have gone far to keep the renewed respect the American public has recently exhibited in the military while concentrating public concern on the policies of President Reagan and the Congress.

In its report, the Commission said that the USMNF was originally perceived to be that of a neutral peacekeeping force sent in to help stabilize the Lebanese Government and to assist, ultimately, in speeding the withdrawal of all foreign troops from Lebanon. The Commission found that the environment the USMNF was deployed into 'while not necessarily benign, was, for the most part, not hostile'. The security of the USMNF depended on just such an environment as well as the necessity of having the Lebanese Armed Forces provide security in the areas in which the force was to operate during a mission of limited duration with a small force which was to be evacuated in the event of attack. In reality, the Lebanese Armed Forces proved incapable of providing necessary security. This should not have been suprising to any knowledgeable observer before the Marines landed.

The Commission said that Syria and Iran, nations hostile to the United States, found it in their national interest to sponsor attacks on the USMNF. All diplomatic efforts to settle the many questions presented by the fighting in Lebanon ground to a halt. These factors, and particularly the actions of the USMNF and United States naval vessels offshore in active support of the

Lebanese Armed Forces in their internal conflict with other Lebanese groups, served to invalidate the basic conditions upon which our intervention was based.

The USMNF laboured under disadvantages of having two distinct sets of rules of engagement. One set, in use around Beirut International Airport, more closely fit the originally contemplated role of the USMNF and its emphasis on self-protection and caution to preserve civilian lives and property. Sentries manned their posts with no ammunition in their guns under these rules. In contrast, a far stricter set, particularly in regard to the treatment of aggressive pedestrian and vehicular traffic was in effect while the USMNF was protecting the United States Embassy, which had itself been relocated after its chancellery had been destroyed by a bomb last April. That bombing, if nothing else, should have alerted the civilian and military leadership of the United States that the USMNF would be a primary target for any one of the many fanatical groups operating in Lebanon.

The Commission found that, although 'intelligence was provided at all levels that presented a great deal of information on the threat, there was no specific intelligence on the where, how and when of the October 23, 1983 bombing'. Put another way, the Marines were drowned in a sea of useless information.

The Commission said that on-the-scene medical care, which had been criticized due to rejected offers of Israeli assistance, was professional and 'indeed, heroic'. Offers of assistance from the Royal Air Force were taken up immediately and those from France and Israel were subsequently deemed unnecessary. The Commission found no evidence to indicate any deaths were caused because of inadequate or inappropriate care during the evacuation to hospitals.

More suprisingly, the Commission discovered that most of the improvements in security measures that were planned for implementation after the October 23 attack had not been made by late November and those steps that had been taken or were planned were, indeed, still inadequate to prevent 'continuing significant attrition of USMNF personnel'.

Three points made by the Commission stand out of this massive report. First, the Commission concluded that the operational chain of command of the United States Commander-in-Chief, Europe, was at fault for not initiating actions to insure the security of USMNF in light of the deteriorating political/military situation in Lebanon, and recommended that the Secretary of Defense take whatever administrative or disciplinary actions he deemed appropriate. The Commission stated that it:



... holds the view that military commanders are responsible for the performance of their subordinates. The Commander can delegate some or all of his authority to his subordinates, but he could not delegate his responsibility for the performance of the forces he commands. In that sense, the responsibility of military command is absolute.'

The responsibility, the Commission found, stretched from Gen Bernard W. Rogers, Commander, US Forces, Europe, down to and including Lt Col Howard L. Gerlach, Marine Battalion Commander.

Second, the Commission found that the change in the environment in which the Marines have been placed in Lebanon has been so great as to render them constantly at risk. The Commission recommended to the Secretary of Defense to continue to urge the National Council to undertake a re-examination of alternative means of achieving US objectives in Lebanon as well as a more vigorous and demanding approach to pursuing diplomatic alternatives. This recommendation has attracted particular attention since a military commission criticized civilian control of diplomatic and military policy.

