

# SEMAPHORE

NEWSLETTER OF THE SEA POWER CENTRE AUSTRALIA

ISSUE 2, MAY 2004

## CONSIDERATIONS IN MARITIME BARRIER OPERATIONS

*Maritime barrier operations* are designed to prevent unauthorised incursions into maritime areas subject to Australian sovereignty or sovereign control, such as the Exclusive Economic Zone and Australian Fishing Zone. Activities that may be the focus of barrier operations include illegal immigration, weapon and drug smuggling, illegal fishing, piracy and maritime crime, maritime terrorism, and quarantine infringements. Barrier operations incorporate actions designed to: prevent unauthorised access activities from commencing, deter access through overt patrolling, respond and intercept prior to a barrier breach, and pursue and intercept following a breach.

These operations are traditional roles with which the Australian Defence Force (ADF) can expect to be involved on behalf of the Government. They have a long history, but were seen as peripheral to the defence of Australia by many during and after the Cold War. However, the reality of Australia's maritime environment meant that by 2000, when the world stood uncertainly between nation states, international organisations, and non-State movements (eg. religious, ethnic, criminal), barrier operations began to receive limited attention. This was an indication to some that security and certainty were two items missing in the New World Order. This was highlighted by the terrorist attacks in the USA on 11 September 2001, which served to galvanise Western interest in border protection issues.

A month prior to 11 September 2001 most Australians were focussed on only one aspect of barrier operations - border protection. MV *Tampa's* actions brought the long-running maritime barrier operations against illegal immigration, smuggling and fishing to the full attention of the nation. The Royal Australian Navy (RAN), the Royal Australian Air Force (RAAF) and the Coastwatch organisation had been conducting a barrier operation against illegal activities in Australia's maritime resource zones for at least the previous quarter of a century, however, these were seen as 'low level' sovereignty issues. The terrorist attacks of 11 September 2001 served to make barrier operations a more central pillar in the defence of Australia's security interests and geography.

The developing uncertainty of the 21st century will in all probability continue to highlight issues of barrier operations, particularly those associated with border protection. This is because issues of oceans

governance, disease, poverty, hunger, religious extremism, transnational crime, and disputes over resource exploitation and legal jurisdiction will continue to grow. Unless the causes of these issues are redressed, and there is little evidence they will be, the movement of people, the smuggling of illegal substances, and other illegal activities on and around Australia's borders will most likely increase over time.

Barrier operations will continue as a requirement for the ADF in response to these issues, with almost all barrier operations conducted at sea. This is a considerable advantage for Australia, as it removes the complex problems of concurrently managing an extensive and permeable land border. The India/Pakistan and Israeli/Palestinian border issues are extreme examples of such complex challenges. International maritime law permits significant control over maritime borders out to 200 nautical miles and beyond, thereby providing a buffer zone that few countries with land borders enjoy.

Warships are fundamental to successful barrier operations, due to their inherent capabilities. Based on the fact that border protection will be a long-term requirement for the RAN, warships with good range, endurance, sea keeping, speed of response, and accommodation for embarked personnel will be required. Noting the open ocean nature of Australia's maritime zones,<sup>1</sup> and the distances involved, maritime characteristics such as poise, persistence, response, flexibility and adaptability are required.<sup>2</sup> Australia's maritime zone extends from the Antarctic regions through to the tropics, and is characterised by extremes of weather, sea state and temperature. No single ship design would be optimised to operate in all areas. However, certain principles are common.

It is important that a vessel utilised for barrier operations be functionally suitable for Australian requirements. Such a vessel should be capable of accommodating the ship's company plus additional personnel as necessary for specific operations, such as security elements or extra boarding party personnel. A degree of excess domestic services such as air conditioning, food services, amenities, and logistics will be necessary to support additional personnel. This additional capability would provide flexibility for a number of response and patrol operations at long range, a reality given Australia's extensive maritime zones. This spare capacity could be utilised for survivors recovered during a search and



rescue mission, humanitarian workers, police and customs agents, or illegal immigrants. In times of tension it would provide for special forces insertion teams, reconnaissance and raiding parties, or evacuees from a country under threat.

