The Auditor-General
Audit Report No.38 1999–2000
Performance Audit

Coastwatch

Australian Customs Service

Australian National Audit Office

ISSN 1036-7632

ISBN 0 642 44242 8

Australian National
Audit Office

Canberra ACT
6 April 2000

Dear Madam President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit in the Australian Customs Service in accordance with the authority contained in the *Auditor-General Act 1997.* I present this report of this audit, and the accompanying brochure, to the Parliament. The report is titled *Coastwatch.*

Following its tabling in Parliament, the report will be placed on the Australian National Audit Office's Homepage—http://www.anao.gov.au.

Yours sincerely

P. J. Barrett
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

AUDITING FOR AUSTRALIA

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Abbreviations/Glossary

AAT	Australian Antarctic Territory
ACS	Australian Customs Service
ACV	Australian Customs Vessel
ADABAS	the Coastwatch central flight statistics database
ADF	Australian Defence Force
AEEZ	Australian Exclusive Economic Zone
AFMA	Australian Fisheries Management Authority
AFP	Australian Federal Police
AMSA	Australian Maritime Safety Authority
ANAO	Australian National Audit Office
AQIS	Australian Quarantine Inspection Service
AusSAR	Australian Search and Rescue
Black flights	illegal undetected or unauthorised flights
CATO	Competency Assessment Training Officer
CASA	Civil Aviation Safety Authority
COGIS	Customs Operational Geographic Information System
CSIRO	Commonwealth Scientific, Industrial, Research Organisation
Defence	for the purposes of this report Defence includes the Department of Defence, Australian Army, Royal Australian Navy and Royal Australian Airforce
Detection	the covert and overt detection of vessels or people
DFAT	Department of Foreign Affairs and Trade
DIMA	Department of Immigration and Multicultural Affairs
EA	Environment Australia
External service providers	External service providers are Surveillance Australia, Reef Helicopters, the Department of Defence and the Australian Customs Service.
FFV	foreign fishing vessel
FCPB	Fremantle Class Patrol Boat

FLIR	Forward Looking Infra red Radar
GBRMPA	Great Barrier Reef Marine Park Authority
identification	classification of persons or vessels in generic or specific terms according to Coastwatch guidelines (ANAO definition)
interception	the interdiction of a target with possible relevance to Coastwatch activities (ANAO definition)
LOTE	Life of Type Extension
NIDS	National Illicit Drugs Strategy
NMU	National Marine Unit (Australian Customs Service)
OPAC	Operational Program and Advisory Committee
P3–C Orion aircraft	RAAF maritime patrol aircraft
PASC	Planning Advisory Sub-committee
patrolling	risk assessed coverage of a designated area based on client requirements (ANAO definition)
PFR	Post Flight Report
PBS	Portfolio Budget Statements
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RRV	Rapid Response Vessel (Australian Customs Service)
ROPAC	Regional Operational Planning and Advisory Committee
SIEV	suspect illegal entry vessel
Southern Ocean	areas around Macquarie and Heard Islands, Sub-Antarctic and Antarctic Territories
strategic operations	long-term plan which assesses relevant Coastwatch threats in the medium to long-term and outlines methodology to address those threats. That is, greater than six months
SUNC	suspect unlawful non citizen
surveillance	the systematic observation of aerospace, surface or sub-surface areas, places, persons or things, by visual, aural, electronic, photographic or other means

Surveillance Australia and Reef Helicopters	civilian air contractors to Coastwatch
tactical operations	the planned response to a more immediate event than those outlined in a strategic long-term plan
task	an objective or assignment determined by a Coastwatch client agency for completion by Coastwatch
tasking	the process of identifying and assigning targets or objectives to Coastwatch resources
TRS	an ADABAS search engine

Summary and Recommendations

Summary

Background to the audit

1. Coastwatch was established in 1988 and is the sub-program of the Australian Customs Service (ACS) responsible for the provision of Australia's civil coastal and offshore surveillance and response service.[1] This service comprises the patrolling, detection, identification, surveillance, interception, and deterrence of targets of interest to Coastwatch's client agencies.[2] Coastwatch relies largely on the ACS, the Department of Defence (Defence) and external contractor resources to deliver these services.[3]

2. The costs associated with the delivery of Coastwatch services in 1998–99 were $168 million. This comprised an ACS component of $35 million and a Defence component of $133 million, which includes the operating costs of the Fremantle Class Patrol Boats and P3–C Orion aircraft.

3. The establishment of Coastwatch was based upon a then Government administrative arrangement, rather than being established under specific surveillance and response legislation. In effect, Coastwatch delivers its services to a number of agencies in accordance with legislation administered by those agencies. As a result, Coastwatch undertakes its responsibilities pursuant to legislation governing immigration, fisheries, quarantine, environmental protection and customs.

4. Coastwatch services are available to any Commonwealth agency with a requirement for surveillance and response services. However, there are a number of key client agencies that use Coastwatch on a regular basis. These agencies include the ACS' Border Management, Australian Federal Police (AFP), Australian Fisheries Management Authority (AFMA), Australian Quarantine Inspection Service (AQIS), Department of Immigration and Multicultural Affairs (DIMA), Environment Australia (EA), and Great Barrier Reef Marine Park Authority (GBRMPA). All Coastwatch client agencies have an important role in the successful delivery of Coastwatch services. This includes the provision and interpretation of intelligence and other information relevant to the effective deployment of Coastwatch assets.

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1 See Appendix 1 for an abridged history of Australia's civil surveillance program since 1967.

2 See glossary for a definition of these terms.

3 Collectively the aircraft and marine vessels supplied by these organisations are referred to as Coastwatch assets throughout the report.

5. Although the audit focused specifically on the administration of Coastwatch, the ANAO was cognisant of the wider environment in which Coastwatch provides services to its clients. Factors affecting Coastwatch clients may have a significant impact on Coastwatch and the delivery of its services. For example, in recent times, there have been a high number of suspect unlawful non-citizens (SUNCs) entering Australia by boat. The Minister for Immigration and Multicultural Affairs has recently made a number of statements outlining the Government's position on people smuggling and trafficking.[4] These statements involve measures not only to deter boat people and step up diplomatic efforts overseas, but also to improve Coastwatch, Customs and the Royal Australian Navy (RAN) capabilities in relation to surveillance and response services.

6. The primary mechanism brought about to facilitate significant changes to people smuggling and associated coastal surveillance issues in 1999–2000 was the Prime Minister's Task Force into Coastal Surveillance. The Prime Minister's Task Force was established to examine Australian coastal surveillance, following increases in the arrival of undetected Suspect Illegal Entry Vessels (SIEVs) on the east coast of Australia (the 'boat people'). Although the Task Force was established in April 1999 primarily to examine surveillance and response issues relating to unauthorised arrival of SUNCs, Coastwatch client agencies provided input on a broad range of Coastwatch's activities. On 27 June 1999, the Prime Minister announced that immigration and Coastwatch-related activities would receive an additional $124 million based on the recommendations of the Task Force. Significant changes made to Coastwatch resulting from Task Force recommendations included the provision of additional administrative and operational resources, and the strengthening of Coastwatch's profile within the ACS internal organisational structure.

Audit objective

7. The objective of the audit was to examine Coastwatch's administration of the Australian civil coastal and offshore surveillance and response service. In particular, the audit focused on Coastwatch's:

- coordination with its clients and external service providers;
- surveillance and response operations; and
- aspects of its corporate governance arrangements bearing on performance and associated accountability.

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[4] Department of Immigration and Multicultural Affairs, *Illegal Migration Issues Protecting the Border: Immigration Compliance*, [Online], Available: http://www.immi.gov.au/illegals/border.htm [9 December 1999].

8. The audit also aimed to identify elements of better practice in relation to civil surveillance and response services.

Overall conclusion

9. Coastwatch operates in a difficult and demanding environment. Its responsibilities include the provision of surveillance and response services for approximately 37 000 kilometres of coastline and a nine million square kilometre offshore maritime area. Given the extent of Australia's coastline and resource availability it is impractical to expect Coastwatch to cover and provide continuous surveillance and response resources for all of this area. Therefore, the successful delivery of Coastwatch services is particularly dependent on effective coordination between Coastwatch and its key client agencies; sound intelligence and risk management procedures for the tasking of Coastwatch assets; clear lines of reporting; and effective support systems for management of operations for greater effectiveness.

10. Over the last 10 years Coastwatch has worked at steadily improving the effectiveness of the Australian surveillance and response service. Recent initiatives implemented by Coastwatch to improve the administration of its services have included the continuing development of a new management information system and the introduction of quality improvement groups to identify and implement changes to Coastwatch administrative and operational processes. The additional funding and successful implementation of the Prime Minister's Coastal Surveillance Task Force recommendations also provide Coastwatch with an opportunity to strengthen its capabilities, particularly in relation to proactive gathering and analysis of intelligence.

11. Notwithstanding these recent initiatives, the ANAO found significant scope for Coastwatch to improve its administration and therefore its cost effectiveness. Over the last five years, Coastwatch has attempted to finalise Memoranda of Understanding (MOU) with its key clients. The ANAO considers these MOUs are essential for the effective delivery of Coastwatch services. In essence they should outline the individual roles and responsibilities of Coastwatch and its client agencies and the performance required in relation to resources available.

12. Coastwatch faces operational difficulties in the effective deployment of its assets over an extensive geographic area of operations. For example, Coastwatch assets can only provide limited coverage of the far southern oceans and the Australian Antarctic Territory (AAT). The phasing out of Defence's Fremantle Class Patrol Boats (FCPBs) is critical to Coastwatch's maritime operations, raising issues about any future marine surveillance and response services or suitable alternatives.

13. The introduction of a more comprehensive set of performance indicators and related information would significantly enhance the assessment of Coastwatch's overall performance. Increased disclosure of Coastwatch performance information, particularly in relation to total costs (in the ACS Annual Report and Portfolio Budget Statements) would improve the external reporting of Coastwatch's performance and the focus on its administration of the required outputs/outcomes.

14. Although our recommendations for improvement largely relate to Coastwatch, the ANAO recognises that, in some areas, recommended improvements are heavily dependent upon the full cooperation of Coastwatch's key client agencies which has not always been forthcoming in the past. Key client agencies also need to cooperate with Coastwatch to successfully deliver their outputs and outcomes and to ensure commensurate accountability. The ANAO notes that Coastwatch is actively taking measures to improve its administration.

Key Findings

Coastwatch overview (Chapter 1)

15. Coastwatch coordinates a combination of civilian contractor aircraft, Defence aircraft and marine vessels, and ACS marine vessels to deliver a range of services to client agencies. The types of services regularly requested by Coastwatch key clients include:

- national and marine park/ wildlife monitoring and protection;
- detection and prevention of quarantine breaches;
- identification of and response to suspect illegal entrant vessels (SIEVs) and illegal foreign fishing vessels (FFVs);
- prevention of unauthorised landings;
- deterrence of illicit drug importations; and
- monitoring of pollution damage to the environment.

16. The successful delivery of civil surveillance and response services is highly dependent on effective coordination of Coastwatch, the resources provided by client agencies and external service providers. In particular, the provision and coordination of intelligence information is critical to the effective tasking of Coastwatch assets as well as for any proactive action that might be considered to prevent illegal intrusion and other illegal and damaging acts.

Coordination between Coastwatch, its clients and external service providers (Chapter 2)

17. The ANAO found that MOUs between Coastwatch and its key client agencies are an essential element in the effective provision of Coastwatch services. MOUs should clearly outline the individual roles and responsibilities of Coastwatch and its key client agencies, including performance and associated accountability criteria, and need to be reviewed regularly. They should also provide the basis for effective coordination of operations, particularly with regard to the gathering and evaluation of intelligence, and the tasking of Coastwatch assets. Coastwatch has been working to develop and finalise MOUs with key client agencies since the mid 1990s. As at December 1999, Coastwatch had formalised MOUs with four client agencies, with seven outstanding.

18. In conjunction with finalising MOUs, the ANAO considers that Coastwatch should restructure and reinvigorate its operational planning committees. This could improve Coastwatch/client liaison and, in particular, the flow of information between individual agencies. Improved liaison between Coastwatch and its clients would have the additional benefit of strengthening the Coastwatch tasking process. Through a strengthened taskings process, Coastwatch should be able to allocate the costs of its services against individual client taskings. This would allow Coastwatch to provide comprehensive reports on the usage and costs of Coastwatch assets attributed to individual agencies and their activities, thus providing a better basis for accuracy and cost effectiveness. The Government, Parliament and Coastwatch clients are also likely to find this information useful when assessing Coastwatch's overall performance.

19. The primary sources of information provided by Coastwatch to its clients are Post Flight Reports (PFRs). In their original state, these reports use aviation and Coastwatch terminology to describe and identify relevant targets. Coastwatch does not simplify these technical reports into plain english before distribution to clients. The ANAO found that it is quite possible that valuable information may be overlooked by clients because of the technical nature of these reports and, consequently, has recommended that Coastwatch process PFRs so they may be more easily understood and readily incorporated into key client agencies' reporting systems.

20. Coastwatch's core business is principally undertaken within the 200 nautical mile boundary of the Australian Exclusive Economic Zone (AEEZ), within which Australia has an international commitment to patrol. However, we found Coastwatch assets are only able to provide limited coverage of the far southern aspects of the AEEZ and of the Australian Antarctic Territory (AAT). Coastwatch, in consultation with its client agencies, should determine options for surveillance and response services for the far southern aspects of the AEEZ and of the Australian Antarctic Territory (AAT). They also need to determine resources necessary to do so in accordance with any such management strategy for surveillance activities and advise the Government as appropriate. Any additional funding may have to be considered in the budget context.

21. Unregistered, uncharted or unidentified aircraft entering or leaving Australia are known as black or suspect illegal flights. The ANAO found that it was not clear whether Coastwatch had a responsibility for the provision of surveillance and response services in relation to black flights entering or leaving Australia. The ANAO recommended that

Coastwatch, in conjunction with Defence and other appropriate agencies, determine responsibility for the detection, surveillance and interception of black flights arriving into, or departing from, Australian territory where appropriate, and the associated financing requirements.

Coastwatch operations (Chapter 3)

22. Coastwatch has integrated a mixture of private and public aircraft and marine vessels to deliver its services to client agencies. Two major private sector contractors deliver the majority of Coastwatch fixed and rotary wing flying. Based on Coastwatch's performance measurement system we found that the aircraft contractors have satisfied their contract performance criteria. Although the performance measurement system was introduced to provide incentives to contractors by improving performance overall, we found the current performance measurement system negotiated by Coastwatch could be improved to enhance performance. Coastwatch has advised that it is currently developing a revised performance assessment system.

23. The ACS National Marine Unit (NMU) and Defence are responsible for the delivery of Coastwatch marine services. Client agencies have expressed concern over the phasing out of the primary assets used to deliver Coastwatch's marine services, that is Defence's FCPBs, over the next few years. Without the early identification of a suitable replacement vessel, Coastwatch will not be able to sustain current levels of civil surveillance and response services. Coastwatch, its client agencies and Defence, are progressing this issue.

24. An important feature of Coastwatch's operations is ensuring an effective flow of intelligence between Coastwatch and its key client agencies. The ANAO found that there were difficulties associated with the provision of early and adequate intelligence by clients to Coastwatch, for Coastwatch related purposes. These difficulties have been highlighted in a number of internal and external reports of Coastwatch operations. The ANAO considers that Coastwatch would have been in a position to improve its operations if the ACS and other relevant Commonwealth agencies had fully implemented the recommendations of the earlier reports in relation to the provision and analysis of intelligence.[5]

25. Without prior intelligence, the probability of detecting a SIEV or FFV is low. Although the National Surveillance Centre was established within Coastwatch in 1999 to provide Coastwatch with an increased

[5] See Appendix 2 for a list of relevant previous reports into Australia's civil surveillance service.

intelligence gathering and analytical capability, Coastwatch remains largely reliant on client agencies to gather and assess relevant intelligence as clients have a greater knowledge of their areas of operation. Coastwatch also relies on these agencies to rank specified mission objectives or targets (tasks) according to the quality and type of intelligence gathered. The ANAO found that Coastwatch clients do not use a common methodology in determining the ranking of their Coastwatch tasks. An improved tasking system would allow client agencies to use a more standardised approach to Coastwatch taskings and improve priority setting as part of good risk management. This would result in better outputs and outcomes. A more systematic and disciplined approach would provide greater assurance that effective management decisions could be made.

26. An important feature of Coastwatch operations systems is the reliance placed on the technical[6] ability of Coastwatch operations staff. Without a high degree of technical knowledge, Coastwatch would not be able to conduct client taskings in an effective manner. Current operational staff are not assessed regularly on their technical skills. Regular assessment of skills would enhance the technical competency of Coastwatch operations staff.

Aspects of corporate governance (Chapter 4)

27. The establishment of a sound corporate governance framework is essential to ensure accountability in Coastwatch's decision-making processes as well as allowing Coastwatch, its key client agencies and the Parliament to assess the success of the coastal surveillance and response service.

28. One important aspect of Coastwatch's corporate governance is the relationship with client agencies. It is essential that clients perceive that they are receiving fair and equitable consideration of their requests for Coastwatch services. The ANAO found the past incorporation of Coastwatch into the ACS' Border Management sub-program (one of Coastwatch's key clients) could have been perceived as a conflict of interest. The Prime Minister's Task Force also recognised this as an issue. Following the Taskforce's review, the ACS removed Coastwatch from the Border Management sub-program and established Coastwatch as a sub-program in its own right, reporting directly to the Chief Executive

[6] That is, relevant aviation and operational planning knowledge relevant to the delivery of Coastwatch services.

Officer of the ACS. This should considerably facilitate identification of responsibility and accountability for performance.

29. The ANAO notes that Coastwatch undertakes client agency surveys in relation to its overall performance. These surveys show that client agencies have been satisfied generally with Coastwatch's performance for a number of years. However, Coastwatch did not undertake its usual client surveys for 1999.

30. The ANAO also found there is scope for Coastwatch to adopt a more rigorous approach to risk management, based on the established ACS risk management framework, to improve performance. This would provide Coastwatch with the opportunity to standardise its task ranking methodology, as well as providing clients with clearer guides on which to assess the importance of their own taskings, to improve the former's overall performance.

31. To assess Coastwatch's performance information, the ANAO examined currently available performance information systems and indicators for their effectiveness and usefulness. We found that the latter is not only difficult to access but, where available, are also of limited value in assessing Coastwatch's overall performance. Coastwatch should provide more accurate and meaningful performance information through the identification and implementation of indicators that adequately reflect overall performance relevant to key client agencies. This is a central issue for accountability and requires early attention. We recommended that Coastwatch investigate the use of a balanced scorecard approach to performance measurement, as it is likely to provide an improved mechanism to determine overall performance, which is meaningful and able to be compared between assessment periods. This would assist both internal management and external scrutiny.

32. While a number of overseas government agencies deliver surveillance and response functions similar to those of Coastwatch, each of those agencies has its own unique civil surveillance and response structure best suited to individual environments and particular sovereignty issues. This makes direct comparison between Coastwatch and other overseas agencies difficult. Nevertheless, the identification of alternative delivery platforms and administrative systems, for example those used by the US Coastguard, may benefit Coastwatch. The ANAO recognises recent efforts by Coastwatch to strengthen ties with the US Coastguard.

33. The ANAO also found Coastwatch did not provide sufficient detail in the ACS Annual Report and Portfolio Budget Statements to allow the Parliament and clients to determine readily either Coastwatch's total

costs (including Defence's component) or allow ready assessment of its overall performance. Again, this is an accountability gap that needs to be rectified.

Recommendations

34. The ANAO has made 15 recommendations aimed at improving Coastwatch's administration. The ACS/Coastwatch advised that it has agreed with the ANAO's recommendations (some with qualification) and is actively taking measures to improve its administration.

Recommendations

Set out below are the ANAO's recommendations with Report paragraph references and the auditee's abbreviated responses. More detailed responses and any ANAO comments are shown in the body of the report. The ANAO considers that the auditee should give priority to recommendations No. 1, 2, 3, 9, 12, 15.

Recommendation No.1 Para. 2.11

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

Coastwatch/ACS Comment: Agree.

Recommendation No.2 Para. 2.19

The ANAO recommends that Coastwatch review the functionality of the Operational Planning and Advisory Committee, the Regional Operational Planning and Advisory Committee, and the Planning 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.

Coastwatch/ACS Comment: Agree.

Recommendation No.3 Para. 2.26

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.

Coastwatch/ACS Comment: Agree with Qualification.

Recommendation No.4 Para. 2.57

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.

Coastwatch/ACS Comment: Agree.

Recommendation No.5 Para. 2.70

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.

Coastwatch/ACS Comment: Agree with Qualification.

Recommendation No.6 Para. 2.75

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

Coastwatch/ACS Comment: Agree.

Recommendation No.7 Para. 3.20

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.

Coastwatch/ACS Comment: Agree.

Recommendation No.8 Para. 3.25

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 incentives, to help ensure cost effectiveness in the delivery of Coastwatch services.

Coastwatch/ACS Comment: Agree.

Recommendation No.9 Para. 3.53

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.

Coastwatch/ACS Comment: Agree.

Recommendation No.10 Para. 3.61

ANAO recommends that Coastwatch undertake technical competency evaluations of Coastwatch operational staff on an annual basis to ensure staff possess appropriate skills and knowledge.

Coastwatch/ACS Comment: Agree.

Recommendation No.11 Para. 4.21

The ANAO recommends that Coastwatch adopt 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 used in developing a credible performance measurement and/or assessment system.

Coastwatch/ACS Comment: Agree.

Recommendation No.12 Para. 4.32

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.

Coastwatch/ACS Comment: Agree.

Recommendation No.13 Para. 4.38

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.

Coastwatch/ACS Comment: Agree.

Recommendation No.14 Para. 4.50

The ANAO recommends that Coastwatch consider the development of 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.

Coastwatch/ACS Comment: Agree with Qualification.

Recommendation No.15 Para. 4.67

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.

Coastwatch/ACS Comment: Agree.

Audit Findings and Conclusions

1. Coastwatch Overview

This chapter provides an overview of the ACS including the Coastwatch sub-program. It details the background to the audit, the audit objectives and the methodology used to conduct the audit.

