



Research Paper
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The Developing Policy Pressures in Australian Coastal Surveillance

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Developing Policy Pressures in Australian Coastal
Surveillance

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Figure 2: Key Australian Maritime Zones



Source: Map courtesy Australian Surveying and Land Information Group, Department of Industry, Science and Resources, Canberra, Australia.
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Acronyms

ACS	Australian Customs Service
ACV	Australian Customs Vessel
ADF	Australian Defence Force
AFMA	Australian Fisheries Management Authority
AFP	Australian Federal Police
AFZ	Australian Fishing Zone
AMSA	Australian Maritime Safety Authority
ANAO	Australian National Audit Office
AQIS	Australian Quarantine Inspection Service
AusSAR	Australian Search and Rescue
Bell 412 EP	A helicopter, fitted with specialised detection equipment, operated by Reef Helicopters as part of the coastal surveillance system in the Torres Strait
Dash 8	Twin engined commuter aircraft converted for coastal surveillance operations
Defence	The Department of Defence
DFAT	Department of Foreign Affairs and Trade
DIMA	Department of Immigration and Multicultural Affairs
EA	Environment Australia
EEZ	Exclusive Economic Zone
FFV	Foreign Fishing Vessel
GBRMPA	Great Barrier Reef Marine Park Authority
JORN	Jindalee Operational Radar Network
km	kilometre
LRMP	Long Range Maritime Patrol (aircraft)
NIDS	National Illicit Drugs Strategy
nm	nautical mile
NMU	National Marine Unit (of the Australian Customs Service)
NSC	National Surveillance Centre (of Coastwatch)
OPAC	Operational Program and Advisory Committee
OPC	Offshore Patrol Combatant
P3-C Orion	RAAF long range maritime patrol aircraft
PASC	Planning Advisory Sub-committee
PFI	Private Finance Initiative
PMTF	Prime Minister's Task Force
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
REEFREP	Queensland agency for controlling maritime traffic through the Great Barrier Reef
ROPAC	Regional Operational Planning and Advisory Committee
SECAR	Surface-wave Extended Coastal Area Radar
SIEV	suspected illegal entry vessels
UAM	Unidentified Aircraft Movements (sometimes referred to as 'black flights')
UNCLOS	United Nations Law of the Sea Convention
UNFSA	United Nations Fish Stocks Agreement

Major Issues

In the election likely be held this year the two major parties seem destined to differ on an issue of national security. The Australian Labor Party will go to the election with a policy to create an Australian Coast Guard,¹ whilst the coalition parties most probably will point to their record of significant increases in expenditure to improve the efficiency of the current coastal surveillance arrangements.² Also during the year a new class of patrol boat, to provide most of the effective law enforcement capacity of the coastal surveillance system for the next 15 to 20 years, should be selected.

In considering policy on coastal surveillance it is important to understand the nature of how this function is discharged in Australia. There is no overriding jurisdiction covering enforcement of law in maritime areas under Australian control. Rather, legislative authority lies with of a number of Commonwealth and State agencies that hold the responsibility in general, whether enforcement is required on land or water. The jurisdictions reflect Australia's history of federalism and do not necessarily coincide in any logical way. The enforcement of legislation recently has been simplified somewhat by passage of the Crimes at Sea Act, which reduces the impact of jurisdictional boundaries. The complexity of potentially differing legislation and prosecuting authorities remains.

The most important characteristic of the Australian coastal surveillance system is that there is no agency with the core role of and, thereby, legislative authority for overall law enforcement in the nation's maritime jurisdictions. Therefore, with no single agency given commanding responsibility for the area, the chief features of current Australian coastal surveillance operations are cooperation and coordination.

Coastwatch, the organisation which coordinates most coastal surveillance activity reflects this situation. It has developed under a series of (sometimes ad hoc) administrative arrangements as effective responses were sought to enforce laws relating to fisheries, immigration, environmental protection and so on, without necessarily having reference to each other. As with the system in general, *Coastwatch* has no legislative basis of its own covering its functions.

This system can best be described as one of 'distributed responsibility', that is, an arrangement where many bodies have responsibility for distinct components but no one body has the power to assess and manage the overall performance of the whole system.

It is this feature which most consistently explains the coordination failures of the system, such as the surprise at the arrival of two refugee boats on the east coast of Australia in 1999, despite the existence of prior information. The nature of the failure was inherent in the system; it depends on good intelligence transfer between participating agencies and this did not occur. The consequence of the political outcry following the landings was an inquiry chaired by the Prime Minister's Department which recommended several changes with an estimated cost over the four years from 1999–2000 of \$124 million. Some of these, particularly the strengthening of *Coastwatch* staffing and its increased role in the management of intelligence generation, should strengthen the central capacities of the system.

In general, however, the work of the inquiry was narrow and focused on the political outcry. No attempt to reform the system as a whole was made and, in fact, the overall effects may have been deleterious. The Australian Fisheries Management Authority has given public evidence that the emphasis on sophisticated illegal immigration since the inquiry had been to the detriment of the needs of fisheries policing.

This is somewhat of a traditional Australian approach to developing policy on coastal surveillance. It reflects a history of unwillingness to respond to any but pressing current problems which has created a persisting risk of fragmentation. A report into the eastern coast illegal immigrant landings by Air Vice Marshal Heggen (ret.) demonstrated that these characteristics continue to carry the risk of failure of the system.

The worst consequence of the inherent structural weakness of the surveillance system was demonstrated in the late 1980s. The participating agencies lacked a cohesive vision of the system's objectives, which led to a failure to resolve issues of responsibility and cost. This was then more significant because each agency was allocated the funding for the component of the system which related to its legislative responsibilities under a user pays approach. No agency had sufficient stake in the effectiveness of the system as a whole to ensure a workable outcome.

This situation produced the politically embarrassing Amman Aviation incident of 1987 where an inexperienced company was selected to provide aerial surveillance and was subsequently stripped of the contract. By 1988 (when the Department of Primary Industries and Energy decided to cease funding aerial surveillance as the means of meeting its quarantine responsibilities) the coastal surveillance system had been brought to the point of collapse. The outcome of this crisis was the most significant move to centralise an element of the coastal surveillance function made so far. *Coastwatch* was transferred to the Australian Customs Service with the central role in coordinating aerial surveillance and with the finance to do it.

In other aspects much of the system remained as before. Therefore, today, inter-agency coordination remains the critical point in the operation of the surveillance system. The efficiency of the exchange of intelligence, the evaluation of consequences and the

communication of options between *Coastwatch* and the client agencies will significantly effect outcomes.

In a recent audit, the Australian National Audit Office found that, indeed, the intelligence framework had not worked as well as expected and that some agencies had not continued to develop their intelligence capacities as required in earlier Ministerial directives. **So intelligence generation and management remains one of the central features governing the efficiency of coastal surveillance and the efficacy of the Government's recent steps to improve them will be one of the crucial areas of evaluation.**

One of the consequences of the transfer of financial resources for aerial surveillance to *Coastwatch* was the provision thereby of a limited power to develop and sustain national level objectives for the system, such as effective deterrence of crime. The capacity of *Coastwatch* to sustain this role may be under threat by what appears may be an attempt to return to the user pays arrangements which proved so disastrous in the 1980s because it undermined effective coordination of operations and prevented the acceptance of central objectives for the system as a whole.

It is difficult to see user pays financing being any less dangerous to the effectiveness of coastal surveillance today than it was in the 1980s. This is because, without the power over finances, the nature of the system remains fundamentally the same as before 1988. However, equally important are the great differences in the nature of the responsibilities of the constituent agencies and, significantly, the consequences of those differences for conducting coastal surveillance operations.

The routine patrol operations of the system, provided because of the needs of only a few agencies, constantly provide the deterrent capacity that supports the law enforcement responsibilities of all other agencies. This is in part due to their visible presence. More significantly, it is because they provide the capacity to respond quickly to the less frequent demands of the majority of agencies. This would not be possible if it were not for the requirement to provide the regular aerial patrols.

User pays procedures cope poorly with such circumstances. Acquiring a suitable capability involves acquisition of expensive aircraft and systems which are so specialised that the market analogy on which user pays proposals are based is irrelevant. Long range aircraft equipped with specialised detection devices are not lying around Australian airports (or those of the world) awaiting ad hoc charter. Consequently, the efficiency of the coastal surveillance system is only marginally susceptible to the types of resource management responsiveness that a user pays system is meant to develop.

Retaining the financial capability within *Coastwatch* to manage the surveillance system and influence the development of national level objectives is an issue central to the increased effectiveness of the system.

An equally significant issue arising from the limited ability of *Coastwatch* to implement such national level objectives is that, as the system is currently structured, a problem that is not the responsibility of one of the constituent agencies will not be seen to exist. One such problem which has captured media attention lately is that of so-called 'black flights' or unidentified aircraft movements (UAM). These are entries into Australian airspace by unidentified aircraft, some of which may be involved in illicit activities. This has been an issue since the original coastal surveillance debates of the 1970s but action to assess and respond (if required) to the problem has not been taken seriously. There is today no more hard data on this issue than there was almost a quarter of a century ago.

The issues discussed above are essentially about rectifying past errors. **Although important, they are going to have to be addressed alongside a developing list of new and potentially more demanding issues.**

The operating environment in the area of the system's traditional focus, the northern coastline, appears to be becoming more demanding. Constituent agencies are seriously considering responding to this by seeking increased capacity for the use of force. **This raises the issue of the potential for coastal surveillance operations to create incidents which might possibly affect diplomatic relations with Indonesia.**

In a more fundamental change, the surveillance system began to move into unfamiliar waters in 1997, when illegal fishing around Australian territories deep into the Southern Ocean became apparent. In the next few years Australia declared more marine conservation areas in waters to the south and east of the continent than to its north. Then in December 1999 Australia became the first nation to proclaim a 200 nm EEZ offshore of an Antarctic territorial claim and attendant rights over the continental shelf. With the implementation of the United Nations Fish Stocks Agreement (UNFSA) in 2000, Australia has been handed expanded responsibility for controlling both domestic and foreign fishing vessels in the EEZ and areas of the high seas.

This suggests the development of a new focus for the surveillance system. It is one which lies in an area for which all elements of the system are poorly equipped. Further, it is one from which existing assets are being withdrawn following a decision to transfer four patrol boats previously based in southern waters to Darwin.

A stopgap approach of chartering the MV *Cape Grafton* from the Australian Maritime Safety Authority to providing a limited patrol capability in the Southern Ocean has funding approval only till mid-2003 and its extension may not be possible. The Government intends to sell the *Cape Grafton*, which may not thereafter be available for the patrols, and there are few suitable alternatives available for periodic charter. It is possible that the RAN could resume the role of patrolling the Southern Ocean but this could be, at best, only a stopgap option.

To date, the approach to providing surface operations into the Southern Ocean is reminiscent of much of the early development of *Coastwatch*—it is tentative, limited and avoids capital expenditure. It is an approach which has sufficed at times in the past but one which always has carried with it the risk of the collapse of the system.

Meanwhile, the Department of Defence is proceeding to select a replacement for the Fremantle class patrol boats. It is doing this in a way which incorporates significant innovations in defence procurement but which seems largely uninformed of the changes in the coastal surveillance environment. There are even signs of ambivalence within Defence itself about the major role of the patrol boats. Are they military craft mostly allocated to civil law enforcement or law enforcement craft to assist civilian authorities (retaining a vestigial military role in the unlikely event that Australia should be attacked)?

If anything, the Fremantle replacement program is illustrating the continued potential for inefficiency arising from the lack of anything like unity of command in the current coastal surveillance system. The consequence is likely to be demands on government in the near future for significant additional capital expenditure once the demands of the emerging environment become undeniably apparent.

A policy debate on appropriate responses to future difficulties is justified in these circumstances and may well arise out of a report the Joint Committee of Public Accounts and Audit is concluding on the ANAO report on *Coastwatch*.

The central issue for such a debate is really the legislative standing and command of the entire system. The Government's initiatives of 1999 appear to have strengthened the management of *Coastwatch*, improved coordination of intelligence and simplified the legal regime. Yet, without legislation defining its role and powers the effectiveness of *Coastwatch* will remain at risk over time to the subtle shifts that deflect policy supported purely by administrative arrangements. Without a centre with sufficient command responsibility to influence the development of the overall system, response to the changing surveillance environment will be less than optimum.

A number of approaches to achieving these objectives may well be advocated:

- a legislative basis for the role of *Coastwatch*
- the establishment of *Coastwatch* as an independent government authority, reporting to an appropriate Minister
- creation of an independent disciplined force, of either constabulary or para-military nature.

Whatever the future course chosen to guide the development of Australia's coastal surveillance system, and despite the significant changes now close to implementation,

there is little likelihood that pressures for change will relent in the future. **The crucial issue for policy development is whether these changes will come about through proactive planning and responsive management or will repeat past practice of crisis driven incrementalism.**

Introduction

In 2001 a Commonwealth election will be held where the two major parties will differ on an issue of national security. Unlike the general bipartisanship on broad areas of security such as defence or foreign policy, the Australian Labor Party will go to the election with a policy to create an Australian Coast Guard, whilst the coalition parties most probably will point to their record of significant increases in expenditure to improve the efficiency of the current coastal surveillance arrangements.³

During the year a new class of patrol boats, that will provide most of the effective law enforcement capacity of the system for the next 15 to 20 years, should be selected. Further, the Joint Committee of Public Accounts and Audit is concluding an inquiry into the implications, for the future management of the Australian coastal surveillance system of an audit of *Coastwatch* conducted by the Australian National Audit Office (ANAO).⁴ It should report in the first half of the year.

