



**Australian Customs Service  
Submission**

**to the**

**Joint Committee of Public Accounts  
and Audit**

**Inquiry into Coastwatch**

**9 June 2000**

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## INTRODUCTION

This submission to the JCPAA Inquiry into Coastwatch from the Australian Customs Service (Customs) hopefully provides constructive input for the Committee's consideration. The submission is not specifically ordered to focus on each of the Committee's Terms of Reference. Rather, it takes the form of a number of individual enclosures, each addressing a specific issue that the Committee has indicated an interest in considering as part of its inquiry.

By way of background, perusal of Enclosure 1 is commended as a general overview which endeavours to set a context for the Committee's subsequent investigations.

## **Enclosure 1: COASTWATCH ROLES, FUNCTIONS AND ACTIVITIES**

- 1.1 The attached enclosure provides an overview of Coastwatch.
- 1.2 The paper includes a brief history of the civil surveillance program and a description of current assets, tasking procedures and relationships with client agencies. It is recommended that this paper be read first as the information provided sets a context against which other papers in the Customs submission to the JCPAA can be considered.
- 1.3 For more detail on specific aspects contained in the paper, readers should refer to relevant enclosures. For example, while 'Funding Issues' are broadly addressed in this paper, Enclosure 4 entitled 'Coastwatch Funding Arrangements' will provide a more expansive treatment of this subject.



# COASTWATCH

## AN OVERVIEW

June 2000

## COASTWATCH - AN OVERVIEW

1. One of the principal roles of the Australian Customs Service (Customs) is to facilitate trade and the movement of people across the Australian border while protecting the community and maintaining appropriate compliance. Customs balances the facilitation of the legitimate movement of people, goods, vessels and aircraft with the detection and deterrence of unlawful activity at the border.
2. As part of this role, Customs is tasked by the Government with providing a civil maritime surveillance and response service to a range of government agencies. Coastwatch, a Division of Customs, provides this service.
3. It is vital to the integrity of the national border that surveillance is conducted such that any potential or actual non-compliance with Australian or international laws is detected and reported as early as possible. The coordination and facilitation of a timely response to such detections is an integral part of Customs' overall border management role.
4. Coastwatch manages and co-ordinates Australia's civil coastal and offshore maritime surveillance program using a combination of contracted aircraft, Australian Defence Force patrol boats and aircraft and sea-going vessels of the Customs Marine Fleet. The activities of Coastwatch are determined by the surveillance and response needs of the various government agencies that form its client base. These include:
  - Australian Fisheries Management Authority (AFMA);
  - Australian Quarantine and Inspection Service (AQIS);
  - Department of Immigration and Multicultural Affairs (DIMA);
  - Department of the Environment and Heritage (DEH);
  - Great Barrier Reef Marine Park Authority (GBRMPA);
  - Australian Nature Conservation Agency (ANCA);
  - Australian Maritime Safety Authority (AMSA);
  - Australian Federal Police (AFP);
  - Customs; and
  - Environment Australia
5. Coastwatch's operational area covers the Australian coastline, Australia's offshore territories, the Australian Fishing Zone (AFZ) and the Exclusive Economic Zone (EEZ) surrounding these areas. This amounts to approximately 37,000 kilometres of coastline and an offshore maritime area of over nine million square kilometres - 20 per cent larger again than the Australian mainland. While this is a challenging task, many of Coastwatch's clients have also recognised that there are significant events which occur outside the EEZ which require investigation, and Coastwatch is increasingly being called on

to investigate incidents up to 100 miles beyond the EEZ. Coastwatch also has responsibilities to the south of Australia for surveillance and response in the sub-Antarctic and Antarctic regions. The Coastwatch challenge is to manage and coordinate the civil maritime surveillance and response program over an extremely large geographic area, for a diverse range of client organisations, and with an asset base which can never hope to cover 100 per cent of the area, all of the time.

6. In surveillance terms, it is simply not possible to 'lock up' an area this large and to continuously maintain an acceptable probability of detection against threats which are diverse, and often unknown. The key, therefore, is risk-assessed operations that are based on accurate and timely information. Coastwatch's effectiveness is directly related to the effectiveness of the information sources and intelligence assessments that flow from these sources. Put simply, Coastwatch needs and relies on information to plan operations that are conducted in the right place at the right time.

## THE HISTORICAL BACKGROUND

7. Civil surveillance in Australia began in the late 1960s using Royal Australian Air Force (RAAF) and Royal Australian Navy (RAN) aircraft to patrol the newly-declared 12 nautical mile fishing zone. In addition, RAN patrol boats assisted with the surveillance and acted as a response force.

8. During the early to mid 1970s a number of issues began to focus the Government's attention on Australia's civil surveillance needs:

- during 1973 and 1974, the activity of foreign fishing vessels significantly increased in Australian waters. Indonesian traditional fishermen were also making regular landings in the Kimberley coast area, with an associated quarantine risk;
- in April 1976, the first Vietnamese 'boat people' arrived in Darwin; and
- in August 1977, the Government announced its intention to declare a 200 nautical mile Australian Fishing Zone (AFZ) around Australia.

9. In the late 1970s, Australia moved closer to a coordinated civil surveillance effort when the Government made the Department of Transport responsible for coastal surveillance. The Government increased the combined military and civil surveillance commitment to 27,000 hours annually. A substantial part of the increase came from the use of chartered civilian aircraft, while monitoring of the AFZ

continued to be carried by RAN Grumman Tracker and RAAF P3 Orion aircraft.

10. In 1983, following a review by Mr Beazley in his capacity as Minister Assisting the Minister for Defence, responsibility for managing and coordinating civil surveillance transferred to the AFP.

11. Coastwatch, as it exists today, developed from a review of civil surveillance arrangements, commissioned by the Australian Government in 1987 and conducted by the late Mr Hugh Hudson. The report, entitled *Northern Approaches*, was handed to government in April 1988 and provided the foundation for future civil surveillance activity.

12. Arrangements in force at the time of the Hudson Report gave responsibility for the civil surveillance program with one government agency (AFP), with funding for the program divided among client agencies. Hudson saw this as a major failing and he recommended that the administration and funding of the civil surveillance program be streamlined by bringing together policy, operational control, contract administration and funding in one autonomous agency.

13. Government consideration of the Hudson Report resulted in the transfer of all administrative and operational responsibility for civil surveillance operations to Customs. The term 'Coastwatch' was coined in August 1988. Between 1988 and early 1999, a series of government and inter-departmental reviews reaffirmed the arrangements for civil surveillance espoused by Hudson.

14. Following two undetected arrivals of Suspect Illegal Entrant Vessels (SIEV's) on the eastern seaboard in early 1999, the Prime Minister ordered a review of coastal surveillance in April 1999. Customs was closely involved with the review, which developed 18 recommendations, subsequently fully accepted and funded by Government. New resources were approved including marine and aircraft crews, new aircraft, increased staff and a new National Surveillance Centre (NSC) which combined the existing operational and planning capability with a new analytical role.

## CONCEPT OF OPERATIONS

15. Coastwatch has progressively developed its concept of operations taking into consideration a number of detailed reviews of Australia's civil surveillance needs and some 12 years of practical experience. The overriding consideration has always been to try to develop an operationally effective, and cost efficient solution to the needs of client agencies. The immense size of the surveillance area, coupled with the diversity of Coastwatch targets, presented a situation



which has been overcome, to a certain extent, by maximising the flexibility of air-power. Operations must cater for flexibility in aircraft deployments, ready reaction to incidents and an ability to rapidly change the surveillance program as new threats emerge. As a result, Coastwatch has adopted a multi-tiered approach to civil surveillance, which allows for 'defence in depth' wherever practicable. In practice, this concept requires that a series of surveillance barriers are constructed such that those intent on breaking the law can be detected as far offshore as is achievable.

16. In 1993, the Concept of Operations was again reviewed. The demand on Coastwatch assets had increased by some 300 per cent in the five years since 1988, and the focus of Coastwatch clients had widened, from a predominantly northern outlook, to encompass the whole of the Australian coastline and its offshore zones. In addition, new threats had emerged. People smuggling and child abduction and an increase in illegal drug importation warranted a re-visiting of the Concept of Operations. Overall, the range of surveillance requirements had become more difficult to address with resources existing at that time.

17. A revised Concept of Operations was developed to account for the need for increased warning time of an approaching threat and the need for surveillance on the eastern and southwestern seaboard. As with the earlier versions, the revised operational concept was developed in close consultation with client agencies.

18. The 1993 concept of operations detailed four separate aerial surveillance tasks:

- visual surveillance of the coast between Exmouth on the west coast, north about, to Brisbane on the east coast;
- electronic offshore surveillance up to 600 nautical miles off the Australian coastline, noting that the more usual requirement would be for searches out to 300 nautical miles offshore;
- combined visual and electronic search from Perth, north about, to Sydney; and
- rotary wing operations in the Torres Strait for both day and night operations.

19. The current Coastwatch concept of operations relies on a structured operational plan that affords security through depth. Electronic and visual surveillance aircraft combine to form an operational matrix that aims to increase the probability of detection as a target approaches the coastline.

20. To ensure the maximum strategic effectiveness, surveillance planning takes account of the effect any one flight has on other flights, including inter-regional implications. The program is developed nationally and executed on a regional basis with Coastwatch Central Office retaining the right to veto regional plans or re-deploy assets should the need arise.

21. Response requirements differ depending upon clients' interests, noting that few reactions can be put in place without a surface response capability. Customs is developing a new range of capabilities in the Torres Strait for rapid response, in conjunction with the existing Coastwatch helicopter capability. The smaller response vessels stationed throughout the Strait can be crewed at short notice from resources funded as part of the Government's National Illicit Drugs Strategy (NIDS).

22. More traditional responses can be mounted from the RAN Fremantle Class Patrol Boats, or the new Customs Bay Class vessels, of which there will be eight by September 2000. The Customs Marine Fleet plays a significant role in the maintenance of border safeguards by providing vessels for Customs and other Federal and State agencies to maintain a strategic presence along the coastline and to mount tactical responses to illegal incursions as they occur. Customs vessels will provide 1200 sea days each year when the final Bay Class is delivered. Additionally, the Customs vessel *Wauri* was stationed at Ashmore Reef in May 2000 to provide specific surface coverage of that high risk area. Defence vessels allocated to the civil surveillance program provide 1800 sea days each year by Government direction.

## OPERATING PRINCIPLES

23. Underlying the Concept of Operations are a number of key principles and parameters.

### National Perspective

24. Australia's civil surveillance program is a national program delivered for Government by Customs, through the Director General Coastwatch who controls and co-ordinates the program through Central Office and four Regional offices. The Director General Coastwatch reports directly to the CEO of Customs.

25. Central Office determines the national direction and focus for surveillance activities in accordance with priorities and requirements identified by client agencies. Regional Offices are responsible for executing the surveillance plan and for local liaison with client agencies to ensure requirements are fully satisfied.

26. A key aspect of this national approach is that Coastwatch aircraft are not allocated to specific locations. Aircraft are located strategically at areas where they can be used to best effect. Coastwatch aircraft are regularly relocated to meet changing operational circumstances.

#### Service Provider to Clients

27. Coastwatch is a service provider, reacting to and responsive to client needs and requirements.

28. Coastwatch does not determine threat areas, nor does it determine clients' surveillance interests. Each client agency is responsible for the development of its own threat assessments and for assessing its surveillance requirements. It is the role of Coastwatch to translate identified client surveillance needs into timely surveillance outcomes.

29. When a client agency requests a response action to a surveillance sighting, Coastwatch coordinates all activities for that response until the client agency is able to assume control of the situation.

#### Concentration of Resources

30. The extent of the Australian coastline and the limited assets available to Coastwatch dictate that the surveillance effort should ideally be concentrated 'in the right place at the right time.' This does not mean that aircraft are launched only when a specific or known threat exists. Instead, Coastwatch uses client generated threat assessments and surveillance requests to plan flying through areas that have the best chance of achieving an operational result. These areas change over time and are continually reassessed by Coastwatch operational planners, in consultation with client agencies, so that all new or emerging threats can be adequately addressed.

#### Economy of Effort

31. Aircraft operations are governed by a series of factors that limit the short and long-term rate of effort. Aircrew numbers and aircraft availability combine to limit the short-term rate, while funding ultimately constrains the long-term rate. Each aircraft operation is planned to gain the maximum possible benefits for the least cost. All aspects of individual flight planning and the inter-relationship between flights are assessed and reviewed critically with the aim of reducing wasted effort. Generally, the optimal economy of effort is achieved through multi-tasking of aircraft. For example, in the

normal course of events, an aircraft conducting a fisheries surveillance task would also undertake surveillance tasks for all other agencies with interests in the area being covered.

#### Aggressive Surveillance

32. Although the mainstay of Coastwatch flying is strategic surveillance, Coastwatch plans and implements that flying in an aggressive fashion. For example, if a particular flight route fails to produce results after a reasonable time, it is modified to reflect possible changes in target operational modes or behaviour. Such modifications could be as simple as different block times, or as radical as using totally different operating modes, routes and aircraft types. Those intent on illegal activity at the border do not operate to set rules and operational activity must therefore be flexible, dynamic and proactive in seeking to deter and detect such illegalities.

#### System Readiness

33. Coastwatch must maintain a viable, national aerial surveillance standby capacity in order to respond at short notice to urgent client requirements. The standby capacity is maintained through a combination of the contractor operating a flexible roster system for aircraft and aircrew, careful assessment and planning of program changes and nationally relocating resources when necessary. Coastwatch has assets that are available for operations 24 hours each day, 365 days each year.

### SURVEILLANCE RESOURCES

34. The principal components of Australia's current civil surveillance effort are:

- visual and electronic aerial surveillance provided by civilian contract fixed-wing aircraft;
- civilian contract helicopter based surveillance and response in the Torres Strait;
- 250 hours of dedicated RAAF P3C Orion offshore patrol effort;
- 1800 sea days per annum provided by RAN patrol boats;
- Customs sea-going vessels which currently provide about 900 sea days per annum, though this will increase to 1200 days as the Bay Class Fleet is completed; and

capacity to charter or hire additional air or surface resources if required.

35. In late 1993, the Australian Government approved the letting of new nine-year contracts for the fixed and rotary wing aircraft. In September 1994, the successful bidders for the Coastwatch civil aerial surveillance contracts for the nine-year period 1995-96 to 2003-04 were announced. National Jet Systems, of Adelaide, through its special purpose company, Surveillance Australia, was awarded the fixed wing contract. Reef Helicopters of Cairns won the contract to provide a helicopter service for the Torres Strait area.