The Australian Customs Service

1.1 The Australian Customs Service (ACS) is a service-oriented organisation, which reports to the Minister for Justice and Customs, within the Attorney-General's portfolio. The three principal roles of the ACS are to:

- facilitate trade and the movement of people across the Australian border while protecting the community and maintaining appropriate compliance with Australian law;
- assist Australian industry through the delivery of Government support measures; and
- efficiently collect customs revenue.[7]

1.2 The effective management and implementation of the ACS' principal roles is the responsibility of four ACS sub-programs. These sub-programs are:

- Border Management: responsible for the facilitation of movement of people, goods, vessels and aircraft with the detection and deterrence of unlawful activity;
- Commercial Services: responsible for trade facilitation, industry support and revenue collection;
- Corporate Management: responsible for the provision of corporate services to the Minister for Justice and Customs and the ACS; and
- Coastwatch.[8]

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[7] Source: *1997–98 ACS Annual Report*.

[8] The Coastwatch Branch was elevated to sub-program status during the course of the audit. This occurred as a result of administrative changes implemented following the report of the Prime Minister's Coastal Surveillance Task Force (see paragraph 1.17).

The Coastwatch Sub-program of the ACS

1.3 Coastwatch was established in 1988 as a semi-autonomous[9] branch of the ACS. Following the *Report of the Prime Minister's Coastal Surveillance Task Force* 1999,[10] the Coastwatch Branch had its profile raised by separating it from the ACS Border sub-program and establishing it as a sub-program in its own right from September 1999. The Coastwatch sub-program provides administrative support for Australia's civil surveillance and response service, in and around the Australian coastline and Australian Exclusive Economic Zone (AEEZ). Figure 1 illustrates the area for which Coastwatch has responsibility for providing services to clients. This area includes:

- Australia's territorial seas;
- the Australian Exclusive Economic Zone (AEEZ);
- areas of the continental self beyond the AEEZ; and
- other areas nominated by Coastwatch clients.[11]

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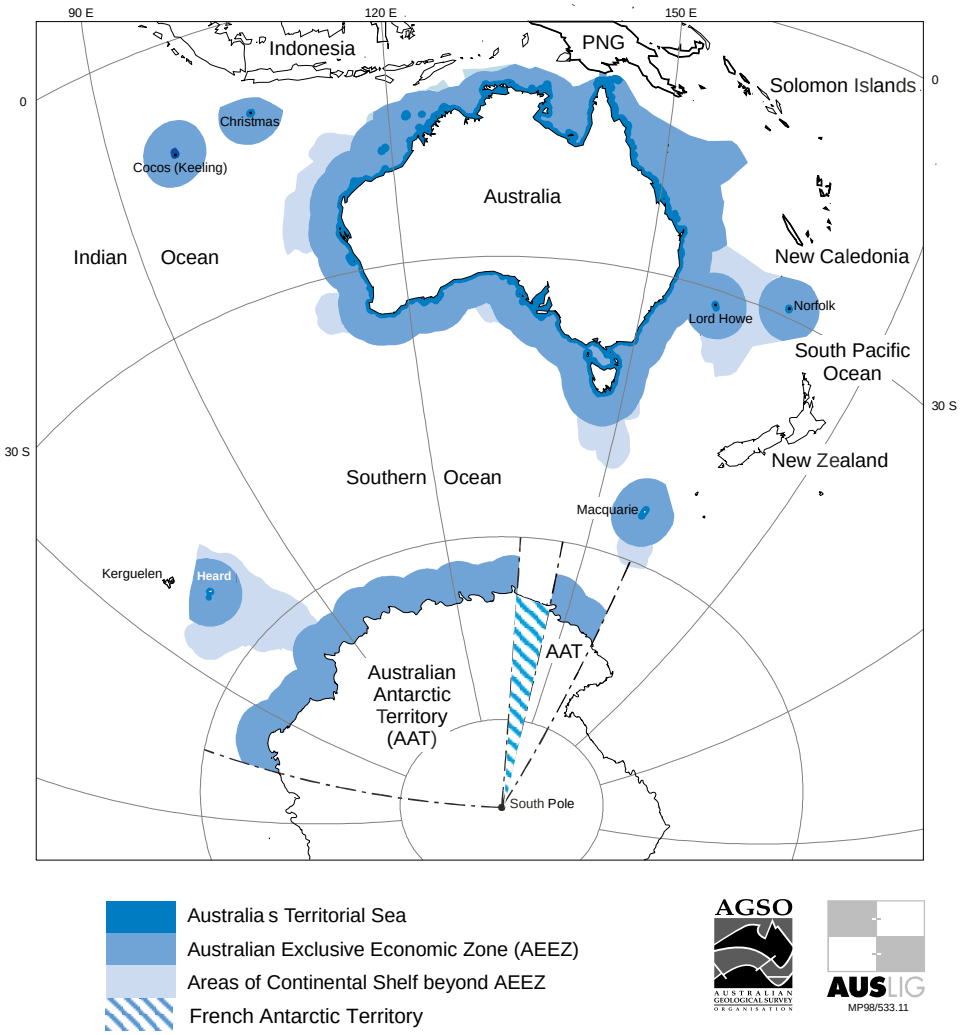
9 By 1998 the ACS described Coastwatch as a 'direct report' branch. That is, the then National Manager of Coastwatch reported directly to the Chief Executive Officer of the ACS.

10 The Task Force was directed by the Secretary of the Department of Prime Minister and Cabinet. Other members of the Task Force included the Chief Executive Officer of the Australian Customs Service, Chief of the Defence Force, the Commissioner of the Australian Federal Police, Director-General of the Office of National Assessments and the Secretaries of the following Departments: Department of Immigration and Multicultural Affairs, Department of Defence, Department of Foreign Affairs and Trade, and the Attorney-Generals Department.

11 Coastwatch clients require Coastwatch-controlled assets to patrol and conduct surveillance beyond the AEEZ.

Figure 1
Australia's Maritime Zones



1.4 Coastwatch uses a variety of aircraft and marine vessels to deliver its services to clients.[12] Currently its principal surveillance and response platforms include:

- contracted civil aircraft provided by Surveillance Australia[13] and Reef Helicopters;
- Department of Defence resources including Fremantle Class Patrol Boats (FCPBs) and P3–C Orion aircraft;

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12 See Chapter 3 for further information on Coastwatch assets.

13 Surveillance Australia is part of the National Jet Systems Group.

- the sea going vessels of the ACS marine fleet; and
- the small Rapid Response Vessels, which form part of the National Illicit Drugs Strategy (NIDS), located in the Torres Strait.[14]

Coastwatch's role and objectives

1.5 The ACS has stated that the role of Coastwatch is to provide a *'civil littoral and offshore surveillance and response service'*.[15] In clarifying Coastwatch's role, the ANAO observed that Coastwatch core business comprised additional services to those outlined in the ACS definition. The ANAO views Coastwatch as providing the following services to clients:

- patrolling;
- detection;
- identification;
- surveillance;
- interception; and
- deterrence.[16]

1.6 Coastwatch has established four primary objectives[17] that underlie the delivery of its services. These objectives are to:

- deliver an effective national coastal and offshore civil surveillance service;
- provide effective marine and aerial responses to known or suspected breaches of the Australian border and offshore sovereignty and/or sovereign rights;
- provide a quality service for client agencies; and
- have staff who are committed to high standards of professionalism, probity and performance and who are supported by a safe, equitable work environment.

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[14] These vessels are administered by the ACS, but do not form part of the ACS marine fleet.

[15] Australian Customs Service, *Coastwatch an Overview*, September 1998.

[16] See Glossary for definitions of these terms.

[17] Coastwatch objectives and key performance indicators are set out in Appendix 5. Coastwatch key performance indicators are discussed in Chapter 4.

Coastwatch clients

1.7 Coastwatch provides a variety of services to a number of Commonwealth Government client agencies.[18] Key client agencies include the ACS' own Border Management sub-program, as well as:[19]

- Australian Federal Police (AFP);
- Australian Fisheries Management Authority (AFMA);
- Australian Maritime Safety Authority (AMSA);
- Australian Quarantine Inspection Service (AQIS);
- Department of Foreign Affairs and Trade (DFAT);
- Department of Immigration and Multicultural Affairs (DIMA);
- Australian Search and Rescue (AusSAR);
- Environment Australia (EA); and
- Great Barrier Reef Marine Park Authority (GBRMPA).

1.8 In addition, the Department of Defence (Defence), while a minor client of Coastwatch, is a strategic partner in assisting Coastwatch in the delivery of its services. Defence provides a number of additional surveillance and response services on behalf of Coastwatch to client agencies. Defence's involvement in Coastwatch activities is discussed in Chapter 3.

Coastal and offshore surveillance

1.9 Coastal and offshore surveillance comprises two major components. These components are military and civilian surveillance.

Military surveillance

1.10 There are areas of common interest between Australia's civil and military surveillance operations. Although military surveillance operations were outside the scope of this audit, we did consult with Defence on how the civil surveillance services could utilise aspects of its military counterpart's operations. The ANAO notes that the ACS does utilise the additional capability of military surveillance operations, where they are available, to add value to Coastwatch operations.

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[18] Aspects concerning key clients are discussed further at Appendix 3.

[19] For a brief description of the type of activity each agency requires Coastwatch to perform, refer to paragraph 1.12.

1.11 There are several means by which Coastwatch can gain important benefits from the military surveillance program. These include:

- using relevant Defence information technology suites and intelligence sources, to streamline detection and identification of vessels;
- leveraging-off relevant developments in fields such as communication, command and control structures; and
- using a variety of Defence assets when they clearly add value over civilian assets, or when it is not possible to use a civilian asset.

Civil surveillance

1.12 Any Commonwealth agency can bid for Coastwatch services.[20] However, as noted in paragraph 1.7, Coastwatch has a group of key clients that are regular users of its services.[21] These client agencies regularly require Coastwatch to perform the following activities:

- national and marine park/ wildlife monitoring and protection;
- detection and prevention of quarantine breaches;
- identification of and response to suspect illegal entrant vessels (SIEVs) and illegal foreign fishing vessels (FFVs);
- prevention of unauthorised landings;
- deterrence of illicit drug importations; and
- monitoring of pollution damage to the environment.[22]

Coastwatch function

1.13 Coastwatch cannot provide the full range of services requested by clients without the assistance of external service providers and input from client agencies. In essence, the partnership of Coastwatch, external service providers and client agencies comprise the Coastwatch function. This is displayed in Figure 2. The optimal outcome of the Coastwatch function is to successfully implement and maintain Government policy, operational control, contract administration and allocation of resources of Australia's Commonwealth civil coastal and offshore surveillance and response service.

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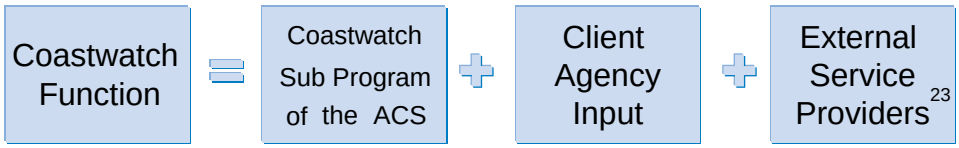
[20] State Government agencies with similar surveillance, patrolling and response requirements can gain access to Coastwatch resources through Commonwealth agency sponsors.

[21] See Appendix 3.

[22] Coastwatch advised the ANAO that these activities are not listed in order of importance to the Coastwatch program. Coastwatch is not limited to these activities and may carry out other activities requested by clients.

Figure 2
Coastwatch Function



Costs of the Coastwatch function

1.14 In 1998–99, ACS expenditure totalled $419 million. Of this, Coastwatch expended $35 million, or 8.4 per cent of the total ACS budget.[24] However, the total cost attributed to the Coastwatch function in 1998–99 was $168 million. Expenditure by Defence on Coastwatch activities, which comprises predominantly the operating costs of the FCPBs and P3–C Orion aircraft,[25] accounted for the additional $133 million.

Economic importance of the Coastwatch function in the protection of the Australian border

1.15 The Coastwatch function plays an important role in the protection of Australia's economic interests through the detection of vessels that may be carrying diseases and/or illegal immigrants, and the detection of vessels fishing illegally in the AEEZ. Based on data obtained from the Australian Bureau of Statistics, the potential cost to Australian agriculture and fisheries from the introduction of exotic diseases, plants, animals and people was estimated to be approximately $30 billion in 1996–97.[26] In addition, the cost of detaining and subsequently repatriating illegal immigrants has to be met by the Australian Government. The cost of repatriating each illegal immigrant is approximately $50 000.[27]

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[23] External service providers are Surveillance Australia, Reef Helicopters, the Department of Defence and the Australian Customs Service.

[24] Figures obtained from *Attorney-General's Portfolio Budget Statements 1999–2000* and *Portfolio Additional Estimates Statements 1999–2000*.

[25] Further discussed in paragraphs 3.9 and 3.36.

[26] The exact values of seafood and agricultural industries totals $30 billion in 1996–97. Further estimates of the potential cost of pest and disease outbreaks can be found in ANAO Audit Report No. 9 *Managing Pests and Disease Emergencies*, *Agriculture Fisheries and Forestry–Australia*, *August 1999.*

[27] Source figures provided by DIMA to the Prime Minister's Task Force.

Prime Minister's Task Force into Coastal Surveillance

1.16 On 12 April 1999, the Prime Minister established a Task Force to examine Australian coastal surveillance, following increases in the arrival of undetected Suspect Illegal Entry Vessels (SIEVs) on the east coast of Australia.[28] Although the Task Force was established primarily to examine surveillance and response issues relating to unauthorised arrival of suspect unlawful non-citizens (SUNCs), advice was provided to the Task Force by key client agencies, including DIMA, on a broad range of Coastwatch's activities.

1.17 On 27 June 1999, the Prime Minister announced a number of changes to the Coastwatch function based on the findings of the Task Force report. In total, these changes involved providing an additional $124 million over the next four years for Coastwatch and DIMA-related services. The changes included:

- funding for two additional contracted Bombadier de Havilland Dash–8 patrolling and surveillance aircraft;
- funding for one additional night-capable contracted helicopter to be deployed in the Torres Strait;
- establishment of a National Surveillance Centre (NSC) at ACS National Office;
- establishment of a new position of Director-General of Coastwatch which is to be filled by a senior Australian Defence Force Officer on secondment;[29]
- provision of twelve additional immigration officers to detect and deter illegal immigration from source and transit countries;
- finalisation of bilateral agreements with illegal immigrant source and transit countries, concerning people smuggling and the return of illegal arrivals;
- strong support for the finalisation of a protocol on people smuggling;
- establishment of an Information Oversight Committee to coordinate information concerning intelligence on people smuggling; and
- introduction of legislative amendments to strengthen maritime investigation and enforcement powers of Commonwealth officers.[30]

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[28] See Appendix 4 for significant SIEV-related incidents involving Coastwatch.

[29] Prior to the Prime Minister's Task Force, the position of Director-General Coastwatch was designated as National Manager Coastwatch.

[30] The ACS in conjunction with other Government agencies, aided the Prime Minister's Task Force in determining recommendations made in the Task Forces report.

1.18 The Prime Minister's Task Force recommended that the Chief Executive Officer of the ACS retain control of Coastwatch, as part of the ACS. The ANAO notes that Coastwatch has derived benefits from being located within the ACS. These include access to ACS staff as part of the ACS staff rotation policy, and command and control structures designed for a law enforcement environment. The ACS has advised also that Coastwatch has been able to achieve savings by using ACS information technology.

Audit objective and methodology

1.19 The objective of the audit was to examine Coastwatch's administration of the Australian civil surveillance and response service. In particular, the audit focused on coordination between Coastwatch, its clients and external service providers; operations; and aspects of corporate governance. The audit also aimed to identify elements of better practice in relation to the Australian civil surveillance and response program.

1.20 The ANAO proposed to undertake an audit of Coastwatch in 1995–1996. However, ACS management requested that the audit be delayed until a more appropriate time because of the number of reviews that had previously taken place,[31] and the implementation of several new management and information technology systems. The audit was scheduled for 1998–99 and following preliminary work in late 1998, the Auditor-General decided to proceed with a performance audit in March 1999.

1.21 As noted earlier, the Prime Minister established a Task Force to examine Australian coastal surveillance in April 1999. This occurred during the fieldwork phase of the audit and impacted on the audit as the Task Force sought to address a number of issues also identified for review by the ANAO. The ANAO advised the Task Force secretariat of the broad areas being examined as part of the audit. These included Coastwatch's intelligence function, corporate structure, key client agencies and their role in the Coastwatch function, administration of air and marine resources and inter-agency coordination with key client agencies. The audit was extended to allow consideration of the Task Force's recommendations. In framing the recommendations in this audit report, the ANAO has taken account of the Task Force report and recommendations.

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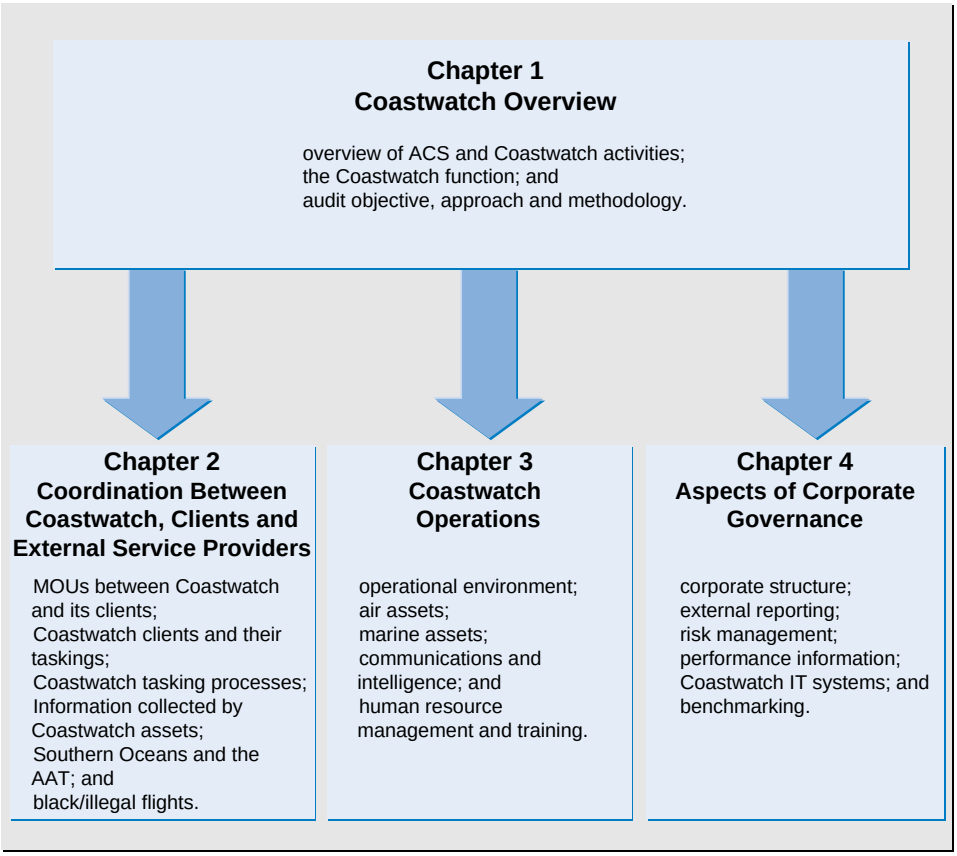
[31] See Appendix 2.

1.22 In undertaking the audit, the ANAO was also cognisant of several important factors when assessing Coastwatch's administrative performance. These factors are the:

- large area Coastwatch is tasked to patrol. Coastwatch's area of surveillance responsibility totals approximately 37 000 kilometres of Australian coastline, in addition to a nine million square kilometre offshore maritime area (see Figure 1);
- financial resources allocated to the civil surveillance program. The ANAO recognises that it is not possible to guarantee complete surveillance coverage of the Australian coastline and AEEZ on a continuous basis, within available resources and given the current state of technology; and
- Government's current focus on measures relating to immigration related issues, such as dealing with 'boat people', following significant increases in the number of SUNCs entering Australia. These strategies involve:
  - improving Coastwatch, Customs and Navy capabilities;
  - increasing penalties for people-smugglers;
  - increasing resources to detect and deter unauthorised travellers;
  - developing and implementing an overseas information campaign aimed at people-smugglers and their targets; and
  - excluding unauthorised arrivals from accessing permanent residence by giving genuine refugees a three-year temporary protection visa or a short-term safe haven visa.[32]

[32] Immigration media release 176/99 Phillip Ruddock Minister for Immigration and Multicultural Affairs, Minister Assisting the Prime Minister for Reconciliation, *New Book Shows People Smugglers Can Charge $40 000 Per Passenger*, 9 December 1999.

Figure 3
Structure of the report



1.23 Chapters 2 to 4 contain recommendations addressing potential areas of improvement in the Coastwatch function. These recommendations also take into account the analysis and findings contained in past reports on Coastwatch as listed in Appendix 2.

1.24 The audit was conducted in accordance with ANAO auditing standards at a cost to the ANAO of $362 000.

Acknowledgments

1.25 The ANAO recognises, and is grateful for, the contribution of Coastwatch officers, clients and contractors who assisted in the conduct of this audit.

2. Coordination between Coastwatch, Clients and External Service Providers

This chapter examines aspects of coordination between Coastwatch, its clients and external service providers. Particular emphasis has been placed on Coastwatch/client agency responsibilities within the Coastwatch function, and administrative processes and practices concerning the allocation of Coastwatch resources.

Introduction

2.1 Chapter 1 introduced the concept of the Coastwatch function and identified key Coastwatch clients and external service providers. It noted that Coastwatch cannot deliver its services efficiently or effectively without the cooperation of key client agencies and external service providers.

2.2 This chapter examines the participation of clients and external service providers within the Coastwatch function and the various mechanisms Coastwatch employs to promote participation within this function, including memoranda of understanding (MOUs), consultative forums and the client tasking process.

Memoranda of Understanding between Coastwatch and its clients

Background to the development of Coastwatch MOUs

2.3 When Coastwatch was established in 1988, the then Government recognised that coordination between Coastwatch, its service providers, and its clients is essential to the efficient and effective delivery of coastal and offshore surveillance and response services. The ANAO found that, over the past decade, a number of client agencies have not participated in Coastwatch coordination arrangements to the degree originally anticipated. This finding is based upon a number of internal and external reports into Coastwatch-related incidents since 1993–94.[33] These reports have found that poor coordination between Coastwatch and its clients has resulted in instances where expected operational outcomes were not achieved in accordance with the agreed approach.[34] A common theme in

[33] See Appendix 2 for a list of reports conducted on Australian civil patrolling and response services.

[34] These reports document instances where Coastwatch did not detect SIEVs. See Appendix 2 for a full list of reports relating to Coastwatch-related incidents involving SIEVs.

these reports is that Coastwatch and its clients need to formalise inter-agency coordination through MOUs and act in accordance with the agreed approach.