In 1999 coastal surveillance again became a focus of public and political attention, as it has at several times since the 1970s, when events created a public impression that Australia's maritime boundaries were being breached. Throughout the year, news of the arrival of illegal immigrants on the shores of Australian territory, no matter how remote or desolate, was often presented as a failure of Australia's maritime policing agency, *Coastwatch*. Sufficient momentum was created for the Government to conduct a major review of coastal surveillance and to recommend significant changes and additional funding, both of which are now largely in place.

In reality, however, the majority of landfalls by illegal immigrants occur on Australian island territories such as the Ashmore and Cartier Reefs and Christmas Island. The latter is much closer to Indonesia than to Australia and on the former there are no facilities to allow people to transit independently to the mainland. Apprehending illegal immigrants is but a portion of the law enforcement responsibilities of the Australian coastal surveillance system, which has one of the largest 'beats' in the world. This is a jurisdiction which consists of the 37 000 kilometres of the Australian coastline, the 200 nautical mile wide Australian Fishing Zone (AFZ) and Exclusive Economic Zone (EEZ), (which, at 9 million square kilometres, is larger in area than the Australian mainland) and the 12 000 land features exposed above the surface within Australian territorial waters. In addition, authority of Australian law also extends to Australian Antarctic regions although the nation has little capability to operate there and *Coastwatch* has none.

Although vast, not all of these waters are so isolated from the rest of the world as popular imagination often supposes. Navigators from the region have been visiting northern Australia for hundreds of years. They came to trade and dive, mostly for trochus shell and bêche-de-mer, with goods and implements from as far away as China. They probably brought the dingo and may even have introduced the first feral cats to Australia. When Matthew Flinders arrived in the region of what was to become Darwin, he found villages where people from the Indonesian islands dried their bêche-de-mer.

This paper will look at some of the underlying policy, organisational and administrative issues that affect the efficiency of Australian coastal surveillance. Throughout, the phrase 'the coastal surveillance system' is used to refer to the totality of government agencies with authority to enforce legislation in Australia's maritime zones or to assist in this enforcement. The name *Coastwatch* refers to the agency which manages surveillance of the maritime zones and coordinates responses required by other agencies to perceived breaches of legislation. *Coastwatch* is the coordinator of the coastal surveillance system but is only one component of it.

The paper is concerned only in passing with the nature of external threats to Australian sovereignty in its maritime zones and with technologies applicable to their defeat. The paper discusses the history of coastal surveillance arrangements at some length because the nature of their developments still heavily influences the performance of operational activities today. It then identifies some significant issues which challenge current policy and indicate that the coastal surveillance system faces further change if it is to respond successfully to a changing maritime environment. The paper does not favour any particular response to these issues because the complexity of the situation is such that any approach will require considerable effort and not be without problems. Identifying and evaluating these would properly be the subject of another paper.

Nature of the Coastal Surveillance Arrangements

Australia's coastal surveillance arrangements have developed incrementally over time to assist the enforcement of the nation's law in its territorial waters and around its coastline and those of Australian territories. There is no overriding jurisdiction covering enforcement of law in maritime areas under Australian control. Rather, legislative authority lies with a number of Commonwealth and State agencies that hold the responsibility in general, whether enforcement is required on land or water. State authorities hold power for much of the jurisdiction out to three nm from the low tide mark. Some Commonwealth departments may hold the power in specific areas reserved by the Constitution for the Commonwealth (such as immigration), even within the three-mile zone. Some State bodies may have authority for select areas of their regime outside the three-mile zone, such as special fisheries powers.

The most important characteristic of the Australian coastal surveillance system is that there is no agency with the core role of and, thereby, legislative authority for overall law enforcement in the nation's maritime jurisdictions. Therefore, with no single agency given commanding responsibility for the area, the chief features of current Australian coastal surveillance operations are cooperation and coordination. For instance, in the Torres Strait, one of the focal areas for surveillance, 26 Commonwealth and State agencies are represented on Thursday Island. They hold responsibility for regulation of law, health, agriculture, foreign relations, pollution, immigration and so on, all of which at sometime may become a concern of coastal surveillance operations.⁵

There is no overriding jurisdiction covering enforcement of law in maritime areas under Australian control. Consequently, there is no agency with the core role of and, thereby, legislative authority for, overall law enforcement in the nation's maritime jurisdictions. This is the most important characteristic of the Australian coastal surveillance system, which can best be described as one of 'distributed responsibility'. That is, an arrangement where many bodies have responsibility for distinct components but no one body has the power to implement requirements for the development, and manage the performance, of the whole system.

Role of *Coastwatch*

The characteristics of the Australian coastal surveillance system are necessarily those also of *Coastwatch*. The organisation has developed under a series of (sometimes ad hoc) administrative arrangements as effective responses were sought to enforce laws relating to fisheries, immigration, environmental protection and so on. As with the system in general, *Coastwatch* has no legislative basis of its own covering its functions.

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As a consequence of these administrative arrangements, the *Coastwatch* operation is essentially one of alerting and management. 'Alerting', in the sense of providing the information which allows the vessels and vehicles used for law enforcement purposes to respond to or prevent breaches of law. 'Management' in the sense of ensuring that resources are available to perform aerial surveillance operations and to coordinate other sources of intelligence at the level required to provide the alerting function.

Coastwatch assesses the information collected by a range of agencies and by its own aerial surveillance program. This is supplemented by informal sources of information such as from free public telephone contact numbers⁶ and from private and commercial vessels. Using this intelligence *Coastwatch* then coordinates effective response when required, to meet the needs identified by those agencies with legal responsibilities in Australia's

maritime zones. Surveillance operations are not performed for their own sake but to meet these needs. Thus the enforcement agencies are generally referred to as *Coastwatch* 'clients' (for surveillance services). The surveillance system can best be described as one of 'distributed responsibility', that is, an arrangement where many bodies have responsibility for distinct components but no one body has the power to implement requirements for the development, and manage the performance, of the whole system.

A significant degree of intelligence and analysis is central to the *Coastwatch* role because maintaining constant surveillance over Australia's maritime domain is impossible due to its huge extent. Were the aerial surveillance resources available to *Coastwatch* simply flown in a uniform pattern over the entire Australian coastline, any particular point would be passed only once in every 12 days. A modestly performing craft can cross the 200 nm EEZ in a day and the 12 nm immigration zone in little more than an hour.⁷ Consequently, the *Coastwatch* approach to its task is to plan 'risk assessed' operations based on intelligence analysis.

In practice, the aerial surveillance operations of *Coastwatch* consist of planning a flying program using hours supplied by private contractors, a small amount of ADF aircraft time and, occasionally, ad hoc charters. The corollary is that *Coastwatch* must also manage the performance of its contactors in meeting flight schedules and for the provision of both adequate equipment and trained personnel. It is then responsible for coordinating any response requested from a responsible agency using, mostly, Royal Australian Navy (RAN) patrol boats and Australian Custom's Service (ACS) launches. Responses to sightings obtained by *Coastwatch* that the client agencies consider require action, are controlled through the *Coastwatch Operations Centre* in Canberra.

In an audit of *Coastwatch* the Australian National Audit Office (ANAO) provided a useful typology of the major client agencies involved in the surveillance system and their influence on the way it functions. This is presented below.

Coastwatch Key Client Agencies

Client Type	Client Agency
<p>Major client (strategically and tactically driven): proactively task Coastwatch to perform long-term strategic patrols as well as shorter-term tactical surveillance. These agencies are the main contributors to Coastwatch forums such as the Planning Advisory Sub-Committee (PASC) and the Operational Program Advisory Committee (OPAC).</p>	<ul style="list-style-type: none"> • Australian Fisheries Management Authority (AFMA) • Environment Australia (EA), and • Australian Customs Service (ACS).
<p>Major client (tactically driven): take an active involvement in Coastwatch activities based on a particular happening or event. These clients are reliant on other client agencies or Coastwatch providing strategic taskings, from which they leverage. Generally the risks associated with these clients to Australian economic and social security are higher than other clients. Consequently, these agencies receive a higher priority on the allocation of Coastwatch resources when required. These agencies are not regular contributors to PASC, however they do attend OPAC regularly*.</p>	<ul style="list-style-type: none"> • Department of Immigration and Multicultural Affairs (DIMA) • Australian Federal Police (AFP), and • Australian Quarantine and Inspection Service (AQIS).
<p>Minor client (tactically driven): Provide tactical Coastwatch taskings and leverage off other agencies for strategic surveillance. Although attending some OPAC meetings, they are more active regionally through Regional Operational Program Advisory Committee (ROPAC).</p>	<ul style="list-style-type: none"> • Great Barrier Marine Reef Marine Park Authority (GBRMPA).
<p>Other minor use clients: use Coastwatch resources infrequently and are not regular contributors to the OPAC and PASC forums. They tend to use Coastwatch resources for specific tactical taskings.</p>	<ul style="list-style-type: none"> • Department of Foreign Affairs and Trade (DFAT), • Department of Defence, and • Australian Maritime Safety Authority (AMSA).

Source: ANAO, *Coastwatch Australian Customs Service*, Report No. 38 of 1999–2000, Appendix 3, p. 112. Available at <http://www.anao.gov.au/>

**The Operations and Program Advisory Committee (OPAC), Regional Operations and Program Advisory Committee (ROPAC) and Planning Advisory Sub-Committee (PASC) are inter-departmental planning and coordination fora for the management of the coastal surveillance system. OPAC develops and reviews the program of surveillance flights and reviews significant issues; ROPAC does the same but at the regional level, including State instrumentalities; PASC determines the long-term requirements for support capacity on the water, including the rolling three-month sailing plan.*

Ad hoc surveillance is organised for other agencies, sometimes acting for State government counterparts, as approved.

Surveillance operations are conducted chiefly by 15 aircraft (following the delivery of two additional Dash 8 aircraft) provided under commercial contract to *Coastwatch* and the response element by 11 (soon to be increased to 15) RAN patrol boats in northern waters and 8 launches operated around Australia by the National Marine Unit (NMU) of the ACS (which recently replaced 6 older, less capable craft). RAAF P3C Orion aircraft and the ad hoc charters provide supplementary capacity.

Obviously, with comparatively few assets, a vast area of coverage and a widespread range of activities to monitor, surveillance flights are tasked to meet the needs of all client agencies with relevant interest in the particular area being covered. Such flights are usually part of the *Coastwatch* 'strategic' program of wide area patrol flights.

In contrast, the needs of a particular agency may be met with 'tactical' flights (protracted shadowing of a suspect vessel, for instance). Procedures also allow for the diversion in flight of current missions to meet new objectives, should a client agency suddenly notify *Coastwatch* of an unexpected priority. Thus, the divide between strategic and tactical operations may be crossed in meeting the practical requirements of the operational environment.

Although tactical flights sometimes produce spectacular results, such as large drug seizures, they usually consume significant resources and service fewer clients. There are tradeoffs, therefore, between the two types of operation and the agencies requesting either, which must be managed by *Coastwatch*.

Place of Newer Surveillance Technologies

The nature of aerial surveillance operations has been evolving for over a decade. From time to time hopes are expressed that new technologies might decrease the reliance of the coastal surveillance system on aircraft. The most promising of the new technologies is the JORN (Jindalee Operational Radar Network) radar system, which is due to become operational in December 2001.⁸ JORN has a detection range out to about 3000 kilometres from the coastline and an increasingly impressive ability to detect difficult contacts such as small vessels. Moreover, it is but one of a suite of surveillance equipments which the Australian Defence Force plans to add in the immediate future. These will allow it to collect an unprecedented quantity of surveillance data about the northern approaches to Australia.

Intelligence exchange arrangements should mean that relevant data is available to *Coastwatch*. This may well improve the efficiency of its aerial surveillance operations allowing more precise dispatch of aircraft to intercept contacts such as vessels fishing illegally or appearing to be carrying illegal immigrants. The requirement for strategic air patrols may thereby be reduced. However, it is doubtful whether the new military technologies will much reduce the total demands of *Coastwatch* upon its aircraft.

It is doubtful whether the new military technologies will much reduce the total demands of *Coastwatch* upon its aircraft.

This is because of the different requirements of military and coastal surveillance. The former needs to detect, identify and track its targets with sufficient accuracy to allow them to be directed if friendly or destroyed if not. Coastal surveillance requires information sufficient to allow successful prosecution of law breakers. This often involves surveillance aircraft taking evidence of such resolution that it enables, for instance, estimating the size of fish on the deck of a trawler. It is not likely that aircraft will be effectively and economically replaced in this role for some time. With the likelihood of increased demands upon the surveillance system developing in the future (discussed above), efficiencies in the use of *Coastwatch* aircraft deriving from the new military surveillance technologies will probably be applied elsewhere in the surveillance system.

Financing the Coastal Surveillance System

The majority of financial outlays incurred by the coastal surveillance system are borne by two agencies, the ACS and Defence. The ACS meets the cost of the civil surveillance flights and the NMU launches while Defence costs include the Fremantle class patrol boats, P3C Orion surveillance flights and some activities during patrols of the Army's Regional Force Surveillance Units. Recent available cost data is presented below.

Costs Associated with Coastal Surveillance

(A\$ million)

Financial Year	Total System Cost	Coastwatch Operating Expenses	National Marine Unit	Total Defence Costs
1998–1999	168 ¹	35 ²	6 ³	133
1999–2000	179.3 ⁴	49.4 ⁵	5.6 ⁶	130
2000–2001 (est.)	216.6 ⁷	65 ⁸		

Note: the figures in this table do not sum. The most recently available sources have been used and in most cases a chronologically consistent series of data is not publicly available.

