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# JOURNAL OF THE AUSTRALIAN NAVAL INSTITUTE

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*Cover Photos:*

*Seahawk Trials with HMAS DARWIN (HMAS CANBERRA Background)*

*Photo taken by ABPH Darren Kerrison*

# AUSTRALIAN NAVAL INSTITUTE INC

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

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.

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

The membership of the Institute is open to:

a. Regular Members. Regular membership is open to members of the RAN or RANR and persons who having qualified for Regular membership, subsequently leave the Service.

b. Associate Members. Associate membership is open to all other persons not qualified to be Regular Members, who profess an interest in the aims of the Institute.

c. Honorary Members. Honorary membership is open to persons who have made a distinguished contribution to the Navy or the maritime profession, or by past service, to the Institute.

## 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.


## ACKNOWLEDGEMENTS

The Australian Naval Institute is grateful for the assistance provided by the corporations listed below. They are demonstrating their support for the aim of the Institute by being members of the "Friends of the Australian Naval Institute" coterie.

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Scientific Management Associates
Stanilite Electronics
Thomson Sintra Pacific
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Krupp Atlas Elektronik (Australia)

# FROM THE PRESIDENT

The Institute Dinner at HMAS HARMAN on Friday 11 May was most successful and the Friends of the Institute remain enthusiastic about their relationship with the ANI. I am grateful for the support of the Fleet Commander who has agreed to give the Friends an opportunity to sea ride Fleet units. I promised the Friends that they would be able to meet naval people both senior and junior, and the ships of the Fleet are the best venues for this.

Australia is an island surrounded by vast oceans. To defend Australia and its interests from a external threat we must be able to control the maritime approaches and seek to influence the development of stability in this region. This is a maritime problem, but Australia's military experiences here continue to dominate defence thinking in the Australian community.

It is timely that the community was better educated and the ANI and its membership can play a role in this. I am not convinced that all the membership is prepared for the task however, and I asked the Acting Chief of Naval Staff, Rear Admiral Doolan to speak at the ANI dinner, on the importance of the Navy in the defence of Australia. His address is on page of this Journal.

I hope to be able to announce the Veron Parker Oration Programme for this year shortly. I will attempt to obtain speakers who will add to the reputation built up by past Orations and also contribute to our understanding of maritime defence matters.

**Regards**
**Ian Callaway**

# FROM THE EDITOR

This issue of the journal represents nother attempt to reduce costs of publication without reduction in quality.

With the assistance of John Filler and Pirie Printers I hope to have all future journals presented to the printer at the camera ready stage. This journal has been partly prepared on that basis and there may be some slight inconsistencies although I hope this is not noticeable.

The second part of 'Using Military Technology For Humanitarian Ends' by Gael M. Graham is included in this issue. I am aware that this article is heavy going. Perhaps some of the legal fraternity can assist by commenting on issues with people may find difficult to comprehend.

It is encouraging that more articles are arriving across my desk these days. One thing I ask authors to do is: **please include a short biography and a passport size photograph (if available)**. However, there is still a shortage of book reviews and letters to the editor being received.

**Sincerely,**

**Don Agar**

# GUIDE FOR AUTHORS

In order to achieve the stated aims of the Institute, all readers, both members and non-members, are encouraged to submit articles for publication. The following guide outlines the major points most authors would need to know in order to publish a quality article in the Journal. A more comprehensive guide is available from the Editor.

**Types of article**

Articles should deal with interesting recent developments in matters relating to maritime matters which directly or indirectly impinge upon the naval profession. Overseas contributions are also encouraged. To be eligible for prizes, original articles must be accompanied by statements that they have been written expressly for the ANI. The editor reserves the right to reject or amend articles for publication. **The ANI will pay the authors of articles specially written for the Journal and accepted for publication, $10 per 1000 words. An annual prize of $25 for the best book review will also be awarded. Payments will not be made to the authors of articles such as staff college prize essays and Peter Mitchell competition entries.**

**Length of Articles**

As a broad guide, articles should range from 2500 to 6000 words. This is between 9 and 21 pages of double spaced typing on A4 size sheets Short articles are also welcome.

**Subdividing the Article**

Three major types of headings are used:

- **MAJOR HEADING** — Bold Capitals
- **Secondary Heading** — Bold Capitals and Lower Case
- Tertiary Heading — Capitals and Lower Case

**Abstract**

An abstract of 75 words at the most is desirable when an article is proposed. It should state the scope of the article and its main features.

**The Text**

The text should be in an impersonal, semi-formal manner. Consistency in spelling, headings, symbols, capitalisation etc is essential.

**References**

References should be numbered consecutively and listed at the end of the paper. The preferred format is:

1. Smith, R. & Jones, A., "Marketing Videotex", Journal of Marketing in Australia, Vol. 20, No. 3, June 1985, pp.36-40.

**Photographs**

Black and white glossy prints and colour prints are acceptable. Clearly identify photographic prints with figure number written on separate slips of paper attached with adhesive tape to the back of the prints. Captions for the photographs must be provided.

**Tables, Diagrams and Graphs**

Tables must be typed on separate sheets and presented so that they may be set by the printer. Use diagrams, graphs and illustrations to improve the general presentation of the article. Illustrations, etc., are referred to in the text by figure numbers, consecutively.

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Authors must complete a "Copyright Declaration" (see below) and attach this with their final typescript.

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Authors should get clearance from their employers if the articles contain sensitive information such as costs, unapproved policies, critical statements, etc. There is no objection to authors stating personal views on subjects where at variance with a corporate view, but their viewpoint must be put in perspective so that readers, including those overseas, do not gain a false impression of the status of the subject.

**The Final Typescript**

Articles should be typed on A4 paper. Good near letter quality (NLQ) dot-matrix print is acceptable. Three copies of the typescript should be sent to the Editor, PO Box 80, Campbell, ACT 2601. The complete package will comprise, on separate sheets:

- Cover sheet
  — Title of article — Author's name (or pseudonym) and qualifications
  — Present position — Telephone number — Address
- Recent photograph and biography of the author (less than 200 words)
- Abstract — less than 75 words
- The text
- Tables, each on a separate sheet
- Illustrations
- Photographs, clearly identified
- List of captions for tables, photographs & illustrations.

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The Editor can be contacted either via the aforementioned postal address or by phone on (062) 652020.

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# ANTI-SUBMARINE WARFARE AND ITS ROLE IN THE STRATEGIC BALANCE

by

**Lieutenant Commander D.M. Stevens, RAN**

**Both superpowers are planning wartime campaigns against SSBNs. However, strategic ASW has been claimed to be destabilising; the destruction or threatening of SSBNs being hightly escalatory and leading to a 'use them or lose them' dilemma. This conflict is complicated both by the current imprecise capabilities of ASW and also by Arms Control negotiations which aim to reduce SLBM numbers. This article examines the current situation.**

## Introduction

Nuclear powered ballistic-missile submarines (SSBN) are generally considered to be the most suvivable element of current strategic forces. They are mobile, concealed, and in theory, immune from pre-emptive attack. Their traditional role, as perceived in the West, has been that of reserve force: providing a nation with a guaranteed retaliatory capability even after the destruction of other strategic weapons. thus, it is argued they are the most valuable element of the deterrent force and an essential element of stability in the strategic balance. Though SSBNs are currently deployed by five nations this article will cocentrate only on the strategic anti-submarine warfare (SASW) capabilities and intentions of the USA and USSR and the likely effect of such actions upon the strategic nuclear balance.

The aim of anti-submarine warfare (ASW) is to prevent a submarine from carrying out its assigned mission. SASW is simply that element of ASW carried out against submarines with a strategic mission; normally taken to be SSBNs but increasingly including other nuclear powered submarines (SSN) armed with nuclear capable land-attack cruise missiles. ASW is not limited only to direct action against submarines, thus strikes on SSBN bases and support facilities may all contribute to the aim.

## Force comparison

The SSBN forces of both superpowrs are dissimilar in structure and doctrine. Tables 1 and 2 provide a comparison of the opposing elements. Submarine-launched ballistic missiles (SLBM) account for 41.9% of the US strategic arsenal and approximately two-thirds of US SSBN strength is at sea at any time. (1) Availability is enhanced by runnig SSBNs with a two crew systesm. The Soviets, through having larger numbers of SSBNs have only 28.3% of their strategic warheads embarked and the SSBN force has historically had only a 10-15% availabiliity. (2) Hitherto it has been sufficient for the larger part of the Soviet fleet to remain alongside ready to 'surge' in times of crisis. But Soviet availability and survivabilty is improving. Longer range SLBMs mean submarines need spend less time in transt to patrol areas or may even be available from port, improved technology has reduced maintenance downtime and for the first time the Soviets have been reported to be running a two crew system. (3) Greater operational availability and hardened shelters is a probable response to the perceived short-warning threat to SSBN bases from US forces, particularly the land-attack cruise missile.

Western SSBNs, relying on stealth, use operating areas that are limited only by missile range. In contrast, the newer Soviet SSBNs have been assessed to be making use of 'bastions' in the Barents Sea and Sea of Okhotsk. The SSBNs are here protected and supported by friendly naval and air forces in

**THE AUTHOR**

**LCDR STEVENS joined the RAN in 1974 and completed a Cachelor of Arts Degree at the University of new South Wales. he specialised as a PWO (ASW) in 1984. He has served in HMA Ships BRISBANE, YARRA, TOBRUK and HOBART and on exchange in HMS HERMIONE. He is presently posted to the Directorate of Combat Force Development (Sea) as Staff Officer Underwater Warfare.**

an area which can be partially sealed against intruders. Soviet strategic forces, it has been argued, are principally designed for a swift decisive strike, but to preserve some flexibility the SSBN 'bastion strategy' provides protection of a reserve capability in case of an extended engagement. This fits in with the alleged shift in Soveit strategy towards a doctine of limited and controlled nuclear options. (4) However, not all analysts agree and it has also been argued that the Soviet SSBN force forms part of the overall first-salvo doctrine and the bastions simply provide protection during convetional hostilities before the nuclear strike is initiated. (5)

## Strategic ASW

The SASW intentions of the superpowers have also developed differently. The US believes that it, unlike the USSR, has the capability to conduct successful SASW and has always regarded SASW and has always regarded SASW as a primary mission. This has been reiterated in the recent US Maritime Strategy, which stated that in war the destruction of Soviet SSBNs would reduce the attractiveness of nuclear escalation by tilting the strategic balance in favour of the US.(6) Somewhat optimistically the former secretary of the Navy J. F. Lehman was quoted as saying Soviet SSBNs would be attacked ". . . *in the first five minutes of the war*". (7) However protective deployments and the improved capabilities of Soviet SSBNs have made ASW directed against them that much harder. Of particular concern are improvements in quietening which have reduced the probability and the range at which SSBNs may be acoustically detected.

The USN may well be losing its advantage in ASW capability. A recent US report on ASW by an advisory panel to the House. Armed Service Subcommittee on Research and Development has highlighted the growing ASW problem and concludes;

> "Because the consequences of failing to find a solution to the challenge presented by quiet Soviet submarines are so serious, we recommend that this work should be considered as one of, if not the, highest priority activities in the DoD." (8)

Soviet views on SASW have undergone several changes in emphasis. When first faced with the threat from Polaris SLBMs in the early 1960's the Soviet Navy shifted its primary mission from anti-carrier to anti-submarine warfare. However, the increasing range of US SLBMs soon made it unrealistic for the Soviets to conduct open-ocean search with available technology and assets. The defence of friendly SSBNs then became paramount. The most recent change is still developing, but the last published writing of Admiral Gorshkov indicate that although protection of Soviet SSBNs remains vital, ASW against US SSBNs is again an important and realistic objective. Gorshkov, as editor of "The Navy: It's role, Prospects for Development and Employment" calls for SASW to come under the first national strategic mission as a major role during the conventional phase of a war. It is proposed that such efforts in defence of the homeland may best be directed by a sixth and additional service of the Soviet Armed Forces (9).

Today an ASW role has been attributed to a majority of Soviet Naval assets but SASW capability still lags behind intention. The invulnerability of US SSBNs has often been cited in the West and it has been claimed that when at sea they have never been detected by Soviet forces. Yet this will not necessarily always be the case and Soviet ASW capability cannot be simply discounted. A former head of the US Strategic Air Command, General R Ellis, stated, albeitt with his own plans for a balanced strategic force in mind, that the US would:

> . . . have elements of the TRIDENT force operational 40-50 years from now . . . We think that, with Soviet technology moving as it is today, they'll have the anti-submarine problem solved before the end of the century."(10)

While the respective navies may regard strategic ASW as a rational aim there are elements from both sides that decry this objective, claiming that in the interests of global stability ASW directed against strategic forces should be abandoned. This would be of greatest importance in a crisis or low level conflict situation. Where it is argued, the targetting of SSBNs would be highly escalatory, leading to a 'use them or lose them' dilemma. Furthermore in conventional war the attrition of SSBNs might be seen as a preliminary step towards a strategic first-strike and thus provide an incentive to immediately escalate to all out nuclear warfare. The offensive doctrine espoused by the US Maritime Strategy has come in for particular criticism. The planned immediate forward deployment of US SSNs is claimed to prevent adequate conflict control. (11) It has also been argued that success against SSBNs is unachievable nd therefore the assets so employed would be better used elsewhere.

In response to the criticism of increased risks to global stability the US uses four arguments

to justify strategic ASW. Firstly, it is claimed, placing a vital and the most secure element of the Soviet strategic forces at risk must limit Soviet options and cause uncertainty in planning. Hence the prospect of major SSBN loss would act as a powerful deterrent to war. Secondly, in the event of conventional war, a successful campaign against SSBNs prior to full nuclear escalation would encourage the Soviets to terminate hostilities prior to losing an essential future strategic option. Thirdly, the protection of Soviet fleet thus preventing a large scale attempt to disrupt Western sea lines of communication (SLOC). Thus even the threat of a US anti-SSBN campaign will be useful. Finally it is argued that together with the Strategic Defense Initiative, SASW can limit the damage caused by a Soviet strategic reserve counter-value strike after land-based ICBMs have been expended in counter-force strikes. (12)

Soviet arguments in favour of strategic ASW focus on the damage limitation aspects. The protection of the homeland being the acknowledged primary purpose of the Soviet Armed Forces. (13) The thrust towards SASW may also be a response to the counter-force capabilities of the soon to be deployed Trident II D-5 SLBM. It has been estimated that once deployed in 15 OHIO Class SSBNs the very accurate D-5 would have a 94% probability of destroying all Soviet ICBMs. (13)

## Capabilities

To assess the above arguments it is necessary first to determine if SASW is a real possibility with current ad projected capabilities. For analysis, the SASW problem may be split into three parts; first SSBNs must be detected, then they must be constantly tracked, and finally capable weapons must be within range and available on immediate notice. Because of the difficulty in wide-are search for a submarine, traditional tactical ASW has largely relied on the need of the submarine to come close to its intended target to attack, thereby providing an opportunity for escorting forces to counter-attack. Strategic submarines have the immediate advantage in that their aim is to remain hidden and avoid all contact.

## Acoustic Detection

For the detection of submarines ASW has hitherto concentrated on the use of acoustics. Either passive, that is listening for the noise made by a submarine, or active, listening to the echoes produced by sonar emissions

**A Soviet Typhoon Class SSBN**

reflected from a target. Active detection ranges are in the order of thousands of yards and are unsuitable for wide-ocean search. SASW has therefore placed particular emphasis on passive means, using for example fixed or towed hydrophone arrays, which in favourable circumstances can make detections at hundreds of miles. More recently the use of low frequency bistatic sonars comprising an active source with a remote hydrophone array have also given some promise of long range detection capabilities.

However, acoustic sensors have limitations: firstly detection capabilities are impreceise, the movement of sound in water being affected by such diverse factors as underwater geography, salinity, temperature and depth. Also, passive sonars can ony localize a contact over a prolonged period and these sensors, being extremely vulnerable, would not survive long in war. In addition there are an inherently large number of false detections to be processed and submarines will seek to increase this by using decoys. The expected deployment of SSBNs under the Northern ice will also cause significant ASW problems as acoustic conditions are particularly poor. Finally, improvements in quietening may soom make it impossible to detect submarines passively outside a few thousand yards.

## Non-acoustic Detection

To overcome acoustic limitations research is beig carried out to determine non-acoustic means of wide area search and detection. Requirement for such a detection system are a sensor that can search large areas quickly and constantly, and a SSBN signature with enough persistence to be reliably detected. Satellites are likely candidates for siting such sensors but currently cannot provide the

**Table 1**

**SOVIET/US SSBN FORCES 1990**

| | Displacement (tons) | Length (metres) | Tubes | Missile | |
|---|---|---|---|---|---|
| **SOVIET** | | | | | |
| 15 x YANKEE I | 7900 | 130 | 16 | SS-N-6 | SERB |
| 1 x YANKEE II | 7900 | 130 | 12 | SS-N-17 | SNIPE |
| 18 x DELTA I | 9000 | 140 | 12 | SS-N-8 | SAWFLY |
| 4 x DELTA II | 10000 | 155 | 16 | SS-N-8 | SAWFLY |
| 14 x DELTA III | 10500 | 155 | 16 | SS-N-18 | STINGRAY |
| 5 x DELTA IV | 10750 | 160 | 16 | SS-N-23 | SKIFF |
| 6 x TYPHOON | 25000 | 170 | 20 | SS-N-20 | STURGEON |
| **USA** | | | | | |
| 5 x LAFAYETTE | 7350 | 129 | 16 | POSEIDON C-3 | |
| 6 x FRANKLIN | 7350 | 129 | 16 | TRIDENT I/C-4 | |
| 6 x FRANKLIN | 7350 | 129 | 16 | POSEIDON C-3 | |
| 6 x MADISON | 7350 | 129 | 16 | TRIDENT I/C-4 | |
| 2 x MADISON | 7350 | 129 | 16 | POSEIDON C-3 | |
| 9 x OHIO | 16764 | 170 | 24 | TRIDENT I/C-4 | |
| 1 x OHIO | 16764 | 170 | 24 | TRIDENT II/D-5 | |

**Table 2**

**SOVIET/US SLBMS**

| | Year (mod) | Range (km) | Warhead | Yield | CEP (1) (m) |
|---|---|---|---|---|---|
| **SOVIET** | | | | | |
| SS-N-6 | 1968 (1) | 2400 | 1 | 1MT | 1850 |
| | 1974 (3) | 3000 | 2 | 1MT | 1300 |
| SS-N-8 | 1972 (1) | 7800 | 1 | 1MT | 1500 |
| | 1973 (2) | 9100 | 1 | 800KT | 900 |
| SS-N-17 | 1977 | 3900 | 1 | 500KT | 1400 |
| SS-N018 | 1977 (1) | 6500 | 3 MIRV | 500KT | 1400 |
| | 1977 (2) | 8000 | 1 | 1MT | 900 |
| | 1978 (3) | 6500 | 5 MIRV | 500KT | 900 |
| SS—N—20 | 1981 | 8300 | 6 MIRV | 100KT | 500 |
| SS-N-21 (cruise) | 1987 | 3000 | 1 | | |
| SS-N-23 SS-NX-24 (cruise) | 1985 | 8300 | 10 MIRV | 100KT | 900 |
| **USA** | | | | | |
| POSEIDON C-3 | 1971 | 4600 | 10 MIRV | 40KT | 450 |
| TRIDENT I C-4 | 1980 | 7400 | 8 MIRV | 100KT | 450 |
| TRIDENT II D-5 | 1989 | 9000 | 8-12 MIRV | 150KT | 120 |
| TOMAHAWK (cruise) | 1983 | 2500 | 1 | 200KT | 280 |

(1) Circular Error Probable — the radius of a circle around a target within which there is a 50% probability that a weapon aimed at that target will fall.

complete solution. In geostationary orbit satellites are too high to provide effective resolution for ocean surveillance, while in low-earth orbit coverage is transitory and they are vulnerable to anti-satellite weapons. Detection sensors beig investiaged include those making use of infra-red, lasers, radar, gas analysis, radiation emission, and sub-atomic particles.

Despite recent press reports, a significant technological breakthrough has yet to be achieved. (14) The signatures investiaged, such as submarine wakes, though theoretically detectable, are in reality highly variable and susceptible to loss in normal background noise. For the foreseeable future there is little likelihood of a single major advance in non-acoustic detection, particularly one that would not soon be exploited or decoyed by both sides. Any relative advantage is likely to be short lived. In fact the more that is learnt about the ocean the more variables are discovered that need to be considered. Despite the capabilities beig realized by high speed data processing the ocean is becoming "more opaque" rather than transparent. (15) To overcome this the Soviets particularly, stress combined operations and appear to work under the assumption that large numbers of even limited-capability devices may achieve an overall success. (16)

## Tracking

If a SSBN is detected the sensor, either acoustic or non-acoustic, must then be able to track and cue tactical ASW forces to trail and/or prosecute. As detection, classification and tracking of submarines is a slow and involved process it would be unrealistic to expect surface and air elements to do so unopposed, particularly in a Soviet bastion. The USN regards the SSN as the only asset with the necessary stealth to track a SSBN for a prolonged period, whilst remaining undetected itself, and only the SSN can follow a SSBN under the arctic ice. Thus, though other ASW assets may asist with detection and reporting it is the SSNs that are the primary means of prosecuting SASW.

The reliance on SSNs is not without problems. The Soviets regard mines as one of teh most important and effective weapons in conducting both offensive and defensive ASW. (17) Minefields deployed at bastion choke points have been claimed to render the forward deployment of US SSNs impossible. (18) In addition, the report on ASW by the US advisory panel found that because of Soviet quietening, US SSNs may be forced to use their active sonar much more, thus losing their covertness.

> "The immediate consequence of this is that the survival ability of Western attack submarines has been reduced." (19)

Finally, it has also been calculated that each deployed SSBN would require 3 SSNs to maintain a trail. Currently neither superpower could maintain such an effort over the entire enemy SSBN force, even if other vital tasking was ignored.

## Targetting

If SSBNs are not constantly trailed by an SSN then the tracking sensor must also be able to pass reliable targetting data to another firing unit. These and other communications may be subject to jamming and the information, subject to delays of processing and decision may still arrive too stale for acceptable accuracy. To further add to delays, SSNs, to avoid compromise, cannot maintain continuous two-way communications.

Unless caught unprotected in port the actual destruction of a SSBN poses additional problems. Firstly a weapon must be available that is capable of overcoming any decoys, jamming or submarine manoeuvre. Then the weapon must be delivered with either sufficient accuracy to enable it to acquire the target or sufficient kill radius to allow for errors in targeting. Nuclear ASW weapons do have a large kill radius but a nuclear detonation would also unpredicatably alter the acoustic environment. Such a detonation would almost certainly prevent any further contact on the target and may prevent a kill being confirmed.

A possibility sometimes advanced is that a nation realiing the limited capabilities of conventional weapons could attempt an indiscriminate barrage of SSBN force operating areas with plunging warhead ICBMs. This 'area-santization' has been outdated by the open ocean capabilities of modern SSBNs. (20) It would be infeasible even with reliable real-time targetting as the time-late of missile arrival would mean an unacceptably large proportion of the strategic arsenal would be wasted. (21)

## Timing

A final problem associated with SASW is timing. If the purpose of the SASW campaign is to ensure immunity to a possible SLBM strike then virtually all of an enemies SSBNs must be destroyed within minutes, while a total disarming strike would need to be coordinated with simultaneous attacks on all other strategic assets. Preparations for such attacks could not be kept secret and from the above discussion

**A Soviet Delta III Class SSBN**

it can be seen that simultaneous SSBN destruction is virtually impossible. Realistically SASW would only involve the gradual attrition of SSBNs.

Though the SSBNs themselves are secure from a sudden strike an area of possible weakness in the SSBN forces is the vulnerabilty of their command, control and communciations (C3). C3 assets ashore then to be soft targets and the disruption of sucure and reliable communications would hamper any attempt to use a strategic reserve force as a bargaining chip. Both the US and USSR are expanding great efforts to ensure that their C3 would survive any such 'decapitation' strike.

## Strategic Balance

Is a SASW campaign then, a rational objective or a destabilising risk? Firstly, it appears unlikely that the SSBN force would be under an immediate and obvious threat. However, if a threat does appear to be developing a nation's reactions will depend on many variables. For example how many SSBNs are being sunk and in what circumstances. Is it a concerted effort or at random? An accurate appreciation of the underwater picture will be of paramount importance. The trailing of Soviet SSBNs occurs regularly in peacetime and if the US Navy is to be believed their SSNs are able to do so undetected. Therefore, in times of tension an increse in trailing activities would be equally difficult to detect. Another consideration is that SSBNs operate completely passive, there is therefore the poossibility that a nation would not even be aware of the loss of an SSBN for some days or perhaps weeks.

It would be unthinkable that conventional war plans would not have taken possible SSBN attrition into account. Conflict therefore, would not be automatically escalated in response to the loss of some of the SSBN force. Certainly the probable existence of bastions indicates the acceptance of a threat by the USSR and therefore the expectation of some losses. The escalation of a conventional conflict to a nuclear one through SASW is unlikely if the superpowers can rely on the maintenance of the other elements of their strategic forces. On the Soviet side there is evidence that they have a high degree of confidence in the survivability of their ICBMs and the continued maintenance of some three quarters of their strategic force

on land would support this. (22) Similarly the US strategic Triad is based on the principle that deterrence can be maintained by the other legs if one is disabled.

However, though the risk of escalation may be acceptable an SASW campaign is still unlikely to achieve its stated aims. Firstly the threat to SSBNs with current capabilities is not great enough to cause complete uncertainty in their survivability. Some SSBN attribution will have been taken into account in planning and potential options. Secondly if a furture conventional conflict is short-lived, as seems likely, then SSBN losses are unlikely to become unacceptable within the timescale. A nation would not therefore feel it is losing a vital strategic option. Thirdly if both superpowers are reaching the practical limites of quietening then in the Soviet example they may no longer feel the need to deply SSBNs in bastions. This would release the protective forces to other duties more able to influence the conduct of the war. Lastly the destructive potential of even a single SSBN means that unless all SSBNs are sunk or disabled the threat of unacceptable damage would remain.

## Arms Control

A final point to be considered in SASW is the Strategic Arms Reduction Talks (START) and other forms of arms control. As part of an overall reduction in strategic weapons START aims to reduce the numbers of SLBM warheads held by both superpowers. A perceived danger in this is that by proxy START will also mean a reductionin SSBN numbers. This would enable the same number of SASW assets to concentrate on a much smaller problem, therefore increasing the chances of success and increasing the escalatory risk of SASW. For the USA, with a presently planned force of only 20 SSBNs by the end of the century this risk could be extremely significant. However, this problem has tended to be overstated. An possible solution could be to maintain a larger number of SSBNs but with a number of missile tubes made inoperative. Other solutions would be to reduce the number of warheads on each missile or to producee larger numbers of a smaller submarine.

A further factor in maintaining the deterrent after START is the deployment of nuclear cruise missiles by both superpowers. These weapons are not yet included in the arms control agenda. Cruise missiles have enabled the sea-based strategic forces to diversify and they cannot be discounted in the future strategic equation.

Other arms control proposals have focussed on the need to protect SSBNs to maintain their essential role in deterrence. These types of proposals face additional problems. To begin with neither superpower appears to have the incentive to negotiate for protection while SSBNs appear relatively invulnerable. A complete moratorium on SSBNs is infeasible because, either through lack of time for evaluation or the absence of a unique signature, it will not always be possible for ASW forces to positively identify a submarine by type. SSBNs therefore, may well be targeted unintentionally. The abolition or reduction of the greatest threat to SSBN, the SSN, is also unlikely owing to its importance in tactical warfare. Finally a ban on ASW research would be unacceptable while other types of submarines continue to pose a threat to shipping.

## Conclusion

In conclusion both the Soviet Union and the US are actively examining the role of strategic ASW. Though both claim competence it is generally agreed that currently only the US has a realistic capability and even then only against a small proportion of SSBNs. The uncertainties of conflict ensure that there will always be some risk in a SASW campaign. However, it appears unlikely that in times of conventional war a nation would automatically escalate to a full scale nuclear exchange, and thereby commit suicide, if some of its SSBNs are sunk.