Establishing MOUs with clients

2.4 Coastwatch has attempted to formalise agreements with client agencies to obtain intelligence and operational information in a systematic, timely and effective manner. These agreements, MOUs, outline the individual roles and responsibilities of Coastwatch and its key client agencies.

2.5 MOUs are an important mechanism for establishing clear objectives and *modus operandi* for both Coastwatch and its key client agencies. A principal advantage of MOUs is that they flag important issues for attention and joint consideration by Coastwatch and its client agencies. Should significant issues not be resolved by officials, then they can be brought to the attention of Ministers for resolution.

2.6 An ACS internal audit in March 1997 recommended that Coastwatch finalise the establishment of MOUs with each key client agency. At that time three key client agencies had established MOUs. By December 1999, Coastwatch had agreed an additional MOU, with seven agency MOUs remaining outstanding despite efforts made by Coastwatch for their introduction since 1994.

2.7 The ANAO considers that formalisation of coordination efforts, response methodology and the delivery of intelligence and operational information should be clearly defined in MOUs between Coastwatch and its key clients.

2.8 The ANAO has noted previously that DIMA has resisted entering into such an agreement. In a 1997–98 Audit Report into *Management of Boat People*,[35] the ANAO recommended that DIMA and Coastwatch develop an MOU to assist both the clear identification of responsibility and the necessary accountability for performance as well as the results required in outputs/outcomes terms. Coastwatch agreed to this recommendation. However, DIMA did not. The following is the ANAO recommendation from the *Management of Boat People* audit in 1997–98 and the DIMA response:

> Recommendation No. 1. *A Memorandum of Understanding (MOU) should be developed between DIMA and Coastwatch incorporating a performance agreement setting out targets, indicators and respective responsibilities.*

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[35] Australian National Audit Office, Audit Report No.32, *The Management of Boat People-Department of Immigration and Multicultural Affairs, Australian Protective Service, Australian Customs Service*, February 1998.

DIMA response. *Not agreed. Coastwatch services to DIMA are frequently not as a result of specific tasking by DIMA but are part of its general surveillance role and are thus inextricably linked with its service to a number of other agencies. Attempts to arbitrarily differentiate and notionally cost the value of Coastwatch services to DIMA would be non-productive and would fragment the valuation of overall Coastwatch performance.*

In addition, the performance measure of detection is critically dependent on the intelligence Coastwatch receives. Any surveillance other than routine tasking by other agencies is linked directly to the overall intelligence received. Since this intelligence has been gathered from a wide variety of sources, its quality is likely to be variable. In the circumstances, it would be unsatisfactory for Coastwatch performance to be evaluated solely on detections or indeed on instances of 'non-detection.'

2.9 The ANAO notes that, in most instances, Coastwatch provides DIMA taskings with a higher priority than those of other key client agencies. In addition, the majority of investigations and reports into Coastwatch have been generated by DIMA-related incidents.[36] Given the importance placed on DIMA taskings, and the attention that Coastwatch incidents involving DIMA responsibilities receive, the ANAO encourages Coastwatch and DIMA to enter into a MOU outlining the responsibilities of each agency. The ANAO considers that DIMA should take a proactive approach in the provision of intelligence and operational information relevant to the successful delivery of Coastwatch services to improve overall performance.

2.10 The issue of coordination between Coastwatch and DIMA was addressed by the Prime Minister's Task Force, which recommended that National Protocols to cover illegal landings be finalised between Coastwatch, DIMA and other relevant agencies. Although the National Protocols are limited to Coastwatch/DIMA operations following illegal landings, Coastwatch and DIMA should extend the process of developing National Protocols on illegal landings to include the development of a comprehensive MOU.

[36] See Appendix 2 for a full list of relevant reviews.

Recommendation No.1

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

Coastwatch /ACS Comment:

2.12 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.

Coastwatch consultative forums

2.13 Coastwatch has a number of consultative forums that it uses to coordinate strategic and tactical operations with clients and external service providers. To work effectively, these forums require active, positive and cooperative involvement by all participants.[37] Each forum centres on a particular aspect of Coastwatch operations. Although all Commonwealth agencies are eligible to attend these forums, key Coastwatch client agencies are generally the main contributors. The forums are as follows:

Operations and Program Advisory Committee (OPAC): a monthly meeting of Coastwatch and its clients to develop and review the Australian civil surveillance program. This includes the review of long-term flight plans and shorter-term tactical taskings, as well as reviews of significant events. OPAC also acts as a forum for all agencies to discuss surveillance issues with each other.

Regional Operations and Program Advisory Committee (ROPAC): a monthly meeting of Coastwatch and its clients at a regional level, to discuss regional surveillance requirements. These clients include State Government agencies that provide additional support to Commonwealth Government operations. Results and determinations of ROPAC meetings are communicated to OPAC.

Planning Advisory Sub-Committee (PASC): a monthly meeting of Coastwatch and its clients that occurs prior to OPAC to determine the long-term marine surface support requirements of Coastwatch clients. PASC participants are responsible for the development and review of the long-term sailing plan, which is developed on a rolling three-month basis. Clients are also able to provide comment on the Coastwatch long-term flying program as part of PASC discussions.

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[37] The ANAO notes that the responsibilities of each agency, in relation to Coastwatch forums, should be clearly outlined in MOUs established with Coastwatch.

Tactical Issue Meetings: when a high risk or urgent tactical event occurs, requiring the attention of a number of client agencies, Coastwatch convenes a meeting to determine client agency requirements and response capability. These meetings are generally restricted to clients with a direct interest in the issue or events relating to that high risk or tactical event.

2.14 Internal reports into Coastwatch operations since 1993–94 have documented the importance of consultative forums to allow client agency participation in Coastwatch planning and consultative processes. The ANAO considers that changes to OPAC and PASC forums could represent an ideal opportunity for Coastwatch clients to have an increased involvement in Coastwatch intelligence gathering and planning processes.[38] Both the ANAO and Coastwatch recognise that OPAC has operated below its full potential as a consultative forum in the past. The ANAO considers that this is due to some agencies not participating in OPAC as fully as others, while placing an undue emphasis on technical aspects of operational planning at the expense of more strategic, Coastwatch policy issues that are integral to the success of the program.

2.15 The ANAO considers that OPAC should focus on strategic administrative policy relating to Coastwatch services. OPAC has the potential to function effectively as a senior advisory body to the Director-General of Coastwatch. Ideally, OPAC should consist of senior agency officers who are able to articulate agency viewpoints and to make decisions concerning strategic issues affecting their agencies. Further, these officers should have the ability to identify and act upon Coastwatch-related situations that require a cooperative whole-of-Government approach. Given the changes to the management structure of Coastwatch, implemented in 1999,[39] the ANAO considers that now is an opportune time for OPAC and associated forums to be renewed and reinvigorated.

2.16 The members of OPAC (under the leadership of the Director-General, and in consultation with the CEO of the ACS) could advise the Director-General on guidelines and administrative policy that outline the roles and responsibilities of Coastwatch and its clients regarding Coastwatch activities. In order for the Director-General and OPAC participants to centre on strategic administrative issues, the majority of OPAC's routine operational planning work could be devolved to PASC.[40]

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[38] Chapter 4 outlines the importance of a cooperative relationship between Coastwatch and its clients and the impact this relationship has on the performance of the Coastwatch sub-program.

[39] This resulted from the implementation of the recommendations of the Prime Minister's Task Force.

[40] See paragraph 2.13 for a description of the PASC forum.

2.17 The ANAO views PASC as being a potentially valuable forum that could assist in managing the majority of operational planning and technical issues. The role of PASC includes currently the development of strategic flight and sailing programs, and could be expanded to include:

- planning of routine aerial and marine operations;
- review and analysis of PFR and sailing reports;
- liaison of Coastwatch and Defence line staff with clients; and
- resolution of minor conflicts between client agencies regarding the tasking of aircraft and marine vessels.

2.18 The operation of OPAC and PASC as envisaged above, should improve cooperation between Coastwatch and its clients and establish foundations for improved surveillance and response services. Civil surveillance operations can only work efficiently and effectively if Coastwatch and its key client agencies agree to make more effective use of each of those committees. The ACS considers that one of the primary functions of the National Surveillance Centre's analysis unit will be the review and analysis of PFRs and sailing reports.

Recommendation No.2

2.19 The ANAO recommends that Coastwatch review the functionality of the Operational Planning and Advisory Committee, the Regional Operational Planning and Advisory Committee, and the Planning 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.

Coastwatch /ACS Comment:

2.20 The ACS **agrees** with this recommendation and notes that the process of reinvigorating the Operational Planning and Advisory Committee, its regional counterparts and the Planning Advisory Committee is actively being pursued.

Coastwatch clients and the tasking process

Client taskings

2.21 Client taskings are a series of instructions or goals to be achieved by Coastwatch. Effective taskings should provide Coastwatch with clear objectives and be based on all intelligence available to Coastwatch and its clients. Although clients are responsible for the compilation of taskings, Coastwatch is responsible for all additional administrative aspects required to carry out such taskings. This includes the selection of appropriate assets and the allocation of Coastwatch resources.

Client responsibilities in relation to the tasking process

2.22 Coastwatch categorises aerial and marine taskings as either strategic or tactical, depending on client requirements. Strategic taskings are long-term plans, which are used by Coastwatch to task resources in the medium to long-term. Tactical taskings are based on specific incidents or events with a particular goal or outcome to be achieved.

2.23 Strategic flight and marine taskings from client agencies form Coastwatch's long-term sailing and flying programs. All strategic flight and sailing plans are based on generic client intelligence and are reviewed by clients on a monthly basis as part of a rolling three monthly long-term program.[41] The long-term flying program comprises pre-determined flight patterns and forms the majority of Coastwatch flights (81%) (see Figure 4). Similarly, Coastwatch's long-term sailing program comprises pre-determined sailing routes and forms the majority of Coastwatch sailing.[42]

2.24 Tactical flight taskings comprise a relatively smaller proportion (19%) of Coastwatch total aerial taskings and have a specific objective or goal. These taskings are usually based on specific intelligence provided by client agencies or are flown in response to an emerging incident. Figure 4 illustrates the percentage of strategic and tactical taskings flights undertaken in the 1998–99 year.

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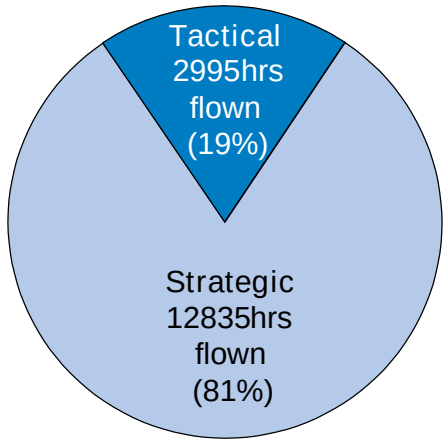
[41] The ANAO notes that Coastwatch also continually monitors and reassess long-term flight priorities through its Weekly Flying Program. The Weekly Flying Program is monitored and assessed by Coastwatch National Office.

[42] Coastwatch and Defence were not able to provide disaggregated information on the tactical and strategic activities undertaken by marine craft.

Figure 4
Number of hours flown by tasking category from 1 July 1998 to 30 June 1999



Source: Coastwatch data

2.25 Client agencies are required by Coastwatch to rank (risk assess) each strategic and tactical tasking made. However, the ANAO found no evidence of a common risk assessment process to rank various client taskings against one another.[43] Coastwatch has advised that, although it will continue to explore methodologies to assist in the ranking of priorities between clients, its view is that the tasking process involves decisions that require sound judgement by senior Coastwatch management. Nevertheless, the ANAO considers that a common risk assessment process to rank various client taskings would be of considerable assistance to Coastwatch management's decision making.

Recommendation No.3

2.26 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.

Coastwatch /ACS Comment:

2.27 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

[43] Coastwatch risk assessment processes are discussed further in Chapter 4.

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.

ANAO Comment:

2.28 The ANAO does not see that a common risk assessment process would preclude recognition and prioritisation of a diverse range of clients' interests, in fact such a risk assessment process would facilitate this. Similarly, the ANAO does not see that risk management removes the onus on management to make well informed decisions; risk management is a framework for the rigorous application of professional judgement in assessing, prioritising, monitoring and treating risks.

Conflicting client tasking

2.29 Although many client taskings may be delivered simultaneously in a single Coastwatch sortie, there are occasions when client taskings conflict. If a conflict occurs during a strategic planning phase, it is resolved by OPAC. Should conflict occur at a time when OPAC cannot be consulted, then the Director-General of Coastwatch decides operational priorities. Coastwatch advised that it nearly always resolves tactical conflicts through consultation with clients. The ANAO noted that, where possible, Coastwatch does attempt to reschedule postponed client taskings at the earliest possible time.

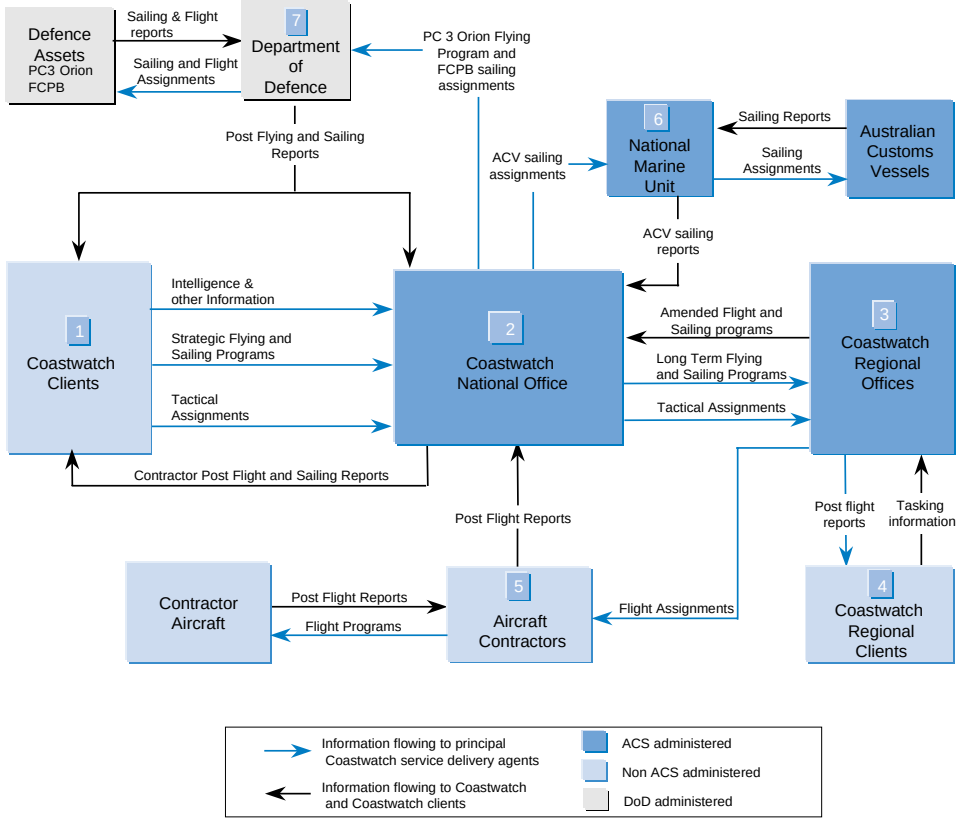
2.30 While some clients take an active role in specifying taskings, others have chosen not to participate as fully. In particular, the ANAO notes the positive contributions of ACS, AQIS, AFMA and EA in developing Coastwatch's long-term operational flying and sailing programs. The ANAO considers that improvements can be made to the Coastwatch tasking system through increased key client participation in all relevant aspects of the planning process.

2.31 The ANAO noted that the Prime Minister's Task Force has encouraged DIMA to become more active in Coastwatch-related activities. The Task Force recommended that DIMA second a liaison officer to Coastwatch to facilitate increased involvement. This officer is expected to commence duties with Coastwatch on secondment in early 2000.

Management of the tasking process

2.32 Figure 5 illustrates Coastwatch information flows between client agencies, Coastwatch administration and the various service delivery mechanisms.

Figure 5
Coastwatch Tasking Process



The above diagram shows the information flows explained in the text below. The numbers in each box correspond with the numbers highlighted in the following text.

Source: ANAO Analysis

2.33 Upon receiving a strategic or tactical tasking from a client agency,[1] Coastwatch National Office staff analyse client requirements and determine what resources available to Coastwatch will be needed to carry out that tasking.[2] This information is then distributed to the relevant Coastwatch regional office,[3] where specific aerial and maritime asset details and requirements are determined.[44] Regional Coastwatch staff determine specific tasking details such as:

- aerial departure times;
- flight routes; and
- other individual flight parameters.

[44] This process does not apply to the RAAF P3–C Orions. These aircraft are requested from Coastwatch National Office.

2.34 Regional clients[4] are also able to generate Coastwatch taskings through Coastwatch regional offices. These taskings are submitted to the Coastwatch National Office for approval and integration into the existing operational program.[45] The ANAO noted that there have been instances where this process was not strictly adhered to by Coastwatch Regional offices. However, we also recognise that there is a need for operational latitude when circumstances demand. In these cases, a report explaining the reasons behind the deviation from the normal tasking procedures is submitted to Coastwatch National Office.

2.35 Once Coastwatch National Office has approved regional and national taskings, flight and sailing assignments are distributed to the appropriate service delivery agent. The principal agents are:

- Surveillance Australia[5]: the private contractor responsible for the delivery of civilian fixed wing aerial surveillance and patrolling services;
- Reef Helicopters[5]: the private contractor responsible for the delivery of civilian rotary wing aerial patrolling, surveillance and general transportation services in the Torres Strait area;
- NMU[6]: provides maritime surveillance and response through the use of ACS marine assets; and
- Defence[7]: provides both aerial[46] and maritime[47] surveillance and response services through the deployment of military assets.

2.36 Each Coastwatch service provider then makes available the assets directed or requested by Coastwatch to complete taskings successfully.

An improved tasking system

2.37 The ANAO is of the view that a priority consideration for a reinvigorated OPAC and PASC could be the implementation of an improved tasking system. An improved tasking system would stipulate that each client rate their taskings according to risks posed to their core business, against a predetermined, standardised scale used by all Coastwatch clients. For example a three tier scale for rating operations could be adopted as follows:

- Priority 1: Highest risk to core client agency functions. A client would expect that a priority 1 tasking would be completed except under exceptional circumstances. If such a task is not completed, the

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45 This is facilitated through the OPAC process.

46 Through P3–C Orion aircraft.

47 Through FCPB vessels.

Director-General Coastwatch would be required to report to OPAC, detailing the rationale for not completing the task.

- Priority 2: Moderate risk to core client agency functions. A client would expect that a priority 2 task would be completed under most circumstances. If such a task is not completed or is rejected, Coastwatch would be required to submit a report to the client agency, detailing the rationale for rejecting/not completing task.
- Priority 3: Low risk to client agency functions. A client could expect that a priority 3 task would be completed, unless higher priority tasks were identified. If such a task is not completed or is rejected, Coastwatch would be required to regularly report to the client agency variations in the tasks undertaken from those planned.

2.38 As part of an improved tasking process, Coastwatch could also examine the cost effectiveness of managing all operational planning from Coastwatch National Office. Currently National Office is responsible for the long-term operational programs, while regional offices 'fine tune' the details and under some circumstances manage tactical operations. Managing operational planning from National Office would be in accordance with procedures adopted by private sector companies involved in complex scheduling and planning activities. These include major airline companies that operate globally.

2.39 Coastwatch National Office is currently responsible for some regional planning, so that regional staff are not required to work unreasonable hours.[48] If Coastwatch planning and operational control were managed by National Office, then regional officers would be able to concentrate upon liaison with local clients. An additional benefit would be that regional staff should be more likely to be available for emergency call outs, as they would no longer have to undertake planning duties. Finally, centralisation of planning would assist in the development of cost allocation for Coastwatch services, as data would not have to be incorporated from various sources.

Allocation of costs for Coastwatch services

2.40 As part of an improved tasking system, Coastwatch could consider trialing a system to allocate costs against client taskings undertaken. This would be linked to the concept that Coastwatch's role is to patrol, detect, identify, provide surveillance and then intercept at the earliest possible opportunity.

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[48] Coastwatch National Office is staffed on a continual 24 hour basis. Regional offices are not staffed for continual 24 hour work.

2.41 The ANAO recognises that the majority of Coastwatch taskings comprise assignments for more than one client. However, it is possible for Coastwatch to attribute percentages of operational hours to individual clients/tasks. Coastwatch currently does this for GBRMPA. Further, subsequent to the Prime Minister's Task Force and under new administrative arrangements, Coastwatch will be expected to enter into a service provider arrangement with DIMA for the provision of additional flying hours. This will require Coastwatch to record and report the hours flown for DIMA.

2.42 As part of the new reporting arrangements required under the Prime Minister's Task Force/DIMA initiative, the ANAO sees merit in Coastwatch evaluating the potential benefits of reporting flying hours (and costs) for all their clients. This would help demonstrate to clients the extent of Coastwatch's services to them and thereby the extent to which individual clients do not need to use their own (or contracted) assets to conduct comparable surveillance and response activities.

2.43 In the longer term, Coastwatch could assign actual mission costs on a percentage basis to clients. For example, a mission with one priority 1 and four priority 3 taskings, could attribute the majority of costs against the priority 1 task, with the remaining costs allocated to each of the priority 3 targets. We would expect the majority of Coastwatch flights and sailing tasks to have a number of client task objectives.

2.44 The ANAO recognises that in the past, analysis of this kind has proved difficult due to broad information technology system limitations in calculating this information. However, with introduction of the new Coastwatch information technology system (see chapter 4), Coastwatch should be in a position to collect and analyse data from each mission, to allow costing of client taskings.

Attributing Coastwatch funding

2.45 Coastwatch is budget funded for all services provided to its key client agencies. This was determined when Coastwatch was established in 1988 by Government decision (see Appendix 1). This method of funding Coastwatch operations was seen to be more cost effective than individual agencies receiving funding for their own surveillance and response operations. The ANAO agrees that there is merit in a single service provider arrangement for surveillance and response activities. However the ANAO notes the changes to administrative arrangements regarding the provision of services in the APS, particularly those based on purchaser/provider[49] arrangements between public sector agencies.

In light of possible alternative administrative arrangements, the ANAO considers that there is merit in the ACS trialing a model involving the funding being allocated to the relevant clients (the purchasing agencies) but ACS supplying the services (as the provider) on a user-pays basis. This approach could improve the efficiency of resource utilisation.