Sources

1. ANAO, *Coastwatch, Australian Customs Service*, p. 35.
2. Eight per cent of this is allocated to *Coastwatch* management and administration; Australian Customs Service, *Coastwatch Efficiency and Cost Effectiveness*, June 2000, Enclosure 5 to submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol.1, p. S233.
3. This is the total cost of the NMU, only a portion of which would have been allocated to operations associated with coastal surveillance. However, this cost is not desegregated. Australian Customs Service, *Coastwatch an Overview*, September 1998, p. 9; ANAO, op. cit., p. 74.
4. Australian Customs Service (ACS), *Annual Report 1999–2000*, September 2000, p. 50.
5. *ibid*, p. 51.
6. *loc. cit.*, p. 51. The costs of the NMU attributed to coastal surveillance represent 33 per cent of the \$12.2m outlay on the NMU. ACS, *Coastwatch: an Overview*, June 2000, Enclosure 1 to submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S200.
7. Attorney-General's Portfolio, 'Australian Customs Service', *Portfolio Budget Statements 2000–01*, Table 2.2, p. 246.
8. ACS, *Coastwatch: an Overview*, June 2000, Enclosure 1 to submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S200.

Latest in a History of Policy Rethinks: The Prime Minister's Task Force of 1999

Throughout its history, *Coastwatch* has been the subject of allegations of ineffectiveness. These have usually followed some event or series of events which have received wide publicity. The usual governmental response has been an inquiry which, in something of an emerging tradition, has mostly focused narrowly on the publicised events. The latest of these was conducted in 1999.

Following well publicised landings of illegal immigrants at Cairns in March and at Nambucca Heads in April 1999, the Prime Minister commissioned a report on appropriate responses from a task force led by the Head of his Department, Mr Moore-Wilton. This

report saw the two incidents as part of an addition to the issues dealt with by *Coastwatch*—commercially arranged people smuggling by organised criminal gangs with access to sophisticated technology. It was to lead to significant changes and additional expenditure for the *Coastwatch* arrangements.

The Prime Minister's Task Force followed and absorbed an earlier report prepared by retired Air Vice Marshall Alan Heggen, which found some problems in the way the coastal surveillance arrangements were implemented.⁹ However, it is apparent that the nature of the problem of the unannounced arrival of the two boats on the Australian mainland was the nature of the arrangements themselves; they depend on good intelligence transfer and coordination between the responsible agencies. Australian agencies had poor intelligence on the gangs organising the trade (operating mainly from southern China) and the technology for inter-agency coordination was antiquated. Furthermore, the smugglers had stretched the arrangements beyond capacity by using approaches from the north east of the continent, for which the surveillance system had not been designed.

It is apparent that the nature of the problem of the unannounced arrival of the two boats on the Australian mainland was the nature of the arrangements themselves; they depend on good intelligence transfer and coordination between the responsible agencies.

Consequent Changes to Australian Coastal Surveillance

The Prime Minister accepted the Prime Minister's Task Force report findings on 27 June 1999. Among the changes the Government approved were:

- a reorganisation of responsibility for strategic and operational surveillance
- deployment of additional DIMA compliance and airport liaison officers to originating countries
- a range of diplomatic activities involving originating and transit countries and international fora
- an increase in the number of long range surveillance aircraft together with changes to the search profile to cover the north eastern approaches to the continent
- an additional helicopter in Torres Strait with more sophisticated equipment levels and longer available flight hours
- organisational changes to *Coastwatch* to restore its position as a semi-autonomous agency within the ACS with obvious independence in the civil surveillance role
- improved coordination with other agencies, supplemented by upgrading of communications and data processing capacity, and

- changes to relevant legislation.¹⁰

The estimated cost of these changes over the four years from 1999–2000 was \$124 million. From this it might be assumed that the average annual additional cost for major components of the recommendations might be:

- \$21 million for increased fixed wing and helicopter surveillance
- \$5 million for the National Surveillance Centre to be established in *Coastwatch* to add an analytical capability to existing operational components, and
- \$0.7 million for secure satellite communications.¹¹

These additions increased the estimate of the total system annual cost at that time to about \$195 million. With the addition of the surveillance hours recommended by the Prime Minister's Task Force about \$55 million per annum will be spent on aerial surveillance by *Coastwatch*.

The Government's Implementation of Recommendations

By the end of 2000 the Government had implemented the recommendations of the Prime Minister's Task Force.¹² The recommendation to change the corporate structure of the ACS was accomplished in July 1999. An ADF officer of Two-Star rank, Rear Admiral Russ Shalders, was appointed as Director General, *Coastwatch*, reporting directly to the CEO of the ACS. Since then additional ADF personnel have been seconded to *Coastwatch*.

In January the National Surveillance Centre began operations, as did an additional helicopter, equipped with all-weather surveillance equipment, in the Torres Strait. The two additional surveillance aircraft were delivered in December 2000.¹³ The additional helicopter, a Bell 412 EP equipped with electro-optical vision equipment and contracted for 500 flying hours per annum, was delivered in December 1999.¹⁴

Amendments to relevant legislation were achieved in March 2000 with assent to the *Crimes at Sea Act 1999*. This simplified somewhat the entanglement of jurisdictions concerned with enforcing law in Australian waters and extended them beyond Australian coastal waters to the limits of the 'continental shelf' and beyond. The Act establishes a cooperative scheme developed by Commonwealth and State/Territory governments for jurisdiction over some areas, a complementary regime developed by the Commonwealth over others and a regime agreed by the Commonwealth and Indonesian Governments for dealing with crimes at sea within 'Area A' of the Timor Gap.¹⁵

The Government considers that its responses to illegal immigration are already showing results. Illegal immigration by air has fallen by 20 per cent since additional DIMA compliance and airport liaison officers were posted to originating countries. Data for

1999–2000 showed that, up till April, of unlawful immigrant boats making landfall 98 per cent had been detected, compared with 74 for the previous year.¹⁶ For all of 1999–2000 the detection rate was 95 per cent.¹⁷

The Government considers that its responses to illegal immigration are already showing results.

Limited Focus, Wrong Area?

Although the Prime Minister's Task Force represents a broadly based cross-portfolio response to the issue of sophisticated people smuggling, it showed a more narrow approach to the coastal surveillance arrangements, grafting a new responsibility onto the existing operational format and adjusting, rather than changing, the existing framework. It also resulted in a change to part of the financing arrangements for aerial surveillance, with the funding of the additional Dash 8 and helicopter capability being appropriated to DIMA and purchased from *Coastwatch* on a purchaser/provider basis.¹⁸ This decision shows little awareness of the way in which such a 'user pays' approach distorted and almost destroyed the aerial surveillance system in the late 1980s (see 'Internal Contradictions Create a Crisis', below). The approach is one which retains the potential to undermine the efficiency of the *Coastwatch* arrangements as they have existed for the last 12 years.

Although the Prime Minister's Task Force represents a broadly based cross-portfolio response to the issue of sophisticated people smuggling, it showed a more narrow approach to the coastal surveillance arrangements, grafting a new responsibility onto the existing operational format and adjusting, rather than changing, the existing framework.

The report of the Task Force did not consider other issues of policy on coastal surveillance and certainly did not offer an assessment of the cumulative impact of environmental factors on the total requirement for surveillance. This might, rather more than the growth in illegal immigration, have justified a more thoroughgoing restructure of the arrangements. In fact, something of the opposite appears to have occurred, with AFMA giving public evidence that the emphasis on sophisticated illegal immigration had been to the detriment of the needs of fisheries policing.¹⁹ It remains to be seen whether the finetuning of the system of distributed responsibility undertaken by the Prime Minister's Task Force has sufficiently altered the system to allow it to cope with future coastal surveillance developments.

The Report did not consider other issues of policy on coastal surveillance and certainly did not assess the cumulative impact of environmental factors on the total requirement for surveillance. This might, together with the growth in illegal immigration, have justified a more thoroughgoing restructure of the arrangements.

The Report was equally narrow in the geographic focus of its operational concerns, a fact not lost on the Northern Territory, whose Chief Minister criticised it for ignoring north western waters when over half of the illegal immigrants apprehended in boats were caught in Territory waters.²⁰ Such feelings were echoed later by the Western Australian Government alleging that coastal surveillance resources on the west coast were inadequate.²¹ Indeed, only shortly after the Prime Minister's Task Force reported, the tempo of boat movements from Indonesia to the Australian north west territories increased significantly. By the end of 1999 this area was firmly re-established as the primary operational focus for people smuggling with 3736 illegal immigrants landing in the area. The pattern was repeated during 2000 with more than 2700 arriving.²² During 2000 no vessel carrying illegal immigrants made landfall on the east coast.

The Development of Coastal Surveillance Arrangements

The narrow focus of that part of the Prime Minister's Task Force dealing with coastal surveillance conforms to a tradition. The problems and development of coastal surveillance arrangements reflect a history of unwillingness to respond to any but pressing current problems. This process has produced a series of arrangements which have progressively refined the capacity to respond to challenges yet avoided significant expense in the process. On the other hand, it has left the arrangements vulnerable to internal contradictions, changes in the nature of threats and public perceptions of incapacity.

The central problem created by the approach of successive governments to coastal surveillance has been a persisting risk of fragmentation.

The central problem created by the approach of successive governments to coastal surveillance has been a persisting risk of fragmentation. Being a composite system, meeting the several needs of various agencies responsible for different areas of legislation, the system has suffered at varying times from differing:

- objectives (should it be optimised for fisheries, quarantine, drugs or other roles?)
- financial priorities (which agencies would bear the cost, which would question the cost if it did not directly affect them?)
- views of national interest (how effective did the system have to be, and for what purpose?), and
- operational procedures (patrol flights versus targeted operations).

Following the transfer of the *Coastwatch* management function to the ACS in 1988, the tendency to fragmentation has been moderated by centralised management of aerial surveillance assets, increasing rationalisation of surface response assets, better liaison and

an increased reliance on focused operations in cooperation with client agencies. Nonetheless, as the Heggen Report demonstrated, the inherent difficulties of the inter-agency arrangements continue to risk a compromise of the performance of its components.²³ Furthermore, responses to emerging problems continue to carry the risk of further fragmentation. To understand why these defects may not have been rectified under the latest set of actions, it is necessary to understand how the coastal surveillance arrangements came into their current state.

As the Heggen Report demonstrated, the inherent difficulties of the surveillance arrangements continue to compromise the performance of its components.

The Origins of the Aerial Surveillance System

Amendments to the Fisheries Act in 1968, that proclaimed a 12 mile fishing zone, marked the beginnings of an institutional Commonwealth law enforcement interest in surveillance of the coast line and its approaches. Over the next few years, suspect activity in the fishing zone increased and other issues, such as unlawful immigration were identified as becoming important. As the responsibilities of a number of agencies were becoming involved, the Standing Inter-Departmental Committee was established in 1973 to coordinate the policy input of the relevant agencies. By 1975 the Department of Transport had leading responsibility for management, with its Marine Operations Centre used to coordinate surveillance activities. Aerial surveillance was increased to 800 hours in 1974–75.

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Coastal surveillance had won increased public profile because it had become a political issue. In 1974 the number of foreign fishing vessels (FFV) sightings increased by 51 per cent to a total of 431. Moreover, some traditional Indonesian fishermen had come ashore on the Northwest coast, leading to pressure on government not only from the fishing industry but also from graziers who feared the importation of exotic diseases. The premiers of both Queensland and Western Australia took up the interests of these groups and started arguing the issue of the alleged inadequacy of the surveillance system. Following an agreement with Indonesia, reached in November 1974, the incidents declined. Nonetheless, the Navy mounted *Operation Trochus 75* during the traditional trochus shell season the following year, using naval aircraft designed for anti-submarine operations from aircraft carriers. *Trochus 75* was the first in a history of specifically targeted coastal surveillance aerial operations.

In 1977 the focus switched, as the first wave of Vietnamese 'boat people' began to build momentum. In 1977–78 4200 flying hours of ADF and 400 hours of civil surveillance were allocated.

Growing Awareness of Long-term Interests

On a less *ad hoc* basis, the Government was beginning to realise that coastal surveillance would become a permanent concern of the Commonwealth. In 1977, the United Nations Law of the Sea Conference formed a consensus that an exclusive economic zone of 200 nm [nautical miles] could be the basis on which littoral nations could claim sovereignty over maritime resources. In early 1978 the Government announced that it intended to legislate for an Australian EEZ.

A consequence was a significant change in policy to provide aerial surveillance of the coastline and EEZ. In July 1978 it was announced that equipment owned and operated by contracted commercial companies would be used to perform the task. In addition, ADF flying hours were also increased. Allocations planned for 1978–79 were:

- 27 000 flying hours with chartered aircraft on quarantine patrols, and
- 2500 hours of RAAF LRMP [long range maritime patrol] aircraft patrols over the Australian Fishing Zone [AFZ].

Additional RAN patrol boats and Customs launches were deployed to north western ports and the ACS was to be allocated three radar equipped aircraft for special border control operations.

Overall, the approach was typical of what was to become a recurring pattern in the development of Australian coastal surveillance—one of pragmatic improvisation on unavoidable recognition of the need to respond to circumstances, counter-acted by a strong desire to avoid any longer term commitments. To quote the Minister:

The measures adopted at this stage [1978] have been designed to provide a high degree of flexibility *without commitments to capital expenditure*.²⁴ [emphasis added]

The approach was typical of what was to become a recurring pattern in the development of Australian coastal surveillance: one of unavoidable recognition of the need to respond to circumstances counter acted by a strong desire to avoid any commitments.