36. The aircraft provided are:

- six Pilatus Britten Norman Islanders plus one Shrike AC Aero Commander for visual surveillance;
- three de Havilland Dash 8 - 200 series aircraft fitted with Texas Instruments SV1022 digital radar and opto-electronics sensors. (Two additional Dash 8 aircraft are being purchased following approval of PMTF recommendations.)
- three Reims F406 aircraft fitted with the same radar as the Dash 8's and night vision equipment for both visual and radar work adjacent to the shore; and
- a Bell 412EP and a Bell Longranger IV provided by Reef Helicopters for operations in the Torres Strait region;

37. The contracts are 'turn key' operations with the contractor supplying aircraft, aircrew, administration and engineering support. Coastwatch controls the operational aspects of the aircraft tasking and maintains a comprehensive performance measurement regime, including involvement in training and aircrew monitoring programs.

38. Surveillance capacity has been markedly increased with these contracts with the previous 27 million square miles per annum being expanded to over 90 million square miles per annum. In addition, some elements of the new fleet are able to conduct all weather, day/night searches to 300 nautical miles offshore and beyond.

#### Rate of Effort Achieved

39. For the financial year 1998-99, Coastwatch planned and coordinated 14 450 hours of fixed wing visual and electronic surveillance. P3C Orion effort totalled 398 hours. Just over 1 000 hours of helicopter surveillance and response was flown in the Torres Strait region. Some 1 868 Fremantle Class Patrol Boat days were expended in the civil surveillance and response role. For 1999-00, the

figures are expected to be about 15 450 fixed wing and 1 000 hours helicopter surveillance and response. With the addition of the two new Dash 8 aircraft, an extra 4 000 hours will be allocated for a total of 19 500 hours in 2000-01.

## FUNDING OF OPERATIONS

40. The question of how best to fund civil surveillance operations has been considered by a number of government reviews over the years. The conclusion reached in the Hudson Report was that there would be greater benefit to the country as a whole if civil surveillance services were provided by a single agency, with total funding for those services provided direct to that agency. The Government agreed with this conclusion. Between 1988, and until changes resulting from the PMTF, all operational funds for the civil surveillance program have been directly budgeted, allocated and managed by Coastwatch. In broad terms these funds cover:

- the costs associated with the contracted aircraft;
- the costs associated with chartering additional general aviation and marine assets; and
- the administrative costs and salaries of Coastwatch staff.

41. Direct expenditure by Coastwatch for the financial year 1998-99 was \$35 million. Projected operating expenses for financial year 1999-00 is \$42.5 million. (2000-01: \$65 million)

42. It should be noted that this figure does not include the cost of RAN Fremantle Class Patrol Boats, RAAF P3C Orion aircraft or the cost of the Customs Marine Fleet. The value of the ADF contribution in 1998-99 was \$133 million. Projected total operating expenditure for 1999-00 for the Customs Marine Fleet is \$12.15 million.

### Department of Immigration and Multicultural Affairs Allocation

43. Under arrangements announced by the Government in mid-1999 following consideration of the report of the PMTF on Coastal Surveillance, funding for an expanded surveillance and response capability designed to counter the threat posed by people smuggling activities were allocated to DIMA. These funds will be transferred to Customs under a purchaser/provider arrangement between the two agencies. The funds will be used to finance the acquisition, under contract, of two new Dash 8 aircraft, to be operated for a total of 4000 hours per year, a Bell 412 helicopter, a range of radar spares and an associated diagnostic unit.

## COASTWATCH ORGANISATION

44. Coastwatch is an operational Division of Customs employing 60 staff. The Division is headed by the Director General Coastwatch who is responsible for:

- delivering effective and efficient civil maritime surveillance and response;
- determining national surveillance planning priorities; and
- administering the contractual and overall financial aspects of the national surveillance program.

Central Office – Canberra

45. In the interest of establishing effective liaison with the head offices of its major clients, Customs has established Coastwatch headquarters and the National Surveillance Centre in Canberra. Two Directors report to the Director General Coastwatch, who is supported by a Chief of Staff seconded from the ADF. Directors' responsibilities are divided between operations, and contractual and administrative matters.

46. The key organisational elements in Central Office are:

- the National Surveillance Centre which provides a twenty-four hour centralised communications and coordination point for all Coastwatch operations, comprising:
  - the Operations Group which provides 24 hour/7 day oversight of all Coastwatch operational activity;
  - the Analysis Unit which provides a 24 hour intelligence facility in support of the operational function; and
  - the Planning Group which develops and monitors the national surveillance plans.
- the Standards Group which is responsible for monitoring contractor performance through the use of Competency Assessment and Training Officers (CATOs). CATOs assess the operational performance of aircrews in the conduct of their surveillance tasks. The Standards Group also delivers training to Coastwatch staff and to contractor personnel.
- the Future Concepts Group which is responsible for evaluation of emerging technology and for maintaining firm links to the scientific

and industry communities. This ensures that Coastwatch is well positioned for the future, and that it remains a 'well informed customer'; and

- the Contracts and Administrative Group provides financial and general administration support to Coastwatch, as well as managing the financial aspects of the contracts, including assessment and payment of accounts and costing of operations.

#### Regional Offices

47. Coastwatch has regional bases in Cairns, Darwin, Broome and Thursday Island. Each Regional Base comes under the direction of a Coastwatch Manager. Manager Coastwatch Broome has additional responsibilities as the District Manager of Customs for the Kimberley Region. The Manager Coastwatch Cairns has responsibility for the Thursday Island Base.

48. Regional Coastwatch staff undertake liaison and day-to-day operational planning and flight briefing activities, in consultation with regional representatives of client government agencies. Regional CATO staff also undertake much of the field check and training of contractor aircrew to ensure performance standards are maintained at high levels. The CATOs are outposted from Central Office and are managed by the Standards Group.

## COORDINATION AND MANAGEMENT

### Strategic and Tactical Surveillance

49. The civil surveillance program is comprised of both strategic and tactical level surveillance operations.

#### *Strategic Surveillance*

50. Strategic surveillance comprises the majority of the flying program. It involves the translation of planned, risk-assessed taskings submitted by client agencies into ongoing flying programs. The flying programs are developed two to three months in advance as 'broad picture plans,' to allow Coastwatch Regional Offices and the contractor to determine the general resource requirement. The Coastwatch Monthly Surveillance Program (CMSP) is sufficiently flexible that it may be varied to suit emerging circumstances at any time in the short to medium term. More precise flying programs are developed by regional staff in the lead up to each flight. These strategic areas of client interest are then supported through the



surface assets of the RAN and the Customs Marine Fleet, which are also promulgated in the CMSP.

### *Tactical surveillance*

51. Tactical surveillance comprises flying which is the result of specific operational intelligence, usually received with little notice and which normally presents a more demanding scenario than routine, strategic surveillance. The nature of the work is normally such that the success of the tactical operations is paramount. Such operations are given absolute priority in both manpower and funding until they are cancelled, if it becomes obvious that the chance of success is minimal, or if the long term effect on normal operations becomes so great that the need for stability overrides the tactical operation. Marine assets are drawn from the strategic program to support tactical operations as required.

### Planning and Coordination

52. The strategic flying program is reflected in three key planning documents:

- *Civil Surveillance Operational Directives*, which are issued on a regular basis to individual Coastwatch Managers, setting out operational priorities and expectations for a particular region. The Directives take into account, to the maximum extent possible, client bids for surveillance tasks based on a measured assessment of the merits of each tasking. The document constitutes a fundamental statement of Coastwatch's surveillance requirements in each region. Regional Coastwatch Managers report on their operational performance each month against the tasking requirements specified in the Directive.
- the *Coastwatch Monthly Surveillance Program* is issued as a general indication of the month's strategic flying requirements for each region. The CMSP will take into account such things as the terms of the Operational Directive, offshore and southern commitments; and projected Customs and RAN forward air support requirements. It details surveillance areas and broad deployment patterns. The CMSP is produced by the Planning and Liaison Group in Central Office two months in advance.
- the *Fortnightly Flying Program (FFP)* refines the CMSP strategic surveillance requirements into specific areas, routes and times. The FFP is developed by the regions in close consultation with the Central Office Planning and Liaison Group.

53. The flying programs are sufficiently flexible to allow the scheduling of additional flights at short notice to meet a perceived need (ie tactical surveillance can quickly be mounted when necessary).

54. Strategic surveillance taskings are submitted by client agencies through a formal standing interdepartmental committee - the Operations and Program Advisory Committee (OPAC). This group meets in Canberra every second month and overviews the development and the outcomes of the surveillance program. Feeding into OPAC is a network of regional committees, meeting monthly to facilitate the input of regional requirements into the national surveillance program.

55. The Planning Advisory Sub-Committee (PASC) is subordinate to OPAC and comprises Coastwatch, client agency and Defence representatives. PASC meets monthly to review and develop detailed surveillance plans.

## FLIGHT BRIEFS AND REPORTING

### Flight Briefings

56. Flight briefings are issued for all flights. In addition, aircrew carry the *Coastwatch Surveillance Checklist* detailing the matters of surveillance interest to be reported. Normally, the flight brief is provided by the Coastwatch Regional Office, although Coastwatch Operations in Canberra may brief if required.

### Post Flight Reports

57. The outcome of each flight is recorded by the aircrew in a Post Flight Report (PFR). That report is forwarded to the NSC in Canberra where the information is automatically entered into the Coastwatch database. The aim is that the PFR should be sent within one hour of the aircraft landing. The NSC then sends a copy of the report to relevant client agencies and Coastwatch Regional Offices.

58. In-flight reports for certain high-risk incidents are also provided direct to the NSC for onward transmission to the appropriate client.

## SURVEILLANCE RESULTS

59. The overall success of Coastwatch can be gauged by considering the broad results achieved. For example, from August 1988 to May 2000 there were 829 Foreign Fishing Vessels (FFV) apprehended and 198 Suspect Illegal Entrant Vessels (SIEV) detected. In all,

Coastwatch has documented some 1460 major<sup>1</sup> and 6719 minor incidents, processed, actioned or coordinated on behalf of client agencies in the same period. Year by year results are shown in the following Table:

<b>SURVEILLANCE RESULTS 1988-89 TO 1998-99</b>				
<b>Financial Year</b>	<b>Fishing Vessel Arrests (number)</b>	<b>Illegal Entry Vessels (number)</b>	<b>Minor Incidents Processed (number)</b>	<b>Major Incidents Processed (number)</b>
1988-89(a)	42	2	-	71
1989-90	54	3	49	112
1990-91	66	5	35	65
1991-92	21	3	62	84
1992-93	51	4	57	127
1993-94	32	6	446	155
1994-95	129	21	687	89
1995-96	71	14	931	95
1996-97	129	12	1243	155
1997-98	114	17	1118	129
1998-1999	55	38	1202	161
1999-2000	65	73	889	222
<b>TOTAL</b>	<b>829</b>	<b>198</b>	<b>6719</b>	<b>1460</b>

(a) Data for 1988-1989 1 August 1988 to 30 June 1989  
(b) Data for 1999-2000 1 July 1999 to 30 May 2000

60. The significant increase in SIEV numbers during 1998-2000 tested Coastwatch's resources to the extreme. There was an increase in undetected arrivals on mainland Australia, with a new trend to increased activity on the East Coast of Australia. The first of these was a tug that arrived at Holloways Beach, just north of Cairns, on 12 March 1999, with 30 Chinese Suspect Unlawful Non-Citizens (SUNC) aboard. This was followed by 61 SUNCs arriving at Scotts Head in NSW on 10 April 1999. The East Coast arrivals, which appeared to be part of a highly sophisticated people smuggling operation organised from China, raised public awareness to new levels and ultimately led to the PMTF.

<sup>1</sup> A major incident is one which requires a response and a minor incident is one which is reported to a client agency, but no further action is required.

## COMMUNITY SUPPORT

61. An extensive Customs community awareness campaign, Customs Watch, has been in operation for some years, especially in remote areas, to spread the message that an important part of the integrity of the Australian border is the active participation of members of the public. The public is asked to report any suspicious activity, be it on land, sea or air, to a Coastwatch operated 'free phone', which is available to callers all round Australia 24 hours a day. The number is 1800-06-1800. On average, between 60 and 100 calls are received each month.

62. This free phone service has greatly assisted Coastwatch in its activities. For example, in October 1999, a Kangaroo shooter from Wallal Downs station (in the Port Hedland region) contacted Coastwatch Operations via the free phone to advise of a foreign vessel on the beach with a number of foreign nationals in the vicinity. As a result of this call, a response team consisting of Customs and AQIS staff from Broome and Port Hedland detained 25 Afghan nationals and two Indonesian crew members within four hours of them having beached their vessel.

63. In January 2000, workers at the Paspaley Pearl Company advised Coastwatch Operations by free phone of a vessel approaching the North-West Kimberley coast which they suspected contained illegal immigrants. A response team was despatched to the area by helicopter where the vessel was boarded and detained. A total of 37 SUNC's of Middle Eastern origin and three Indonesian crew members were detained.

## THE FUTURE OF AUSTRALIA'S CIVIL SURVEILLANCE REGIME

64. In September 1994, the Australian Government let new nine-year contracts for the provision of surveillance services. In July 1999 these contracts were varied to reflect the outcomes of the PMTF.

65. Since 1994, surveillance technology has moved on dramatically. As noted earlier, the PMTF recommendations have provided some impetus for funding of an upgrade to the level of resources and capability available to Coastwatch. A new day/night surveillance helicopter has been positioned in Torres Strait and an additional 4 000 hours for the Dash 8 fleet has been approved. Existing aircraft will be upgraded with better communications, improved information technology support and enhanced capacity for new sensors and other equipment.

66. Coastwatch recognises that it is not possible to develop a concept, put it into place, then be satisfied that the future will be secure for the next decade. The threat against which Coastwatch operates is constantly changing and it too needs to adapt. For example, over the last five years Indonesian fishing operations have moved from sail powered to motorised vessels, from navigation by the stars to the use of Global Positioning Systems (GPS) and from predominantly day operations to night operations. Similarly, SIEV routes have generally changed from island hopping to direct transit from China (for example) to northern and now eastern Australia. Vessels importing drugs are likely to operate over a wider area than hitherto and may involve sophisticated communications and monitoring arrangements to avoid detection. Coastwatch must continue to keep abreast of the latest developments in surveillance systems and methodologies to maximise the effectiveness of the service it provides to clients. Coastwatch is now re-equipping with a range of improvements that will increase operational effectiveness. Several of these enhancements are discussed in the following paragraphs.