Patrol and response vessels suitable for Australia may, where appropriate, be significantly enhanced by a capability to operate a helicopter and/or an uninhabited aerial vehicle (UAV). Over a vast maritime zone aerial surveillance is a force multiplier that permits the vessel to respond very effectively to cueing information from either its own aircraft or other external sensor systems. An organic aviation capability may also provide additional options for executing successful operations under Australian and international law. Legal compliance with issues such as 'hot pursuit' could be simplified if the continuous pursuit requirement were supplemented by an organic air capability. A helicopter also permits boarding operations in higher sea states where the use of the response vessel's boats may be deemed too risky.

Vessels optimised for barrier operations should also be technologically advanced. Simple navigational radars may detect a small, wooden vessel at approximately 8-10 nautical miles in sea state 3. This may be adequate in some coastal areas, however, the size of Australia's maritime zones highlights the benefits of high technology combat system radars, which permit detection and tracking of such a vessel at greater than forty nautical miles. Advanced sensor technology provides a quantum leap in capability and efficiency for the task. Such systems must be supported by integrated detection and tracking equipment, with a computerised digital command and control system to provide comprehensive real-time information to the on-scene commander.

Other technological elements necessary in vessels required for barrier operations include, but are not limited to: electronic support systems to detect radar and communications emissions; electro-optical surveillance systems for low light conditions; fast watercraft operable in adverse sea states, potentially fitted with radar, communications and navigation systems for operations over the horizon from the parent vessel; maritime command, control and support systems that may include command decision aids, data links, automatic charting, and navigational and automated recording capabilities; satellite compatible secure communications capabilities including real-time video; and a weapon system that can be utilised in inclement weather and low light conditions.

Barrier operations exhibit the flexibility inherent in a maritime strategy, and should be seen as protecting interests rather than geography. Each major surface combatant or patrol and response vessel has the potential to exert influence over a vast sea area by using maritime manoeuvre. A modern surface craft has the ability to loiter at sea for upwards of thirty days without the need for refuelling or resupply. In this period it can cover some 500-600 nautical miles per day, and search a vast area, which can be further increased with an organic aviation capability. The primary challenge is to ensure that a suitable intelligence and surveillance

organisation is in place that permits advanced warning of an illegal activity taking place, to allow a patrol and response vessel in the vicinity to respond in an effective manner.

As an example, a surveillance and response line could be established to counter an identified threat. Given a 200 nautical mile sea gap between the territorial seas of the adjacent nation, a threat craft travelling at about six knots would take some thirty-three hours to cover the distance from the time it sailed. If the threat vessel was not detected before sailing a patrol vessel could be some 500 nautical miles away and still be effectively utilised in a barrier operation. However, at times the surface response vessel could be even further away, perhaps conducting training with other assets and still respond effectively. This naturally depends on the accuracy of intelligence and the frequency of surveillance. If intelligence, weather or aircraft defects/availability are adversely impacting the situational awareness, then the patrol ship can be surged closer to the actual geographic position and threat as necessary. This is a manoeuvre-based philosophy which best maximises the advantages of operations in a maritime environment.

Manoeuvre at sea also has the advantage of keeping an adversary guessing. A criminal or terrorist organisation in the 21st century will have access to a vast amount of intelligence information, and will focus its smuggling efforts in a location where the vessel or aircraft involved in a static barrier operation is not. If defending geography is the ADF's objective in a particular maritime barrier operation, then the inevitable objective of the opponent will be to operate where the defensive assets are absent. Only by optimising the access and adaptability of maritime forces will Australia be able to defend its borders and resource interests adequately when faced with well organised transnational crime or terrorist syndicates.

This manoeuvre-based philosophy is alien to those more attuned to the holding of territory and the defence of geography ashore. It will remain a challenge to convince some that a surface vessel can monitor and patrol a region as large as 500-600 nautical miles, and that perhaps it is misused if restricted to a small geographic patrol box. Given Australia's vast maritime area of interest we will always have a limited number of assets, and thus the characteristics of poise, persistence, response, flexibility and adaptability, flowing from sea-based manoeuvre, need to be exploited to maximise the long-term effectiveness of barrier operations.

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<sup>1</sup> Australia claims one of the largest maritime areas of all States, with an Exclusive Economic Zone and continental shelf covering an area of 16 million km<sup>2</sup>, and over 20 million km<sup>2</sup> when the features of the extended continental shelf are included.

<sup>2</sup> See *Australian Maritime Doctrine*, Chapter 6.