A Cycle of Problems and Reviews—1978 to 1988

This grudging approach had an unsurprising outcome. Legislation, contracts and management reorganisation were delayed for years. A review of the system, promised for 1979, was not announced until 1982. Not surprisingly, since some of the contracts had not commenced until 1981, no substantial changes were recommended. The only one that has lasted was adoption of the name *Coastwatch* and the application of an identifiable aircraft livery.²⁵

In May 1983, the then newly elected Labor Government conducted a further inquiry under the Minister for Aviation and Minister Assisting the Minister for Defence Kim Beazley. This action reflected an increased awareness of coastal surveillance as a political issue at the time. Partly, this had occurred due to criticisms by the *Australian Royal Commission of Enquiry into Drugs* [Williams report] of 1980, which were later reinforced by the *Royal Commission of Enquiry into Drug Trafficking* [Stewart report] of 1983. Mr Justice Williams had commented that, as far as countering drug operations was concerned, coastal surveillance efforts had been inadequate and misdirected. In fact, standing aerial patrols to counter drug smuggling had been mounted in 1978 but were discontinued in 1980 after no relevant sightings had been recorded.

Nonetheless, expectations had been created which connected control of illicit narcotics and coastal surveillance in the public debate. Then, in March 1983, the Standing Inter-Departmental Committee, (then) responsible for oversight of the surveillance program, decided that 2500 hours of LRMP surveillance were more than needed to achieve agreed tasks and recommended that only 1500 be apportioned for the 1983–84 Financial Year.²⁶ Thus was created one of those disparities between public perceptions of need and appearances of government response that have often become controversial issues in the conduct of coastal surveillance.

In general, the Beazley review supported continued use of chartered aircraft, developed arrangements for reducing the role of P3C Orion in surveillance of the EEZ and dispensed, entirely, with the use of Navy Tracker aircraft on the grounds of cost/effectiveness. However, Beazley perceived a structural deficiency in the organisation of the system. This was the separation of responsibility for aerial surveillance operations (largely under Transport) and for response and enforcement, which lay with various individual agencies. He considered that the system would be better run if it were controlled by an agency with response and enforcement responsibilities.

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The Beazley review recommended that:

- counter-drug operations become a *Coastwatch* responsibility
- the direction and coordination functions of *Coastwatch* surveillance and response be transferred to a Coastal Protection Unit [CPU] established within the Australian Federal Police [AFP]
- officers from Customs be attached to the CPU
- a system of regional centres be set up

- the user pays principle be extended for Commonwealth agencies using the contracted aerial surveillance services, also covering aspects of the cost of ADF assets, to promote the more rational use of resources.²⁷

However, the Department of Transport continued to manage the ACSC and to run maritime search and rescue [SAR] operations. The AFP became a joint user of an operational centre where coastal surveillance was an ancillary function. Surveillance flights were of more relevance to quarantine and fisheries needs [for which they had been implemented] than for counter drug operations. In subsequent years, they were reduced by 30 per cent. Yet a number of issues remained unresolved:

- Defence wanted to fly fewer hours on coastal surveillance, fisheries interests and officials wanted more
- Health [then responsible for quarantine] wanted to dispense with aerial surveillance and use boats for close in-shore patrols but the RAN did not have the capacity to oblige
- agencies responsible for using coastal surveillance information remained different from those providing the aerial surveillance and views on cost and benefit differed.

Internal Contradictions Create a Crisis

These issues and other technical matters were supposed to be resolved by the CPU in the development of the surveillance system but never were. Changes in administrative arrangements gave the Department of Primary Industries and Energy responsibility for quarantine thus making it responsible for the two largest functions to which the aerial surveillance program was devoted. One of these, fisheries, was requesting increased RAAF hours that were provided to it without charge. At the same time the other, quarantine, was trying to reduce its participation in the contracted surveillance program, for which it paid. Transport remained responsible for supplying the contracted aerial capacity and the AFP for its overall coordination. The participating agencies were unable to resolve issues of responsibility and costs.²⁸

This division of responsibility resulted in the Amman affair of 1987 when an under funded and inexperienced bidder, Amman Aviation, was awarded the contract for the littoral surveillance flights. The contract was eventually breached for non-performance [but with grounds for a successful suit of the Commonwealth] and the contract handed back, of necessity, to the previous operator. A subsequent report blamed the outcome on the imbalance between cost sharing and responsibility in the selection process, where the Department of Transport, with least involvement in the system, was the prime agency for selecting the aerial surveillance contractor. Overall, no agency had sufficient stake in the effectiveness of the surveillance system to ensure a workable outcome.²⁹

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The Amman incident prompted a complete re-evaluation, made unavoidable by a review of quarantine arrangements which, in 1987, had recommended that Primary Industries and Energy cease funding the aerial littoral flights and reinvest in a broader quarantine strategy.³⁰

Since its inception most of the civil aerial surveillance program had been managed around the quarantine requirement and there had been no significant restructure of these operations.³¹ Consequently, quarantine continued to pay for most of the aerial surveillance system and the outcome of the review of the quarantine program brought *Coastwatch* to the point of collapse.

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The Beginnings of the Current System

In 1988 the aerial surveillance system was again reviewed, this time during a period when increased numbers of Indonesian fishing boats were being detected, all by the flights ostensibly tasked for quarantine patrols. This emphasised the national law enforcement role of the surveillance system, regardless of who was paying. The recognition of this by the reviewer, Hugh Hudson,³² marked the beginning of the current approach to coastal surveillance.

Recognition of the national law enforcement role of the surveillance system, regardless of who was paying, marked the beginning of the current approach to coastal surveillance.

Hudson concluded that the operational effort of the coastal surveillance aerial program was already at a minimum and at levels that might not meet Australia's obligations under the United Nations Law of the Sea Convention (UNCLOS) to manage the resources of the AFZ.³³ Littoral flights, which originally had been at 23 000 hours per annum were, by 1988, down to 10 000 hours; ADF flights over the AFZ were down from 2500 hours per annum to 700. The review also recommended that increased resources be targeted on the Torres Strait which, again, marked the beginning of a theme in current surveillance management.

Hudson's central conclusion was that the organisation of the *Coastwatch* system left it under the effective control of the main funding agency and insufficiently responsive to

changing requirements. He recommended that an Australian Maritime Safety and Coastwatch Agency (AMSCA) be established, combining the functions of the coastal surveillance operations and those of the Department of Transport and Communication's Federal Sea Safety and Surveillance Centre. AMSCA was to report directly to an appropriate Minister.³⁴

Hudson's central conclusion was that the organisation of the *Coastwatch* system left it under the effective control of the main funding agency and insufficiently responsive to changing requirements.

However, in July 1988 the Government transferred management of *Coastwatch* to the ACS. This was done on the grounds that Customs already had considerable experience in law enforcement aspects of the coastal protection function.³⁵ *Coastwatch* took over responsibility for managing the aerial surveillance of the AFZ, for the littoral patrols and for surveillance of the Great Barrier Reef Marine Park. With it came control over the system's budget, something that had not been achieved before.

Issues During the 1990s

Over the last 12 years, the aerial surveillance system, both in terms of day-to-day operations, and selection and supervision of the aviation contractor, has settled into a more stable and manageable pattern. With control of the aerial surveillance task, *Coastwatch* has been able to modify its operations to improve performance and efficiency and cope with growing demand.³⁶ Gradually the nature of operations has shifted from routine patrolling, towards operations more responsive to intelligence evaluation. In 1990 *Coastwatch* awarded, with no public excitement, a five-year contract amalgamating civil aerial surveillance operations. In September 1994 this contract was smoothly transferred to a new operator with a nine year contract which allowed for a revised Concept of Operations determined by a review held the previous year.

Under this latter contract the search capacity of *Coastwatch* was increased almost threefold at an addition to cost of only 30 per cent. The increase in the area of coverage reflects the requirements of enforcing agencies for surveillance around a longer length of coastline and for detection at distances sometimes up to 600nm from the shore.³⁷ In 1994–95 *Coastwatch* searched an area of 100 million square kilometres; by 1996–97 it was covering 285 million.³⁸ The two additional aircraft recommended in the Prime Minister's Task Force have increased *Coastwatch* capacity for electronic surveillance by 63 per cent, from 7000 to 11 000 hours per annum.³⁹

Not all aspects of the system proceeded so smoothly. Inter-agency cooperation and the development of intelligence assessments—and their use in decision making, remained issues (discussed in 'Intelligence and Inter-Agency Cooperation', below). Despite the

critical nature of communications between surveillance and reaction forces on the water, deficiencies in communications equipment persisted. High frequency radio has poor reliability in tropical environments and *Coastwatch* aircraft and patrol vessels had frequent problems communicating with each other. Satellite-based systems provided a reliable solution but were expensive. It was not till the intervention of the Prime Minister's Task Force that secure satellite based systems were acquired, with the program completed by December 2000.⁴⁰

It was not till the intervention of the Prime Minister's Task Force that secure satellite based systems were acquired.

When the *Coastwatch* function was established in the ACS two additional senior management positions were created to enable it to function as a semi-autonomous branch, reporting directly to the Head of the ACS. After years of public sector downsizing and the loss of senior management staffing, the ACS embarked on a corporate restructuring in 1998. Responding to the current needs of the parent organisation rather than the directive in the administrative arrangements of 1988, *Coastwatch* was absorbed into the Border Management sub-program of ACS (itself a significant client of *Coastwatch*) and its senior management positions stripped.⁴¹

Responding to the current needs of the parent organisation rather than the directive in the administrative arrangements of 1988, *Coastwatch* was absorbed into the Border Management sub-program of ACS (itself a significant client of *Coastwatch*) and its senior management positions stripped.

Impartial assessment of needs in response to the requests of the various client agencies, deliberately structured into the 1988 arrangements, was compromised. There was potential for the ACS to exploit its position and overly influence the allocation of resources. According to at least one retired official with extensive *Coastwatch* service, such behaviour did occur. At times ACS officers made excessive use of their position to divert *Coastwatch* activities from strategic patrols to the more resource intensive tactical flights.⁴²

Again, the intervention of the Prime Minister's Task Force was required to rectify the situation. The status of *Coastwatch* was restored with the Director General reporting directly to the CEO of the ACS. To weaken the incentive to absorb senior positions, the DG *Coastwatch* became a position for a senior seconded ADF officer.

Nonetheless, such ructions were internal and not widely known. They were a sideline to what became the development of a generally high community regard for *Coastwatch*. One instance which illustrated this was the *Review of the Australian Customs Service*. Generally scathing and sufficiently damaging as to lead to a major restructure of the ACS, the *Review* commented of *Coastwatch*:

[it] has achieved what no other function in Customs has with any consistency, an enviable public image. It is regarded as a successful and worthwhile organisation performing an essential service.⁴³

The *Tough on Drugs* Initiatives

In November 1997 the Prime Minister announced a strategy to counter drug trading and usage in Australia, entitled *Tough on Drugs*. Although a national program, it included a number of initiatives targeted at improving coastal surveillance, specifically in the Torres Strait. Over the three years from 1998–99, \$6.73 million is being spent as the cost of:

- three outboard-powered launches capable of 35 kts [total cost \$176 000] based on the Torres Strait islands and crewed by local navigators
- increasing the operational availability of the *Coastwatch* helicopter from 500 to 1000 hours per annum and providing night vision capability on Islander aircraft [\$930 000], and
- sealing helicopter pads on four islands and providing illumination for night landing.

These responses reflected the problem that Fremantle class patrol boats and ACS' seagoing launches are too large to move freely within the Torres Strait because of extensive reef development in the southern portion of the Strait and heavy mud bank sedimentation in the north. Consequently, these vessels are limited largely to east-west passage through the chartered channels of the Strait, whilst the traffic that requires closest monitoring moves north-south. Much of this is allowed under the Torres Strait Treaty but involved issues of immigration, animal and human health quarantine, smuggling and fisheries. Control of such activities requires an adequate intelligence and response capacity for which small boats and helicopters are more suited than the equipment used over the rest of the Australian coastal surveillance environment.

Law Enforcement on the Water: Maritime Capabilities and Powers

Northern and Coastal Patrol

Since the early 1980s the RAN has allocated a total of 1800 boat days per annum from its patrol boat fleet to implement the law enforcement response to any breaches detected by aerial surveillance or other means. This amounts to 41 per cent of the theoretical maximum capacity of the fleet. Currently, 11 of the RAN's Fremantle Class patrol boats are based in the north of Australia (details of patrol boat deployments are shown in Attachment 1). However, the remainder are to be moved north, with four more boats to be based in Darwin after a \$12 million upgrade to the Darwin Naval Base, planned for completion in mid-2001.⁴⁴

When the coastal surveillance system was established in 1978, two of the ACS's seagoing launches had been moved to assist in operations, one to Broome and the other to Darwin. In the late 1980s a fisheries patrol vessel, the *Wauri*, was built specifically to police the unique fishing arrangements within the Torres Strait Treaty of 1985 with Papua New Guinea. *Coastwatch* could call on this vessel, and the two ACS launches [indeed the rest of the ACS fleet if available] where appropriate to respond to breaches but all remained under the control and operational command of other agencies.

In March 1998 the ACS vessels of the National Marine Unit (NMU), and the fisheries vessel *Wauri*, were merged with *Coastwatch* when both were incorporated into the Border Control Branch of the ACS. This allowed the ACS to apply *Coastwatch* expertise in contract management, technical evaluation concepts and other procedures to management of the NMU.⁴⁵ It also gave *Coastwatch* operational control of the Unit's capacity of 1000 boat days per annum allowing closer integration of surveillance and customs roles. In May 2000, *Wauri* was detached on station at Ashmore Reef, which had become the dropping point of illegal immigration vessels from Indonesia. This was further supplemented in November 2000 by the charter, for two years, of a 35 metre ferry with a capacity to transport up to 150 people, to transport illegal arrivals to the mainland.⁴⁶

A program to replace the NMU craft with eight 34.8 metre launches under a \$58.4 million program was announced in May 1998. The first of these, the *Roebuck Bay*, was delivered in February 1999 and all were completed by September 2000. These Bay Class boats are designed to give the NMU greater seagoing capability with capacity to operate out to the limits of the Australian 200 nm EEZ in most sea conditions and a 20 percent increase in available sea days, up to 1200 per annum. They have command and communications systems which are integrated into the ACS information network. Given the increased operational capability resulting from this upgrade, the ACS undertook studies of the issues involved in arming crew members to provide an armed boarding capability. The launches themselves are unarmed although they have potential to mount 50 calibre machine guns.