Future aspects of SASW and its role in the US Maritime Strategy remain to be considered. If, as has been reported, there is a finite limit to submarine quietening then the US is unlikely in the future to maintain its current ASW advantage. The US may be forced to modify its strategy if futher improvements in Soviet SSBNs allow them to operate securely in open-ocean areas. Such operations would allow Soviet protective forces to be redeployed from the bastion and force and US to pull back more forces to protect Western SLOCS.

At present there is little likelihood of a technological breakthrough that would render either SSBN force completely vulnerable. Additionally both sides realise the importance to the other of the SSBN force. However, if a breakthrough in detection and targetting did occur, which critically threatened SSBN safety, then both sides may find the incentive to negotiate some form of ASW arms control. There is even the remote possibility that this could lead to secure bastion agreements for both forces.

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# ANI DINNER HMAS HARMAN 11 MAY 1990 PRESIDENT'S ADDRESS

The role of the Naval Institute is to encourage and promote the advancement of knowledge related to the Navy and the maritime profession, The institute is important because there is a lack of appreciation of maritime affairs in the community at large, and many Naval persons lack in depth appreciation of strategic maritime matters. They do not understand the need for sea power in the defence of Australia.

If the institute is to play its assigned role however, it must have a sound financial basis. Unfortunately, due to falling revenue from Journal advertising, this time last year our financial basis was far from sound.

Enter the Friends of the Naval Institute. Ladies and gentlemen with their help, the Institute can re-establish itself as a credible forum for the exchange of ideas concerning the maritime defence of Australia. Please bid them welcome.

Tehe members of the Friends coterie for 1990 are

Thompson Sintra Pacific

Australian Defence Industries

GEC Marconi

Jueman Schnieder

Scientific Management Associates

Krupp Atlas

Computer Sciences Australia

Avco Consultants

Blohm and Voss

Scientific Electronics

Rockwell Ship Systems

Westinghouse Electric

Pacific Dunlop Batteries

Their friendship is of great benefit to the Institute. I hope to repay the assistance they give by hosting their attendance at ANI functions. Principally, this will be the Vernon Parker Oration and I hope for two this year.

I have arranged, with the support of the Maritime Commander, Rear Admiral Ian McDougall, for their representatives to sea ride in Fleet units on an occasional basis, and I intend that they be our guests at the next in the ANI's Seapower series of seminars during the second half of 1990. I hope that the association will be professionally rewarding for everyone involved, both friends and institute members.

Thank you all for demonstrating your support for the Institute. May it continue to develop as it has in the past year.

To ensure that those attending tonight do understand the importance of sea power in the defence of Australia as we approach the 21st century, I have asked the Acting Chief of Naval Staff Rear Admiral Doolan to address this and other relevant issues.

Ladies and Gentlemen, Admiral Doolan.


**The Federal Government's Two-ocean Navy policy came a step closer to fruition with the arrival of the replenishment oiler HMAS WESTRALIA (A0195) at the HMAS STIRLING fleet support facility in Western Australia on 20 December, 1989. HMAS WESTRALIA is seen at sea the day before her arrival after carrying our a RAS with the destroyer escort HMAS DERWENT. Photo: Navy Public Relations (WA)**

# THE FUTURE ROLE OF THE NAVY IN THE DEFENCE OF AUSTRALIA

**ADDRESS BY REAR ADMIRAL K.A. DOOLAN RAN**
**TO THE**
**AUSTRALIAN NAVAL INSTITUTE DINNER**
**ON FRIDAY 11 MAY 1990**

Thank you for your kind invitation Mr President. I am honoured that you asked me to speak to the ANI this evening and, like you, I am delighted that so many of the friends of the ANI are able to be present.

In his book "Command of the Sea", subtitled "The History and Strategy of Maritime Empires", The American author Clark Reynolds observed that

'Without land frontiers to defend, a maritime nation may minimise its army for home defence and simultaneously be able to project its commercial and naval strength overseas. Placed in the dominant geographical position relative to rival land powers, oceanic states such as Ancient Athens, modern Great Britain or the contemporary United States have been able to emerge as domiant maritime nations. And their strategies have rested upon their ability to command the sea.'

I have chosen this quote from Clark Reynolds' book because it drives home two of the essential points I mmust make in speaking about the subject the ANI President asked me to address, "The Future Role of the Navy in the Defence of Australia". The first point is, that like both ancient and modern thalaassocracies, Australia has no land frontiers to protect; these very favourable geographic circumstances alone provide us with an enormous measure of protection. The second point which flows from the introductory quote is that, like other maritime nations, our defence strategy rests in large part on our ability to use, or if the occasion arises, to take command of the sea, even if only temporarily.

Of course, neither of these points is a revelation. From the outset of European settlement on the Australian continent, we have depended for our well-being and security on our surrounding seas. Nothing in the 202 years since then, even including the gigantic strides that mankind has made in advancing knowledge and harnessing technology, has lessened the importance and validity of these factors.

The importance of our maritimed surrounds on Australia's economic wellbeing can be gauged from the fact that 98% by volume of our exports are carried by sea, and significant amounts of minerals, fuels and general cargo are carried by coastal shipping. Additionally, around 90% of Australia's oil and gas reserves are located offshore and the newly opened North West shelf gas fields are expected to earn $2B annually by the year 2000.

Ladies and gentlemen, it is my contention that for the foreseeable future, Australia's island status and our ability to make the very best use of our vast maritime surrounds for whatever purpose is in our national interest, will be key determinants of our future porsperity and safety.

Thus I see the role of the Royal Australian Navy in the defence of Australia as being an ongoing and essential ingredient in the national endeavour of both preserving the peace and of playing a vital part in promoting Australia's wider interests in our region. To do this, our Navy will have to be of sufficient strength, capability, versatility and quality to be able to carry out the multitude of tasks that may well fall to it.

Specifically, the RAn of the future will need to be perceived by others in our region as a force to be reckoned with; as a visible manifestation of Australia's intention and ability, not only to look after its own defence needs, but also to reassure others, particularly in our region, that we mean what we say about ensuring the maintenance of regional stability, and the continuance of peace.

To do all this we will need to be able to operate effectively on, under and over the waters in our maritime surrounds, or, if needs be, further afield in what is termed Australia's area of direct military interest, a vast area

stretching over 7000 kilometres from the Cocos Islands to New Zealand and the Islands of the South West Pacific, and over 5000 kilometres from the Archipelago and Island chain in the north to the Southern ocean. The sorts of tasks I envisage include surveillance and patrol in coastal waters; intelligence oriented tasks throughout our region; control and protection of the merchant shipping in time of tension so as to ensure that this vital economic connection to the rest of the world is not interrupted; maintenance of a forceful Australian presence for as long as may be necessary in open ocean areas in the region; and in times of tension or low level conflict, deployments of regionally powerful submarine and surface forces along with the necessary air assets, in support of Australian diplomatic and other measures aimed at processing our national interests.

Of course, this list is by no means exhaustive, and it is possible that our future Navy's tasks could include minewarfare operations, both defensive and offensive; and sealift tasks for the other elements of the defence force. And may I emphasise, that I do not see our future navy in any way going it alone in any tasking. Whatever we are required to take on will undoubtedly be in consonance with supporting activities by both the Army and the Air Force. Indeed, there may be future taks where our Navy is in support of one or both of our sister services.

How then might this be achieved? Do we keep on going down the same track we are now embarked upon? Do we grasp the possibility of "peace in our time" and trust that others will not try to use our maritime surrounds for their own purposes, regardless of whether they are inimical to ours? Or do we set out in some radical new direction, with the future role of the Navy much ore aligned to hoped for technological advances?

In my view, our Navy of the future will be shaped, and its role reinforced, by elements from all these possibilities. Clearly with the naval reequipment program now well underway, Australia will remain a significant naval force to be reckoned with in our region well into the next century. That reequipment program, with its emphasis on a self-reliant posture through Australian manufacture and support for defence equipment, has already engaged the minds of some of our neighbours. However, the preception of Australians as to the peacefulness of the world, and in particular our region, will undoubtedly be a significant factor in determining the extent to which they are prepared to continue funding by Navy, and hence our ability to continue to be a stabilising influence in the region.

The "swords into ploughshares" ideal is as powerful today as it was in ancient times, and one of the greater challenges for those who will be charged with our maritime defence in the future will be to gain, and maintain, the support of the Australian people for the ongoing need for sufficient high quality naval forces to ensure our safety. And in this force, the use of advances in technology will be essential. This is not to say, for example, that we should abandon displacement hulls for surface warships and go all out for such things as catamaran hull with its evolution towards a combined catamaran and centrally placed, but somewhat higher, wave piercing hull. Rather, as evidenced by such current projects as our minehunting catamarans and minor survey vessels or the airborne laser depth sounder, it is to make the point that we must continue to keep up with technological developments in platforms, weapons and sensors; for it is only by doing so that Australia's Navy will retain the qualitative edge without whict it will lose its regional significance.

But quality does not depend solely on the effectiveness and modernity of equipment. There can be absolutely no doubt that the effectiveness of the Royal Australian Navy of the future, and its ability to successfully undertake the role and functions I have suggested will be required of it, will depend primarily upon those Australians who man, support and maintain our fleet in the years ahead.

Just a few moments ago, I spoke of the challenge I saw in maintaining the support of the Australian people for their navy. A very significant part of that challenge will be to attract, recruit, train, and then retrain, the necessary number of Australians to ensure the viability of our Navy. Maritime forces in our region are increasingly being manned by more highly educated and more technically competent personnel and, in my view, this trend is unlikely to be reversed, at least in the short term. Another trend is unlikely to be reversed, at least in the short term. Another emerging trend concerning manpower is that towards minimum manning of ships. One exciting manpower is that towards the requirement for precursor minesweeping is the unmanned drone boat — the ultimate in minimum manning. Other steps we are taking towards reducing manpower include the increasing use of automation in new units — the Collins class is a good example. However, in spite of the

ever increasing sophistication of technology in weapons, sensors and automation, and the trend towards further reductions in the size of our ships' companies, if we are to maintain our qualitative edge we must attract and retain in naval service the necessary number of highly competent and dedicated naval service to ensure that we are the regional pace setters in this regard. There can be no doubt that the future effectivenes of the RAN in fulfilling its role will in large part depend upon the perception of regional countries and others of the calibre of the Australians who man our fleet in the future.

Being there, or having the ability to be there when needed, and being recognised professionally as a force to be reckoned with, are key attributes of naval forces. Australia's Navy has these attributes, and this along with the apparent acceptance by other countries that we have no hostile intent towards them, means that our Navy is accepted as being a regionally stabilising force. As we look to the future I believe Australia's best interests will be served by maintaining these attributes.

While we are here together tonight, our Navy is out and about our region, supporting a wide range of Australian initiatives and endeavours and doing it well. Indeed it is pleasing to note that our Minister for Foreign Affairs, Senator Gareth Evans, recently said:

'The high prefessionalism displayed by the RAN, and the good relations established with local communities through sporting contacts and the community welfare projects undertaken by ships' companies enhance Australia's overall standing and reputation in the region and are a valuable support to our diplomatic presence.'

Simultaneously the Navy is making it clear that we have the ability to be there should the occasion demand. This Navy presence mission, whether very obviously effected by the deployment of a surface combatant task group, or whether implied by Australia's maintenance of a highly credible submarine force, will continue to be relevant for the foreseeable future. It will be every bit as important that, throughout the decade of the nineties and through into the next century, Australia's Navy has the versatility, strength ad spread of capabilities to continue this important task in furtherance of our national aims of maintaining freedom and protecting our quality of life.

**An artist's impression of the proposed Royal Australian Navy submarine school to be erected within the precincts of the HMAS STIRLING fleet support facility on Garden Island.**

# USING MILITARY TECHNOLOGY FOR HUMANITARIAN ENDS — PART 2

## 2.0 HUMANITARIAN PRINCIPLES FOR VICTIM PROTECTION IN CONFLICTS OF THE POST-WORLD WAR II UNITED NATIONS REGIME

### 2.1 Introduction

Victims of armed conflict in the post-World War I United Nations regime look predominantly to two sources of conventional legal protection: the 1949 Geneva Conventions[25] and the 1977 Protocols.[26] At the time of their drafting, the 1949 Geneva Conventions consolidated humanitarian principles recognized and previously applied in combat situations and humanitarian principles acknowledged either wholly aspirationally or acknowledged and applied selectively during earlier conflicts. In part, the Protocols — particularly Protocol I — codify pre-existing rules of customary international law, and in part, formulate new rules based upon fundamental humanitarian principles located throughout customary and conventional international law. The Protocols do not reformulate the law of the Geneva Conventions, but rather, supplement it.

### 2.2 Concepts and provisions common to the 1949 Geneva Conventions and Protocol I: protection of victims of international armed conflicts

Six concepts or provisions are common to the 1949 Geneva Conventions and Protocol I: (1) scope of application; (2) prohibition of reprisals; (3) non-renunciation of rights; (4) supervision; (5) sanctions; and (6) dissemination.

The Geneva Conventions and Protocol I apply in the event of war or in any other so-called international armed conflict arising between two or more of the parties to the Conventions or Protocol I from the outbreak of the conflictual situation, even if, in the event of a war, the state of war is not recognized by one of them.

Protocol I includes in the definition of international armed conflict situations in which peoples are fighting against racist regimes in the exercise of their right of self-determination.[27]

Application of the law continues until the close of military operations and, in the case of occupied territories, until the end of that occupation, except for those persons for whom repatriation or resettlement will take place subsequently.[28]

Under the so-called *Martens* clause, civilians remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of conscience where the relevant conventional law is incomplete, inadequate or has been renounced.[29]

Reprisals are permitted only in the conduct of hostilities. Violations of the law in response to other violations of the law are at all times prohibited against the wounded, sick and shipwrecked, medical services and personnel, civil defense services and personnel, prisoners of war, civilians, and cultural property and the natural environment.[30]

The principle of non-renunciation of rights applies to all the rights which protect war victims, *viz*, military and civilian personnel and the wounded, military and civilian sick and shipwrecked persons, prisoners of war, civilian internees, inhabitants of occupied territories and foreigners on the territory of a party to the conflict. In order to ensure their protection, these persons should not be placed in a situation which would induce them to compromise their status: under no circumstances may they renounce the rights guaranteed them under the law.[31]

Despite proposals advanced in the Conference debates to hasten the appointment of a person charged with overseeing the application and enforcement of the humanitarian principles expressed in the conventional law, provisions dealing with Protecting Powers do not differ substantially between the two documents. Parties to a conflict are responsible for securing the co-operation of a Protecting Power and of submitting to its supervision. In the event that the belligerents are unable to agree upon an appointment — particularly likely in the case of conflicts between entities of a dissimilar cultural heritage or between entities involved in an art 1(4) conflict[32] — the ICRC will offer the parties its assistance in the designation of Protecting Powers. The ICRC made clear in Conference debates that, for reasons of wanting not to give even the appearance of non-neutrality, it would act only upon invitation and not of its own initiative.[33]

The presence of the Protecting Powers does not conflict with the humanitarian activities entrusted to be executed by the ICRC or any other humanitarian organization. At all times, ICRC delegates are authorized to and should be accorded such facilities as are needed to execute their humanitarian responsibilities.[34]

Certain articles of the 1949 Geneva Conventions and Protocol I enumerate offenses (1) which of a degree such as to subject the offender only to administrative or disciplinary sanctions; and (2) which amount to grave breaches, and as such, constitute war crimes.[35]

All states parties to the Conventions and Protocol I are bound to take those steps necessary to prevent the commission of actions contrary to the law. Additionally, the documents require governments to enact such legislation as is necessary to provide effective penal sanctions for persons committing or ordering the commission of any of the listed grave breaches. Owing to the universality of the sanctions imposed upon grave breaches, a state will be required to extradite an offender whenever that state has not summoned the accused to answer to its own legal system.[36]

Finally, parties are under an obligation in time of peace, as well as in time of war, to see that the military, in particular, and also civilians, receive adequate instruction in the humanitarian principles represented throughout the law. Parties are also bound to ensure that legal advisers are available to advise military commanders on the application of the relevant conventional law and to instruct their armed forces thereon.[37]

### 2.3 Protection of the wounded, sick and shipwrecked under the 1949 Geneva Conventions and Protocol I

The First and Second Conventions[38] diverge little from one another except in the category of the victim protection: the first concerns the wounded and sick in armed forces on the field, while the second concerns the wounded, sick and shipwrecked members of armed forces at sea.[39] Protocol I extends the protection to wounded sick and shipwrecked civilians, as well as members of the armed forces.[40]

Wounded and sick are defined as military or civilian personnel who refrain from any act of hostility and who are in need of medical care. Shipwrecked are those military or civilian persons who refrain from any act of hostility and who are in a perilous situation at sea or any other waters.[41]

Nine concepts are common to the Conventions and Protocol I: (1) that all wounded, sick and shipwrecked shall be respected and protected;[42] (2) that subsidiary to the right of families to know the condition of their relatives, is the obligation of parties to search for the wounded, dead and missing, and as necessary, to attend to the needs of, to accord proper obsequies to and to report as missing those persons fallen in hostilities'[43] (3) that parties to a conflict must record all available particulars which could help to identify the wounded, sick and dead who have fallen into the hands of the enemies and to provide that information as soon as is practicable to the Central Tracing Agency of the ICRC;[44] (4) that the party concerned is responsible for ensuring that its civilian population respect the wounded, sick and shipwrecked, and commit no act of violence against them;[45] (5) that military or civilian medical units are protected by the Conventions and by Protocol I, including those which belong to a party to the conflict or which are recognized and authorized by a party to the conflict, or which are placed at the disposal of a Party to the conflict by a neutral state or by an impartial international organization of humanitarian nature;[46] (6) that medical transport includes any means of transport, military or civilian, permanent or temporary, assigned exclusively to this purpose and placed under the control of a party to the conflict: the circumstances under which protection is guaranteed these various forms of transport differ as between transport by land, by water and by air;[47] (7) that medical and religious personnel of the parties to the conflict, military or civilian, permanent and temporary, and including civil defense organizations, together with those of the ICRC and other national societies recognized by a party to the conflict shall be respected and protected;[48] (8) that no one shall be punished for having offered or carried out medical services, nor shall one be compelled to carry out acts contrary to the rules of medical ethics, or be prevented from carrying out such acts;[49] and (9) that the distinctive emblem of the Conventions and the Protocol[50] may be displayed only on medical units and by medical personnel protected by the Conventions and Protocol I, and only with the consent of the competent authority, except that the international Red Cross organizations are permitted to use their emblem at all times.[51]

### 2.4 Treatment of combatants and prisoners of war under the Geneva Conventions and Protocol I

The general principle represented in the Conventions and Protocol I relating to the treatment of combatants and prisoners of war is that any members of the armed forces of a party to a conflict is a combatant and any combatant captured by the adverse party is a prisoner of war.[52]

The general principle is supplemented by three rules which further describe and define the combatant and the prisoner of war:

(1) in order to be recognized by the documents under consideration, the armed forces of a party to a conflict must be organized and placed under a command responsible to that party for the conduct of its subordinates; this includes the situation where the party is represented by a government or other authority not recognized by the adverse party. The forces must, moreover, be subject to an internal disciplinary system which, *inter alia*, enforces compliance with rules of international law applicable in armed conflicts; combatants must distinguish themselves from civilians by means of a uniform or other distinctive sign which is visible or recognizable at a distance, while they are engaged in an attack or are preparing to attack. Violation of the prescribes rules may result in adverse consequences to the individual in question, but so long as he carries his arms openly during engagement, he does not forfeit his right to prisoner of war status in the event of capture;[53]

(2) the status of prisoner of war is extended to the following categories of persons who do not qualify as combatants:
   (a) those taking part in a levy en masse, when they carry their arms openly and respect the laws and customs of war;
   (b) persons authorized to follow the armed forces without being directly part of them;
   (c) crews of the merchant marine and civil aviation;
   (d) members of military personnel serving in civil defense organizations;[54]

   and prisoner of war treatment, *sans* status, is accorded the following:
   (a) persons arrested in an occupied territory because they belong to the armed forces of the occupied territory;
   (b) military internees in a neutral country;
   (c) members of non-combatant medical and religious personnel who are part of the armed forces;[55]

(3) in certain exceptional cases, when required by the nature of the hostilities, combatants may be excused from the obligation to distinguish themselves from the civilian population by wearing a uniform or distinctive sign recognizable at a distance during military operations; however, in such situations, these combatants must distinguish themselves by carrying arms openly during the engagement and during such time as they are visible to the adversary while engaged in a military deployment preceding the launching of an attack in which they are to participate; even should they fail to comply with the obligation to carry arms openly, such persons may not be prosecuted for carrying arms illegally either with or without other offenses.[56]

In order to prevent the application of arbitrary measures at the time of capture, a presumption of prisoner of war status is raised in favour of one whoc takes part in hostilities and is subsequently captured; cases of doubt are to be decided by a tribunal at a later date. Should one who has participated in hostilities subsequently be deprived of prisoner of war status, he will continue to benefit from the applicable provisions of the Fourth Convention and Protocol I.[57]

Spies and mercenaries are not entitled to prisoner of war status;[58] children under fifteen years of age shall not be recruited into the armed forces.[59]

## 2.5 Protection of civilians, civilian property and the environment under the Geneva Conventions and Protocol I

### 2.5.1 Introduction

Because the 1907 Hague Conventions[60] treat the general protections which should be afforded civilians during periods of hostilities, and since those rules have acquired a customary character, and are still valid, the Geneva Conventions do not deal with civilian protections apart from a few provisions limited in scope.

Military technique, and more evidently, military technology, have increased in sophistication since the conception of the Hague law: the fundamental principles respecting protections owed civilians have not altered except in the direction of increased scope of protection. In order, however, to elaborate with greater precision those fundamental principles and to take account of some of the technological developments, among other considerations, Protocol I was drafted.

The fundamental principle on which rests the law of armed conflict generally is that in any armed conflict, the right of the parties to the conflict to choose methods or means of warfare is not unlimited. From this basic principle flow two rules, one general and one relating specifically to civilian populations: (1) prohibited is the use of weapons, projectiles and material and methods of warfare of a nature to cause unnecessary suffering; and (2) in order to ensure respect and protection for the civilian population and civilian property, the parties to a conflict are obliged at all times to distinguish between the civilian population and combatants and between civilian property and military objectives, and to direct their opreations only against military objectives.[61]

### 2.5.2 Protection of civilians and civilian property

Civilians are defined as any person not belonging to the armed forces, including those whose status is questioned.[62] Civilian property consists of all property which does not have or does not serve a military purpose; doubt with respect to purpose should always be resolved in favour of civilian use.[63]

Civilian persons and property are meant to be protected against all forms of attack — offensive and defensive, directed and indiscriminate. Particularly cited as violative of accepted humanitarian principles are attacks which treat as a single military objective a number of clearly separated and distinct military objectives located in a particular area. Finally, the principle of proportionality prohibits attacks which cause incidental civilian losses and damage excessive in relation to the concrete and direct military advantage anticipated.[64]

Civilian populations may not be starved: to that end, foodstuffs, crops, livestock, agricultural areas may not be ravaged, potable watger supplies may not be tainted and irrigation and other water works may not be impaired or destroyed. Exception is made for the belligerent on its own territory and only if imperative military necessities require it to do so.[65]

Two particular classes of civilian property have been singled out for special protection under the law: cultural property[66] and works and installations containing dangerous forces.[67] The former include historical monuments, works of art or places of worship which comprise the cultural or spiritual heritage of peoples; the latter, dams, dykes, and nuclear generating facilities.

The same rules with respect to protection against targeting, including loss of protective status in the event of military use, adhere. In the case of dangerous works, somewhat greater latitude is permitted in the definition of military use: protection will only cease if the works are used for the regular, significant and direct support of military operations; attack upon the works must be the only means of incapacitating them. Markings described in annexes to the 1954 Hague Convention[68] and to Protocol I are intended to identify the protected property to the adverse party. These are purely visual and will not be effective against any form of long-distance targeting, *eg* air-, sea-, or land-launched missile or bomb.

Finally, the Fourth Convention provides for the conclusion by parties to a conflict of local agreements for the evacuation from besieged or encircled areas of wounded, sick, disabled and old people, children and women in labour, as well as for the passage of ministers of all religions, medical personnal and equipment on their way to such areas.[69]

### 2.5.3 Protection of the environment

Parties are bound to safeguard the environment against widespread, long-term and severe damage. Methods and means of warfare likely to cause such damage, and consequently to impair the health or survival of the population are forbidden.[70]

### 2.5.4 Other measures designed to protect civilian persons and civilian property

The Fourth Convention allows for the establishment of safety zones and neutralized zones. Safety and hospital zones are intended to protect the wounded, sick and aged persons, expectant mothers, mothers with children under the age of seven, and children under the age of fifteen.[71]

By contrast, neutralized zones are set up in fighting areas and are designed to shelter all persons from hostilities; no distinction is made between those who are and who are not partaking in the hostilities. These zones are established by agreement of the parties.[72]

Finally, an inhabited place near or in a zone in which armed forces are in contact and which are open to the adversary may be declared a non-defended locality. Provided that certain conditions are met regarding non-support of military purpose and use by the non-defended locality are met, no attack may be launched upon it.[73]

Protocol I prohibits the contravention of an agreement between the parties to maintain a demilitarized zone of any sort.[74]. That Protocol also details the permitted scope of humanitarian activities of local civil defense organizations.[75]

Those responsible for planning an attack — at the strategic, tactical and operational levels, are responsible for comprehending the extent of their humanitarian obligations and for ensuring that those obligations are met. This includes verifying that objectives planned for execution are military objectives, avoidance of targeting of civilian areas, including targeting of protected property, and where military operations must be launched, prohibition of the violation of the principle of proportionality, and, when circumstances so allow, advance warning to the civilian population of scheduled attacks.[76]

### 2.5.5 Administration of protections guaranteed civilians and their property

Rules embodied in the developing law of armed conflict and generated from generally accepted or acknowledged humanitarian principles protect all persons who, in the case of a conflict or occupation, find themselves in the hands of a party to the conflict or of an occupying power of which they are not nationals; included in this definition are nationals and non-nationals of the parties to the conflict, as well as nationals of states not parties to the Conventions and the Protocol who find themselves on the affected territory. These rules expand upon the fundamental protections offered by the Fourth Convention[77] and that article, in turn, supplements section III of the Hague Regulations of 1907 on the laws and customs of war relating to occupied territories:[78] their aim is to prevent arbitrary actions by the enemy in whose hands the protected persons find themselves. Both the Hague and the Geneva law have largely been supplemented or replaced by the law of New York.[79]

Essential humanitarian principles dictate that protected persons are, in all circumstances, entitled to respect for their persons, their honour, their family rights, their religious convictions and practices and their manners and customs; they shall at all times be humanely treated and shall be protected especially against acts of violence or threats thereof, and against insults and public curiosity. Women especially shall be protected against such assaults on their persons as rape, forced prostitution, and any form of indecent assault. The state is responsible for any violation of these rules.[80]

The general protections offered in accordance therewith fall into the following categories: (1) facilitation of the rendering of aid;[81] (2) protection of children;[82] (3) protection of women;[83] (4) reuniting of dispersed families and facilitating communication among family members;[84] (5) treatment of refugees and stateless persons;[85] and (6) protection of journalists.[86]

Insofar as persons affected by a situation of armed conflict find themselves in the hands of a party to the conflict and they are not themselves covered by the conventional law, they shall be treated humanely and shall benefit from the fundamental guarantees of the conventional law without discrimination against them. Given the fundamental character of the protections described, it can be argued that even where all entities involved in an armed conflict have not yet expressly subscribed to the relevant conventional law, the protections must be provided to affected civilians and their property.[87]

Essentially, the honor, convictions and religious practices of the persons must be respected. In particular, the following acts are prohibited, whether committed by civil or military agents: (1) violence to the life, health and physical or mental well-being of persons, and especially, murder, torture — physical and mental, corporal punishment, mutilation; (2) degradation of the personal dignity, and especially humiliating treatment, enforced prostitution and any form of indecent assault; (3) the taking of hostages: (4) collective punishments; (5) pillage and (6) threats to commit any of the foregoing acts. Judicial procedures are guaranteed.[88]

Finally, the parties to the conflict must grant the ICRC all facilities within their power to enable it to carry out its obligations under conventional and customary law with respect to the implementation of humanitarian principles in the context of an armed conflict. The parties to a conflict are also obliged to grant their respective Red Cross and Red Crescent organizations the facilities necessary to carry out their humanitarian obligations, as well as to offer those organizations whatever assistance they may need in the execution of their responsibilities.[89]

### 2.5.6 Protections offered to specifically named persons: foreigners on the territory of a party to the conflict, those subject to occupations administration and civilian internees

#### *(a) Treatment of foreigners on the territory of a party to the conflict*

Conventional law recognizes the right of foreigns to leave the territory at the outset of or during a conflict, while recognizing as well, the right of the state affected to detain them if it judges that their departure would be against national interests. Procedures of detention and release are controlled by the provisions concerning aliens in time of peace.[90]

In any event, foreigners on the territory of a party to the conflict benefit from the general protections described immediately above. A number of additional rights are also guaranteed them, *inter alia*, the right to receive individual or collective relief, the right to medical and hospital treatment, the right to practice their religion, and the right to benefit from the measures decreed by the government in favour of certain categories of persons.