2.46 In making this suggestion, the ANAO notes that the Hudson Report of 1988 did not support the notion of user-pays in the context of the production of a public good, on the grounds that it was thought it may seriously distort decision making.[50] We are aware that the ACS continues to hold those concerns, suggesting that 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.

2.47 The ACS has advised that an attributed funding approach is likely to prove administratively unwieldy and may reduce operational responsiveness and flexibility to constantly changing threat parameters. However, we are aware that the financial arrangements to apply to the new aircraft being acquired for surveillance and response following the Prime Minister's Task Force (PMTF) will require the development and application of funding attribution procedures. We consider that the PMTF represents an opportunity to trial revised funding attribution procedures to enable the allocation of costs against specific taskings for DIMA. Depending on the success of these revised attribution procedures, these mechanisms may be able to be extended to other client agencies.

Information collection by Coastwatch-tasked assets

2.48 Coastwatch-tasked marine and air assets collect a variety of information in a number of different forms to distribute to clients. The following assets may be tasked by Coastwatch to collect this information:

- contractor aircraft (fixed wing and rotary wing);
- RAAF P3–C Orions;
- FCPBs; and
- Australian Customs Vessels (ACVs).

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[49] The term purchaser/provider refers to a situation where an agency receives funding to achieve certain outcomes, but does not have the service delivery mechanisms to directly achieve these outcomes. The agency contracts another entity from the public or private sector to deliver the good or service on its behalf. In Coastwatch's case, it is effectively contracted by other agencies to provide surveillance and response services on their behalf.

[50] Hugh Hudson, *Northern Approaches: A report on the administration and Management of Civil Coastal Surveillance in Northern Australia*", April 1988, paragraph 3.11, page 18.

2.49 The technical aspects of these aircraft and marine vessels are reported in Chapter 3. To examine the information collected by Coastwatch, the ANAO analysed the various forms and types of information collected by the assets outlined above.

Fixed wing aircraft

2.50 Once the Coastwatch fixed wing contractor has carried out an aerial assignment, the flight information collected is forwarded to Coastwatch National Office in an electronic format for distribution within National Office and to relevant clients. This report is known as a Post Flight Report (PFR) and is the principal data source stored on the Coastwatch computer system.[51] In addition to PFRs, the contractor also delivers videos and photographs associated with each tasking. The type of information collected by the fixed wing contractor depends heavily on the type of aircraft used. For example, a Bombadier de Havilland Dash–8 aircraft is able to collect video, radar and visual information, whereas a Pilatus Britten-Norman Islander aircraft can collect only visual information. The features of these aircraft are outlined in Figure 12 Chapter 3.

Rotary wing aircraft

2.51 Rotary wing aircrew are also required to submit PFRs to Coastwatch and where appropriate they are distributed to clients. However these reports are not submitted in an electronic format and they are not posted onto the Coastwatch computer system. The ANAO further comments on PFRs in paragraph 4.40.

Royal Australian Air Force aircraft

2.52 All information collected by RAAF P3–C Orion aircraft is analysed by the Royal Australian Air Force and distributed to Coastwatch National Office, who subsequently distributes relevant information to clients. In addition to information provided by the civilian contractor, these aircraft, due their technical sophistication, can collect additional information, which is valued by Coastwatch and its clients. Although Coastwatch advised that the Orions are only used for roles that exploit the full range of their additional capabilities, the ANAO noted that Coastwatch has not documented criteria for P3–C Orion aircraft use. The features of the Orion aircraft are outlined in Figure 10 Chapter 3.

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[51] See paragraph 4.42 for details on the Coastwatch computer system.

Royal Australian Navy vessels

2.53 The FCPB is the principal platform used for the delivery of Coastwatch marine services. Although a Defence asset, Coastwatch is allocated 1800 FCPB patrol days annually for Coastwatch related activities. FCPB crew produce real-time incident reports and monthly reports of sailing activity that are analysed by the RAN. Depending on the urgency of the situation information may be forwarded to Coastwatch staff and clients immediately. Along with relevant Coastwatch clients, Coastwatch receives operational statistics at the OPAC and PASC forums. However, not all statistics and information collected through FCPB activity are entered into the Coastwatch computer system. This is discussed further in Chapter 3.

Australian Customs Vessels

2.54 In a similar format similar to the FCPB crews, ACV staff produce activity summaries for the Customs NMU on a daily basis. This information is then distributed to relevant Coastwatch clients. ACVs are discussed further in Chapter 3.

Information analysis

2.55 PFRs are technical documents that use aviation terminology and acronyms, as well as Coastwatch-specific jargon. In their original state, clients cannot easily understand PFRs. Coastwatch does not decipher PFRs before distribution to clients. The ANAO notes that there is the potential that valuable information may be overlooked by clients because of the technical nature of these reports.

2.56 The ANAO supports the initiatives taken by Coastwatch to produce user-friendly PFR reports. These initiatives include the formation of quality improvement groups to examine current PFR reporting systems and the introduction of new Coastwatch computer systems to facilitate the efficient production of user-friendly PFR reports.

Recommendation No.4

2.57 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.

Coastwatch/ACS Comment:

2.58 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.

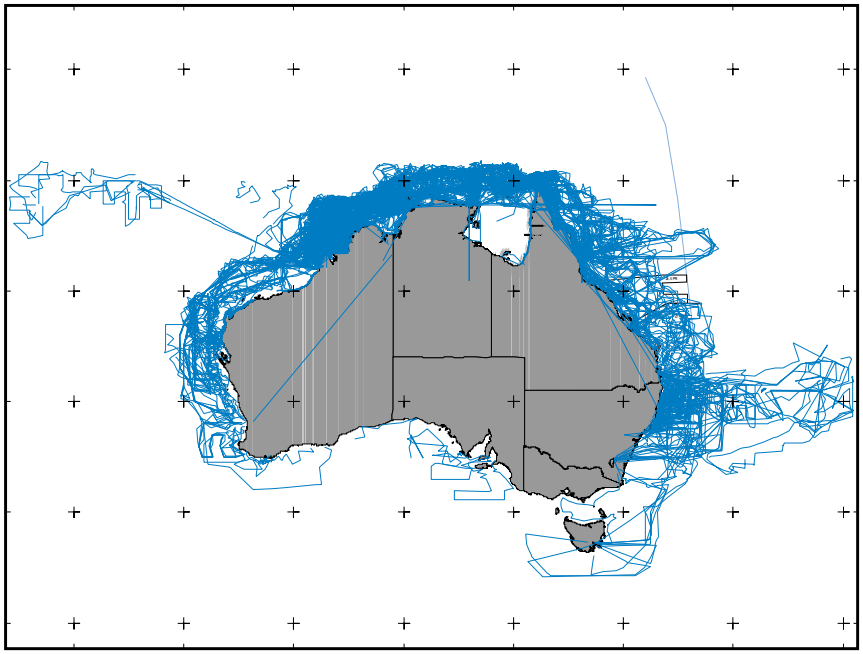
Scope of Coastwatch operations

2.59 The ANAO sees that there are important issues of coordination that require resolution between Coastwatch and its clients, regarding the provision of civil surveillance and response services. These issues relate to the scope of services provided by Coastwatch. Existing Coastwatch services have their origins in a number of Government-commissioned reports and Government decisions. [52]

2.60 The pre-eminent source of Coastwatch's guidelines of administrative responsibility originates from the recommendations of the 1988 Hudson Report.[53] However, the ANAO considers that caveats from other reports, and Government decisions, have left ambiguities in the scope of Coastwatch's operations and the types of services it could be expected to provide to clients. In particular, there were two areas for which Coastwatch appeared to be accountable, but where it did not have the resources to respond to potential agency requests. These two areas are the patrolling of Australia's Southern Oceans and the AAT; and the detection and surveillance of suspect illegal (black) flights.

Figure 6

Coastwatch tasked aerial services 1 January 1998 – 1 January 1999



Source: Coastwatch data

[52] See Appendix 1 for a brief history of Coastwatch and Appendix 2 for a list of relevant reports affecting Coastwatch.

[53] See Appendix 1 for a brief history of Coastwatch.

Provision of Coastwatch services to the Southern Oceans and the Australian Antarctic Territory

2.61 Australia's international commitment to patrol actively and conduct surveillance operations in the AEEZ, not only requires active patrolling of high risk sectors of the AEEZ such as the northern Australia,[54] but also the Southern Oceans and the AAT.[55] To date, Coastwatch is only able to provide limited coverage of Australia's Southern Ocean and the AAT. The following diagram illustrates where Coastwatch aerial surveillance was concentrated between January 1998 and January 1999.

2.62 Figure 6 shows that northern Australia receives the highest proportion of Coastwatch's aerial services. The southern coastline receives the least coverage, with the waters of the far Southern Ocean and AAT receiving little aerial patrolling and surveillance coverage.

Client assessment of high risk areas

2.63 Coastwatch and its clients have indicated that past patrolling and surveillance activity in the Australian Southern Ocean has been affected by higher priority tasks performed in northern Australia. Three key clients, DIMA, AQIS and AFMA informed the ANAO that their highest Coastwatch related risks were historically situated in the northern AEEZ, although EA stated that there could be significant benefits in conducting more Southern Ocean patrolling for environmental-related incidents. However, Coastwatch key clients have not completed comprehensive research or risk analysis of the threats posed to various areas of the AEEZ. Although recognising that there has not been an overall risk assessment, the ACS has advised that the aggregation of the tasks that underpin the Coastwatch strategic flying program shows that considerable analysis has been done by individual clients to define their own particular risk pictures. The ACS further advised that the Surveillance Analysis Unit within the NSC will provide significantly greater capability in this area than has been available in the past.

2.64 Recent reports published by international fisheries agencies, and environmental impact studies undertaken by the CSIRO, suggest that there are potential new threats to Australia's Southern Ocean environment and fisheries stocks.[56] These reports also indicate that there

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[54] Identified by Coastwatch clients, DIMA, AFMA, AQIS, and Defence as representing the greatest risks to Australian sovereignty.

[55] The United Nations-sponsored *Law of the Sea* conference was the forum used by Australia to request a 200 nautical mile zone around Australia.

[56] ISOFISH Occasional Report No.2, March 1999, *The Chilean Fishing Industry: its Involvement in and Connections to the Illegal, Unreported and Unregulated Exploitation of Patagonian toothfish in the Southern Ocean*, Based on a report prepared by Juan Calos Cardenas and Patricio Igor Melillanca of the Centre for Conservation and Sustainable Development.

is systematic illegal fishing in Australia's sub-Antarctic fisheries by modern vessels utilising state-of-the-art equipment. This was confirmed in October 1998, when two large fishing trawlers (44m and 57m respectively) were apprehended by the Australian Defence Force (ADF) for illegal fishing in Australia's Southern Ocean.

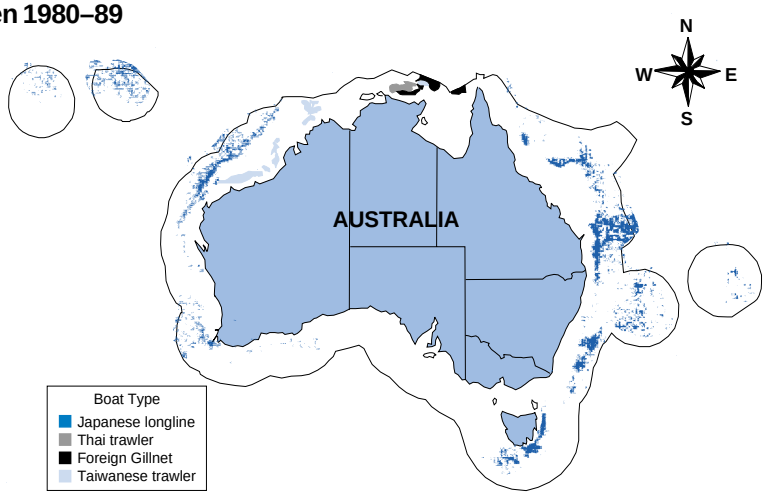
2.65 In order to detect such illegal activity, Coastwatch would need to undertake long range patrolling and surveillance activities in the Southern Ocean using RAAF aircraft. The current Coastwatch contractor aircraft fleet does not have the flight endurance to undertake extensive surveillance activity around key Southern Ocean fisheries such as Heard Island (see Figure 1).

2.66 Market figures show that fish caught in the vicinity of Heard Island are rare and attract a high market price.[57] Illegal fishing activity in this area may result in economic and environmental damage to Australian fisheries. At the time of the audit this matter was the subject of debate in Parliament.

2.67 AFMA has undertaken some limited analysis of the value of resources in this region. This includes mapping legal foreign fishing activity within the AEEZ (displayed in Figure 7), that should correlate to valuable fisheries resources. Through the collection and analysis of this type of fisheries data, Coastwatch and AFMA should be able to identify potential high risk areas for illegal fishing, and to task Coastwatch assets to respond appropriately, or develop alternative strategies to respond to these activities.

Figure 7

Indicative foreign fishing activity in the AFZ for any 12 month period between 1980–89



[57] The main fish taken in the southern AEEZ is the Patagonian Toothfish. Patagonian Toothfish can grow up to 100kg and fetch around US$6–$10 per kilogram (Japanese market figures).

2.68 An interdepartmental committee examined the issue of Southern Ocean marine patrolling in 1997.[58] The Committee concluded that Coastwatch and the RAN did not possess any marine vessels capable of undertaking interception and/or surveillance activities, in the far Southern Ocean and/or AAT, on a protracted basis. As noted in Appendix 1, the Australian Government gave a commitment to actively manage the utilisation of marine resources within the AEEZ (see Figure 1).[59]

2.69 The ANAO considers that Coastwatch needs to specify the area of coverage for which it provides surveillance and response services, and outline the areas of the AEEZ for which it is unable to provide these services. The ANAO notes that once Coastwatch and its clients have determined the geographic boundaries and activities for which Coastwatch is accountable, research should be undertaken by relevant stakeholders on the types of aircraft, marine vessels or other appropriate service delivery mechanisms needed to deliver surveillance and response services. This would allow Government to be informed of options for delivering surveillance and response services, as appropriate. Any additional funding for these services would have to be considered in the budget context.

Recommendation No.5

2.70 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.

Coastwatch/ACS Comment:

2.71 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.

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[58] Interdepartmental Committee on Arrangements for Coastal Surveillance, 1997.

[59] Articles 56–64 of the Convention on the Law of the Sea.

Suspect illegal (black) flights into Australian airspace

2.72 Unregistered or unidentified aircraft entering or leaving Australia are known as black or suspect illegal fights. These flights pose problems similar to SIEVs/FFVs, regarding possible breaches of Australian sovereignty.

2.73 It is not possible to report on the extent of the black flight problem in Australia because there have been no studies completed by Coastwatch or its key client agencies. Defence is conducting some research in this area, which is yet to be completed. There are a number of problems associated with the detection of black flights. These problems include:

- aircraft altitude. Aircraft travelling at low altitude may not deliver a radar return (radar paint) making them difficult to detect;
- aircraft speed. Aircraft travel at high speed therefore making it difficult for an Australian authority to intercept and/or conduct surveillance on an aircraft;
- the proximity of Australian airspace to that of other countries. Jurisdictional issues may arise if an Australian aircraft pursues another aircraft into non-Australian airspace;
- the number of airfields. There are numerous sites that can be used as airfields spread throughout northern Australia, making it difficult to pinpoint where a possible black flight has landed;
- Coastwatch contractor aircraft have not been equipped with the facilities to detect black flights. Existing radar systems are specifically designed for surface craft detection;
- Civil Aviation Safety Authority (CASA) regulations specify distances between aircraft and flying patterns in some areas; and
- while RAAF aircraft have the ability to detect and pursue suspected black flights, they are restricted by Government from pursuing aircraft owned by Australians.

2.74 Previous reports[60] on Australia's civil surveillance and response service have not addressed which government agency should manage the issues related to black flights. The ANAO considers that this matter needs clarification and resolution as to which agency has responsibility with intrusions into Australian territory. Suitable options for managing such intrusions should take into consideration associated financing requirements.

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[60] See Appendix 2.

Recommendation No.6

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

Coastwatch/ACS Comment:

2.76 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.

3. Coastwatch Operations

This chapter examines the resources used by Coastwatch to undertake client taskings. In particular, this chapter focuses on issues associated with marine and aerial craft, intelligence collection and analysis, tactical communications and Coastwatch human resources.

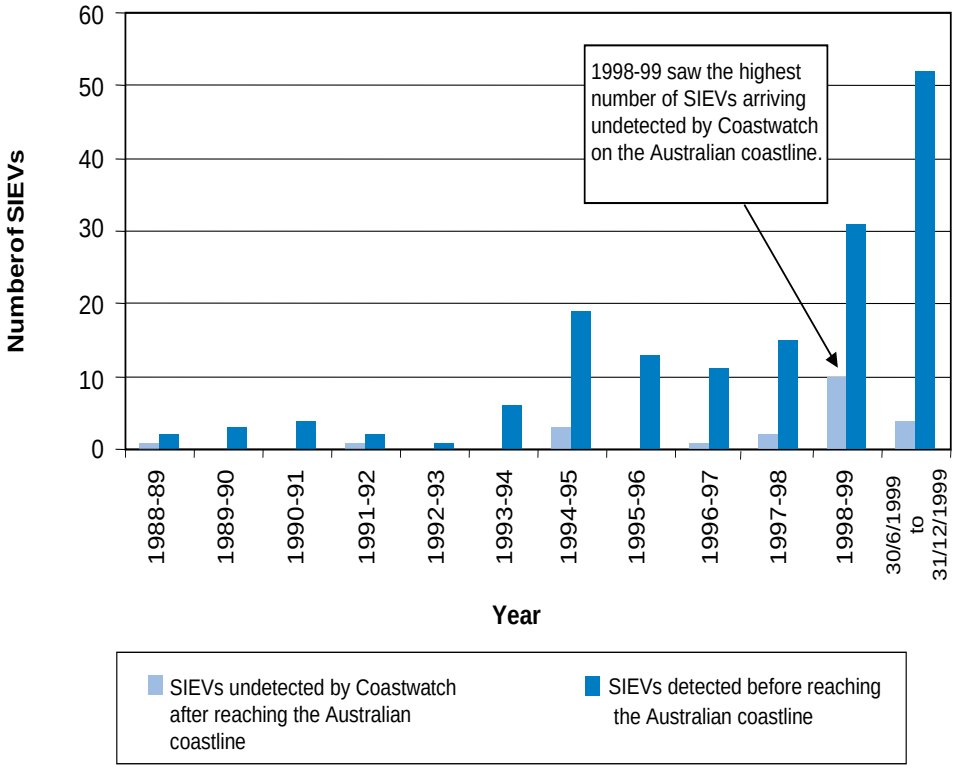
Operational environment

3.1 Coastwatch uses a mixture of aircraft and marine vessels in meeting client demands. The aircraft, both fixed wing and rotary are supplied by outsourced contractors, Defence and charter flights. The marine vessels are supplied by either the RAN, private charter or the NMU. Coastwatch stated that this system of integrating a range of private and public sector assets has delivered a largely satisfactory outcome for Coastwatch clients.

3.2 Coastwatch resources have been allocated on assessments made by both clients and other external reports (see Appendix 2) that northern Australia is the area most threatened by either FFVs or SIEVs, which also pose a quarantine threat. Historically, suspect vessels conformed to a stereotype, with SIEVs actively seeking the assistance of Coastwatch marine vessels to land in Australia. However, a new paradigm appears to now be in place, with rising numbers of SIEVs attempting to land on the east coast of Australia undetected by Coastwatch. Figures 8 and 9 show the increases in numbers of SIEVs and SUNCs landing (detected and undetected by Coastwatch) on the Australian coastline.

Figure 8

SIEVs detected by Coastwatch before reaching the Australian coastline and SIEVs undetected by Coastwatch after reaching the Australian coastline 1 July 1988 – 31 December 1999



Source: Coastwatch data

3.3 Figure 8 illustrates a substantial increase in 1998–99 in the number of SIEVs attempting to reach the Australian coastline undetected, in comparison to previous years.[61] In 1998–99, Coastwatch did not detect one third of SIEVs before they reached the Australian coastline. One of the reasons for a decrease in detection rates is attributed to changes in the destination of these vessels from the north coast to the east coast of Australia.[62]

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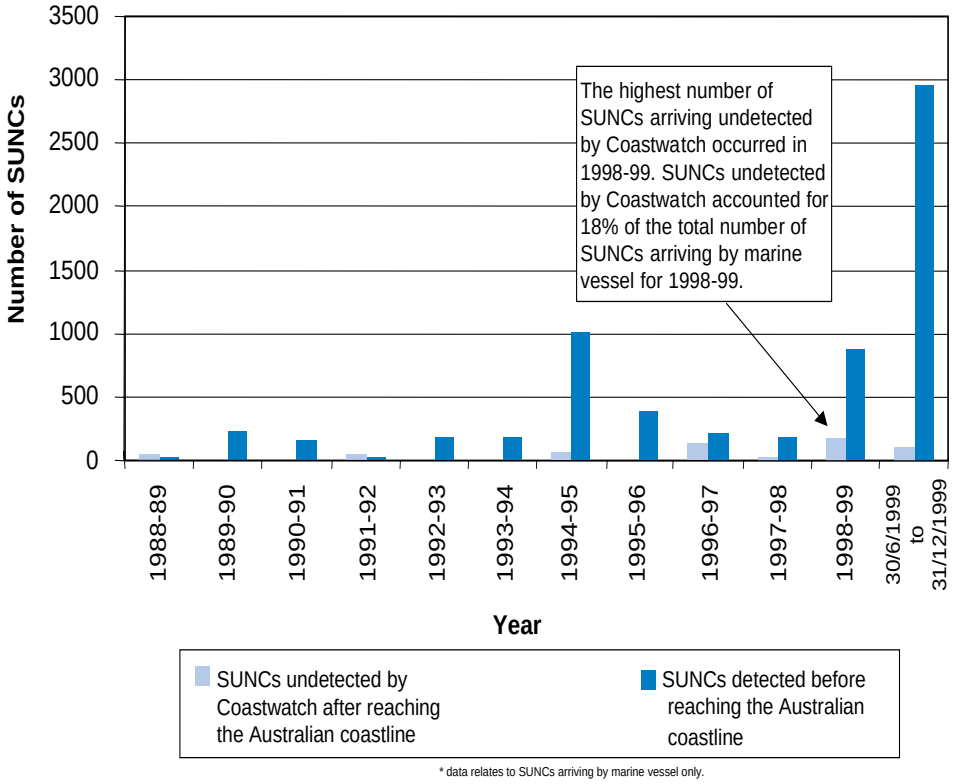
[61] The ANAO notes that between June 1999 and December 1999 there has been a significant increase in the number of vessels attempting to land on the Australian mainland coastline. Coastwatch has detected a significantly higher proportion of these vessels before they have arrived on the Australian coastline in comparison to 1998–1999.