More recently, when the position of *Coastwatch* within the ACS was altered pursuant to the Prime Minister's Task Force and became a Branch in its own right, the NMU was retained within the Border Control Branch. This leaves *Coastwatch* again without any direct operational control of response vessels.

The relocation of *Coastwatch* within the ACS as a result of the Prime Minister's Task Force recommendations leaves it again without any direct operational control of response vessels.

Deep Ocean Patrol

In 1997 illegal commercial fishing in the AFZ deep in the Southern Ocean around Heard and MacDonalld islands was noted.⁴⁷ Two ADF operations against these activities were conducted, one each in late 1997 and in early 1998, and three vessel were apprehended for illegal fishing. However, the total cost of the operation, which involved a frigate, a tanker and P3C surveillance was \$13–\$15 million.⁴⁸ This was clearly inefficient and during 1998 the Government directed that alternative means of protecting deep Southern Ocean fisheries be investigated. A range of managerial, legal, diplomatic and operational responses was considered, including civil maritime patrols.

In the 1999–2000 Budget, the Department of Agriculture, Fisheries and Forestry announced a measure to patrol the sub-Antarctic waters of the AFZ using a chartered commercial vessel.⁴⁹ This initiative was costed at around \$4.2 million over each of the next four years, which provided for two patrols each year. Four patrols have been conducted over the last two years using the MV *Cape Grafton*, a former Australian Maritime Safety Agency lighthouse tender. At 74.5 metres in length and displacing over 1000 tonnes, she is at about the dimensions thought necessary to operate efficiently in the Southern Ocean and is one of the few suitable vessels available for periodic charter.

In itself, this is a sensible operational concept with which to respond to the problem of enforcing the Australian fisheries regime in the Southern Ocean. However, in the past, single purpose allocation of resources has often reduced the management focus of the overall surveillance system. In this regard, the charter of a vessel for the Southern Ocean is little different in principle to hiring commercial aerial operators and it took over a decade to draw all these elements under a cohesive management structure.

Stresses and Strains: Challenges for the System

Constraints on Operational Efficiency

The functioning of the coastal surveillance system has been much improved after the changes introduced in 1988. As could be expected, there have been failures and there are constant problems which make the task difficult to achieve. The following section discusses the ongoing challenges with which the system contends.

Intelligence and Inter-Agency Coordination

Central Importance of Intelligence Exchange

It has long been apparent that the efficiency and effectiveness of Australia's coastal surveillance arrangements depends on the nature of the intelligence available to *Coastwatch*. Despite the added strengths of the analytical unit in the newly opened NSC, most of the responsibility for the production of relevant intelligence continues to lie with the agencies which are responsible for the enforcement of law in Australia's maritime zones. The client agencies' greater knowledge of these areas was recognised when the current system was set up in 1988. Consequently, government directed that they continue their intelligence collection and analysis programs⁵⁰ and *Coastwatch's* intelligence function was limited to that generated by its surveillance flights.⁵¹

Thus, many of the judgements underlying the planning of coastal surveillance operations remain outside *Coastwatch*. Where the client agency considers a reported incident as being of a low priority or is unaware of a threat, it is unlikely that *Coastwatch* will be tasked to investigate a possible breach of law. Similarly, a client agency will not possess a fully developed awareness of the surveillance environment and may not appreciate the importance of particular data in the development of broader intelligence. As noted above, such circumstances were among the reasons that a ship carrying illegal immigrants was able, in March 1999, to beach north of Cairns unexpectedly although it had been reported as suspicious during its passage down the coast.

Problems in Intelligence Exchange

Therefore, inter-agency coordination is the critical point in the operation of the surveillance system. The efficiency of the exchange of intelligence, the evaluation of consequences and the communication of options between *Coastwatch* and the client agencies will significantly affect outcomes. In the period after 1988 a number of client agencies did not share the same concept of their role in the system.⁵² For instance, in 1998 the ANAO reported on differences between *Coastwatch* and DIMA over the responsibilities held by each agency. Consequently, it was difficult for either to sustain procedures for assessment of the effectiveness and efficiency of operations to detect suspected illegal entry vessels (SIEV). To correct this, the ANAO recommended that the two agencies formalise their roles by developing a Memorandum of Understanding (MOU).⁵³ Although *Coastwatch* agreed, DIMA continued to oppose the idea. It was not till March 2000, in the aftermath of the Prime Minister's Task Force, that the MOU was signed.

Inter-agency coordination is the critical point in the operation of the surveillance system. The efficiency of the exchange of intelligence, the evaluation of consequences and the communication of options between *Coastwatch* and the client agencies will significantly affect outcomes.

Because of the structure of the system, problems were bound to arise if interchange between agencies did not occur or were agencies to value differently the results of their intelligence work. ANAO found that, indeed, the intelligence framework had not worked as well as expected and that some agencies had not continued to develop their intelligence capacities.⁵⁴ Further, *Coastwatch* did not receive all relevant information from the other agencies which had developed intelligence holdings.⁵⁵ Illegal landings at Montague Sound in 1992 and on the Coburg Peninsula in 1998 demonstrated these problems and, as indicated above, the Heggen Report showed that they have continued as a potentially serious problem.

Because of the structure of the system, problems were bound to arise if interchange between agencies did not occur or were agencies to value differently the results of their intelligence work. ANAO found that the intelligence framework had not worked as well as expected.

Moreover, problems may persist even where appropriate intelligence information is exchanged. There are no objective tests to rank more than roughly the risks involved in the potential breaches of law in the coastal surveillance domain. Nor is it likely that such tests can be developed to the satisfaction of all involved, given the variance of legal arrangements and the vagaries of the maritime environment.⁵⁶ The extent to which client agencies pass on their own risk perceptions to *Coastwatch* varies.⁵⁷ Yet it is on the basis of risk that *Coastwatch* operational tasking is assigned high, medium or low priority. With formal frameworks remaining problematic and with possible tasks potentially able to exceed resources, assessment of priorities often will depend on *Coastwatch* operational experience. ANAO described this as an 'inferred intelligence role', where these skills were needed to moderate competing client demands, compensate for limits to agencies' intelligence generation capacities and reassess where client agencies had over confident expectations of the results of the surveillance process.⁵⁸

Although inferred intelligence is subjective and, as such, sometimes may cause friction with client agencies, it seems unlikely that professional judgement can be overridden in the process of deriving operational plans. These matters have been considered over the last decade but *Coastwatch* and its clients have been unable to reach complete agreement on the complex issues involved.⁵⁹

Improvements are in train. The analytical capacity in the NSC will enable *Coastwatch* both to expand its intelligence base and to work with client agencies in improving theirs,⁶⁰

hopefully overcoming some of the nugatory effort of the past.⁶¹ This process benefits from newly installed communications technologies that allow the NSC to directly access the relevant primary data of agencies such as Defence and REEFREP, the Queensland Government agency for managing the passage of vessels within the Great Barrier Reef.⁶² Improved communications, especially via satellite, between controlling and operational units will allow near real time consideration of operational priorities as they evolve over the water.⁶³ The MOUs now being implemented with client agencies⁶⁴ and changes to the inter-agency management committees⁶⁵ will formalise and clarify the arrangements for inter-agency coordination.

These changes will take some time to develop but should address many of the constraints on the operational efficiency of the surveillance system. Yet they are not without the potential difficulties that are endemic in the current surveillance structure of distributed authority. There may be disputes over the interpretation of intelligence where the stronger analytical capabilities of the NSC lead to differences with client agencies. Each agency will continue to have its own agenda in the management committees and these may not coincide always with the overall objectives of the system. Whatever managerial approaches are taken to improve the system, the structure of Australia's coastal surveillance system means that its success depends ultimately on the good will and professionalism of the officers who make it function.

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Ultimately, the performance of *Coastwatch* day-to-day operations are most effectively ensured through the Director General's power to countermand plans and redirect operations as circumstances evolve. However, this is a limited power of command in terms of the overall objectives of the coastal surveillance system and its overall efficiency. There is certainly nothing in the current system which approaches the military concept of 'unity of command', based on the observation that the success of an operation is usually dependant on the effective control of all components contributing to an operation's outcome. Neither is there any authority within the system to control its longer term development, an issue which is currently relevant in the context of proposals to replace the Fremantle class patrol boats (discussed below in 'Replacing the Fremantle Class patrol Boats').

Financial Arrangements and National Objectives

Financial Centralisation as an Organisational Lever

The increased efficiency of the surveillance system over the past decade has been achieved by rationalising tasks, contracted service providers and procedures. In this process *Coastwatch* has had significant leverage through control of the relevant funds. It could sustain its coordinating role (even if at times this might have unduly favoured ACS priorities) because it financed and controlled the contracts with the aerial surveillance providers.

This meant, in turn, that the system had the potential to sustain national level objectives. Perhaps the most important of these is deterrence, the capacity of the system as a whole to change the minds of individuals contemplating violations of Australian law.⁶⁶ In this, the policing of Australia's maritime zones should be little different to other areas of law enforcement. Such national objectives are greater than the responsibilities of the constituents yet, as separate agencies that do not have the core role of enforcing a total regime of Australian law in the maritime zone, client agencies cannot be expected to sustain them.

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The process of sustaining national objectives does not occur automatically and in the processes of day-to-day government they are easily overlooked. The Commonwealth bureaucracy is without a centralised hierarchy, which generally means that where responsibilities are not identified by legislation, disputes between, or omissions by, departments can usually only be resolved by Ministers. While this accords with democratic principles, the realities of public administration often result in problems being addressed only after they become public. This certainly has been the history of Australian coastal surveillance.

Threats to Hard Won Improvements

One of the decisions of the Prime Minister's Task Force increases the potential for inter-departmental dispute and potentially weakens the position *Coastwatch* has built over the last decade to sustain national level objectives. Finance for the additional surveillance capacity recommended by the Task Force will not be appropriated to the ACS budget but, instead, will be allocated to DIMA. The funds will be transferred to *Coastwatch* under a

purchaser/provider arrangement to pay for the operation of the two Dash 8 aircraft and that of the Bell 412 helicopter.⁶⁷

While such a move reflects desires for more transparent costing procedures, it may also represent a broader conception of how coastal surveillance should be funded. The ANAO report specifically raises these purchaser/provider arrangements to again advocate the user pays policy⁶⁸ which almost destroyed the surveillance system in the late 1980s. The ANAO seeks improved performance by maximizing the efficiency of the interaction of the components, rather than addressing the cohesiveness of the overall system. This approach loses sight of the wood for the trees. In the 1980s agencies, which had to manage their own appropriation for surveillance flights, were loath to allow a mission to be diverted to meet another agency's requirements. As the objectives of the overall system grew apart from those of the major funding agency, the overall viability of the system was threatened. The financial arrangements for the surveillance system at that time thus contributed to both its inefficiency and instability.

As the coastal surveillance system is currently structured, it is difficult to see user pays financing being any less dangerous to its effectiveness than it was in the 1980s. This is not just because it is a system of distributed responsibility. More important are the great differences in the nature of those responsibilities and, significantly, the operational consequences of those differences.

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Irrelevance of User Pays Approaches to Surveillance Management

As shown above ('Role of Coastwatch'), the responsibilities of three major client agencies (AFMA, EA and the ACS) generate most of the system's aerial surveillance operations. The requirements of the other agencies generally are supported from this effort. Without the operations conducted for the major clients, there is little capacity to allow multi-tasking of assets or tactical flights to meet the responsibilities of other agencies. Neither is the extent of an agency's involvement in the flying program necessarily commensurate with the consequences of failure to enforce an agency's responsibilities. The type of risks associated with the responsibilities of the second level of client agency (quarantine, drugs) are generally considered to have higher economic and social costs than those associated with the risks driving the system's routine operations.⁶⁹

In that sense, the routine operations of the system constantly provide the deterrent capacity that supports the law enforcement responsibilities of all other agencies. This is so whether or not the latter are involved in any particular operation. User pays procedures cope poorly with such circumstances. Agencies under budget pressures will seek to reduce

expenditures, looking to non-core areas to find savings. As did the ACS in the mid-1990s, they may pay little regard to broader consequences, since *Coastwatch* is the only agency for whom the overall health of the surveillance system approaches being core business.

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Further, for an activity where a multi-functional task is involved, a user pays approach is at best excessively burdensome or at worst irrelevant. Building the flexibility to move between strategic and tactical operations involves acquisition of expensive aircraft and systems, which are so specialised that the market analogy on which user pays proposals are based is irrelevant. Long range aircraft equipped with specialised detection devices are not lying around Australian airports (or those of the world) awaiting ad hoc charter. Consequently, obtaining operational flexibility incurs long-term financial obligations which are, in reality, only marginally susceptible to the types of resource management responsiveness that a user pays system is meant to develop. The history of Australian coastal surveillance demonstrates that maintaining national level objectives and flexible operational capacity is the role of a coordinating, rather than a peripheral, agency. This was the conclusion of the Hudson Report in 1988 and will remain so whilst the coastal surveillance system is structured as it is.

