

The Auditor-General
Audit Report No.6 2001–2002
Performance Audit

Commonwealth Fisheries Management: Follow-up Audit

Australian Fisheries Management Authority

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Canberra ACT
9 August 2001

Dear Madam President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit of the Australian Fisheries Management Authority 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 *Commonwealth Fisheries Management: Follow-up Audit*.

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

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

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Abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
AFFA	Department of Agriculture, Fisheries and Forestry—Australia
AFMA	Australian Fisheries Management Authority
AFZ	Australian fishing zone
ALC	Automatic Location Communicator
ANAO	Australian National Audit Office
ANTA	Australian National Training Authority
ARC	AFMA Research Committee
BRS	Bureau of Rural Sciences
CLEB	Commonwealth Law Enforcement Board
CSIRO	Commonwealth Scientific and Industrial Research Organisation
EA	Environment Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ESD	ecologically sustainable development
FAG	Fisheries Assessment Group
FRDC	Fisheries Research and Development Corporation
GPS	Global Positioning System
GVP	gross value of production
ITQ	individual transferable quota
MAC	Management Advisory Committee
MOU	Memorandum of Understanding
NGO	Non Government Organisation
NPF	Northern Prawn Fishery
OCS	Offshore Constitutional Settlement
SBT	Southern bluefin tuna
SFR	Statutory Fishing Rights

SMP	Statutory Management Plan
STECF	Scientific, Technical and Economic Committee on Fisheries
TAP	Threat Abatement Plan
TAC	total allowable catch
VMS	Vessel Monitoring System

Summary and Recommendations

Summary

Commonwealth fisheries management

1. The Australian fishing zone (AFZ) is the world's third largest. It extends 200 nautical miles from the Australian coast line and includes the Cocos/Keeling Islands, Christmas Islands, Macquarie Island, Norfolk Island, Heard Island and McDonald Islands and the Australian Antarctic Territory.¹

2. The AFZ ranks about fiftieth in world production (that is, tonnes of fish landed), with a gross value of Commonwealth fisheries production of some \$413 million in 1999–2000. In addition, there is increasing recognition of the commercial value associated with the use of the AFZ for recreational fishing purposes.

3. The Australian Fisheries Management Authority (AFMA) was established in 1992 as a Commonwealth statutory authority under the *Fisheries Administration Act 1991* to ensure the sustainable use and efficient management of Commonwealth fisheries resources. Its work is guided by the 1989 Commonwealth Government Fisheries Policy Statement: *New Directions for Commonwealth Fisheries in the 1990s: A Government Policy Statement*. A review of the 1989 Policy Statement is currently under way. The objective of the review is to develop a policy framework to respond to the challenges posed by the changes in natural resource management and Commonwealth policy structures since the late 1980s.

4. AFMA manages fisheries within the AFZ² and, in some cases, by agreement with the Australian States and the Northern Territory, to the low water mark. In fulfilling its responsibilities, AFMA works closely with other Commonwealth, State and Northern Territory agencies, industry and with other stakeholders.

¹ See Figure 1.1 of report.

² The Southern Bluefin Tuna Management Plan applies in the AFZ and on the High Seas for Australian nationals operating under that Plan.

5. For administrative purposes, AFMA has grouped fisheries resources into 21 fisheries that are identified by species, fishing method and/or area. The Commonwealth model of fisheries management has a number of features that distinguish it from other countries, the most prominent of which is the partnership approach with industry and with other stakeholders. Under this model, the involvement of industry is recognised as being vital to successful fisheries management. There is an increasing trend in international fisheries management to adopt similar partnership approaches.³ Notwithstanding this trend, there is general agreement that the Commonwealth's approach to stakeholder involvement is more advanced in Australia than in most other countries.

6. Management Advisory Committees (MACs) advise the AFMA Board on the management of a fishery⁴ and liaise between those with an interest in the fishing industry and the AFMA Board. MACs provide advice on total allowable catches, research, management and compliance, budgets, research priorities, and AFMA cost recovery activities.

7. Fishery Assessment Groups (FAGs) have also been established by the AFMA Board to provide independent advice on fishery and stock status and to achieve transparency in the collection and analysis of data for fisheries management purposes.

8. As at 30 June 2000, AFMA employed 105 staff. In addition, specific compliance functions are performed by State and Territory fisheries agencies on behalf of AFMA. AFMA receives funding from two main sources with the amounts in 2000–2001 being as follows:

- annual Federal Government appropriations of \$10.474 million; and
- \$7.578 million in levies collected from industry.

9. In addition, AFMA received a separate government appropriation of \$3.778 million in 2000–2001 as an annual component of a four-year sub-Antarctic surveillance program.

³ Smith, A.D.M., Sainsbury, K.J. and Stevens R.A. (1999) Implementing effective fisheries management systems—management strategy evaluation and the Australian partnership approach. *ICES Journal of Marine Science*, 56: pp. 967–979.

⁴ A further committee known as the Torres Strait Fisheries Management Committee is formed under the *Torres Strait Fisheries Act 1984*. A Norfolk Island Fisheries Consultative Committee and a Jack Mackerel Consultative Group remain in place at present.

Previous audit and Parliamentary review

10. The previous audit of fisheries management was presented in June 1996 in Audit Report No.32 1995–96, entitled *Commonwealth Fisheries Management—Australian Fisheries Management Authority* (referred to as the previous audit throughout this report). The audit concluded that there was scope to enhance AFMA’s efficiency and administrative effectiveness, and made 39 recommendations to address such improvements. AFMA accepted 12 recommendations and part of another; accepted ‘in principle’ 15 recommendations and part of one other; and disagreed with 10 recommendations, and parts of two others.

11. The previous audit report was referred to the House of Representatives Standing Committee on Primary Industries, Resources and Rural and Regional Affairs, for inquiry and report.

12. The Standing Committee’s report, *Managing Commonwealth Fisheries: The Last Frontier*, was tabled in June 1997 (referred to as the Standing Committee report throughout this report). As well as examining the recommendations of the previous audit report, the Standing Committee considered, and made recommendations, on broader issues such as: the partnership approach to the management of Commonwealth fisheries, including the MAC process; research; and recreational and gamefishers’ involvement in Commonwealth fisheries management.

13. The Government responded to the Standing Committee report in March 2001, supporting 31 of the 44 recommendations. The Standing Committee report recommendations that formed the basis of the issues addressed in this follow-up audit consisted of those recommendations that were directed at AFMA, did not require legislative or government policy changes, and were supported by the Government.

14. The recommendations of the previous audit report and of the Standing Committee report are at Appendices 2 and 3.

Audit objectives and scope

15. The objective of this follow-up audit was to assess the extent to which AFMA addressed the issues that gave rise to the recommendations of ANAO Report No.32 1995–96, and the related recommendations of the House of Representatives Standing Committee Report 1997, that were supported by the Government.

Issues identified in previous inquiries and addressed in the follow-up audit

16. The follow-up audit focussed on the key issues identified in the recommendations and grouped these in the themes of:

- strategic and performance management;
- management of the advisory process;
- implementation of fisheries management methods;
- managing AFMA's environmental responsibilities as they relate to Commonwealth fisheries management;
- compliance, monitoring and enforcement responsibilities; and
- management of information and research.

17. The ANAO examined relevant files and documents. As well, consultations were held with industry stakeholders, MAC members, industry organisations, representatives of Indigenous groups, other Government agencies and environmental organisations.

18. The ANAO engaged Ms Sevaly Sen and Dr Anthony Smith to provide relevant advice on fisheries management and related science.

Overall conclusion

19. The previous audit and Standing Committee reports acknowledged the progress made in fisheries management under the *Fisheries Administration Act 1991*, but also identified the scope to enhance the efficiency and effectiveness of fisheries administration. Particular areas identified for improvement included: strengthening of the advisory process; implementation of preferred fisheries management methods and Statutory Management Plans; greater availability of data and performance information in support of fisheries management and improved reporting; greater focus on AFMA's environmental responsibilities; improved operational guidance; and strengthening of compliance operations.

20. Over the last four to five years, AFMA has made progress in developing fisheries management and in addressing areas for improvement identified by the previous audit and by the Standing Committee report. In particular, there has been a broadening of input to, and support for, the advisory process, which is essential to effective administration of the Commonwealth's fisheries management model. In addition, the majority, by value, of fisheries production is undertaken in accordance with the preferred fisheries management methods specified in the 1989 Fisheries Policy Statement; responsibilities for managing fisheries in accordance with the principles of ecologically sustainable development are now integrated into its management processes; and there

are strengthened arrangements for managing compliance, monitoring and enforcement responsibilities.

21. However, progress in some other areas previously identified as warranting administrative improvement has been limited, weakening the effectiveness of fisheries management, with potential impact identified on outcomes. AFMA has not had a systematic means of monitoring progress in addressing the recommendations of the two reports. One of the areas which continues to warrant management attention is the challenge of cost effectively improving the nature and credibility of data in support of fisheries management in an environment where development of sufficient data can be costly and take some time to achieve. There remain considerable limitations to data on the status of the marine environment and related performance information, including reporting on achievement of planned outcomes. As a consequence, the ANAO has not been able to assess the extent to which improved management arrangements have actually impacted on outcomes. Progress in implementing Statutory Management Plans has been well below AFMA's own expectations. There remains a need for strengthened operational guidance. Furthermore, while aspects of AFMA's operations are supported by risk assessments, AFMA does not have an overall structured risk management framework or plan in support of its fisheries management responsibilities. This follow-up audit has identified several areas of AFMA's operations which would benefit from a more systematic approach to risk management. The ANAO's specific conclusions are discussed below.

22. AFMA has now well aligned its planning and performance framework with its legislative objectives. However, in practice, the measures reported to date still provide only limited information on its planned outcome of ecologically sustainable and economically efficient Commonwealth fisheries. AFMA has developed a range of new performance indicators which, in principle, would provide far more useful performance information but for which data is currently not available.⁵

23. There is wider stakeholder participation in fisheries management both from a broadening of the range of interests reflected in MAC membership and greater use of observers. Whilst there is now more structured guidance for MACs, further guidance and support appear necessary, particularly for new MAC members, to ensure that MACs operate as intended and to facilitate appropriate communication with all stakeholders.⁶

⁵ ANAO recommendations 6, 10, 19 and 34–38; Standing Committee recommendations 15 and 22.

⁶ ANAO recommendations 5 and 12; Standing Committee recommendations 8, 13, 24 and 41.

24. The evolution of Fishery Assessment Groups has resulted in considerable industry involvement in, and transparency of, the stock assessment process. However, improved guidance on the scope and nature of stock assessments and on the means of communicating scientific advice remains a challenge in order to strengthen the participation of industry in the stock assessment process and to ensure that fisheries management is supported by stock assessments of appropriate quality.⁷

25. AFMA has made progress in implementing preferred management methods, with approximately 67 per cent of Commonwealth fisheries by value managed in accordance with the 1989 Policy Statement, rising to an expected 90 per cent by June 2002. However, progress with the implementation of Statutory Management Plans has been much slower than anticipated and has fallen well short of the targets AFMA presented to the Standing Committee.⁸

26. AFMA has substantially strengthened its focus on and arrangements for its environmental responsibilities. It has introduced a range of bycatch (catch that is not the target species) reduction measures and completed Bycatch Action Plans for its major fisheries. However, these arrangements would be better supported by appropriate guidance for AFMA staff and stakeholders on how it seeks to give effect to its key environmental responsibilities. Furthermore, AFMA's ability to assess its performance in managing its environmental responsibilities for non-target species has been hampered, as data on bycatch has not been collected and analysed consistently (although AFMA advises that all fishers' logbooks now collect such information).⁹

27. Progress in undertaking environmental impact assessments has been limited, despite their importance to all stakeholders. There are now requirements under the *Environment Protection and Biodiversity Conservation Act 1999* to establish agreements to complete such assessments, referred to as strategic assessments. Environment Australia requires these assessments to be completed by 2004, for two-thirds of Commonwealth fisheries. In these circumstances, a structured project management approach, taking into account the risks inherent in the process, would provide greater assurance to all stakeholders that AFMA can meet its obligations regarding strategic assessments.

28. AFMA has substantially developed its approach to improve compliance, monitoring and enforcement. It has introduced a risk-based

⁷ ANAO recommendations 11 and 17; Standing Committee recommendation 16.

⁸ ANAO recommendations 7, 8, 14, 15 and 18; Standing Committee recommendations 12, 13, 23, 25, 43 and 44.