[62] Appendix 4 lists significant Coastwatch-related SIEV events since 1988. Between December 1998 and June 1999 there was a significant increase in the number of vessels arriving on the east coast of Australia.

Figure 9

SUNCs detected by Coastwatch before reaching the Australian coastline and SUNCs undetected by Coastwatch after reaching the Australian coastline 1 July 1988 – 31 December 1999



Source: Coastwatch data

3.4 Figure 9 shows that there was a significant increase in the total number of SUNCs attempting to enter Australia by sea in 1998–99, in comparison to previous years. This is due in part, to the observed increased size and sophistication of the vessels attempting to reach Australia undetected. The Prime Minister's Task Force also noted that increases in the number of SUNCs in 1998–99 were linked with systematic people-smuggling practices.

3.5 Placed in perspective, the total number of detected SUNCs arriving by marine vessel in 1998–99 was 992 compared with 2106 unauthorised air arrivals and 4183 people overstaying Australian Visas. That is, SUNCs arriving by marine vessel accounted for approximately 14 per cent of all unlawful non-citizens in Australia.[63]

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[63] It is noted that between 30 June 1999 and 31 December 1999 there was a considerable increase in the number of SUNCs arriving by marine vessel. This could affect the proportion of SUNCs arriving by marine vessel to those SUNCs arriving by air and overstaying visas for 1999–2000.

3.6 Coastwatch has improved its operational techniques since its inception, but so have its targets. FFVs and SIEVs today can range from simple traditional vessels to large, well-maintained merchant ships carrying the latest navigational equipment. The physical attributes of vessels and the courses that they sail are also varying from previous years, so that patrolling and many other traditional detection methods are unlikely to detect the presence of suspect vessels. These vessels no longer restrict themselves to Australia's north. As noted above, a number of SIEVs have been detected off Australia's east coast and FFVs have been apprehended on the west coast and in the Southern Ocean.

3.7 For Coastwatch to successfully detect increasing numbers of SUNCs, in a changing environment, and to provide services to other client agencies, it must efficiently and effectively manage a variety of assets over which it maintains control. These assets include:

- air assets;
- marine assets;
- communications and intelligence;[64] and
- people.

Air assets

3.8 Coastwatch's air assets provide the following services:

- patrolling sectors of the Australian coastline and adjacent seas;
- deterring breaches of Australian sovereignty;
- reporting relevant surveillance activity;
- assisting Coastwatch marine assets in the apprehension of suspect vessels; and
- providing transport to clients where applicable (the primary role of the contractor helicopter based in the Torres Strait).

RAAF contribution

3.9 Since Coastwatch's inception, successive Commonwealth Governments have decided that the RAAF is to contribute flying hours to Coastwatch. Currently this allocation consists of 250 P3–C Orion aircraft flying hours per year.[65] In addition, other RAAF assets also assist

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[64] The ADF uses the concept of C4I, that is, Command, Control, Communication, Computers and Intelligence, as being a central doctrine in the management of Defence Force assets. The ANAO has adapted aspects of this premise and applied it to its assessment of the civil patrolling and surveillance program.

[65] For 1998–98, this total was consumed by March 1999. However, the RAAF continued to provide assistance to Coastwatch on a user pays basis. The RAAF advised that payment of user-pays charges was waived under the authority of the Ministers for Defence and Finance and Administration.

Coastwatch by reporting unusual activity or responding to a specific Coastwatch request. Figure 10 summarises the costs and features of the P3–C Orion aircraft.

Figure 10

P3–C Orion aircraft statistics

RAAF P3-C Orion Aircraft

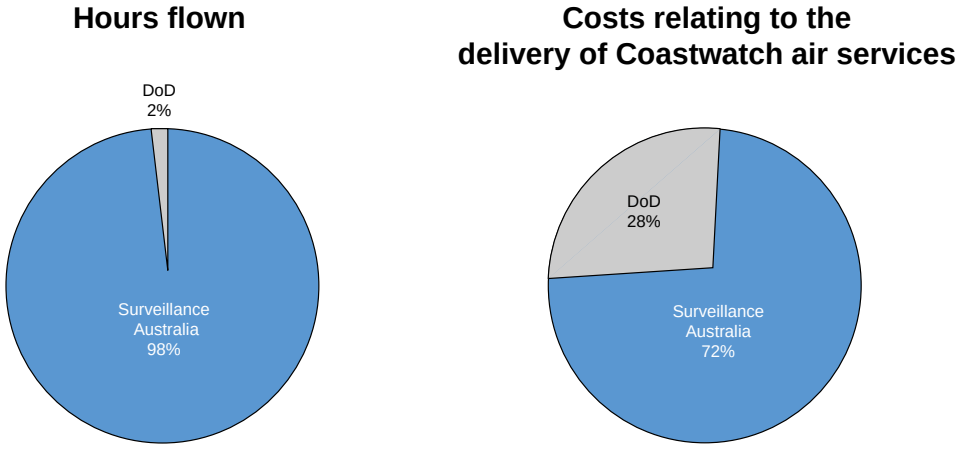
Maximum flying time:	15 hours (2200 nautical miles)
Crew:	7-16
Standard flight time:	8-10 hours
Patrolling and surveilliance capability:	Visual, maritime surface radar and specialist radar equipment
Coastwatch allotment:	250 flying hours per year
Total cost per hour:	$ 44 012 (1998-99)
Total potential allotted cost:	$ 11 003 000 (1998-99)

Source: Department of Defence[66]

3.10 The ANAO noted that there has been discussion amongst stakeholders in the Coastwatch function, on the suitability and use of RAAF assets for the delivery of Coastwatch services. For example, the P3–C Orion aircraft are at least 10 times more expensive than the civilian contractor's aircraft (a broad comparison can be made between Figures 10 and 12). Figure 11 compares relative hours flown and costs for the delivery of Coastwatch services by military and civilian aircraft.

Figure 11

The percentage of costs and air hours flown for Surveillance Australia and Defence in the delivery of Coastwatch services based on 1998–99 costing figures and 250 P3–C flying hours.



Source: Coastwatch and DoD costing figures

[66] It is noted that Coastwatch used 149 hours more than its allotted budget for 1998–99. This meant that for 1998–99 the total cost of Orion Aircraft used in Coastwatch operations was $17.5 million.

3.11 Notwithstanding their greater costs, Orion aircraft are able to provide additional services to those within the capability of civilian contracted aircraft, in part because of specialised military equipment. Orion aircraft are able to fly at higher speeds and for a longer period of time, than Coastwatch's civilian contracted aircraft. RAAF resources patrol Australia's southern ocean and the AAT. Operations in this environment are difficult. However, the RAAF has demonstrated that it has the capacity to successfully identify highly sophisticated FFVs in this environment and to coordinate RAN response and interdiction.

3.12 Defence also makes a significant contribution to Coastwatch as many of the Coastwatch technical positions rely on the occupant having maritime surveillance experience. Often such experience is found in former Defence and Coastwatch contractor personnel. The ANAO sees scope for Coastwatch to examine the cost effectiveness of entering into formal arrangements with Defence on the training, certification and possible exchange of relevant staff for air activities.

Contracted flying

3.13 The majority of Coastwatch flying hours, over 14 000 per year, are delivered by long-term contractors. Surveillance Australia holds the fixed wing contract that forms the largest component of these flying hours. Figure 12 illustrates the types of fixed wing contractor aircraft used to conduct Coastwatch activities.

Figure 12
Surveillance Australia fixed wing aircraft statistics

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, FLIR and HDTV surveillance

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

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

Aero Commander AC500 Shrike	
Number of aircraft:	1
Maximum flying time:	5 hours
Crew:	3
Surveillance type:	day
Surveillance and patrolling capability:	visual

* Two additional Dash 8 aircraft are to be contracted to Coastwatch in 2000 (see paragraph 1.17).

Surveillance Australia Totals	
Total Electronic and visual surveillance per year:	**14 500 hours (1998-99)**
Contract costs per year:	**$ 31.2 million (1998-99)**

Source: Coastwatch

3.14 Currently the Coastwatch rotary wing contract is held by Reef Helicopters. Figure 13 illustrates the rotary wing aircraft used to conduct Coastwatch activities.

Figure 13
Reef Helicopter's rotary wing aircraft statistics

Bell Long Ranger	
Number of aircraft:	1
Range:	200 nautical miles
Crew	1-5
Surveillance and patrolling capability:	Visual
Contracted hours:	1000
Contract cost:	$ 1 385 710

Bell 412 EP*	
Number of aircraft:	1
Range:	360 nautical miles
Crew:	1-9
Surveillance and Patrolling capabilities:	Visual, FLIR, HDTV, Night Vision equipped for passengers
Additional attributes:	Twin engine, large load capacity, quick response time, winch and rappel equipped
Contracted hours:	500
Contract cost:	$1800 per hour, $10 525 standing charge per day

*Helicopter introduced into operation in January 2000

Source: Coastwatch

3.15 Coastwatch can supplement existing fixed and rotary wing services with charter flights from other service providers, on an ad hoc basis. For example, Coastwatch chartered helicopters for ACS Border Management so those Border officers could quickly respond to recent SIEV landings. The ANAO sees considerable merit in Coastwatch continuing the management of charter aircraft on behalf of clients for Coastwatch relevant purposes. Coastwatch has experience in managing relationships with the aviation industry that is not necessarily possessed by clients. In this way clients should continue to receive value for money when dealing with the aviation industry on Coastwatch activities.

Contractor aircrews

3.16 Coastwatch and its clients were generally highly complimentary of the contractor aircrews. The audit team spent some time with the contractor crews and was impressed by their professionalism and enthusiasm for conducting operations, despite some technical difficulties with equipment. A concern expressed by Coastwatch was the level of contractor staff turnover and the need for Coastwatch to continue to

invest heavily in the training of new staff.[67] The ANAO considers that Coastwatch should address this issue when new contracts for the fixed and rotary wing aircraft are let.

Coastwatch helicopter

3.17 The role of the Coastwatch helicopter is significantly different to that of the fixed wing air assets. Principally, the helicopter's role is to pick up and deliver equipment and personnel. Given the topography of the Torres Strait, and the needs of Coastwatch clients, this is an appropriate role for the helicopter. The ANAO acknowledges also that Coastwatch's experience in the tasking of air assets and the maintenance of aircraft contracts is invaluable in ensuring the successful operation of a helicopter in the Torres Strait. While moving people and goods throughout the Torres Strait, the helicopter is able to act as a deterrent by providing a visible presence in the region.[68]

3.18 Coastwatch has investigated the effectiveness of helicopter night vision equipment for use in the Torres Strait. Research conducted by Coastwatch showed that there could be a substantial increase in the effectiveness of Coastwatch operations through the use of this equipment. Following this assessment, ACS purchased night vision equipment for pilot use. This included refitting the Torres Strait helicopter with appropriate equipment for night vision flight. In making this decision the ACS did not fully assess the risks associated with the use of night vision equipment prior to its acquisition.

Tasking of the Coastwatch helicopter

3.19 Given the remote location and the nature of the work carried out by the helicopter, Coastwatch should ensure that rigorous controls are in place to ensure that appropriate taskings are flown. Although Coastwatch National Office staff approve helicopter taskings, the level of documentation produced by Coastwatch and its clients for a tasking is insufficient to ensure that every helicopter flight is appropriate. The ANAO recognises that there should be some operational latitude for the use of the helicopter in the Torres Strait. However, Coastwatch National Office staff should be able to accurately determine the function and nature of each tasking from the documentation provided by Torres Strait Coastwatch staff.

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[67] The ANAO recognises that staff turnover is difficult for the contractors to control given the nature of the aircraft industry and location of their operations. Since Coastwatch entered into a contract with Surveillance Australia in 1995, the contractor advised that staff turnover has averaged 9.75 per cent, although turnover increased in 1998–99. The contractor advised further that other comparable industries had an average staff turnover of 10–12 per cent.

[68] There are a large number of non-Australian citizens who are legally allowed to fish in some Australian waters. These actions are ratified through agreements signed with Papua New Guinea and Indonesia.

Recommendation No.7

3.20 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.

Coastwatch/ACS Comment:

3.21 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.

Assessment of air operations

Contractor performance assessment

3.22 The overall performance of Coastwatch contractors (Reef Helicopters and Surveillance Australia) is assessed using an agreed system specified under their contracts. The current contractor performance measurement system was designed and is monitored by Coastwatch Competency Assessment Training Officers (CATO) in Coastwatch national and regional offices. Overall performance is measured through the following eight factors:

- aircrew performance;
- PFR standards;
- flight departure times;
- serviceability of equipment;
- aircraft/aircrew availability;
- management team performance;
- delivery of invoices; and
- client reports.

3.23 The contractor is provided with monthly measurement reports. These are derived from a combination of Daily Base Status reports, CATO assessments and other elements. A score of 90% equates to full payment of the service fee. A score of 70% will result in the service fee being withheld. Monthly assessments are averaged to provide a quarterly performance score. To avoid financial penalty, the contractor must achieve an average performance score of 90% each quarter. To encourage performance above the contacted level; the contractor can earn bonus points for quarterly performance score above 90%. Bonus points earned

in the two quarters preceding the current quarter can be used to offset performance below 90% in that period. For example, under-performance in the December quarter can be offset with bonus points earned in the September and June quarters. In this way the contractor can avoid a financial penalty for a score below 90% for the quarterly period.

3.24 The performance measurement system was introduced to provide incentives to contractors by improving performance overall. Based on Coastwatch's performance measurement system we found that the aircraft contractors have satisfied their contract performance criteria. The ANAO noted, however, that there may be scope to improve the current performance measurement system negotiated by Coastwatch in two areas:

- Individual flight performance measurement: continually negating under-performance in one area with good performance in another, may allow the contractor to ignore systemic problems in that area. For example, if a radar is not in service for an entire month the contractor does not suffer a penalty for under-performance if it over-performs in other factors or in other flights during the quarter. Consequently, the contractor may be less likely to rectify systemic problems as they are able to make up for under-performance in another area. The ANAO noted that this has occurred in relation to the serviceability of aircraft radar systems.[69]
- Quarterly flight performance measurement: the current contractor performance assessment system does not recognise the importance placed by clients on individual flights, rather it averages all flights for a three monthly period. Consequently poor performance for critical taskings may be negated with good performance for routine taskings. Given the reliance by client agencies on critical tactical taskings the ANAO considers that it is important that a higher performance weighting be placed on critical taskings.

[69] Coastwatch renegotiated aspects of the contractor performance measurement system when contracts for the two new Dash-8 fixed wing aircraft and the new twin engine helicopter were determined. Coastwatch informed the ANAO that previous difficulties in assessing contractor performance, in relation to radar systems, were addressed as part of the renegotiated contract.

Recommendation No.8

3.25 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 incentives, to help ensure cost effectiveness in the delivery of Coastwatch services.

Coastwatch/ACS Comment:

3.26 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.

Marine assets

3.27 Marine assets available to Coastwatch primarily comprise ACVs and FCPBs.[70] These assets are supplemented by privately chartered vessels and other RAN ships on a needs/opportunities basis. The purpose of marine assets, as part of the Coastwatch framework, is to provide a:

- deterrence to illegal activity;
- response platform for client agencies' maritime targets;
- marine based surveillance platform; and
- suitable means of transport for Coastwatch clients, for non-enforcement activities, when no commercial service is available or cost effective.

3.28 Compared to air assets, marine vessels are relatively slow moving and are capable of identifying only a limited number of suspect vessels. However, they do have greater endurance, and the ability to approach and question, and if necessary apprehend, vessels and their crews. Without the ability to carry out these tasks the Coastwatch function is limited. There must be a perception by targeted marine vessels that detection and identification by aircraft will be followed by Coastwatch marine interception.

Australian Customs Vessels (ACVs)

3.29 ACVs comprise a number of vessel types.[71] Figure 14 displays these vessels with associated statistical information:

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[70] The audit did not examine the activities of State-based marine assets, such as water police and fisheries, as they were outside the Auditor-General's mandate.

[71] The ANAO reviewed the operational functionality of all ACS vessels, however we chose only to report upon the Bay Class vessels in detail as all other vessels will be phased out of operational use by the year 2001.

Figure 14
Marine vessels of the National Marine Unit statistics

Minister Class

Number of Vessels:	3 (as at September 1999)
Crew:	6 crew (up to 10 clients)
Patrolling, surveillance and interception capability:	radar, SIEV and FFV interception capability.
Range:	570 nautical miles
Current Status:	to be replaced by new Bay class vessels.

Delphinus

Number of Vessels:	1
Crew:	6 crew (up to 10 clients)
Patrolling, surveillance and interception capability:	radar, SIEV and FFV interception capability.
Range:	1000 nautical miles
Current Status:	to be replaced by new Bay class vessels.

Wauri

Number of Vessels:	1
Crew:	4 crew (up to 8 clients)
Patrolling, surveillance and interception capability:	radar, SIEV and FFV interception capability.
Steaming days per year:	1000 nautical miles
Current Status:	to be replaced by new Bay class vessels.

Bay Class

Number of Vessels:	3
Crew:	up to 8 (up to 8 clients)
Patrolling, surveillance and interception capability:	radar, multiple SIEV and FFV interception capability
Steaming days per year:	see below
Current Status:	3 currently operation. further 5 to be introduced by 2001.

Total steaming days (combined):	900
Total cost:	$ 6 million
Average steaming cost per day:	$ 6 600 per day (for ACV s) (1998-99)
Average steaming cost per day:	$ 13 - 17 000 per day (for Bay Class Vessels) (1998-99)

Source: Coastwatch

3.30 In 1997–98 the ACS placed Coastwatch in its Border Management sub-program.[72] In doing so the ACS moved its NMU into Coastwatch. The ACS advised that this was done to capitalise on the contract management unit that already existed within Coastwatch. In addition, Coastwatch advised that the NMU was also able to examine and utilise technical evaluation concepts and procedures already utilised by

[72] Refer to paragraphs 4.3–4.8 for details of further changes to the Coastwatch structure. Figure 16 shows changes to the Coastwatch structure in a diagrammatic format.

Coastwatch, and to apply these to the NMU. Coastwatch computer-based reporting systems were also readily adaptable for use by the NMU.

3.31 In June 1999, the ACS advised the ANAO that the NMU had been relocated to the ACS Border sub-program. This leaves Coastwatch without direct operational control of any marine vessels. Coastwatch will need to develop appropriate arrangements with ACS Border to access the marine vessels of the ACS Border NMU. The ACS further advised the ANAO that it is currently reviewing the placement of the NMU.

Bay Class Vessels

3.32 The Bay Class vessels (BCV) are a new marine platform introduced in 1999, with many purpose-designed features such as improved range and performance, and an information technology suite that is integrated into the ACS information technology network. In addition, the range and performance of the vessels enables them to service a range of client agency needs. The design and fit-out of these vessels reflects many client requirements, especially those of ACS Border Management, such as the ability of the vessel's boat to search river and coastal areas. When consulting Coastwatch clients, the ANAO received generally favourable feedback on the BCVs. However, clients did express concern in relation to:

- the ability to detain suspect vessels; and
- training of crews.

Detention of suspect vessels

3.33 BCVs have a crew of eight to nine ACS officers. This number of crew may inhibit the ability to place boarding parties on a number of vessels and then to escort these vessels back to an Australian port. In many instances this type of task is currently performed by the FCPBs. However, there is no certainty that a replacement for the FCPBs (which are reaching the end of their operational life) will have the necessary crew numbers to allow the RAN to perform this function. The relative costs of the two types of vessels indicate that it is cost effective to use the BCVs if possible. However, this would be dependent on the particular situation.

3.34 The ACS has advised that the towing of impounded vessels is an ineffective use of BCVs and FCPBs. Further, the ACS stated that previous attempts to use other support vessels have not been successful due to the distances involved, and that the leasing of suitable vessels would not be cost effective. Moreover, with the FCPBs to be phased out over the next few years, it could be opportune for the ACS to examine the cost effectiveness of other types of vessels to supplement existing BCVs and

FCPBs. Vessels that could supplement the BCV and FCPB, could include tenders or barges designed to hold or tow impounded vessels, dependent upon their size. These support vessels could be located strategically to support the operations of the response vessels. Defence has raised this issue of towing vessels with Coastwatch and will be investigating a number of options. The ANAO considers that if viable, the concept of towing of vessels could involve a pilot project that would lease/tender or buy suitable vessels.

Training of crews

3.35 BCV crews are comprised of ACS officers with marine qualifications, as determined by statutory requirements, in conjunction with Customs skills and knowledge. As the BCVs and their crews play a role in assisting Coastwatch with marine interception and response, crews are progressively being trained in the roles and functions of other Coastwatch clients, in a manner similar to FCPB Commanding Officers and Executive Officers. While it is a matter for Government to legislate, where necessary, to give BCV crews the appropriate executive authority, Coastwatch should be prepared to be in a position to act should changes be made. .

Fremantle Class Patrol Boats

3.36 At present the FCPBs are the main marine response and patrolling platform for Coastwatch operations. This is not based on cost efficiency, but on the historical allocation by Government of 1800 patrol boat steaming days, to the civil coastal surveillance program. The average steaming day operating total cost of an FCPB is $61 738, compared to $6 600 for older ACVs, with the new Bay Class vessels costing between $13 000 and 17 000 per day.[73] Apart from the ability to apprehend and detain a larger number of vessels,[74] and the additional capability associated with a small/medium calibre gun, the FCPBs have few comparative advantages over the BCVs. Figure 15 summarises the cost and capabilities of the FCPB.

[73] See Figure 14.

[74] FCPBs are able to apprehend larger numbers of illegal vessels than BCVs due to their larger crew numbers.