For instance, the two additional Dash 8 aircraft were ostensibly justified by the potential for growth of the organised people smuggling trade. Now, however, it is obvious that this development is of less significance than thought at the time and the aircraft can only be used efficiently if they performed tasks across the spectrum of *Coastwatch* responsibilities. Inversely, the investment and time required to develop the additional surveillance capacity indicates that it has an importance to the system more broad than the issue of DIMA's requirements.⁷⁰ If anything, these arguments apply even more strongly to the use of the Bell 412 helicopter in the Torres Strait where, because of limited resources, any capable platform frequently will be called upon to perform a variety of roles.⁷¹

'Black Flights' and National Vision

An equally significant problem with a component driven approach to coastal surveillance is that a problem that is not the responsibility of one of the constituent agencies will not be seen to exist. One such problem which has captured media attention lately is that of so-called 'black flights'.⁷² These are officially called unidentified aircraft movements (UAM) and are entries into Australian airspace by unidentified aircraft. It is feared that some of these may be involved in illicit activities.

An equally significant problem with a component driven approach to coastal surveillance is that an issue which is not the responsibility of one of the constituent agencies will not be seen to exist.

Although allegations of the extent, and possible dangers of, such incursions were part of the original debate on the creation of aerial surveillance in 1978 and have persisted, no action to assess and respond (if required) to the problem has been taken.⁷³ Although some study of the operational aspects of the problem has been undertaken over the years, no policy or management requirements have been developed. There is today no more hard data on this issue than there was almost a quarter of a century ago.

That a solution to the issue of UAM, if required, is likely to be complex, difficult and expensive would discourage any agency concerned with only a component of the surveillance system from accepting responsibility. More importantly, a system where the constituent agencies concentrate on the efficiency of their interactions is not well suited to sustaining attention on the solution of a problem that is of direct concern to none.

Thus arrangements of the user pays type in reality contribute nothing to the transparency and efficiency of surveillance operations whilst raising the potential for degradation of the entire system's efficiency. The method of funding for the additional surveillance capacity recommended by the Prime Minister's Task Force may prove to be an isolated issue. Nonetheless, if purchaser/provider arrangements become a more prominent feature of the *Coastwatch* budget, the prospects for systemic disruption of the surveillance system will increase.

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Variable Circumstances

There is no reason to suppose that the environment in which coastal surveillance is conducted will become any easier. This is, in itself, sufficiently difficult to be considered a constraint on operational efficiency. The nature of offences that may be committed within Australia's maritime zones changes, even at the same location. For instance, the Ashmore Reef was previously monitored for environmental reasons, with a secondary interest in quarantine requirements. It has now become a frequent landing point for illegal immigrants. This has requiring increased surveillance and a capacity to remove people from the area, forcing a changed response from that of locating a National Parks Ranger in a chartered launch to that of positioning the ACV *Wauri* on the reef.

Part of the environment that is unlikely to become easier is the nature of the legal regime covering Australia's maritime jurisdictions. The problem is not so much the legal issues themselves, although the range of powers available to authorities in each of Australia's maritime zones varies greatly, but the restraints that juridical requirements place upon efficient operation of the *Coastwatch* system. Surveillance of targets that have not yet but might act illegally, requires prolonged tactical surveillance which can become a heavy drain on *Coastwatch* resources. *Coastwatch* surveillance and response assets are capable of tracking suspicious vessels and can apprehend them should the crew breach Australian law. This was demonstrated with the capture of a large quantity of heroin at Port Macquarie in October 1998.⁷⁴ However, it is beyond the resources of *Coastwatch* to conduct tactical operations on a continuing basis around the coast.

The task of finding boats en route from Vietnam during earlier waves of illegal maritime immigration was often simplified by their need to seek assistance in the Indonesian archipelago. Australian officials, working with the Indonesians and the UNHCR eventually established a procedure for early warning of approaching vessels. The surveillance response could be concentrated from the Kimberley to the Arnhem Land coast.

In contrast, commercial illegal immigration vessels can make landfall anywhere around the coast or on Australian territories. Some of the vessels used by Chinese criminal groups in the illegal immigrant trade are sufficiently large and seaworthy to not require landfall en route and seek to avoid detection rather than seek assistance. Some have been found equipped with sophisticated electronic devices to provide warning if they become the target of radar surveillance.

Developments such as these greatly affect both the extent and nature of operations of the existing system. Most of the Australian coastline, instead of the north west arc from Broome to Cairns, becomes a potential operational area. Vessels with accurate navigational equipment and sufficient sea worthiness can choose their time and place of landfall. This can force *Coastwatch* to divert surveillance assets from strategic (programmed patrol flights) to tactical operations and gives a suspect options to over-extend and exhaust the surveillance effort before acting illegally.

Whilst the first wave of boat people was stemmed with the active assistance of Indonesian officials, recent illegal arrivals in the northwest have transshipped in Indonesia at a time of strained relations between Australia and Indonesia in the aftermath of events in East Timor. Indonesian President, Abdurrahman Wahid, has promised action to restrict this movement⁷⁵ and DIMA is finding that cooperation between officials is now reaching effective levels. However, any outcome remains doubtful, as much for the poverty of the south eastern Indonesian islands, which makes people smuggling appear attractive, as for the administrative incoherence which currently characterises Indonesia's transition to democracy.

Indonesian behavior is also changing in other ways that may require variations in the conduct of operations. There is an increasing incidence of Indonesian fishermen refusing to stop when warned and of making threats of violence.⁷⁶ If sustained, this behavior would complicate the conduct of fisheries protection operations, would require all Australian vessels to carry appropriate deck guns (the ACVs are currently unarmed) and may involve Australian officers in dangerous boarding situations requiring the use of deadly force. Such developments would raise the potential for coastal surveillance operations to create incidents which might possibly affect diplomatic relations with Indonesia.

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Changing Pressures in the Surveillance Environment

The problems discussed above are ones with which the system has always contended. However, developments are looming which existing arrangements will address only with some difficulty. These pressures could challenge the effective management gains made over the last decade and decrease the effectiveness of coastal surveillance operations. The use of ADF equipment for elements of the coastal surveillance system has enabled operations to be conducted to date at a satisfactory level whilst avoiding the capital costs of purchasing more specialised equipment. However, it seems that the usefulness of this approach may now be declining. Whatever the result, it is apparent that the system will not be able to escape some significant changes.

New Areas of Responsibility

The operational areas of Australian maritime law enforcement are changing. In 1997, the Australian Fisheries Management Authority (AFMA) became aware of the need to police the Southern Ocean fisheries around Heard and McDonald Islands, over 4000 kilometres from Australia. At around the same time, the AFP became aware that drug smuggling operations were being conducted by sailing south-about Australia, taking advantage of the low level of maritime surveillance south of the line between Broome and Cairns. In early 1998 the Government declared what is the world's second largest marine park, in the Great Australian Bight.

Maritime Conservation and the Southern Ocean

The Government followed this in May of 1998, by announcing the establishment of five new marine parks in Commonwealth waters, all in remote locations. Of these, only one is in the traditional arc of coastal surveillance activity, from Broome northabout to Cairns. Two are in the deep Southern Ocean, another is south of Tasmania and the fourth is around

Lord Howe Island.⁷⁷ In December 1999 Australia became the first nation to proclaim a 200 nm EEZ and to claim the continental shelf offshore of an Antarctic territorial claim.⁷⁸ The Australian Geological Survey Organisation will send two vessels to the Southern Ocean by 2002 at a cost of \$30 million, to survey the claimed area and gather data which must be lodged with the UN by 2004 to substantiate the claim. Of itself a move of some diplomatic delicacy (claims to Antarctic territory were frozen by agreement of signatories to the Antarctic Treaty), the claim will also attract the obligations for management and policing under UNCLOS that adhere to existing Australian maritime jurisdictions. How extensive and resource intensive these will prove remains to be seen; what is significant is that there appears to be no public indication that these issues have been considered.

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Such developments are indicative of the operating environment for coastal surveillance in the future. The creation of the new marine parks was a prelude to the delivery of the Government's Oceans Policy. This was its response to the maturity of the UNCLOS process, which delineated the responsibilities for Australian management of the 11 million sq kms of ocean and the additional 5.1 million sq kms of continental shelf which it has claimed under the Convention.⁷⁹ It also reflects Australia's attempts to influence conservation issues through fora such as the Commission for the Conservation of Marine Living resources, the Eastern Antarctic Coastal States group and the UN Fish Stocks Agreement.

Over \$50 million was allocated in the 1999–2000 Budget for matters arising out of the Oceans Policy, including management of the southern marine parks. The range of responsibilities entailed under the regime ensures that it will become an increasingly important area of Commonwealth responsibility⁸⁰ although one which has a strong involvement of State governments and agencies. The implementation of the Oceans Policy reached a further stage in January 2001 with the release of its first product, the Scoping Paper for the South East Regional Marine Plan. This focuses on the continental coastline from southern New South Wales to Eastern South Australia on Tasmania and on Macquarie Island.

The objective of this, and forthcoming plans for other areas, is to prevent the despoliation of the land environment being repeated in Australia's adjoining oceans. Although the extent of these dangers are as yet difficult to quantify, the establishment of plans implies the monitoring of their success and the possibility that, at some time, corrective action may be needed to prevent activities outside the plane. Because of this, the management of the Oceans Policy will require coastal surveillance operations across the spectrum of Australia's maritime jurisdiction and will, from time to time, involve response operations based on a range of Commonwealth and State law. The increasing scope of the legislative domain arising from the Oceans Policy implies that response operations are likely to

become more complex. This in turn suggests that the RAN's current plans to locate all its patrol boats in the north of Australia will leave few resources to respond to this developing area.

Changing Pressures in Commercial Fisheries

Fish stocks around the world, both commercial and subsistence, are being over-fished. This tends to produce more desperation in fishing operations with less respect for the laws governing them. Under the UNCLOS regime legitimizing its EEZ, Australia has international obligations as well as domestic interests in protecting domestic fisheries. With the implementation of the United Nations Fish Stocks Agreement (UNFSA) in 2000, Australia has been handed expanded responsibility for controlling both domestic and foreign fishing vessels in the EEZ and areas of the high seas. This latter obligation comes from the need to protect 'straddling stocks' of mobile or migratory species such as tuna which are under threat from uncontrolled fishing outside national fishing zones.

With the implementation of the United Nations Fish Stocks Agreement (UNFSA) in 2000, Australia has been handed expanded responsibility for controlling both domestic and foreign fishing vessels in the EEZ and areas of the high seas.

These issues have been a problem in Australian fisheries management under the existing system. For instance, there was no agreement with the Japanese for 1997–98 on the management of the Southern Blue Fin Tuna stock, leading AFMA to seek monitoring of **all** relevant waters. These were mostly from the south east to south west of the continent, away from the northern areas for which the surveillance patrol flights had been designed. And, while exploitation of the Southern Ocean fisheries around Heard Island has become apparent, violations of fishing agreements in the Arafura and Timor Seas continue. This is largely a consequence of the Asian economic crisis in Indonesia and depletion of local fish stocks, which force Indonesian fishermen further afield from islands like Roti and West Timor.

The point is approaching where the principal element of the ADF used to assist the fisheries function, patrol boats of the Fremantle type, no longer meet all operational requirements. The current aerial surveillance system was developed, in large part, to perform the task of controlling foreign incursions into northern fisheries. Commercial licensing arrangements have allowed other Australian fisheries to be controlled by self-reporting, on board monitoring and minimised aerial surveillance. The system has no current capacity to monitor Southern Ocean fisheries on more than an occasional basis, little to meet the obligations of the emerging international fisheries control arrangements, and is insufficient to respond should the potential of increased lawlessness in existing fisheries be realised.

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These expanded roles will require different shipping resources which, currently, are not available. Distant ocean operations in difficult seas will require vessels much larger than a patrol boat,⁸¹ whilst the logistics of dealing with arrested vessels in remote locations like the Cocos and Christmas Island produce much the same demands.⁸²

Challenges on the Water—a Time for New Vessels

Replacing the Fremantle Class Patrol Boats

The Fremantle Class patrol boats, which have been the backbone of maritime law enforcement, have a limited service life. They were due to retire around the turn of the century to be replaced by a much larger, corvette sized Offshore Patrol Combatant (OPC) which was being proposed as a joint development project with Malaysia. The OPC would have had the capability to operate in the Southern Ocean (although not designed specifically for that role), but was potentially too expensive to be built in numbers sufficient to meet the requirements of northwestern operations. In the event, the Malaysians chose to proceed with a German design and, consequently, the proposed RAN version of the OPC was abandoned. In *Australia's Strategic Policy*, of December 1997, the Government announced that it no longer intended to provide coastal surveillance capability with this type of vessel.⁸³ It would, instead, extend the life of the Fremantle Class and make a decision in two to three year's time on a similar type of boat to replace them, commencing about 2006.

However, it was subsequently shown that, if the boats were built to commercial rather than military specifications, Australian yards could build replacement craft in the same time scale as then expected for the life extension program.⁸⁴ Defence proposed, if this approach was approved, to call for tenders about late March 2000. Further consideration of the project led, by mid-2000, to strengthening of the concept that the maintenance and support of the vessels through their service lives should be part of the procurement package. Further, financing the boats under the Private Finance Initiative (PFI) concept was being considered.⁸⁵ The PFI is an approach to capitalising public sector requirements by having private sector suppliers raise the finance to provide them, with the suppliers usually retaining ownership of any capital assets needed. There are many ways this can be done but an example relevant to this case would be for a consortium of financier, builder and maintenance manager to fund, build and maintain the boats and make their profit through

receipt of an agreed fee for providing an agreed number of patrol boat days per year over the service lives of the boats.

Initially, Defence appears to have expected that using a PFI approach to funding the new patrol boats would allow the project to move rapidly and avoid being caught in the freeze of capital procurement instituted in 1999–2000 and continued up till the release of the defence white paper.⁸⁶ It was reported that the original schedule provided for the procurement contract to be awarded by the end of 2000 and for the new vessels to be delivered between 2002 and 2005.⁸⁷ This proved not to be the case and the new patrol boat program has been delayed along with all other defence capital projects. The recent defence white paper announced that the program will commence in 2001 with vessels to enter service from 2004–05.⁸⁸

Future Problems? Ambiguity in Program Objectives

To work effectively, PFI arrangements require a departure from more traditional military procurement, where equipment performance and maintenance objectives are specified in comprehensive detail. The PFI approach works best where competing private sector companies are allowed scope, within broad operational objectives, to propose innovative options which reduce cost or increase effectiveness. The decision to build the Fremantle replacements to a commercial standard was an important step in facilitating this process and Navy has specified neither the type of hull nor the building material.