Third, the Commission found that 'the systematic, carefully orchestrated terrorism which we see in the Middle East represents a new dimension in warfare'. To combat that type of warfare 'requires an active policy', as a reactive policy 'only forfeits the initiative to the terrorist'. Terrorism, in other words, has become a form of warfare 'on the cheap' which allows small countries to attack United States interests in a manner which, 'if done openly, would constitute acts of war and justify a direct military response'.

Of all parts of the Commission's report, it is this conclusion that the United States is unprepared to fight terrorists that has virtually dumbfounded many observers. After all, the British have been fighting the Irish Republican Army in Northern Ireland for years and the French have

recently encountered terrorism in Corsica on the streets of Paris. As previously mentioned, our own embassy in Beirut was destroyed by a similar terrorist attack last April.

Military leaders in the United States are frequently accused of being prepared to fight the last war. Certainly, it is not too much to ask that our national security experts understand the nature of modern, undeclared terrorist warfare. As *The Wall Street Journal* commented, 'if our military leaders don't know these things and aren't training officers and troops to fight this kind of war, what exactly are we getting from a 300 billion dollar defense budget?'

And this of course is the main question. What is the Pentagon doing with the 300 billion dollar defense budget if it is not properly comprehending how the nature of warfare is changing? What is the responsibility of President Reagan, who on more than one occasion has promised the American people not to place our armed forces in a position where they could not defend themselves, yet at the same time, orders a deployment of Marines into Lebanon where sentries man their posts with unloaded rifles? And what of the so-called experts in the Department of State who have been encouraging us to deal with Syria while, for over 10 years, Syria has acted as the most destabilizing influence in the Middle East while being armed to the teeth by the Soviet Union?