Conventional law provides as well specifically for enemy aliens *per se*, together with so-called enemy aliens, who qualify as such because, as expatriates, their *de jure* nationality qualifies or apparently qualifies them as enemy.[31]

Stateless persons or refugees are protected persons within the meaning of the Fourth Convention.[92] It is prohibited to transfer protected persons to a power which is not a party to the Convention; and, in any event, a protected person can, under no circumstance, be transferred to a country where he or she may have reason to fear persecution for his or her political opinions or religious beliefs. Should internment be ordered, the decision must be reconsidered as soon as possible; in case of maintenance of a decision for internment, the decision must be re-examined at least twice yearly.[93]

***(b) Those subject to occupation administration***

Persons subject to an occupying power are covered by the general protection of all persons affected by an armed conflict. Additionally, individual or mass forcible transfers, as well as deportation from the occupied territory to the territory of the occupying power or to any other country, regardless of motive is prohibited.[94] Detailed provisions regulate the responsibilities and conduct of the occupying power with respect to: (1) care of children; (2) regulation of compelled labour; (3) provision of food and medical supplies; (4) maintenance of hygiene and public health; (5) observation of religious practices; (6) facilitation of internal and external relief operations; and (7) protection of real and personal property individually and collectively owned and property publically owned.[95]

Penal legislation must guarantee procedural and substantive due process; no death sentence may be executed before at least six months have elapsed from the time the sentence was notified to the protecting power. Refugees are specially protected.[96]

Humanitarian relief and assistance activities may not be impeded by the occupying power except to the extent that exceptional measures may be imposed for urgent security reasons.[97]

***(c) Treatment of civilian internees***

In the case of enemy civilians on the territory of a party to the conflict, as well as that of protected persons in occupied territory, the operative humanitarian principle prescribes that if the detaining power considers it necessary, for imperative reasons of security, to take safety measures concerning protected persons, it may at the most, subject them to assigned residence or to internment.[98] In the event of internment, however, the Convention describes the permitted conduct of the detaining power with respect to the following items: (1) management of property; (2) facilities for legal proceedings; (3) visits; (4) working conditions *only if* the civilian internees elect to work; (5) preservation of the family unit; (6) release of certain categories of internees, including those requiring hospitalization, the wounded and the sick, those detained for a long period of time, children, pregnant women and women with infants and young children.[99] As soon as possible after the conclusion of hostilities or occupation, the detaining states must ensure the return of all internees to their last place of residence or otherwise facilitate their repatriation.[100]

## 2.6 Protection of victims of non-international armed conflicts

### 2.6.1 Introduction

The general rules regulating conduct with respect to non-international armed conflicts relate to two paradigmatic situations: (1) that in which within a state's territory, clear and unmistakeable hostilities break out between the armed forces and organized armed groups; and (2) that in which dissident forces are organized under the leadership of a responsible command and exercise such control over a part of the territory as to enable them to conduct sustained military operations. The former is described by article 3 common to the four Geneva Conventions; the latter by the Additional Protocol II.

### 2.6.2 Common article 3 of the Four Geneva Conventions

Common article 3 of the four Geneva Conventions applies to all armed conflicts of a non-international character and occurring on the territory of one of the powers parties to the Conventions. Thereunder, persons taking no active part in the hostilities, including members of armed forces who have laid down their arms and those who are *hors de combat* for any other reason will in all circumstances be accorded a minimum of humane treatment without any adverse distinction.

The latter is defined to prohibit at all times and in all places the following acts: (1) violence to life and person, particularly murder, mutilation, cruel treatment and torture; (2) the taking of hostages; (3) outrages upon the personal dignity, particularly humiliating and degrading treatment; and (4) the passing of sentences and carrying out of executions without previous judgement pronounced by a regularly constituted court, affording the judicial guarantees which are recognized

by civilized peoples. A humanitarian organization such as the ICRC may offer its services to the parties to the conflict; furthermore, these parties should endeavour to bring into force, by means of special agreement or otherwise, all or part of the provisions of the Conventions. In any event, application of the Convention provisions does not affect the legal status of the parties to the conflict.[101]

### 2.6.3 Additional Protocol II

#### *(a) Introduction*

Where there is intensive fighting, and in the absence of the acknowledgement of a state of war involving the application of the entire law of war, both the provisions of common article 3 and the rules of the second additional Protocol apply. All persons who do not take a direct part in the hostilities must be treated humanely in all circumstances and must benefit from the fundamental guarantees embodied in humanitarian principles without discrimination.

The detailed expression of these principles demands that performance of the following acts is prohibited: (1) violence to the life, health and physical or mental well-being of the person; (2) outrages upon the personal dignity; (3) the taking of hostages; (4) collective punishments; (5) threats of any of the foregoing; (6) withholding of medical care, food, hygiene, relief and prohibitions with respect to the practice of one's religion, as regards persons deprived of their liberty for any reason; (7) the pronouncement of sentences without according the person due process by a court offering the essential guarantees of independence and impartiality; and (8) neglecting fundamental responsibilities with respect to children, including a duty to educate and an obligation to facilitate the maintenance of the family unit.[102]

#### *(b) Protection and care of the wounded, sick and shipwrecked*

All wounded, sick and shipwrecked must be respected and protected, treated humanely and cared for without distinction except medical. When circumstances so demand, all measures must be taken without delay, to search for and collect the wounded, sick and shipwrecked and to ensure proper obsequies for the dead. Medical personnel, at a minimum, must not be impeded in the execution of their responsibilities, and should, rather, be respected, protected and helped in connection therewith. Similarly, medical units and transports must be protected and respected. The distinctive emblem of the international Red Cross and the Red Crescent must be properly used and observed accordingly.[103]

#### *(c) Protection of the civilian population and civilian property*

The aim of Protocol II is to extend to victims of non-international armed conflicts, the protections described by the fundamental humanitarian principles which comprise Protocol I. Thus Protocol II mandates that neither the civilian population, nor individual citizens may be the object of attacks; acts of terrorism against them are prohibited. Starvation of the civilian population is prohibited; and the displacement of the civilian population may only be ordered if the safety of the state in question or imperative military reasons demand it. So long as civilians forego taking a direct part in hostilities, they are afforded the benefit of the Protocol II protections; in the event of widespread non-urban guerilla warfare, this determination may not be easy to make. Finally, relief societies are entitled to offer impartial humanitarian relief, subject, however, to the consent of the high contracting party concerned.[104]

Cultural property, property indispensable to the survival of the civilian population and works and installations containing dangerous forces must not be attacked. With respect to the latter, this is so even if they are military objectives: in this case the principle of military proportionality operates presumptively to protect the affected civilians.[105]

## ANNEX II

### 3.4 A preliminary listing of selected military technology for use in the implementation of humanitarian law obligations

#### 3.4.1 Introduction

The following section reviews one segment of military equipment that lends itself particularly well to the implementation of humanitarian principles under international law. Military vehicles and ground support equipment can be used, among other things, to sweep and clear ground

mines, to search for and to sanitize against nuclear, biological and chemical refuse, to clear away debris, to raze dangerous structures and to erect new structures — temporary and permanent — in assisting civilians return to a pre-conflict existence, and to assist in evacuation and resettlement efforts.

Much of this equipment is fairly expensive, and although not technologically highly sophisticated, would probably better serve its users if they were trained in its use and maintenance. Where this is not possible, most of the equipment could probably be used nevertheless. This suggests that donor states and non-statal entities[11] should, whenever possible, pair equipment with training teams. Within a range of equivalent equipment, I have selected items for price, durability and sophistication differences. Little, if any of the equipment, would cause a state an information loss hardship: the equipment I considered has been published in a commercial source.

The equipment can be classified into ten categories: (1) armoured engineer vehicles, (2) recovery vehicles and equipment, (3) bridging systems, (4) mine warfare equipment, (5) transport equipment, (6) construction equipment, (7) demolition equipment, (8) field fortifications and related emplacements equipment, (9) nuclear, biological and chemical [NBC] equipment, and (10) miscellaneous equipment.[12]

Equipment from each of the classification groups is listed under the above-described functional categories, which latter are designed to implement observance of humanitarian principles.

### 3.4.2 Mine-detection and mine-clearing

The primary function of the equipment listed below is mine detection. Most of the units are hand-held; some are vehicle mounted. Particularly where extended swaths of terrain or rugged terrain are the targets of mine-clearing efforts, the latter are useful.

- M62 Mine Detector [hand-held; simplest and probably least expensive of mine detectors described; can detect metallic and plastic mines with some metallic components] (Bulgaria)
- Scintrix Explosive Ordnance Detector Magnetometer V-92 [hand-held; highly sensitive; can be used on land and underwater] (Canada; in service in USA and several other countries)
- Mine Detector MSG1 [vehicle-mounted; detects both metallic and non-metallic mines; remote control equipment may be installed to enable vehicle to be operated from a safe distance] (Federal Republic of Germany; prototype)
- Foerster Search Instrument FEREX 4.021 [hand-held; land, underwater and borehole applications] (Federal Republic of Germany; in service with UK, Sweden, some other NATO countries and several undisclosed countries)
- BETA BMD-34 Metallic Mine Detector [hand-held; designed for use under severe environmental conditions; immersion proof in two metres of water; shock and vibration proof and has EMI protection] (Israel; in service with several undisclosed countries)
- DIM Vehicle-mounted Mine Detector [vehicle-mounted; land and underwater applications; no provision made for remote control of vehicle; system mounted on T-62 MBT's in Afghanistan] (USSR; in service with Warsaw Pact countries and some other countries in Middle East)
- MILDEC Metallic Mine Detectors [hand-held; detectors incorporate a unique method of body-mounting the search probe which leaves the operator's hands free during the search enabling operator to carry an automatic weapon or radio; operator can quickly jettison equipment by use of quick-release clasps built into harness] (UK)
- AN/VRS-5 Vehicle-mounted Road Mine Detector System [vehicle-mounted; capable of finding metallic and non-metallic mines at rapid rate along unpaved roads and trails or on fairly flat and sparsely vegetated ground; designed to be fitted to the front of an armoured personnel carrier or any other standard army vehicle, such as a jeep or truck; has a high detection rate and a low false-alarm rate] (USA)

The primary functions of the equipment listed immediately below is mine-clearing. Given their bulk and efficiency, such equipment is well-suited to large scale and particularly hazardous mine-clearing expeditions.

- Rapid Land Mine-clearance System [vehicle; earth spaded to expose mines which are then smashed or detonated] (Federal Republic of Germany; under development for NATO countries)
- Full Width Mine-Plough [vehicle; used for the mechanical clearing of a five-metre wide path through anti-tank minefields to open safety lanes for tanks, APC's and other vehicles; can be used in most soil types other than rocky ground and can also be used to clear scatterable mines] (Israel)
- Cleared Lane Explosive Widening and Proofing Charge (CLEWP) [explosive mine charge used to clear a 150-metre long path through a minefield thereby allowing the safe passage of tanks and other vehicles] (Israel)

— Japanese mine clearing equipment [two types known: tank-mounted mine-clearing roller system; rocket-propelled explosive filled mine-clearing charge] (Japan)
— *Bangalore Torpedos (Singapore; Spain; USSR; USA)*
— Tank-mounted Mine-clearing Rollers [various types; rollers detonate mines as tank moves forward] (USSR; in service Warsaw Pact countries, Yugoslavia and a number of countries in the Middle East, including Egypt and Syria)
— Pearson Mine Ploughs (UK; in service in Peru)
— Fuel Air Explosive for Mine-clearing Operations (USA)
— Vehicle Magnetic Signature Duplicator (VEMASID) [designed to detonate magnetically-fuzed mines before the carrier reaches them] (USA)

Minefield marking equipment is used to designate cleared lanes through minefields. Various forms of this equipment are manufactured by the below-listed states.

— France
— Federal Republic of Germany
— Israel
— UK
— USA

### 3.4.3 Searching for and sanitizing against nuclear, biological and chemical refuse

Nuclear, biological and chemical equipment is designed to serve the following purposes: (1) protection; (2) decontamination; (3) detection; (4) training and maintenance; and (5) survey and charging.

#### *(1) Protection*

— Syntex NBC Protective Clothing and Protective Tent [clothing in both permanent and disposable models; one-person tent incorporates sleeping bag and is designed for securing onto a rucksack] (Belgium; clothing in service in the Netherlands)
— Protective equipment: Gas Mask, Protective Coverall, Protective Gloves, Overboots, NBC Casualty Bag (Canada)
— Protective equipment: Protective Mask, Protective Cape, Protective Overboots (Czechoslovakia, *German Democratic Republic)*
— Protective Suit and Protective Masks (Israel; in service with several foreign countries)
— Protective equipment: Protective Masks, including communication, headwound, face and facelet, Clothing, including heavy-duty, coveralls, suits, rubberized, Gloves and Aprons (USSR; in service with Warsaw Pact countries)
— Protective equipment: Respirator, Protective Suits and Poncho, Protective Masks, including Cambridge Hood, face and facelet, Protective Gloves, Protective Overboots, NBC Casualty Bag (UK; in service in Norway)
— Protective equipment (chemical-biological only): Facemasks, including field, tank, headwound, Protective gloves (chemical only) (USA)

#### *(2) Decontamination*

— Decontamination truck (Brazil; in service with a North African country)
— Decontamination equipment: Protective kits, including medical and individual, Decontamination apparatus, including truck- and trailer-mounted, Decontamination shower, including vehicle- and truck-mounted (German Democratic Republic)
— Kaercher HDS 1200 BK Steam-jet Decontamination Apparatus (Federal Republic of Germany; *in service in several other NATO countries)*
— Japanese NBC systems: chemical protection and decontamination vehicles (Japan)
— Decontamination equipment: Individual decontamination kits, including atropine (self-)injector, packets, personal-weapon-, artillery- and machine-gun/mortar-decontamination and backpack-decontamination kits, decontamination apparatus, including clothing- and truck-mounted, and special-purpose-decontamination apparatus (USSR; in service with various Warsaw Pact forces)
— Decontamination equipment: various special-purpose-decontamination equipment, including portable-, multi-purpose, interior-surface-, and jet-exhaust-equipment, individual protective kits and ointment, lightweight decontamination system (USA).

#### *(3) Detection*

— Duphar "the Button" Individual Chemical Detector [easy to use; coin-sized individual chemical detector carried in gas-tight envelope] (the Netherlands)

— Duphar Water Testing Kit, Chemical Agents [designed to determine whether water is contaminated with chemical warfare agents or other toxic substances]

One of the primary functions of the equipment listed immediately below is the clearing of significant debris by dozer and hydraulic power. Such equipment would prove useful in the aftermath of an armed conflict in which civilian areas had come under attack and were rendered uninhabitable for, among other reasons, mounds of immovable debris.

— M9 armoured combat earthmover (USA)
— Type 653 armoured recovery vehicle (PRC)
— WPT-TOPAS armoured recovery vehicle [also amphibious, and equipped with NBC system and infra-red night vision system] (Czechoslovakia)
— Type 78 armoured recovery vehicle [very similar in design to the Leopard 1 ARV (FRG) and the AMX-300 ARV (France)] (Japan)
— Bargingsbandvagn 82 armoured recovery vehicle [also amphibious, designed to accommodate an NBC pack, and equipped with infra-red driving lights] (Sweden)
— BTR-50PK(B) amphibious armoured recovery vehicles (USSR)
— Alvis Samson armoured recovery vehicle [also NBC capacity and night periscope] (UK; on order in 1985 with Belgium, Brunei, Honduras, Iran, Ireland, Kuwait, Malaysia, New Zealand, Nigeria, Oman, Philippines, Tanzania, Thailand, United Arab Emirates)
— V-150 Commando Recovery Vehicle (USA; users of the Commando include Bolivia, Ethiopia, Gabon, Guatemala, Haiti, Indonesia, Jamaica, Malaysia, Oman, Philippines, Saudi Arabia, Singapore, Somalia, Sudan, Thailand, Tunisia, Turkey, Vietnam)

The recovery equipment listed below perform a variety of functions. Certain of the equipment relies upon hydraulic power for lifting, as well as upon dozer power for clearing. Some features lifting devices — for both razing and raising.

— AD-090 Wheeled recovery vehicle (Czechoslovakia)
— Berliet TBC Wrecker (France; in use by Algeria, Austria, China, Iraq, Morocco, Portugal)
— Land-Rover Santana Light Recovery Vehicle [very light, easy to operate] (Spain)
— Volvo Recovery Vehicle [powerful, multipurpose vehicle] (Sweden; used by a number of undisclosed states)
— Holmes Recovery Vehicles (Switzerland; in use the world over, including, among others, Australia, Egypt, Jordan, India, Saudi Arabia, USA)

### 3.4.5 Evacuation and resettlement efforts

Mechanized bridging systems are generally truck- or tank-mounted. They are able to move over ravaged and mined terrain. Bridging systems can be used to evacuate endangered civilians, as well as to assist in their effective resettlement from refugee camps and elsewhere. Below are listed pieces of equipment which can function to allow people to be moved on foot and by vehicle.

— XLP-10 Armoured Vehicle Launched Bridge (Brazil)
— MT-55 Armoured Bridgelayer [includes NBC system] (Czechoslovakia; in service in the USSR and Yugoslavia, and in some countries in the Middle East)
— Amx-13 Armoured Bridgelayer (France; in service with Argentina, France and Indonesia)
— Bruckenlegepanzer Biber [armoured bridgelayer] (Federal Republic of Germany; in service with Australia, Canada, Federal Republic of Germany and the Netherlands)
— Indian Bridging Vehicles [two under development] (India)
— TLB 24- 24-metre launched bridge [light assault bridge] (Israel)
— Type 67 Armoured Vehicle Launched Bridge (Japan)
— Brobandvagn 941 Armoured Bridgelayer [fully amphibious; infra-red night vision equipment; not provided with NBC system although provision was made for one in the design of the vehicle] (Sweden)
— MTU-20 Armoured Bridgelayer (USSR); in service with Afghanistan, Albania, Algeria, Angola, Bangladesh, Bulgaria, China (PRC), the Congo, Cuba, Cyprus, Czechoslovakia, Egypt, Equatorial Guinea, Ethiopia, Federal Republic of Germany, Finland, Guinea, Guinea-Bissau, Hungary, India, Iraq, Israel, North Korea, Libya, Mali, Mongolia, Morocco, Mozambique, Nigeria, Pakistan, Peru, Poland, Romania, Somalia, Sudan, Syria, the USSR, Vietnam, North and South Yemen, Yugoslavia and Zimbabwe)
— Mobile Assault Bridge Ferry (USA; in service with Belgium and Israel)
— Heavy Assault Bridge [crew of two — a driver and a commander — can complete bridgelaying operation without having to leave the vehicle] (USA)
— SE Road and Railway Bridge (German Democratic Republic)

— Bridge, Panel, Class 30 (Japan)
— PVM Foot Suspension Bridge, LVM Light Suspension Bridge, TVM Heavy Suspension Bridge [designed for use in mountainous country and normally transported by pack animal or, terrain permitting, motor vehicle] (USSR)
— Thos Storey Bailey Bridge [designed as universal unit-construction military bridging system with the Bailey panel as its basic component; advantage of system lies in its use of standard interchangeable components which, combined with the simplicity of design, enable it to be erected by unskilled labour under limited specialist supervision in a short time] (UK; in service with armed forces the world over)
— F1 Pontoon Bridge (France)
— BNK Bridging Boat (USSR; in service with Warsaw Pact countries)
— Fairey Allday Marine Combat Support Boat [well suited to civilian evacuation efforts; designed to assist with bridging operations and other river and estuary and support and assault duties; standard equipment includes navigation and towing lights and a searchlight, fire extinguishers, windscreen wipers, bilge pumping system, heavy duty fendering; pump and engine heaters, defrosting equipment and personnel heaters are optional features] (UK; in service in Greece, USA)

Bulk fuel storage and distribution systems may be used to provide resettled civilians with temporary fuel needs.

— Tank and Pump Unit 4.5 m (3) Capacity [two tanks and a pump unit are to be fitted onto a common base for mounting on a five-ton Army truck] (Australia)
— Fuel handling equipment, including container, pumping station, and pumping plant [fuel container has capacity of 17 cubic metres and is designed to be carried either on railway trucks or on special tractor trailer trucks] (German Democratic Republic)
— Aluminium Storage Tank [designed for bulk storage of liquids such as oil, petrol or water; its main advantages are its ease of transportation, short assembly time and capability of being erected on various types of surface, including concrete, earth and sand] (Federal Republic of Germany; in service in Argentina, Egypt, Libya and USA)
— Collapsible Tank [can hold up to 300 cubic metres; can be used as a storage tank or as a central refuelling system] (Federal Republic of Germany)
— Portable Tank and Pump Unit [consists of a pumping unit, two tanks and related items; designed for mounting onto a 2.5- or 5-ton truck and it may be used for storage, as a mobile refuelling pint or for transporting liquid loads] (Israel)
— Experimental Field Pipeline System [consists of one pumping station connected to the storage tank containing petrol, 2000 metres of pipeline consisting of 102mm steel pipe, fittings and a removable steel rank with a capacity of 80 cubic metres] (Italy)
— Sekur OIL-SIL Flexible Storage Tanks [capacity 1500 to 100,000 litres; intended for storage of mineral and fuel oils and use an internal rubber lining] (Italy)
— Static Storage Tanks [capacity 4500 to 50,000 litres; intended for storage of fuel oil products and water; made from nylon-reinforced nitrile rubber with abrasion, ozone and sunlight resistent external surfaces] (South Africa)
— 2300-litre Collapsible Wheeldrum [used to carry fuels and can be carried by aircraft, helicopter or truck and can be para-dropped, man-handled or towed for short distances; outer surface designed to provide a high degree of abrasion, ozone and sunlight resistance] (South Africa)
— Fabric-Reinforced Rubber Fuel Tanks [capacity 4000 to 260,000 litres; for storage and mobile carrying of fuel and other liquids] (USSR; in service in Warsaw Pact countries)
— Dunlop Collapsible Containers [capacity 225 to 225,000 litres; can be used to store a wide variety of liquids ranging from petrol, oil and lubricants to water and chemicals for almost any purpose] (UK; in service with several other armed forces)
— Portable Flexible Storage Tanks [capacity 22,730 to 136,380; can be used to transport and store a wide range of liquid chemicals and petroleum products] (UK)
— Uniroyal Sealdrums [capacity 208 to 1950 litres; portable, collapsible rubber containers for storing and transporting POL products, water, liquid chemicals and other fuels; filled the tanks are non-vented and hermetically sealed; can be transported by truck, aircraft or helicopter and may be truck- or para-dropped; designed for forward area refueling and Arctic fueling, among others] (USA; in service with several other armed forces)
— Uniroyal Sealdtanks [capacity 6000 to 18,000 litres; long, bag-type containers that can be used to convert ordinary cargo or closed-body trucks into fuel or other liquid containers by unrolling the container in the back of the truck, lashing it down and filling the container through a valve at one end] (USA)

— Uniroyal Static Storage Tank [capacity 3800 to 380,000 litres; can store a wide variety of liquids; can be stored and carried in wooden crates] (USA; in service in many countries)

During and following hostilities, water supplies in affected areas may be rendered unpotable. The below-listed equipment can remedy this problem.

— PRONAL Flexible Water Storage Tanks [capacity 1000 to 35,000 litres; flexible water storage tanks] (France; in service in some other countries)
— Water Filtering Units (German Democratic Republic)
— Aquaport Desalination Plants [advanced type of low temperature evaporator designed to convert sea or brackish water into pure (distilled) water for drinking or industrial purposes] (Israel)
— 900-litre Water Tank Trailer [specially designed to meet the stringent conditions of the South African bush] (South Africa)
— Mobile Water Desalination Plant: OPS and POU [POU capacity 320 litres per hour; OPS capacity 2000 litres per hour; carried on a truck chassis; OPS distills water and purifies it biologically; power provided by a towed generator] (USSR)
— Airborne Inflatable Water Tanks [capacity 1820 to 23,000 litres; widely used for civil and military applications where the ability to store water or set up an open water relay is required at short notice] (UK)
— Stellar NBC Decontamination Water Purification Equipment [output from 4500 to 13,000 litres per hour from fresh water, or from 1250 to 4100 litres per hour from NBC-contaminated fresh water; process removes turbid, ionic, organic, chemical, nuclear and bacterial contaminants from water supplies] (UK)
— Stellar Water Carriage Pack [each WCP consists of a 700-litre storage tank, filter unit, pumping set and ancillary equipment for the production of water from fresh, raw sources; when empty it can be lifted by two men] (UK)
— Stellar Mobile Water Purification Equipment [output varies from 2.7 and 13.5 cubic metres of water per hour, depending on the unit; provides clean and disinfected water from almost all water sources; is particularly adept at purifying tropical raw water supplies] (UK; in service in Argentina, Australia, Canada, Ecuador, Finland, Ghana, India, Iran, Iraq, Jordan, Libya, Malawi, Malaysia, the Netherlands, New Zealand, Nigeria, Oman, Pakistan, Singapore, Sudan, Tanzania, United Arab Emirates and Zambia)
— Portals Water Treatment Mobile Water Purification Equipment [output from .19 to 6.5 cubic metres of water per hour; capable of producing drinking water to World Health Organization standards from turbid waters with a high concentration of dissolved solids] (UK; units have been sold to at least one country in Africa)
— Tactical Water Distribution System [flexible distribution, storage and receiving system that can issue a maximum of 2,725,200 litres of water during the course of a 20-hour working day; designed to distribute water up to 112.4 km; uses mobile tanks, collapsible containers and static inflatable tanks together with associated equipment] (USA)
— Forward Area Water Point Supply System [designed to supply areas remote from water facilities; water is delivered to a central point by air, truck or any other method and from there is distributed as required through a network of tanks, pumps and hoselines; can store for distribution 7300 litres; complete system is air transportable and can be set up by two persons; only one person is needed for its operation] (USA)
— Uniroyal Collapsible Water Drums [capacity from 208 to 946 litres; can be airlifted and towed at slow speeds over short distances] (USA)
— Water Quality Analysis Sets [packaged in case for individual use; permits testing of bacteriological and chemical characteristics of sanitary significance associated with preventive medicine] (USA)
— Water Purification System [processes up to 1590 per hour] (USA)

Short-term electricity needs, for reasons of repair, of maintenance of lines of communication and of residence, may be supplied by mobile generators.