⁹ ANAO recommendation 9; Standing Committee recommendations 17, 18, 19 and 37.

approach to annual compliance plans for the eight major fisheries; and has been expanding its use of technology for surveillance purposes, specifically through use of a Vessel Monitoring System. While AFMA has recently established Memoranda of Understanding regarding surveillance-compliance arrangements with the majority of States, negotiations are continuing with Victoria and the Northern Territory to do so.¹⁰

29. The difficulty of cost effectively obtaining accurate and relevant data on the marine environment is a particular challenge in managing fisheries. AFMA has sought to improve the quality of its most important source of data—logbook data—by, *inter alia*, increasing consistency in the design of logbooks, educating industry about the importance of data collection and enhancing enforcement provisions for reporting of catches. However, AFMA has not supported its data collection and management with a risk management strategy addressing the requirement for quality and integrity of key fisheries management information. The latter would be particularly beneficial in the challenging marine environment. The strategy could address, for example, the need for more robust quality assurance processes for logbook and other data management.¹¹

30. AFMA has a structured and systematic approach to developing, evaluating and prioritising research projects, which includes industry input.¹²

AFMA's response

31. AFMA's response, in summary, was as follows:

32. AFMA generally accepts the thrust of the proposed report and its five recommendations. Many of the issues raised in the report are not new to AFMA and indeed we had already identified a number of these as areas for improvement and initiated actions to address concerns. In May 2001, the AFMA Board held a stakeholder input and planning workshop in Melbourne. As a result the Board has refined its priorities and AFMA will be concentrating on implementing Statutory Management Plans in key fisheries using improved project management processes; developing and implementing a communications strategy aimed at improving communications with stakeholders; and implementing the recommendations from an external review of the operations of AFMA's management advisory committees with the aim of improving their effectiveness.

¹⁰ ANAO recommendations 24, 25, 26, 27, 31 and 32; Standing Committee recommendations 29 and 43.

¹¹ ANAO recommendations 16, 20, 21, 28, 29 and 30; Standing Committee recommendation 28.

¹² ANAO recommendation 22; Standing Committee recommendation 32.

33. AFMA believes that we have made significant progress since the 1996 audit and the ANAO has recognised this. AFMA believes that we will make further progress in the years to come.

34. In accepting the report there are some important points that AFMA would like to reiterate by way of context. The costs of fisheries management can be almost limitless depending on the quality of the desired outcomes and AFMA has also taken on increased responsibilities particularly for meeting environment assessments and international obligations. AFMA must analyse the costs and benefits of taking particular actions and then assess the priorities of a range of options. Limited resourcing, rather than a lack of will, remains a key issue for AFMA and constrains the rate at which we can progress.

35. Consultation with stakeholders and many other processes in managing fisheries are time consuming. This is particularly the case in relation to broader environmental issues and 'ecosystem management', implementation of which is an extended process to be implemented over the next five to ten years.

Key Findings

Strategic and Performance Management (Chapter 2)

36. The previous audit and Standing Committee reports identified the need to strengthen the way in which AFMA's legislative objectives were reflected in its performance management framework, particularly the objectives relating to ecologically sustainable development and maximising economic efficiency. The ANAO found that AFMA has now encapsulated these two objectives in its planned outcome statement: *Ecologically sustainable and economically efficient Commonwealth fisheries*. AFMA's other legislative objectives are reflected in its Corporate Plan in various ways as an output, a guiding principle and a performance measure.

37. AFMA's performance indicators and reporting to Parliament against this outcome has also improved since 1995. However, in practice, the measures reported to date still provide only limited information on ecological sustainability and economic efficiency. For example, AFMA has reported against the latter aim by indicating the gross value and amount of Commonwealth fisheries production. These measures provide, at best, a limited perspective of economic efficiency, and will be influenced by, *inter alia*, environmental factors, fishing effort, market forces, exchange rates and export market prices.

38. Assessment of performance against the other element of AFMA's outcome—ecologically sustainable development (ESD)—is particularly difficult as fish stocks are difficult to observe directly and their mobility and variability make it hard to assess stock sizes and sustainable harvest levels. AFMA's reporting with respect to ESD has, so far, largely focussed on the stock status of target species. The difficulties with this approach are illustrated by the fact that, as scientific approaches to stock assessment have become more refined and rigorous, there has been increasing recognition of the uncertainties in stock assessments. The body of knowledge of larger fisheries/species groups is most advanced but, even so, of the 30 main fisheries/species groups for which the Bureau of Rural Sciences assesses stock status, 15 are uncertain, 10 are fully fished, four are overfished, and one is underfished.¹³

¹³ **Uncertain**—there is inadequate or inappropriate information to form a reliable assessment of status.

Fully fished—catches are close to optimum sustainable levels.

Overfished—levels of fishing or catches are excessive, or still reflect the effects of prior excessive fishing.

Underfished—a fish stock that has potential to sustain catches higher than those currently taken.

39. AFMA has recognised the need to strengthen its outcomes and outputs framework, and has identified a range of new performance indicators that it intends to report against in its 2000–2001 Annual Report. The new indicators for productivity and economic efficiency of fisheries are: changes in volume and value of production; percentage of fisheries in which impediments and management restrictions to constrain economic efficiency have been removed; and percentage change in value of fishing concessions. The new performance indicators for ecological sustainability include the assessed status and viability of target, by-product, and bycatch species and any agreed recovery program, as well as those marine ecosystems identified as being at risk for which an agreed recovery program is in place.

40. These measures were not available at the time of the audit. When data becomes available, the measures should provide better information upon which to assess fisheries management performance. Notwithstanding these improvements, performance information on ecological sustainability in particular, remains an area that continues to warrant development. The ANAO understands that opportunities for improvements in this area are under consideration as part of the fisheries policy review.

41. AFMA's performance measure of its principal output, fisheries management services, is the cost of providing these services as a percentage of the gross value of fisheries production. This rose to 3.7 per cent in 1999–2000 from 3.3 per cent in 1998–1999. As acknowledged by AFMA, this measure is only an indicative measure and does not extend to issues of cost effectiveness. The ANAO considers assessment of AFMA's fisheries management services would be refined by including quality dimensions; for example, stakeholder perceptions of, and satisfaction with, management services. Such information could be collected as part of AFMA's proposed client survey.

42. AFMA has also increased performance reporting for individual fisheries, including gross value of production, management method and stock status. AFMA has also advised that it intends to further enhance reporting by fishery.

43. AFMA does not have an overall structured risk management framework, or plan, in support of its fisheries management responsibilities. The previous audit drew attention to several aspects of AFMA's operations which would benefit from a more risk-based approach. There has been progress in incorporating risk management in some of these areas. However, other key areas would also benefit from being supported by a more systematic approach to risk management across AFMA than is currently the case.

Management of the Advisory Process (Chapter 3)

Reflection of stakeholder views through MAC membership or other means

44. AFMA's legislation limits the number of members on a Management Advisory Committee (MAC) to seven, in addition to the Chairperson and an AFMA officer, with members appointed on the basis of their expertise. Broadening of MAC membership to include non-industry groups with a legitimate claim to involvement with the process was seen as desirable by the House of Representatives Standing Committee in 1997. The ANAO found that, within the size limitations, MAC membership reflects a broader range of community interests than at the time of the previous audit. All MACs now have an environment/conservation member. Further, a MAC may include members with research, recreational, gamefishing or Indigenous backgrounds and members of State and Territory governments. In addition, AFMA has appointed observers from these interest groups to many MACs to facilitate their input to the advisory process.

45. At the time of this follow-up audit AFMA undertook an independent review of the MAC process and the AFMA Board has accepted the majority of the recommendations of this review.

Strengthening guidance for Management Advisory Committees

46. The previous audit and Standing Committee reports found that AFMA required more structured guidance for MACs and staff to facilitate consistent and effective implementation of key operational matters. Since then, additional guidance has been issued in the form of Fisheries Management and Administration Papers which, *inter alia*, provide guidance on the role and function of a MAC and the role of industry members of committees. MAC members are provided with this information and are asked to sign a declaration that they understand their roles and responsibilities.

47. Notwithstanding the guidance provided, MAC members varied in their views about the adequacy of support structures, with some considering current arrangements inadequate. For example, some members emphasised that to fulfil their role effectively, they needed to acquire broader skills and knowledge in areas of fisheries management outside of their expertise. This has to be acquired 'on the job', limiting their ability to contribute effectively to the advisory process, at least initially.

48. The ANAO also found that, some MAC members understood (incorrectly) their role to be representative, while others considered that there were often unintended conflicting messages about the consultative aspect of their role when matters affecting industry were being considered.

49. The ANAO considers that these matters warrant attention to facilitate the contribution of all members and to ensure that MACs operate as intended. This would appear to be particularly relevant for newer members and could be addressed through a more structured approach to induction, including consideration of options such as on-line support and video aids.

Accountability to key stakeholders

50. All MACs are required to hold an annual general meeting, at which they can be questioned about their decisions and recommendations. Summaries of regular MAC meetings are posted on the AFMA website. AFMA's guidance to MAC members also now identifies their role in communicating with their constituent groups, but does not give specific advice. The ANAO found that, in practice, the extent and nature of liaison with stakeholders by industry MAC members varies widely. AFMA has acknowledged that this is the case, and that some members take a 'minimalist approach'. The ANAO also found that the varying approaches to communicating with industry risks variation in the extent to which stakeholders are aware of, and have input to, some fisheries management issues. The ANAO considers that the parameters for liaison with stakeholders could be more clearly defined, without becoming overly prescriptive, to support more efficient and effective accountability to stakeholders.

51. Stakeholders, including MAC members, also considered there were insufficient face-to-face meetings with the Board and AFMA senior management. There would be merit, as part of a risk-managed approach to fisheries management and to stakeholder consultation in particular, in considering the costs and benefits of wider consultation with MACs and stakeholders outside of the Australian Capital Territory. The ANAO understands that AFMA is giving this consideration.

Managing conflicts of interest

52. The expertise-based nature of MACs, and involvement of stakeholders in fisheries management, means that members are likely, from time to time, to face potential conflicts of interest. It follows that sound corporate governance requires effective arrangements for managing such situations.

53. The ANAO found that guidance has been issued since the previous audit detailing conflict of interest disclosure provisions for MAC members. Furthermore, the members are required to formally declare any potential conflict of interest at each MAC meeting. MAC Chairpersons are required to ask for disclosures of conflicts of interest at the beginning of each MAC meeting. The ANAO considers that these arrangements are generally sound and appropriately implemented in practice; AFMA is considering broadening governance arrangements through a formal governance statement for MACs.

Assessing performance of MACs

54. Apart from anecdotal industry feedback, and the presence of an AFMA member on each MAC, AFMA and the Board do not have performance information on MACs or any regular means of assessing the effectiveness of MACs' performance. There would be merit in systematically assessing their performance in a cost effective manner. A client survey of stakeholder perceptions would contribute to this. AFMA has indicated it plans to undertake a survey which will, *inter alia*, address some of these issues.

The stock assessment advisory process

55. The stock assessment process is critical to fisheries management and to achieving AFMA's ESD outcome. Fisheries/stock assessments are undertaken by FAGs, for advice to the MAC and the AFMA Board. FAGs include marine scientists, industry members, economists and where relevant, other stakeholders such as environmental experts.

56. As well as marine scientists and other experts or relevant stakeholders, each FAG now includes industry member/s to ensure industry input in the fishery/stock assessment process, resulting in a considerable level of industry involvement and transparency of the stock assessment process. This contrasts with some other international arrangements; for example, in the European Union, where the key advisory bodies on stock assessment and total allowable catch do not have industry participation.

57. The previous audit and Standing Committee reports emphasised, given the importance of stock assessments, the value of guidance on the scope, objective and nature of the stock assessment process. AFMA indicated to the Standing Committee the intention to issue a policy paper to provide such guidance in June 1997. However, the paper has not been issued, nor has alternative guidance material. A draft paper on the role of FAGs has been prepared, but this has been delayed as AFMA is considering a review of the FAG process. AFMA also advised that it does not wish to set out general guidelines for the scope and types of assessments, or be prescriptive.

58. However, AFMA still retains the responsibility for ensuring that Commonwealth fisheries management is supported by stock assessments of appropriate quality. The ANAO considers that additional guidance to FAGs on the scope and nature of stock assessments would, *inter alia*, assist the participation of industry in the stock assessment process. For example, some FAG members advised that the highly technical nature of some scientific documents can hinder effective participation of industry members, with limited transparency and articulation of some of the models used. The ANAO considers that guidance on this matter could be included as part of more general guidance on stock assessments, the value of which was supported by many FAG members consulted.