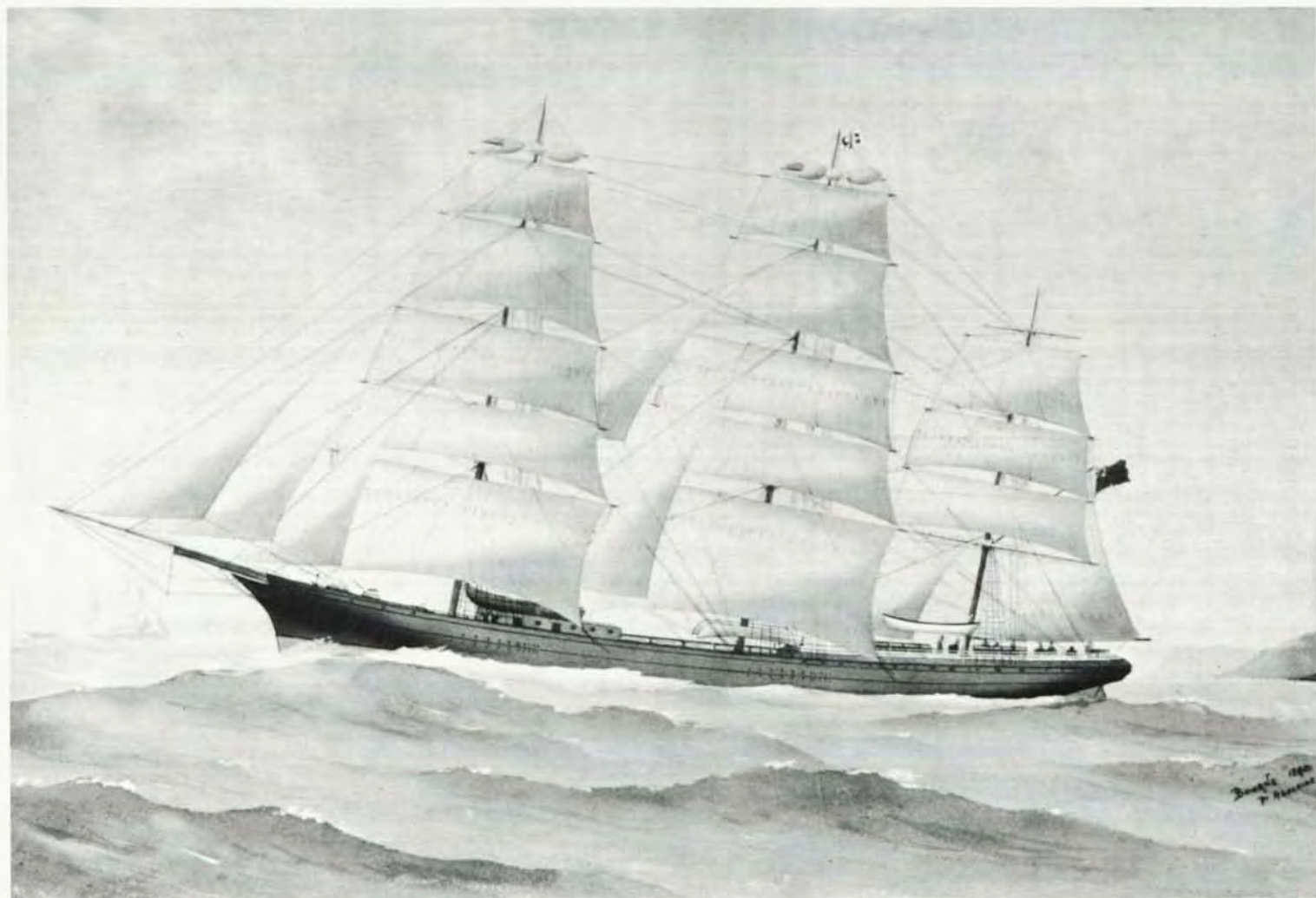
There is more than enough blame to spread throughout the civilian and military hierarchy of the United States in regard to the October 23 bombing of the USMNF in Beirut. Fortunately for this country, Adm Long and the members of his Commission have already given us a report that is thoughtful and honest. Hopefully, our national leaders will use the Long Commission report as a basis from which to work in order to protect this country and its interest from the real and present threat of international terrorism.



## SUBSCRIPTIONS







SHIP TORRENS (1875-1910)

— NOCSA



# SHIPS AND THE SEA



## THE CLIPPER *TORRENS*

Described by the renowned maritime historian Basil Lubbock as 'probably the most perfect of all composite clippers', the three masted full-rigged ship *TORRENS* was the last of the so-called clippers to be built by the composite construction method.

Composite construction, wooden hull on iron frames, was a short-lived affair and came into being during the period that ship-builders were having problems with all-iron vessels. Although only an interim method of construction, it proved to be one that had lasting qualities, as evidence by such famous names as *SOBRAON* and *CUTTY SARK*.

Specially designed for the Australian passenger trade, *TORRENS* was built by James Laird of Sunderland in 1875 for the ship owners A.L. Elder and Co. Regarded as fast, dry and comfortable she was used exclusively on the run to Adelaide.

*TORRENS* was driven hard, but made fast voyages, always less than 100 days. Her best recorded passages were 65 days in 1881, 67 days in 1888, and 68 days in 1886. Of the total 27 trips to Adelaide, only two exceeded 100 days. The worst was in 1890, when *TORRENS* took 179 days to reach Adelaide, but there was a good excuse. Captain H.R. Angel her master since building retired in 1890 and was succeeded by Captain Cope. On Cope's first voyage, *TORRENS* lost her foremast and main-topmast in a wild gale, making for Pernambuco for repairs. During the refit she caught fire, but with little damage continued on to Adelaide. This was the 179 day passage.