— Generator Set 30 kVA [specially designed for sub-tropical and tropical climates] (Australia)
— ACEC 12.5 kVA Generating Set GE 30 [designed to power communication and similar equipment; designed to operate under a wide variety of climactic conditions; single-axle trailer mounting a diesel engine; NATO hitch] (Belgium)
— Knurz Petrol Engine Generating Sets [range of petrol-engine generating sets some of which are built to suit military needs] (FRG; in service in several countries)
— 150/250 kVA Mobile Generating Set [self-contained electrical power generating unit designed for severe continuous duty and suitable for transport by road and air; sets are normally used

in pairs; fuel tank set to run for 24 hours; protection provided against low oil pressure, high engine temperature, overspeed, overload and over- or low-voltage] (South Africa)

- Plessey 1.5 kw and 1.9 kVA Generating Sets [generators suitable for a wide range of applications including permanent or standby sources of electrical power for battery charging, communications, field workshops and medical equipment] (UK)
- Plessey 1.5 kW 28 V dc Engine-driven Generating Set [designed for use as power source for communications, workshops, medical equipment or battery charging; designed for reliability under harsh environmental conditions] (UK; in service in Egypt and Oman)
- Hunting Portable Diesel Generator [portable 12 kW generator set suitable for military and civil applications; designed to withstand effects of sand, salt and humidity and operates within ambient temperatures from minus 30 C to plus 44 C] (UK)
- All-Power Inc Generating Sets (Gensets) [wide variety of generating sets varying in output from 5kW to 2500 kW; most with a wide variety of fittings and extras to suit almost any application; accessories such as mains electricity, air-conditioning, lighting, securing and lashing points can be fitted as required] (Sweden)
- Giltspur Specialist Module Containers [variety of pre-equipped containerised modules to enable armed forces to survive and operate in regions where no facilities exist; system based on standard 6- and 12-metre containers suitably modified for their particular purpose; each container has installed all of the equipment it requires to function; module containers are available for the following roles:
  - mobile hospital; accommodates operating theatre, X-ray department, central sterile supplies department, recovery areas and wards; key areas may be supplied with extra protection against shell splinters
  - mobile air base
  - field cooking module: facilities to prepare, cook and serve up to 500 meals in one session
  - workshop module: electrical power available; also may be used as office
  - field laundry module: can process up to 200 kg dry weight in an eight-hour shift
  - field shower module: can supply showers for up to six persons at one time
  - command module: six-person maximum; contains radio/communications bay
  - customs post module: surveillance, communication and office facilities
  - dental module: equipped to provide regular dental care, including record-keeping facilities
  - ophthalmic module: equipped with treatment couch and for minor surgery; diagnostic, reception and records area
  - navaid (radio) module: designed to accommodate radio and navigational units; also has repair facilities
  - generator module: contains power generators, repair, cooking and other facilities for maintenance staff (UK)
- Pilcher-Greene Ambulances [produced a range of 4 by 4 ambulance based on the Land-Rover, suited to a variety of climactic conditions] (UK; in service in a number of countries in South America, Africa, the Middle East, the Indian subcontinent and the Far East)
- Relocatable Hospital System [designed for use in outlying or remote locations; depending on configuration offers 20- to 60-beds; at greatest extent, all necessary hospital facilities are available, including pre- and post-operative rooms, operating room, pharmacy, lab and X-ray; each unit is fully equipped to carry out a certain function and the entire complex is self-sufficient apart from external supplies of water, fuels and expandable supplies; hospital has own power generation plan, internal water supply system and material supply centre; all units have their own integral lighting and air-conditioning with power coming from a 6 generator housed in a standard container] (USA)

For the rapid evacuation of civilians, portable roadways may be indispensible. The following countries manufacture portable roadways:

- Czechoslovakia
- France
- Federal Republic of Germany
- Greece
- Sweden
- Union of Soviet Socialist Republics
- United Kingdom
- United States of America

Its content has to be supplied from other instruments, mainly art 83 of Protocol I. It cannot be accepted that the standard of dissemination had been lowered by choosing this laconic form.

NEW RULES, *supra* note 3, at 701.

Why the Conference adopted such an inflexible stance vis-a-vis dissemination procedures is not transparent; one supposes, however, that it signals delegate dissatisfaction generally, vented on a symbolically appropriate article as a political gesture.

Interestingly, on 7 June 1977, the Conference adopted Resolution 21 regarding "Dissemination of knowledge of international humanitarian law applicable in armed conflict". *See* Official Records, *supra* note 4, at 214. National Red Cross Societies, wanting to define more explicitly the methods and means of dissemination garnered the support of sixteen Western European and Others Group (WEOG) delegations, five Eastern European delegations and four delegations from Africa. *See* CDDH/438 (1977). This Red Cross Society solidarity bespeaks well its apoliticized concern for the promulgation of humanitarian principles.

The Resolution addresses the question of bodies responsible for dissemination: the armed forces, appropriate administrative authorities, universities, and in particular, faculties of law, political science and medicine, and secondary and similar schools. Means of dissemination include leading courses and seminars, the publication of material and the circulation of appropriate information. I Official Records, *supra* note 4, at 214, paras 2 and 4. Finally, the National Red Cross, Red Crescent and Red Lion and Sun Societies, together with the ICRC, are exhorted to participate actively in the effort to disseminate knowledge of international humanitarian law. *Id* at paras 3 and 4.

7. *See infra* sec 1.5.

8. Moving from weaponry the peer of the iron-clad bomb to that capable of a higher degree of targeting accuracy should be accompanied by a reduction in damage effected on the grounds of military necessity. This, in turn, should enlarge the area in which humanitarian law should operate. In other words, if a belligerent's weaponry can be trained with such accuracy so as to avoid damage to civilian sites while targeting military ones, that belligerent should be held responsible for collateral damage to people and things which — within the circumstance of more accurate targeting capability — fall without the realm of military necessity and within that of the protections of humanitarian principles.

   In many situations, however, sophisticated weaponry is purchased or received in isolation from additional weaponry which must be employed in order to ensure that the accuracy is enjoyed. Moreover, in such situations, adequate training is almost always lacking. Under these circumstances, an argument can be made that the belligerent in question need not be held to that higher standard of responsibility. The net result is to drastically reduce the protective capacity of humanitarian principles — a consequence, I think, not anticipated by many, if not most, legal advocates of the application of humanitarian law principles.

9. Low-intensity conflict is a term susceptible of many meanings, although the various definitions promulgated share the following essential elements: (1) actively greater than armed peace but less than large-scale war; (2) supplementation of armed coercion with political, economic and psychological coercion; (3) the likelihood of protracted engagement in the conflict; and (4) action prompted in reaction to a threat against the national security. *Compare, eg*, the definition adopted by the Joint Chiefs of Staff, DICTIONARY OF MILITARY AND ASSOCIATED TERMS (Publication No. 1) 214-15 (1987), *with* that of S Sarkesian, THE NEW BATTLEFIELD (1986).

9. For reports on the work in which the International Committee has been engaged, see, eg, J Mine, *The Geneva Conventions and medical personnel in the field*, 257 Int'l Rev of the Red Cross 180 (March-April, 1987); P Eberlin, *The protection of rescue craft in periods of armed conflict*, 246 Int'l Rev of the Red Cross 140 (May-June, 1985); *Revision of Annex I to Protocol I: Regulations concerning identification*, 232 Int'l Rev of the Red Cross 22 (January-February, 1983); P Eberlin, *Modernization of Protective Markings and Signalling*, 209 Int'l Rev of the Red Cross 59 (March-April, 1979); F de Mulinen, *Signalling and Identification of Medical Personnel and Material*, 138 Int'l Rev of the Red Cross 479 (September, 1979).

10. *See supra* note 2, at Protocol I, Annexes; Protocol II, Annexes.

11. It is certainly true that military strategic-planners on both sides recognize the folly of preparing themselves for a large-scale European-theatre war to the exclusion of all else. The shift toward a strategy of flexible response has been evident in public debate in the states of the Western European Alliance for some time. It is also an accepted part of the alliance strategy — albeit not on a glamour par with large-scale confrontational planning.

    In early 1989, the Soviet Union engineered a significant policy shift in this direction. After seventeen years as military commander of the Warsaw Pact, Viktor G Kulikov was replaced by Pyotor G Lushev, a four-star general regarded as a supporter of Mikhail Gorbachev. Since becoming the Soviet head of state nearly four years ago, Gorbachev has replaced most of the key military leaders, including the Defence Minister, the armed forces' Chief of Staff and most of the top theatre commanders.

    On the basis of his military writings and speeches, it is known that Marshall Kulikov believed that any confrontration with Western forces in Europe would escalate rapidly into a nuclear exchange. General Lushev implicitly rejects this view. Moreover, Lushev has repeatedly suggested that military effectiveness depends upon troop discipline, tough training and a flexible command structure. This latter position is thoroughly at odds with that of others of his generation, including Marshall Kulikov, who have advocated the acquisition of new generation of high-technology weapons. Mr Gorbachev's views resemble more those of the incoming General Lushev. *See* Burns, *Warsaw Pact's Chief Is Replaced By One in Tune With Gorbachev* N Y Times, February 3, 1989, at A2, cols 3-4.

    Nevertheless, the predominant fascination with a large-scale European war is revealed in the recently disclosed United States' Army battle methodology. Entitled AirLand Battle 2000, it revolves around the idea of a strategic defense of NATO's central region by aggressive tactics. These would include immediate, sustained and simultaneous attacks both in depths and on the line of contact.

    The plan was devised on the basis of a 20-year Soviet threat projection: it presumes that the NATO forces, outnumbered in men and equipment, would be foolish to fight a war of attrition. The plan envisages that the NATO forces will defend offensively, striking quickly at Soviet assault echelons, in an attempt to end the war at this point before the follow-up echelons join in the battle.

    The initial strike will be a depth attack, penetrating as far as 200 miles, integrating air forces, indirect fire systems and deep penetration ground units. In an attempt to take advantage of the relatively monolithic solidity of the Warsaw Pact fighting force, the NATO allies intend to spin out small combat units which will operate more or less independently of each other. These will fight in an array of 360 degrees, forcing the Warsaw Pact units to surround the allies' agile combat forces.

Similarly indispensible for air-lift removal of civilians are landing strips. Countries from which rapid runway repair equipment and portable runways are available are:

— Greece
— United Kingdom
— United States of America

Mobile shelters may be used for emergency medical purposes as well as sheltering personnel involved in relief efforts. The latter will need to maintain communication with military personnel. A number of the below-listed items are well-suited to that purpose.

— Australian Army Medical Shelter [air transportable medical shelter] (Australia)
— Air Transportable Shelters [from 300 kg to 2300 kg empty; can be used for a wide variety of tasks, including as command posts and communication centres] (France)
— AMF 80 Modular NBC Shelter [can be constructed in a great variety of configurations; a basic AMF 80 can accommodate 60 people with 50 seated and 10 recumbent] (France)
— Tangram TILOS Logistics System [fully mobile containerised unit capable of use in front line conditions; container body may be used for a number of logistic functions from a mobile hospital to an NBC decontamination centre (Italy; in service in an unspecified Central American country)
— Piaggio Shelters [capacity from 1000 kg to 3650 kg; designed for civilian or military use; EMP (electromagnetic pulse from nuclear blast) protected] (Italy; in service with NATO and NATO affiliated nations and with several other nations)
— Oliveiero Grazia Ambulance Bodies [converts commercially-available vehicles into ambulances with special bodies to suit almost any application] (Italy)
— Modular Operating Theatre [transported by means of a mobilser wheel set; 220-volt electrical system and a battery-operated emergency supply] (South Africa)
— DIAB Shelters [constructed in a number of configurations]

1. *See generally* THE NEW HUMANITARIAN LAW OF ARMED CONFLICT (A Cassesse ed 1979).
2. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, Geneva, 10 June 1977, 16 ILM 1391 [hereinafter Protocol I]; 1977 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts, Geneva, 8 June 1977, 16 ILM 1391 [hereinafter Protocol II] [together 1977 Geneva Protocols].
3. *See* M Bothe, K J Partsch, W A Solf, NEW RULES FOR VICTIMS OF ARMED CONFLICT (1982) [hereinafter NEW RULES].
4. The Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law applicable in Armed Conflicts, held at Geneva from 1974 to 1977, [hereinafter Conference] is abbreviated officially as CDDH. The main documentary source for the Conference are seventeen volumes of the Official Records published by the Federal Political Department, Berne, Switzerland, in the official working languages of the Conference. The records are complete in English, French and Spanish; documents from the second sessions area also available in Russian and from the fourth session in Arabic. The Final Act has also been translated into Chinese [hereinafter Official Records]. For summaries of the work at the four sessions of the Conference, see generally NEW RULES, *supra* note 3; COMMENTAIRE DES PROTOCOLS ADDITIONNELS (Y Sandoz, C Swinarski, B Zimmerman ed 1986).
5. The four Geneva Conventions of 1949 describe the scope of application as being "declared war or any other armed conflict which may arise between two or more of the High Contracting Parties, even if the state of war is not recognized by one of them". *See* Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, Geneva, 12 August 1949, 6 UST 3114, 75 UNTS 31, 157 BFSP [hereinafter 1949 First Convention or I]; Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked members of Armed Forces at Sea, Geneva, 12 August 1949, 6 UST 3217, 75 UNTS 85, 157 BFSP 262 [hereinafter 1949 Second Convention or II]; Convention Relative to the Treatment of Prisoners of War, Geneva, 12 August 1949, 6 UST 3316, 75 UNTS 135, 157 BFSP 284 [hereinafter 1949 Third Convention or III]; Convention Relative to the Protection of Civilian Persons in Time of War, Geneva, 12 August 1949, 6 UST 3516, 75 UNTS 287, 157 BFSP 355 [hereinafter 1949 Fourth Convention or IV] [together 1949 Geneva Conventions] at common art 2.

   While some writers have argued to maintain the distinction — fearing, rightly so, that "armed conflict" would subsume "war" — between the two terms, the former is now commonly used as an inclusive descriptive, if not normative term. Given that, particularly in the post-UN Charter regime in which war is illegal among states, "armed conflict" accurately describes hostilities of varying degrees of intensity between groups — statal or non-statal — driven by ideology and usually resulting in death and destruction. I will use the term "armed conflict" thus broadly.
6. *See* 1949 Geneva Conventions, common articles 47, 48, 127, 144 and I, art 83, II, art 19, each concerning responsibility with respect to the dissemination of the document in question. Unfortunately, the form of Protocols I and II most certainly is retrograde as regards dissemination responsibilities. The ICRC sought throughout the Conference to increase dissemination responsibilities: the Conference delegates, on the other hand, acted consciously to circumscribe obligations owing. *See, in particular,* Doc CDDH/I/Protocol II, art 37, the Committee draft, which contains detailed dissemination obligations attached to Protocol II. Following Conference debate, the article was first wholly deleted, then re-instated in "simplified" form. Finding the latter untenable, one commentator notes:

   As the provision now reads it is no more than a maxim or a reference to the well-known concept of "dissemination".

   Implementation of Air-Land Battle 2000 will depend heavily upon new technology — especially communications' technology, and in the rapid collection and assessment of intelligence data.

Air-Land 2000 will demand the development of sophisticated command, control, communication and intelligence technology, all of which can be exploited for use in other more immediate conflict situations. *See* THE ILLUSTRATED DICTIONARY OF MODERN AMERICAN WEAPONS 7 (1986).

12. UNITED STATES NAVAL INSTITUTE DATABASE (August, 1988). ENAER of Santiago manufactures the Caiquen, a radar warning receiver used by the Chilean Air Force, as well as the Itata, an airborne electronic intelligence system used mainly to detect, identify and locate enemy radars. Both are available for export.
13. JANE'S MILITARY VEHICLES AND GROUND SUPPORT EQUIPMENT (C Foss and T Gander 6th ed 1985).
14. *See* UNITED STATES NAVAL INSTITUTE DATABASE, *supra* note 4.
15. *Id.*
16. See Annex I.
17. *Id.*
18. Having said this, I wish to emphasize that I do not find the idea of an agency *per se* repulsive. But an international agency is only as effective as the individual states of the international community will it to be. The post-United Nations regime has witnessed the establishment of a variety of international agencies. Most of these have been progeny of the United Nations Organization.

    The track record of the United Nations has not been particularly encouraging. During the era in which decisions could be and were made, the organization represented, in fact, the more-or-less convergent will of an elite club of states. In the present era, it represents the diverging wills of a scattered group of states, which neither collectively nor apart, are able to influence international opinion consistently to change. I do not believe that any body established within the United Nations at this time could be expected to garner sufficient respect to serve an international interest in the observation of humanitarian principles.

    On the other hand, it is possible that the International Committee of the Red Cross [ICRC] would be an effective seat of such an agency. Given its experience and the respect it has earned for the maintenance of humanitarian principles world-wide, I think that it is the only possible candidate for housing such an agency. However, the ICRC has been loathe to take any action which would lend it even the appearance of non-neutrality. It may very well conclude that its neutrality would be endangered if it were expected to collect electronically-gathered information from a variety of sources, determine which of it could be isolated to serve humanitarian ends, and to decide to whom to give it (recalling that in some instances, the receiving entity would not be a state).
19. *See* BASIC RULES OF THE GENEVA CONVENTIONS AND THEIR ADDITIONAL PROTOCOLS (1983).
20. Convention for the Amelioration of the Condition of the Wounded in Armies in the Field, Geneva, 22 August 1864, 22 Stat 940, 55 BFSP 43, 1 AMER J INT'L L (Supp) 90 [hereinafter 1864 Geneva Convention]; *see also* Additional Articles Relating to the Condition of the Wounded and Sick, Geneva, 20 October 1868, 22 Stat 946, 73 BFSP 1113 [hereinafter 1868 Additional Articles]; Declaration Renouncing the Use in Time of War of Explosive Projectiles under 400 Grammes in Weight, St Petersburg, 11 December 1868, 138 Parry 297, 58 BFSP 16, 1 AMER J INT'L L (Supp) 95.
21. The law of the Hague includes: 1899 Hague II, and 1899 Hague Regulations, 1899 Hague III, 1899 Hague Declaration IV (I), 1899 Hague Declaration IV (II), 1899 Hague Declaration IV (III), 1904 Hague Convention, and 1907 Hague III-XIV. For full a brief description and full citations to each of these conventions, see H Levie, 2 THE CODE OF INTERNATIONAL ARMED CONFLICT 1019 (1986). For the law of Geneva, see *supra* note 5.
22. In support of Resolution XXIII issued by the 1968 Teheran Human Rights Conference, the General Assembly invited the Secretary-General, in consultation with the ICRC, to secure the better application of existing humanitarian conventions and rules in armed conflict. G A Res 2444 (XXIII) (1968).
23. *See* F Kalshoven, CONSTRAINTS ON THE WAGING OF WAR 18-21 (1987).
24. *See id* at 21.
25. Records of the XX International Conference of the Red Cross, Vienna (1965).
26. G A Res 2444 (XXIII) (1968).
27. G A Res 1653 (XVI).
28. *Id.*
29. *See* THE LAWS OF ARMED CONFLICTS 701-03 (ed D Schindler and J Toman 1988).
30. *Id* at 617-18.
31. *See* 1977 Protocols, *supra* note 2.
32. *But see, eg,* NEW RULES, *supra* note 3, at 52, in which the commentator supports the view that the field of application of article 1, paragraph 4 is very limited — perhaps to only the peoples of Southern Africa and Palestine.
33. The prolonged Soviet presence in Afghanistan would now be viewed as a parallel paradigm to Vietnam.
34. *See supra* note 5.
35. *See supra* note 2.
36. *See supra* note 5, at I, II, III, IV, common art 2 and *supra* note 2, Protocol I, art 1.
37. *See supra* note 5, at I, art 5; III, art 5; IV art 6 and *supra* note 2, at Protocol I, arts 1,3.
38. *See supra* note 5 at I, art 63; II, art 62; III, art 142; IV, art 158 and *supra* note 2, at Protocol I, art 1.
39. *See supra* note 5, at I, art 46; II, art 47; III, art 13; IV, art 33; and *supra* note 2 at Protocol I, arts 1, 20, 51-56.
40. *See supra* note 5, at I, II, III, common art 7; IV, art 8; and *supra* note 2, at Protocol I, art 1.
41. *See supra* note 2, at Protocol I, art 1(4), in which armed conflict is specifically defined to "include armed conflicts in which peoples are fighting against colonial domination and alien occupation and against racist regimes in the exercise of their right of self-determination . . ." [hereinafter, in text and in notes, art 1(4) conflict].
42. *See supra* note 5, at I, II, III, common article I; IV, art 9; *supra* note 2, Protocol I, at art 5.
43. *See supra* note 5, at I, II, III, common arts 9, 10; III, art 126; IV, art 11, 143 and *supra* note 2, at Protocol I, art 81.
44. *See supra* note 5, at I, art 50; II, art 51; III art 130; IV, art 147; and supra note 2, at Protocol I, arts 11, 85.
45. *See supra* note 5, at I, art 1; II, art 50; III art 129; IV, art 146.
46. *See supra* note 5, at I, art 47; II, art 48; III, art 127; IV, art 144 and *supra* note 2, at Protocol, I, arts 83, 87.
47. *See supra* note 5.
48. *See supra* note 5, at I,II, common art 13.
49. *See supra* note 2, at Protocol I arts 8, 34.
50. *See supra* note 2, at Protocol I, art 8.
51. *See supra* note 5, at I,II, common art 12 and *supra* note 2, at Protocol I, art 10.
52. *See supra* note 5, at I, arts 15, 17; II, arts 18, 20; IV, art 16 and *supra* note 2, at Protocol I, arts 32, 33.

53. *See supra* note 5, at I, art 16; II, art 19; III, art 122; IV, art 136 and *supra* note 2, at Protocol I, art 33.
54. *See supra* note 5, at I, 18; II, art 21 and *supra* note 2, at Protocol I, art 18.
55. *See supra* note 5, at I, arts 19, 21, 22, 33, 34 and *supra* note 2, at Protocol I, arts 8, 9, 12, 13, 14.
56. *See supra* note 5, at I, art 35; II, arts 22, 24, 25, 29, 31, 38, 40 and *supra* note 2, at Protocol I, arts 8, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31.
57. *See supra* note 5, at I, arts 24-28; II, arts 36, 37, 42; III, art 33 and *supra* note 2, at Protocol I, arts 8, 14, 24, 25.
58. *See supra* note 2, at Protocol I, art 16.
59. The distinctive emblem is the sign of the red cross or the red crescent; the red lion-and-sun emblem is no longer in use. The form of the red cross is not specified; customarily, however, a so-called Greek cross had been used.
60. *See supra* note 5, at I, arts 39, 42, 44, 53, 54; II, arts 43, 45 and *supra* note 2, at Protocol I, arts 18, 85 and Annex I.
61. *See supra* note 5, at III, art 4 and *supra* note 2 at arts 43.
62. *See supra* note 5, at III, art 4 and *supra* note 2, at Protocol I, arts 43, 44. Note that in III, art 4, the term "armed forces" and "regular armed forces" covers only "regular" manpower, *viz*, such as is recognized by the government in power at the time of the constitution; members of other militia do not comprise part of the regular establishment. This distinction is eliminated by the Protocol.
63. *See supra* note 2, at Protocol I, art 67.
64. *Id.*
65. *Id.*
66. *See supra* note 5, at III, art 5; IV and *supra* note 2, at Protocol I, arts 45, 75.
67. *See supra* note 2, at Protocol I, arts 46, 47.
68. *See supra* note 2, at Protocol I, art 77.
69. *See supra* note 12.
70. *See supra* note 2, at Protocol I, arts 35, 48.
71. *See supra* note 2, at Protocol I, art 50.
72. *Id.* at art 52.
73. *Id.* at arts 49, 51, 52.
74. *Id.* at art 54.
75. *Id.* at art 53; and Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict, 14 May 1954, 249 UNTS 240-88 [hereinafter 1954 Hague Convention].
76. *See supra* note 2, at Protocol I, art 56, Annex I, 16.
77. *See supra* note 66 and accompanying text.
78. *See supra* note 5, at IV, art 17.
79. *See supra* note 2, at Protocol, art 55.
80. *See supra* note 5, at IV, art 14.
81. *Id.* at art 15.
82. *See supra* note 2, at Protocol I, art 59.
83. *Id.* at art 60.
84. *Id.* at arts 61-67, Annex I, 15.
85. *Id.* at arts 57, 60.
86. *See supra note 5, at IV, art 27 and generally part III, sec I.*
87. *See supra* note 12.
88. *See supra* notes 12-14 and accompanying text for an explanation of the laws of the Hague, Geneva and New York; *see supra* note 2, at Protocol I, art 75.
89. *See supra* note 5, at IV, arts 27, 29, 30.
90. *See supra* note 5, at IV, art 23 and *supra* note 2, at Protocol I, arts 69-71.
91. *See supra* note 5, at IV, art 24 and *supra* note 2, at Protocol I, arts 77, 78.
92. *See supra* note 2, at Protocol I, art 76.
93. *See supra* note 5, at IV, arts 25, 26 and *supra* note 2, at Protocol I, art 74.
94. *See supra* note 2, at Protocol I, art 73.
95. *See supra* note 2, at Protocol I, art 79.
96. *See supra* note 2, at Protocol I, art 75.
97. *See supra* note 5, at IV, arts 31-34 and *supra note 2, at Protocol I, art 75.*
98. *See supra* note 5, at IV, art 10 and *supra* note 2, at Protocol I, art 81.
99. *See supra* note 5, at IV, art 35, 36, 38.
100. *See supra* note 5, at IV, art 44.
101. *See supra* note 2, at Protocol I, art 73.
102. *See supra note 5, at IV, arts 42.*
103. *See supra* note 5, at IV, art 49.
104. *See supra* note 5, at IV, arts 50, 51, 53, 55, 56, 58, 59, 61.
105. *See supra note 5, at IV, arts 64, 67, 68, 71, 72, 73, 75 and supra note 2, at Protocol I, arts 75-77.*
106. *See supra* note 5, at IV, arts 54, 63.
107. *See supra* note 5, at IV, arts 41, 78.
108. *See supra* note 5, at IV, art 132.
109. *Id.* at art 134.
110. *See supra* note 5, at I, II, III, IV, common art 3.
111. *See supra* note 2, at Protocol I, arts 2, 4, 5, 6.
112. *See supra* note 2, at Protocol II, arts 7-12.
113. *Id.* at arts 13, 14, 17, 18.
114. *Id.* at arts 14-16.
115. States are not the only actors capable of participating in activities taking place in the transition to peace. Actors tend, however, to pattern future behaviour on past behaviour, a characteristic that inhibits innovation. To encourage non-statal entities, such as profit and not-for-profit corporations, to contribute to peacemaking, the suggestion must be made that their contributions are needed. Moreover, contact persons and procedures to be followed must be specified.

As an initial matter, I could imagine that the manufacturers of equipment needed during and after conflict-wind-down could contribute such equipment directly to the parties in need of it. Optimally, a neutral force would be in charge of collecting and dispersing such donations. (And, it would be hoped that at some stage, at soliciting the materiel as well.) Not-for-profit corporations might also be established whose task it would be to evaluate the needs of a particular situation, and to gather equipment accordingly.

Finally, the potential role of third-party-non-state-representative interveners must be born in mind.

116. This classificatory scheme is drawn from JANE'S MILITARY VEHICLES AND GROUND SUPPORT EQUIPMENT (C Foss and T Gander 6th ed 1985). Information gleaned about much of the equipment covered in this subsection also derives from this edition of JANE'S.

**IKARA firing HMAS DERWENT April 1989**

# ORGANIZATIONAL STRUCTURES FOR SLOC SECURITY IN NORTHEAST ASIA

by

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*Prepared for the 6th International Conference on the Security of Sea Lanes of Communication: Techniques for Ensuring SLOC Security in the Asia-Pacific Region, Melbourne, Australia, October 11-13, 1988.*

## Introduction

As a generalization, it may be said that the delegations from the nations represented at the previous conferences agreed to the following general conclusions:

1. The security of the sea lanes of the Pacific Basin since the mid-1970s has become a matter of increasing concern to the individual nations of the Basin area. Their high dependency on the import of energy and raw materials, especially strategic ones, is the principal basis for their concern.

2. The recent build-up of the Soviet Pacific Fleet and its strategic implications indicate that the principal but not the only source of the threat to the sea lanes, particularly in case of war, is the Soviet Union.

3. Deterrence is the best means of keeping vital SLOC secured.

4. Since individual nations cannot effectively provide for SLOC security on their own, there is a need to develop co-operation between nations of the Pacific Basin.

However, it is also acknowledged that irrespective of its desirability, the establishment of a multilateral collective defense system for SLOC security is not feasible in the near future due primarily to political difficulties. As a consequence, as Michael O'Connor among others has lamented, there has been little discussion of the practical means of co-operation by which the threat can be countered, while there has been much discussion about the threats and the constraints on the development of a co-operative system.