Implementation of Fisheries Management Methods (Chapter 4)

Implementation of preferred management methods for Commonwealth fisheries

59. The 1989 Fisheries Policy Statement identified output controls, and specifically individual transferable quotas (ITQs), as the preferred management approach for protecting stocks and achieving an economically efficient industry. Output controls set a maximum catch level for all or some of the species in a fishery. ITQs represent a share of the total allowable catch and can be traded, permitting market forces to operate in a manner consistent with AFMA's ESD objective. The preferred management method for fisheries that are unsuited to ITQs is the use of tradeable gear units, which restrict the level of fishing effort by controls on fishing gear, boats etc, but which may be traded.

60. Since the previous audit AFMA has made substantial progress in implementing preferred management methods. ITQs have been implemented for six fisheries, and three fisheries are managed by a combination of ITQs and input controls.¹⁴ AFMA has also identified a further two fisheries currently managed by input controls, and for which it anticipates ITQs being in place by June 2002. One fishery—the Northern Prawn Fishery—is managed by tradeable gear units. The other nine fisheries are managed by other (non-preferred) means of input control.¹⁵ These are generally the smaller fisheries. Currently approximately 67 per cent of Commonwealth fisheries by value are managed in accordance with the Policy Statement, with this expected to rise to 90 per cent by June 2002.

¹⁴ For example where fishing can only occur during certain months of the year.

¹⁵ In addition, Norfolk Island is managed under scientific permit.

Progress in implementing statutory management plans

61. The 1989 Fisheries Policy Statement states that Statutory Management Plans (SMPs) are the preferred means of developing fishery management strategies. While fisheries can be managed without such plans (using management policies and through fishing permits), SMPs provide greater stability and certainty to the fishing industry through the allocation of Statutory Fishing Rights. Development of SMPs is therefore a key deliverable for AFMA in implementing Government policy.

62. At the time of the previous audit, progress in implementing SMPs had been limited, although AFMA anticipated that progress would accelerate. It provided a timetable to the Standing Committee, indicating that it intended to have a total of 10 SMPs in place by 1998. AFMA has not met this target. It has completed and implemented just one new SMP (South East Trawl Fishery) and reviewed the existing SMP for the Northern Prawn Fishery, bringing the total number of SMPs to four.

63. AFMA advised that it is committed to the development and implementation of SMPs but progress had been limited due to a number of factors, in particular the time required to achieve consensus among stakeholders, and delays in finalising Offshore Constitutional Settlement agreements. AFMA also advised that it has continued to learn from its experience, and that it has substantially progressed a further four proposed SMPs. It anticipates completing these by 30 June 2002. When AFMA meets this target there would then be eight SMPs in force covering some 90 per cent of the value of Commonwealth fisheries production.

64. The ANAO found that progress against the implementation timetable presented to the Standing Committee in 1997 has not met AFMA's target nor been regularly reported to the Board¹⁶ or in its Annual Reports.

Guidance for staff and stakeholders on management methods and SMPs

65. The previous audit and Standing Committee reports recommended that, to assist in the development and implementation of SMPs and assist stakeholders in understanding and participating in the process, AFMA provide appropriate guidance and information for staff and stakeholders. AFMA advised the Standing Committee that it would prepare a policy paper on the SMP process by December 1997 to meet this need. This paper has not yet been issued, and AFMA advised that it now expects it to be available in December 2001. The ANAO notes that, by then, AFMA expects that the bulk of fisheries production will already be covered by SMPs.

¹⁶ AFMA has advised it has, however, informed the Board of progress in specific fisheries.

Cost recovery

66. The ANAO found that AFMA's methodology and results for cost recovery are transparent. For example, AFMA's approach to cost recovery is set out in Fisheries Administration Papers; budgets are discussed with the relevant MAC; cost recovery outcomes provided to the MAC; and AFMA's Annual Report provides information on cost recovery outcomes.

Managing AFMA's Environmental Responsibilities (Chapter 5)

Management and liaison arrangements for environmental matters

67. The ANAO found that management arrangements have been strengthened since the previous audit to better support AFMA's environmental responsibilities. The AFMA Board now has an Environment sub-Committee, which includes representatives of Environment Australia (EA) and of an environmental Non Government Organisation (NGO); AFMA has an Environment Unit providing advice on environmental matters; and, as previously noted, MACs have an environment/conservation member. There is also regular interaction between AFMA's Environment Unit, EA and the Department of Agriculture, Fisheries and Forestry—Australia (AFFA) on matters of environmental significance affecting fisheries management.

68. Stakeholders consulted by the ANAO agreed that the greater focus in AFMA's operations on its ESD objective is one of the most noticeable changes in fisheries management since the previous audit. They also commented that the fishing industry in general has become increasingly aware of the value of addressing environmental considerations for the industry's long-term sustainability.

69. Notwithstanding these improvements, the ANAO found that the boundaries of responsibility between the various government agencies are not always adequately understood by external stakeholders, particularly NGOs. AFMA has been working to strengthen communication on these matters.

Assessing environmental impact

70. The previous audit report identified the value of effective processes and procedures to support assessing environmental impact. AFMA advised the Standing Committee that it would prepare a policy paper by June 1997, providing guidance on how to undertake environmental impact assessments. This did not occur and at the time of the audit AFMA had not made guidance available for its staff and

stakeholders on how it seeks to give effect to its key environmental responsibilities. AFMA has advised that it has now held workshops with 12 fisheries to explain the requirements of strategic assessment; to identify the areas in the management of the fishery which are and are not likely to meet the requirements; and to assist its environment section in preparing assessment reports. Outcomes from each workshop have been provided to the MACs to prioritise and address the issues. AFMA has yet, however, to prepare a policy paper to provide guidance.

71. The legislative context in which environmental impact assessments are to be undertaken has changed significantly with the introduction of the *Environment Protection and Biodiversity Conservation Act 1999*, which requires that all Commonwealth fisheries be strategically assessed for environmental impacts, safeguards and mitigation measures. These strategic assessments have to be approved by the Minister for the Environment and Heritage.

72. The Act requires that agreements to assess all 21 fisheries managed by AFMA be in place by 2005, with two-thirds to be in place by 2003. The legislation does not set out when the strategic assessments are to be completed. However, EA expects assessments to be completed within 12 months of completing an agreement.

73. The ANAO found that there has been limited progress in completing environmental impact assessments so far.¹⁷ This contrasts with the importance to all stakeholders of meeting requirements for finalising agreements and completing assessments.

74. While AFMA has introduced a framework for managing key deliverables in each fishery including strategic assessments, the approach is not underpinned by a structured risk assessment nor does it explicitly address the many challenges in meeting these key deliverables. Past experience has shown that these challenges can substantially delay AFMA's planned timelines. For example, the availability of data on the marine environment is a crucial component of the strategic assessment process; however, largely because of data issues, AFMA is currently only confident of meeting strategic assessment guidelines negotiated with EA with respect to target species and less so in relation to bycatch, ecosystem, and habitat issues.

¹⁷ Since the previous audit, one environmental impact assessment has been completed, for the South East Trawl Fishery, and there has been an exchange of letters between AFMA and the then Environmental Protection Agency in relation to the Great Australian Bight and Southern Bluefin Tuna Fisheries. Four decisions in relation to impact assessments had also been referred to Environment Australia by AFMA. As at July 2001, AFMA had entered agreements with the Minister for the Environment and Heritage for assessment of the Bass Strait Central Zone Scallop; Heard Island and McDonald Islands; and the Northern Prawn Fisheries.

75. The introduction of a more structured project management approach incorporating detailed risk assessments for each strategic assessment would better assist AFMA in providing appropriate assurance to the Board, Parliament and key stakeholders that policy guidelines, legislative requirements and timeframes for conducting strategic assessments can be met.

Bycatch management

76. Managing bycatch¹⁸ is an important aspect of managing fisheries for environmental sustainability. The previous audit and Standing Committee reports found that bycatch warranted further management attention and measures to reduce its extent. Since that time, the policy framework for bycatch management has strengthened substantially.¹⁹ A National Bycatch Policy was endorsed by all Australian Governments in October 1999 and a Commonwealth Policy on Fisheries Bycatch was launched jointly in June 2000.

77. In accordance with this policy, AFMA has completed Bycatch Action Plans for all major Commonwealth fisheries,²⁰ identifying the specific bycatch issues in the fishery and actions required to address those issues. The development of bycatch policy and Bycatch Action Plans adds a strategic dimension to actions previously taken by AFMA to develop and implement a number of bycatch reduction measures in consultation with industry. For example, AFMA has introduced regulations to reduce the number of turtles killed or injured in the Northern Prawn Fishery through compulsory use of turtle excluder and bycatch reduction devices, and introduced codes of conduct and other measures to reduce seal deaths.

78. The Commonwealth bycatch policy identifies the availability of data and its usefulness as one of the first steps in developing Bycatch Action Plans. However, the ANAO found that, until recently, bycatch data has not been collected consistently across all fisheries, and the data that has been available has not been regularly analysed by AFMA. For example, the ANAO found that for several years AFMA logbook data showed that turtles were being caught on long-lines in certain fisheries, however, this data was not analysed for management purposes until the recent development of Bycatch Action Plans.

¹⁸ Bycatch are species taken incidentally in a fishery where other species are the target. (See Glossary, Appendix 1).

¹⁹ The 1998 *Oceans Policy* committed the Government to finalising both Commonwealth and National Bycatch policies and to the development of fisheries specific action plans, including the formal incorporation of Bycatch Action Plans in Commonwealth fisheries management arrangements.

²⁰ Apart from the Torres Strait Line and Net Fishery; its Bycatch Action Plan is to be completed in October 2001.

79. AFMA has advised that it has now made provision for collecting bycatch data in all its logbooks, but that it will take time to collect sufficient data to support analysis and management decision making for bycatch.

80. The most recent detailed analysis of available bycatch data was undertaken in 1999, based primarily on 1995 data. This showed that bycatch as a percentage of target species (by weight) ranged from some 16 per cent in the East Coast Tuna Fishery to between 75 and 85 per cent in the Northern Prawn Fishery. The review also showed that in 1995 some 95 per cent of the bycatch in the Northern Prawn Fishery, and between 50 and 86 per cent in the Southern Bluefin Tuna, South East Trawl and East Coast Tuna Fisheries was discarded (most of which was dead or would not survive). The extent of non-target catch in fisheries was, to a large extent, the result of the fishing methods employed (such as trawl versus more selective gear).

81. Changes in fishing technology and practices, and the bycatch reduction measures mentioned above, should have reduced the levels of bycatch from those in 1995. However, in the absence of comparative data, this cannot be assessed or reported for the benefit of all stakeholders, including Parliament.

Management of blue and black marlin

82. In response to concerns from the gamefishing sector about the sustainability of blue and black marlin stocks, the Standing Committee report recommended that there be a ban on the take, possession and landing of blue and black marlin by commercial fishers. The Government implemented this recommendation in 1998 by amending the *Fisheries Management Act 1991*.

Compliance, Monitoring and Enforcement Responsibilities (Chapter 6)

Compliance operational planning

83. The previous audit found that AFMA's approach to fulfilling its compliance, monitoring and enforcement responsibilities was not supported by robust and systematic planning and risk management. AFMA has now introduced a much sounder risk-based approach to its compliance activities for the eight major fisheries, involving annual compliance risk workshops; determining compliance priorities; and developing compliance operational plans for the fisheries. There has been a marked increase in the funding of the compliance and surveillance activities, with a parallel increase in compliance activities such as boarding of vessels in some fisheries.

84. The previous audit noted that the Commonwealth's fisheries management model, which seeks to obtain the benefits of input and advice from industry and other stakeholders, created the potential for conflicts of interest with respect to MACs' advice on compliance budgets. The ANAO found that AFMA now has sound procedures for managing potential conflicts of interest, including guidance on this matter to MACs; a more robust and objective framework for assessing risk; and MACs considering risk issues separate to plans and budgets. Furthermore, decisions on compliance operational plans are taken finally by the Board.

Pursuing technological means of enhancing compliance monitoring

85. The previous audit and Standing Committee reports made recommendations aimed at furthering the use of technology to support and strengthen surveillance. The recommendations particularly addressed greater use of a Vessel Monitoring System, which is an electronic means of monitoring a vessel's position, thereby providing information on the duration of fishing activity and where fishing is undertaken.