### National Surveillance Centre

67. The PMTF recommended that a National Surveillance Centre (NSC) be established within Coastwatch in Canberra, with enhanced electronic communications links and an internal capacity to analyse information received from agencies to better manage the national effort. The NSC became operational on 26 January 2000 and was formally commissioned by the Prime Minister on 5 April 2000.

68. The NSC is supported by a suite of electronic systems supplied from a range of Government agencies, including Defence. Highly skilled intelligence analysts located in the NSC provide a significant new internal capacity to analyse and disseminate information received. These analysts use the new electronic systems to assist client agencies with risk assessments and support Coastwatch activities by providing intelligence which allows more effective deployment of surveillance assets.

### Geographic Information System (GIS)

69. Operational planning within Coastwatch still relies, to a certain extent, on the old and proven method of pencils, dividers and hand held computers. While this system is suitable for limited operational planning, it does not enable multiple 'what ifs' to be quickly tested, searches and search results to be easily displayed or statistical data to be adequately analysed. As a consequence, Coastwatch has evaluated a pilot stand-alone Geographic Information System which has enabled mission planning, evaluation of surveillance outcomes and generation

of statistical reports to be completed on screen based equipment. This system has sped up and made more accurate the mission planning process and has allowed faster reconstruction of operations so that shortfalls can be easily rectified and clients can be better informed of outcomes. A new project is now under way to develop a fully integrated, RESTRICTED level GIS and business management system that will connect all Coastwatch regional centres, Central Office in Canberra and clients. This system will be known as Coastwatch Command Support System (CWSS).

## Alternative Surveillance Systems

70. The surveillance contracts running to 2004 continue to be based on aircraft using visual, radar and electro-optical systems. Coastwatch is investigating new and emerging technologies that may be applied to the conduct of surveillance, so that it can continue to provide high level service to clients. Should any technological innovation come to light which would supply more cost effective surveillance, Coastwatch has, as a result of the PMTF, a clear mandate to investigate alternative forms of technology. By way of example, recent trials of commercial satellite information gathering have been conducted though the cost remains prohibitive. Unmanned Aerial Vehicles may prove to be a cost-effective alternative for some of the manned aircraft tasks. High Frequency Surface Wave Radar is being investigated for its promise to provide continual long-range/wide-area tracking of vessels. Many other forms of technology remain under active consideration.

## Surveillance Methodology

71. Since 1988, Coastwatch has developed and improved on procedures for conducting and coordinating civil surveillance. In many parts of the world Governments conduct, or would like to conduct, operations similar to all or parts of the Coastwatch task. Requests for information have been received from a range of foreign countries seeking advice on how Coastwatch goes about its task. Conversely, Coastwatch is aware that there are other organisations elsewhere in the world from which it can learn.

72. Customs has strong links into Defence, the Oceania Customs Organization (OCO), the World Customs Organisation (WCO), and the United States Coast Guard (USCG). This has greatly expanded Coastwatch boundaries in terms of information sharing and of facilitating an information exchange with regional and extra regional countries who have mutual interests with Coastwatch. Coastwatch has effectively made the leap into the global customs community from a communications, crime detection and an information sharing

perspective. These expanded opportunities will continue to be pursued.

## SUMMARY

73. Coastwatch has been steadily developing since the late 1960's and, during that time, has advanced from very simple, daytime, visual surveillance operations tied to the coastline, to a system of highly complex, all weather operations far out to sea. This development has not been easy and there have been some false starts along the way. In 1988 Coastwatch found its home in the Australian Customs Service and, since that time, its operations and coordination activities have expanded exponentially.

74. The challenge for Coastwatch is to continuously improve the quality of the service provided to clients and to keep meeting the expectations that they and the general public demand and deserve. This is done in the knowledge that the geographic challenge is immutable and that allocated surveillance resources are limited. The challenge is great, but the rewards are many.

## COASTWATCH ASSETS

### TASK ONE - VISUAL SURVEILLANCE

Visual surveillance of the coastal strip from Exmouth on the west coast, north about to Brisbane on the east coast and visual searches of offshore islands and reefs

#### Aircraft - Pilatus Britten-Norman Islander PBN2B



	Pilatus Britten-	Norman Islander
Number of aircraft:	6	
Maximum flying time:	5 hours	
Crew:	3	
Surveillance type:	day	
Surveillance and patrolling capability:	visual	

Six aircraft deployed at Broome (two aircraft), Darwin (one), Cairns (one), and Horn Island in the Torres Strait (two).

#### Aero Commander AC500 Shrike



	Aero Commander AC500 Shrike
Number of aircraft:	1
Maximum flying time:	7 hours
Crew:	3
Surveillance type:	day
Surveillance and patrolling capability:	visual

One aircraft based at Broome.



## TASK TWO - OFFSHORE ELECTRONIC SURVEILLANCE

Offshore surveillance both day and night up to 600 nautical miles off the Australian coastline. The more usual requirement would be for searches out to 300 nautical miles.

### Aircraft - Bombardier de Havilland Dash 8 - Series 200



Bombadier de Havilland Dash 8 Series 200	
Number of aircraft:	3
Maximum flying time:	7 hours
Crew:	4
Surveillance type:	day and night
Surveillance and patrolling capability:	visual, radar, infra-red and TV surveillance

Three aircraft - deployed at Broome, Darwin and Cairns.

## TASK THREE - COMBINED ELECTRONIC AND VISUAL SURVEILLANCE

Combined visual and electronic search, both day and night from Perth north about to Sydney.

### Aircraft - Reims F406



Reims F 406	
Number of aircraft	3
Max flying time:	5 hours
Crew:	3
Surveillance type:	day and night
Surveillance and patrolling capability:	visual, radar, night vision goggles.

Three aircraft deployed - one each at Broome, Darwin and Cairns.

## TASK FOUR - HELICOPTER SERVICES IN TORRES STRAIT REGION

Visual search, day and night plus transportation of people and equipment in the Torres Strait and Cape York Peninsula areas.

### Aircraft - Bell Longranger IV



Bell Long Ranger

No. of aircraft:	1
Range	200 nm
Crew	1-5
Surveillance and patrol capability:	visual

One aircraft deployed at Thursday Island in the Torres Strait.

## TASK FIVE - OFFSHORE ELECTRONIC SURVEILLANCE (commencing December 2000)

Offshore surveillance, both day and night, up to 600 nautical miles off the Australian coastline. The more usual requirement would be for searches out to 300 nautical miles.

### Aircraft - Bombardier de Havilland Dash 8 - Series 200



Bombadier de Havilland Dash 8 Series 200

Number of aircraft:	3
Maximum flying time:	7 hours
Crew:	4
Surveillance type:	day and night
Surveillance and patrolling capability:	visual, radar, infra-red and TV surveillance

Two aircraft deployed at Darwin and Cairns.

**TASK SIX – TWIN-ENGINE HELICOPTER SERVICE IN TORRES  
STRAIT REGION**

Visual search, day and night surveillance in the Torres Strait and  
Cape York Peninsula areas.

**Aircraft - Bell 412**

	<p style="text-align: center;">Bell 412</p> <table><tr><td>No of aircraft:</td><td>1</td></tr><tr><td>Range:</td><td>360 nm</td></tr><tr><td>Crew</td><td>1-9</td></tr><tr><td>Surveillance and patrolling capability:</td><td>Visual, infra-red, TV, Night Vision; equipped for passengers</td></tr><tr><td>Contracted hours:</td><td>500</td></tr></table>	No of aircraft:	1	Range:	360 nm	Crew	1-9	Surveillance and patrolling capability:	Visual, infra-red, TV, Night Vision; equipped for passengers	Contracted hours:	500
No of aircraft:	1										
Range:	360 nm										
Crew	1-9										
Surveillance and patrolling capability:	Visual, infra-red, TV, Night Vision; equipped for passengers										
Contracted hours:	500										

One aircraft deployed at Thursday Island in the Torres Strait.

**Enclosure 2: AUSTRALIAN NATIONAL AUDIT  
OFFICE REPORT - STATUS OF  
IMPLEMENTATION**

2.1 The ANAO tabled Audit Report Number 38: *Coastwatch* on 6 April 2000. The Report contained 15 separate recommendations.

2.2 Customs agreed with all recommendations made by the Audit Office, but qualified its agreement to three. The text of the ANAO recommendations, together with the Customs response and the current status of action taken, is at Attachment A to this Enclosure.

ENCLOSURE 2: ANAO REPORT- STATUS OF IMPLEMENTATION  
Attachment A

**RECOMMENDATION 1**

*The ANAO recommends that Coastwatch, finalise appropriate Memoranda of Understanding (MOU) with all key client agencies as a matter of priority.*

ACS COMMENT: The ACS agrees with this recommendation but notes that the successful negotiation of MOUs with client agencies depends on the support and willingness of these agencies to engage in the process.

STATUS: MOUs are currently in place with AFMA, AMSA, AQIS and GBRMPA. Those with GBRMPA, AQIS and AFMA are being reviewed. It is intended that a new DIMA MOU will operate from 1 July 2000. Other MOUs are being progressed and expect to be concluded by December 2000.

**RECOMMENDATION 2**

The ANAO recommends that Coastwatch review the functionality of the Operational Planning and Advisory Committee, the Regional Operational Planning and Advisory Committee, and the Program Advisory Sub-Committee. Such a review should determine the optimal structure for effective operation and the appropriate allocation of responsibilities for each body to better assist the Director-General Coastwatch to secure timely resolution of operational and technical issues relating to Coastwatch activity for improved performance.

ACS COMMENT: The ACS agrees with this recommendation and notes that the process of re-energizing the Operational Planning and Advisory Committee, its regional counterparts and the Planning Advisory Committee is actively being pursued.

STATUS:

- A revised OPAC process commenced in April 2000. OPAC meetings are now held every two months to review previous achievements, overview surveillance plans for the ensuing two months and outline plans for a further two months. The structure and content of information provided to OPAC members has been refined so that it is less detailed and in a more condensed form.

PASC meetings continue to be held monthly to develop detailed surveillance plans.

- OPAC members have been fully engaged in the reform process.

### RECOMMENDATION 3

*The ANAO recommends that Coastwatch, in consultation with key client agencies, develop a common risk assessment process as a basis for ranking and treating client taskings for maximum effectiveness.*

ACS COMMENT: The ACS agrees with qualification with this recommendation. It is agreed that there is merit in adopting a common risk management mechanism against which to prioritise client needs. However, it needs to be noted that Coastwatch services a diverse range of clients with an equally diverse range of interests around and off the coast. Adoption of a common risk assessment process to order and prioritise the risks of all clients will therefore be highly problematic. ACS contends that, even with a well developed risk management strategy, this is only part of the process as effective Coastwatch operations will continue to depend on the exercise of well formed professional judgement which will often have to be exercised on a case-by-case basis.

STATUS: Coastwatch is consolidating its internal risk assessment processes (see *Risk Management* paper at Enclosure 7) to provide a foundation on which to develop, in consultation with client agencies, a more cohesive process for risk assessing taskings.

### RECOMMENDATION 4

*The ANAO recommends that Coastwatch process Post Flight Reports (PFRs), photographs and videos in a timely and user friendly manner so that they can be readily and efficiently incorporated into clients' own reporting systems.*

ACS COMMENT: The ACS agrees with this recommendation. Current and planned enhancements to Coastwatch command and support systems will facilitate the improvements being recommended by the ANAO.

STATUS: Coastwatch has recently completed a Business Analysis and developed an IT functionality statement for a more efficient and customer focussed reporting mechanism. The

analysis examined ways in which digital imagery and other data might be transferred to clients. The improvements will be delivered in the context of the Coastwatch Command Support System (CWSS) project.

#### RECOMMENDATION 5

*The ANAO recommends that Coastwatch, in conjunction with client agencies, assess the risks, develop options and assess the costs of patrols of the Southern Ocean and Australian Antarctic Territory, and advise Government as appropriate.*

ACS COMMENT: The ACS agrees with qualification with this recommendation. The issue of illegal fishing in the Heard and McDonald Islands (HIMI) area was extensively canvassed by Government in 1997. As a result, funding was provided to charter a civil vessel to carry out fisheries enforcement operations. This activity is supported by surveillance carried out by a range of classified methods. Through the involvement of Coastwatch in the HIMI Operational Group, which is chaired by the Director General Coastwatch, the matters raised by the ANAO are under constant consideration.

STATUS: See *Southern Oceans* paper at Enclosure 10.

#### RECOMMENDATION 6

*The ANAO recommends that Coastwatch, in conjunction with client agencies, determine whether black/suspect/illegal flights are within its scope of operations and, if not, advise Government of options to deal with such intrusions.*

ACS COMMENT: The ACS agrees with this recommendation and notes that there has already been considerable work done by Head Quarters Northern Command (HQNORCOM) and Coastwatch to define the parameters of the potential problem throughout the NORCOM area of operations. At the broader national surveillance level, Coastwatch staff are involved on the Integrated Surveillance System Development team that is currently reviewing ADF surveillance operations and systems.

STATUS: See *Unidentified Air Movements* paper at Enclosure 11.

## RECOMMENDATION 7

*The ANAO recommends that Coastwatch review current controls relating to the tasking of the helicopter in the Torres Strait with the aim of improving Coastwatch helicopter tasking procedures and overall effectiveness.*

ACS COMMENT: The ACS agrees with this recommendation and notes that the introduction of the new Bell 412EP strengthens the need for a comprehensive review of management practices in relation to helicopter operations in the Torres Strait. A Helicopter Policy document is in the final stages of negotiation with all affected client agencies.

STATUS: A Review of current controls has been completed. *Guidelines for Helicopter Taskings* and the *Helicopter Policy* paper are in the course of issue.

## RECOMMENDATION 8

*The ANAO recommends that Coastwatch review its contractor performance measurement system for fixed and rotary wing aircraft contracts with a view to establishing an evaluation framework that provides more appropriate penalties and incentives, to help ensure cost effectiveness in the delivery of Coastwatch services.*

ACS COMMENT: The ACS agrees with this recommendation. Development of a revised performance measurement system is in progress. Negotiations with the contractors are in the final stages.

STATUS: Changes have been agreed with Reef Helicopters. Further negotiation is occurring with Surveillance Australia with a view to implementing new arrangements in the next financial year (2000-01).