I believe, it is in this context that the international steering committee for the SLOC security conference has decided that the 6th conference should focus its attention on a number of specific organizational and operational problems that need to be addressed in concert so that a general solution can be found.

I fully agree with the need to discuss and develop the practical means of co-operation. However, it seems to me that the steering committee's position tends to over-emphasize the importance of dealing with military problems of co-operation at the expense of political problems as evident in the following statement.

> "While the committee accepts that there are and will be political difficulties in the implementation of these solutions at this time, it believes that such solutions should be canvassed if only because political obstacles can be overcome more quickly under the pressure of events than can the operational problems."

Needless to say, it is of great importance to deal with military problems of co-operation, for a kind of division of labor or harmonization of military activities helps avoid duplication of effort and mutual interference and exploit the opportunity of a far better force posture than is possible with scarce national naval forces. But in the discussion of mutual co-operation it seems more reasonable and meaningful to consider both military and political problems together rather than considering them separately, since military aspect of co-operation varies depending not only upon the nature and scope of events but also upon the assessment of the events by individual nations. For instance, would Japan intend to blockade the

North Korea from taking any military adventurism against South Korea in order to avoid a direct confrontation with the U.S. and a subsequent escalation of such confrontation into a global war.

Furthermore, a timely announcement of the special declaration by President Tae Woo Roh of South Korea in the interest of national self-esteem, unification and prosperity on July 7, 1988 demonstrated the willingness and readiness of South Korea to make changes in its policies toward North Korea to facilitate North Korea's acceptance of peaceful coexistence on the peninsula.[15]

During the past decade, the Pacific has become an arena for intensified naval competition between the superpowers. As a consequence, in recent years, the U.S. and the Soviet Union have repeatedly accused each other of relentlessly expanding and modernizing their naval forces in the Pacific. Then, the question becomes whether the excessive naval imbalance between the superpowers exists in the Pacific.

It does not seem required to elaborate further on the Soviet naval build-up in the Pacific. Suffice to say that since the mid-1970s there has been a distinct shift in the proportional distribution of Soviet naval capabilities from the Baltic and the Black Sea Fleets to the Pacific and the Northern ones, and that during the latter part of the 1970s a clear strengthening of the Pacific Fleet relative to the Northern one took place with respect to both submarines and large surface combatants (see Tables 1 and 2, and Figures 1 and 2).

To the contrary, during the 1970s, U.S. naval forces in the Pacific continued to be reduced to reach a post-World War II low, largely as a result of the fall-out of the Vietnam war. However, the Reagan Administration, as part of its commitment to build a modern 600-ship navy, has accelerated the strengthening and modernization process of the U.S. Pacific Fleet.[16] For instance, the U.S. Pacific Fleet has received Spruance-class destroyers, Perry-class frigates, Los Angeles-class nuclear attack submarines, Ohio-class Trident SSBNs, Tarawa-class amphibious assault ships, Whidbey Island-class amphibious ships, and Aegis cruisers. And two of the U.S. navy's four reactivated battleships (New Jersey and Missouri) and three of the navy's five nuclear aircraft carriers were also assigned to the Pacific Fleet.

Moreover, the strengthening of the U.S. Pacific Fleet has been accompanied by the Reagan Administration's increased emphasis on a naval strategy known as the "Maritime Strategy," which seeks not to sacrifice the Pacific.[17] That is, no longer is the U.S. Pacific Fleet regarded as a 'swing' force whose assets would be diverted to the European theatre at the onset of a NATO-Warsaw Pact conflict.

Therefore, it seems that overall, the U.S. naval posture in the Pacific has improved considerably in the 1980s and as a consequence not only that the superpower naval balance has been achieved in the Pacific but also that the overall correlation of forces today is favourable to the U.S.[18] (See Table 3).

In sum, the foregoing analysis indicates that minimum conditions for the introduction of maritime CBMs in Northeast Asia are met, namely, the presence of a sense of threat, the improbability of armed aggression, and the absence of excessive military imbalance.

**Reasons for maritime CBMs in Northeast Asia**

The existence of minimum conditions for introducing maritime CBMs in Northeast Asia does not necessarily mean that they can be effective in creating and enhancing confidence among the nations in the region. In other words, to be effective, maritime CBMs must be introduced only after the regional characteristics are taken fully into account. It is, therefore, necessary to examine the reasons for and the usefulness of applying the maritime CBMs to Northeast Asia.

First, in dealing with the security of the SLOC in Northeast Asia, the dilemma with which we have been faced is that while it is required to develop a joint military co-operation in order to enhance defense as well as deterrent capabilities, the obstacles to such development are not easy to overcome. In contrast, maritime CBMs by their nature can bypass many of the problems related to the development of joint military activities. That is, on the one hand, maritime CBMs leave naval forces and their existing composition largely intact, and as a consequence they do not interfere with the existing level of deterrent capability as well as the balance of naval power. On the other hand, since maritime CBMs are designed to prevent normal peacetime military activity from causing fear, tension, and misunderstandings, they help to reduce the danger of inadvertent conflict and escalation, and unintended naval war resulting from mutual uncertainty, miscalculation or misinterpretation. From this follows that maritime CBMs could improve relations with adversaries without entailing any loss. Therefore, maritime CBMs, if adopted, make it unnecessary to enhance deterrent capability which requires a difficult and long process of compromising complex political difficulties of each nation.

as a common threat. For instance, while South Korea is now, and continues to be, devoting its whole military forces to protecting itself from North Korean, Japan is primarily worried about the Soviet Union, as is the U.S., and ROC views the PRC as the primary threat. In addition, the nations of this region have different backgrounds in their politics, economy, and military, and there is no firm multilateral security system like NATO without which it is much more difficult to promote military co-operation for the defense of SLOC. As a consequence, it is highly doubtful whether the nations in Northeast Asia would be able to agree on a particular type of force structure or functional division of SLOC defense as a desirable arrangement.

In the end, the attempt to establish a multilateral force structure may find the nations of the region demurring due mainly to differences in their military as well as political interests.

Third, there is a question about the degree of contribution that South Korea and/or ROC can make to either functional or geographical division of SLOC defense. With their economic resources and technological capabilities, the U.S. and Japan could certainly assume their shares of the burden for the security of the SLOC. But what about ROC and South Korea? Do they have enough resources and capabilities to share more burdens then they are responsible now?

The present structure and composition of the navies of ROC and South Korea clearly demonstrate the limited roles they could play. That is, their roles and operations are geared primarily to the defense of their respective coastlines. It should be also noted, as Choung-il Chee aptly points out, that in general a navy is a very expensive proposition, requiring a very high expenditure, and that South Korea already spends more than 35% of its national budget for the defense and any drastic increase in its defense budget would seriously strain its economy, which in turn gradually jeopardize its defense capability.[4]

In sum, it can be said that for the aforementioned reasons, security relationships are much more complex in this region than in Europe and, as a result, it is much more difficult to overcome political problems. From this follows that in the discussion of mutual co-operation both military and political problems should be taken into consideration.

## Confidence building measures at sea in Northeast Asia

As the discussion thus far indicates, it is extremely difficult to implement joint military activities for the SLOC security in Northeast Asia. How then can we keep vital SLOC secured? Are there any other alternatives to joint military activities?

In the ensuing pages, I propose to give a serious consideration into confidence building measures at sea (maritime CBMs) as an alternative to joint military activities for the SLOC security in Northeast Asia. Underlying assumption of the maritime CBMs is that reductions in the possibilities of the political exploitation of superior naval power, in the occurrence of naval incidents, in the danger of inadvertent escalation of naval incidents in peace time or during crises, and in the danger of surprise attack would contribute to a great extent to the SLOC security.

In 1975, the Conference on Security and Co-operation in Europe in Helsinki agreed to certain military confidence building measures (CBMs). The purpose of such measures is to prevent normal peace time military activity from causing fear, tension, and misunderstandings. The measures, however, do not apply to the level of forces nor do they constrain force structures. That is, unlike arms control measures, CBMs do not address the reduction or limitation of armaments or armed forces. They are designed primarily to increase transparency and predictability, thus preventing routine military activity from causing alarm.

Given this general nature of CBMs, the conceivable types of maritime CBMs are as follows:[5]

(1) Prior notification of major naval manoeuvres;
(2) Exchange of observers on board warships during manoeuvres;
(3) Measures to reduce the risk of dangerous incidents at sea during manoeuvres built upon traditional naval rules of behaviour;
(4) Establishment of channels of communication and procedures for early notification of sea accident and for consultation on subsequent actions.

Is there then any possibility to introduce effective maritime CBMs in Northeast Asia?

### Minimum conditions for maritime CBMs in Northeast Asia

Masahiko Asada insists that minimum requirements to be met when introducing CBMs in a region are the existence of a sense of threat, the absence of a state with single-minded intention to invade the other, and the absence of excessive military imbalance between the states concerned.[6] That is, it would be meaningless to introduce CBMs between states enjoying mutually friendly relations and CBMs would not work if one side is determined

to invade the other.[7] Likewise, it would be difficult to introduce CBMs under conditions of military imbalance, since they are unnecessary measures for the superior nation. With these general conditions in mind, let us examine whether the conditions for introducing maritime CBMs exist in Northeast Asia.

With respect to the existence of feeling of threat, it does not seem necessary to elaborate on the Soviet threat, for we are already familiar with naval capabilities and strategies of the Soviet Union and their implications for SLOC security in Northeast Asia. However, it should be noted that the Soviet Union also sees great dangers to its security from the build-up of U.S. Pacific forces. Soviet military strategists are particularly concerned about the forward offensive posture of the U.S. navy and argue that the build-up of Soviet naval power in the Pacific is a "strictly defensive measure to counter U.S. expansionist policy."[8]

Stephen Gibert points out five potentially dangerous conflict arenas in Northeast Asia and Western Pacific: confrontation between the Soviet Union and the PRC; clash between North Korea and South Korea; conflict between the PRC and Vietnam; attack or some other military action by the PRC against ROC; and conflict between the two superpowers as the result of a Soviet-American clash in Europe or elsewhere.[9] From this follows that major sources of conceivable wars in Northeast Asia are the Soviet Union, the PRC, and North Korea. Let us consider the possibilities of armed aggression by these communist nations under the present situations of this region.

First of all, while the growth of Soviet Pacific Fleet during the past decade has been impressive, there seems little likelihood of a preemptive attack by the Soviet forces including a Soviet invasion of Japan. That is, although it is highly controversial whether the Soviet naval build-up in the Pacific region has been prompted by an offensive strategy, many analysts maintain that underlying rationale and orientation of the Soviet Pacific Fleet has not been mainly offensive. For instance, Gibert argues that:

> "Soviet naval strategy in the Pacific is, to a large extent, the mirror image of that of the United States. That is to say, despite the fact that Soviet military doctrine stresses the offense, the Russian Navy's concept of wartime operations, influenced by geographic factors, is largely defensive in character."[10]

In addition, the leaders of the Soviet Union would not easily contemplate an invasion of Japan, since the presence of U.S. forces in Japan as well as the U.S. commitment to defend Japan and PRC forces with the potential to exploit Soviet neglect of the Sino-Soviet border function as a deterrent force against Soviet invasion.[11]

Secondly, as to the probability of the use of forces by the PRC against ROC, analysts tend to agree that it is very unlikely. Hengtse Tu, for instance, argues that PRC's blockade of ROC is not exclusively a military question, and that "even taking military considerations alone, it is very doubtful that Communist naval forces could blockade such a long coastline as Taiwan's, especially with the two superpowers looking on from the north."[12]

Indeed, the facts that major security threat to the PRC comes from the Soviet Union, and that the success of the PRC's "Four Modernization" depends to a large extent on its relations with Western nations suggest that PRC's threat to ROC has become much less immediate and grave than it was in the period of 1950 to 1970. In this connection, Gibert aptly points out that:

> "Beijing knows that an attack on Taiwan would so disrupt its ties with both the United States and Japan as to, in effect, isolate the PRC in its confrontation with the USSR. This is too dangerous a price to pay to bring Taiwan under its control."[13]

Therefore, it seems safe to conclude that it would be both politically counterproductive and militarily unwise for the PRC to use its forces against ROC.

Finally, there is the question about the possibility of North Korea's invasion of South Korea. Clearly, the Korean peninsula is the volatile powderkeg of Northeast Asia, the place where war may break out with only minutes notice. Moreover, many observers are particularly concerned about the recent strengthening of military ties between the Soviet Union and North Korea which is a grave threat not only to the security of South Korea but also to that of the SLOC in Northeast Asia in the sense that it will increase the possibility of Soviet involvement and thus the Soviet naval intervention in another military clash in the Korean peninsula.[14]

However, it should be noted that the recent changes in the international relations in general and in South Korea's policy toward North Korea in particular can make a great contribution to the stability of the Korean peninsula. The emerging new detente mood between the U.S. and the Soviet Union and the improving U.S. and Japanese relations with the PRC may become a significant force for stability in the peninsula. More specifically, these improving relations between the great powers would increase the possibility that both the Soviet Union and the PRC might dissuade

Korea-Tsushima straits in case of another Korean war in order to prevent North Korean naval forces from being deployed in the southern part of the Korean waters?

The purpose of this paper, then, is to propose an alternative means of keeping the Northeast Asian SLOC secured to sheer military aspect of co-operation.

## Review of the constraints on the development of co-operation

In this section, attempts are made to review the constraints on the development of military co-operation in conjunction with previously suggested means of co-operation in an effort to clarify and highlight the obstacles with which we are now faced.

As the ways of sharing burdens of the SLOC defense among the four navies in Northeast Asia Sang-Woo Rhee made suggestions for "the division of SLOC defense zones" and "functional division of SLOC defense" at the First International SLOC Conference in San Francisco in 1982.[1] Rhee, by pointing out that the U.S.-Japan agreement for bilateral division of the SLOC defense zones (i.e., Japan's declaration of defending the sea defense zone in the Pacific up to 1,000 nautical miles from her coastline) would enhance security of the SLOC in Northeast Asia for the American allies, suggested a multilateral burden sharing system based on the division of SLOC defense zones. Rhee did not specify how and what areas should be assigned to South Korea and ROC for SLOC defense except for mentioning that "the U.S. and Japan help strengthen the navies of ROK and ROC to take responsibilities of SLOC defense surrounding their own territories."

As an alternative to the division of SLOC defense zones, Rhee also suggested to share the burdens functionally. To defend common SLOC among the concerned nations, according to Rhee, we can establish a joint "North-East Asian SLOC Defense Allied Forces" (NEASLOC/DAF) and each member nation takes functionally divided roles for the operation by dispatching special units to the joint forces.

Similarly, O'Connor also offered some thoughts on the means of co-operation at the Fourth International SLOC Conference in Taipei in 1986.[2] O'Connor's suggestion encompasses two broad areas: "force structure" and "command structures." The essence of force structure proposals is that nations should be willing to work towards complementary force structures in order to ensure that "the combined forces in each region are as capable as as possible of meeting the threat to SLOCs without having to call for outside assistance." In addition, O'Connor suggested to establish three maritime headquarters to control multinational forces assigned to SLOC protection by national governments, i.e., the Northeast Pacific Area, the ASEAN Area, and the ANZAC Area.

In proposing these thoughtful suggestions both Rhee and O'Connor noted that these suggestions should be seen as a basis for further research and discussion, and admitted that there would be many difficulties in implementing these joint co-operations. Nevertheless, they failed not only to elaborate on obstacles to the development of co-operation but also to suggest how to deal with them, thereby relegating their valuable suggestions to impractical means of joint co-operation for the SLOC security.

Then, what are the constraints on the development of co-operation for the SLOC security?

First, it is generally understood that the question of mutual co-operation as far as the security of sea lanes in the Western Pacific in general and in Northeast Asia in particular is concerned depends to a great extent upon the Japanese defense policy and attitude. However, as Toshihiko Hozumi and many others have already pointed out, "Japan takes a position that, in the field of sea-lanes defense as well, Japan will exercise the self-defense right only within the individual and independent defense right and it is not allowed to exercise collective defense under the present Constitution."[3] Then, the serious questions that arise are as follows: Is Japan able to co-operate militarily with the Asian nations?; is Japan able to get out of the present individual and independent defense policy and to go collective in terms of SLOC security?; Is Japan able to help strengthen the navies of South Korea and ROC as Rhee suggested?; Is Japan able to contribute to military operations if an armed conflict is to break out in the Korean peninsula or between ROC and the PRC? It seems that the answers to these questions are either negative or ambiguous at best.

Second, naval forces are inherently flexible to the extent that there is no guarantee that they will arrive at the time and place of each nation's need or preference. From this follows that a nation cannot allow itself in any way to restructure its naval forces or base its contingency planning on a particular common strategy. In this connection, it should be noted that there are differences in threat assessment by the nations of this region although generally speaking all of them perceive the Soviet Union

**Table 1**

**Distribution of Soviet submarines of different types among the 4 fleets for the years 1968, 1975, 1980 and 1987**

| | NORTHERN | | | | BALTIC | | | | BLACK SEA | | | | PACIFIC | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 |
| SSBNs | 14 | 38 | 46 | 37 | | | | | | | | | 6 | 11 | 25 | 25 | 20 | 49 | 71 | 62 |
| + SSBs | 21 | 15 | 3 | 1 | | | 6 | 6 | | | | | 14 | 8 | 7 | 7 | 35 | 23 | 16 | 14 |
| = SSBNs & SSBs | 35 | 53 | 49 | 38 | | | 6 | 6 | | | | | 20 | 19 | 32 | 32 | 55 | 72 | 87 | 76 |
| SSGNs | 18 | 28 | 26 | 24 | | | | | | | | | 10 | 12 | 19 | 20 | 28 | 40 | 45 | 44 |
| + SSGs | 13 | 16 | 12 | 5 | 6 | 2 | 2 | 2 | | 1 | 3 | 2 | 3 | 9 | 6 | 6 | 22 | 28 | 23 | 15 |
| = SSGNs & SSGs | 31 | 44 | 38 | 29 | 6 | 2 | 2 | 2 | | 1 | 3 | 2 | 13 | 21 | 25 | 26 | 50 | 68 | 68 | 59 |
| SSNs | 10 | 26 | 33 | 51 | | | | | | | | | 5 | 6 | 13 | 24 | 15 | 32 | 46 | 75 |
| + SSs | 105 | 54 | 54 | 42 | 63 | 73 | 28 | 23 | 40 | 43 | 18 | 17 | 62 | 45 | 39 | 34 | 270 | 215 | 139 | 116 |
| = SSNs & SSs | 115 | 80 | 87 | 93 | 63 | 73 | 28 | 23 | 40 | 43 | 18 | 17 | 67 | 51 | 52 | 58 | 285 | 247 | 185 | 191 |
| SSNs & SSs | 115 | 80 | 87 | 93 | 63 | 73 | 28 | 23 | 40 | 43 | 18 | 17 | 67 | 51 | 52 | 58 | 285 | 247 | 185 | 191 |
| + SSGNs & SSGs | 31 | 44 | 38 | 29 | 6 | 2 | 2 | 22 | | 1 | 3 | 2 | 13 | 21 | 25 | 26 | 50 | 68 | 68 | 59 |
| = No. of attack subs | 146 | 124 | 125 | 122 | 69 | 75 | 30 | 25 | 40 | 44 | 21 | 19 | 80 | 72 | 77 | 84 | 335 | 315 | 253 | 250 |
| + SSBNs & SSBs | 35 | 53 | 49 | 38 | | | 6 | 6 | | | | | 20 | 19 | 32 | 32 | 55 | 72 | 87 | 76 |
| = Total No. of subs | 181 | 177 | 174 | 160 | 69 | 75 | 36 | 31 | 40 | 44 | 21 | 19 | 100 | 91 | 109 | 116 | 390 | 387 | 340 | 326 |

*Source:* John Kristen Skogan, "The Evolution of the 4 Soviet Fleets 1968-1987", paper presented at the International Comparative Workshop on Soviet Seapower, Sortland, Norway, June 6-10, 1988.

**Table 2**

**Distribution of large surface combatants of different types among the 4 Soviet fleets for the years 1968, 1975, 1980 and 1987**

| | NORTHERN | | | | BALTIC | | | | BLACK SEA | | | | PACIFIC | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 | -68 | -75 | -80 | -87 |
| Aircr/heli carriers | | | 1 | 1 | | | | | 2 | 3 | 2 | 3 | | | 1 | 2 | 2 | 3 | 4 | 6 |
| Missile cruisers | 3 | 7 | 9 | 11 | 2 | 2 | 2 | 1 | 2 | 5 | 7 | 6 | 2 | 3 | 8 | 11 | 9 | 17 | 26 | 29 |
| + Old cruisers | 2 | 3 | 2 | 2 | 4 | 5 | 3 | 2 | 5 | 5 | 4 | 3 | 4 | 3 | 3 | 3 | 15 | 16 | 12 | 10 |
| = No. of cruisers | 5 | 10 | 11 | 13 | 6 | 7 | 5 | 3 | 7 | 10 | 11 | 9 | 6 | 6 | 11 | 14 | 24 | 33 | 38 | 39 |
| Missile destroyers | 6 | 9 | 14 | 27 | 7 | 14 | 14 | 12 | 11 | 15 | 20 | 21 | 4 | 9 | 17 | 24 | 28 | 47 | 65 | 84 |
| + Old destroyers | 18 | 13 | 5 | 3 | 15 | 14 | 5 | 6 | 18 | 14 | 13 | 6 | 25 | 18 | 13 | 6 | 76 | 59 | 36 | 21 |
| = No. of destroyers | 24 | 22 | 19 | 30 | 22 | 28 | 19 | 18 | 29 | 29 | 33 | 27 | 29 | 27 | 30 | 30 | 104 | 106 | 101 | 105 |
| Total number of large surface combatants | 29 | 32 | 31 | 44 | 28 | 35 | 24 | 21 | 38 | 42 | 46 | 39 | 35 | 33 | 42 | 46 | 130 | 142 | 143 | 150 |

*Source:* John Kristen Skogan, "The Evolution of the 4 Soviet Fleets 1968-1987", paper presented at the International Comparative Workshop on Soviet Seapower, Sortland, Norway, June 6-10, 1988.

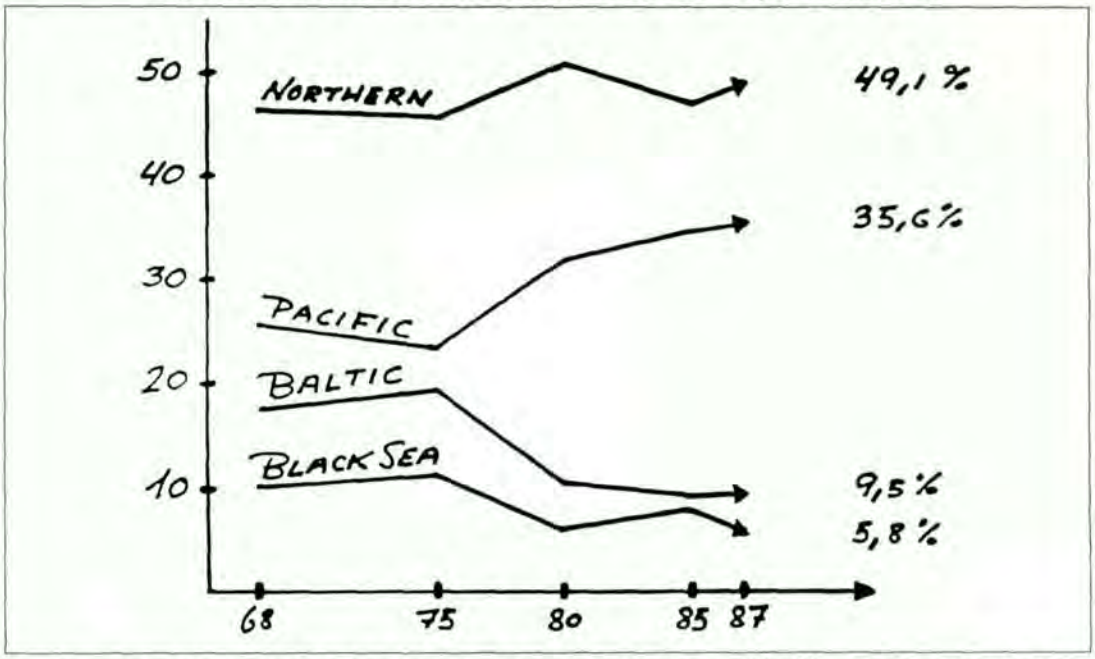
Second, the strategic importance and the frequency of naval manoeuvres make maritime CBMs appropriate in Northeast Asia. Since the Pacific became a major area of direct military rivalry between Soviet and U.S. naval forces, both nations have steadily increased the tempo of naval operations pursued in very close proximity to each other. Moreover, both nations have also continued to expand the proportion of their naval forces that are nuclear capable and/or nuclear equipped.

As a result of this undesirable development, along with the extremely short warning times involved in warfare at sea, the risk of nuclear war in this region through inadvertence has increased to an alarming level. In this connection, Peter Hayes argues that among the conceivable nuclear wars in Asia-Pacific a naval nuclear shoot-out between U.S. and Soviet Pacific Fleets in a crisis is the most likely case.[19] Viewed in this context, it would be expedient for us to take the initiatives and introduce maritime CBMs as these could contribute to avoid such a dangerous situation by increasing transparency and predictability.

Third, in Northeast Asia, maritime CBMs are less difficult to implement than other measures such as joint military co-operations or arms

**Figure 1**

**Proportional distribution of Soviet submarines over the period 1968-1987**




*Source:* John Kristen Skogan, "The Evolution of the 4 Soviet Fleets 1968-1987", paper presented at the International Comparative Workshop on Soviet Seapower, Sortland, Norway, June 6-10, 1988.

**Table 3**

**The Pacific Naval Balance**

| | *U.S.* | *Soviet Union* |
|---|---|---|
| Principal Surface Combatants: | | |
| — Aircraft carriers | 6 | 2 |
| — Battleships | 2 | 0 |
| — Cruisers | 18 | 15 |
| — Destroyers | 29 | 16[1] |
| — Frigates | 46 | 55[2] |
| Submarines: | | |
| — Strategic | 8[3] | 32[3] |
| — Attack | 43 | 90[5] |
| Amphibious | 32[6] | 21[7] |

[1] About 10 are obsolete gun-destroyers of *Skory, Kotlin* and *Kildin* classes.
[2] About 30 are obsolete gun frigates of *Riga, Grisha* and *Petya*classes.
[3] *Ohio* class SSBNs. Each carries 24 *Trident* missiles with a total of 192 warheads per boat.
[4] Includes 16 *Delta*, 9 *Yankee*class SSBNs and 7 *Golf* class SSBs.
[5] About half are nuclear-powered. 25 carry cruise missiles.
[6] Includes 6 assault carriers, about 30,000 tons each.
[7] Includes one *Ivan Rogov* class landing ship dock (LPD).