Figure 15
RAN Fremantle Class Patrol Boat statistics

Number of vessels:	15
Crew:	up to 23
Patrolling, surveillance and interception capability:	radar, multiple SIEV and FFV interception capability
Range:	AEEZ capable (except far Southern Ocean and AAT)
Coastwatch allotment:	1800 steaming days
Average cost per steaming day:	$ 61 738 (1998-99)
Total potential cost for 1 year:	$ 111 128 400 (based on 1800 days)

Source: Department of Defence

3.37 FCPBs were originally to be phased out of service over the next few years. In 1995–96, the intended replacement for the FCPB was the Off-Shore Combatant. These vessels were intended to be considerably larger, carrying their own helicopter and having a true 'blue water' naval capacity. However, many of these attributes would have made the vessels unsuitable for aspects of Coastwatch work currently undertaken by the FCPBs. From a Coastwatch perspective, the Defence proposal to replace the 15 FCPBs with fewer than six Off Shore Combatants, would not have left a sufficient number of marine vessels to carry out Coastwatch response and patrolling functions.

3.38 A life of type (LOTE) was approved to extend the service life of the FCPBs to approximately 2008. Since the Life LOTE on the FCPBs was approved, Defence has advised that there have been a number of developments, which together indicate that proceeding with the LOTE would not be the best way ahead for the Patrol Boat Force. The cost of the Fremantle LOTE has increased and there are concerns that the LOTE program would not achieve necessary outcomes in a cost effective way. Defence advised further, that Australian shipbuilders could provide suitable patrol and response vessels, built to civilian specifications, quickly enough to remove the need for the LOTE for considerably less cost than building vessels to the more stringent military specifications. The strategy of acquiring patrol vessels built to civilian specifications is currently being explored without prejudicing the LOTE, if the alternative strategy proves not to be viable.

3.39 Defence also stated that consultation on the suitability of replacement functionality for the FCPBs needs to take place between Coastwatch and the RAN. If the LOTE of the FCPBs proceeds, some additional time prior to the FCPB replacement would be available,

however if the LOTE does not continue and an alternative patrol and response vessel is purchased, this matter would require immediate action. Defence further noted that Coastwatch, its clients and Defence should be involved in the replacement for the FCPBs, given that the primary user of this resource is Coastwatch.

3.40 Coastwatch informed the ANAO that it has been involved in negotiations with Defence on the replacement of the FCPBs. Coastwatch has examined the specifications for the proposed replacement vessels and agrees with Defence that they will more than adequately achieve the capability of the FCPBs, and in some respects, exceed those capabilities. Coastwatch went on to state that at all stages of these negotiations, assurances have been given and accepted that the interests of the civil surveillance and response service were being taken into account in any proposed replacement or upgrade program.

Communications and Intelligence

Communications

3.41 Communications are crucial to Coastwatch, at all operational levels, as part of a sound command and control system. The ACS has a structured communications network[75] that involves the use of a national communications centre in Melbourne[76] and the Coastwatch National Surveillance Centre in Canberra. While the national communications centre (Melbourne) is tasked to respond to Coastwatch calls, the National Surveillance Centre (Canberra) is tasked to receive calls from the ACS National Customs Watch alert system.[77] The ANAO sees considerable merit in the National Surveillance Centre (Canberra) managing Coastwatch's surveillance-related calls directly and not having these calls transferred through Melbourne. Additionally, Customs Watch calls (which do not all relate to Coastwatch) could be directed through the ACS national communications centre in Melbourne to the relevant area within the ACS.

3.42 Users of the Coastwatch communication network, including aircraft and FCPB communications operators, noted that the current system does not work at an optimal level. In particular, there is

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[75] ACS has several preferred means of communication. Some of these can be sensitive to various weather and atmospheric conditions.

[76] Voice and secure data communications are directed through the ACS national communications centre in Melbourne.

[77] Customs Watch is a national program run by the ACS as a telephone hotline and encourages the public to report a range of items of interest to the ACS. Only a small proportion of calls are directly of interest to Coastwatch.

considerable difficulty in communicating between Coastwatch's marine and air assets. The ANAO is aware of existing and emergent technologies that satisfy the demands of crews and clients.[78] The Prime Minister's Task Force recommended that Coastwatch acquire a secure satellite-based communication system to facilitate communication between aerial and marine assets. Coastwatch advised that satellite communication equipment should be fitted to all fixed wing aircraft and the new Coastwatch helicopter. This refit program should be completed by December 2000.

Intelligence

3.43 Intelligence is the product that results from the collection, evaluation (and continued re-evaluation), collation, and analysis of information. Information, data, hearsay, rumour and innuendo are not generally regarded as intelligence and action should not be taken until they are analysed as part of a disciplined intelligence process. Intelligence becomes meaningful when it is controlled, focussed, secure, timely, accurate and distributed to consumers. Intelligence, which does not meet these criteria, is likely to hinder rather than advantage the operations of an agency.

The importance of intelligence to the Coastwatch function

3.44 Coastwatch estimates that without prior intelligence, the probability of detecting a SIEV/FFV attempting to breach Australian sovereignty is likely to be low. Therefore, in order to achieve the best results from the Coastwatch program, its operations must be directed by intelligence. This can be demonstrated by taking the existing Coastwatch flying program and applying flying hours equally around the Australian coast. Under these conditions, a Coastwatch plane would pass over any one point on the Australian coastline once every 12 days.[79] Given that a marine vessel, in reasonable to poor condition, can penetrate the AEEZ within a day and the migration zone[80] in a matter of hours, the need for intelligence-driven Coastwatch patrols is clearly apparent.

Client intelligence responsibility

3.45 Coastwatch has advised that it relies on its clients to have a broader and deeper knowledge of their areas of operation than does Coastwatch. The desirability of this situation was recognised by

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[78] Some clients, such as ACS Border Management, are now requesting specific aircraft for operations as they have the communications technologies which clients wish to use.

[79] This is based on Coastwatch air assets as at June 1999.

[80] The migration zone extends 12 nautical miles from the Australian coast.

Government when Coastwatch was established in 1988, and has been reaffirmed by the 1999 Prime Minister's Task Force. The Government, in 1988, directed that it was the responsibility of Coastwatch clients to continue their intelligence collection and analysis programs. The results of these individual intelligence activities were to be used as part of the agency's risk management strategy when requesting use of Coastwatch resources and when submitting taskings.

3.46 The ANAO found that some agencies have invested considerable resources in complying with the spirit of the Government decision. However, other agencies have not perceived themselves as principal Coastwatch clients/stakeholders, and therefore have invested few resources in this process. The ANAO considers that all client agencies hold valuable information that can assist in improving operational outcomes.

3.47 As noted in Chapter 2, the ANAO noted that Coastwatch clients do not use any common methodology in determining their Coastwatch taskings. This results in Coastwatch operational planners not having optimal information available to them when they are determining patrol parameters. An improved system would see all client agencies using a similar, quality-controlled methodology in preparing their submissions for Coastwatch resources.

Coastwatch's intelligence role

3.48 Within the current Coastwatch system, Coastwatch has both explicit and inferred intelligence roles. The explicit intelligence roles consist of:

- tactical analysis of vessels;
- certification that a designated patrol area is clear of target vessels;
- surveillance of vessels on client request; and
- interception of target vessels as directed by clients.

3.49 The inferred intelligence roles consist of:

- using the skills and knowledge of Coastwatch staff to moderate the demands of various clients, who have used varying risk management techniques when submitting taskings to Coastwatch;
- Coastwatch staff attempting to fill an intelligence void created by some agencies; and
- clients assuming that Coastwatch can detect all targets of interest in enough time for the client agency to take appropriate action.

3.50 The difficulties associated with the provision of intelligence by clients to Coastwatch for Coastwatch related purposes has been highlighted in a number of reports on Coastwatch since 1992, most recently by the Prime Minister's Task Force. The ANAO considers that Coastwatch would have been in a position to improve its operations if the ACS and other relevant Commonwealth agencies had fully implemented the recommendations of the earlier reports.[81]

An integrated approach to Coastwatch intelligence management

3.51 The intelligence framework established for Coastwatch has not worked as efficiently and effectively as originally anticipated.[82] As discussed previously, this is due principally to client agencies employing various methods of assessing risk when requesting Coastwatch resources. The moderation of these taskings by Coastwatch has in most cases produced the desired outcomes sought by the client agency.[83] However, the ANAO has been informed by Coastwatch that it does not receive all relevant intelligence from clients/stakeholders. The Prime Minister's Task Force recommended that Coastwatch should be given increased ability to collect and analyse intelligence to improve the management of Coastwatch-related intelligence information.

3.52 The ANAO considers that in addition to the Prime Minister's Task Force recommendations, Coastwatch could further improve its intelligence processes by reviewing the cost effectiveness of:

- client agencies providing Coastwatch with information, which is not currently available to Coastwatch;[84] and

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81 For example, Australian Customs Service, Department of Immigration, Local Government and Ethnic Affairs, Australian Quarantine and Inspection Service: Australian Customs Service, Coastwatch, *Report on Investigation into arrival of Suspect Illegal Entrant Vessel (SIEV) into Montague Sound*, February 1992. Coastwatch Post incident Review, Arrival of the Chinese Vessel 'Min Ping Yu no.8' Coburg Peninsula December 1998. Air Vice Marshal Alan E. Heggen AO, *Independent Inquiry into Circumstances Surrounding The Arrival Of Suspected Illegal Entry Vessels Near Cairns, North Queensland And Nambucca Heads, New South Wales March/April 1999*, April 1999.

82 This is evident from the results of numerous internal and external inquiries into Coastwatch, including the 1999 Prime Minister's Task Force.

83 Coastwatch client surveys state that clients have traditionally been highly satisfied with Coastwatch services.

84 For example, AFMA knows the location of the Australian fishing fleets, as Australian fishing vessels are fitted with transponders. The transponders emit an electronic signal which enables AFMA to identify individual vessels. If Coastwatch had access to this information it would be able to eliminate those vessels from its patrolling patterns. It is also possible that Coastwatch could liaise with the Australian fishing fleets in requesting them to report any suspect vessel movements in their areas of operation. The ACS has advised that it plans that the NSC could significantly enhance communication links with client agencies.

- using computer-generated operational modelling of possible surveillance and response scenarios to train and operationally exercise Coastwatch staff.

Recommendation No.9

3.53 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.

Coastwatch/ACS Comment:

3.54 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.

Human resource management and training

3.55 Like many other organisations, Coastwatch places significant reliance on its people to achieve its goals. Coastwatch does not have direct managerial control of many of those responsible for providing services to Coastwatch clients. Aircrews are the responsibility of either the civilian contractors or the RAAF, while the RAN manages FCPB crews. In addition, ACS Border Management directly manages the crews of the ACVs, leaving Coastwatch with the responsibility of managing its national and regional staff. Coastwatch staff in regional offices are managed using a matrix management system[85] through ACS regional offices.

3.56 The ANAO observed varying outcomes as a result of the management regimes applied to staff undertaking Coastwatch functions. The principal advantage of using outsourced staff, provided through either contractors or Defence, is that Coastwatch can contract for a level of expertise and experience without having to directly manage the staff. However, Coastwatch cannot directly recruit, develop, reward or terminate the employment of these staff. This can result in a loss of management control of some staffing issues. In order to moderate some

[85] The ACS matrix management system uses a combination of staff being administered nationally or regionally in any location, depending upon their classification and the type of duties that they perform.

aspects of these staffing issues, principally in the area of quality control, Coastwatch employs a number of CATOs. However, the ANAO would support any other cost effective initiative that Coastwatch may explore in quality assuring operational staff.

Competency Assessment Training Officers

3.57 CATOs are specialist ACS officers who have extensive backgrounds in aspects of aircraft operations and related training. They are employed by Coastwatch for these particular skills and are not subject to the normal ACS job rotational policy. Current roles of CATOs revolve around the training and certification of the civilian contracted aircrews. Coastwatch has a target of placing CATOs on 15 per cent of contractor flights to ensure that contract standards specifying levels of crew professionalism are met. CATOs also produce training manuals that are used by contractor aircrews.

3.58 The ANAO sees considerable merit in the CATO system. Some CATOs are located in National Office, and others in regional offices. All CATOs travel to centres of Coastwatch air operations to evaluate contractor aircrews, so that no single CATO can be perceived to be building an unhealthy relationship with individual aircrews. This reflects sound judgement on the part of Coastwatch and appears to have worked. The ANAO notes that four additional CATOs will be recruited as a result of the Prime Minister's Task Force. These officers will significantly enhance Coastwatch's training and quality assurance capability.

Training of Coastwatch staff

3.59 The ANAO sees advantage in extending the use of CATOs, or other appropriate personnel, to other aspects of Coastwatch operations. This could also involve their being used in an annual technical certification process for Coastwatch planning and operational staff to ensure that their skill levels remain high. They could also have an important role to play in advising FCPB and P3–C Orion crews on Coastwatch operational standards and procedures.

3.60 In order to assure that CATOs, or other appropriate personnel, possess appropriate skills and knowledge, Coastwatch should arrange technical quality assurance checks of these personnel. Subsequent to the introduction of any certification system, Coastwatch should develop procedures to manage those officers who did not meet the required standard.

Recommendation No.10

3.61 ANAO recommends that Coastwatch undertake technical competency evaluations of Coastwatch operational staff on an annual basis to ensure staff possess appropriate skills and knowledge.

Coastwatch/ACS Comment:

3.62 The ACS **agrees** with this recommendation.

4. Aspects of Corporate Governance

This chapter discusses the corporate governance of the Coastwatch sub-program. In particular, the ANAO examined the Coastwatch structure, external reporting practices, collection and analysis of performance information, and its application of better practice risk management techniques.

Introduction

4.1 The establishment of a robust corporate governance framework is essential to ensure the efficient and effective operation of the Coastwatch function.[86] Sound corporate governance ensures accountability in decision-making as well as allowing Coastwatch, its key clients and external service providers to determine and analyse the success of Coastwatch operations. The ANAO identified five principal areas that are relevant to the corporate governance of the Coastwatch function. These are Coastwatch's:

- position within the ACS corporate structure;
- risk management approach;
- performance information;
- benchmarking practices; and
- external reporting.

4.2 In addition to the five areas outlined above, the ANAO considered, as appropriate, the better practice corporate governance principles outlined in Appendix 6.

[86] See Chapter 1 Coastwatch Overview for a description of the Coastwatch function.

Coastwatch's position within the ACS corporate structure

The changing nature of Coastwatch's status within the ACS since 1988

4.3 When Coastwatch was established in 1988, the then Government recognised the importance of establishing Coastwatch as a semi-autonomous branch of the ACS, to facilitate client participation within the broader Coastwatch function.[87] In particular, the then Government specifically outlined Coastwatch's structure, position within the ACS, and funding arrangements.[88] In 1988, the then Government provided the ACS with additional funding for a new Coastwatch management structure, including two new senior management positions. These positions were the National Manager of Coastwatch and Assistant National Manager of Coastwatch.[89] Under this structure the National Manager of Coastwatch was directly accountable to the Deputy Chief Executive Officer of the ACS (see Figure 16 Diagram 1).

4.4 In 1997–98 Coastwatch was assimilated into the Border Management sub-program of the ACS. This meant that the National Manager Coastwatch reported directly to the National Manager Border Management sub-program (see Figure 16 Diagram 2).[90] The ACS also reclassified senior level Coastwatch staff, between 1988 and 1997. With regard to Coastwatch, the position of National Manager Coastwatch was downgraded (from an SES Band 2 position to an SES Band 1), while the Assistant National Manager's position was abolished. Figure 16 Diagram 2 (light blue boxes) shows the changes to Coastwatch after it was incorporated into the ACS' Border Management sub-program.[91]

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87 The decision to establish Coastwatch as a semi-autonomous branch of the ACS was made following the then Government's consideration of the *Northern Approaches* report by Hugh Hudson which advocated a totally independent agency to undertake the Coastwatch function (see Appendix 1 for a brief history of Coastwatch).

88 The ANAO noted that the majority of Coastwatch funding came from other Commonwealth agencies with a requirement for civil patrolling and surveillance services. This transfer of funds and functionality from client agencies to the ACS, gives client agencies a degree of 'ownership' of the Coastwatch function.

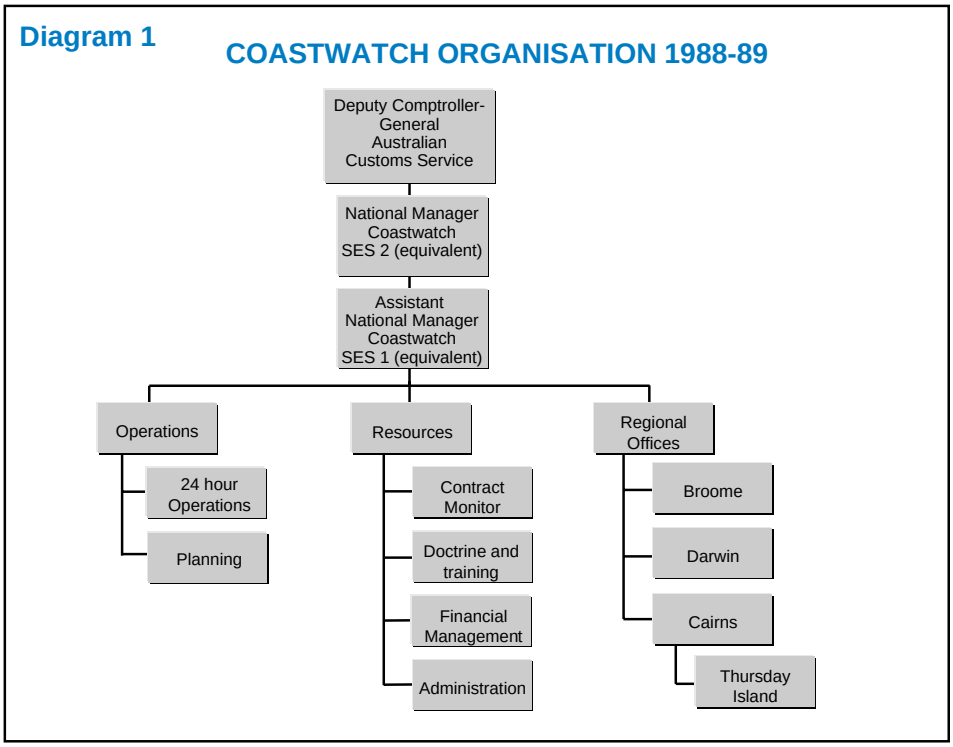
89 The National Manager of Coastwatch position was designated at the then SES Level 3 position. This position is equivalent to the current SES Band 2 position. The Assistant National Manager of Coastwatch was designated at the SES Level 1 position. This is equivalent to the current SES Band 1 position.

90 The ANAO noted that the movement of Coastwatch into Border Management had the potential to create a perceived conflict of interest between Coastwatch management (who were directly accountable to the management of Border Management) and Border Management (as a client of Coastwatch).

91 The ACS advised that there were substantial reductions in staff since 1988 and a significant reduction in the total number of SES officers in the agency. Further, the ACS stated that they have been required to achieve savings under recent Governments.

Figure 16

Diagrams 1–3 changing structure of Coastwatch 1988–89 – 1999–2000



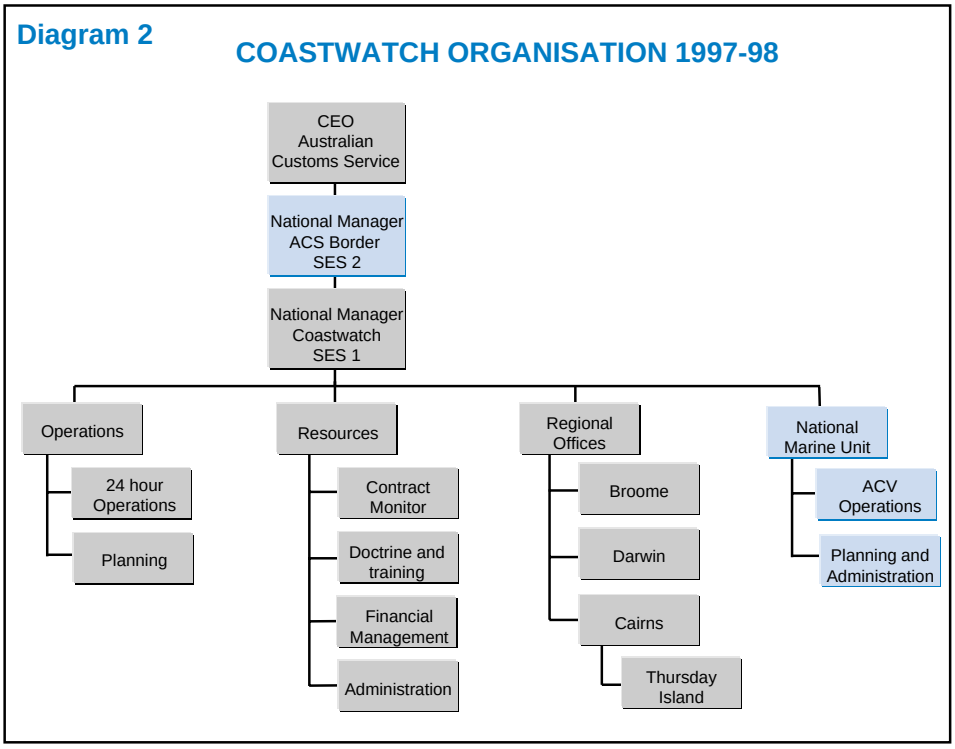
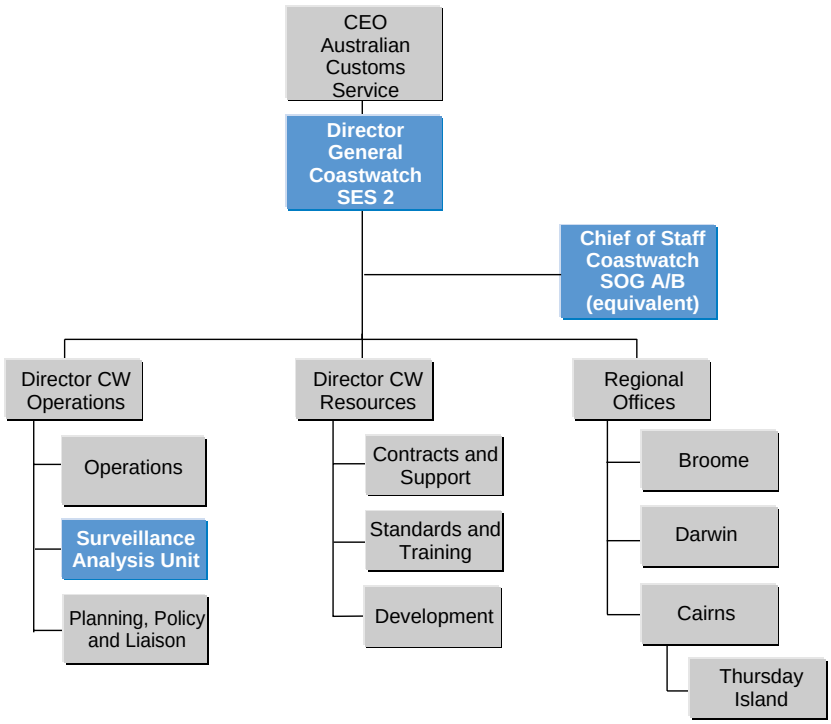


Diagram 3 **COASTWATCH ORGANISATION 1999-2000**



National issues concerning the Coastwatch corporate structure

4.5 The ANAO noted that the movement of Coastwatch into the ACS' Border Management sub-program, and the associated accountability of the Coastwatch national management to the National Manager of Border Management, was not congruent with Hudson's[92] concept of independence or semi-autonomy (see Figure 16 Diagram 2). That is, the accountability of Coastwatch management to ACS Border management had the potential to create a perception that the ACS Border Management sub-program was able to exert influence over Coastwatch in a capacity unavailable to other client agencies. Conversely, the Border Management sub-program may have been disadvantaged in Coastwatch resource bidding processes, as Coastwatch did not want to be perceived by other clients as providing an unfair advantage to the Border Management sub-program in the tasking of Coastwatch assets.