## RECOMMENDATION 9

*The ANAO recommends that Coastwatch:*

- a) in consultation with its clients, identify and utilise, where appropriate, client intelligence sources that would enhance Coastwatch's ability to achieve better outputs and outcomes; and*
- b) investigate the cost effectiveness of using computer modelling techniques to assist in operational planning that incorporates relevant data from other Commonwealth agencies.*

ACS COMMENT: The ACS agrees with this recommendation. The Surveillance Analysis Unit of the National Surveillance Centre will have both the personnel and systems to meet the terms of both items of the recommendation.

STATUS:

- a) Achieved in the context of the newly established Analysis Unit within the National Surveillance Centre (See *Intelligence* paper at Enclosure 6.)
- b) Dedicated intelligence analytical effort has been allocated to each client problem set. Various analytical methodologies will be employed to focus Coastwatch assets and, where practicable, assist clients. Data from all sources will be utilised in the conduct of analyses.

## RECOMMENDATION 10

*ANAO recommends that Coastwatch undertake technical competency evaluations of Coastwatch operational staff on an annual basis; and*

ACS COMMENT: The ACS agrees with this recommendation.

STATUS: A competency package for Coastwatch operational staff, including self-paced learning, is being developed and will be available by August 2000.

#### RECOMMENDATION 11

*The ANAO recommends that Coastwatch adopts a more rigorous approach to risk management by utilising the Australian Customs Service risk management framework and ensuring that Coastwatch's risk management processes are an integral part of the performance measurement and/or assessment system.*

ACS COMMENT: The ACS agrees with this recommendation. A Strategic Risk Management Plan was developed in January 1999 and will be reviewed annually.

STATUS: See *Risk Management* paper at Enclosure 7. In addition, a Risk Management program, including development of a Coastwatch wide Risk Register commenced on 5 June 2000.

#### RECOMMENDATION 12

*The ANAO recommends that Coastwatch develop a more comprehensive and useful set of performance indicators that reflect key aspects of service delivery to client agencies and regularly monitor and report on these indicators as a means of improving Coastwatch's operations.*

ACS COMMENT: The ACS agrees with this recommendation.

STATUS: See *Coastwatch Efficiency and Effectiveness* paper at Enclosure 5.

#### RECOMMENDATION 13

*The ANAO recommends that in addition to biannual questionnaires sent to clients, Coastwatch expand its use of post flight questionnaires to assist in better determining client satisfaction in relation to its performance.*

ACS COMMENT: The ACS agrees with this recommendation but notes that the usefulness of this approach will rely heavily on the ability of clients to determine the outcomes of a particular flight from the perspective of their own threat analyses. Also, Coastwatch has implemented a regular client survey regime to coincide with monthly OPAC meetings.

STATUS: Client satisfaction questionnaires are now provided to clients as part of the formal documentation of each OPAC cycle. Clients also have the opportunity to provide feedback on performance at any time.

#### RECOMMENDATION 14

*The ANAO recommends that Coastwatch develop a balanced scorecard approach to performance measurement, as part of its long-term performance measurement system, reflecting the range of objectives that it has to meet.*

ACS COMMENT: The ACS agrees with qualification with this recommendation noting that the balanced scorecard approach is only one form of performance measurement. The ACS proposes to undertake an examination of the various forms of performance measurement to determine the most applicable and most effective approach for Coastwatch.

STATUS: See *Coastwatch Efficiency and Effectiveness* paper at Enclosure 5.

#### RECOMMENDATION 15

*The ANAO recommends that Coastwatch separate its budget/financial data for reporting purposes from other Australian Customs Service budget/financial data, so that clients and other interested parties can readily access the former information from the Portfolio Budget Statements and the Australian Customs Service Annual Report.*

ACS COMMENT: The ACS agrees with this recommendation. The separate identification of financial data in relation to Coastwatch is important to allow accountability and transparency. This recommendation is currently being implemented with the move to 'output' reporting. The Coastwatch activities are a separate Output and as such all financial data will be identified and reported separately.

The financial data will not be separate within the Customs financial statements as these are prepared in line with the format provided by the Department of Finance and Administration. The separate financial information will be provided in the body of the Annual Report.

STATUS: Separate Coastwatch budget data will be reported in the 1999-00 Customs Annual Report and will be incorporated in future Portfolio Budget Statements.

### **Enclosure 3: PRIME MINISTER'S TASK FORCE RECOMMENDATIONS- STATUS**

3.1 As a result of two undetected illegal entry vessel landings on the East Coast of Australia, the Prime Minister, on 12 April 1999, announced the formation of a high-level Task Force to investigate issues related to coastal surveillance. The Prime Minister's Task Force (PMTF) was chaired by the Secretary, Department of Prime Minister and Cabinet and included equivalent level representatives from Defence, Customs, Department of Foreign Affairs and Trade, Office of National Assessments, Attorney-General's and the AFP.

3.2 The Task Force incorporated recommendations resulting from the earlier Heggen inquiry into circumstances surrounding landings on Holloway's Beach, north of Cairns in March 1999 and at Scott's Head, NSW in April 1999.

3.3 The PMTF Report was presented in late June 1999 and all 18 recommendations were subsequently accepted by Government. A four year, \$124 million program was announced by the Prime Minister on 27 June 1999.

3.4 Of the 18 recommendations, nine were of specific relevance and required action by Coastwatch. Attachment A to this paper provides a status report on action taken to implement the PMTF recommendations.

ENCLOSURE 3: STATUS OF PMTF RECOMMENDATIONS  
ATTACHMENT A

**RECOMMENDATION 8**

*That the footprint and intensity of Coastwatch's aerial surveillance be extended through the lease of a further two Dash 8 aircraft (with provision for double crewing and 4000 hours of operation per annum for the two aircraft) and one twin-engine helicopter for use in the Torres Strait.*

*[Note: the aircraft and helicopter leases will be to 2004 to coincide with the expiry of the existing Coastwatch contracts for the provision of aerial surveillance aircraft. The first year includes \$2m for 1,000hrs additional flying time for the existing fleet, to cover the lead-time for the introduction of the two leased aircraft. Provision is also included for the lease of a radar maintenance unit and spares to provide enhanced support for the aircraft and four additional Coastwatch Competency Assessment and Training Officers (CATOs). The cost over four years will be in the order of \$85 million.]*

**STATUS:**

- The first Dash 8 will be off the production line in Canada in late July 2000; the second aircraft in early August. Aircraft will be available for tasking in November and December 2000 after fit out by Field Aviation in Canada. This is two months later than originally expected due to production delays at Bombardier in Canada.
- An additional 4000 hours from July 00 will be covered initially by the three existing Dash 8s, supplemented by additional crews, who have been recruited by the contractor and trained jointly by Surveillance Australia and Coastwatch.
- An additional 1000 hours for the existing fleet has been programmed in the current year.
- The twin engine Bell 4112EP helicopter entered service in the Torres Strait on 1 January 2000, and was fully operational from 1 February 2000.
- The Radar Maintenance Unit is operational in Cairns. Radar Spares have been procured.
- CATO positions have been advertised and selection finalised. Three of the four new positions have been filled. The fourth position has been re-advertised and is awaiting selection.

#### RECOMMENDATION 9

*That a National Surveillance Centre (NSC) be established within Coastwatch in Canberra with enhanced electronic communications links, including with state agencies, and an internal capacity to analyse information received from agencies to better manage the national effort.*

*The cost over four years will be in the order of \$20 million.*

STATUS: The NSC was formally opened by the Prime Minister on 5 April 2000. A suite of electronic systems have been supplied from Defence and are fully operational. New analysts are on-line.

#### RECOMMENDATION 10

*That secure satellite-based voice/data communications be established to cover the full extent of Australia's Exclusive Economic Zone (EEZ) and beyond, including the capacity for real time communication with coastal surveillance aircraft and ocean-going vessels.*

*The cost over four years will be in the order of \$3 million.*

STATUS: Installation of the satellite communications up-grade continues, with all aircraft to be fully modified by September 2000.

#### RECOMMENDATION 11

*That Coastwatch extend its surveillance to include more systematic coverage of the EEZ in the Coral Sea area, through transit operations as required from neighbouring states such as PNG, the Solomon Islands, New Caledonia and Indonesia.*

STATUS: The Coastwatch Monthly Surveillance Plan (CMSP) has been amended and new flight route numbers assigned to these specific flights. These flights commenced in October 1999 and continue on a regular basis. The next deployment planned is to Honiara in late June 2000, though this is subject to resolution of the current Solomon Islands crisis.

#### RECOMMENDATION 12

*That Coastwatch's profile be raised by separating it from Border Division within Customs and establishing it as a group in its own right under a redesignated position of Director General of*

*Coastwatch, reporting directly to the CEO of the Australian Customs Service.*

STATUS: Achieved in July 1999.

#### RECOMMENDATION 13

*That the position of Director General Coastwatch be filled through secondment of a serving uniformed Australian Defence Force (ADF) officer, and that the Defence officer selected for the role identify other secondment opportunities in Coastwatch and other relevant areas for filling by members of the ADF.*

STATUS: Achieved. A Rear Admiral from the RAN was seconded to the position of Director General Coastwatch with effect from 16 July 1999. A Colonel and Lieutenant Commander have also been posted on secondment from Defence. A scientist from DSTO has been seconded to manage the Coastwatch Future Concepts cell.

#### RECOMMENDATION 14

*That the links between Coastwatch and its clients be strengthened by the secondment to Coastwatch of the ADF Liaison Officer (ADFLO) position (currently in Sydney) and a DIMA Liaison Officer; that Coastwatch post a Liaison Officer to REEFCENTRE headquarters to liaise with Queensland authorities and to Defence's Northern Command in Darwin to enhance links with Defence.*

STATUS:

- An Army Colonel has been posted as Chief of Staff, Coastwatch and ADF Liaison Officer in Canberra. The existing ADFLO will remain located at HQAST in Sydney.
- The DIMA Liaison Officer has been selected and is awaiting security clearance.
- Communications links installed at NORCOM have obviated the need for permanent Coastwatch presence in the HQ.
- Electronic access to data from REEFREP is being negotiated to allow real time access to information, thus obviating the need for permanent liaison staff.

#### RECOMMENDATION 15

*That Customs and DIMA, in consultation with relevant agencies, develop a National Protocol among Commonwealth agencies and with state and territory agencies to cover illegal landings on Australian territory, as an adjunct to offshore surveillance arrangements.*

STATUS: National protocols and associated guidelines have been agreed with affected Commonwealth agencies and all State and Territory Police Services and were promulgated in April 2000.

#### RECOMMENDATION 16

*That in the lead-up to the expiry of the two major Coastwatch surveillance contracts in 2004, Coastwatch further investigates the capacity of emerging technologies to partly replace manned aerial surveillance.*

STATUS:

- Funding for two staff to set up a Future Concepts Section has been approved by Customs Executive. The manager of the Future Concepts Section commenced 03 April 2000, on secondment from DSTO.
- A surveillance technology database and library has been implemented and meetings with potential technology providers continue.



## Enclosure 4: COASTWATCH FUNDING ARRANGEMENTS

### INTRODUCTION

4.1 The Hudson Report of 1988 described the civil surveillance and response service as a public good jointly used by the range of Commonwealth government agencies having administrative responsibilities around and on the coast. In this context, the role of Coastwatch is that of an 'honest broker', responsible for the equitable and effective distribution of available surveillance and response resources across the often-competing needs of its various clients; Coastwatch does not task on its own behalf.

4.2 In his report, Hudson considered the issues of 'user-pays' and cost attribution and concluded that '[The] notional allocation of the cost of the service to one user or among the total group of users may seriously distort decision making.'

4.3 Hudson further concluded that '[The] notional attribution of costs of production of a public good or service does not generate effective cost consciousness or help to curtail expenditure. For example, the attribution of littoral surveillance costs to Quarantine did not permit AQIS to reduce expenditure or to re-allocate the funds involved to other activities. Any action of this nature would automatically threaten the position of other users and require the government, rather than an individual department, to consider the matter.'

4.4 Customs considers that the shortcomings of a user-pays approach to funding the civil surveillance program identified by Hudson remain extant. Given the increasing tempo and broadening range of threats to the Australian border and its offshore zones since 1988, it is now even more imperative that the civil surveillance program be able to operate as a cohesive, integrated service without the distraction of having to deal with potentially fragmented and uncertain funding arrangements.

4.5 In undertaking its role, Coastwatch weighs up the risks inherent in each client's stated priorities and plans a service delivery that responds to the greatest national risk and/or most immediate threat. This priority ordering is subject to change at short notice - even within course of a single surveillance flight.

4.6 The needs and requirements of Coastwatch clients are inherently divergent, but often geographically coincidental. This allows Coastwatch to often cover the interests of numerous clients on a single surveillance flight. This approach also means that in the

conduct of a single task, Coastwatch may gather information on targets as diverse as foreign fishing vessels (FFVs), a Suspect Illegal Entry Vessel (SIEV), a yacht suspected of involvement in drug trafficking, marine pollution and whale sightings. This multi-tasking approach makes it difficult to attribute costs to individual clients in any meaningful way. Additionally, a flight briefed to specifically undertake work on behalf one set of clients maybe diverted mid-task to cover the interests of another.

4.7 Equally, there are significant areas of overlap among the interests of clients. Any vessel approaching the Australian coast is inherently of interest to the three principal border management agencies: Customs, Quarantine and Immigration. Information gathered by Coastwatch on all vessels is routinely distributed to these agencies after each flight.

4.8 Coastwatch planning and operational processes are, of necessity, based on a cooperative and collaborative effort among all interested parties. One of the primary benefits of the current centrally managed and funded approach adopted by Coastwatch is that its services are planned and delivered to best address Government's collective needs and priorities, rather than as a discrete response to an individual client with the capacity (and inclination) to pay for the service.

4.9 A key component of Coastwatch's operational effectiveness is that it alone is responsible for determining the most effective way, both in terms of cost and operational efficiency, to undertake any given surveillance or response task. This process is free of the burden associated with having to keep an eye on the meter to ensure the cost does not exceed the clients' (declared) capacity to pay. It also allows Coastwatch to resist the temptation exhibited by clients from time to time to ask for the "Rolls-Royce" option when more cost-effective alternatives are available.

4.10 This is important given the substantial differences in the costs of operating the various assets available for Coastwatch taskings. For example, helicopters range between \$1385 and \$1800 per hour; fixed wing aircraft between \$3 835 for a Dash 8 and \$44 012 for a PC3 Orion per hour. Vessels available to Coastwatch vary between \$13 000 and \$61 738 per steaming day.