86. AFMA has undertaken a staged expansion of the use of Vessel Monitoring System (VMS) where it is considered cost effective. There are now some 340 boats on the VMS (as at December 2000), compared with approximately 60 at the time of the previous audit. In consultation with industry, AFMA is also considering introducing VMS into the Western Tuna and Billfish Fishery (40 boats), the Eastern Tuna and Billfish Fishery (120 boats) and the Southern Shark Fishery (some 230 boats).

Surveillance-compliance arrangements with States and the Northern Territory

87. The previous audit found that AFMA did not have formal arrangements with States and the Northern Territory addressing the surveillance-compliance activities that they undertake on its behalf. Since then, AFMA has negotiated arrangements with the majority of States, although progress was slower than anticipated due to the number of agencies involved and their different organisational approaches to fisheries management. Memoranda of Understanding have now been established with New South Wales, Queensland, Tasmania, Western Australia and South Australia. Negotiations are continuing with Victoria and Northern Territory.

88. AFMA provides training to the State Fisheries' Officers who undertake compliance-surveillance activities on its behalf, and AFMA has advised that it intends that the officers who carry out functions on its behalf will meet the new national competency standards of the

Commonwealth Law Enforcement Board. Within these arrangements, a framework to communicate and guide compliance activities would assist in ensuring that they are conducted in accordance with AFMA's strategies, risk assessments and compliance operational plans.

Management of Information and Research (Chapter 7)

Data collection and management information

89. The high cost of collecting at-sea scientific data, means that most of the data on the marine environment required for fisheries management, and the data necessary for scientific assessments of fish stocks, come from the logbooks filled out by fishers. The substantial reliance on industry data presents real benefits by allowing cost effective targeting of information gathering in the complex marine environment, and in the participation of stakeholders in the collection process. However, while AFMA informed the ANAO that most fishers do fill out logbooks properly, the process also carries risks, as filling out logbooks can be an administrative burden and there are few immediate benefits to fishers, and some disincentives, in accurately entering logbook data.

90. Managing this balance between benefits and risks is a challenge, as processes to assure the quality of data collected in this way may be costly or difficult to implement and alternative approaches may be prohibitively expensive and require negotiation with stakeholders. It follows that management of data gathering and its use would benefit from development and implementation of a risk management strategy to address the requirement for quality and integrity of key fisheries management information. However, AFMA has not supported its data management with such a risk assessment.

91. The most obvious way to improve the accuracy of data entered by fishers in logbooks is through the presence of observers on fishing vessels. However, as the cost of observers is borne by fishers, extensive use across the board has practical constraints. AFMA therefore needs to rely on other methods to address the accuracy of logbook data. These other approaches include educating industry about the importance of data collection, including distributing two Fisheries Fact Sheets setting out AFMA's data collection and collation processes, and making similar information available on AFMA's website. The *Fisheries Legislation Amendment Act 2000* has also enhanced the enforcement provisions for reporting of catches in quota managed fisheries, including penalties ranging from on the spot fines to forfeiture of boats and gear.

92. AFMA has also been exploring the use of electronic data management to reduce the administrative burden on fishers and to increase the accuracy of logbook data. In particular it is developing an electronic logbook data system which is currently being trialed on some boats in the South East Trawl Fishery.

93. The ANAO found that AFMA does not have a robust quality control system for its logbook data entry; there is no manual to provide guidance for data entry; and no articulated standards are in place to aid consistency and accuracy. End-users of the data consulted by the ANAO expressed concerns about the quality of the data and the checks undertaken, with examples of obvious misreporting.

94. AFMA has advised that it is aware of data quality issues. The ANAO considers that the risk of misreporting data would be better managed through implementing relevant quality assurance processes. Such process could address, *inter alia*, verification of logbook data by cross-checking with other information sources as part of a broader risk managed approach.

Management and industry participation in research projects

95. The previous audit and Standing Committee reports found that the importance of research for the management of Commonwealth fisheries required a structured and systematic approach to developing, evaluating and prioritising research projects, to maximise the value of research effort and to incorporate industry input, for a risk assessment and cost benefit analysis of research projects.

96. The ANAO found that, overall, AFMA now has a structured and systematic approach to developing, evaluating and prioritising research projects. AFMA also has a five-year Strategic Research Plan that sets out the priority areas for fisheries research and within which MACs develop their own research plans. The research projects that are funded by AFMA are overseen by an AFMA Research Committee. The process for developing research includes cost/benefit analyses.

97. The ANAO also found that the MAC process provides stakeholder input in the prioritisation of research projects. These arrangements result in a high level of industry participation in research, with industry contributing some \$2.3 million out of \$4.5 million AFMA research expenditure in 1999–2000. Stakeholders were generally satisfied with the manner in which AFMA managed the research process.

Recommendations

Set out below are the ANAO's recommendations aimed at improving AFMA's management of fisheries. Report paragraph references and abbreviated AFMA responses are also included. More detailed responses are shown in the body of the report.

**Recommendation No.1
Para 3.14** The ANAO recommends that AFMA strengthen guidance and support for Management Advisory Committee members, particularly newer members, to assist them in understanding key aspects of fisheries management and their role. This might be achieved through an induction program and on-going guidance materials.

AFMA response: Agreed.

**Recommendation No.2
Para 3.40** The ANAO recommends that AFMA provide guidance to Fisheries Assessment Groups on broad policy direction and standards and on the objectives, scope and types of stock assessments, and that this guidance include standards required of scientific service providers in communicating and presenting results.

AFMA response: Agreed.

**Recommendation No.3
Para 5.21** The ANAO recommends that AFMA implement a structured project management approach that takes into account the risks inherent in the process of implementing AFMA's key deliverables.

AFMA response: Agreed.

**Recommendation No.4
Para 5.39** The ANAO recommends that, to better inform bycatch management practices, AFMA give priority to the development of appropriate data holdings on bycatch, and regularly monitor and report against performance measures based on this information.
AFMA response: Agreed.

**Recommendation No.5
Para 7.13** The ANAO recommends that AFMA undertake a risk assessment of its data collection and information management systems to ensure that the data that is available is collected and managed in accordance with quality assurance principles.
AFMA response: Agreed.

Audit Findings and Conclusions

1. Introduction

This chapter details the management arrangements for Commonwealth fisheries and provides the context for the follow-up audit. It also outlines the objectives, focus and methodology of the follow-up audit, and the structure of the report.

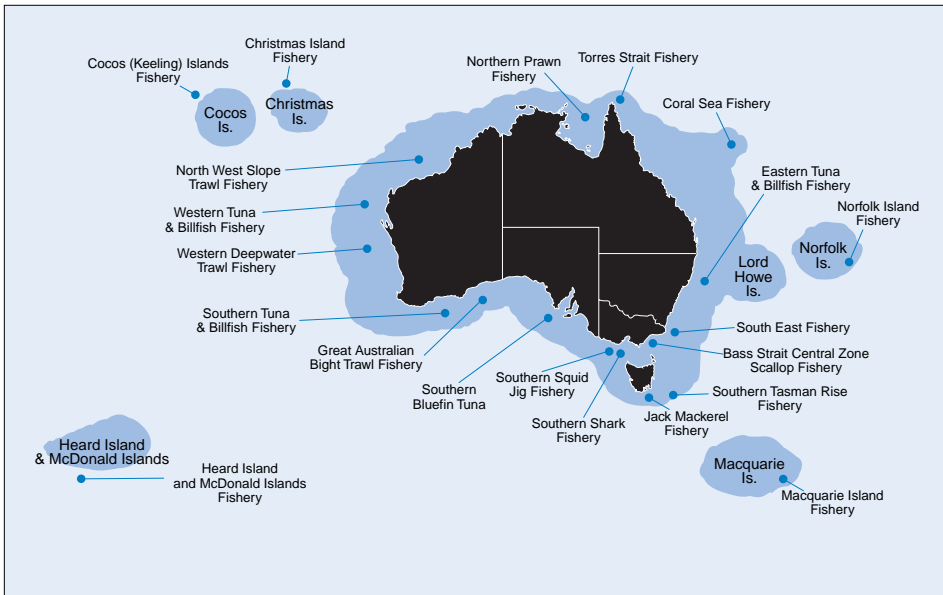
Commonwealth fisheries management

The Australian fishing zone

1.1 Australia's jurisdiction over the Australian fishing zone (AFZ) was established in 1979 following the Third Law of the Sea Conference and the 1979 proclamation by the International Court concerning the validity of extended economic zones.

1.2 The AFZ is the world's third largest and extends 200 nautical miles from the Australian coastline. It also includes Cocos (Keeling) Islands, Christmas Island, Macquarie Island, Norfolk Island, Heard Island and McDonald Islands and the Australian Antarctic Territory (see Figure 1.1).

Figure 1.1
Extent of Australian fishing zone



Source: AFMA 1999–2000 *Annual Report*

1.3 Compared with many other regions, Australia's marine environment is low in nutrients and biological productivity. Nevertheless, this environment is extremely diverse and, within the AFZ, there are thousands of different species of fish, seals, sea lions, turtles and other marine animals and seabirds. Many species are migratory and cover large distances during their lifespan, often beyond the AFZ (for example whales, tuna and, seabirds). The majority of fish and other marine species within the AFZ have little commercial or recreational value.

1.4 The AFZ ranks about fiftieth in world production (that is, tonnes of fish landed), with a gross value of production of some \$413 million in 1999–2000. In addition, there is an increasing recognition of the commercial value associated with the use of the AFZ for recreational purposes.

Role of AFMA

1.5 In 1989 the Commonwealth Government introduced its Fisheries Policy Statement: *New Directions for Commonwealth Fisheries in the 1990s: A Government Policy Statement*. The statement led to changes to the structure of management arrangements for Commonwealth fisheries, with the Australian Fisheries Management Authority (AFMA) being established in 1992 as a Commonwealth statutory authority under the *Fisheries Administration Act 1991*.

1.6 AFMA is governed by a Board of Directors appointed by the Minister and was set up at arm's length from the Commonwealth Minister and Department responsible for fisheries.²¹

1.7 As at 30 June 2000, AFMA employed 105 staff, compared with 74 staff at 30 June 1995, the time of the previous audit. In addition specific compliance functions are undertaken by State and Territory fisheries agencies on behalf of AFMA. AFMA receives funding from two main sources with the amounts in 2000–2001 being as follows:

- annual Federal Government appropriations of \$10.474 million; and
- \$7.578 million in levies collected from industry.

1.8 In addition, AFMA received a separate government appropriation of \$3.778 million in 2000–2001 as an annual component of a four-year sub-Antarctic surveillance program.

²¹ Directors are appointed on the basis of their expertise in one or more of the following fields: commercial fishing; fishing industry operations other than commercial fishing; fisheries science; natural resource management; marine ecology; economics; business management; and other fields as prescribed.

Commonwealth and State responsibilities for fisheries management

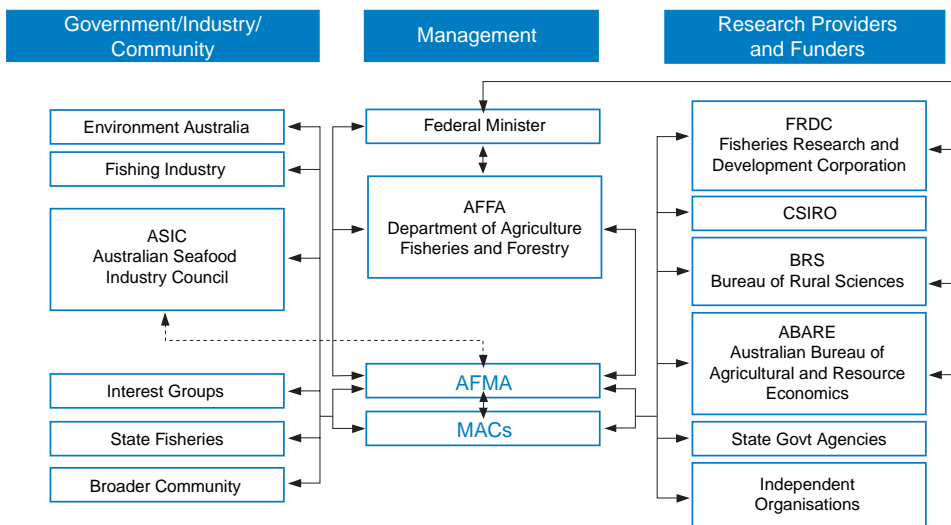
1.9 Historically, the States or the Northern Territory managed fisheries out to the three nautical miles and the Commonwealth managed fisheries from three nautical miles to the 200 nautical mile limit of the Australian fishing zone. Since 1982, the States and the Territories and the Commonwealth have sought to further rationalise the division of responsibility for fisheries management through Offshore Constitutional Settlement agreements for some fisheries. Under these agreements, management responsibility for a particular fishery is passed to either a State/Territory or to the Commonwealth, or in some cases to a Joint Authority, to enable the fishery to be managed under a single law.