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[92] Hugh Hudson noted in his Report *Northern Approaches* that *'In order to secure full cooperation and support from "user" departments, it is vital that the agency be seen by the major users as "their" agency and not the full prerogative of the "rationing" department.'* Hugh Hudson's *Northern Approaches* is further discussed in Appendix 1.

4.6 In 1999, the Prime Minister's Task Force re-affirmed the importance of Coastwatch's independent profile within the ACS. In particular, the Task Force recommended that the decision to assimilate Coastwatch into the ACS' Border Management sub-program be reversed as it did not promote the perception of an independent civil surveillance and response function. The measures taken by the ACS and Defence resulting from recommendations made by the Prime Minister's Task Force, included:

- upgrade the position of National Manager Coastwatch (SES Band 1) to Director-General Coastwatch (SES Band 2);
- have the Director-General Coastwatch directly accountable to the Chief Executive Officer ACS; and
- appoint a senior ADF officer as Director-General.[93]

4.7 The ANAO notes that Coastwatch has to maintain the perception of independence by upholding the distinction between itself and its key clients. This includes the ACS' Border Management sub-program. The implementation of the recommendations of the Prime Minister's Task Force will promote the perception of a semi-autonomous or independent Coastwatch.

4.8 Interviews conducted by the ANAO with key Coastwatch clients indicated that all were either concerned, or were unaware, that Coastwatch had undergone a restructuring process in March 1988.[94] The ANAO considers that clients should be made aware of the recent changes to the corporate structure of Coastwatch made as a result of the Prime Minister's Task Force, and the potential impacts those changes may have on the decision-making processes affecting Coastwatch. The changes made by the ACS and Defence to Coastwatch's corporate structure (in accordance with recommendations made by the Prime Minister's Task Force) are illustrated in Figure 16 Diagram 3.

Regional issues concerning the Coastwatch corporate structure

4.9 Coastwatch operations centres in Darwin, Broome, Cairns and Thursday Island have different regional office structures, dependent on the staffing and other resource requirements of that particular region. For example, Coastwatch in Cairns has a larger number of staff than Thursday Island, as it is responsible for coordinating a larger number of Coastwatch-tasked assets. Although the ANAO recognises the necessity

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[93] The resulting organisational changes can be seen in Figure 16 Diagram 3.

[94] The ANAO acknowledges that Coastwatch clients attending an OPAC meeting in March 1998 were informed of some changes to Coastwatch's corporate structure.

of adapting to specific environmental and resource requirements, we note that the ACS did not appear to employ a consistent approach to staffing the Thursday Island regional office commensurate to workload.

4.10 The ACS stated that there has been a degree of difficulty in reconciling the amount of resources in some Coastwatch regional offices with workload of those offices.[95] For example, at the time of the audit, Coastwatch staffing in the Thursday Island office was limited to a single officer. These officers are responsible for the relevant management of two aircraft and the Coastwatch helicopter (an additional helicopter is to be provided following the Prime Minister's Task Force recommendation). The ACS agreed with the ANAO's assessment of the level of resources on Thursday Island and has allocated additional resources to Coastwatch's Thursday Island operation centre.

4.11 The ANAO noted an instance where an ACS officer exercised Border Management and Coastwatch responsibilities in an important functional area. In this situation, the ANAO recognises that there could be a potential conflict of interest between his Border Management duties (as a Coastwatch client) and Coastwatch duties. The ANAO noted that the ACS should ensure that officers with both ACS Border Management and Coastwatch responsibilities, have clearly defined and segregated duties, to prevent conflicts and to maintain the perception of Coastwatch's independence. Corporate governance requirements should be clear, so that individual officers bear little or no apparent conflict in their duties and/or responsibilities.

Risk Management

Context

4.12 The operational use and location of Coastwatch-tasked aircraft and marine vessels (Coastwatch assets) is important to the successful delivery of Coastwatch services and the protection of the Australian coastline and AEEZ. As Coastwatch has a limited number of assets to cover a large coastal and offshore maritime area (see paragraph 1.22), the use of risk management methodology to classify and rank operational objectives (and therefore determine optimal use of assets), is integral to effective service delivery.

[95] This is due in part to the location difficulties and costs associated with locating staff in remote regions (such as Thursday Island in the Torres Strait).

Development of risk management methodology in Coastwatch

4.13 In 1989–90, Coastwatch identified the use of risk management techniques to determine where its assets should be placed to best fulfil client requirements for its services. In the subsequent years 1990–91 and 1991–92, the development and maintenance of risk assessment techniques were primary objectives of Coastwatch.

4.14 The review of Coastwatch risk management methodology was due in part, to SIEV landings in 1991. Following the illegal landing of 56 people by boat at Montague Sound (see Appendix 4), in late December 1991, the ACS, DIMA and AQIS investigated why this SIEV was not detected before reaching the Australian mainland. The report concluded that because of the size of the Australian coastline, good intelligence and a clear risk analysis methodology must be used to determine the best placement of Coastwatch assets to detect SIEVs. A subsequent review of a similar incident in 1998 also recognised that Coastwatch should adopt more comprehensive risk analysis techniques regarding the flight patterns and placement of Coastwatch aircraft.

4.15 In response to these internal reviews, between 1991 and 1999, Coastwatch developed limited risk assessment documentation. However, the ANAO noted that this documentation did not appear to have direct practical application to the provision of Coastwatch services, as recommended in the 1991 internal review of Montague Sound and subsequent incidents.[96]

4.16 The ANAO noted that Coastwatch and its key clients, despite recommendations made in internal reviews, had not undertaken a comprehensive analysis of risks affecting client-tasking priorities. Consequently, the prioritisation of tasks by Coastwatch staff is based on 'corporate knowledge and experience'[97] of perceived risk, rather than systematic, risk analysis processes. At present, many operational decisions made by Coastwatch staff are based on the Coastwatch *Standard Operating Procedures* manual. Although this manual provides specific guidance relating to the day to day administration of Coastwatch operations, it does not provide clear guidance on important decision-making processes such as the ranking and prioritisation of client taskings (see Chapter 2).

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[96] See Appendix 2.

[97] Coastwatch 'corporate experience' has been acquired over a long period of time, by experienced officers and clients.

Risk management and the tasking of Coastwatch assets

4.17 Risk management can be applied to all areas of Coastwatch administration. However, the ANAO considers that the tasking of Coastwatch assets is a priority area for the strengthening of risk management controls and processes. In particular, we see additional value being added through the:

- assessment of the priorities clients assign to taskings. Coastwatch requires clients to classify their taskings as either a 'high', 'medium' or 'low' priority. At present, there is no standard methodology for agencies to classify or rank tasks. Coastwatch could develop guidelines for clients, based on risk management methodology, to provide consistency in prioritising tasks; and
- standardisation of Coastwatch's task ranking methodology. Although Coastwatch requires clients to assess the priority of their tasks (as outlined above), Coastwatch ultimately determines the relative operational importance of each task. For example, a low priority DIMA task may receive a higher priority from Coastwatch than a task rated by AFMA as a high priority (see paragraph 2.9).

4.18 There are several advantages for Coastwatch and its clients in improving risk management processes in relation to the tasking methodology. Firstly, there will be an increase in the transparency of the tasking process. This could improve client confidence in the tasking process as clients are better able to examine Coastwatch's rationale for determining tasking priorities. Secondly, Coastwatch would be better placed to justify the decisions behind the tasking of assets when an incident occurs (for example a SIEV arriving on the Australian coastline undetected by Coastwatch).

4.19 A comprehensive risk management system could also be used to identify, and determine the importance of, key performance indicators critical to the achievement of Coastwatch's overall objectives (see Appendix 5). By linking prioritising risks to critical performance indicators, Coastwatch management should be able to emphasise the importance of each critical indicator and determine an overall performance 'score' (see paragraph 4.47–4.49).

4.20 The ANAO has reviewed the ACS' risk management framework in a previous audit[98] and found that the ACS has developed a risk management framework. The ACS risk management framework would provide Coastwatch with a strong basis on which to review its risk management processes.[99]

Recommendation No.11

4.21 The ANAO recommends that Coastwatch adopt 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 used in developing a credible performance measurement and/or assessment system.

Coastwatch/ACS Comment:

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

Performance Information

4.23 Comprehensive, timely and accurate performance information is critical to the effective planning and implementation of Coastwatch services. When operating at an optimal level, Coastwatch performance information systems should assist management and clients in making objective decisions about the planning, operations and tasking of Coastwatch assets. Coastwatch performance information systems should also assist management in the identification and prioritisation of risks, and be an integral input into a broader risk management strategy.

4.24 In assessing Coastwatch's performance information, the ANAO examined the:

- relevance of performance information developed by Coastwatch;
- validity of performance information;
- use of Coastwatch information technology systems to extract performance information;

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[98] Australian National Audit Office, Audit Report No. 6, *Risk Management in Commercial Compliance – Australian Customs Service*, October 1997.

[99] The ANAO notes that Coastwatch did produce a *Coastwatch Strategic Risk Management Plan, 1999.* However this document provided only a broad assessment of Coastwatch's risks and has not been applied to all areas of Coastwatch operations.

- use of a balanced scorecard approach to performance measurement; and
- ACS' external reporting practices in relation to Coastwatch's performance.

Relevance of performance information developed by Coastwatch

4.25 Measuring Coastwatch's overall performance is difficult considering the number of clients it services, the variety of tasks it undertakes and the number of external factors outside of its immediate control. Therefore, it is important that Coastwatch collect information relating to a range of performance indicators reflecting the various service requirements of all clients. It is also important that Coastwatch provide a full explanation of external factors that may affect performance indicators, so that performance information remains contextually relevant.

4.26 An example of a key performance indicator that should be interpreted in context is the number of SIEVs/FFVs detected by Coastwatch assets.[100] Although the number of SIEVs/FFVs detected by Coastwatch is readily determined from PFR information, it is difficult to ascertain the exact cause of increases or decreases in SIEV/FFV detection's without additional qualifying information. Factors that have a bearing on SIEV/FFV numbers detected by Coastwatch include:

- the actual number of SIEVs/FFVs travelling to Australia;
- the quality of information/intelligence received from client agencies;
- the aerial and maritime routes undertaken by Coastwatch assets;
- weather conditions affecting Coastwatch assets; and
- Coastwatch resource levels.

4.27 Ideally, the best measure of the success of Coastwatch's ability to detect SIEVs/FFVs would be a count of the number of illegal vessels undetected. However, it is not possible to gather information relating to this performance measure. Therefore, Coastwatch relies on SIEV/FFV detection rates in conjunction with other performance indicators and intelligence information as an indicator of the success of Coastwatch activities. Performance indicators such as the detection of SIEVs/FFVs are not meaningful in isolation, but can be useful in assessing performance if used in context within a broader performance management framework (see paragraph 4.47–4.49).

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[100] See Appendix 5.

Coastwatch performance information practices

4.28 Coastwatch has established a strategic framework (known as an 'action plan') that links its performance indicators to its four primary objectives. The ANAO notes that the Coastwatch action plan provides a reliable base upon which Coastwatch could seek to include additional measures to aid in the measurement of its performance (see paragraph 4.35–4.37).

4.29 In 1997–98, Coastwatch performance reports show that it met the majority of objectives reported against using key performance indicators outlined in the Coastwatch action plan. However, a number of the performance indicators outlined in the Coastwatch action plan were not reported upon regularly in either Coastwatch internal reports, the ACS Annual Report or the Portfolio Budget Statements (PBS).[101] The ANAO considers that if Coastwatch gathers information on particular performance indicators, then the results should be reported to Coastwatch management and/or clients through an appropriate reporting mechanism.

Coastwatch key performance indicators

4.30 As noted in paragraph 4.25, it is important that Coastwatch's key performance indicators reflect critical aspects of its clients' surveillance and response requests. However, Coastwatch places a higher emphasis on the tasks of some agencies over others (see paragraph 2.9). This emphasis is reflected in the collection of information for performance reporting purposes. That is, the majority of Coastwatch's key performance indicators relate to DIMA and AFMA-related events.

4.31 To provide an accurate measure of overall performance, Coastwatch needs to measure the success of its delivery of surveillance and response services to all key client agencies. As outlined in Figure 5, Coastwatch collects and distributes data for all client agencies for statistical purposes. However, much of this information (for example the information collected for EA, and GBRMPA) is not used by Coastwatch to assess its own performance. Therefore, there is merit in Coastwatch investigating the advantages of using information collected for all client agencies to assist in determining overall performance.

[101] For further details on the ACS Annual Report and the ACS PBSs, see paragraphs 4.62–4.66.

Recommendation No.12

4.32 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.

Coastwatch/ACS Comment:

4.33 The ACS **agrees** with this recommendation.

Validity of performance information

4.34 Coastwatch can obtain relevant information from a number of sources to determine its overall performance. These information sources include:

- Defence flight and sailing reports;
- feedback from OPAC;
- NMU sailing reports;
- PFRs from contractor fixed wing and rotary wing aircraft;
- post flight client surveys; and
- biannual client surveys.

4.35 All of these data sources provide relevant and reliable data that can be used by Coastwatch and its clients in making informed decisions about surveillance and response activities. However, the majority of information used to assess Coastwatch performance comes from the qualitative data obtained from biannual Coastwatch client surveys and the principal air contractor's post flight information (see Figure 5). Both of these sources of information provide timely, comprehensive and accurate performance information, if used effectively.

Post flight questionnaires

4.36 Clients often board Coastwatch-tasked flights and marine craft as observers and/or to familiarise themselves with Coastwatch activities. After each flight, client agency officers complete an evaluation form to assess crew performance. This information is currently used to assess contractor performance. However, the ANAO sees scope for including this information as part of an overall assessment of Coastwatch performance, as it represents a continuous source of client feedback on Coastwatch activity.

Biannual questionnaires

4.37 The ANAO recognises Coastwatch's continuing efforts in seeking to establish a formal feedback mechanism for its clients. Twice a year, Coastwatch clients complete evaluation forms on Coastwatch's overall performance relating to long and short-term tasking of Coastwatch assets. Client agency surveys show that Coastwatch clients have been generally satisfied with Coastwatch performance for a number of years. However, we note that Coastwatch did not undertake its usual client surveys for 1999.

Recommendation No.13

4.38 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.

Coastwatch/ACS Comment:

4.39 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.

Post Flight Reports from the principal aerial contractor

4.40 The majority of information used to assess Coastwatch performance comes from the principal air contractor's post flight information. PFR information is provided in an electronic format by the principal air contractor, and allows Coastwatch to extract statistical information about individual contractor flights. This information is provided in an electronic format and represents the majority of quantitative data collected by Coastwatch. The ANAO views this type of information as having a high degree of accuracy and as a reliable source upon which performance information can be based. However, unless PFR data is easily extracted, analysed and interrogated, it cannot be used to provide quality management information to clients and Coastwatch. At the time of the audit Coastwatch computer systems did not allow easy extraction of data useful in measuring Coastwatch performance. Coastwatch advised the ANAO that measures are in place for the introduction of a replacement information technology system, which should provide an efficient means of extracting Coastwatch data.

Use of information technology systems in assessing Coastwatch performance information

4.41 The collection and interrogation of Coastwatch PFR data is an important means of providing Coastwatch clients with valuable information. The most efficient and effective way to extrapolate this information is through computer-based data analysis tools. The Coastwatch computer system should provide accurate and accessible information that is easily analysed, so that it aids client decision-making processes.

4.42 The current Coastwatch computer system comprises four individual packages, each providing a different function for examining and disseminating PFR data collected by fixed wing contractor flight crews. These computer packages include the following:

- ADABAS: the central flight statistics database in the Coastwatch system used to collate data collected by the principal contractor's aircrews.
- COGIS (Customs Operational Geographic Information System): provides Coastwatch operations officers and clients with a graphical display of flight routes and marine vessel detections. The data used by COGIS is collected electronically by the principal contractors' flight crews and is down-loaded directly into the COGIS.
- Connect: a document handling system used to sort, interrogate and categorise PFR information.
- TRS: a search engine used by Coastwatch operations officers to locate data from the ADABAS database.

4.43 At present Coastwatch computer systems can only analyse flight report data collected from principal contractor fixed wing aircrews. The ANAO noted that a major limitation of this system is its inability to process data collected from other information sources as outlined in paragraph 4.34. This includes data from the following:

- Defence assets. Data collected by FCPBs and P3–C Orions is currently collated and analysed at Defence facilities and presented to clients at the OPAC forum.
- NMU vessels. All relevant NMU vessel data is processed within the NMU and is presented to key clients at OPAC.
- Rotary wing assets. Flight reports produced by Reef Helicopters are kept in hard copy format and are not entered into the Coastwatch information system.[102]

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[102] Coastwatch informed the ANAO that with the introduction of the new Bell 412EP helicopter (see Figure 13), PFR data from rotary wing assets will be entered into the Coastwatch IT system in a similar manner to fixed wing aircraft.

4.44 All information collected by Defence assets supporting civil surveillance and response operations, NMU vessels and Coastwatch tasked rotary wing aircraft, should be transferred in a timely manner into the Coastwatch database for immediate distribution to clients and analysis by the National Surveillance Centre.[103] By including this data on the Coastwatch system, more complete and accurate statistical and performance information will be generated.

Extraction of performance information from the Coastwatch database

4.45 The current Coastwatch computer system, while able to produce individual PFR information for clients in a timely manner, is unable to produce relevant and reliable collated PFR statistics. Collated PFR information is useful in compiling statistics used to determine performance information and in trend analysis. It is also useful for other aspects of an effective management information system, such as Coastwatch operations modelling.

4.46 At present all statistical information used in the compilation of critical performance indicators is manually compiled by Coastwatch officers. This is accomplished by Coastwatch staff manually counting specific incidents relevant to particular indicators (for example the number of SIEVs and FFVs detected by contractor aircraft). Given the large quantities of data collected by Coastwatch, the Coastwatch computer system should be able to process this information in a timely manner. The manual compilation of Coastwatch statistics is not an efficient and effective use of limited Coastwatch resources and is more likely to produce spurious or inaccurate results. As noted previously (see paragraph 4.40), Coastwatch is in the process of updating and integrating its computer systems to provide the capability required to conduct timely and accurate analysis of PFR information. This will assist Coastwatch in the timely compilation of performance information to assess its overall performance. A useful management tool to assess overall performance information is a balanced scorecard.

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[103] See paragraph 1.17 for details on the establishment of the National Surveillance Centre in accordance with the recommendations made by the Prime Minister's Task Force.

A balanced scorecard approach to performance measurement

4.47 The ANAO noted that, although Coastwatch has developed a computer system and a performance measurement framework that links performance information to strategic goals, it does not compile and analyse performance information on a routine basis, that is, monthly or quarterly. Therefore, there is limited performance information available on a timely basis to Coastwatch management upon which to base decisions. Furthermore, Coastwatch has not recently reviewed current performance indicators to assess their appropriateness.

4.48 Coastwatch has stated that it will undertake a review of performance information as part of the introduction of the new information technology system. In undertaking this review of existing performance indicators Coastwatch could use a risk management methodology to assess/ rank performance indicator importance. The ANAO considers that the adoption of a balanced scorecard approach[104] to assess Coastwatch's strategic performance would provide a more comprehensive means to report on Coastwatch's overall performance. A balanced scorecard is a performance management tool which combines assessments of a range of operational features such as financial performance, learning and innovation, internal organisational processes (for example staff surveys) and customer satisfaction to determine an organisation's overall performance. As noted in paragraphs 4.25–4.27, reliance on individual performance indicators to measure Coastwatch's overall performance may lead to inconclusive or misleading results. A balanced scorecard moderates the misleading effects of individual performance indicators, by basing overall performance on a combined weighted score of all key performance indicators. Determination of an overall score for Coastwatch's performance would provide a sound base upon which subsequent reporting periods can be compared.

4.49 The ANAO acknowledges that it will take time and resources for Coastwatch to develop a comprehensive and meaningful balanced scorecard that enhances key management perspective's relating to financial, customs, internal processes, and learning and innovation. Therefore, Coastwatch should have a long-term goal of implementing a comprehensive balanced scorecard that combines a broad range of relevant performance measures to determine its overall performance.

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[104] The ANAO considers that a balanced scorecard approach that relates a number of critical performance indicators back to an organisation's overall strategic objectives, gives an accurate representation of that agency's performance.

Recommendation No.14

4.50 The ANAO recommends that Coastwatch consider the development of 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.

Coastwatch/ACS Comment:

4.51 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.

Benchmarking

4.52 A means of establishing operational standards to ensure the quality of Coastwatch operations is to benchmark performance against similar authorities or programs. In Coastwatch's case, a system of benchmarking has the additional benefit of identifying new technologies and patrolling methods that may not have been used or trailed in Australia. During the audit, the ANAO considered the delivery of surveillance and response functions similar to those of Coastwatch in a number of comparable countries. Details of the functions and assets of Coastwatch-like organisations in three of these countries are summarised in Appendix 7.

4.53 Each country examined during the audit had its own unique civil surveillance, patrolling and response structure suited to individual environments and identified sovereignty issues. This made direct comparison between Coastwatch and other agencies difficult. The ANAO considers that the agency most closely reflecting Australia's adoption of a surveillance, patrolling and response function is the US Coastguard.