4.11 While cost effectiveness is obviously a very important business imperative for Coastwatch, operational outcomes, generally represented by client satisfaction with the service delivered, must be the key driver in each decision process.

## PURCHASER/PROVIDER FUNDING APPROACH

### Background

4.12 In general terms, a user-pays or purchaser/provider arrangement is one in which the purchaser decides what will be produced, the quantity and quality required; and pays the provider to deliver the agreed output(s). Within the government sector, the arrangement is usually detailed in a purchase agreement between the parties. These arrangements are typically implemented in order to:

- clearly separate roles and responsibilities between the purchaser and provider and to improve accountability;
- expose the full cost and performance of services to clients (and the provider), and consequently to improve decision making;
- provide clients with a greater level of control over how funds are utilised, and to improve responsiveness to client needs; and
- to promote contestability.

4.13 If the purchaser is funded for an activity, but does not have discretion to pay for the service, purchaser/provider benefits are limited.

4.14 Purchaser/provider arrangements introduce market forces to non-profit services. They require the client to have a reasonable level of control over the services required, and the performance of the provider to be readily measurable. Such arrangements are most effective when there is a direct relationship between the requirements of an individual client and the service actually delivered; and a strong relationship between the client's requirements and the provider's costs.

4.15 An example of an effective purchaser provider relationship is the Queensland State Health Department which has entered into an arrangement with private providers for the provision of health care services and facilities. Two hospitals in South-East Queensland are administered by private providers where funded is based on set prices and volumes, after consideration of detailed health planning data (including demographics of the region, complexity rating for the hospital and profiles of the region). Detailed costing information is available for all treatments and services. The performance of the private sectors is monitored monthly and the detailed contract provides for variations in price and volume to be initiated by either party.

4.16 The role undertaken by Coastwatch does not meet the ideal purchaser/provider arrangement. A purchaser/provider model normally assumes that there is one purchaser who is solely responsible for the determination of the service to be provided. In addition, the service will generally achieve one outcome (for example, the provision of hospital services). Coastwatch does not have one purchaser and ultimately contributes to a range of diverse government outcomes.

#### Possible Coastwatch Purchaser/Provider models

4.17 There are a number of purchaser/provider models that could be applied to the funding of Coastwatch activities. One model would require the transfer of existing funding to client agencies to cover the totality of Coastwatch costs, including those associated with Defence and Customs assets. Alternatively, this could be limited to full or partial transfer of the aerial surveillance component, leaving response services subject to current arrangements.

#### *Analysis*

4.18 Any changes in administrative arrangements for Coastwatch funding, based on purchaser/provider arrangements between relevant public sector agencies, would over-ride the approach suggested by Hudson and adopted by successive governments, for Coastwatch funding.

4.19 The nature of the service provided by Coastwatch distorts the market forces which would normally operate in a user-pays model, particularly the relationship between fees and client access to services. With the need for constant re-evaluation of priorities across the client base, and the finite surveillance assets available, it is difficult for Coastwatch to guarantee clients' exclusive access to a particular service. This holds true even if individual clients were prepared to pay more or to pay early to secure access. As previously noted, it is the whole-of Government operational outcome which must drive the provision of each Coastwatch service, including the choice of an appropriate asset to undertake that service, rather than consideration of which agency can best afford to pay. It should also be noted that Coastwatch is the only viable service for most client agencies.

4.20 Customs considers that there are practical problems with the use of a purchaser/provider approach for the delivery of Coastwatch services:

- there is a risk that clients may redirect surveillance funds to other pressure areas within their parent agency. In this circumstance, it

would be hard to quarantine the impact – the likely result would be to disadvantage other Coastwatch clients. Strategic surveillance could be compromised, or curtailed, and funds may not be available for critical tactical activity in support of emerging client operational needs.

- the environment and expectations of implementing a user-pays regime for a multi-user service could make it difficult to establish an equitable dispersion of existing funds among clients, and to determine client-specific charges. As each client has finite resources, there is a risk that this could generate conflict between client and provider, or among clients. This would generally be counter productive and could dominate agency interchanges, at the expense of cross agency planning, prioritisation and operational outcomes.
- the demand for Coastwatch services is not necessarily based on the activities of previous years. By way of example, with the flexibility in current funding arrangements, Coastwatch was able to respond quickly to the significant upturn in recent SIEV incursions. If a purchaser/provider arrangement, in which funding had been allocated in the basis of previous activity had been in place, funds for the requisite aerial surveillance and response would not have been reflected in the DIMA or Coastwatch budget.
- it can be difficult for Coastwatch to accurately estimate costs for clients prior to the start of an operation. Clients may be reluctant or unable to quickly commit to expenditure on tactical taskings, particularly if an extended, high cost deployment is envisaged. In some cases, it may not be practical to wait for a client to commit funds before initiating a tasking.
- investment strategies may be difficult to negotiate if clients become reluctant to carry the burden of potential future cost increases in an environment which must necessarily be highly technology oriented.

## ATTRIBUTION OF COASTWATCH COSTINGS

4.21 Cost attribution of Coastwatch activities would require the imputation of funds expended in undertaking Coastwatch activities to relevant clients. With such a regime in place, the full cost of administering each client agency's programs could be detailed in Program Budget Statements and Annual Reports.

4.22 As with the purchaser/provider approach, there are some risks associated with employing a cost attribution model where all costs

must be apportioned across agencies, but are not readily delineated. Additionally, given the uncertain nature of Coastwatch activity year on year, the estimation of notional expenditure for each agency for Budget purposes needs to be treated with some caution.

4.23 These complexities make the development and application of a cost attribution model, which is acceptable to all parties, a difficult, and potentially divisive, task.

4.24 In line with ANAO comments on the benefits of a cost attribution approach, a program is underway within Coastwatch to address the attribution of operational hours to individual clients. The initial stage of this effort involves refinement of the long term planning process so that client taskings can be linked to specific missions. This new process will be implemented in the planning cycle that applies to operations from 1 July 2000.

4.25 The second stage of the program involves the analysis and review of client taskings to determine how well they reflect client needs and Coastwatch's ability to meet those needs. In effect, Coastwatch is proposing to conduct a 'spring cleaning' activity to ensure all generic tasking remains appropriate. This will be done on both a National and Regional basis.

4.26 The third stage will be the development and trial of a task priority weighting system as recommended by the ANAO Audit Report.

4.27 The cost attribution model, when agreed, will be underpinned through strengthening the existing MOU or Service Level Agreement (SLA) approach to cover all client agencies. This will involve updating existing MOUs, or putting new MOUs in place to provide specific identification of options available for provision of additional Coastwatch services. (MOUs currently exist with AFMA, AMSA, AQIS and GBRMPA and include provision for additional non-core flying costs to be funded by clients to the extent possible with current surveillance assets).

4.28 Following a period of trials, and only when this system is considered by Coastwatch and client agencies to be sufficiently robust and representative of the service performed, and after a suitable database has been developed and properly analysed, can an effective cost attribution model be established.

## **Enclosure 5: COASTWATCH EFFICIENCY AND COST EFFECTIVENESS**

### **BACKGROUND**

5.1 Efficiency and cost effectiveness have been at the heart of the almost continuous review of Coastwatch ever since the inception of the civil surveillance program. Since the early 1970's successive Governments have accepted the concept of a single agency with core funding and centralised management control as the most effective arrangement for providing this public service. The responsibility shifted from Transport to AFP in 1974 and, since the Hudson Report of 1988 it has remained with Customs.

5.2 The main difference in approach between the Beazley Report of 1983 and the Hudson Report, based on the intervening experience, was the acknowledgment that the concept of user pays could distort the arguments about efficiency and funding. In broad terms, Hudson noted that the agencies with the money controlled the program, generally to the detriment of those without funds.

5.3 The Prime Minister's Coastal Surveillance Task Force (PMTF) reaffirmed the proven concept of a single agency controlling both operations and funds, and working on behalf of all client agencies.

5.4 To put the issues into perspective, it may be of interest to note the usage and overall quantity of currently allocated Coastwatch funding. Of the directly administered funding for Coastwatch of \$35 million in 1998-99, approximately 8% was spent on management and administration. The remainder was expended on the contracts for flying. In 1999-2000, Coastwatch operating expenses will be \$42.5 million. This will increase in 2000-01 to some \$65 million. This 50% increase in the budget for Coastwatch for 2000-01, will result in a 70% increase in capability with the new Dash 8 aircraft coming on line in late 2000.

### **EFFICIENCY**

5.5 The contracted aircraft are by far the most cost efficient means to meet the majority of current surveillance requirements. The offshore surveillance taskings are capable of being met by the Dash 8, with the exception of the Heard and MacDonal Island and Antarctic requirements. (Other strategies and taskings are in place to monitor these regions).

5.6 The endurance and sensor performance of the RAAF P3C Orions adds to the flexibility of the asset base, however this is at a significant cost. Government has agreed that the RAAF provide 250 hours of P3C

flying in support of the civil maritime surveillance program as a 'cost neutral' resource.

5.7 The Dash 8 is less than one tenth of the cost to fly per hour of the P3C Orion. The ANAO Report identifies that some surveillance taskings can only be addressed by the P3C, but also correctly notes that the aircraft is not always available. The hourly flying cost is very high, the amount of transit time can be prohibitive, and difficulties with short notice availability for tasking make the P3C difficult to use in a fully cost effective manner. This said, the P3C allocation is invaluable in terms of the added capability and flexibility the platform provides.

## EFFECTIVENESS

5.8 All previous reports into Coastwatch have recognised that, although the actual cost of surveillance could easily be identified, the evaluation of benefits was often difficult. Hudson said, *'The valuation of the benefit from surveillance is specifically a function of Government rather than an individual department or group of departments. It is similar to the judgement that must be made continually by Government about the value of other "public goods and services", for example, those provided by the Australian Federal Police [and other enforcement agencies], or the Defence forces.'*

5.9 The Martin Report of 1990 noted *'the measurement of the effectiveness of a program such as Coastwatch is by nature difficult to measure'*. Martin found that the requirements to pay for services may result in some rationalisation of requests for surveillance by encouraging agencies to improve their ability to risk assess possible surveillance areas and thus their tasking to Coastwatch. However, the Committee concluded that the surveillance service is one provided in the public interest and therefore appropriately funded from a central budget rather than user charging.

5.10 In some cases, benefits can be clearly assessed and articulated. For example, the cost to Australia's export market and agriculture sector of the outbreak of exotic disease introduced through a breach of the border has been estimated at \$30 billion per annum. In this context, AQIS is considered a primary client of Coastwatch in terms of both surveillance and response. Similarly, while the cost of illegal fishing can be estimated, the ecological impact is more difficult to measure, though it is clearly recognised in international forums that management of fish stocks is a high priority for Governments. The difficulties with assessing the cost-benefits and even measuring performance against an unquantifiable threat in the socio-political areas of illegal immigrants and illicit drugs are similarly recognised by Government.



## Solutions

5.11 The solution favoured by Hudson in 1988 and subsequently adopted by successive Governments was to institute a comprehensive arrangement with a single agency with full control and funding allocated for the surveillance program. This agency, re-named Coastwatch when control was passed to Customs in 1988, undertakes surveillance based on intelligence and risk assessed threats provided by client agencies. Multi-tasked flying is conducted on behalf of all Commonwealth agencies who request the service. Regular performance reviews are conducted to ensure clients are satisfied with the services being provided. This concept has worked well and is supported by clients, as indicated in the recent ANAO report where it was noted that *'Coastwatch client surveys state that clients have traditionally been highly satisfied with Coastwatch services'*.

## APPLICATIONS

5.12 The PMTF funding arrangement for the expanded electronic surveillance coverage of the East Coast and offshore, and the new night capable, twin engine helicopter, retains the well established principle of multi-tasking and flexibility based on best use of assets against the perceived threats of the time. Under the PMTF endorsed arrangements, funding has been provided to DIMA for provision of these assets, and Coastwatch has an arrangement for the transfer of the funds based on the expanded services. The arrangement is such that, as long as the coverage is achieved, and the client is satisfied, the funds will be transferred regularly to cover the contracted aircraft costs.

5.13 The current contracts with Surveillance Australia and Reef Helicopters are set up in such a way that aircraft assets and crews are provided over a nine-year period. Nine years was considered to be the most cost effective period based on the commercial reality that the high capital costs for the aircraft and associated sensor equipment need to be amortised over longer periods than the previous three and five year contracts. A variation to the contracts in July 1999 accommodated the expanded services arising from the PMTF as this was the most efficient and timely way to achieve the service. The commitment of funds for the basic fixed costs of the contract, which covers the exclusive availability of the aircraft for Coastwatch taskings, is not discretionary. It is only if the contractors fail to meet the performance criteria that funding can be withheld. The system of contractor performance measurement is reasonably responsive and encourages the contractor to meet the standards required. In the past five years, payment has been withheld once for lack of performance following a major aircraft mishap in 1999 which destroyed a wing, rendering one aircraft off line for five months.

5.14 On occurrence tactical reports, Post Flight Reports, Surveillance Sighting Reports, routine feedback at OPAC, and regular performance monitoring by CATOs provides a robust and constant evaluation of the delivery of the contracts and ultimately of the service. Coastwatch is negotiating with the contractors to provide an even more responsive and comprehensive performance monitoring system. The new system will be in place for the financial year 2000-01.

## PERFORMANCE MEASUREMENT

5.15 The ANAO report suggested that the Balanced Scorecard<sup>2</sup> approach be adopted to better report on the overall performance of Coastwatch. Customs acknowledged the recommendation, but noted there were other alternatives to providing a comprehensive performance measurement system.

5.16 It is recognised that the current performance measures are largely quantitative and that they lack meaning without reference to a context. They are measures of workload and, to a limited extent, broad measures of effectiveness. For example, while they show how many sightings were reported and how much coverage was achieved, results are not compared to the previous year(s) and nor do they indicate what environmental factors come into play. Coastwatch is seeking to adopt a more comprehensive approach for both quantitative and qualitative measures, which will be incorporated in the Command Support System being developed under the CWCSS project.

5.17 Finding a suitable methodology to identify and measure the benefits of deterrence is a challenge for all law enforcement (and defence) agencies. Measuring the deterrent factor and the benefit to the "public good" is difficult.