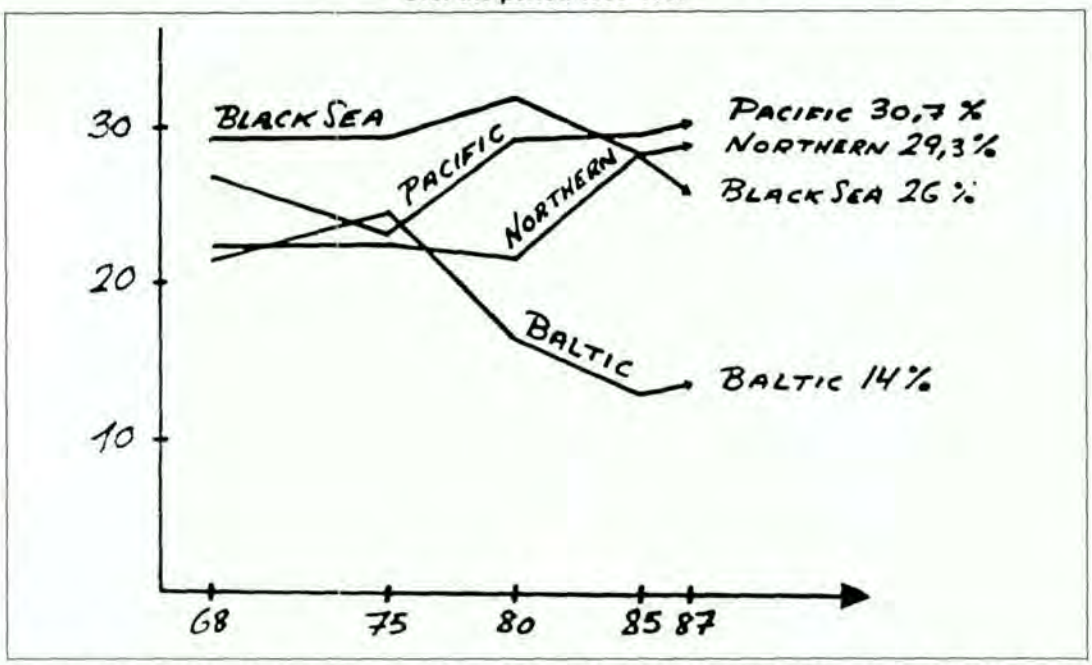
*Source:* Amitav Acharya, "The United States Versus the USSR in the Pacific: Trends in the Military Balance," *Contemporary Southeast Asia*, Vol. 9, No. 4 (March 1988), p. 296.

control. Unlike joint military activities, as mentioned earlier, maritime CBMs are not designed to enhance deterrent and/or defense capabilities which entail a long and difficult process of compromising various military as well as political interests of the nations concerned. In addition, the fact that some forms of CBMs including maritime CBMs already exist in Northeast Asia could serve as an important impetus to seriously consider the further development of maritime CBMs. For instance, the Air Safety Agreement of 1985 between the U.S., the Soviet Union, and Japan may be viewed in this light. Moreover, annually since 1982, the U.S. and South Korea have notified North Korea and the PRC of their Team Spirit exercises and have invited them to send military observers, and there is a 1972 agreement between the U.S. and the Soviet Union that stipulates measures to prevent incidents between warships during manoeuvres on the high seas.[20] Given this history of CBMs in Northeast Asia, it would be safe to assume that there is a good chance of introducing effective maritime CBMs in this region.

Another favourable factor which makes the implementation of maritime CBMs relatively easier is that they can be taken on a unilateral basis. In other words, since maritime CBMs do not interfere with the existing level and

**Figure 2**

**Proportional distribution of large surface combatants of the Soviet Navy over the period 1968-1987**




*Source:* John Kristen Skogan, "The Evolution of the 4 Soviet Fleets 1968-1987", paper presented at the International Comparative Workshop on Soviet Seapower, Sortland, Norway, June 6-10, 1988.

structure of naval forces, they can be implemented unilaterally. Moreover, unilateral implementation can be used as a means of showing off implementor's military capability as well as of demonstrating its non-aggressive intentions. However, this is not to say that unilateral implementation is more desirable and more effective than reciprocal implementation of maritime CBMs. To be sure, unilaterally implemented maritime CBMs may deprive the other side of its incentive to engage in such measures, thus making them less effective. Nevertheless, it should be noted that notwithstanding its shortcoming, unilateral implementation of maritime CBMs, if adopted with vigor, could contribute to the implementation of reciprocal maritime CBMs.

Fourth, emerging mood of new detente between the U.S. and the Soviet Union as well as among the four great powers in Northeast Asia suggests that the prospect of implementing maritime CBMs on reciprocal basis is much brighter now than ever before. More importantly, Mikhail Gorbachev based on his "New Thinking" has been urging CBMs in general and maritime CBMs in particular. In addition to his proposals in Vladivostok speech and in Merdaka interview, Gorbachev put forward a more specific proposal for maritime CBMs in the Asia-Pacific region in Krasnoyarsk speech on September 16, 1988. For instance, Gorbachev stated that:[21]

> "Second: the Soviet Union is inviting the main naval powers of the region to hold consultations on the non-increase of naval forces in the region.
>
> Third: the USSR suggests that the question of lowering military confrontation in the areas where the coasts of the USSR, the People's Republic of China, Japan, the Democratic People's Republic of Korea, and South Korea converge be discussed on a multilateral basis, with a view to freezing and commensurately lowering the levels of naval and air forces and limiting their activity."
>
> "Fifth: in the interests of the safety of sea lanes and air communications of the region, the USSR suggests that measures be jointly elaborated to prevent incidents in the open sea and the air space over it. The experience of the existing bilateral Soviet-American and Soviet-British accords, as well as the USA-USSR-Japan Trilateral Accord could be used during the elaboration of these measures."

This is not to say that we should accept the Gorbachev's proposals at face value, but that given the symptoms of new detente, we should make efforts to take the initiative by carefully

examining them and suggesting a counter-proposal instead of flatly refusing or ignoring them.

In short, the foregoing analysis suggests that maritime CBMs are quite viable and would serve an important confidence enhancing role in this region.

## Conclusion

This paper attempted to propose maritime CBMs as an alternative to military co-operation for the security of SLOC in Northeast Asia by examining the conditions for and possibility and usefulness of applying maritime CBMs to the region.

This preliminary examination suggests the following tentative conclusions:

First, the variety of military as well as political interests of the nations in the region makes maritime CBMs more suitable than military co-operations for the security of SLOC in Northeast Asia.

Second, the strategic importance of the sea, the frequency of naval manoeuvres, and the danger of a naval nuclear war make maritime CBMs appropriate in this region.

Third, maritime CBMs could make a considerable contribution to ensuring the most important security interest of the region, namely, maritime safety.

Fourth, given the emerging mood of a new detente maritime CBMs are quite viable and would serve an important confidence enhancing role in this region.

Fifth, we should continue to examine and develop more effective maritime CBMs.

## Footnotes

* The views expressed in this paper are the author's own and do not represent those of the Institute of Foreign Affairs and National Security, Ministry of Foreign Affairs, Korea.

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    (1) We will actively promote exchanges of visits between the people of South and North Korea, including politicians, businessmen, journalists, religious leaders, cultural leaders, artists, academics and students and will make necessary arrangements to ensure that Koreans residing overseas can freely visit both parts of Korea.
    (2) Even before the successful conclusion of the North-South Red Cross Talks, we will promote and actively support, from a humanitarian viewpoint, all measures which can assist dispersed families in their efforts to find out whether their family members in the other part of the peninsula are still alive and their whereabouts, and will also promote exchanges of correspondence and visits between them.
    (3) We will open doors for trade between South and North Korea, which will be regarded as internal trade within the national community.
    (4) We hope to achieve the balanced development of the national economy with a view to enhancing the quality of life for all Korean people in both the South and the North, and will not oppose nations friendly with us trading with North Korea provided that it does not involve military goods.
    (5) We hope to bring to an end counter-productive diplomacy characterised by competition and confrontation between the South and the North and to co-operate in ensuring that North Korea makes a positive contribution to the international community. We also hope that representatives of South and North Korea will contact each other freely in international forums and will co-operate to pursue the common interests of the whole Korean nation.
    (6) To create an atmosphere conducive to durable peace on the Korean peninsula, we are willing to co-operate with North Korea in its efforts to improve relations with countries friendly to us including the United States and Japan, and in parallel with this, we will continue to seek improved relations with the Soviet Union, China and other socialist countries.
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**OUT OF THE PAST**
**The light crusier HMAS ADELAIDE seen in Gage Roads off Fremantle, Western Australia in 1940 prior to her adopting herdrab wartime camouflage.**
**Photo: Navy Public Relations (WA)**

# AN ESSAY ON NAVAL PRESENCE IN SUPPORT OF AUSTRALIA'S FOREIGN POLICY; IMPORTANCE VERSUS CAPABILITY

by

LCDR V.E.B. Di Pietro, RAN

*Between the Idea*
*And the reality*
*Between the motion*
*and the act*
*Falls the Shadow.*

*T.S. Eliot*

## INTRODUCTION

Amongst the plethora of recollections of an individual's lifetime, memories of the children one went to school with are likely to be the most vivid. In retrospect, one tends to group the 'kids on the block' into a number of different types: the leaders, the bullies, the weak, the strong, the followers The pecking order sorted itself out quickly with little interference from beyond the peer group. The childhood evolution was all about relationships: choosing your friends and boundaries, and surviving in possibly the cruellest environment known to man.

International relationships are not unlike those between children. The choices, options, and infinite differences are grander but the basic behavioural elements are identical. In the global context, a nation assesses its position and ambitions and transmits them to all others as its foreign policy. This essay will discuss foreign policy, its objectives and relationship with defence. It will then focus on the peacetime strategy the maritime forces should adopt to best achieve the broadest national objectives.

This strategy is the naval presence mission. After describing the mission and its importance as an effective medium for the preservation of peace, its theoretical and practical relevance to Australia will be discussed. Finally, an assessment will be made of Australia's capability to carry out the mission within the present defence context of Australia's defence strategy.

The aim of this essay is to evaluate whether the importance of the naval presence mission in support of Australia's foreign policy is matched by the ADF's capability.

## FOREIGN POLICY '...the idea'

Foreign policy may most simply be likened to a patchwork quilt. No rules exist for the order in which the patches must be laid but the end product nevertheless has an identifiable pattern. Each patch is an idea responding to a nation's geopolitical situation; images of national interest which may be realigned or reinterpreted at any time. As each realignment takes place to respond to a changing situation, so too does the formation of the political and bureaucratic framework which exists to monitor these events.

The main function of the policy is to ensure that the very delicate balance between economics, politics and the military is never eccentric to any single factor. A change of policy direction is made with external factors at the forefront of any decision, but is also inextricably intertwined with domestic politics. To this end, the national executive takes the pre-eminent role in the decision-making process but many other institutions play a large part. This process is always dynamic and, except for a few elements, largely unpredictable

**Australia's foreign policy and areas of interest**

Within the Australian context the Federal Government effects changes following inputs from parliament, political parties, the states, pressure groups, the public and the media. In the pursuit of a credible foreign policy, the current Minister for Foreign Affairs and Trade, Senator Evans, has detailed Australia's four highest priorities in foreign affairs policy (2). These are:

**To maintain** a positive security and strategic environment in our own region;

**to pursue trade**, investment and economic co-operation;

**to contribute** to global security; and

**to contribute** to the cause of good international citizenship.

Put simply, Australia's foreign policy objectives are 'a safer Australia, a better international environment, a more prosperous world and a better world'. (3)

Due to significant resource limitations, the above objectives must be further qualified by clearly defining our region. Described as 'a conceptual watershed as much in foreign policy as in defence policy, (4) the Defence White Paper of 1987 defines our region as two concentric rings (5): The zone of direct military interest (6) and the area of primary strategic interest. (7)

**Australia's perception of its role**

Having determined the basis of Australia's foreign policy, the level of effort to be expended in pursuit of its objectives rests on Australia's perception of its role in the region. The viewpoint from within is that Australia has a significant standing and influence in the world and particularly in our region (8). It 'must be able to project independent, comprehensive military power in order to provide for our direct security. (9). More importantly, Australia and its allies expect it to play an independent role in the (defined) region commensurate with its size and resources. (10).

**Foreign Policy and Defence**

Australia implements its foreign policy by a number of means. These include:

**An active and unselfish** participation in treaties, alliances and international forums (UN, UNCLOS, ANZUS, FPDA); (11)

**participation** in regional forums (SWPF); (12)

**numerous and far reaching** foreign aid programs; and

**maintaining a defence profile** within the region.

Although initiated by diplomatic means, the performance and necessary support of these tasks is clearly not achievable with diplomacy alone. Australia's stated defence policy is to develop the ability to defend itself, deter aggression against Australia, promote co-operation with friends and allies and foster awareness of common strategic interests. Hence, defence policy meshes perfectly with the objectives of foreign policy; in effect defence and foreign policies are inseparable. Mahan aptly describes this dovetailing of functions: 'Diplomatic conditions affect military action and military considerations diplomatic measures...they are inseparable parts of a whole; and as such those responsible for military measures should understand the diplomatic factors and vice versa.' (13)

In practice, overseas defence activities rely heavily on the involvement of the Department of Foreign Affairs and Trade, military exercises with other countries, defence co-operation programs, port visits and defence science. (14) A very good current example is the Pacific Patrol Boat program (15) described as 'the central pillar of (Australia's) effort to assist the South West Pacific nations'. (16). Australia is a nation with no shared land borders, adjacent to archipelagic and island states, with an absolute reliance on sea trade. Therefore Australia's maritime element of defence and more specifically the Navy has the most vital role to play in promoting Australia's foreign policy and protecting its interests. (17)

**THE NAVAL PRESENCE MISSION '...the reality'**

The purely peacetime mission which uses naval forces to achieve political objectives is naval presence - a deterrence designed to convince the potential opponent that aggression is the least attractive of all alternatives. Sometimes incorrectly referred to as coercive or gunboat diplomacy, naval presence is unique because it directs capability to avoid conflict. Although difficult to quantify because not universally associated with the traditional naval roles, presence is inextricably linked with the navy's potential to wage war if diplomacy fails. In some circles, the naval presence mission is seen as an effective peacetime strategy. It achieves national aims and deters aggression.

As a peacetime mission, naval presence may be used either reactively or prophylactically. Although its name implies

the physical existence of an object, the principal impact of naval presence is its image - the observer's perception of the presence as a force to be reckoned with. The functions of naval presence are:

**The demonstration of commitment** to political, security and economic interests, either shared or unilateral;

**the demonstration of resolve** to defend national objectives by maintaining operational readiness;

**to act as a stabilising influence** in areas of rising tension by providing a credible capability to wage war if necessary;

**the support of military commitments abroad** (e g port visits; and

**to provide humanitarian assistance** or disaster relief at home and abroad. (18)

As well as overseas deployments or a permanent presence within a specific region (e g the permanent presence of a major combatant in South East Asia) (19) these functions can be achieved by more subtle means; a spectrum of options, not all of which rely on naval vessels for execution. Although not within the scope of this essay, some examples of the lesser-known options are:

**Manpower training** programs in Australia for members of regional services;

**the establishment of defence attaches** overseas;

**the continuation training** of personnel in their own countries (e g follow up training for naval personnel in the Pacific Patrol Boat Program); and

**tradesperson expertise** 'on the ground' to assist local community projects abroad.

### Advantages and disadvantages

As with all strategic options, there are two sides to the coin and the naval presence option is no exception. Its main advantage it its flexibility, mobility and range as a promotion vehicle for foreign policy. When practised with a warship, presence adds bite to the policy though not necessarily baring teeth: In a potentially escalatory environment it can act as a diffuser. Secondly, unlike aircraft or soldiers, a warship's presence makes no territorial demands. It is visible to the general public as a direct reflection of national resolve and represents a piece of national sovereignty. Submarines are a vital naval presence even if not visible because the possibility of their presence implies a significant capability. Most importantly, naval units' actions can be monitored and controlled minute by minute from their respective commands at home.

On the other hand, naval presence has some disadvantages:

**The presence may be misinterpreted** as aggression due to the perceived uncertainty of the user's intent;

**an error of judgement** on the part of the commander on the scene is always possible. (e g the 1988 USS VINCENNES incident).

**it may provide the calalyst** to escalate an otherwise tense but non-violent situation; and

**the balance of presence** is vital; a semi-permanent presence with a low-capability ship may be perceived as permanent weakness, but infrequent visits by a major unit not provide a sufficiently valid presence. (20)

### Implications of the naval presence to the observer

A credible naval presence demands certain qualities of any national leadership committed to such a strategy. Will has to be the primary criterion. A nation must be willing to become involved, commit assets and take necessary risks to protect or enforce its national interest. A nation that is prepared to use expensive and precious assets, and if necessary lose them, demonstrates as much will as is possible within a naval presence strategy.

Secondly, the total effort behind the presence must be fully revealed. A major part of deterrence is maintaining operational flexibility. If adequately supported, a fleet can remain on station indefinitely and would depend on continual projection of capability to prevent the need to resort to violence.

The success of effective naval presence is heavily reliant upon the seizure of the political as well as the military initiative. The first external party to make its presence felt can exploit its presence as it sees fit. The second or subsequent party loses both initiatives and is forced to regain the nations ability to effect the desired result in its national interest.

Finally, if the nation wishing to exert the presence is perceived as a 'bushfire' manager rather than one operating to a specific plan, the presence loses impact. If the outcome in unpredictable there is no identifiable threat to the offender for unacceptable behaviour. (21)

### The blueprint for a credible naval presence

The focus of the preceding appreciations of foreign policy and naval presence has been to formulate the minimum requirements for

credibility. Notwith-standing the quasi-diplomatic functions, the following features of the maritime elements of a defence force are considered vital: (22)

**Ships** must be capable and impressive. Presence gains its strength from the other party's perception of the asset. A carrier is very impressive, very complex and clearly very capable to all; a state of the art ship impresses the savant but with few if any visible weapons does not have the same impact on the populace.

**A force of ships** must have a multi-role capability thereby showing an ability to meet most situations in the protection of their national interests, regardless of their location.

**Units must be supportable** and their support capability must be as visible as the warship's weapons. The other party must see that the nation's will to maintain the effort is as serious as the will to enforce the issue.

**Fleet units must exercise** regularly with each other and other navies. Tacit in this is the need for the units to be seen in the region of interest.

**Command and control** must be efficient and visibly effective. Response times to any development is the primary indication of will, efficiency, resolve and management ability.

## THE NAVAL PRESENCE MISSION FOR AUSTRALIA '...the motion'

A principal aim of foreign policy is to deter aggression before it starts. To achieve this primary function, the naval presence mission has many inherent advantages and qualities which are absolutely essential for Australia. A valid presence in our region would meet all other stated foreign policy requirements and guarantee a majority percentage of success in persuance of its objectives.. This diplomatic success, not only as a direct result of but intertwined with, a credible defence policy would provide a regional ambience of security and stability. Naval presence is the best provider of this environment, a mission entirely conceived and employed for the preservation of peace.

*The defence of Australia 1987* (Defence White Paper) states that Australia is developing a 'defence force capable of maintaining a self-reliant cefence posture, giving priority to those capabilities which are needed for the defence of Australia and its direct interests'. The force will be expected to 'respond effectively to attacks within our area of direct military interest. This area stretches 7000 km from the Cocos Islands to New Zealand and the islands of the south-west Pacific, and over 5000 km from the archipelago and island chain to the north to the Southern Ocean'. (23) Effectively, we hope to achieve a presence commensurate with the perception of our role in the region by adopting an extended fleet-in-being (24) strategy as a component of the total force-in-being. (25) Such a strategy requires a naval capability and dimension of respectable proportions.

In the event that our foreign policy should fail, such a naval presence should be a credible maritime force. This force could be expected to operate effectively as the major element of an overall strategy commensurate with Admiral Stansfield Turner's concept of sea control. (26) Within the constraints of Australia's conventional posture such a force would possess a deterrent function threatening denial of the use of the sea and a combative function which could assert or deny control of the sea to the aggressor.

Within stated national objectives the importance of the naval presence mission in support of Australia's foreign policy cannot be understated. The size of the fleet necessary to meet the task as suggested by the Defence White Paper, however, would have considerable trouble receiving support and finance from a country with many other urgent commitments and serious fiscal constraints.

## EVALUATING CAPABILITY FOR NAVAL PRESENCE '...the act'

The Defence White Paper states that "No neighbouring country harbours any aggressive designs on Australia and no country possesses, or has embarked on the development of, the extensive capabilities to project maritime power which would be necessary to sustain intensive military operations against us. Given the long lead times and large costs involved in establishing the kind of major military capabilities which would be required, this is likely to remain so for many years'.(27)

The author wholeheartedly supports this perception. However, one must question the validity of reorganising existing forces and channeling future force development to counter the (non-existent) threat from the north. Admittedly the formulation of a defence strategy in peacetime is difficult because it relies on uncertainties. Nonetheless, if there is no foreseeable threat of invasion from the north perhaps the present should be the time to consolidate our investments. The formulation of a strategy should be based on

vulnerabilities, not threats. Scarce defence funds may be better spent on developing a credible naval presence to deter aggression effectively before it reaches the shore in the future, while enhancing our regional influence within stated national objectives in the present.

Secondly, in accordance with foreign and defence policy objectives, the Defence White Paper states there is an identified requirement for "Australia's defence policy to take account of developments in the south west Pacific and South East Asia - our region of primary strategic interest - and be capable of reacting positively to calls for military support further afield from our allies and friends'. (28)

This requirement is achievable with a valid Australian naval presence. However, the self-reliant posture and future force development expects the ADF to be capable of coping with defined low-level and possibly escalated low-level conflicts only. (29) This very narrow level of force development is justified by stating that "the possibility of deployments beyond our region should not determine the structure and capabilities of the ADF'. (30)

The inconsistency is that Australia perceives its regional posture and defence ambitions as those of a maritime power. However, without the ability to project a capable naval presence stronger than other regional nations Australia's status is effectively reduced to that of a continental power with some coastal capability.

Operation Morris Dance showed Australia's will and initiative to respond to a situation within our region. The operational planning and mobilisation of numerous ADF assets and personnel proved an invaluable exercise for Australia. It did, however, highlight the lack of vital assets for the RAN to project Australia into the region. Shortcomings were evident in:

**Amphibious capability;**
**appropriate support vessels** capable of sustaining long-term naval effort;
**inadequate air assets** (both in number and type) to carry out logistics-over-the-shore operations; and, most importantly,
**the lack of an air-capable platform** to embark the necessary number and types of air assets to conduct projected operations within our region in support of the Operational Deployment Force.

At this stage the clear and irreconcilable conflict between desired cabability and actual capacity may best be resolved by once again directing resources towards a credible presence.

As components of our existing maritime force, the F111C, P3C Orion and the Oberon class submarine are very high value units. They are unquestionably the most potent weapons in the region and possess the capability to project way beyond Australia's shore. Fitted with Harpoon and in the case of the F111C, PAVE TAK, these assets provide the most significant offensive power. Their value to Australia as Type 1 deterrence (31) is vital. The remainder of the ADF is geared towards the low-level contingency and provides deterrence at the other end of the scale. The deficiency here is the inability to handle any 'middle of the road' situation that may arise. It is extremely unlikely that any contingency in our area in the foreseeable future will warrant the level of response which the 'sharpest teeth' of the ADF provide. In the absence of a credible naval presence to handle conflicts in the neutrality of the open sea, the conflict must betaken onto the shore.

## WHAT POSSIBILITIES FOR CREDIBLE AUSTRALIAN NAVAL PRESENCE *Illuminating '...the shadow'*

It must be emphasised that the key descriptors of this discussion are 'importance' and 'credible'. The qualities and advantages of naval presence self-evidently prove the mission's validity and hence its importance for Australia. The 'shadow' in Australia's existing and proposed naval presence is in its credibility to perform all that is expected of it. This has been highlighted by the clear disparity between Australia's stated perception of its role in our region and the absence of some vital assets to carry out the role.

Existing naval assets are, to varying degrees, capable and impressive but they do not provide any superior presence to any other medium nation in the region. Proposed capital equipment acquisition programs for the navy will provide assets of greater capability for the fleet within the nations financial capacity and the requirements of the Defence White Paper. However, the present fleet ant that of the future must have the ability to project a sustainable, autonomous naval presence capable of layered air, surface, sub-surface and electronic operations in the region.

There are two alternatives Australia can adopt. The first is to adhere to a continental strategy and reconsider its strategic and military areas as of academic interest only. The second is to look laterally for inexpensive

alternatives which increase presence, fleet autonomy and regional profile and, therefore, capability. A few suggested possibilities are:

**An air capable platform** (naval or merchant) as a base for expansion in the future;

**current technology airships** for fleet AEW, coastal and co-operative regional surveillance;

**alternative vehicles** for enhances amphibious and support capability; and

**capable, medium-lift utility helicopters** for logistics-over-the-shore operations.

Each option need not, indeed should not, be state-of-the-art hardware nor necessarily new. Acquisition arrangements such as long-term leasing are worthy of extensive consideration. The current manpower and fiscal constraints are many. Although not specified in the Defence White Paper, justification for such equipment is not outside its scope or the stated defence objectives for Australia. It is not suggested that such options be additional but perhaps in lieu of defence assets which do not achieve credible Australian presence or meet current national foreign policy objectives: The shadow is easy to identify, the missing capability not inherently difficult to provide.

## CONCLUSION

The line of least resistance is offhandedly to dismiss the naval presence mission. The decision to withdraw HMS ENDURANCE from the Falkland Islands was perceived as Great Britain's last show of interest in the South Atlantic, thereby catalysing Argentina's decision to invade the Falklands. This affirmative example of naval presence is often described as irrelevant to Australia's region.

However, in recent years Australia has been presented with what could be referred to as a 'necklace' of instability within our region. Events in Fiji, New Caledonia, Vanuatu, Bougainville and on the Irian Jaya/Papua New Guinea border should be a deep cause for concern. These events have occurred during a time when the effectiveness of, and security offered by ANZUS has been doubtful. Over a similar period the RAN's capability was severely reduced by the decommissioning of HMAS MELBOURNE without replacement and the dismantling of the fixed wing component of the Fleet Air Arm, the only autonomous naval aviation force in the region. These degradations of capability have significantly reduced Australia's credible naval presence and ability to project into our region. They broadcast a step down in our regional commitments and responsibilities. Is there a nexus?

Notwithstanding, Australia is the world's fifth largest user of shipping to transport 94% of its import and export trade It is a simple reality, not a myth, that we are a maritime nation and must therefore protect not only foreign policy but our own national interest by keeping sea lines of communication open. Australia may not necessarily have to do this against an aggressor, but as a neutral party whose shipping may be a target of opportunity of conflicts between other nations. An Australian registered merchant vessel was attacked in the Persian Gulf in 1987. (32) A continental defence posture leaves Australia no option but to accept such occurrences. Without the option of a projected naval presence to protect our shipping, what level of lost revenue or imports could Australia sustain?

There are few simple choices and even less certainties in forming foreign policy. One of the few certainties is its reliance on defence policy as the ultimate arm of diplomatic extension. For a maritime nation, the navy is the principal protection vehicle of national interests and objectives, and must be afforded appropriate levels of capability and expenditure. The prime task of the ADF is not to fight a war but to prevent it with a determined but friendly presence. This presence will provide a deterrence which will inhibit aggressive adventurism by making limited provocations appear unprofitable. (33) Within our region this should be the ADF's mission to preserve peace and elevate Australia's status to that of a credible medium power. To this end, the RAN's capability must reflect the importance of the naval mission in support of Australia's foreign policy.

As John Stuart Mill said:

'Our diplomacy stands for nothing when we have not a fleet to back it.'

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# PROTECTION OF SEA LINES OF COMMUNICATIONS - POTENTIAL FOR REGIONAL CO-OPERATION IN THE WESTERN PACIFIC

by
Commodore H J Donohue, RAN

## INTRODUCTION

The Western Pacific Region - stretching from Japan and the Republic of Korea through to Australia and New Zealand -was the most dynamic region in the world in the 1980s, in terms of economic growth, trade and investment. Much of this growthcan be attributed to the export oriented industrialisation strategies adopted by many countries in the region. These developments have seen regional economies become competitive exporters of both traditional and non-traditional manufactures. In addition, these strategies, together with the natural trade already existing, have facilitated strong growth in intra-regional trade.

Trade has been one of the key factors in generating economic growth in the Western Pacific Region. Despite more difficult economic prospects in the world generally, rates of economic and trade growth in the region can be expected to continue to be high relative to the world economy as a whole. While the region is strongly integrated with the world economy, this link is becoming less significant as activity in the region becomes increasingly self generating. An emphasis on trade indicates the importance of sea lines of communications, the security of which needs to be addressed from a regional perspective.

## TRADE IN THE WESTERN PACIFIC

In the period 1971 to 1984 exports by Western Pacific Region countries grew at an average rate of 17.9 per cent compared with world exports which grew at an average annual rate of 14.2 per cent. Reflecting the rapid export growth rates, the Western Pacific Region's share of world trade has increased significantly from 14.3 per cent in 1971 to 21.8 per cent in 1984 (1).

The bilateral trade patterns that have developed in the region have resulted in a complex structure of distribution channels and markets, which if disrupted would pose enormous economic and security challenges. In emphasising the importance of the maritime dimension and particularly trade to economic development in the Western Pacific, the reliance which major manufacturing nations, like Japan and now Korea, have on trade for the maintenance of their rising standards of living should be recognised.