Joseph Conrad, author of many sea-stories, sailed as the Mate in 1893 and *TORRENS* is well remembered as his favourite ship. It is not Conrad's prose that best describes *TORRENS* at

sea, but rather an excerpt from a letter written to Captain Angel:

'... My brother made a run out of this vessel when he was in command, of 364 miles in 24 hours under all plain sail, during which time she was making a steady 16 knots on heaving the log ...'

'... Blue Peter Magazine always said that she was making 18 knots, certainly all the boys from the deckhouse came aft to see the performance, so she must have been smoking along to get them out of their bunks.'

1896 saw another change of command, when Captain F. Angel, son of the original master and part owner, took over. During his third voyage, *TORRENS* was in collision with an ice-berg in high latitudes but made Port Adelaide on 5 February 1899 under shortened rig. Although partially dismasted by the impact, the bowsprit took most of the shock of the collision. Temporary repairs were made to the bows and rigging at Fletchers Slip, Port Adelaide, and *TORRENS* continued on her regular run.

*TORRENS* left Port Adelaide for the last time under the British Flag on 23 April 1903. Unable to find much cargo, she was fairly light and proceeded for England westabout via the Cape of Good Hope. Adverse weather forced her into Capetown, but there was no cargo available there either. The journey home continued via St. Helena where explosives were loaded for England. Whilst towing up the Thames at journey's end, a coaster attempted to pass between *TORRENS* and her tug; the coaster was run down and sunk.

At the end of 1903, *TORRENS* was sold to Italian owners and used in local waters until put ashore in 1910 and sold for breaking up.



Built to put emphasis on the passenger trade, accommodation was above average. Smaller than normal cargo hatches gave more clear deck space, and the unusually long poop deck of 80 ft. gave a promenade space for first class passengers. These were accommodated in the after deckhouse and the immigrant passengers accommodated in the 'tween-decks. Scuttles were fitted in her sides to light all accommodation spaces including the crew's quarters. Six boats were carried, including two permanently in davits abreast the mizzen mast.

Additional statistics for *TORRENS*:

- length 222 ft.
- beam 38 ft.
- draft 21 ft.
- tonnage 1276 (registered)
- The sail plan shows 15 square and 7 fore-and-aft sails. She was the last of the clippers to be fitted with stuns'ls (studding sails). These were 8 smaller square sails set outboard of the normal sails on the fore and main masts.

Robin Pennock

## STAR OF GREECE

The Belfast shipowners J.P. Corry and Co. owned 13 ships, all purpose built for the Calcutta jute trade. Except for their first vessel, *JANE PORTER*, they were all named with the prefix *STAR OF* ..., and except for *STAR OF AUSTRALIA* were all built by Harland & Wolff.

*STAR OF GREECE* and *STAR OF PERSIA* were identical ships and great rivals. Built in 1868, they were 3 masted full-rigged iron ships of 1227 tons; with the dimensions of 227 ft. long, 35 ft. beam and a depth of 22.2 ft. both ships required 120 tons of iron ballast as stiffening to keep them upright when empty. They carried about 1850 tons of coal on the outward voyage to Calcutta and over 8,500 bales of jute on the return trip. With both cargoes loaded, draft was 20 ft. 6 ins. *STAR OF GREECE* was faster than her sister, probably due to the sailing prowess of her original Master (Captain W.J.M. Shaw) in the early years.

Although purpose built for the Indian jute trade, 1884/85 were lean years in this trade so both ships ventured further afield to Australia and New Zealand. There appears to have been little drama in the working life of *STAR OF GREECE*. Her passages normally were fast and comfortable and she was a happy ship.

A record of the 25 voyages and Masters during the years 1868 to 1888 are:

- 1868 to 1877, Captain W.J.M. Shaw — 12 voyages UK to Calcutta and return. During the period 3 February to 20 May 1874, Captain John Simpson took temporary command for the return journey Calcutta to London
- 1877 to 1884, Captain William Legg — 6 voyages UK to Calcutta, one being extended to Mauritius. 1 voyage to New York and return and 1 to Adelaide and return
- 1885 to 1887, Captain John Legg — a voyage London, Otago, Newcastle NSW, Calcutta, London and another to Calcutta, Mauritius, Calcutta and London
- 1887 to 1888, Captain H.R. Harrower — a return voyage to Calcutta and an unfinished voyage to Adelaide.