5.18 The fundamental measure of Coastwatch's effectiveness will continue to be the level of client satisfaction. With the recent development of an intelligence analysis capability, Coastwatch can bring to bear better and more responsive planning, and a more flexible and powerful Information Technology system to support operations. Reports for clients will be produced in a more user friendly and timely manner. The already high level of client satisfaction will continue and gradually grow over time as clients become more familiar with Coastwatch capabilities, and more demanding in their taskings.

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<sup>2</sup> Balanced Scorecard is an approach to performance measurement that translates an organisation's strategic objectives into a set of performance indicators. Measures used are in four broad areas: Financial Performance, Customers, Internal Business Processes, and Learning and Growth.

5.19 Two relevant adages come to mind: 'You don't know what you'll find until you look' and 'You don't know what you don't know'. Coastwatch developments in the near future will provide significant efficiency and effectiveness dividends for Coastwatch clients, for its parent and supporting organisations, but, most of all, for the Australian people.

## Enclosure 6: COASTWATCH INTELLIGENCE CAPABILITY

6.1 Prior to the Prime Minister's Task Force (PMTF) in 1999, Coastwatch's intelligence analysis and gathering capability had been specifically limited, by Government decision, to information gained during surveillance flights. Since 1984, a number of studies, reviews and reports on civil surveillance effectiveness have highlighted the need for good intelligence to drive and focus the civil surveillance and response program. In particular, it has been emphasised repeatedly that the ability to accurately position limited surveillance assets, properly manage those assets, and deliver improved surveillance productivity relies on comprehensive and accurate assessment of the capabilities, intentions, and actions associated with various threats to the Australian border. In short, intelligence is fundamental to an effective civil offshore surveillance and response program.

6.2 The need for an intelligence capability within Coastwatch was again recognised by the PMTF and specific funding was provided for a National Surveillance Centre (NSC), with an integrated intelligence analytical capability, to be established within Coastwatch in Canberra. The NSC, which was occupied on 26 January 2000, supports Coastwatch 24 hours a day, with state of the art electronic communications links with a range of agencies, and a significant new internal capacity to analyse and communicate information received.

### THE NSC ANALYSIS UNIT

6.3 The NSC Analysis Unit is a fully accredited and properly certified intelligence facility, staffed with a broad range of skilled analysts. It has been designed to enhance coastal surveillance and response by supporting and supplementing the intelligence and risk assessment infrastructure of Coastwatch clients. The intelligence processed and generated by the Analysis Unit will also improve the effectiveness of Coastwatch air and maritime surveillance operations by reducing the area coverage-to-detection ratio. The savings so generated can be used to cover more of the existing client requirements or, where a priority exists, to undertake new tasks.

6.4 The NSC Analysis Unit is located in Customs House in Canberra. The Unit's principal focus is the provision of tailored intelligence support to the Coastwatch Operations Section. When at full complement, it will be staffed by eight highly skilled Customs Level 3 intelligence analysts and an experienced Customs Level 4 manager. Currently, six of the eight analysts have taken up their positions, having been recruited as a result of an intensive series of selection panels during the period October to December 1999. Delays

in staff taking up positions have, in part, been due to the need for them to undertake high-level security clearance processes.

6.5 The analysts represent a cross-section of intelligence experience and provide a powerful addition to Coastwatch capabilities. Their collective skills-set includes expertise in the following intelligence disciplines:

- all source analysis
- Defence intelligence; and
- law enforcement intelligence (including Customs).

6.6 The analysts each have considerable practical experience in the conduct of intelligence research, analysis and reporting. Their depth emanates from previous work in other National Intelligence Agencies, as well as international experience with, and in some cases within, US and UK counterpart organisations. The group brings a significant understanding of, and experience in operating, the new all source intelligence systems recently installed in the NSC.

6.7 In providing timely all source intelligence support to Coastwatch operations, the Analysis Unit delivers product in three broad categories:

- immediate tactical intelligence for ongoing operations;
- current intelligence support to inform decisions relating to ongoing or impending operations; and
- predictive analyses to refine longer term Coastwatch planning.

6.8 The key tasks of the NSC Analysis Unit are systems monitoring, maintaining situational awareness and the provision of warning of potential threats. Client liaison and analyst-to-analyst liaison with related intelligence agencies are also priorities. The unit's reporting framework is:

- Surveillance Intelligence Reports which provide warning of potential activity of Coastwatch interest. These reports are disseminated as on-occurrence reporting of actual or impending threats and related events.
- Surveillance Intelligence Summaries which provide a synopsis of recent reporting aimed at providing improved understanding of particular threat activities. They provide an initial – or first-line – analysis and assessment of likely future illegal activity.
- Surveillance Intelligence Estimates which are more detailed analyses of potential and emerging threats. They involve substantial research and provide longer term (3-4 months)

predictions of threat probabilities and are used primarily for planning long-term surveillance activities.

## INFRASTRUCTURE.

6.9 The NSC is supported by a suite of classified electronic systems, linked to a range of Government agencies. The NSC gathers and analyses data from these systems and disseminates reports to appropriate agencies via the same systems. These connections also allow collaborative analytical effort that will improve the predictive potential of the NSC and which will also contribute to the effectiveness of linked agencies. The ability to collaborate on the resolution of intelligence problems will reduce duplication of effort across agencies and improve the timeliness and accuracy of intelligence reporting across the Australian and allied intelligence communities.

## Enclosure 7: RISK MANAGEMENT

7.1 Coastwatch provides a surveillance and response service, to a range of clients, around the Australian coastline and throughout the Exclusive Economic Zone (EEZ). Risk management underpins all Coastwatch operational activity.

7.2 Coastwatch does not undertake surveillance and response taskings on its own behalf. Rather, it reacts to the clearly defined requirements of its clients, based on their own internal risk assessment processes. No Coastwatch tasking occurs without this risk assessment link. The internal risk assessment processes of client agencies are now supported by the additional intelligence and predictive capability available in the Coastwatch National Surveillance Centre.

7.3 Clients transfer, to varying degrees, aspects of their individual risk treatments to Coastwatch. This transfer may be limited to detection and reporting of breaches, such as for Environment Australia and AMSA, or may extend to full coordination of aerial surveillance and surface response required to apprehend offenders, as is the case for AFMA, DIMA, Customs and AQIS

7.4 It is a Coastwatch standard operating procedure that clients are kept fully informed of the progress of operational activity pre-, during, and post-taskings, so that they can continually update their risk assessments and modify, if necessary, risk treatments they may require.

7.5 The Coastwatch service is structured to realise maximum return from each unit of resource. To this end, and wherever possible, taskings undertaken by surveillance and response assets cover the range of risks managed by Coastwatch on behalf of all clients with interests in the area. In this regard, it should be evident that risks identified by clients may coincide. For example, a SIEV will present a specific risk to DIMA, but also to AQIS and Customs, albeit for different reasons.

7.6 Where client tasks conflict, priorities are generally resolved by OPAC in the context of long term planning<sup>3</sup>. Noting the time critical nature of tactical taskings, for example an aircraft is in flight when confliction arises, Coastwatch operations staff will first seek to broker a solution among relevant clients and asset providers. If necessary,

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<sup>3</sup> The OPAC and PASC processes, which aim to ensure the optimal deployment of Coastwatch assets to meet the external risks identified by clients, are described in the Overview paper at Enclosure 1.

the Director-General Coastwatch will determine a priority order for action, attempting to ensure all clients risk treatment requirements are fully addressed.

7.7 Risk Management is also an integral component of Coastwatch's internal administrative processes. Foremost among these is the contract monitoring processes, including the CATO arrangements, for the delivery of aerial surveillance. These are also set out in detail at Enclosure 1.

7.8 A Coastwatch *Strategic Risk Management Plan* was developed in 1999 and is now in the *Monitoring and Review* cycle. Many of the risk treatments identified in the Strategic Plan, such as the increased use of helicopters, enhanced communications and other linkages with clients and service suppliers, development of a strategic and tactical intelligence capability, the need for Memoranda of Understanding, and the granting of additional powers for Customs Officers, were considered and endorsed by the Prime Minister's Task Force.

7.9 The development of the lower level, formal Risk Management Plan documentation was suspended during the Heggen, Prime Minister's Task Force and ANAO processes. However, application of the full range of risk treatments that underpin all aspects of Coastwatch operations and administrative activities continued; specifically through the use of Standard Operating Procedures and relevant associated documentation to support all major operational activity.

7.10 The acquisition of additional resources, including new assets, access to information technology systems, intelligence analytical capability and the National Surveillance Centre, has changed, in part, the way that Coastwatch deals with its risk load, and it has been recognised that further review of risk management processes is warranted. To this end, an officer has been dedicated to identifying the additional risk treatments arising from the new resources, and for preparing the requisite risk management documentation across Coastwatch activities.

7.11 The ANAO Audit Report also commented on this aspect of Coastwatch's performance (Recommendation Number 11). In accordance with the ANAO's recommendation, Coastwatch intends applying the Australian Customs Service risk management framework (noted by the ANAO as providing a '*strong basis*' for further work) to the ongoing review of these matters.



## Enclosure 8: TECHNOLOGY

8.1 An awareness of current and emerging technology options and their possible applicability for surveillance purposes is needed for Coastwatch to maintain and improve its effectiveness. Until recently, due to limited staff resources, this function has necessarily been performed in a somewhat perfunctory manner. Technology evaluation has periodically gained prominence at the times when the civilian surveillance contracts were being reviewed. For example, when evaluating tender bids, proposed sensor systems were subject to full evaluation.

8.2 Since the Government endorsed the recommendations of the PMTF, the approach has been more systematic and far more rigorous. The PMTF highlighted the possible contribution that emerging technologies could make to the successful delivery of the civil surveillance program. To this end the PMTF recommended:

‘That in the lead-up to the expiry of the two major Coastwatch surveillance contracts in 2004, Coastwatch further investigate the capacity of emerging technologies to partly replace manned aerial surveillance.’

8.3 In recent months, Coastwatch has established a Future Concepts Section to address technological developments in surveillance and related fields. The area has been staffed by an officer seconded from the Defence Science and Technology Organisation (DSTO), and is supported by a Customs Officer. The Future Concepts Section is responsible for collecting, collating and analysing available information on new technologies with particular emphasis on their application to the Coastwatch task. The Section has regular and routine interaction with DSTO and other external technical and scientific organisations. It aims to identify areas requiring further investigation, and where this cannot be carried out in-house, is authorised to seek external agency assistance to coordinate and oversight any necessary analysis or assessment. The Section is also responsible for providing day to day scientific advice to management. In essence, the Future Concepts Section has allowed Coastwatch to position itself for the future, and to become a fully informed customer of available technology.

8.4 Possible technology options identified by the Future Concepts Section are numerous, varied and diverse in both nature and levels of relevance. Some options are proposed by external organisations, and others have been identified internally as being of interest. To assist in managing the variety of options, a new technology library and interactive database have been set up and are continually updated.

Information is obtained from many sources, much of it provided by the industry who are trying to interest Coastwatch in their technology. Where more specific or detailed information is needed, Coastwatch has the ability to fund the conduct of trials, seeking DSTO assistance where necessary in the analysis of the results.

8.5 While it is possible to discuss the advantages and features of many of the possible technologies in some detail, it is difficult, at this stage, to make definitive statements on the likely utility of some of the options. A synopsis of some of the more applicable technologies currently under consideration is provided at the end of this paper.

8.6 The technology options listed can, of course, form only the basis for the way ahead. Concepts of operations which take account of the features of each option will need to be developed in order to place the possible options in a whole-of-operations context. This work will allow Coastwatch to better assess the suitability and likely effectiveness resulting from the adoption of any alternatives. Suitable Measures of Effectiveness will need to be developed, in close consultation with clients. Past reviews of Coastwatch have noted the difficulty likely to be encountered in attempting to quantify the benefits of surveillance. However, suitable measures are essential if the amount and focus of the surveillance effort are to be optimally determined. Coastwatch may again need to look to DSTO or other external assistance in making a full assessment.

8.7 Technologies and alternative methodologies showing promise will need to be considered in the context of the funding likely to be available. Although some improvement in performance could be anticipated, available funding levels will constrain the adoption of some alternative technologies and may limit the level of performance achievable. For example, subscription to commercially available Radar Satellite technology has considerable potential, but as was evident from trials conducted by Coastwatch in 1998, the cost of such technology remains prohibitive.

8.8 The evolving relationship with Defence is expected to bring major benefits to Coastwatch in terms of technological advances. Defence is examining the way ahead for its surveillance operations and Coastwatch stands to benefit from relevant Defence trials and analyses undertaken in this area. Future Coastwatch operations need to take into account the support that will be available from Defence and other agencies. Major Defence projects that are expected to have a considerable impact on wide area surveillance include the Jindalee Operational Radar Network (JORN) and the Airborne Early Warning and Control (AEW&C) aircraft.

8.9 Other like organisations, such as the US Coast Guard, are involved in similar technology research. Coastwatch is examining

their methods of operation and their use of technology in order to inform its own research. Certain aspects of Coastwatch operations can also be benchmarked against the performance of other organisations to ensure that world's best practice is achieved.

8.10 The synopsis which follows provides an indication of what may be possible with *some* of the technologies of interest. It is by no means an exhaustive list of all that is available and nor is it presented as a comprehensive evaluation.

#### Digital imaging systems

8.11 Digital cameras are being procured to replace the conventional film cameras currently used on Coastwatch aircraft. They will reduce photo-processing and storage costs in the long term and, in conjunction with satellite communications will allow for the rapid transmission of imagery to interested parties, resulting in quicker and more informed decisions. Trade-offs in resolution and issues involved in the handling of digital images are being addressed. Future improvements in communications will allow the transmission of digital video from aircraft and rapid dissemination of the imagery produced to client agencies.

#### Inverse Synthetic Aperture Radar (ISAR)

8.12 A higher resolution ISAR capability for the radars currently fitted to 6 (soon to be 8) Coastwatch aircraft may be useful in classifying small vessels from long ranges. This will allow a reduction in the time spent deviating from the planned flight route to close on the target for classification/identification purposes. DSTO trials in 1998 were encouraging and Raytheon is currently developing an improved version of ISAR. One of the new Dash-8s to be delivered later this year will come equipped with the ISAR modification to allow further trials to be conducted.

#### Improved Electro-Optic Systems on aircraft

8.13 Proposed enhancements to Forward Looking Infra-Red (FLIR) and High Definition TV (HDTV) systems fitted in the current fleet will provide better resolution and sensitivity. This results in similar advantages to the ISAR modification, allowing greater stand-off ranges for classification and identification of contacts.