Working with other parties

1.10 The management of Commonwealth fisheries also requires AFMA to work closely with other Commonwealth and States and the Northern Territory agencies, industry and with other stakeholders, as summarised in Figure 1.2.

Figure 1.2

Parties involved in the management of Commonwealth fisheries



Source: AFMA 1999–2000 *Annual Report*

Australian fisheries management

1.11 The Commonwealth's model of fisheries management has a number of features that distinguish it from other countries, the most prominent of which is the partnership approach with industry and other stakeholders in the management of Commonwealth fisheries. Under this model, the involvement of industry is recognised as being vital to successful fisheries management. There is also an increasing trend in international fisheries management to adopt similar partnership approaches.²² Notwithstanding these developments, there is general agreement that the Commonwealth's approach to stakeholder involvement in the stock assessment process and advice on total catch limits is more advanced than in most other countries.

Management advisory committees

1.12 The *Fisheries Administration Act 1991* allows for the appointment of Management Advisory Committees (MACs) to achieve the structured input of industry and other stakeholders in the management of Commonwealth fisheries. The role of the MAC is twofold: to advise the AFMA Board on the management of a fishery and to liaise between those with an interest in the fishery for which the MAC is established and the AFMA Board. MACs provide advice on total allowable catches (TACs), management and compliance, budgets, research priorities, and AFMA cost recovery activities. At the time of the follow-up audit AFMA had appointed 12 MACs.²³

1.13 The importance of stakeholders, other than the industry, has been increasingly recognised since AFMA's establishment. In response, environmental groups, recreational and gamefishers, State and Territory Governments and Indigenous communities have been included as members on MACs where considered appropriate.

²² Smith, A.D.M., K.J. Sainsbury and Stevens R.A. (1999) Implementing effective fisheries management systems— management strategy evaluation and the Australian partnership approach. *ICES Journal of Marine Science*, 56: pp. 967–979.

²³ A further committee known as the Torres Strait Fisheries Management Committee is formed under the *Torres Strait Fisheries Act 1984*. A Norfolk Island Fisheries Consultative Committee and a Jack Mackerel Consultative Group remain in place at present. AFMA expects both of these to become defunct in the near future.

Fishery Assessment Groups

1.14 Fishery Assessment Groups (FAGs) have been established by the AFMA Board to provide independent advice on fishery and stock status and to achieve transparency in the collection and analysis of data for fisheries management purpose. FAGs are set up at arm's length from AFMA and MACs, and are funded by the AFMA Research Fund. FAGs present their research findings both to the AFMA Board and the relevant MAC.

Management methods

1.15 For administrative purposes, AFMA has grouped fisheries resources into 21 fisheries that are identified by species, fishing method and/or area. This distinction is largely historical and is based on such considerations as the characteristics of commercial fishing operations and of the species themselves.

1.16 The 1989 Policy Statement advocated the use of individual transferable quotas (ITQs) in fisheries, a market mechanism to drive economic restructure within the fishing industry by setting a TAC for each fishery and apportioning this to individual fishers.²⁴ The aim of the system was to maintain a balance between fishing capacity and resource availability. However, it was recognised that there would be fisheries that were unsuited to management through ITQs, and, where this was the case, input controls using tradeable units of gear (for example, nets) were to be used.

1.17 A review of the 1989 Policy Statement is currently under way. The objective of the review is to develop a policy framework to respond to the challenges posed by the changes in natural resource management and Commonwealth policy structures since the late 1980s.

The audit

Audit objectives and scope

1.18 The objective of this follow-up audit was to assess the extent to which AFMA has addressed the issues that gave rise to the recommendations of ANAO Report No.32 1995–96, and the related recommendations of the House of Representatives Standing Committee Report 1997.²⁵

²⁴ Unless indicated, fishers in this report refer to commercial operators fishing in the AFZ.

²⁵ The Government responded to the Standing Committee report on 6 March 2001 and accepted 31 of the 44 recommendations. It did not accept recommendations number 9, 10, 20, 21, 26, 27, 30, 31, 35, 36, 38, 39 and 42.

1.19 The audit criteria are focussed on these recommendations and are summarised at Appendix 4.

Audit methodology

1.20 The ANAO invited AFMA to provide evidence of its implementation of the recommendations, interviewed AFMA officers, examined external reviews of AFMA and examined relevant files and documents.

1.21 Consultations were held with industry stakeholders, MAC members, industry organisations, representatives of Indigenous groups, other Government agencies and environmental organisations.

1.22 The ANAO engaged Ms Sevaly Sen, of Fisheries Economics Research and Management Pty Ltd, and Dr Anthony Smith, of CSIRO Marine Research, to provide relevant advice on fisheries management and science.

1.23 The follow-up audit was conducted in accordance with ANAO Auditing Standards. Its estimated cost was \$309 000.

Stakeholder consultations

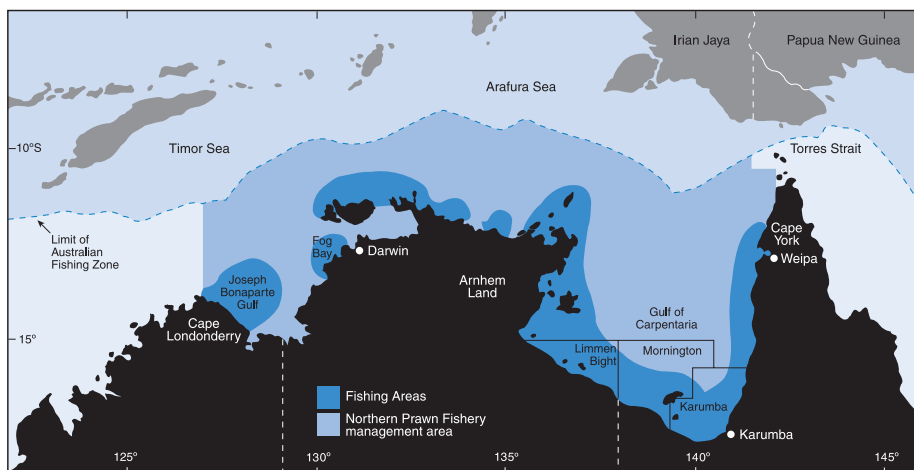
1.24 The consultations with stakeholders focussed on the three most valuable fisheries managed by AFMA: Northern Prawn Fishery; Southern Bluefin Tuna; and South East Trawl Fishery. An overview of each of these fisheries is provided below.

1.25 The ANAO found that there was a wide range of stakeholder views both between and within fisheries highlighting AFMA's challenge in managing stakeholders with an interest in fisheries management. The key themes mentioned by stakeholders were gathered in accordance with the audit criteria.

Northern Prawn Fishery

The Northern Prawn Fishery extends from low water to the outer edge of the Australian fishing zone in the area between Cape York in Queensland and Cape Londonderry in Western Australia.

The Northern Prawn Fishery is the most valuable fishery managed by the Commonwealth, with a gross value of production of \$90.8 million in 1999–2000.



The Northern Prawn Fishery targets nine commercial species of prawn including white banana, red-legged banana, brown tiger, grooved tiger, blue endeavour and red endeavour. By-products such as squid, scallops and bugs are also taken.

Banana prawn catches are probably **sustainable**, but fluctuate considerably from year to year; tiger prawns are **overfished**; and the status of endeavour prawns is **uncertain**. Prawn fisheries typically experience high natural variability in abundance, growth and mortality due to environmental conditions (for example, rainfall, salinity and el niño effects). Population and stock assessment is therefore difficult.

The Fishery is managed under a Statutory Management Plan (SMP). The SMP provides for the grant of transferable Statutory Fishing Rights that determine the size and number of trawlers that may operate in the Fishery. Management is effected through input controls, including limited access during certain times of the year. The fishing year runs from April to November.

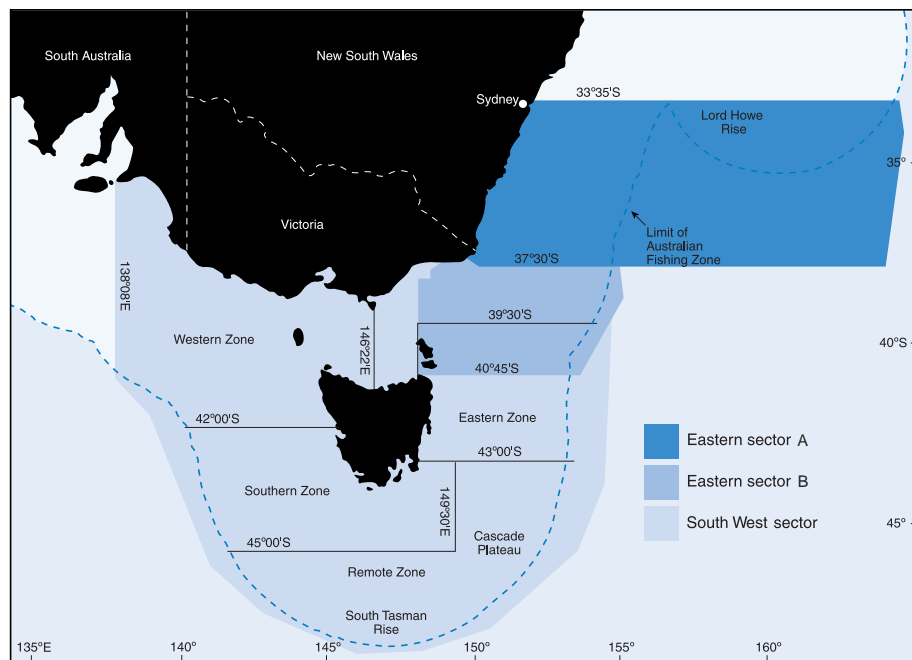
Under the SMP there has been a reduction in boats operating in the Fishery, from 127 active in the 1996 fishing year, to 115 active in the 2000 fishing year.

The industry has two broad groupings: one based in north Queensland tends to be characterised by smaller, individually based operations; the other is predominantly in Western Australia and tends to be characterised by larger corporate operations.

There is a high level of unused bycatch. The Bureau of Rural Sciences calculated that in 1995 the amount of bycatch caught was between 75 and 85 per cent of the total catch. Virtually all (95 per cent) of bycatch was discarded. Of this, 98 per cent of the fish bycatch was dead, while between 50 and 100 per cent of crustaceans survived. Species of concern include turtles, snakes, sawfish, seahorses and pipefish. The use of turtle exclusion and bycatch reduction devices to reduce these levels of bycatch has been compulsory since April 2000.

South East Trawl Fishery

The South East Trawl Fishery incorporates trawl methods taking finfish and deepwater crustaceans in Commonwealth waters adjacent to New South Wales (south of Barrenjoey Point), Victoria, Tasmania and South Australia (east of Cape Jervis).



Although competing with rising imports of frozen fish, the Fishery supplies most of the fresh fish to New South Wales, Victorian and Tasmanian markets. More than 100 commercial species are taken by the Fishery, but 16 species or species groups provide most of the catch. The 1999–2000 gross value of production was \$67.5 million.