The career of *STAR OF GREECE* came to a violent end not far from the South Australian capital. Departing from Adelaide with a cargo of 16,002 bags of wheat on 12 July 1888 in reasonable weather, she ran into a violent NW gale, was driven some 20 miles off course and forced ashore near Port Willunga in St. Vincent's Gulf. The Master, two officers and most of the crew were drowned in the tragedy.

The wreck of *STAR OF GREECE* has been located in 5 to 7 metres of water about 200 metres from shore. The remains of the ship are battered and tangled, but many of the iron frames, floors and hull plates are still recognisable. Many relics including the figurehead have been recovered, but the site is still a popular spot for divers.

*STAR OF GREECE* has been declared under the (South Australian) Historic Shipwrecks Act of 1981.

Robin Pennock





## BOOK REVIEWS



### CONWAY'S ALL THE WORLD'S FIGHTING SHIPS 1947-82 PART 1: THE WESTERN POWERS. London, Conway Maritime Press, 1983. 304 pp, ill, approx \$85.

An authoritative naval reference book covering the postwar era and using newly released information on postwar naval affairs from the largest political issues to the minute technicalities of warship design was long overdue.

At long last this void has been filled with this magnificent reference book which includes a major revaluation of published information and much previously unpublished material available for the first time. It is a delight to be able to look up warships of the 1950s and 1960s and find out if they are still extant or have been disposed of: this volume lists every significant warship built for the Western Powers since the end of 1945. It covers in a comprehensive style their weapon systems and electronics.

The background to the development of each navy is covered in a manner which enables the reader to identify clearly the significant trends in warship design and procurement.

Each navy is prefaced by a standard introduction, followed by a statement of fleet strength in 1947, then the post-1947 classes in type and chronological order.

Six basic types have been adopted — major surface ships (aircraft carriers, cruisers, destroyers and frigates), submarines, amphibious warfare vessels, small surface combatants (corvettes to patrol craft), mine warfare vessels and miscellaneous.

In looking at the 'Australia' section it is worth remembering that in 1947 the Royal Australian Navy boasted 3 cruisers (2 heavy), 8 destroyers, 14 frigates, 32 corvette/minesweepers, 4 tank landing ships and a variety of other vessels.

The abortive 1966 light destroyer project is included in the post-1947 section of the RAN as are the Fremantle class patrol craft now entering service. There are several errors in this section, *HMAS LAUNCESTON* (207) is listed as 209, *WHYALLA* (208) and *IPSWICH* (209) are not included and, strangely, five follow-on vessels which are yet to be officially announced or named are included. They are *BALLARAT* (218), *MILDURA* (219), *ARMIDALE* (220), *BUNDABERG* (221) and *PIRIE* (222).

Eighteen western navies are covered in Part One. They are the North Atlantic Treaty Organisation naval powers Belgium, Canada, Denmark, France, Greece, Iceland, Italy, Netherlands, Norway, Portugal, Spain, Turkey, United Kingdom, United States of America and West Germany. The other three pro-Western navies are Australia, New Zealand and Japan.

One fascinating inclusion is the 'ships that never were', the abortive British design projects which cover the two fleet aircraft carriers CVA 01 and CVA 02 cancelled in 1966, four 1960 cruiser designs covering small medium, missile-armed and gun-armed ships ranging from 13,000 to 17,500 tonnes and the 1953 destroyer design for a larger destroyer to follow the 'Daring' class. This design was more reminiscent of the later US Navy missile cruisers.