#### High Frequency Surface Wave Radar (HFSWR)

8.14 HFSWR is a derivative of the Jindalee research now being actively marketed within the private sector. HFSWR has the potential to provide detection and tracking of larger surface vessels out to 300km and over an arc of 90 degrees. It can be made transportable

and can be relocated to previously selected and prepared sites. If promising trail results are proven in an operational environment, the reduced number of other surveillance resources required to cover the area 'painted' by the HFSWR can be released for surveillance of alternative high threat areas. It should be remembered that air or surface response vehicles will still be required in the HFSWR coverage area for classification and identification purposes. Coastwatch will be participating in the trials of HFSWR, to be held later this year in Darwin.

### Satellites

8.15 Wide area detection and identification is possible from satellites using a variety of sensors. At present, this is a prohibitively expensive option and there are trade-offs required in the number of satellites, revisit times and geographical coverage. Coastwatch currently has access to classified Defence sources which use a variety of satellite systems.

### Unmanned Aerial Vehicles (UAVs)

8.16 UAVs come in a variety of sizes, endurance and payload capability. Some may be of value when used locally for identification purposes, while others can provide wide area coverage with long endurance. A range of sensors can be fitted, ranging from simple, unstabilised optical sensors to Synthetic Aperture Radar.

8.17 The Global Hawk High-Altitude UAV represents the current upper limit in wide area coverage capability. Coastwatch will be participating in the Australian trials of Global Hawk being conducted by Defence next year.

### Airships

8.18 Airships offer long endurance, with the ability to loiter very economically. A range of surveillance sensors can be fitted. Their lower cruising speed, compared with conventional fixed wing aircraft, means that response times are increased and the rate of area coverage is lower.

### Aerostats

8.19 Aerostats are tethered airships. The US Customs has used Aerostats for some years on the South-West border of the US. Aerostats provide some extension to the sensor horizon. The presence of a tethering cable can cause complications in airspace clearance. High winds can also constrain their use. They have the usual limitations imposed by their 'fixed' position, though they are a viable platform for some sensor applications.

## Synthetic Aperture Radar (SAR)

8.20 SAR can provide high resolution imaging allowing detection of targets in all weather. It can be fitted to aircraft, UAVs and Satellites. Depending on the resolution, SAR systems may have the ability to classify or even identify targets of interest.

## Acoustic Sensors

8.21 Current technology allows long term coverage of selected areas using fixed acoustic sensors or free floating or tethered sonobuoys<sup>4</sup>. These sensors have the ability to detect and, through the use of acoustic signatures, classify or identify air and surface activity in the vicinity. Coastwatch is participating in trials of this technology later in 2000.

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<sup>4</sup> A sonobuoy is a small hydrophone receiver suspended from beneath a floating buoy.

## Enclosure 9: LEGISLATION

9.1 In terms of the Coastwatch roles and functions, management of the aerial surveillance program and coordination of the response to suspect incursions does not, in itself, require the exercise of any legislative powers by Coastwatch officers in the course of their operational duties.

9.2 However, the activities associated with prevention, response, and investigation of illegal offshore activity do require a sound legislative basis. The Prime Minister's Task Force examination of coastal surveillance activities identified a number of deficiencies in the legislative framework for dealing with suspect illegal offshore activities. As a result, the *Border Protection Legislation Amendment Act 1999* (BPLAA) was drafted in mid-1999 and enacted in December 1999. The Act strengthens powers available to officers, principally Customs, AFP and RAN officers, undertaking activities in this arena.

9.3 A summary of the legislative changes resulting from the BPLAA is at Attachment A to this enclosure.

ENCLOSURE 9: LEGISLATION  
ATTACHMENT A

***BORDER PROTECTION LEGISLATION AMENDMENT  
ACT 1999***

**INTRODUCTION**

1. Prior to the Border Protection amendment legislation, the general principle on which Commonwealth powers to board vessels at sea were predicated was a two-stage process:

- the Commander of a Commonwealth vessel could, under specific circumstances, make a request of the master of another vessel to permit his or her vessel to be boarded; and then
- once such a request was lawfully made, the vessel could be boarded (even if the master did not give permission) and a number of powers exercised. These included:
  - searching the vessel;
  - securing any goods found on the vessel;
  - asking questions of people on the vessel;
  - arresting without warrant any person suspected of committing an offence;
  - detaining the vessel and bringing it to port if there are reasonable grounds to believe offences had been committed.

2. A request to board could only be made if the vessel was within 12 nautical miles of the coastline.<sup>5</sup>

3. These powers did not reflect the full extent of the powers available to Australia under the provisions of UNCLOS (United Nations Convention on the Law of the Sea), which Australia had ratified in October 1994.

**UNCLOS**

4. UNCLOS provides international agreement about the powers of countries in relation to the sea and also represents the maximum extent to which any signatory can enact domestic law. The Convention was opened for signature in 1982 and came into full force on 16 November 1994.

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<sup>5</sup> A nautical mile is 2025 yards, as opposed to a 'land' mile of 1760 yards. Twelve nautical miles is equivalent therefore to 22.2 kilometres.

5. UNCLOS defines a number of sea areas and stipulates the types of powers that may be exercised in those areas:

- Territorial sea

These are the waters within 12 nautical miles of the coastline and are broadly regarded as though they were part of Australia. Within this area, Australia can exercise all powers under domestic law.

- Contiguous zone

These are the waters from 12 – 24 nautical miles offshore. It is effectively a buffer zone that allows Australia to prevent or punish infringements of customs, fiscal, immigration or sanitary laws in the territorial sea.

- Exclusive Economic Zone (EEZ)

These are the waters from 12 – 200 nautical miles offshore. In the EEZ, Australia can exercise powers in relation to the management, protection and preservation of the natural resources of the waters and seabed of the zone. This includes fisheries and non-living resources; and matters such as marine pollution.

- High seas

For customs and immigration purposes, the high seas are the waters beyond 24 nautical miles of the coastline.

6. UNCLOS allows pursuit and boarding of vessels using the concept of constructive presence. This is to deal with the situation where a mothership remains on the high seas but uses one of its own ships or a ship from the shore to commit offences in the territorial sea.

7. UNCLOS also distinguishes between foreign ships and ships registered in the signatory state. The effect is that Australia can exercise powers over Australian ships anywhere in the world (except in another country's territorial sea), but can only exercise powers over foreign ships in ways which are consistent with UNCLOS provisions detailed above.

#### CHANGES RESULTING FROM THE BPLAA

8. The Border Protection legislation enables officers to exercise powers in relation to other Acts prescribed by legislation; in particular, the *Migration Act*, *Quarantine Act* and the *Fisheries Management Act*; and any other legislation that may later be prescribed.



9. Following is a summary of the changes to officers' powers resulting from the BPLAA:

A. Extension of powers to make a request to board (s184A)

10. In addition to the previously existing circumstances, the commander of a Commonwealth vessel can make a request to board another vessel in the following circumstances:

- Australian ships anywhere, except in the territorial sea of another country;
- Foreign ships in the contiguous zone - for the purposes of identifying the ship, or if the commander reasonably suspects that the ship is, will be, or has been involved in the contravention of the *Customs Act 1901* (Customs Act) or a prescribed Act in the territorial sea;
- Motherships on the high seas - where the commander reasonably suspects that the ship is being used, or was used, to support another vessel in a contravention within the territorial sea of the Customs Act or a prescribed Act;
- Suspicious foreign ships in the EEZ - where the commander reasonably suspects that the ship is, will be, or has been involved in contravention of a prescribed Act which deals with resources or protection and preservation of the marine environment. (At this stage, only the *Fisheries Management Act* is being prescribed, but other Acts relating to these issues could be prescribed later);
- Mother ships on high seas supporting contraventions in EEZ - as for motherships on the high seas, but limited to Acts dealing with resources or protection and preservation of the marine environment;
- Foreign ships on the high seas and covered by an agreement - where Australia has entered into an agreement with another country which allows Australia to board ships of that country's nationality; and
- Ships without nationality on the high seas - where the commander has reason to believe that the ship has no nationality (for example, if it is not flying any flag).

B. Powers to chase ships (s184B (foreign ships) and s184C (Australian ships))

11. These amendments more closely reflect UNCLOS and make it clear that where a ship has not complied with a legitimate request to

permit boarding, it may be chased, even if it leaves Australian waters and enters the high seas.

C. Powers able to be exercised after boarding (185 and 185A)

12. As noted above, the Customs Act already grants a range of powers which may be exercised after a ship has been lawfully boarded. Changes to these powers include:

- Extension of the power to question, to include questions relating to contraventions of the Act;
- Extension of the power to require production of documents to allow copying or taking of extracts from documents;
- Clarification of existing powers to examine goods found during a search (for example, to permit use of X-ray or ionscan<sup>6</sup> machines);
- Clarification of the power to detain the ship and creation of a power to detain people on a ship which has been detained. This is necessary because in some cases, such as people smuggling, there may be reasonable grounds to detain the ship, but the potential illegal immigrants on board may not, at that stage, have committed an offence;
- Allowing use of reasonable force during the exercise of searching, and placing limits on the force that may be used to search the ship and arrest or detain people. In particular, officers must not do anything in arresting or detaining a person likely to cause grievous bodily harm, unless the officer believes that it is necessary to protect life or prevent serious injury to another person. These provisions are modelled on the *Crimes Act 1914*;
- Inclusion of a provision to allow any evidence obtained during a search to be used in other prosecutions;
- Creation of a power to allow boarding of ships of a country with which Australia has an arrangement or a ship which is not displaying its nationality on the high seas (see A above), for the purposes of identifying the vessel:
  - if it transpires that the ship is properly registered in another country, the officer must leave the ship;

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<sup>6</sup> The ionscan is a trace analyser capable of identifying narcotics in particles of less than one nanogram (one billionth of a gram).

- if it transpires that the ship is Australian or without any nationality, the officer may search the ship and seize any narcotic goods found;
- if Australia has an arrangement with the country of registration of the ship, then powers may be exercised in accordance with the arrangement.

#### D. Powers to move and destroy certain ships (s185B)

13. In recognition of the fact that most ships that are involved in people smuggling, and which reach Australia, are dilapidated, this Section creates a new power to allow the CEO of Customs to direct the destruction of a ship if:

- it is suspected of having been involved in the contravention of the Act or a prescribed Act;
- it is unseaworthy;
- it is a serious risk to navigation, quarantine, safety or public health;
- it poses a serious risk of damage to property or to the environment;
- the cost of its custody or maintenance is likely to be greater than its value.

14. This section will also allow a ship to be moved to another place.

#### E. Power to carry firearms (s189A)

15. This section allows the commander to issue 'approved' firearms and other personal defence equipment, such as anti-ballistic clothing, to officers to allow the 'safe exercise' of their powers. 'Approved' means that the firearms and items of personal defence equipment will be specified in regulation.

#### F. Miscellaneous

16. Other changes include:

- Removing the previous limitation on length, which specified that ships under 80 metres may be forfeit if they have been used in smuggling or the importation or exportation of prohibited imports or exports (s228);
- Certain matters related to control of movements of people and goods between natural resource installations and places outside Australia;

- Amendments to earlier amendments (contained in the NIDS Bill) which include a number of additional circumstances where offences may occur in relation to the transfer of goods between vessels at sea;
- A number of transitional provisions flowing from changes relating to the display of insignia;
- Inserting a 'shipwrecks' clause that will ensure that no part of the Customs Act will be invalidated because it leads to an acquisition of property.

## Enclosure 10: SOUTHERN OCEANS SURVEILLANCE

10.1 The ANAO Report on Coastwatch recommended that Coastwatch, 'in conjunction with client agencies, assess the risks, develop options and assess the costs of patrols of the Southern Ocean and Australian Antarctic Territory, and advise Government as appropriate'. In view of the extensive examination of this matter by agencies and Government as recently as 1997, and the singularity of the threat being faced in the area at present, Customs provided qualified agreement with the ANAO recommendation.

10.2 The issue of surveillance of Australia's fishing zones in the Southern Ocean, in particular in the AEEZ surrounding Heard and McDonald Islands (HIMI), first came to prominence in 1997. At that time the Australian Fisheries Management Authority (AFMA) became aware of increasing levels of illegal fishing activity in the area involving large fishing vessels targeting the Patagonian Toothfish

10.3 In order to demonstrate Australia's resolve to protect its sovereign rights around its Southern Ocean territories, an immediate response to incursions in the HIMI area was mounted using major fleet units of the RAN. In the course of two patrols to the area conducted in October 1997 and February 1998 by the RAN frigates HMAS ANZAC and HMAS NEWCASTLE, supported by the fleet tanker HMAS WESTRALIA, three foreign fishing vessels (FFVs) were arrested and escorted back to Fremantle.

10.4 Following an extensive series of Inter Departmental Committee discussions which canvassed the issue and which provided advice at Cabinet level, funding was provided to the then Department of Primary Industries and Energy to charter a civil vessel to carry out on-going fisheries enforcement operations in the HIMI EEZ. The National Manager of Coastwatch at the time was part of the evaluation team that examined tenders from the commercial shipping industry for supply of a vessel to undertake the civil patrol program in the HIMI area. The contract was awarded to AMSA, the operators of the MV CAPE GRAFTON. The first civil patrol was made in October 1998, two were made in 1999, with the last patrol returning home in March 2000.

10.5 Although operations in the HIMI area, including the earlier RAN operations, have essentially been conducted outside the mainstream of the civil surveillance and response program, Coastwatch has maintained a close involvement in each phase. Participation in the HIMI Operational Group, which is chaired by the Director General Coastwatch, has ensured that Coastwatch has maintained full

visibility of operations, as well as a degree of responsibility for their conduct.

10.6 It should be noted that, due to the distances involved, aerial surveillance of the HIMI area can only be achieved at present using highly modified aircraft that can only provide a visual or non-electronic surveillance capability. Such aircraft are not readily available in Australia.

10.7 In early 1998, in an effort to bridge the surveillance gap in the HIMI area, Coastwatch contracted a Canadian-based civil radar satellite operator to conduct coverage of the area on a trial basis. The results of the trial proved to be inconclusive, due mainly to the computer software available to the company at the time having insufficient interpretive power to provide a conclusive analysis of radar contacts gained during passes over the area. Coastwatch does have constant access to classified surveillance sources from Defence which are used in support of Southern Ocean monitoring.