However, negotiating around the broad criteria to select a preferred provider of the new patrol boat capability will be complex. Consequently, the nature of coastal surveillance response forces in the future will remain imprecise until the selection is announced. It is generally thought that suitable designs will be about 50 metres in length, to provide improved sea keeping, and performance targets for speed and range. Further, reports suggest some dispute about the number of vessels to be acquired. The RAN apparently wants to replace the Fremantles on a one-for-one basis, for reasons which include crewing options and personnel morale. Other areas within Defence argue that, as companies are being asked to bid for the replacement program on the basis of providing the requisite number of sea days, they should be given an opportunity to propose solutions which require varying numbers of boats.⁸⁹ Similarly, there are issues to be resolved concerning the armament of the vessels.

Such disputes suggest a degree of ambivalence about the major role of the RAN's patrol boats. Are they military craft mostly allocated to civil law enforcement or law enforcement craft to assist civilian authorities (retaining a vestigial military role in the unlikely event that Australia should be attacked)? In a sense this ambiguity reflects the success of the current arrangements. Coastal surveillance tasks provide an applied training environment which builds morale among young naval personnel, allows the RAN to make a tangible contribution to national security and provides good publicity. Civil authorities enjoy the

benefits of a disciplined, professional and experienced Service without the capital, personnel and organisational costs involved.

Reports of disputes within the Department of Defence about the number of patrol vessels that should be obtained and about some of their characteristics, suggest a degree of ambivalence about the major role of the RAN's patrol boats.

However, when making significant decisions such arrangements should be sufficiently clear to avoid inappropriate outcomes that might reduce the effectiveness of the overall system. The lack of a central decision-making authority for the coastal surveillance system is a handicap which is as relevant to the persistence of disputes within departments as to those between different departments. In the end, the internal defence disputes may well be resolved effectively. Nonetheless it is significant that in the development of the new patrol boat program, elements within Defence appear, de facto, to be performing the role of representing the overall coastal surveillance system's interests to one of the system's component suppliers. Yet again, there appears the risk of repeating the history of the development of the coastal surveillance system through incrementalism spurred by crisis management.

The lack of a central decision-making authority for the coastal surveillance system is a handicap which is as relevant to the persistence of disputes within departments as to those between different departments.

Doubts about Deep Ocean Patrol Capability

Experience has shown that the Fremantles, being craft of around 40 metres, have comparatively limited capability for work along Australia's southerly coasts and in the higher latitudes to the south of the continent. The Southern Ocean produces among the roughest seas in the world and crews of small vessels exposed to these conditions quickly lose endurance and productivity. To date this has presented little problem. Fortuitously, the service life of the Fremantle class has coincided with the concentration of major coastal surveillance activity to the north of the continent, which has facilitated the decision to move all of the boats to that area.

As discussed above, circumstances are now changing. The need for a maritime response capability more suited to the Southern Ocean was demonstrated by the use of the frigate HMAS ANZAC to arrest three illegal fishing vessels in the Southern Ocean in 1997–98. Because such operations were uneconomic, the plan to charter a commercial vessel for four years was approved in the 1999–2000 Budget. However, this approach has funding approval till only the middle of 2003 and a re-commitment to the plan will be needed before then if civil patrols of the deep Southern Ocean are to continue. Even in such circumstances the concept of operations may prove impossible to execute in future. The Government intends to sell the *Cape Grafton*, which creates doubt of its continued

availability for the patrols, and there are few suitable alternatives available for periodic charter.⁹⁰

ADF's Limited Future in Southern Ocean Surveillance

It is possible that the RAN could resume the role of patrolling the southern ocean, but this could be, at best, only a stopgap option. The Government has agreed that the ADF may be deployed on fisheries operations into the Southern Ocean in future, under appropriate circumstances.⁹¹ Defence acknowledges that the adequacy of Australian civil and military forces to operate in the Southern Ocean and elsewhere at a distance from the EEZ 'is of national concern.' However, the ADF has not developed capabilities for sub-Antarctic operations and there is no strategic justification for such a course which would, in any case, divert resources from military roles.⁹² Defence Minister John Moore rejected the option of a greater degree of ADF involvement in coastal surveillance when the Prime Minister's Task Force on Coastal Surveillance was investigating the issue. The 2000 defence white paper noted the current level of support from the ADF for coastal surveillance, cited the likely benefit to surveillance (relevant to the north west approaches) from the introduction of the JORN system, but did not alter the Minister's position.⁹³

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In these circumstances it is not only uneconomic to operate RAN vessels in the deep Southern Ocean but also dangerous. Warships are built to absorb battle damage but can still fare badly in the mountainous seas often encountered in the high latitudes. The most likely risk is having valuable equipment stripped from the topsides but more serious damage can be suffered. In 1999, the New Zealand frigate *Te Kaha*, sister ship of the RAN's ANZAC class, had fittings on her forecastle deck stripped away by a 17 metre high wave. Although the ship's safety was not in doubt, the deck split and the spaces below flooded to a depth of 10 cm before the damage was corrected.⁹⁴

The ADF's JORN system is not positioned to monitor activity to the south of the continent. Even the likely future deployment of more transportable surface-wave radar systems of the SECAR type,⁹⁵ being developed by the ADF, is likely to have much relevance to surveillance of the Southern Ocean unless funding can be found to position systems on Australia's southern island territories. *Coastwatch's* aerial surveillance aircraft can cover fisheries to the south of Tasmania but cannot operate in the deep Southern Ocean. Even the RAAF's P3C aircraft would be unable to provide surveillance of the area covered by Australia's recent maritime claims around Antarctica. Some equipment, such as C-130 Hercules aircraft of the type operated by the US Coast Guard, would be able to cover the area and are capable of operating from ice or semi-prepared runways. However, given the

weather conditions in the Antarctic, aerial surveillance in this region would be difficult to sustain.

An Inadequate Basis for Decision Making?

To date, the approach to providing surface operations into the Southern Ocean is reminiscent of much of the early development of *Coastwatch*—it is tentative, limited and avoids capital expenditure. It is an approach which has sufficed at times in the past but which always has carried with it the risk of the collapse of the system. AFMA echoes something of this history in noting that the uncertain future of Southern Ocean patrolling at the moment 'highlights the difficulties of conducting a stand alone operation of this (*Cape Grafton*) type'.⁹⁶

To date, the approach to providing surface operations into the Southern Ocean is reminiscent of much of the early development *Coastwatch*—it is tentative, limited and avoids capital expenditure.

Moreover, the limited option is one not well suited to the moment, with decisions soon to be made on the future of the surveillance system's surface response fleet. Currently, outcomes appear likely to be based on predominantly the requirements of one of the associated agencies (albeit a major component supplier) rather than those of the system as a whole.

Undoubtedly, the program to replace the Fremantle class will draw productively on the lessons gained from decades of coastal surveillance operations. However, there is little public evidence to suggest that it is more than a *replacement* program, reproducing what has gone before. There is little to suggest that planning reflects the changes in the coastal surveillance environment during those decades, or those likely to develop. The new patrol boat program certainly shows none of the attributes of an integrated procurement and management program of surface patrol assets run by *Coastwatch*, that AFMA has suggested as an appropriate response to the emerging fisheries environment.⁹⁷

Again, the lack of a central decision-making authority for the coastal surveillance system can be seen as making effective decisions more problematic. Certainly, with the policy for replacement of the Fremantles focused on providing a similar type of craft, the Australian coastal surveillance system will continue to have a limited response capability over a significant area of Australia's maritime jurisdiction. The consequence is likely to be demands on government in the near future for significant capital expenditure once the demands of the emerging environment become undeniably apparent. If anything, the history to date of the Fremantle replacement illustrates the continued potential for inefficiency arising from the lack of anything like unity of command in the current coastal surveillance system.

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Conclusion—A Time for Policy Change?

Achievement of Gradual Improvement

Greater efficiency and effectiveness in the coastal surveillance system has come with increased centralisation in the management of resources and should improve further with increased central intelligence processing capacity. Where *Coastwatch* has been able to develop these attributes during the past 12 years the stability of the system has improved, the resource base has increased in financial and technological terms and operational procedures have been refined.

The changes now being finalised as a result of the Prime Minister's Task Force should further this process. For a system which particularly relies on the quality of intelligence to gain acceptable results from its operations, the emphasis placed on intelligence is crucial, importantly within *Coastwatch* but equally significantly on the exchange of data between participating agencies. For the future, the commitment in the defence white paper of access to ADF wide area surveillance data will be particularly significant in protecting the north and north western coastlines.

The changes in *Coastwatch* management are of little less significance for possible future options for the development of the coastal surveillance system. That several of the management positions in *Coastwatch* have been filled by ADF and Defence personnel on secondment is of less importance than is the nature of the positions they have occupied. With developing staff capabilities in personnel management, intelligence and technological options, *Coastwatch* now has the nucleus of a future staff, in the military sense of the term. This could provide the capacity for any major development of the *Coastwatch* role in the future.

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Persistence of Fundamental Flaws

However, as currently organised, the efficiency of the coastal surveillance system remains hostage to both the efficiency of the system's client agencies and the efficiency of coordination between all of them. The current system's characteristic of distributed responsibility is effective when it works, is comparatively cheap and avoids the necessity to untangle a century of national legal arrangements.

However, when the coordination fails, or the priorities of the participating agencies differ, the system can fail even when all actors within it are discharging their own particular duties to the full. The system continues to lack a mechanism to superimpose some assessment of national priority for issues other than operations currently in progress. Under the Australian system of government such issues are usually only resolved when a crisis or event of similar gravity forces itself upon the attention of Cabinet. This, after all, is the process which has formed the history of Australian coastal surveillance.

The system continues to lack a mechanism to superimpose some assessment of national priority for issues other than operations currently in progress.

Imperatives for Further Change

This situation faces change. The threat environment for coastal surveillance is developing. Greater geographical dispersion of, and increased difficulty in, operations is likely. Australia's assumption of rights over the seas off its Antarctic territorial claims has consequences which government may not have fully evaluated and certainly has not detailed publicly. The lynch pin of the system's surface vessel fleet will soon retire, with doubts that current plans for its renewal adequately reflect future system-wide demands. With all of the RAN's patrol boats to be based in the north, the surveillance system will have to turn elsewhere to find a maritime response capacity in its other areas of responsibility. Although activity in these areas is currently small it is unlikely to remain that way. Even the Coastwatch aerial surveillance operations will be affected by these developments and will probably be called upon to develop even longer range surveillance capabilities.

The early indicators of likely responses to this situation are not altogether promising. There are hints of policy coordination being lacking and suggestions of a resurrection of user pays arrangements which would threaten a return to earlier days of management fragmentation.

Initiating a policy debate on appropriate responses to future difficulties is justified in these circumstances. The central issue is really the legislative standing and command of the entire system. The Government's initiatives of 1999 appear to have strengthened the management of *Coastwatch*, improved coordination of intelligence and simplified the legal

regime. Yet, without legislation defining its role and powers the effectiveness of *Coastwatch* will remain at risk over time to the subtle shifts that deflect the intention of policy that is supported purely by administrative arrangements.

Despite recent readjustments, *Coastwatch* remains an administrative unit within a department that is also one of the client users of the system; thus the risk of unbalanced influence on the management of the overall system will remain. Without a centre with sufficient command responsibility to influence the development of the overall system there is reduced prospect that efforts to respond to the changing surveillance environment will produce results close to the optimum.

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There is a range of approaches that could be taken to overcome such problems:

- a legislative basis for the role of *Coastwatch* could, if appropriately drafted, give it the authority when required, to sustain the efficient operation and development of the overall system
- the establishment of *Coastwatch* as an independent government authority, reporting to a Minister with appropriate national security responsibilities, could go further and allow for expansion of its role, and
- creation of an independent disciplined force, of either constabulary or para-military nature, could provide a centre with the authority to plan and implement changes necessary to respond to the developing needs of law enforcement in Australia's maritime jurisdictions.

Whatever the future course chosen to guide the development of Australia's coastal surveillance system, and despite significant changes now close to implementation, there is little likelihood that pressures to change the surveillance system will relent. The crucial point for policy development is whether these changes will come about through pro-active planning and responsive management or will repeat past practice of incremental change as the result of decisions driven by periodic public perceptions of crisis.

Endnotes

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3. See notes 1 and 2.
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39. 'People smuggling tempo brings higher Coastwatch capability', *Australian Defence Report*, 8 June 2000, p. 8.
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44. 'DNB in \$12m development', *Navy News*, 24 January 2000.
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47. These islands are about 4000 km south west of Fremantle.
48. Department of Defence, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 2, p. S279.
49. Budget Paper no. 2, *Budget Measures 1999–2000*, p. 40.
50. *ibid.*, p. 80.
51. ACS, *Coastwatch Intelligence Capability*, Enclosure 6, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S238.
52. ANAO, *Coastwatch*, p. 40.
53. ANAO, *The Management of Boat People*, Canberra, February 1998, p. 15ff. The concept is that parties in the surveillance system would have a more clear view of their roles and responsibilities under a MOU which formalised coordination, response methodology, and delivery of intelligence and operational information. ANAO, *Coastwatch*, p. 41.
54. ANAO, *Coastwatch*, pp. 40–41.
55. *ibid.*, pp. 80–81. For instance, at the time of the ANAO report, *Coastwatch* did not have access to electronic position data available to AFMA which identified the location of Australian fishing fleets.
56. This is certainly the view of *Coastwatch*. In 1999 it developed the Strategic Risk Management Plan which identified a large number of the issues subsequently endorsed by the Prime Minister's Task Force. However, under operational conditions formalistic procedures

are often inadequate and competing priorities will often be resolved by active negotiations with clients. ACS, *ANAO Report—Status of Implementation*, Enclosure 2, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S216, and ACS, *Risk Management*, Enclosure 7, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S242.