This book boasts an impeccable list of contributors including the American naval analyst Norman Friedman, Britain's Antony Preston, who is one of the world's best known naval historians, and the Polish naval architect Przemyslaw Budzbon who produced most of the line drawings for this book.

Published on 29 April, 1983, this 304 page book is of a handy size, 310mm x 216mm (12 1/4" x 8 1/4") and contains 291 good quality photographs and 251 line drawings. Maintaining the high standards set by Conway Maritime Press of London, the book retails for around \$85 in Australia and is due to be followed by Part II, covering the Warsaw Pact, non-aligned countries and minor navies of the postwar world later this year. This must rate as an all-time great naval reference book, truly a collector's item. Highly recommended.

Vic Jeffery

### US AIRCRAFT CARRIERS. By Norman Friedman. US Naval Institute Press, 1983. 427pp, ill, appendices, index. \$US 47 approx.

*US Aircraft Carriers, An Illustrated Design History* is the second in a series of three books by Norman Friedman on specialised ship-design history. The first book, *US Destroyers* has already been reviewed in the *Journal of the ANI* and, according to a publisher's note, the final of the series, *US Cruisers*, is due for release in 1984.



1983 has been a significant year for the Royal Australian Navy, the Fleet Air Arm and *HMAS MELBOURNE*. Without wishing to enter the debate on whether or not we need a carrier, the foreword to *US Aircraft Carriers* (by Admiral Thomas B. Hayward USN Rtd) is worth reading and digesting. Let me quote the first paragraph in full:

'For the past years, at least, no naval ship (of the United States) has been subjected to more analysis, rhetoric, and emotionalism by its supporters and critics alike than the aircraft carrier. Protagonists abound, both in and out of uniform. The carrier has often been swept up in roles-and-missions debates, leading to allegations, at times justifiable, of inter-Service rivalry, even inter-Service dispute. Yet, it is of more than passing significance that throughout its operational life, the most consistent acclaim of the carrier has been sounded by the commander at sea, where the true test is inevitably made. Thus, when someone gives the aircraft carrier a rigorous, objective analysis as Norman Friedman does here with distinction, one is left with a perplexing sense of disparity that currently exists between the uncertainty of the carrier's future (in the US Navy) and its vital accomplishment of the past.'

(Reviewer's italics to illustrate the international flavour of the foreword.)

*US Aircraft Carriers* is a remarkable work dealing as it does with six decades of history of aircraft carriers. In the same style as his previous work, Norman Friedman has used a multitude of photographs and once again drawn on the skills of A.D. Baker's line drawings, plans and profiles.

The first chapter opens the book with a broadside. It is devoted to the role of the carrier in the US Navy and explains it in a no-nonsense, straight forward way and covers the subject from World War 1 to the 1980s.

Friedman presents his subject as a sound, easily understood history without acrimony or emotion. The result of studying Chapter 1 is that any reader can see the logical reason for a continuing carrier force. Obviously others have seen the same logic, even the USSR (a late starter in the carrier stakes), and obviously agree that there is a need for sea-borne airpower.

The first carrier acquired by the USN was a slow collier of the fleet-train (*USS JUPITER*). Fitted with a prototype turbo-electric propulsion system, *JUPITER* seems to have been selected because of her ability to steam at full power both ahead and astern. Conversion into her role as *USS LANGLEY* included in the most basic terms construction of a flight deck over the normal superstructure, holds altered to become aeroplane stowages and the single funnel displaced to the port side of the flight-deck. *LANGLEY* was fitted with two tiltable funnels in later life, but she was never fitted with an island. Navigating and ship-handling continued to be carried out from beneath the flight deck; not an appealing thought!

The requirement for more than adequate sternpower in the USN carriers will be of interest. In its simplest form, the need was for a double ended vessel capable of landing aircraft over-the-bow whilst making a sternboard. *LANGLEY* also had a catapult fitted at both ends of the flight deck. The first purpose built carriers

*LEXINGTON* and *SARATOGA* were designed for catapults at the after end of the flight deck but weight and space problems precluded them being fitted. However, the double-ended concept remained a USN staff requirement until abolished in 1944.