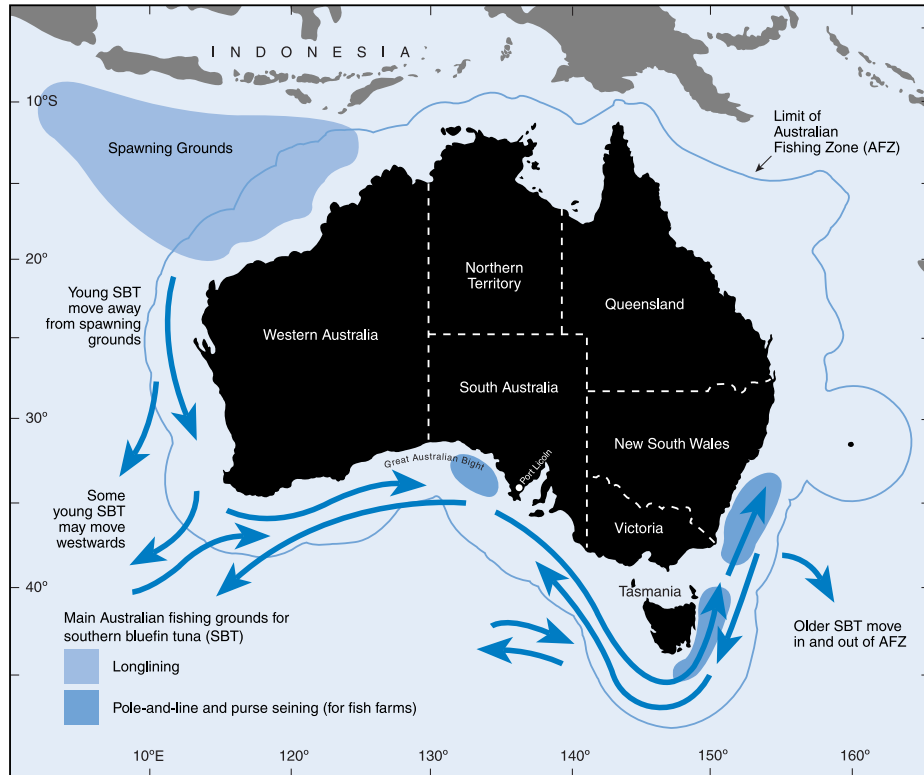
The Fishery is managed through a Statutory Management Plan under which fishing permits are issued. Management is effected through a system of output controls (total allowable catch limits) that set individual transferable quotas for the 16 major species and some input controls (limited entry, mesh size and area restrictions). Of the major species, gemfish (eastern zone) and orange roughy (southern and eastern zone) are **overfished**; blue warehou, flathead, jackass morwong (eastern sector), ocean perch, orange roughy (eastern, southern and western zones) and redfish are probably **fully fished**; blue grenadier, eastern school whiting (other than Jarvis Bay/Portland) and jackass morwong (southwestern sector) are **underfished**; while blue-eye trevalla, eastern school whiting (Jarvis Bay/Portland area), john dory, ling, mirror dory, royal red prawn, silver trevally, orange roughy (Cascade Plateau and remote zones), gemfish (western zone), and spotted warehou are **uncertain**.

The industry is diverse, with many fishers being relatively small operators. In 1992, trawl fishing capacity and effort was increasing, leading to the overfishing of some species. The number of active trawlers has since decreased (but fishing effort continued to increase steadily until 1997. There was a slight decline in effort in 1998).

Discarding at sea is a major issue for some species, particularly in shelf waters. The Bureau of Rural Sciences reported that, for 1995, the amount of bycatch caught was about 50 per cent of the total catch; and between 50 and 86 per cent of the bycatch was discarded. Species of concern included seals and deepwater sharks. A seal interaction research program and trials of seal exclusion devices commenced in 2000, involving collection of biological samples, use of underwater cameras, and observers.

Southern Bluefin Tuna Fishery

Southern bluefin tuna is a highly migratory species which is widely distributed throughout the waters of the southern oceans, including the Australian fishing zone.



Southern bluefin tuna are long-lived (up to about 40 years), slow-growing, late-maturing and highly migratory. The fish is marketed almost exclusively on the Japanese sashimi market, where it is one of the most valuable fish. The gross value of production in 1999–2000 was \$73.4 million.

The Fishery is managed through Statutory Fishing Rights under a Statutory Management Plan. Management is effected through output controls and individual transferable quotas for the domestic fishery. There has been a reduction from 109 quota owners in 1994–95 to 97 in 1998–99. The maximum southern bluefin tuna quota tonnage was fixed at 5265 tonnes during those years. Australia, New Zealand and Japan established the *Convention for the Conservation of Southern Bluefin Tuna* in 1994 to formalise a global catch limit. The total allowable catch (TAC) limit for Australia is set as a proportion of the international TAC set by the Convention.

Southern bluefin tuna is **overfished**. Australian stock assessments indicate that there is little chance of stock rebuilding with the current global catch level, whereas Japanese assessments suggest a recovery is assured. Efforts to rebuild the southern bluefin tuna parent stock are hampered by catches taken by Taiwan, Indonesia, Korea and others who are outside the Convention. Japan unilaterally increased its catch in international waters in 1998 and 1999 through an 'experimental fishing program' that has since become subject to a ruling by the International Tribunal for the Law of the Sea that the catch should be counted against Japan's annual national allocation. Japan has since agreed to suspend experimental fishing for the next two years.

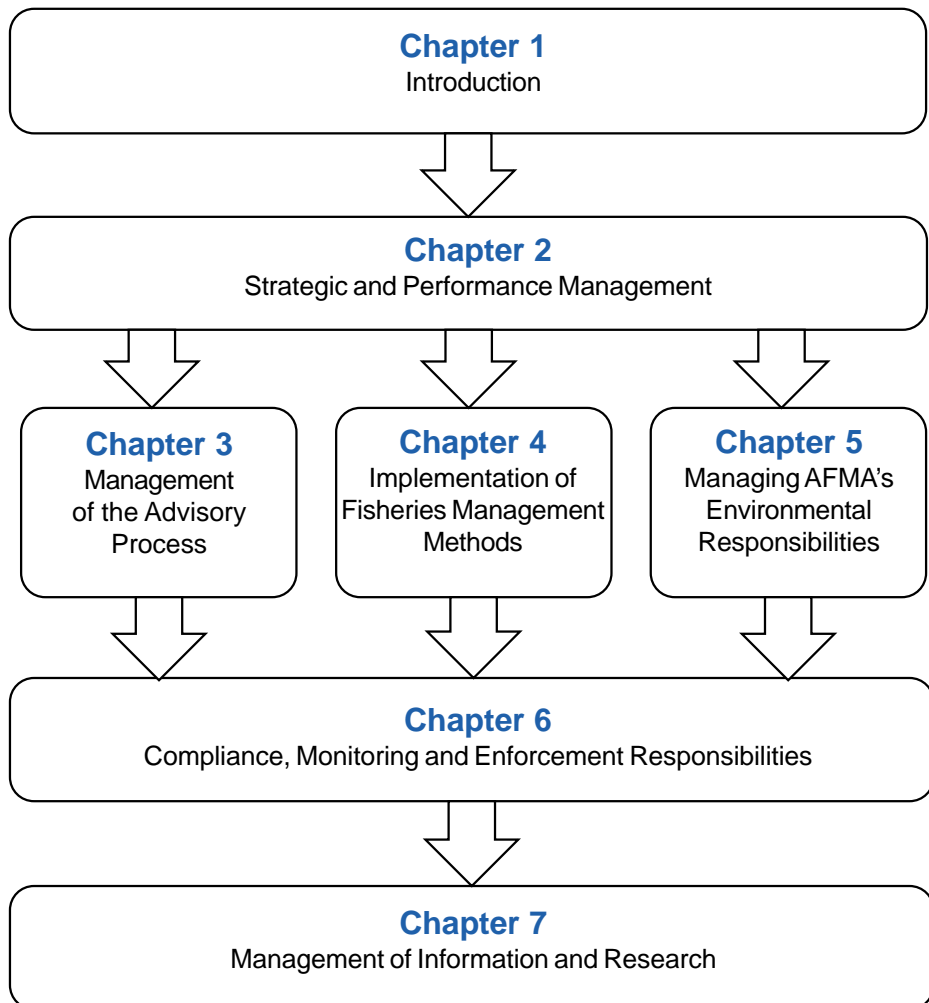
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About 95 per cent of the Australia's southern bluefin tuna catch is taken for fish farming purposes where the southern bluefin tuna are 'grown out' to increase production from a limited wild fishery and to add value to the wild catch fishery. The Bureau of Rural Sciences calculated that in 1995 the amount of bycatch caught was about 23 per cent of the total catch; 83 per cent of the bycatch was discarded. Species of concern included albatrosses, other seabirds and the blue whaler shark. The Fishery has implemented a seabird Threat Abatement Plan and developed a branch line chute²⁶ as a new mitigation measure. The increase in fish farming since 1995 will also have reduced bycatch.

Report structure

1.26 The report structure is summarised in Figure 1.3.

Figure 1.3
Report structure



²⁶ A branch line chute allows bait to be set a few metres under water so that birds are not aware that there is bait in the water. (See Glossary, Appendix 1).

2. Strategic and Performance Management

This chapter examines AFMA's initiatives to address issues raised in the previous audit and Standing Committee reports in relation to reporting against its legislative objectives.

2.1 The previous audit and Standing Committee reports identified the need to strengthen the way in which AFMA's legislative objectives were implemented in its strategic and performance management framework, and particularly to achieve:

- closer alignment of AFMA's corporate objectives with its legislative objectives and responsibilities; and
- improved performance information and reporting.

2.2 Progress in each of these areas is discussed below.

Alignment of AFMA's legislative objectives in corporate planning

Previous issues

AFMA's Corporate Plans did not clearly reflect its legislative objectives, risking misunderstanding or misinterpretation by staff and stakeholders of AFMA's objectives and key strategic priorities. This was considered particularly relevant for AFMA's ecologically sustainable development (ESD) legislative objective. The ANAO recommended that AFMA achieve closer alignment of its corporate objectives with its legislative objectives and responsibilities.²⁷

2.3 AFMA's activities are governed by the provisions of the *Fisheries Administration Act 1991* and the *Fisheries Management Act 1991*. Those objectives with a particular outcome focus relate to ensuring that the exploitation of fisheries resources and related activities maximises economic efficiency and is conducted in a manner consistent with the principles of ecologically sustainable development (see (b) and (c) of Figure 2.1).

²⁷ ANAO recommendations 6 and 10.

Figure 2.1

AFMA's legislative objectives

The *Fisheries Administration Act 1991* (section 6) and the *Fisheries Management Act 1991* (section 3), provide that AFMA must pursue the objectives of:

- a) implementing efficient and cost effective fisheries management on behalf of the Commonwealth;
- b) ensuring the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle, in particular the need to have regard to the impact of fishing activities on non-target species and the long-term sustainability of the marine environment;
- c) maximising economic efficiency in the exploitation of fisheries resources;
- d) ensuring accountability to the fishing industry and the Australian community in the Authority's management of fisheries resources; and
- e) achieving the government targets in relation to the recovery of the costs of the Authority.

The *Fisheries Management Act 1991* also provides that the Minister, AFMA and Joint Authorities are to have regard to the objectives of:

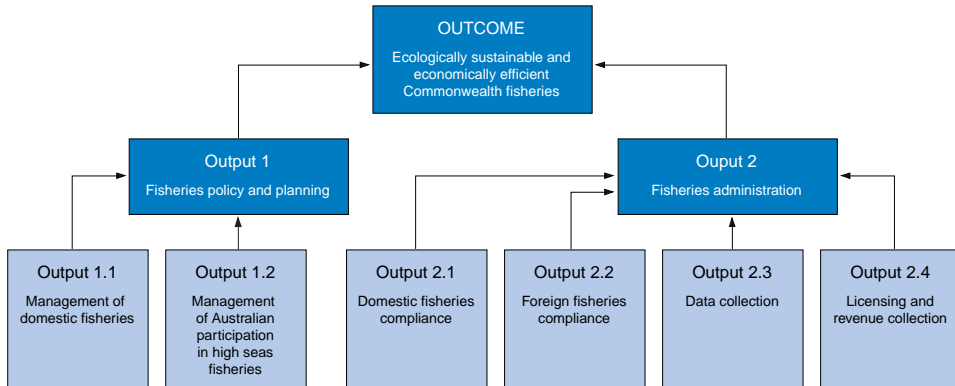
- a) ensuring through proper conservation and management measures, that the living resources of the AFZ are not endangered by over-exploitation;
- b) achieving optimum utilisation of the living resources of the AFZ; and
- c) ensuring that conservation and management measures in the AFZ and the high seas implement Australia's obligations under international agreements that deal with fish stocks (not yet in force at the time of the audit),

but must ensure, as far as practicable, that measures adopted in pursuit of these objectives are not inconsistent with the preservation, conservation and protection of all species of whales.

Since 1999, the *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*) has required all Commonwealth fisheries to be strategically assessed and have the assessment approved for environmental impacts, safeguards and mitigation measures by the Minister for the Environment (*EPBC Act* part 10). (This is discussed further in Chapter 5).

2.4 AFMA's directions for strategic and performance management are now included in its outcomes and outputs framework and in its 2000–2005 Corporate Plan.

2.5 AFMA has not sought to address all its legislative objectives in a single outcome statement. Rather it has sought to encapsulate its two outcome oriented objectives; those addressing ecological sustainability and economic efficiency (b and c in Figure 2.1), in its planned outcome statement: *Ecologically sustainable and economically efficient Commonwealth fisheries* (see Figure 2.2).