## Enclosure 11: UNIDENTIFIED AIRCRAFT MOVEMENTS (UAMs)

11.1 There is a body of evidence, largely anecdotal, that indicates there may be a number of unidentified aircraft movements (UAMs) into Australia. The evidence, such as it is, points to these movements occurring primarily in Northern Australia, in an area stretching from Cape York in the east to the Kimberley Region in the west. Within the total number of known air movements reported to, or identified by Australian authorities, very few of the alleged illegal movements have been substantiated.

11.2 In its recent performance audit report on Coastwatch, the ANAO opined that the matter of UAMs, or 'Black Flights' as referenced in the report, needs clarification and resolution as to which agency has responsibility for air-borne intrusions into Australian territory. The ANAO has recommended that Coastwatch, in conjunction with its client agencies, determine whether UAMs are within its scope of operations and, if not, advise Government of options to deal with such intrusions.

11.3 Customs believes, and Defence has agreed, that the use of the term 'Black Flights', as used in the ANAO Report, is inappropriate. 'Black Flights' is more appropriately used to describe hostile covert (military) intelligence collection activities against Australia. It is clear that this was not the aim of the ANAO auditors, who sought to address the concept of unidentified civilian aircraft that do not report to Customs or other authorities for clearance on arrival in Australia and which are likely to be involved in illegal activities.

11.4 As noted in the ANAO report, Customs has, for some time, been in dialogue with Defence regarding the division of responsibilities for UAMs. Customs and Defence are currently undertaking an assessment of the extent and the nature of the risk. These issues are being addressed as part of a collaborative analysis with Defence agencies, in particular Headquarters Northern Command and Headquarters Australian Theatre. The initial aim is to verify the extent of UAM incursions based on empirical, rather than anecdotal, data. Currently, authoritative data is limited or not available. Additionally, and at the broader national surveillance level, Coastwatch staff are fully engaged in a Defence-led study into the Integrated Surveillance System. A Steering Committee and Working Group are developing a series of options for Government which will include reference to the UAM situations addressed by the ANAO.

11.5 While UAMs do represent a breach of the border and noting that their prior detection could be construed as falling within the purview

of the civil surveillance program, the current range of resources directly available to Coastwatch does not enable it to effectively cover this area of risk. In particular, Australia's ability to detect UAMs remains limited across the northern border for the following reasons:

- there is no integrated microwave radar system providing unbroken coverage of the Australian coastline;
- Darwin has fixed radar sites that detect and track aircraft in the vicinity of, and in the approaches to that city;
- there is no microwave radar coverage west of Darwin, and
- aircraft can avoid radar detection by routeing outside the coverage of the existing microwave network.

11.6 Australia's national capacity to respond to UAMs, if and when detected, is similarly constrained, primarily by the following structural and capability limitations:

- Coastwatch is not authorised, nor configured through its operational arrangements with its civilian contractors, to conduct air-to-air pursuit operations;
- Civil Aviation Safety Authority (CASA) regulations prescribe separation distances between aircraft, further limiting pursuit options;
- RAAF aircraft are capable, but are heavily constrained, from pursuing Australian owned aircraft;
- apprehension operations relating to UAMs identified crossing the Border and landing are, in the first instance, the responsibility of the Customs Border Division, in conjunction with the AFP and the relevant State/Territory Police Service. It should be noted, however, that Customs jurisdiction does not extend to criminal activity beyond the Border where no clear continuum with a Border incursion can be established.

11.7 There have been past attempts by Customs to monitor UAMs across northern Australia. For some years Customs carried out a program of monitoring movements at remote locations through the use of passive remote area sensors (movement sensors, coupled with sound recorders and cameras). This program was supported in part by the [then] Customs fleet of Nomad aircraft that had the capability of operating from rough bush airfields. At best, the results of this program were described as having been indeterminate.



11.8 If UAMs are determined to present a compelling risk, and this is subject to on-going analysis, there are a number of issues which need to be considered. These include:

- the division of primary policy responsibility for UAMs between Customs, Defence, civilian aviation authorities and law enforcement agencies;
- the need to represent the interests of other agencies potentially affected by UAMs, such as AQIS, CASA, Environment Australia and DIMA;
- the need to be able to quickly distinguish UAMs from legitimate [light] aircraft movements, given that aircraft are a relatively common form of transport in some of the more remote areas of Australia noting that, under current airspace rules, most light aircraft movements do not require lodgement of flight plans with Air Services Australia;
- the response to a UAM incursion
  - the tracking and interception of UAMs is a complex task. It requires sophisticated equipment not currently available to civilian agencies in Australia. For example, aerial surveillance radar systems currently installed in Coastwatch aircraft are optimised for surface surveillance and have limited air-to-air capability
  - options for responding to a UAM after landing are also limited by virtue of the number and spread of remote airfields around Australia. The parlous state of many of these airfields limits the type of response aircraft that can be used to insert response teams which in themselves would need to be appropriately trained to undertake operations in remote and potentially hazardous areas.

## Enclosure 12: AN AUSTRALIAN COASTGUARD?

12.1 Arguments have been put forward proposing the formation of a US-style Coastguard to replace the current Coastwatch arrangements. The costs of such a move are likely to be significant, and it may not, in itself, improve on the current Coastwatch performance. In this context, it should be noted that the recent ANAO Report advised that *'Coastwatch has in most cases produced the desired outcomes sought by the client agencies.'* The ANAO further noted that *'Coastwatch client surveys show the clients have traditionally been highly satisfied with Coastwatch services.'*

### WHAT IS A COASTGUARD?

12.2 The role and the structure of an independent Coastguard depend on the model chosen. In the Australian context, the most often quoted model is that of a law enforcement agency with primary responsibility for maintenance and enforcement of Commonwealth maritime law, and possibly including Search and Rescue responsibilities, similar in style and approach to the US Coast Guard.

#### The United States Coast Guard (USCG)

12.3 The USCG is part of the US Department of Transportation. The personnel complement comprises active duty, reserve, civilian and auxiliary members. In addition to maritime law enforcement, the USCG is responsible for a wide range of coastal and offshore administrative matters such as maintenance of navigation marks and aids, recreational boating safety, port security and safety, preservation of marine living resources and vessel standards. It also has responsibility for safety of life at sea matters including Search and Rescue, and response to incidents involving criminal activities, including drug importations and illegal entrants.

12.4 The USCG has a balanced grouping of vessels, aircraft and military forces, integrated under a single command to achieve the Coast Guard mission, which is *'to protect the public, the environment, and US economic interests - in the Nation's ports and waterways, along the coast, on international waters, or in any maritime region as required to support public safety.'*

12.5 The USCG has a budget of about \$US4 billion a year and a staffing base of in excess of 40 000 personnel. USCG resources include 199 'cutters'<sup>7</sup>, 211 aircraft and 1 440 boats. The costs to raise, train and sustain these multi-faceted, integrated and high-end maritime capabilities are significant and parallel the expense of

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<sup>7</sup> Coast Guard vessels 65 feet in length or greater.

maintaining military readiness.<sup>8 9</sup> Under US law, the USCG is required to maintain a state of readiness to function as a specialised service in the Navy in time of war. Further, the USCG is a military service and a branch of the armed forces of the United States at all times. In fact, standing alone, the USCG would be the world's 12<sup>th</sup> largest Navy, in number of vessels and 7<sup>th</sup> largest naval air force, in number of airframes.

12.6 To fulfil its law enforcement roles, the USCG operates in concert with other agencies, such as US Customs (22 boats, 62 aircraft and 11 aerostat balloons), the Federal Bureau of Investigation (FBI), Drug Enforcement Agency (DEA), the Immigration and Naturalisation Service (INS) and the US Department of Defense. The costs of additional assets provided by these agencies are not included in the figures above.

## ISSUES

How much would it cost to provide the same level of service?

12.7 The cost differential of a Coastguard approach is directly related to the model being considered. If the existing functions and ownership of assets, such as the RAN Patrol Boats, P3C Orions and the Bay Class Vessels presently employed by Coastwatch were transferred from current agencies, direct costs would shift commensurately. Subject to the model chosen, a new administrative infrastructure and replication of other facilities that are provided currently by the host agencies (Customs, Defence and, possibly AMSA), would also be required.

12.8 The only known, detailed examination of the costs of a Coastguard approach in Australia was conducted in 1978 and was quoted in a review by Mr Beazley in 1984: *A Review of Australia's Peace Time Coastal Surveillance and Protection Arrangements*. The Beazley Report noted that the 1978 Permanent Heads Committee report on surveillance had estimated the costs of establishing a US-style Coastal Protection Force at between \$365 and \$450 million in capital costs, with annual operating costs of around \$55 million (all costs quoted in 1977 prices). In current year dollars this amounts to approximately \$1.8 billion for initial capital, infrastructure and support facility costs, as well as an additional \$135 million in annual operating costs.

12.9 Mr Beazley noted that these figures did not include the costs of additional infrastructure and support facilities, which he considered

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<sup>8</sup> 14 United States Code 2.

<sup>9</sup> 14 United States Code 1

could double the capital investment required for a separate Coastguard organisation.

12.10 It is also relevant to note that these costings do not take account of the advances in, and associated costs of, information technology, communications and other gains in the design and equipping of vessels and aircraft.

12.11 Finally, it is reiterated that, in the absence of a more detailed model upon which to estimate likely costings, any prediction is likely to be very broad. Whichever model is used, the cost of existing arrangements should provide a point of comparison.

### Legislation

12.12 The full range of machinery of Government changes needed to give effect to an independent Coastguard could be considerable. In particular, a legislative framework to provide a charter for, and to vest authority in, an Australian Coastguard would need to at least replicate, and probably expand on, the enforcement laws currently governing the range of agencies serviced by Coastwatch. A significant effort would be needed in drafting appropriate legislative cover for an independent Coastguard.

### Staffing

12.13 Some staff could be transferred from current agencies, such as Customs, within Public Service arrangements, as part of machinery of Government changes. Legal advice would be required on whether similar transfer of Defence staff with the Defence assets could be achieved. Depending on the model chosen, staff costings could be considerable. The USCG currently has a staff of 35 000 uniformed military personnel, 6 000 reserves and 5 000 public servants. By way of comparison, Coastwatch currently employs 62 people, with a further 150 contracted staff and, on average, 120 ADF personnel contributing to the Coastwatch mission.

### Service Delivery

12.14 There are a range of checks and balances within Coastwatch to monitor the performance of asset providers. Organisational changes flowing from the Prime Minister's Task Force separated Coastwatch from the Border Division of Customs, made it a direct reporting program to the CEO of Customs, and placed a serving Defence officer as Director-General of the program. These changes were made to underscore the independence of the delivery of the Coastwatch service from its client base and its assets providers within Customs (ie from the Customs Marine Fleet as an asset provider, and from Border Operations Branch as a client).

12.15 This arms length nature of the relationship between Coastwatch and all of its clients and each of its assets providers remains extremely important. It facilitates transparency of Coastwatch decision making processes and gives a level of assurance to Government and client agencies that services are delivered to a high standard and on the basis of an independent assessment of comparative risk, rather than being influenced by organisational relationships. The systems and capabilities now available within the National Surveillance Centre allow this risk assessment to be very measured, responsive and effective.

#### Impact on Existing Agencies

12.16 It should be noted that, if a Coastguard were to absorb existing assets *in toto*, there would be a corresponding decrease in capability within the donor organisations to undertake current duties that presently fall outside Coastwatch taskings. New arrangements would need to be put in place to cover these activities, either through a considerably expanded Coastguard bidding process, or through the duplication, at least in part, of assets and staff. For example, in the case of the Defence assets, high-level, national security considerations such as wartime patrol and low level war fighting tasks, would need to be addressed. Similarly, it could be anticipated that there would be an on-going loss of highly trained and experienced officers from the current organisations (primarily Customs and Navy) to a civilian Coastguard agency. The longer-term impact of this loss of personnel and experience would need to be included in any costing model.

12.17 Finally, it is noted that the Prime Minister's Task Force Report concluded that the difficulties associated with a separate Coastguard did not justify the considerable additional expenditure likely to be incurred with such a venture.

## Enclosure 13: LIST OF ACRONYMS

ACS	Australian Customs Service (Customs)
ADF	Australian Defence Force
AEW&C	Airborne Early Warning and Control
AFMA	Australian Fisheries Management Authority
AFP	Australian Federal Police
AFZ	Australian Fishing Zone
AMSA	Australian Maritime Safety Authority
ANAO	Australian National Audit Office
ANCA	Australian Nature Conservation Agency
AQIS	Australian Quarantine and Inspection Service
BPLAA	Border Protection Legislation Amendment Act
CATO	Competency Assessment and Training Officer
CMSP	Coastwatch Monthly Surveillance Program
CWCSS	Coastwatch Command Support System
DIMA	Dept. of Immigration & Multicultural Affairs
DEST	Dept. of the Environment and Heritage
DSTO	Defence Science & Technology Organisation
EA	Environment Australia
EEZ	Exclusive Economic Zone
FFP	Fortnightly Flying Program
FFV	Foreign Fishing Vessel
FLIR	Forward Looking Infra-Red
GBRMPA	Great Barrier Reef Marine Park Authority
GIS	Geographic Information System
GPS	Global Positioning Systems
HDTV	High Definition TV
HFSWR	High Frequency Surface Wave Radar
HIMI	Heard and McDonald Islands
ISAR	Inverse Synthetic Aperture Radar
JORN	Jindalee Operational Radar Network
NSC	National Surveillance Centre
OCO	Oceanic Customs Organisation
OPAC	Operations and Program Advisory Committee

<b>PASC</b>	<b>Planning Advisory Sub-Committee</b>
<b>PFR</b>	<b>Post Flight Report</b>
<b>PMTF</b>	<b>Prime Minister's Task Force</b>
<b>RAAF</b>	<b>Royal Australian Air Force</b>
<b>RAN</b>	<b>Royal Australian Navy</b>
<b>SAR</b>	<b>Synthetic Aperture Radar/Search and Rescue</b>
<b>SIEV</b>	<b>Suspect Illegal Entrant Vessels</b>
<b>SUNC</b>	<b>Suspect Unlawful Non-Citizens</b>
<b>UAM</b>	<b>Unidentified Aircraft Movements</b>
<b>UAV</b>	<b>Unmanned Aerial Vehicles</b>
<b>UNCLOS</b>	<b>United Nations Convention on the Law of the Sea</b>
<b>USCG</b>	<b>United States Coast Guard</b>
<b>WCO</b>	<b>World Customs Organisation</b>