Friedman's book explains the development of the USN aircraft carrier vis-a-vis the RN and places a time scale on when the co-operation ceased. The fact that each country went its separate way is obvious, and the early differences of wooden flight-decks, deck edge elevators and open hangars attest to this. The lesser known reasons for multiple funnels on the flight-deck are discussed, as is the late acceptance of the island. Perusal of the photographs and drawings might indicate that the USN has yet to make up its mind about the position of the island structure — the line drawings indicate just where the island has been placed in different carrier variants.

In its 17 chapters and 7 appendices, *US Aircraft Carriers* deals in details with every US carrier type built, and some concepts. It is a concise interesting work with the appendices dealing with amongst other things catapult and arresting gear variants.

One appendix, entitled 'Out of the Mainstream', demonstrates that all was not straight-forward and that initiative came to the fore. When the need arose for flight-decks for training purposes in 1942, the US Navy bought, converted and commissioned the two (side wheel) paddle steamers *USS WOLVERINE* (ex *SEEBEE*) and *USS SABLE* (ex *GREATER BUFFALO*). Photographs of the hybrids appear in the book. *WOLVERINE*, with her four funnels appears as the more exotic of the two.

A few criticisms of *US Aircraft Carriers*. As in his previous book, Norman Friedman falls into the trap of using too many sets of initials and abbreviations not common outside the US Navy: BuAer, CinCNELM and Oop-OOX illustrate the point. He also stresses developments of the American carrier, but he completely ignores the origins of the angled flightdeck, steam catapult and mirror landing sight. However, the credits far outweigh these small points. A multitude of photographs before, during and after refits detail each alteration and addition. A.D. Baker III has taken much time and effort to provide clear and detailed drawings.

*US Aircraft Carriers* is not a book for the home bookshelf unless you are an avid ship development fan. It is, however, a necessary addition to technical, historical and reference libraries.

Robyn Pennock

## MARITIME STRATEGY AND THE NUCLEAR AGE

By Geoffrey Till et al. London, Macmillan 1982.  
274 pp, bibliog, index. \$32.40.

In 1953, Rear Admiral J.D. Hayes of the United States wrote: 'Until there comes another like him to dissect, analyze, and codify the experiences of our day, none of us can go wrong if we study Mahan's great historical works.' The title 'Maritime Strategy and the Nuclear Age' suggest that such a one has come to do these very things. Regrettably, the book is mislabelled; it is really a history of maritime strategy. As such it is nonetheless welcome, as in it Greenwich



historian Geoffrey Till (aided by seven eminent contributors) thoroughly analyzes the emergence of naval strategic thought from ancient times to the present day (albeit pre-Falklands). It should be prescribed reading for today's naval strategist.

The book's scope is wide, covering the well-known and many lesser-known authors in well-documented and logical depth, trying at each point to understand their reasoning. Contemporary historical records are used to deduce concepts and reasons where these are not readily apparent from the authors' work.

Till writes concisely and unaffectedly, yet at times his painstaking style drags. The frequent examples from different ages and countries enliven the text and yet make getting to the point slow. This is not so much a fault as a by-product of the historian's exhaustive method.