Figure 2.2**AFMA's outcome and outputs framework**

Source: AFMA 2000–2005 *Corporate Plan*

2.6 AFMA's other legislative objectives are reflected in its Corporate Plan in various ways. Broadly, objective (a) is considered an output, (d) a guiding principle, and (e) a performance measure. The Corporate Plan clearly states AFMA's legislative objectives and how these are reconciled within AFMA's outcomes and outputs framework.

2.7 The ANAO concludes that AFMA's strategic and corporate planning framework is now well aligned with its legislative objectives and responsibilities.

Performance information and reporting

Previous issues

AFMA's performance information framework required strengthening to better support effective management decision making, as well as to enable sufficient and appropriate reporting to Parliament and stakeholders on fisheries management performance.²⁸

Areas particularly identified for improved performance information included:

- performance against legislative objectives; and
- performance and strategies for each fishery.

²⁸ ANAO recommendations 19 and 34–38; Standing Committee recommendations 15 and 22.

2.8 While AFMA's performance indicators and reporting to Parliament has changed since 1995, in practice, the measures reported to date still provide only limited information in relation to the areas recommended for improvement in the previous report. However, as part of its review of its outcome and outputs framework, AFMA has identified a range of new performance indicators in its 2000–2005 Corporate Plan that it intends to report against in its 2000–2001 Annual Report.

2.9 Past measures and results, as well as planned improvements of the measures, are discussed below for AFMA's outcomes and key outputs. Results for these new measures were not available at the time of the audit.²⁹

Maximising economic efficiency

2.10 Since the previous audit, AFMA has changed the performance measures used in relation to its objective of maximising economic efficiency. These are:

- gross value of Commonwealth fisheries production; and
- Commonwealth fisheries production (in tonnes of fish).

2.11 Recent data, which are reported in AFMA's Annual Reports, are shown in Table 2.1.

Table 2.1

Volume and value of Commonwealth fisheries production

<i>Period</i>	<i>1997–1998</i>	<i>1998–1999</i>	<i>1999–2000</i>
Production in tonnes of fish (rounded)	70 000	77 000	68 000
Gross value (\$million)	354	406	413

Source: Bureau of Rural Sciences (2001) *Australian Fisheries Statistics 2000*

2.12 These measures provide, at best, a limited perspective of economic efficiency, and will be influenced by, *inter alia*, environmental factors, fishing effort, market forces, exchange rates and export market prices, as well as AFMA's management actions.

2.13 AFMA has identified the following new indicators for productivity and economic efficiency of fisheries, which it intends to report in its 2000–2001 and future Annual Reports:

- changes in volume and value of production;
- percentage of fisheries in which impediments and management

²⁹ AFMA has not yet started to systematically collect, analyse and report internally on these measures.

restrictions which constrain economic efficiency have been removed;
and

- percentage change in value of fishing concessions.

2.14 These measures, when data become available, should result in greater insight into outcomes in relation to this objective.

ESD legislative objective

2.15 Assessment of AFMA's performance against its ecologically sustainable outcome requires consideration of several aspects of its legislative objective, including:

- the impact of fishing activities on target species;³⁰
- the impact of fishing activities on non-target species;³¹
- the precautionary principle; and
- the long-term sustainability of the marine environment.

2.16 This is a very difficult area for AFMA to assess performance as, unlike land-based resources, fish stocks are extremely difficult to observe directly and their mobility and variability makes it hard to assess stock sizes and sustainable harvest levels, even with substantial investment in data collection and research effort. Often little is known about the influence of environmental fluctuations on the behaviour of particular species or on the size of fish stocks. As a result, gaps remain in the information upon which to base sound fisheries management resulting in considerable risk and uncertainty.

2.17 AFMA's reporting against its ecological sustainability outcome has focused on the stock status of target species. This approach illustrates the difficulties AFMA has in assessing performance against this legislative objective (see Figure 2.3).

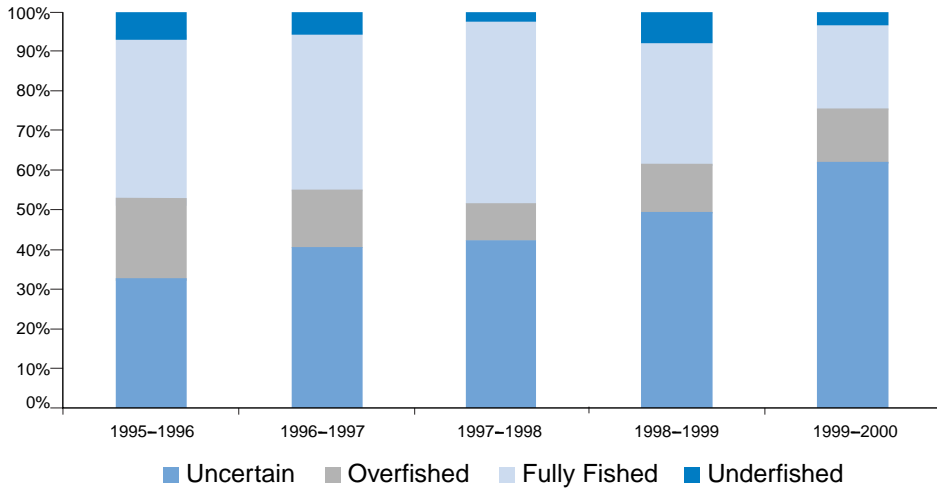
2.18 The stock status of some 60 per cent of target stock species is uncertain, a doubling on five years ago. Paradoxically, as scientific approaches to stock assessment have become more refined and rigorous, this has resulted in increasing recognition of the wider range of uncertainties in stock assessments.

³⁰ Target species are the most highly sought component of the catch taken by fishers.

³¹ Non-target species are any part of the catch, except the target species, and include bycatch and by-product.

Figure 2.3

Stock status of all fisheries 1995–2000



Sources: AFMA 1999–2000 *Annual Report*; Bureau of Rural Sciences (2000) *Fishery Status Report 1999*

2.19 It should be noted, however, that the majority of fisheries whose stock status became increasingly uncertain in the intervening period are the smaller fisheries. These fisheries have often received little direct research attention and the stock status classifications have been less robust. The classification ‘uncertain’ may be adopted despite the existence of considerable monitoring and research information. For example, uncertainty may exist about the status of the Australian waters component of an otherwise well-understood stock fished more broadly on the high seas.

2.20 The body of knowledge of larger fisheries/species groups is less uncertain, but even so, of the 30 main fisheries/species groups for which the Bureau of Rural Sciences assesses stock status, 15 are uncertain, 10 are fully fished, four are overfished, and one is underfished (blue grenadier). The stock status for AFMA’s five largest fisheries in 1999 is summarised in Table 2.2. Broadly, most target stock in these fisheries are either fully fished or overfished.

Table 2.2**Status of five largest Commonwealth fisheries (by value) 1999–2000**

Fishery	Species and status 1999–2000
Northern Prawn (\$91 million)	Banana Prawns: fully fished
	Tiger Prawns: overfished
Southern Bluefin Tuna (\$73 million)	Tuna: overfished
South East Fishery (including Trawl and Non-Trawl) Quota species only (\$67 million)	Blue-eye trevalla: uncertain but probably fully fished in some eastern localities
	Blue grenadier: underfished
	Blue warehou: fully fished
	Flathead: fully fished
	Redfish: fully fished
	Eastern school whiting: underfished (uncertain in Jervis Bay-Portland)
	Gemfish: overfished in eastern zone, underfished in southwestern zone
	Jackass morwong: fully fished in the eastern sector, underfished in southwestern sector
	John dory, ling, mirror dory, royal red prawn, silver trevally, spotted warehou: uncertain
	Ocean perch: fully fished in eastern sector only and possibly underfished in the southwestern sector.
Orange roughy: fully fished in the eastern zone, overfished in the southern and western zones, uncertain on the Cascade Plateau and remote zones.	
Southern and Western Tuna and Billfish (\$24 million)	Tuna and Billfish: uncertain
Torres Strait Fisheries (\$31 million)	Prawn: fully fished
	Rock lobster: uncertain and possibly overfished
	Finfish (mackerel and reef species: mackerel underfished, reef species: uncertain)
	Other collection fisheries: Beche-de-mer overfished. Other species uncertain. Pearl shell overfished, Trochus: uncertain, possibly underfished
	Dugong (not commercially fished): possibly overfished
Turtle (mostly green): uncertain	

Sources: AFMA 1999–2000 *Annual Report*; Bureau of Rural Sciences (2000) *Fisheries Status Reports 1999*

2.21 Current performance reporting means that AFMA can only provide limited assurance to itself, Parliament and stakeholders that its management activities in addressing ecological sustainability are well directed. Further, the focus of reporting provides only limited insight into broader ecological sustainability. As one stakeholder commented, reporting target species detracts from:

...a focus on those parts of [AFMA's] legislation that mention the broader marine environment and the precautionary principle.

2.22 AFMA does intend to strengthen performance measures in its 2000–2001 Annual Report to include the:

- percentage of target and by-product species fished with reference to a fishing level (or stock size) benchmark for assessment, where such reference points are available;
- percentage of target and by-product species identified as at risk or vulnerable as a result of fishing, for which an agreed recovery program is in place;
- percentage of bycatch species assessed as being ecologically viable;
- percentage of bycatch species identified as at risk or vulnerable as a result of fishing for which an agreed recovery program is in place;
- number of initiatives in place to protect the broader marine ecosystem; and
- percentage of marine ecosystems identified as being at risk or vulnerable as a result of fishing, for which an agreed recovery program is in place.

2.23 These measures, when available, should provide better information upon which to assess performance in relation to ecological sustainable development. Notwithstanding these improvements, this remains an area that continues to warrant development in respect of effective management and accountability for AFMA’s ecological sustainable development outcome. The ANAO understands that opportunities for improvements in this area are under consideration as part of the fisheries policy review.

2.24 Chapter 5 considers further, performance and other issues in relation to ecological sustainability.

Cost effectiveness of fisheries management

2.25 AFMA reports on performance of its principal output, fisheries management services, by identifying as an indicative measure the cost of fisheries management as a percentage of the gross value of production (GVP) of Commonwealth fisheries. In 1999–2000 this percentage for domestic fisheries rose to 3.7 per cent of GVP compared to 3.3 per cent in 1998–1999. The cost was approximately \$13.25 million in 1999–2000, or approximately \$800 000 more than in 1998–1999.

2.26 As acknowledged by AFMA, this measure is only an indicative measure and does not go to issues of cost effectiveness. The ANAO considers assessment of AFMA’s fisheries management services would be refined by including quality dimensions such as stakeholder perceptions of, and satisfaction with, management services. Such information could be collected as part of AFMA’s proposed client survey.

Individual fisheries

2.27 The previous reports pointed to the desirability of strengthening information on management approaches, strategies and performance for individual fisheries. Since then, AFMA has increased the performance information reported on individual fisheries, including GVP, management method and stock status. AFMA intends to further enhance reporting by fishery through reporting its outputs and outcomes framework (see for example, Table 2.2).

Risk management

2.28 One of the challenges for AFMA in managing Commonwealth fisheries is the complexity of the task. The difficulties in establishing performance against planned outcomes has been noted above, and AFMA has many stakeholders, who often have divergent views. The previous audit drew attention to several aspects of AFMA's operations which would benefit from a more risk-based approach. The later parts of this report find that there has been progress in incorporating risk management in some of these areas, but also identify other key areas of AFMA's activities which would benefit from being supported by a more systematic approach to risk management than is currently the case.

2.29 AFMA does not have an overall structured risk management framework or plan in support of fisheries management responsibilities. The findings elsewhere in this report suggest that AFMA's operations would benefit from a more systematic approach to risk management across AFMA.

3 Management of the Advisory Process

This chapter examines AFMA's progress on a number of issues associated with the management of the advisory process for Commonwealth fisheries management, including the stock assessment process, identified in the previous audit and Standing Committee reports.

Introduction

3.1 The advisory process is an integral part of AFMA's model for managing Commonwealth fisheries. In particular, Management Advisory Committees (MACs) provide expert advice to the AFMA Board on the management of the fishery, and act as a conduit for the flow of information between stakeholders.

3.2 The previous audit and Standing Committee reports suggested that management of the advisory process could be improved in a number of areas. Suggestions focussed on:

- reflecting the range of industry and other stakeholders through membership on MACs or other means;
- strengthening guidance to MACs to facilitate consistent and effective implementation of key operational matters;
- accountability to key stakeholders;
- addressing the potential for conflict of interest of MAC members; and
- stakeholder input to the stock assessment process.