US Coastguard

4.54 The United States of America has numerous agencies that share surveillance, patrolling and response functions.[105] In a similar manner to Australia, the US has a central coordinating agency (US Coastguard) that enforces or assists in the enforcement of all applicable laws on, under and over the high seas and waters subject to the jurisdiction of the United States. Although there are similarities in the functions that the US Coastguard and Coastwatch provide, differences in the size, jurisdiction, structure and intelligence-gathering capabilities of the organisations do not allow direct comparison of the two agencies.

[105] See Appendix 7.

4.55 However, there are potential benefits of inter-agency liaison between Coastwatch and the US Coastguard. The potential areas that Coastwatch could examine include:

- new and emerging technologies;
- methods in use for the delivery of surveillance, patrolling and response services to other client agencies; and
- strategies to counter specific problems such as drug interdiction and the interdiction of SUNCs.

4.56 In this regard, the ANAO recognises the efforts of Coastwatch and the RAN in establishing a working relationship with the US Coastguard. This has included the secondment of a US Coastguard officer to the RAN to provide advice and to implement better practice in tasking techniques. Ties with the US Coastguard were also strengthened in late 1999 when the Director-General Coastwatch visited the United States of America. The visit included a series of meetings with the US Coastguard on the sharing of information/intelligence, particularly in relation to people smuggling.

4.57 The ANAO also acknowledges Coastwatch's efforts in investigating new and emerging technologies to aid in the delivery of its services. These investigations have included the use of surveillance satellites, unmanned aircraft and advanced land-based radar systems.

4.58 While appreciating that direct comparisons with overseas organisations are difficult, the benchmarking of service delivery processes is likely to benefit Coastwatch through the identification of alternative service delivery platforms and administrative systems.

External Reporting

4.59 To establish the Coastwatch program, the then Government transferred resources from analogous programs in a number of Commonwealth client agencies. This funding formed the basis for the Coastwatch program. Each of these agencies (or their current equivalents) now relies principally on Coastwatch to deliver services vital to their operations. These agencies were:

- Department of Transport and Communications;
- Australian Federal Police;
- Department of Primary Industries;
- Department of Defence;
- Australian Nature Protection Wildlife Service;

- Great Barrier Reef Marine Park Authority; and
- Department of the Arts, Sport, the Environment, Tourism and Territories.

4.60 Since that time, several other agencies that require surveillance and response services also rely on Coastwatch.[106]

4.61 The ANAO considers that, as part of sound corporate governance, and in order to provide a high standard of client service, Coastwatch has a responsibility to disclose funding and resource arrangements to its client agencies and the Parliament in a full and transparent manner. This includes the reporting of services (provided at no cost) to Coastwatch from all sources, particularly the Defence contribution that forms the largest component of the Coastwatch program. The disclosure of the costs of Coastwatch resources should be readily accessible from the ACS Annual Report and the ACS PBSs.

Australian Customs Service Annual Report (1998–99)

4.62 Australia's civil surveillance service is a partnership between Coastwatch and its various client agencies (see Chapter 1). In the interest of increased transparency, Coastwatch and client agencies should agree on appropriate levels of disclosure of performance information. Although the ACS produced relevant performance information concerning the services provided by Coastwatch in its 1998–99 Annual Report, there was not an adequate analysis or dissemination of Coastwatch resources and funding. Consequently, client agencies and the Parliament would find it difficult to determine the level of appropriations associated with each component of the total Coastwatch budget.

4.63 The ANAO considers that a full disclosure of costs and appropriations associated with the Defence component of the Coastwatch program should be presented in the ACS Annual Report. Sufficient disclosure should also include details of ACS administrative costs; to allow clients to take note of changes in the resourcing levels (in particular decreases in administrative resources) associated with the Coastwatch program.

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[106] A full list of these agencies can be found at paragraph 1.7.

Australian Customs Service Portfolio Budget Statements

4.64 Until 1994–95, the Coastwatch function was identified and disclosed in the PBSs[107] as a separate sub-program of the ACS. This allowed users of the PBSs (client agencies and the Parliament) to readily examine and assess Coastwatch's forecasted budgets, budget appropriations and performance in a logical and easy to read format.

4.65 In 1995–96, the ACS incorporated the Coastwatch Branch into the Border Management sub-program for PBS reporting purposes. As a result all Coastwatch financial and performance information was incorporated into overall Border Management information. This presentation has continued through to the 1999–2000 PBSs. Users of PBS information will have difficulty interpreting Coastwatch financial and performance information, including the three-year forecasts, as they are incorporated in the information provided for the Border Management sub-program.

4.66 In the 1999–2000 PBSs, the ACS did report total expenses relating to the Coastwatch function, including the Defence contribution. However, the PBSs do not adequately disclose the nature of these expenses, nor provide an explanation for the way they were expended.[108] The ANAO considers that to provide a fully transparent service, the PBSs should specify Coastwatch as an output of the ACS and provide separate financial and performance information for this output in sufficient detail to meet transparency and accountability requirements.

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[107] For the purposes of this report Portfolio Budget Statements include the various other forms in which these statements have appeared since 1988. These are:

<1990–91 – Explanatory Notes

1991–92 – 1993–94 Program Performance Statements

1994–95 Portfolio Budget Measures Statements

1995–96 Portfolio Budget Statements

[108] That is, the ANAO was unable to determine, without first consulting the ACS, whether Defence costs were part of total Coastwatch costs. Only after subsequent clarification from the ACS, was the ANAO able to confirm that these costs were attributable to the Defence contribution to the Coastwatch function.

Recommendation No.15

4.67 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.

Coastwatch/ACS Comment:

4.68 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.

Canberra ACT
6 April 2000

P. J. Barrett
Auditor-General

Appendices

Appendix 1

A brief history of the civil surveillance and response program

The Australian Government formally began a civil coastal surveillance program in 1967 when the then Department of Primary Industry requested that surveillance be provided for a newly declared Australian twelve nautical mile fishing zone. In subsequent years, increasing numbers of foreign fishing vessels (FFVs) entered this restricted fishing zone. In addition there were increases in the number of suspect illegal entry vessels (SIEVs) carrying suspect unlawful non-citizens (SUNCs), [109] entering Australian waters, during and following the conclusion of the Vietnam war.

Since 1969 a number of Interdepartmental Committees have examined and discussed issues involving civil surveillance in Australia. In 1973 the then Government established a Standing Committee to draw-up guidelines for a coordinated surveillance and patrolling program. This committee identified patrolling, surveillance, response and coordination issues that remain relevant to Coastwatch operations today.

In 1977 Australia submitted an application to the United Nations to establish a 200 nautical mile AEEZ around all Australian territory (including the Australian Antarctic Territory) to ensure Australian sovereignty and to protect resources. The subsequent agreement between Australia and the United Nations conferred control of all mineral and living resources within this zone to Australia. In justifying such a large EEZ to the international community,[110] Australia undertook to '*demonstrate an ongoing commitment to patrolling and protecting this zone*'.[111]

Although the establishment of a civil surveillance program in the 1970s provided some deterrence to FFVs and SIEVs entering the AEEZ, numerous parliamentary and independent reviews conducted in the 1980s recognised the need for Australia's civil surveillance program to improve its ability to detect and respond to unauthorised incursions.

Prior to 1988, the administration of Australia's civil surveillance program rested with a number of different agencies including the Australian Federal Police and the then Department of Transport and

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[109] This is the preferred term used by DIMA.

[110] The United Nations sponsored *Law of the Sea* conference was used as the forum to request a 200nm zone around Australia.

[111] Hudson Hugh, *A Report on the Administration and Management of Civil Coastal Surveillance in Northern Australia*, *Northern Approaches*, April 1988.

Communications. However, the Hawke Government recognised there were apparent inefficiencies in the delivery of Australian civil surveillance, in particular, the coordination between the many Government agencies that used surveillance resources. This resulted in the then Department of Transport and Communications commissioning a report into the management of Civil Coastal Surveillance in Northern Australia. The review was conducted by Hugh Hudson (the Hudson report). The recommendations and principles contained in the Hudson report remains a guide to the current administrative responsibilities and functionality of Coastwatch today.

The Government accepted the majority of recommendations made in the Hudson report, with one major exception, Australia's civil surveillance function would not become a fully autonomous agency (for example, such as the United States Coast Guard). Although recognising the importance of maintaining the independence of a surveillance agency from its clients, the Government conferred responsibility for Australia's civil surveillance function on the ACS.

Appendix 2

Relevant reviews of the civil surveillance function since 1984

Beazley, Kim, *A Review of Australia's Peace Time Coastal Surveillance and Protection Arrangements*, 1984;

The House of Representatives Standing Committee on Expenditure, *Report—Footprints in the Sand*, 1986;

Hudson, Hugh, *A Report on the Administration and Management of Civil Coastal Surveillance in Northern Australia, Northern Approaches*, April 1988;

The House of Representatives Standing Committee on Finance and Public Administration, *The First Report on an Inquiry into Aspects of the Australian Customs Service. Risky Business—the 37,000 kilometres challenge*, October 1990;

Australian Customs Service, *Report On Investigation Into Arrival Of Suspect Illegal Entrant Vessel (SIEV) Into Montague Sound*, February 1992;

Australian National Audit Office, Audit Report No.32, *The Management of Boat People—Department of Immigration and Multicultural Affairs, Australian Protective Service, Australian Customs Service*, February 1998;

Australian Customs Service, *Post Incident Review Arrival of Chinese Vessel 'Min Ping Yu No.8' Coburg Peninsula*, December 1998;

Heggen Alan E, *Independent Inquiry into the Circumstances surrounding the arrival of Suspected Illegal Entry Vessels Near Cairns, North Queensland and Nambucca Heads New South Wales* March/April 1999; and

Report of the Prime Minister's Coastal Surveillance Task Force, June 1999.

Appendix 3

Coastwatch key client agencies

Client Type	*Client Agency*
Major client (strategically and tactically driven): pro-actively task Coastwatch to perform long-term strategic patrols as well as shorter-term tactical surveillance. These agencies are the main contributors to Coastwatch forums such as the Planning Advisory Sub-Committee (PASC) and the Operational Program Advisory Committee (OPAC).	• Australian Fisheries Management Authority (AFMA); • Environment Australia (EA); and • Australian Customs Service (ACS).
Major client (tactically driven): take an active involvement in Coastwatch activities based on a particular happening or event. These clients are reliant on other client agencies or Coastwatch providing strategic taskings, from which they leverage. Generally the risks associated with these clients to Australian economic and social security are higher than other clients. Consequently, these agencies receive a higher priority on the allocation of Coastwatch resources when required. These agencies are not regular contributors to PASC, however they do attend OPAC regularly.	• Department of Immigration and Multicultural Affairs (DIMA); • Australian Federal Police (AFP); and • Australian Quarantine and Inspection Service (AQIS).
Minor client (tactically driven): Provide tactical Coastwatch taskings and leverage off other agencies for strategic surveillance. Although attending some OPAC meetings, they are more active regionally through Regional Operational Program Advisory Committee (ROPAC).	• Great Barrier Marine Reef Marine Park Authority (GBRMPA).
Other minor use clients: use Coastwatch resources infrequently and are not regular contributors to the OPAC and PASC forums.[112] They tend to use Coastwatch resources for specific tactical taskings.	• Department of Foreign Affairs and Trade (DFAT); • Department of Defence; and • Australian Maritime Safety Authority (AMSA).

Source: ANAO analysis

Examples of potential economic and social consequences of failing to properly patrol Australia's coastline (by selected client agency) follow.

AQIS

One of the greatest threats to Australia's economic and social well being, is the introduction or importation of prohibited quarantine goods. The introduction of uninspected quarantinable goods potentially puts at risk the health of Australian citizens, as well as exports and produce of

[112] The Department of Defence is a regular contributor to the PASC, OPAC and ROPAC forums in its capacity as a service provider, not as a Coastwatch client.

agricultural industries valued at approximately $30 billion. AQIS uses Coastwatch to provide a surveillance and transportation function to prevent the introduction of infected insect, animal or vegetable material into Australia. This includes the detection of SIEVs with unauthorised non-citizens (an immigration function) possibly carrying disease.

DIMA

DIMA uses Coastwatch resources to conduct surveillance on possible SIEVs carrying unauthorised non-citizens. Failure to detect illegal immigrants arriving in Australia has a twofold effect. Firstly, as mentioned above, the risk of foreign diseases entering the country is increased. Secondly, Australia must be seen to enforce its immigration policy and deter further incursions.

Suspect illegal non-citizens, although not posing as great an economic or social threat as quarantine-related risks, do pose political and Australian sovereignty threats. Placed in perspective, the total number of detected SUNCs arriving by marine vessel in 1998–99 totalled 992 compared with 2106 unauthorised air arrivals and 4183 people overstaying Australian Visas. That is, SUNCs arriving by marine vessel accounted for approximately 14 per cent of all unlawful non-citizens in Australia.

ACS and AFP

The ACS, in conjunction with the AFP, tasks Coastwatch to provide surveillance, interception and coordination functions in relation to the importation of illicit drugs and illegal goods. For example, since 1988–89 Coastwatch detected and responded to four major incidents relating to boats suspected of carrying illicit substances. From these boats, 390 kg of heroin, 225 kg of cocaine and between nine and 11 tonnes of cannabis were prevented from entering Australia. Coastwatch also has a direct involvement in the ACS-administered National Illicit Drugs Enforcement Strategy (NIDS) which is part of the Government's policy platform on drugs.

AFMA

AFMA tasks Coastwatch assets to provide surveillance and response functions regarding illegal fishing in Australian waters. Between 30 June 1998 and 24 May 1999 Coastwatch apprehended 407 people on 49 foreign fishing vessels, illegally fishing in Australian territorial waters. During 1997–98, 124 FFV's were intercepted and 1068 people detained.

EA and GBRMPA

Coastwatch provides a surveying, surveillance and response capability to GBRMPA and EA. Coastwatch is specifically tasked by these agencies to prevent damage to Australian waters, marine life and marine parks from pollutants, marine poachers and maritime vandals. In addition, Coastwatch also conducts counts and surveys of wildlife in these areas. Failure to protect these resources may have longer-term impacts on the environment as well as on Australia's fishing and tourism industries.

Appendix 4

Significant Coastwatch-related activity (from 1988 to 31 December 1999)

Significant Suspect Illegal Entry Vessel related events since 1988

Date of arrival	*SUNC Nationality*	*Number of SUNCs*	*Place of arrival*
31/03/1990	Cambodian	119	Montgomery Island (Western Australia)
31/10/91*	Chinese	56	Montague Sound (Western Australia)
30/10/1992	Chinese	113	Christmas Island
09/09/1994*	Vietnamese	31	Cape Leveque (Western Australia)
12/11/1994	Chinese	118	Darwin (Northern Territory)
22/11/1994*	Chinese	84	Darwin (Northern Territory)
12/12/1994*	Vietnamese	27	Cable Beach – Broome (Western Australia)
13/06/1997*	Chinese	139	Thursday Island (Torres Strait)
24/12/1998*	Chinese	52	Coburg Peninsula (Northern Territory)
12/03/1999*	Chinese	30	Holloway Beach (Queensland)
10/04/1999*	Chinese	61	Scotts Head (New South Wales)
04/06/1999	Chinese	108	Broken Bay (New South Wales)
27/11/1999	Indonesian, Iraqi, Iranian, Kuwaiti	186	Christmas Island
06/12/1999	Indonesian, Iraqi	141	Ashmore Reef
16/12/1999	Afgani, Iraqi, Pakistani, Indonesian	150	Ashmore Reef
20/12/1999	Middle Eastern Internationals, Indonesian	231	Christmas Island

* Denotes a vessel that arrived undetected by Coastwatch.

Total number of SIEVs detected by Coastwatch before reaching the Australian coastline (1988 to 31 December 1999)	**163**
Total number of SIEVs not detected by Coastwatch before reaching the Australian coastline (1988 to 31 December 1999)	**22**

Significant Foreign Fishing Vessel detections by Coastwatch since 1988

Date of Apprehension	*Number of vessels*	*Nationality*	*Boat type*	*Target species*	*Persons on board*
05/04/1989	6	Indonesia	small motorised vessel	shark	64
22/09/1994	12	Indonesia	small motorised vessel	trepang	119
28/09/1994	14	Indonesia	small motorised vessel	trepang	137
09/09/1997	1	Thailand	trawler	fish	33
09/09/1997	1	Thailand	trawler	fish	34
16/10/1997	1	Belize	demersal longline	pattagonian toothfish	37
17/10/1997	1	Panama	demersal longline	pattagonian toothfish	33
26–30/11/1997	15	Indonesia	small motorised vessels and small sailing vessels	shark	85
09/12/1997	1	Korea	sterntrawler	fish	30
21/02/1998	1	Seychelles	longliner	pattagonian toothfish	38
05/01/1999	1	Indonesia	small motorised vessel	trochus	37
30/11/1999	1	Korea	stern trawler	fish	29

Total number of FFVs intercepted (27/01/88 to 31/12/99)	**825**

Significant narcotic-related incidents involving Coastwatch since 1988

Date	*Vessel type*	*Narcotic type*	*Quantity*	*Approximate value*	*Place of apprehension*
06/01/1997	fishing vessel	cannabis resin	11 tonnes	$77 million	Port Stephens (New South Wales)
14/10/1998	large motorised vessel	heroin	390 kilograms	$300–400 million	Port Macquarie (New South Wales)
08/12/1998	yacht	cocaine	225 kilograms	not determined	Coffs Harbour (New South Wales)
01/02/2000	yacht	cocaine	500 kilograms	not determined	Coffs Harbour (New South Wales)

Appendix 5

Coastwatch objectives and key performance indicators

Overall objective	*Key Performance Measure*
To deliver an effective national coastal and offshore civil surveillance service.	• number of square nautical miles patrolled compared with the area planned; • cost of aerial surveillance per square nautical mile patrolled; • number of detection's of Suspect Illegal Entry Vessels and Foreign Fishing Vessels apparently in breach of Australian laws; and • number of suspect vessels reaching the Australian mainland undetected.
To provide effective aerial and marine responses to known or suspected breaches of the Australian border and offshore sovereignty and/or sovereign rights.	• potential number of crew sea days; • potential number of vessel sea days; • cost of marine fleet per sea day; • actual crew sea days per annum compared to available vessel sea days; • actual vessel sea days per annum compared to available vessel sea days; • number of marine taskings requested (strategic and tactical); • number of marine taskings completed (strategic and tactical); and • proportion of tactical responses undertaken within 48 hours of initial request.
To provide a quality service for client agencies.	• assessment of client agency satisfaction; and • compliance with agreed service delivery standards.
To have staff who are committed to high standards of professionalism, probity and performance and are supported by a safe equitable work environment.	• number of operative staff; • percentage of staff who have commenced, completed or are engaged in a formally recognised education program; • the proportion of staff in each of the performance assessment categories; and • number of days lost through OH&S incidents.

Source: Coastwatch

Appendix 6

Better practice corporate governance[113]

The ANAO considered the following four corporate governance principles when examining Coastwatch performance. These are:

- transparency: which is about providing Coastwatch clients and key stakeholders with confidence about decision-making processes and actions of Coastwatch management when managing their activities;
- integrity: which is based on objectivity, as well as high standards of propriety and probity in the stewardship of Coastwatch resources and the management of its affairs;
- accountability: which is the process whereby Coastwatch is responsible for its decisions and actions. Accountability can only be achieved when all parties associated with the Coastwatch function have a clear understanding of their responsibilities and roles. This is achieved through a clearly defined/robust organisational structure and the establishment of client agency MOUs; and
- leadership: which involves clearly setting out the roles, values and standards of Coastwatch. It includes defining the culture of the organisation and the behaviour of everyone in it.

[113] P. Barrett, Occasional Paper, *A Systematic Approach to Effective Decision Making*, November 1998.

Appendix 7

Foreign agencies conducting Coastwatch type functions (as at February 1999).

Overseas country, agency and description	*Resources*
United States of America **US Coastguard (part of the U.S. Department of Transportation).** **Mission:** The Coastguard shall enforce or assist in the enforcement of all applicable laws on, under and over the high seas and waters subject to the jurisdiction of the United States. **Responsibilities:** • ensuring compliance with recreational and other vessel safety laws; • enforcing environmental protection statutes; • response to incidents involving violent acts or other criminal activities; • drug interdiction; • search and rescue; • alien migrant interdiction; and • protection of marine resources.	**199 'Cutters'.**[114] These include: • icebreakers; • tugs; • high enduranace vessels; and • patrol boats. **211 Aircraft.** These include: • C–130 Hercules (fixed wing surveillance platform); • HU–25 Falcon (fixed wing jet); • HH–60 Jayhawk (rotary wing); and • HH–65 Dolphin (rotary wing). **1440 'Boats'.**[115] These include: • motor lifeboats and surfboats; • large utility boats; • port security boats; and • rigid inflatable boats.

[114] Cutters are Coastguard vessels 65 feet in length or greater.

[115] All vessels owned by the Coastguard under 65 feet in length.

Overseas country, agency and description	*Resources*
United Kingdom The UK does not have one agency responsible for the delivery of the range of Coastwatch services. The responsibility for the delivery of these services is shared between the following agencies and groups: • **Ministry of Agriculture, Fisheries & Food;** • **Royal Navy;** • **Royal Air Force;** • **HM Coastguard;**[116] • **HM Customs and Excise;** • **National Investigation Services; and** • **Immigration & Nationality Directorate** The assets primarily used for Coastwatch equivalent activities in the UK are provided by the Royal Navy and the Royal Air Force. Many of the services provided by Coastwatch are also undertaken by local shires, councils and the UK state emergency services.	**Satellite monitoring** **Air and sea assets** of the Royal Navy and Airforce are provided for Coastwatch type activities as required. Specific use is made of these resources for fisheries patrolling purposes.
Canada Canada does not have one agency responsible for the delivery of the range of Coastwatch services. The responsibility for the delivery of these services rests with seven bodies. **Canadian Coastguard**[117]**;** **Citizenship and Immigration;** **Royal Canadian Mounted Police;** **Dept. of Fisheries & Oceans;** **Environment Canada;** **Parks Canada; and** **Canada Customs.** The majority of these bodies administer their own assets to deliver services of a similar nature to Coastwatch.	**Air and Sea assets of the various agencies** The Canadian Coastguard currently has 1,399 Air & Sea assets at its disposal. **Satellite technology (RADARSAT).** In addition to monitoring the Canadian Coastline this technology is also used for the following: • ice reconnaissance; • oceanography; • cartography; • geology; and • environmental monitoring.

[116] The main function of HM Coastguard is to provide search and rescue capability.

[117] The Canadian Coastguard is responsible for search and rescue, and environmental monitoring.

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