There is a growing realisation that the economies of the Pacific, and those of the United States and Europe, are becoming more and more interdependent. The implications of this for seaborne trade are indeed significant noting that ships carry some 70-75 percent of the volume of trade which has expanded more than eight times in the last 50 years (2).

There is also of course significant bilateral trade within the region, with Japan being the largest regional market and the United States being the largest outside trading partner. The importance of the US economy for growth prospects in the region can clearly be seen from the fact that for 60 percent of the countries, the USA is their largest export market, whilst for all (except PNG) the USA is ranked amongst their top 3 export markets. (3).

The regional trade which has built up over the twenty years or more is firmly based on complementary economic accompanying similar interdependence in Western Europe. The basis for much of this trade is the

exchange of raw materials for manufactured goods. Since many of the primary commodoties normally traded require bulk cargo carrying capacity and high tonnages, these shipments are particularly dependent on secure sealines to assure adequate quantities at economical competitive cost.

Good examples of these complementary economic structures, and the consequent trade relationships, include the relationships both Indonesia and Australia have with Japan. The flow of oil and natural gas from Indonesia and of minerals from Australia to Japan is offset, to a degree, by Japan's exports of manufacture goods to both countries. While there are many advantages accruing to each country from this arrangement, there are also some disadvantages, particularly if the interdependence becomes too great. And, importantly for the region as a whole, the disadvantages can affect third parties. For example the cut-off of oil to Japan would have serious implications for all countries which rely on trade with Japan and not just the supplier of oil.

## AUSTRALIAN TRADE

In Australia's case, annual exports amount to about 26.8 million tonnes worth some $36 billion and imported consist of some 27 million tonnes worth some $32 billion. Significantly 99.9 per cent of all Australian trade by volume and 81 per cent by value is carried by sea (4). Sea transport also makes a major contribution to Australia's domestic trade. Each year, Australia's coastal shipping carries 45 million tonnes of cargo worth some $15 billion (5).

The direction of Australia's overseas trade, based on the percentage of our exports and imports, was fairly stable until the late 1950s. Then, the fast rate of economic growth and industrialisation of Japan began to show, setting in train a remarkable shift in the direction of Australia's trade away from Europe in favour of the Western Pacific Region. This was reinforced by the growth of other Asian economies and Australia losing her favoured position in trade with the UK.

By value, 59 percent of Australian exports are now destined for Western Pacific nations. The other major change in recent years has been in exports to the Persian Gulf, particularly live sheep and manufactured goods. The high growth export industries relate to mining and manufactured goods while overall the importance of primary exports has declined. (6)

Imports have also changed in favour of the Western Pacific, with some 42 percent originating in that region. Those from the Persian Gulf area, of course, are mainly heavy crude oil. Australian imports by value relate mainly to manufactured goods with a preponderance for machinery and equipment (7). Australia's dependence on imports of complex, manufactured goods, is planned to reduce, and the building of the new submarines and ANZAC ships locally is an example of this trend.

Trade forms a significant part of Australia's economic growth and, including imports and exports, equates to about 25 percent of GDP. Additionally, exports not only generate employment in their own sector, but they create indirect demands which in turn are beneficial to the economy. Although Australia enjoys a relatively high level of self-sufficiency in many areas, standards of living are very much dependent on the free flow of trade.

## GEO-STRATEGIC CONSIDERATIONS

The region's geostrategic environment and history has tended to have a significant maritime bias. The ancient Chinese had established an extensive trading empire, while Japan and Korea have long maritime traditions. Nations such as Indonesia and the Philippines exercise sovereignty over significant ocean spaces and view the sea as an integral part of their nation i.e., the concept of the archipelagic state. Malaysia's division into two distinct and widely separated geographic regions poses particular strategic problems including a significant maritime dimension. Thailand too faces a maritime dimension as well as a continental one, as it is dependent on the security and stability of two separate and unconnected ocean areas - the South Chinese Sea and the Andaman Sea. It has also vital strategic interests on its long land borders.

Perhaps the most outstanding maritime feature of the Western Pacific's strategic environment is the Malacca Strait. It is the busiest strait in the world with as many as 200 ships per day passing through this long, shallow waterway. It is fundamental to Japan's economic well-being, and to the economic development of China, Korea and Taiwan. It is the shortest line of communication between the Pacific and Indian Oceans and hence of significance in the development of trade between the Western Pacific and Europe. It is also of vital interest

to the economies of Malaysia, Singapore and Indonesia.

Although less significant in global terms, the other archipelagic sea lines of communication are of fundamental strategic significance to the Western Pacific region, particularly for Australia, Indonesia and Japan. While the re-routing of merchant ships is always an option, it is an expensive one. For example, the closure of Sunda, Lombok, Ombai and Wetar Straits would add some 15 to 20 percent to the cost of exporting iron ore from North West Australia to Japan if the ships had to divert south around Indonesia and Papua New Guinea. The denial of maritime access in the region would be of major strategic and economic importance to the countries within the Western Pacific.

## AUSTRALIA'S STRATEGIC POLICIES

The Government's approach to defence is to seek to reinforce the positive aspects of Australia's strategic environment and to provide an appropriate measure of insurance against future uncertainty. Our defence strategy goes beyond the defence of the nation against direct attack to include the promotion of our security interests. Through its activities, Defence both complements and supports activities conducted in the diplomatic, social and commercial field, at the Government and private sector levels.

Defence planning encompasses force structure development and how it could be used operationally, including not only the activities necessary to resolve conflict, but also activities to support the present favourable strategic environment. Accordingly, defence planning extends to the maintenance and development of alliances and regional defence relationships which support our strategic objectives and make their realization more achieveable.

Fundamental elements of this approach are the need for Defence to:

**maintain** a defence force able to respond to a range ofsituations as required by government;

**continue** to promote our strategic interests in concert with our neighbours; and

**actively** encourage and support our alliances and defence relationships.

Since publication of the 1987 Defence White Paper, Government has reaffirmed its intention to contribute to regional security and to maintain close practical co-operation with the ASEAN and South West Pacific nations. As the Minister for Defence noted in a statement to the Parliament in early 1988, 'Within this area of broad strategic interest we intend to develop and maintain defence relations, co-operate in the development of defence capabilities, and undertake military deployments, visits and exercises with our regional neighbours.. (8)

One important aspect of this regional co-operation must be to focus on mutual trade issues, improve regional consultation and co-ordination, and to link trade and economic interdependence with sea lines of communications security. Australia has developed concepts and doctrine for such operations and these should be examined for their potential for furthering regional co-operation.

## NAVAL CONTROL OF SHIPPING

Naval control of shipping is a well developed concept within many western navies. The Australian Defence Force has within its responsibilities the control, direction and protection of merchant shipping at sea. The RAN regularly exercises this responsibility through its established Naval Control of Shipping organisation. The responsibility of such an organisation encompasses authorisation to sail, selection of routes, organisation of convoys, tactical diversions, movement reporting, and preparation, from a defence point of view, of vessels for sea.

The responsibility for protection of shipping has as its objective the safe and timely arrival of shipping at scheduled destinations, using a combination of offensive and defensive measures as necessary. Such operations could include close-in defence, in the case of convoy escort, or more distant defence in the case of strike, surveillance, or barrier operations.

The organisation is manned largely by naval reserve officers with specialist training, and, typically, backgrounds in the merchant marine, the RAN, or the maritime industry.Enhancement of their normal training comes from overseas courses, and opportunities to work in other countries during major Naval Control of Shipping exercises. Some of the other countries involved in these exercises include UK, USA, and Singapore. The naval reservists involved constitute a very important and experienced corps which would provide a firm basis for expansion in wartime.

It could be expected that the progression from peacetime arrangements to full civil direction, and naval control of shipping would

take place gradually, beginning with an advisory phase. This would emerge from the system now operated by the Department of Transport through the Federal Sea Safety Centre which co-ordinates coastal surveillance and the Australian Ship Position Reporting System (AUSREP). The system operated for some time on a voluntary basis, but is now supported by Australian law and it is generally adhered to by most ships.

During a period of tension, or in a contingency, ship owners would be advised to submit their ships to a series of measures designed to allow authorities to exercise an increasing level of control and protection relative to any escalating danger at sea. Initially too, masters would be required to report ships' departure times and intended routes, thus allowing Maritime Command to maintain a plot and advise of developing dangers. As the danger level rose, merchant ships intending to pass through recognised high threat areas would be subject to positive control, and may be diverted clear of the danger area.

In the event of localised harassment or escalation the Government might declare certain sea areas as Merchant Ship Control Zones (MERZONES) in which the movement of ships would be subject to positive naval control.

Full naval control of merchant shipping procedures could be implemented by Government in the event of war breaking out or being imminent. Under these procedures merchant ships would not sail without specific orders from the Naval Control of Shipping organisation, and when they did sail, they would have orders specifying departure and arrival times, routes, speeds, evasive measures, and restrictions on the use of radio, radar, and lights. Security precautions would be implemented and a range of protective measures would be implemented.

## RELEVANCE OF CURENT DOCTRINE

Given the clear articulation of Australia's strategic policies in recent years in such documents as Defence of Australia 1987 and subsequent Ministerial statements, it is timely to question the relevance of the naval control of shipping doctrine currently adopted in Australia. It was developed from World War II experience, predominantly in the Atlantic theatre. The reality of Australia's coastal and overseas trade is not taken into account, and the practicability of forming the Atlantic style convoys in Australia's maritime environment is not assessed. Whilst Australia's coastal shipping is Australian owned, the majority of overseas trade is carried in international shipping. The legal aspects of controlling this shipping needs to be assessed.

Whilst Australian Bureau of Statistics data on shipping gives data on gross tonnage or value, there is no overall authoritative data on actual ship movements except that held by some local port authorities. Again there has been no published analysis of Australian shipping movements compared to say, the movement of shipping in the region. How does the naval control of shipping doctrine cope with the 200 odd ships a day using the Malacca Strait? The problem of protecting shipping in the many narrow seas to Australia's north, seas where territorial claims abut each other and the sea lanes pass through the territorial seas of several countries, pose issues which need to be analysed. The maritime environment ranges from vast oceans through narrow seas and straits. Traffic flows and average shipping densities must be understood and the naval control of shipping procedures adjusted to the regional environment.

The present doctrine used by Australia was developed for the NATO countries. In the Western Pacific region, the only alliance is the Five Power Defence Arrangements, which does not include all the regional countries. Consequently any useful doctrine must be developed with not only the wide range of shipping types and density, and the varying maritime environment in the region in mind, but consider how regional countries could co-operate in a loose, mutual beneficial arrangement.

Another aspect to be assessed is the use of procedures in a lesser threat scenario. Most exercises in which Australia presently contributes relate to global war and bear little relevance to the lower level, shorter term contingencies assessed as more credible in Australia's strategic environment. The threat could be posed by a number of platforms and the level and extent of threat could vary considerably, however, procedures need to be developed which could be realistically applied in the complex geo-political environment in the Western Pacific. Exchange of relevant and appropriate surveillance and intelligence information, and arrangements for shipping control procedures through different national waters in the region pose significant organisational challenges.

## SHIP ROUTING POLICIES

Another issue which should be analysed and concepts developed for the local environment is that of ship routing policies. The doctrine refers to "independent sailing" and "convoys". These options need to be reviewed as escort forces both in Australia and in the region, will be limited in any situation requiring consideration of the protection of sea

The following routing policies were developed in an operational analysis sense by the then Royal Australian Naval Research Laboratory. They relate to a submarine threat only, but give an insight into other possibilities worthy of consideration which can be explored to further develop doctrine to be more relevant to Australia's postulated credible contingencies.

Assuming that focal area defences are available, a range of shipping control policies were examined which could best minimise possible losses to submarine action.

Briefly there were four routing alternatives considered worth examining. First there is, of course, the unescorted convoy. This may be good option when the probability of being intercepted is comparatively low, as it provides fewer opportunities for attack and if the submarine fails to #ntercept, then a large number of ships escape unscathed. Clearly, however, it should not be attempted if the risk of intercept is high, such as then the submarine has good wide area reconnaissance support, because the unescorted convoy presents a large number of targets and can suffer heavy losses.

The second alternative is random independent routing, although it will clearly be a poor one in situations where the probability of intercept is high, because of the large number of independent intercept opportunities that would be presented. It might also be no more successful where the probability of intercept is low, for the same reason.

The third alternative is stream routing, which attempts to keep the intercept probability fairly low, while limiting ship losses if submarines do succeed in intercepting.

In stream routing, ships are routed sequentially, say some 40 to 120nm apart, along a chosen corridor until an attack occurs. Incoming and outgoing corridors are parallel and closely spaced. As soon as an attack is reported, ships in the vicinity of that position are diverted around the danger area, and a new corridor is established for further operations. LRMP aircraft are then used to prosecute or form a barrier to oppose submarine transits to a new patrol area.

The spacing of ships along the corridor, and the spacing of incoming and outgoing corridors, is chosen, where possible, to make it impossible for submarines to simultaneously attack two or more ships, and to allow for the nearest ships to be notified of and diverted away from a datum area. When faced with this policy, submarines must search along their patrol lines to find the current corridor crossing point. This is illustrated in figure 1. Spacing of ships is based on the weapon envelope of the submarine, allowing a margin to allow the next ship in the stream to react to an incident and divert.

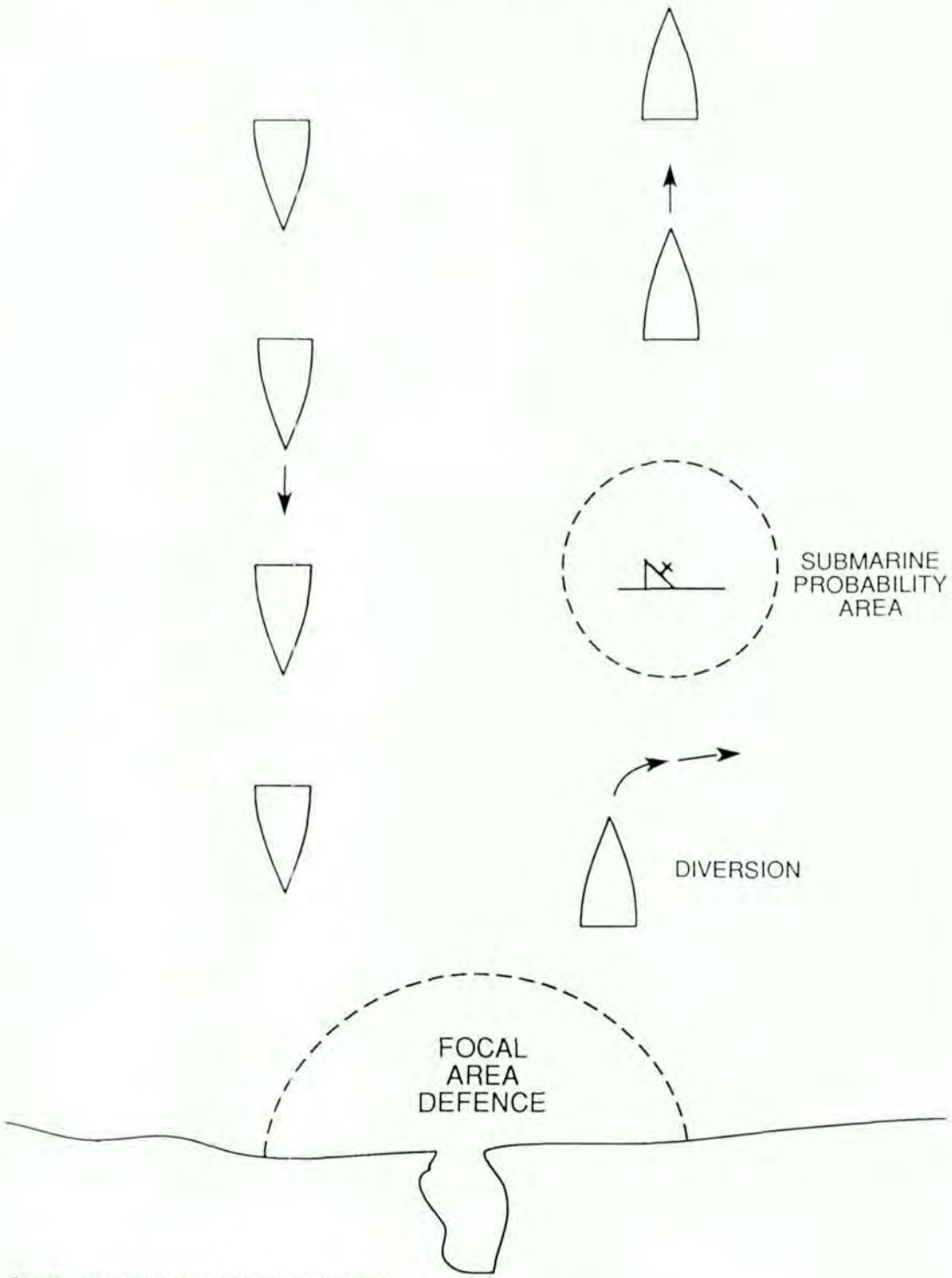
In the final alternative, wave routing, ships are laterally spaced and cross the submarine patrol line almost simultaneously. Thus the policy may concede a fairly high probability of intercepting one ship, but the effect of ship spacing and evasive action following the report of an attack should limit the maximum total losses when a convoy-size group of ships crosses the patrol line.

A variation of the single line wave is the double line or staggered wave. The effect of the double line is to double the effective spacing between adjacent ships, minimising the chance of multiple attacks. For this reason, the second line must be far enough behind the first to be outside weapon range, but close enough to avoid presenting a separate intercept opportunity. The staggered wave is of most use in situations when submarines have reconnaissance support. This is illustrated in figure 2. Spacing of ships is based on the assessed detection envelope and the number of ships to be sailed, spread evenly through the ocean area. around known danger areas allows a considerable reduction in losses, but is still not as good a policy as the alternatives. Similarly, the stream routing policy is assessed as not generally a good option.

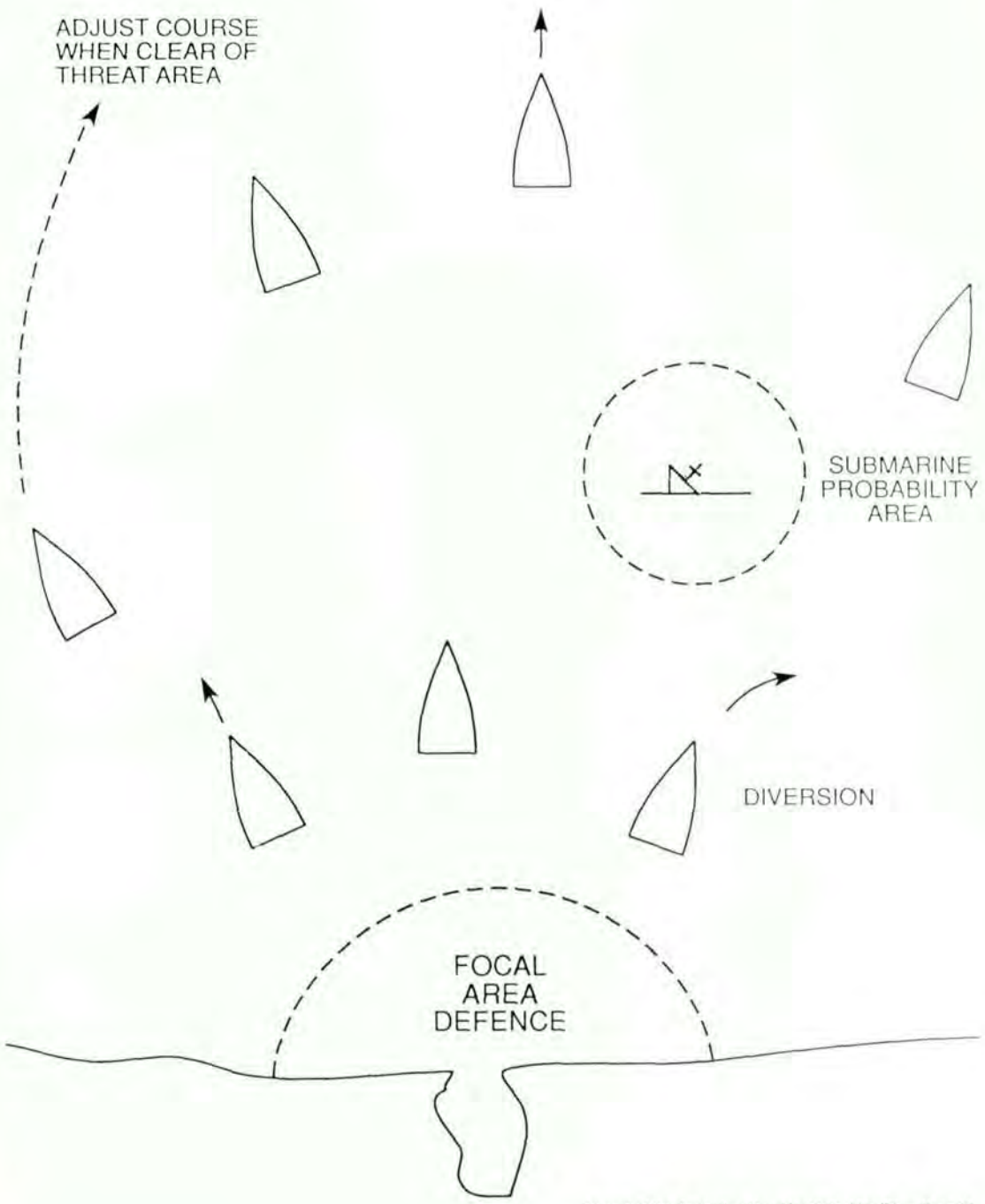
These basic policies were developed for ease of analysis and of course in developing doctrine, more complex policies involving the use of the range of assets available in the Australian Defence Force must be examined. For example, the use of maritime patrol aircraft in support and intelligence from broad area surveillance adds another dimension.

The practicability of wave routing should be further examined, noting that any shipping has a destination which is often constrained by the narrow straits and seas to Australia's north. Another factor to be considered in developing any routing policy is that the threat will not only be posed by submarines.

## FIGURE 1 – STREAM ROUTING



# FIGURE 2 – STAGGERED WAVE ROUTING



These alternative routing policies should be considered in any review of naval control of shipping doctrine.

## CONCLUSION

The Western Pacific region has been the most dynamic trading block in the world in the past two decades. Economic growth in the region can be expected to continue to be high relative to the world economy. The importance of the maritime environment is well understood by all countries in the region. Additionally it is recognised that the free flow of trade is a significant factor in their growth and security.

Australian defence policies seek to strengthen the commonality of strategic interests in the Western Pacific region and to develop closer co-operative defence relationships. The security of sea lines of communications is an area of common and enduring interest in the region. Australia has well developed naval control of shipping doctrine and exercises these procedures regularly. However, there is a need to further develop these procedures to be more appropriate to the realities of the geo-political situation and maritime environment in the region. The problem of controlling shipping and ensuring the sea lines of communication remain open and free from interference is a potential area for co-operation and could lead to establishment of closer overall links with the defence forces in the region. As Sun-Tzu stated 'Generally, management of the many is the same as management of the few. It is a matter of organisation'.

Australia should take the lead and promote such an activity, but first should further develop the naval control of shipping doctrine currently used to ensure it is appropriate to the maritime strategic environment of the Western Pacific.

## ACKNOWLEDGEMENTS

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# SECURITY COOPERATION IN SOUTHEAST ASIA AND THE PACIFIC ISLANDS AN AUSTRALIAN PERSPECTIVE

by

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*A paper prepared for the conference of The Japanese Center for Strategic Studies on The Security of East Asia and the Pacific Self Defense and Mutual Security in the Emerging New Era of Fluidity, Tokyo, October 1989*

Australia looks out to the Pacific through the two regions that are closest to it - Southeast Asia and the Southwest Pacific. While these regions differ in many respects, the strategic distinctions between them are collapsing. The potential of Southeast Asia is enormous. The ASEAN and the Indochina states together with Burma constitute an area larger than Europe; they have a combined population of more than 400 million and great natural resources. On the other hand, the 10,000 islands of the Pacific Islands region's 21 states and territories contain only 215,000 square miles of land surface with a combined population of 5.5 million. There are dramatic differences in size (ranging from Papua New Guinea's 180,274 square miles to Nauru's eight), in population (from Papua New Guinea's 3.5 million to Niue's 2,900) and in cultures (Polynesian, Melanesian and Micronesian).

Geographic location is responsible for differing strategic circumstances. Situated astride the lines of transport and communication between the Indian and Pacific oceans, the Philippine and Indonesian archipelagos constitute a geographic barrier between the two oceans. As well, Southeast Asia is one of two regions where the strategic interests of China, the US and the USSR intersect. In contrast, the South Pacific is remote from the focal points of great power competition and so, at least until recently, the region has been ignored by most of the larger external powers.

The Pacific Islands have enjoyed a remarkable degree of strategic consensus. Their ideological outlook, external linkages and security preoccupations are very largely harmonious. Southeast Asia encompasses states with diverse social and political systems, security concerns and external alignments.

While both have developed regional institutions, their experiences have differed. Though more prestigious, ASEAN remains a sub-regional organisation with rather uncertain prospects. Regionalism in the South Pacific began more modestly, yet its achievements are now quite impressive.

The recent inclusion of the Micronesian states in the Pacific Island community has enlarged the region and placed it in closer proximity to Southeast Asia and indeed, to the Northwest Pacific. The proximity of the Micronesian states (north of the equator) to major communication lines and to military assets will serve to break down the strategic remoteness of the South Pacific Islands from the more intense forms of international competition.

Diminishing military competition between the superpowers is having an impact on both regions. The new Soviet strategy in the Asia Pacific, with its emphasis on multipolarity and invigorated bilateral relations through economic cooperation, poses new challenges. There is also a sustained interest in both regions to assert sbme control over the military involvement of the outside powers by instituting regimes of control such as the Zone of Peace Freedom and Neutrality

proposed by ASEAN and the South Pacific Nuclear Free Zone Treaty.

Security concerns in both regions are becoming more diverse. In Southeast Asia some of the following contingencies might surface:

**Regional depolarisation** as a result of reduced superpower involvement.

**Heightened** intra-mural conflict and rivalries.

**More pronounced** differences between China and Vietnam.

**A renewed** Vietnamese concern with the security of its western border in the wake of its withdrawal from Cambodia.

The security outlook in the Pacific islands is far less complex, though here also the trend is towards diversification. The regional debate over nuclear issues is well-known and could be further exacerbated with the inclusion of the Micronesian states into the region. While all the islands share a deep sense of economic insecurity and a common concern with the need to control their outlying territories and offshore claims, only one state, Papua New Guinea, faces an external security contingency.

he coastal states of Southeast Asia and all the Pacific Island nations have extended their maritime jurisdiction out to 200 nautical miles or more. Consequently, all the reginonal waters of Southeast Asia are subject to national claims and a significant number of these claims overlap. Under the Law of the Sea conventions, navigational rights differ in each jurisdictional zone - internal waters, territorial seas, contiguous zones, archipelagic waters and exclusive economic zones. As well, the coastal states have rights to impose environmental legislation within these zones which have implications for international shipping, offshore resource development and the management of the marine environment.

For the Pacific Islands, the Law of the Sea conventions present enormous challenges which stem from their vast offshoreclaims that now blanket much of the Pacific. The extent of theseclaims are often quite disproportionate to the land territories. For example, Kiribati, with a land surface roughly equivalent to metropolitan Washington DC, has an EEZ that covers an ocean area that is the seize of all of Europe.

The importance of shipping to most Pacific economies is well understood and it is dealt with here in the briefest way to highlight the following points:

**Japan** is the largest shipping nation in East Asia; it has almost 10% of the world's fleet.(1)

**Japan** is by far the world's largest importer of raw materials; it accounts for over 70% of copper ore and concentrates; 41% of the iron ore; 30% of the manganese and nickel ore; 26% of.the chrome ore; and 32% of the coal. Much of these materials are supplied from the Asia Pacific region. For example, Japan is Australia's largest market for raw materials and over 50% of Indonesian exports (by value) go to Japan.