57. AFMA, DIMA, ACS and AQIS pass on fully detailed accounts whilst, at the other end of the scale, the input of EA and AMSA is limited to only detection and reports of breaches. ACS, *Risk Management*, p. S241.
58. ANAO, *Coastwatch*, p. 80.
59. *ibid.*, p. 91. For a discussion of these issues, see, ACS, *Risk Management*, p. S241ff.
60. ACS, *ANAO Report—Status of Implementation*, p. S219, ACS, *Coastwatch Intelligence Capability*, p. S238.
61. *ibid.*, p. 240.
62. ACS, *Implementation of PMTF Recommendations*, Enclosure 3, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S226. Electronic connections to Defence include those at regional level, for instance between *Coastwatch* in Darwin and Headquarters Northern Command. Coastwatch has access to ADF operational staffs in Sydney, Perth, Cairns and Darwin. Department of Defence, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 2, pp. S274–276. REEFREP is a Queensland Government agency responsible for coordinating maritime traffic through the Great Barrier Reef.
63. All surveillance units should have been fitted with satellite communications systems by September 2000. ACS, *Implementation of PMTF Recommendations*, p. S224.
64. *Coastwatch* has had MOUs with AMSA, AFMA, AQIS and GBRMPA. All but the first of have been reviewed following ANAO recommendation. It expects to conclude MOUs with other agencies by December 2000. ACS, *ANAO Report—Status of Implementation*, p. S215.
65. ANAO recommended some streamlining of the roles of the OPAC, ROPAC and PASC. This was primarily to strengthen OPAC as a consultative forum and to stimulate the participation of client agencies in that committee's policy advisory role. ANAO, *Coastwatch*, pp. 44–45. A revised OPAC process commenced in April 2000. ACS, *ANAO Report—Status of Implementation*, *loc cit.*
66. Deterrence is a stated objective of the coastal surveillance program. ANAO, *Coastwatch*, p. 16 and p. 65.
67. ACS, *Coastwatch: An Overview*, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S200.
68. The ANAO, in considering the issue of allocating costs, moves too uncritically from discussing the benefits of providing a notional attribution of surveillance costs against participating agencies to advocating that the ACS trial models for returning coastal surveillance funding to a user pays model. This is despite its explicit recognition of the

- principles involved in the Hudson Report. It is perhaps significant that ANAO does not go beyond a discussion of the issues to providing a recommendation. ANAO, *Coastwatch*, pp. 51–53.
69. *ibid.*, p. 112.
 70. In fact, this was emphasised by the Government when, in December 2000 the two additional Dash 8 surveillance aircraft were introduced to service. Minister for Justice and Customs, Senator the Hon. Amanda Vanstone, 'Boost for long-range aircraft surveillance', *Media Release*, 19 December 2000, available at: http://www.law.gov.au/aghome/agnews/2000newsjus/16_00.htm
 71. An example of this occurred in September 2000, when the 412 was able to locate four locals adrift in the water off Murray island. Senator the Hon. Amanda Vanstone, Minister for Justice and Customs, 'Customs helicopter in night rescue mission', *Media Release*, 4 September 2000, available at: http://www.law.gov.au/aghome/agnews/2000newsjus/130_00.htm
 72. See, for instance, Megan Saunders and Paul Toohey, 'Radar misses illicit flights', *Australian*, 10 July 2000.
 73. ANAO, *Coastwatch*, p. 60.
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 75. Lindasay Booth and Ningrum Widyastuty, 'Wahid pledges boat people crackdown', *Sydney Morning Herald*, 24 April 2000.
 76. Australian Fisheries Management Authority, submission to the Joint Committee on Public Accounts and Audit, *Inquiry into Coastwatch*, vol. 1, p. S127.
 77. Senator the Hon. Robert Hill, 'Howard Government Launches New Marine Park Agenda', *Media Release 52/98*, 19 May 1998: <http://www.environment.gov.au/portfolio/minister/env/98/mr19may98.html>
 78. Andrew Darby, 'Australia stakes new territory', *The Age*, 4 December 1999.
 79. Senator the Hon. Robert Hill, 'Howard Government Launches New Marine Park Agenda', *op. cit.*
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 81. Department of Defence, submission to the Joint Committee on Public Accounts and Audit, *Inquiry into Coastwatch*, vol. 2, p. S276.
 82. Australian Fisheries Management Authority, submission to the Joint Committee on Public Accounts and Audit, *Inquiry into Coastwatch*, vol. 1, p. S126.
 83. Department of Defence, *Australia's Strategic Policy*, Canberra, December 1997, p. 62.k.

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86. For details see, Derek Woolner, 'Pressures on Defence Policy: The Defence Budget Crisis', *Research Paper no. 20 1999–2000*, Department of the Parliamentary Library, April 2000, also available at: <http://www.aph.gov.au/library/pubs/rp/1999-2000/2000rp20.htm>
87. Fred Haddock and Tom Muir, 'New patrol boats for the RAN', *Australian Defence Magazine*, May 2000, p. 30.
88. Department of Defence, *Our Future Defence Force*, Canberra, December 2000, p. 91.
89. A. W. Grazebrook, 'Patrol boat plan moves ahead', *Asia-Pacific Defence Reporter*, April/May 2000, p. 64.
90. Australian Fisheries Management Authority, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 1, p. S127.
91. The appropriate circumstances are when intelligence indicates illegal activity, civil operations have proved ineffective, and if AFMA has requested and the Government has directed such assistance. Department of Defence, submission to the Joint Committee on Public Accounts and Audit, Inquiry into Coastwatch, vol. 2, p. S280.
92. *ibid.*
93. Department of Defence, *Our Future Defence Force*, pp. 12–13.
94. 'Wave tears frigate's deck', *Evening Post*, 19 March 1999, 'Navy reveals damage to frigate from huge seas in Antarctic', New Zealand Press Association, 19 March 1999.
95. SECAR is an acronym for Surface-wave Extended Coastal Area Radar. See, for instance, Gregor Ferguson, 'SECAR PFI proposal breaks surveillance mould', *Australian Defence Magazine*, November 2000, pp. 16–17.
96. Australian Fisheries Management Authority, *loc cit.*
97. *ibid.*

Appendix 1—Current Assets Available to *Coastwatch*

Aerial

Aerial surveillance flights are performed by civil aviation contractors who provide a fully operational system to *Coastwatch*. The contractor provides aircraft, crew, operational support, maintenance and related services. *Coastwatch* is responsible for monitoring contractor performance and operational training.

The fixed wing aerial surveillance operator is Surveillance Australia, an Adelaide-based company. This is a subsidiary of National Jet Systems, which was bought by the British company FR Aviation in 1999. It provides the following aircraft for operations under a \$300m, nine-year contract for fixed wing surveillance:

- 5 Bombardier Dash 8-200s with radar and optical electro-optic sensor equipment to operate fisheries patrols up to 100 nm beyond the AFZ
- 3 Reims F406s with the same radar as the Dash 8 and night vision equipment for medium range seaward operations
- 6 Britten-Norman Islanders for visual littoral search from Exmouth northabout to Brisbane
- 1 Shrike Commander for visual search, predominantly over the inner Barrier Reef during the 1990s, now based at Broome.

Rotary winged surveillance and air transport in the Torres Strait area is provided by Reef Helicopters of Cairns with the following helicopters:

- 1 Bell 412EP equipped with electro-optical vision equipment and contracted for 500 flying hours
- 1 Bell Longranger IV for visual surveillance and special purpose transportation.

The RAAF continues to provide around 250 hours per annum of P3C Orion aircraft surveillance, primarily in waters south between Perth and Newcastle.

A mix of the first three *Coastwatch* aircraft types is based in Broome, Darwin and Cairns. Two Islanders and the helicopters are located at Horne Island in the Torres Strait, and the Shrike Commander is based in Broome.

The advanced surveillance equipment of the new *Coastwatch* aircraft has enabled a significant improvement of the system's scope. The aircraft of the previous contract were capable of covering 18 000 to 25 000 sq. nautical miles per sortie. Currently, *Coastwatch*

sorties cover 50 000 to 80 000 sq. nm. The area of surveillance that can be undertaken annually has increased from 29 million sq nm to 83 million sq nm.

The two additional aircraft recommended in the Prime Minister's Task Force will increase *Coastwatch* capacity for electronic surveillance by 63 per cent, from 7000 to 11 000 hours per annum. This is in addition to the 7500 hours of visual surveillance flown each year by other aircraft under contract to *Coastwatch* and the 1000 hours of helicopter flying time, providing the system with a total of 19 500 flying hours in 1999–2000 rising to 19 750 in 2000–2001.

Maritime Surface Craft

Since the early 1980s the RAN has allocated a total of 1800 boat days per annum from its patrol boat fleet. Fremantle class patrol boats most often used for coastal surveillance purposes are based in:

- Cairns, 5 vessels
- Darwin, 6 vessels and
- HMAS *Stirling*, Fremantle, two vessels to supplement, as necessary.

Two further vessels are based at HMAS *Waterhen*, Sydney. These and the boats at *Stirling* will move to Darwin in mid–2001.

When it was composed of the older customs vessels, the ACS seagoing fleet was allocated to specific stations because of their comparatively limited mobility. The disposition was as follows:

Sir William Lyne—Cairns to Sydney
Wauri—Cairns to Gove
Delphinus—Coffs Harbour to Ceduna
Charles Kingston—Esperence to Broom
Andrew Fisher—Carnarvon to Darwin
Austin Chapman—Broome to Torres Strait.

The improved performance of the eight new Australian Customs Vessels of the Bay class allows them to be positioned in various operational areas in response to indications of need provided through threat analysis.

The *Wauri* continues in service, deployed to the Ashmore and Cartier Reefs. In November 2000, a 35 metre catamaran ferry *Samson Explorer* was leased to transport unauthorised arrivals in the north west of Australia. It is capable of carrying 150 people and has a crew

of five, not including officials and security personnel. The leasing arrangements will be reviewed in two years.

Appendix 2—Major Commonwealth Agencies with Responsibility in the Coastal Surveillance System

Australian Customs Service

The ACS has responsibility to control the importation of illicit drugs and illegal goods. This is often exercised in conjunction with the AFP. The ACS administers the National Illicit Drugs Enforcement Strategy (NIDS). Although a major client of the system, the ACS is the parent organisation for *Coastwatch* and controls the NMU, part of the response element of the system. This consists of the eight ACVs, the former fisheries patrol vessel *Wauri* and the recently leased catamaran ferry *Samson Explorer*.

Australian Federal Police

Responsible for Commonwealth law enforcement including, in this case, enforcement in maritime zones. It may perform this responsibility in conjunction with State police forces, which have a similar role of enforcing the law in their maritime jurisdictions.

Australian Fisheries Management Authority

Manages both Australian and licensed foreign fishing within the 200nm Australian Fishing Zone but its major role within the coastal surveillance system is to control illegal foreign fishing. Historically, this role has been one of the consistent generators of demands for increased capability within the system since its earliest manifestations in 1968. Demonstrating the complexity of the surveillance system, some states continue to control fisheries within their territorial waters whilst others, by agreement, have ceded management to AFMA.

Australian Maritime Safety Authority

AMSA is responsible for maritime safety services, not only in Australian waters but in the approaches to the continent that together total about 10 per cent of the Earth's surface. Part of this function is discharged by tracking all legitimate maritime transport within its reporting area. It is responsible for managing search and rescue operations for vessels in distress. Its branch, Australian Search and Rescue performs the same function for missing aircraft. AMSA manages the national plan for response to pollution by marine oil spills and other chemicals and its Marine Environmental Protection Services coordinates development of the plan and maintains and operates the Commonwealth's pollution response equipment.

Australian Quarantine and Inspection Service

This has, amongst other roles, the task of preventing the introduction or importation of goods prohibited for quarantine reasons and of infected insect, animal or vegetable material. Demonstrating the interdependence of many coastal surveillance functions, the agency is responsible for this function upon the arrival of boats carrying illegal immigrants, whilst the immigration function concerning the same vessels falls to DIMA. AQIS is a significant agency in the Torres Strait where the risk of direct passage of potentially undesirable or dangerous organisms is high.

Department of Defence

Not an agency with responsibility to enforce legislation Defence, through the three Armed Services, is the major supplier of resources for the enforcement of that legislation. Typically, in any one year, 70–80 per cent of the total cost of the surveillance system is borne by Defence. The RAN operates patrol boats to allow apprehension of violators at sea, the RAAF contributes to aerial surveillance with its P3C Orion and other aircraft and the Army makes a contribution during the patrols of its Regional Force Surveillance Units, which operate in coastal regions in the Pilbarra, Northern Territory and far north Queensland.

Department of Immigration and Multicultural Affairs

Responsible for managing the entry of people into Australia, including those arriving without clearance in unauthorised vessels. This role also involves removal of alleged illegal immigrants to appropriate accommodation after they have been brought ashore by other agencies.

Environment Australia

Both itself and through its associated portfolio agencies, such as National Parks and Wildlife and the Great Barrier Reef Marine Park Authority, EA is responsible for preserving the ecosystems in Australian waters. This includes monitoring pollution, marine poaching and vandalism, surveying wildlife and preventing illegal taking of flora and fauna in these areas.