The book can be divided into four parts. The first contains a thorough review of the literature from Thucydides to Gorshkov. The second explores the concepts of maritime strategy under the headings: 'Sources and Elements', 'The Decisive Battle', 'Alternative Routes' and 'Command of the Sea', and 'The Exercise of Command'. It is comprehensive and well argued. The third section deals with the current maritime scene. The chapter 'A New Environment for Navies?' is a valuable analysis of the political, legal and technological environment. 'Old Tasks for New Navies' considers well the application of old strategic concepts. 'New Tasks for New Navies' examines the protection of the offshore estates, naval diplomacy and strategic deterrence, but ends rather lamely with the conclusion that established maritime strategic thought is of probable, but doubtful relevance in the absence of an attractive replacement. The final section 'A Survey of Present Practice' considers the 'breadth' of naval happenings in 1979 and the 'depth' of the naval aspects of the Arab-Israeli war of 1973. This is interesting reading. The chapter (and the book) once more ends lamely and quickly with the conclusions that: 'worthwhile parallels can still be drawn between past and present performance', and that the strategic thinkers of the past can 'help to identify the questions that need asking' regarding contemporary maritime strategy.

The book really is an historical tour de force and as such deserves reading. The author should have been content with this rather than giving the book a title which leaves the reader feeling that he has scaled a truncated pyramid, contemplating the incompleteness of the massive edifice.

Is maritime strategy in the nuclear age really any different to maritime strategy as it was in the days of its glorious Mahanian jeunesse? The Falklands conflict with its old-fashioned gun boat diplomacy would suggest not, but glib generalization from this limited war would be unwise. Till himself remains unsure of the specific applications of the strategic lessons of our forefathers in today's world. A second volume to this work is certainly needed to distil these applications. It might be entitled: 'An Admirals' Primer of Modern Maritime Strategy'. It is to be hoped that some latter-day Mahan will write it after reading Till's valuable history.

**F.J. PARKES**

**Surgeon Lieutenant Commander RAN**

## **THE SOVIET SURFACE FLEET 1960 TO THE PRESENT. By John Jordan. London & Melbourne, Arms & Armour Press, ill, tables. \$44.95**

This book provides an interesting alternative view to the sometimes over-reactive reading of Soviet naval intentions. Author John Jordan argues that the innovatory nature of Soviet ship design and construction since World War Two is not, as had been implied, a quality that is admirable in itself, but one that has been made necessary by technological development by the West.

An in-depth study of the USSR's blue water fleet, providing a detailed analysis of the new generations of Soviet surface ships from the Kynda class of the 1960s to the nuclear-powered battle cruiser Kirov, the book closely examines technical issues and its purpose is clearly to investigate and compare.

Consisting of 10 chapters, each dedicated to the major classes of Soviet warships, the book is supported by 133 excellent black and white photographs including many from the United States Navy, Ministry of Defence, Novosti, the French Navy, Skyfotos and TASS. The classes of warship covered are Kashin, Kresta I, Moskva, Kresta II, Krivak, Kara, Kiev, Kirov and the new destroyers Sovremenny and Udaloy. All aspects of these classes are studied in great detail, an example being the Moskva class helicopter cruisers. Divided into subsections, the areas covered are Polaris, The Development of Soviet ASW, The Eastern Mediterranean, Aspects of the Design, Flight Deck and Hangar, Helicopters, Anti-submarine Missiles, Smaller ASW Weapons, Sonars, Air Defence, Other Air Defence Systems, Replenishment and Service History.

Jordan stresses that there is one 'authority' on the Soviet Navy, and that is the Soviet Navy itself. Whereas Soviet-built tanks and Soviet-built aircraft have been widely employed in conflicts around the globe, and have been engaged, captured and examined by forces belonging to pro-Western regimes, no major Soviet-built surface ship has seen action since World War Two. Recent Soviet naval developments are viewed in this book not as an attempt to win control of the sea, but as a persistent drive to counter Western sea-power as a force capable of threatening Soviet territory.

Included in the book are more than 30 tables of ship specifications, missiles, guns and aircraft carried by each class. One interesting table compares the Ka-25 Hormone with anti-submarine helicopters in service with Western navies.

A most interesting book with some intriguing theories, it is available through Thomas C. Lothian Pty. Ltd. of 4-12 Tattersall's Lane, Melbourne at a retail price of \$44.95. Recommended.

**Vic Jeffery**



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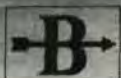
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