**Pacific basin trade** is expected to increase substantially, thereby fostering further economic interdependence.

**The concentration** of commodity production in the region and the large distances between user and source have turned the sea lines of transportation into long and vulnerable pipelines for critical materials to both suppliers and users. Much of this traffic passes through Southeast Asia. The volume of shipping in the region is already heavy; according to one estimate there are about 51 supertankers in regional waters at any one time. (2)

**The disruption of shipping** through the region would be costly. For example, the interdiction of oil shipments between Indonesia and Singapore and other ports world wide could reduce Australia's GDP by over 8% in the third year and Japan's GDP by about 5% in the first two years, with a severe secondary impact on Australia. (3)

**The re-routing of shipping** could involve substantial costs. One estimate of annual savings by use of the Malacca Straits is $US 2.5 billion (50% as general cargo, 22% as bulk cargo and 28% as oil. (4)

A brief glance at the map illustrates Australian interest in Southeast Asia and the Pacific Islands. Almost all of Australia's lines of communication pass through these two regions which also cover its northern and eastern approaches.

The trade routes that link Western Australia with Northeast and Southeast Asia pass through the archipelagic waters of Indonesia, Malaysia and the Philippines. These routes account for over 50% of Australia's external trade by volume and over 40% by value.

The primary sea lanes for trade from eastern Australia pass through PNG waters. These trade routes are also of importance to other Western nations.

The common concern with sea lane security is compounded by the range of interests in regional shipping . Diverse flags carry Australia's overseas trade. Only about 6% (by volume) is carried by Australian ships, while about 55% is carried by Japanese registered or controlled vessels

This common interest in sea lane security is well recognised by the Autralian Navy. Vice Admiral Hudson, the Chief of the Australian Naval Staff, has recently outlined what he sees as cooperative steps to be taken in the common interest. These steps are:

**assessment** of shared regional interests;

**assessment** of regional capabilities which might lead to a coordinated response to trade protection;

**determination** of how regional cooperation might be realised so as to serve common aims and utilise combined capabilities. Admiral Hudson has offered the RAN's services to coordinate efforts to improve cooperation. (5)

To these ends, the first Western Pacific Naval Symposium was held in Canberra last October (1988). This meeting identified the preliminary steps that can be taken for regional cooperation on shipping protection. These steps are to-

**Investigate** how to maximise the benefits from the existing exercise programs;

**Investige** how cooperating navies could provide training in relevant maritime operations;

**Investigate** procedures to enable the cooperating navies to assist in the protection of shipping within the region. Steps that could be taken might include the sharing of information on shipping movements and arrangements to coordinate national forces "so as to gain the greatest value from what inevitably will be limited capabilities."(6)

Australia is increasingly looking to the Asia Pacific for its economic prospects. Capital flows to the region have increased significantly and trade links have strengthened. About 49% of Australia's exports are sent to Asia and imports have risen from 9% to over 13% in the last decade

As well, Australia has long been a major source of development assistance to the Island nations of the South Pacific.

Australian security interests have changed little over the post-War years and on the whole, they have been in tandem with the broader strategic interests of the West. These interests include:

**Promoting** a stable regional order.

**Encouraging** regional cohesion and fostering regional institutions to facilitate intra-mural cooperation.

**Encouraging** regional resilience so as to, inter alia, minimise the influence of external adversaries.

**Encouraging** the Western powers to make positive contributions to regional security.

**Encouraging** a community of Western oriented strategic interests.

The security of Southeast Asia and the Pacific Islands is closely linked with Australia's defence interests. Australia has therefore tried to build good security relation with its neighbours by helping to develop regional defence capabilities; and by undertaking military deployments, visits and exercise with regional neighbours.

Before looking at Australian security cooperation programs in more closely, it is useful to place Australia in the wider context of regional order.

As a secure and non-adventurist nation, Australia represents a dependable and stabilising factor on the periphery of Southeast Asia and the Pacific Islands regions. As an allied Western state, whose security is ultimately guaranteed by the US, Australia facilitates an over-the-horizon presence for the US in the region..Finally, Australia's defence policy of greater self reliance, is developing military capabilities that will enhance its ability to participate in regional cooperative security programs.

Australian security involvement in Southeast Asia has been continuous since World War II. Australian forces fought in the region during the Malayan emergency, then during confrontation and of course, in the Vietnam War. As well, Australia contributed a battalion to the Commonwealth Strategic Reserve in Southeast Asia and since 1971, Australian land and air forces have been deployed under the Five Power Defence Arrangement (FPDA). Participation in these programs has been substantial.

Australia's security role has evolved over the post-War years. Changes have been due to the altered needs of the regional states; the nature of regional security problems; and changes in Australian defence policies.

From the end of World War II to the early 1970's, the Australian regional posture reflected the recent colonial status of the Southeast Asian states and also of Australia itself. During the early post-War years, the newly independent states faced major internal and external threats to their security and many were ill equipped to undertake their own defence.

At this time Australia's main allies - the US and UK - played a major role in regional security. Australia encouraged that role and it contributed to allied strategies in the belief that threats to the stability of

Southeast Asia would directly endanger its own security.

Far reaching changes have taken place over the past two decades. ASEAN's economic growth has been impressive and the member states have demonstrated considerable political and social resilience. As well they have built up significant military capabilities to defend their national interests.

At the same time, the US and the UK have substantially reduced their regional military commitments.

These developments lead to far reaching reassessments in Australia and these in turn, led to the policy of greater military self reliance.

Australian defence policy is based on a strategy of "defence-in-depth" and calls for the capability to operate independently in regions of immediate approximaty. Referred to as 'the area of direct military interest' this encompasses the approaches to Australia, reaching out some 1000 nautical miles. This area is not seen as an outer security boundary, but as a guide for force capability development. Under present policy, Australian forces are required to develop independent operational capabilities within this area. This requirement in turn calls for the concentration of surveillance activities on the maritime approaches and the ability to interdict hostile forces in the area of direct military interest.

The changing role of the great powers is bound to have a significant impact on the regional order.

The US role could alter as a result of: budgetary constraint, Congressional views on burden sharing and changes in Soviet regional policies.

At the same time, China's modernisation program is improving it force projection capabilities. Given its complex linkages with Southeast Asia, it is not difficult to see a more assertive role in the future. The PRC has already demonstrated its willingness to conduct forward operations in the defence of its interests in the South China Sea.

The Soviet Union maintains close relations with Vietnam and its naval facility in that country is the largest outside Soviet territory. Its presence in Indochina give it a voice in the region and its current diplomatic strategy could ennance its influence, especially after Vietnam's withdrawal from Cambodia.

While none of these factors threaten regional security directly, they do represent developments which, along with other contingencies - such as Philippine internal security or a precipitous US military withdrawal rrom the the Philippine bases - could severely undermine stability.

The nature of military power in the region is changing.The traditional emphasis on land power is giving way to more balanced ASEAN forces. There is an increasing recognition of the role of force projection in the protection of offshore interests. Thus for example, Indonesia has taken delivery of 4 Harpoon equipped frigates; Malaysia has embarked on on major modernisation program that includes a submarine aquisition and a fleet air arm of 6 Wasp helicopters; Thailand has recently taken delivery of two US built frigates and it plans to acquire 4 Chinese designed (Jiangha class) frigates.

The new regional maritime emphasis on more flexibility and depth has far reaching implications. It improves the ability to respond to external forces, to protect offshore resources and to police shipping lanes. These capabilities open new possibilities for security cooperation.

The capability of the ASEAN states with regard to shipping is especially important because it is here that the interests of the regional states and the other Pacific nations coincide most directly.

Australian security programs are adapting to the growing sophistication of its ASEAN neighbours. Cooperative programs are moving away from the old equipment transfers and related training aimed at building up another state's forces. These programs are becoming inappropriate. The emphasis has shifted to: service-to-service training; the exchange of personnel; and to joint exercises. The direction is away from the dependent relationships and it is towards genuine partnership.

The new direction in defence cooperation is reflected in the changing character of the Five Power Defence Arrangement (FPDA). Signed in 1971 between Australia, Britain, Malaysia, New Zealand and Singapore, the FPDA was to multilateralise the British defence role in Malaysia and Singapore. While the formal Arrangement is kept on, its character has been re-shaped to serve the interests of the members in the current circumstances.

Australia no longer deploys air units on a continuous basis for the air defence of its regional partners. It now sends F/A-18 and F-111 aircraft to Malaysia and Singapore on a rotational basis for about 16 weeks each year. The emphasis with the rotational deployments is enhanced training and exercising opportunities.

Similar changes in emphasis are evident with naval deployments. Arrangements with Malayasia and Singapore will lead to the deployment of a major Australian naval combatant in Southeast Asian waters on a continuous basis.

A similar emphasis on cooperation for mutual benefit is evident with in the surveillance arrangements. For some years Australia has been conducting regional maritime surveillance operations in support of its own and broader Western interests. With the greater regional concern for offshore interests, there is now a convergence of interest in maritime surveillance. Australia has a program of continuous deployment of P-3C patrol aircraft and cooperates with Malaysia in surveillance operations over the South China Sea and the Malacca straits. The data from these missions is shared with a number of regional countries.

Aside from the FPDA programs, modest naval exercises have begun with Thailand. There are naval passage exercises with Indonesia.

New acquisition by the Australian Navy, especially thelong range frigates and the new submarines, will open additionalopportunities for cooperation. The basing of half the fleet in Western Australia will significantly enhance the capability of Australian vessels to operate in Southeast Asia. The growing regional interest in sub-surface surveillance together with Australia's ASW capabilities represents a further poential for cooperation.

The post-War history of the Pacific Islands region has been among the most stable in the world. The outlook for the future is more uncertain. The emerging picture is one of shifting coalitions of interest which will be less predictable than in the past. Destabilising political events are becoming more frequent. The authority of the central government has been seriously challenged in Papua New Guinea and Vanuatu; there have been military coups in Fiji; more radical impulses have surfaced in Melanesian politics and there are prospects for radical nationalism in some Polynesian and Micronesian societies. At the same time, the regional activities of the great powers is rising. Taken together, these developments are straining the regional order and this trend is set to continue.

The outlook of the South Pacific islands is decidedly more insecure than that of the Micronesian states. Insecurity in the South Pacific is not due to external threats , indeed only Papua New Guinea is facing such contingencies. Rather, insecurity stems from the inability of the islands to respond to the range of essentially internal problems that confront them.

Regional insecurity stems largely from the very high levels of external dependence. On a per capita basis, the islands rank amongst the highest recipients of external assistance. The economic outlook for most is not good. With small and highly dependent economies, most states are unable to support military forces. Most maintain small constabulary units and only PNG has land, sea and air elements in its defence force. Few have the capability to secure their outlying territories, still less their vast offshore claims.

In short, the insecurity of the islands does not stem from military threats; the problem is economic dependence, geographic isolation, social fragility and a limited ability to manage their own interests.

The security challenges in the Pacific Islands region are both diverse and complex. The major problems include the following:

**Maintaining** regional stability and the security of the lines of communication that link the Australia-Japan economic relationship and the Australia-US security relationship.

**Maintaining** the community of security interests between the Islands and the West.

**Defining** appropriate and constructive regional roles for major Western regional actors such as France, Japan and the US.

**Generating** Island and Western consensus on the boundaries of legitimate Soviet interest in the region.

**Encouraging** the development of regional institutions that facilitate the realization of Islands' aspirations.

Australia has significantly upgraded its defence cooperation programs in the South Pacific. The aim has been to address the security concerns of the Islands, while furthering Australia's regional defence interest.

The focus of the programs is on fostering economic security and greater self reliance by helping the Islands to manage their offshore economic zones through improved surveillance and patrolling capabilities. These programs aim to build a regional security network which looks to Australian leadership.

To these ends Australia has:

**Undertaken** to provide 12 long range patrol boats plus naval advisory and assistance training.

**Approximately doubled** its regional air and naval activities; ship visits have been

increased and by the end of 1988 the Australian and New Zealand air forces were conducting some 25 P-3 surveillance patrols, each of five days duration.

Other elements of the defence program include the training of police and defence personnel and the provision of technical support.

As well, Australia usually leads the discussion of international security developments at the annual South Pacific Forum meetings and there are consultations with the island states on security matters.

## CONCLUSION

Security cooperation in Southeast Asia and the Pacific Islands in this 'new era of fluidity' is both complex and challenging.

Regional order in Southeast Asia is depolarising. Shifting coalitions will open new opportunities for the rising influential states such as China and Japan to exercise more direct influence.

Again, a new fluidity is apparent in the Pacific Islands.

There too, new players are making an impact on the regional order.

The demarcations between the two regions are collapsing.

The institutional foundations for regional cooperation are not well developed. In Southeast Asia, regionalism has been impeded by diverse national orientations and rivalries; incompatible alignment and divergent priorities. While the prospects for regionalism seem more favourable in the Pacific Islands, limited resources and the high level of external dependence will constrain regional resilience.

If cooperative initiatives are to succeed, they must address the security concerns of the regional states. Experience shows that the wider strategic concerns of the great powers are not, in themselves, sufficient to sustain cohesion and regional strategic consensus. Such consensus is facilitated by more consultations. One step might be to expand the regional web of political-military talks on a bilateral basis.

A strategy for regional security cooperation is most likely to succeed when it addresses points of common concern. This paper has identified a number of such concerns. These concerns are:

i) The essentially maritime character of the Pacific region points to a common concern with the security of the sea lines of communication. Some arrangements for the naval control and protection of shipping already exist, such as those between Australia and the US, but there is scope for further cooperation.

ii) The common interest in sea lanes security points to expanded arrangements for sharing maritime surveillance data.

iii) The concern of the Pacific Island states with economic security and the protection and control of their offshore zones points to the need for not only surveillance but also cooperative resource management, especially fisheries.

iv) In Southeast Asia, where resource zones are in close proximity (and often overlap), there is also a pressing need for cooperative management of EEZs. A major international initiative to resolve outstanding claims in the South China Sea might avert what could otherwise prove to be a major destabilising issue in the 1990s.

v) The already heavy volume of shipping through the confined waterways of Southeast Asia gives rise to increasing concern with safety and environmental issues; these should be addressed multilaterally. The concern with piracy, especially in the Malacca Straits, couuld be addressed on a multilateral basis.

vi) Significant improvements in the air and naval capabilities of the ASEAN states have opened new opportunities for training and exercising.

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# REAR ADMIRAL FARNCOMB

by

**Alan Zammit**

On September 29, 1989, Major General Peter Day, A.O. Commandant at the Australian Defence Force Academy, Canberra invited Mrs J.R. Farncomb, O.B.E. to officially open Farncomb House and unveil a plaque in honour of her husband, Rear Admiral H.B. Farncomb, C.B., D.S.O., M.V.O., U.S. Legion of Merit and Navy Cross, as well as having been three times Mentioned in Despatches during the 1939-1945 war.

Thus was added one more honour to one of the R.A.N.'s greatest wartime Captains. His officers called him 'Uncle Hal' and the sailors nicknamed him 'Fearless Frank'. Among those at the Dedication Service were: The Farncomb family together with three Former Chiefs of Naval Staff with two Rear Admirals, two Commodores, captains, commanders and old shipmates from HMAS ships Australia, Canberra, Hobart, Perth, Shropshire, Sydney and Arunta. Staff and officer-cadets from the Australian Defence Force Academy also attended.

Mrs Jean Ross Farncomb, O.B.E. donated a portrait of her late husband with signatures of all at the Service who had served under Rear Admiral Farncomb.

Vice Admiral Sir Richard Peek, K.B.E., C.B., D.S.C. presented a Phil Belbin print of the Battle of the Coral Sea and gave a graphic account of the Battle in which he took part as the Gunnery Officer of HMAS HOBART while Captain Farncomb was half a mile away avoiding torpedoes and bombs in HMAS AUSTRALIA. Sir Richard said the thirteen year old boys who joined the Naval College, first at Geelong and then at Jervis Bay, to be trained as Australia's first cadet midshipmen, were an exceptional group.

To me, three stand out. In alphabetical order they were Collins, Farncomb and Showers and I had the honour to serve under all three.

It was with Admiral Farncomb that I served most — on three occasions all of them in HMAS AUSTRALIA. His association with this fine ship was so long and so close that he could even be called Farncomb of the AUSTRALIA.

He spent almost the whole of World War II at sea in command, an enormous physical and mental burden. He was ony a very great naval officer, he was an Australian of whom we can all be proud.

After Farncomb House was opened, the distinguished officers and old sailors of the past spoke to the young officers of the future.

Major General Peter Day, his staff and the officer cadets, took the guests on a tour of the Academy and to afternoon tea.

Everyone agreed the Service became a poignant Farncomb affair and the thoughts of many were on old Fearless Frank.

Admiral Sir Victor Smith, A.C., K.B.E., C.B., D.S.C., the first of only two Australians to be promoted to the rank of four star Admiral, said: Such features as H.B. Farncomb being the first graduate of the R.A.N.C. to be promoted to captain, his outstanding war service, and other matters are well known. What may be lesser known were his high qualities of leadership including his great ability in decision making. What should never be forgotten was the respect and affection in which 'Uncle Hal' Farncomb was held by many in the R.A.N.

Commander A.S. (Donk) Storey, D.S.C. recalled: My first meeting with Admiral Farncomb was in 1933 when he was appointed as Commander of the AUSTRALIA. Hal Farncomb's predecessor in AUSTRALIA was a typical R.N. martient of the "fire-eating" sort — they bred them llike that in those days!

Harold was a welcome change. He was assiduous in his duties, but managed to combine this with a real understanding of his men. He was strict, but scrupulously honest and fair with his "requestment and defaulters".

He built into AUSTRALIA a morale which was unequalled.

Between December 1944 until January 1945 I was Staff Officer, Operations, to Commodore Farncomb. As the Commodore-in-Command, Hal Farncomb was superb. During the Lingayen campaign, AUSTRALIA was hit by five kamikazes, but Farncomb was imperturbable. During this time, he earned the sailors' nickname of "Fearless Frank"!

He remains in my memory as a very brave and gallant officer. He was very quick in assimilating the voluminous operation orders that emanted from the American Command and was faultless in their tactical execution and judgement.

My time with him was limited, as when AUSTRALIA was about to return to Sydney for repairs, I was transferred to my old Admiral Sir Philip Vian in the B.P.F. I had served with him on the Mediterranean two year before.

My next encounter with Admiral Farncomb (as he then was), was as Captain of the BATAAN in 1948-49, when he ws the Flag Officer commanding the Australian squadron.

His grasp of administrative problems which faced him was exceptional, and he continued to show that sense of fairness and justice which had always characterised him. He was, in my opinion, a great man."

Chief Yeoman Harry O'Neil recalled that in 1939 Rear Admiral Farncomb was given the nickname of "Fearless Frank" when he signalled to a convey Commodore which H.M.A.S. PERTH was escorting in the event of an attack by a raider, the convoy was to scatter. "My intention is to engage the enemy which my main armament and close him until I am in torpedo firing range. If gun fire and torpedoes are not sufficient to disabling the raider, I intend to ram the enemy ship."

Captain L.M. Hinchliffe, D.S.C., R.A.N. (Rtd) recalled that in 1935 he was Commander Farncomb's "Doggie" (Runner or Aide). The officers called the Commander 'Uncle Hal' but of course never in his hearing. The Commodore in Command of the Mediterranean fleet Admiral Sir William Fisher "The Great Agrippa", I asked Midshipman Hinchliffe what he thought of Malta; Midshipman Hinchliffe replied he had not been ashore because he was not interested in the place. Commander Farncomb later sent for the Midshipmen and said "Mr 'Bloody' Hinchliffe you are to write the history of Malta when Midshipman Hinchliffe told Commander Farncomb the real reason he had not ashore was because he was broke. Commander Farncomb lent the midshipman ten shillings to go ashore and buy a book.

Rear Admiral W.D.H. (Bill) Graham C.B.E. said: "I had the good fortune to be Admiral Farncomb's Secretary during the post war period 1946-1949 when he was the Commodore and then the Rear Admiral Commanding the Australian Fleet. This was a difficult period for the R.A.N. generally and particularly for the Fleet, following, as it did, on the unavoidably very disruptive effects of post war demobilization with consequent major reductions in personnel and ship numbers, as decisions regarding the shape and size of the post war R.A.N. were put into effect.

However, despite the reductions in Fleet capabilities arising from these decisions, the Navy was still required by the Government to meet many and varied commitments, e.g. the stationing and rotation of ships in Japanese waters and the introduction of the Fleet Air Arm in the R.A.N.

The fact that, during this very difficult time, the Fleet did meet all it's commitments and that efficiency and morale were maintained at a high level, was largely due to the outstanding leadership and the administrative ability of Admiral Farncomb."

Between 1936 and 1937 Captain Farncomb was at the Naval Intelligence Division at the Admiralty. He expected that war with Hitler was inevitable, so went to Germany to improve his German language and have a look at the country. He befriended two German Jewish school girls who he helped to get to America. The girls' whole family, who remained in Germany, lost their lives.

In December 1941 Captain Farncomb assumed command of H.M.A.S. AUSTRALIA. His first action against the Japanese was th Coral Sea Battle in May 1942. Rear Admiral Crace's Australian-American Support Force Squadron consisted of H.M.A.S. AUSTRALIA, H.M.A.S. HOBART, U.S.S. CHICAGO and three U.S. Destroyers. On May 7 Admiral Crace was ordered to intercept the Japanese invasion force heading for Port Moresby. At 2.30pm eleven aircraft were sighted. Half an hour later twelve Japanese twin engined torpedo bombers, each armed with two torpedoes attacked the Squadron. By Captain Farncomb's skillful handling, AUSTRALIA avoided two torpedoes. A number of Japanese aircraft were shot down. A short time later nineteen bombers attacked the Squadron and their main target ws the Flagship. Some twenty 500 pound bombs were dropped in a pattern around AUSTRALIA. The bombs' water spouts rose well above the ship's masts. Admiral Crace, Captain Farncomb and the crew on the bridge over fifty feet above the waterline were drenched to the skin. The other ships thought

the AUSSIE had been hit and the Japs claimed to have sunk her. The Japanese aircraft attack was followed up by an attack by U.S. B 26 bombers from Townsville, which mistook the ships for Japanese. By night Admiral Crace was 120 miles south of New Guinea and did not retire until after the Japanese Port Moresby invaders turned back.

Captain Farncomb was Mentioned in Depatches for bravery when H.M.A.S. AUSTRALIA was attacked by enemy aircraft.

As a result of the wounding of Commodore Collins off Leyte, Commodore Farncomb returned to the Pacific to become Commodore Commanding the Australian Squadron. At the Lingayen landings in January 1945 his Flagship H.M.A.S. AUSTRALIA was hit five times by Kamikazes. When AUSTRALIA withdrew south for repairs, Commodore Farncomb transferred his Broad Pennant to H.M.A.S. SHROPSHIRE. For Commodore Farncomb's services at Lingayen Gulf he was awarded the C.B.

He took a great interest in the law and was always fair. It was fitting that he should become a barrister after retiring from the Navy. He appeared often without charge when old shipmates and sailors got into trouble.


## Acknowledgements

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*HMAS SHOALWATER during trials.*

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The CROSSBOW 70 in action at the Bofors Proving Ground

Bofors of Sweden has developed the RBS 70 in a modular concept, intended to be integrated with other operational modules from a co-partner to form a custom designed weapon system, for field or naval use. This opens possibilities for using the RBS 70 in a wide range of applications.

The Bofors vital main parts are the guidance beam transmitter and the Missile Mk 2 in launchers. The co-partner supplies the gyro-stablized platform, the sensors, command/controll units and possibly the carrier.

Bofors and LTV Missiles and Electronics Group of U.S. have started a joint development of a concept designated CROSSBOW 70.

The LTV's CROSSBOW is a modular unit that can be mounted on a variety of vehicles and naval vessels.

The CROSSBOW 70 configuration is mounted on an LTV-built High-Mobility Multipurpose Wheeled Vehicle ("HUMMER").

Bofors and LTV conducted a successful ground-based test series of CROSSBOW 70 at the Bofors providing range in Sweden in December.

One live RBS 70 was fired at a stationary tower-mounted target aircraft and scored a direct hit.

In addition, a series of tracking tests was conducted and four inert missiles were launched in order to collect test data.

In January, sea tests were successfully carried out in a very tough naval environment together with the Swedish Navy.

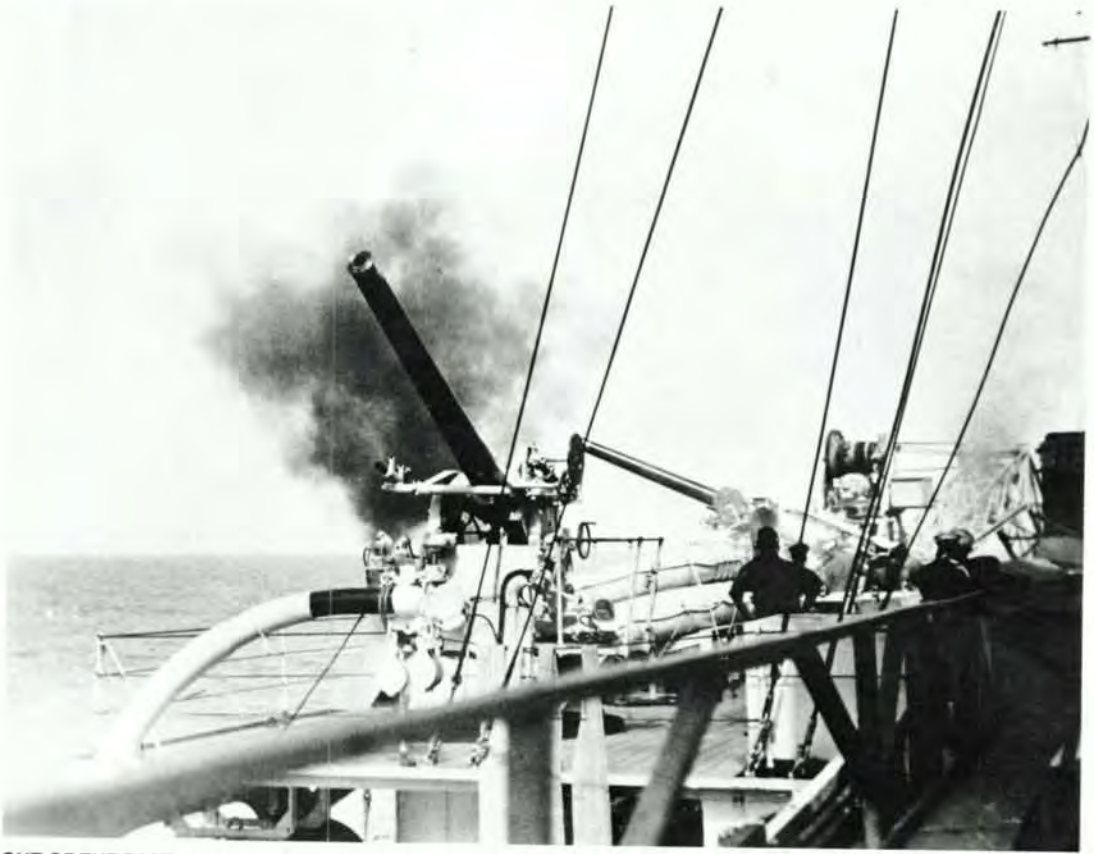
The RBS 70 All-Target Missile System is a laser beam-riding system and can counter such difficult targets as Attack Aircraft, RPVs, Helicopters, Seaskimmers, ground and surface targets for self defense.

The RBS 70 is operational as low level air defense system in some 15 countries around the world.

The successful testing of CROSSBOW 70 means that both army vehicles and naval vessels can now be offered an air defence missile concept with the following special qualities:

- Gyro-stabilized
- Remote controlled (and auto-tracker)
- Night capability
- Low weight and easy installation
- Flexible weapon combination
- Low cost

**OUT OF THE PAST**
**The flagship of the RAN in 1940, the heavy cruiser HMAS AUSTRALIA seen off the West Australian coast.**
**Photo: Navy Public Relations (WA)**



**OUT OF THE PAST**
**Gunnery practice for the heavy cruiser HMAS AUSTRALIA's secondary 4-inch armament in the 1930s.**
**Photo: Navy Public Relations (WA)**

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