3.3 The ANAO found that management of the advisory process has improved substantially since the previous audit, and this was generally confirmed by stakeholders consulted by the ANAO. However, there were also views that aspects of the advisory processes required strengthening, ranging from strong concerns to suggestions for improvement. The ANAO notes that AFMA undertook a review of the effectiveness of MACs during the course of the audit, the majority of the review's recommendations have been accepted by the AFMA Board.

3.4 Progress in each of the above areas, and scope for further improvement, is discussed below.

Reflection of stakeholder views through membership or other means

Previous issues

While industry involvement in the management process through MACs was clearly beneficial and undoubtedly an improvement on previous management approaches, continued broadening of membership of MACs was seen as desirable. Particular groups identified were non-industry groups with a legitimate claim to involvement with the process and traditional fishers.³²

3.5 AFMA's legislation limits the number of members on a MAC to seven (in addition to the Chairperson and an AFMA officer). The members are appointed on the basis of their expertise; they are meant to act in the interests of the fishery as a whole, rather than represent sectoral interests.

3.6 The ANAO found that within the size limitations, MAC membership now reflects a broader range of community interests than at the time of the previous audit. All MACs now have an environment/conservation member. Further, depending on the location and nature of a fishery and its species, a MAC may include members with research, recreational fishing, gamefishing or Indigenous backgrounds and members for State and Territory governments. In addition AFMA has appointed observers from these interest groups to many MACs to facilitate their input to the advisory process.

Strengthening guidance to MACs

Previous issues

AFMA had not disseminated structured guidance for MACs and staff on a range of issues. The arrangements in place were not sufficient to facilitate consistent and effective implementation of key operational matters. The ANAO recommended that AFMA expand policy guidance to MACs.³³

³² Standing Committee recommendations 8 and 41.

³³ ANAO recommendations 5 and 12; Standing Committee recommendation 13.

3.7 Since the previous audit, AFMA has become more structured and systematic in issuing guidance to its staff and to MACs. This takes the form of Fisheries Management Papers, covering matters such as allocation of fishing concessions and monitoring illegal fishing activity, and Fishery Administration Papers covering administrative matters such as interpreting cost recovery policy. Two of these papers provide guidance for MAC members.³⁴ One covers the role and function of a MAC, its composition, the selection and appointment procedures and the role of MAC members. The other provides guidance to industry members on MACs and other committees on matters such as: meeting procedures; remuneration and travelling allowance; and handling potential conflicts of interest. AFMA is also developing a Fisheries Management Paper setting out how it interprets its legislative objectives and its ecologically sustainable development and maximising economic efficiency objectives in particular.

3.8 MAC members are asked to sign a declaration that they understand their roles and responsibilities. In addition, AFMA encourages MAC members to attend training courses for MAC members offered by the Australian Maritime College in Launceston. However, very few members attend the course. The ANAO was advised by members and AFMA that the opportunity cost of attendance made participation in the course difficult.

3.9 Stakeholders stated that the effectiveness of the MAC Chairperson is critical to the operations of the MAC and to the quality of its advice to the AFMA Board. AFMA recognises this and, in addition to the above guidance material, it provides MAC Chairpersons with a one-day induction and also organises an annual workshop for MAC Chairpersons to discuss matters such as changes in policy parameters, updates and common fisheries management issues.

3.10 Notwithstanding the guidance provided, MAC members varied in their views about the adequacy of support structures for members, with some considering current support and guidance inadequate. AFMA informed the ANAO that it does not consider it necessary that MAC members need an understanding of aspects of fisheries management beyond the area of expertise for which they are appointed. However,

³⁴ AFMA 1998, Fisheries Management Paper Number 1, *Management Advisory Committees*, and AFMA 1999, Fisheries Administration Paper Number 7, *Information and Advice for Industry Members on AFMA Committees*.

some members emphasised that while they were appointed because of their expertise in one area, to fulfil their role effectively, they needed sufficient understanding of other areas of fisheries management, as well as of participation in a public sector advisory framework. In practice, these members have to acquire the broader skills 'on the job', limiting their ability to contribute effectively to the advisory process. This did not just apply to industry members; for example, an environmental member advised that in the early stages of being a MAC member he was not fully aware of the different fishing technologies and their impact on the environment, limiting his contribution on environmental matters. Assisting the contribution of members in these circumstances is not a matter of making expert advisers competent in other disciplines but of ensuring sufficient understanding for members to contribute effectively to the advisory process.

3.11 The ANAO also found that while AFMA provided guidance to MAC members, they varied in their understanding of their roles. For example, whilst AFMA's guidance states that members: '*are appointed on the basis of their individual expertise ... and not as representatives of any particular group*',³⁵ some MAC members understood their role to be representative, while others considered that there were often unintended conflicting messages from AFMA and MAC Chairpersons about this aspect of their role when issues affecting industry were being considered.

3.12 The ANAO considers that these matters warrant attention to facilitate the contribution of all members and to ensure that MACs operate as intended. This would appear to be particularly relevant for newer members and could be addressed through a more structured approach to induction, including consideration of options such as on-line support and video aids.

3.13 Guidance in relation to specific aspects of scope, objectives and methodology for stock assessments are discussed below (see paragraphs 3.28–3.39). Issues on guidance in relation to the processes and procedures for the development of Statutory Management Plans, incorporating environmental impact assessment in fisheries management, and for officers engaged in surveillance and compliance activities are discussed at paragraphs 4.19–4.21, 5.14–5.15 and 6.14–6.20.

³⁵ AFMA 1998, Fisheries Management Paper Number 1, *Management Advisory Committees*, p. 3.

Recommendation No.1

3.14 The ANAO recommends that AFMA strengthen guidance and support for Management Advisory Committee members, particularly newer members, to assist them in understanding key aspects of fisheries management and their role. This might be achieved through an induction program and on-going guidance materials.

AFMA's Response

3.15 Agreed. AFMA agrees that there is a need to improve induction processes for MAC members to ensure that they clearly understand their roles and responsibilities as members. The need for further guidance and support was also confirmed by the review of AFMA's MACs undertaken by ACIL Consulting Pty Ltd in late 2000. The AFMA Board has now accepted the majority of recommendations arising from the ACIL Report and AFMA has already initiated action to address some of the issues covered in the Report. Further action will be required to implement remaining agreed recommendations. AFMA is currently developing an implementation plan and timetable for these actions.

3.16 MACs are comprised of a range of members with different expertise. MAC members are appointed for their expertise and therefore bring a variety of capabilities to the MAC. For example, industry members are appointed because of their fishing knowledge and expertise. It is not feasible for AFMA to provide training for all MAC members to become competent in all disciplines required to successfully manage fisheries. However, AFMA intends to ensure that MAC members understand the MAC process and the directions set for the relevant fishery by the Board. In providing this guidance, AFMA aims to enable the MACs to more effectively combine the expertise of members and improve advice to the Board.

Accountability to key stakeholders

Previous issues

The Standing Committee considered that there was scope for greater accountability to industry for example through fishery wide annual workshops.³⁶

³⁶ Standing Committee recommendation 24.

3.17 All MACs are required to hold an annual general meeting, at which they can be questioned about their recommendations. In addition, stakeholders advised that industry meetings provide the industry with the opportunity to discuss relevant matters for advice to MACs.

3.18 AFMA's Fisheries Management Papers provide advice to MAC members on their role in communicating with their constituent groups.³⁷ It requires them to:

Regularly report to other operators in the fishery on the MAC's activities, including the issues being dealt with and the possible solutions being dealt with.

3.19 However, the guidance does not address the nature, extent and frequency of such communication with stakeholders. This is left to the discretion of the individual members, including what type of information (for example, Fisheries Assessment Group reports and MAC advice) is to be made publicly available to stakeholders.

3.20 Consequently, stakeholders informed the ANAO that the extent and nature of liaison with stakeholders by industry MAC members varies widely. AFMA has acknowledged that this is the case, and that some members take a 'minimalist approach', but has emphasised that it does not wish to be overly prescriptive and make the members' role onerous, which may reduce their participation.

3.21 The ANAO found that the varying approaches to communicating with industry risks variation in the extent to which stakeholders are aware of, and have input to, some fisheries management issues, potentially undermining the advisory process and accountability to stakeholders. This risk is potentially exacerbated by some MAC members being unclear about aspects of their role (see paragraph 3.11). The ANAO considers that the parameters for liaison with stakeholders could be more clearly defined, without becoming overly prescriptive, to support more efficient and effective accountability to stakeholders. The independent MAC Review has made a recommendation to address these arrangements.³⁸

³⁷ AFMA 1998, Fisheries Management Paper Number 1, *Management Advisory Committees*.

³⁸ Recommendation 19 of the independent review of MACs commissioned by AFMA in 2000, recommended that communication with operators in a fishery be undertaken by the MAC Chair and Executive Officer. The AFMA Board accepted this recommendation and responded that AFMA and industry associations have a key role in communicating to industry. AFMA advised the ANAO that the Fisheries Management Papers will be rewritten to reflect this change.

3.22 AFMA keeps industry and other stakeholders informed by other means, including *AFMA News*, which reports on decisions of the Board and fisheries management issues, and *Environment Updates*, which focuses on environmental matters. The AFMA Board also holds an annual public meeting to answer questions directly from stakeholders and at least one meeting a year outside the Australian Capital Territory.

3.23 Notwithstanding these arrangements, stakeholders, including MAC members, considered there were insufficient face-to-face meetings with the Board and AFMA senior management. For example, one large licence holder in a major fishery stated that the Executive had never initiated contact when in his home city. MACs are central to effective fisheries management and the ANAO considers that there would be merit, as part of a risk managed approach to fisheries management and to stakeholder consultation in particular, in considering the costs and benefits of wider consultation with MACs and stakeholders outside of the Australian Capital Territory. The AFMA Board recently accepted a recommendation (Recommendation 21) of the independent MAC review to this effect.

Managing conflicts of interest

Previous issues

More robust processes could be in place to effectively manage the potential for conflicts of interest of MAC members.³⁹

3.24 The expertise-based nature of MACs and involvement of stakeholders in fisheries management means that members are likely, from time to time, to face potential conflicts of interest, for example, where a management proposal under consideration may present a conflict between a member's short term personal interests and the long-term interests of the fishery.⁴⁰ It follows that sound corporate governance requires effective arrangements for managing such situations.

3.25 Since the previous reports, guidance has been issued⁴¹ which details extensive conflict of interest disclosure provisions for MAC

³⁹ Standing Committee recommendation 11.

⁴⁰ The process for declaring a conflict of interest is set out in the *Fisheries Administration Act 1991* section 64A.

⁴¹ AFMA's 1998 Fisheries Management Paper Number 1, *Management Advisory Committees*; and 1999 Fisheries Administration Paper Number 7, *Information and Advice for Industry Members on AFMA Committees*.

members on how to deal with situations where potential conflict of interest arises. In addition, MAC members are required to sign a declaration that they understand their roles and responsibilities and to sign a form declaring any potential conflict of interest. MAC Chairpersons are required to ask for disclosures of conflicts of interest at the beginning of each MAC meeting. AFMA has also emphasised that, as MACs are advisory bodies only, the Board provides further assurance in this regard as it is the final decision maker.

3.26 The ANAO considers that this guidance is generally sound. MAC members consulted also consider that conflict of interest was effectively managed in MAC meetings. Notwithstanding the specific measures for managing potential conflict of interest, AFMA is considering broadening governance arrangements through a formal governance statement for MACs. Given the sensitivity of this issue in the industry advisory process, there would also be merit in AFMA considering a mechanism to assess how effectively conflict of interest is managed by individual MACs.

Assessing performance of MACs

3.27 As noted above, AFMA has undertaken a review to examine the concept and conduct of MACs. However, apart from anecdotal industry feedback and the presence of an AFMA member on each MAC, AFMA and the Board do not have performance information on MACs or any regular means of assessing the effectiveness of MACs' performance, notwithstanding that they are central for effective fisheries management under the Commonwealth's management model. In particular AFMA does not obtain feedback from stakeholders on the performance of MACs, the effectiveness of consultation mechanisms, or stakeholder understanding of the role of the MAC.⁴²

3.28 The ANAO considers that given the importance of MACs, and their role in interfacing with industry and stakeholders generally, there would be merit in systematically assessing their performance in a cost effective manner. A client survey of stakeholder perceptions would contribute to this. AFMA has indicated it plans to undertake a survey which will, *inter alia*, address some of these issues.

⁴² Some questions about MACs were part of the 1996 and 2000 client survey.

Stakeholder input into the stock assessment process: fisheries assessment groups

Previous issues

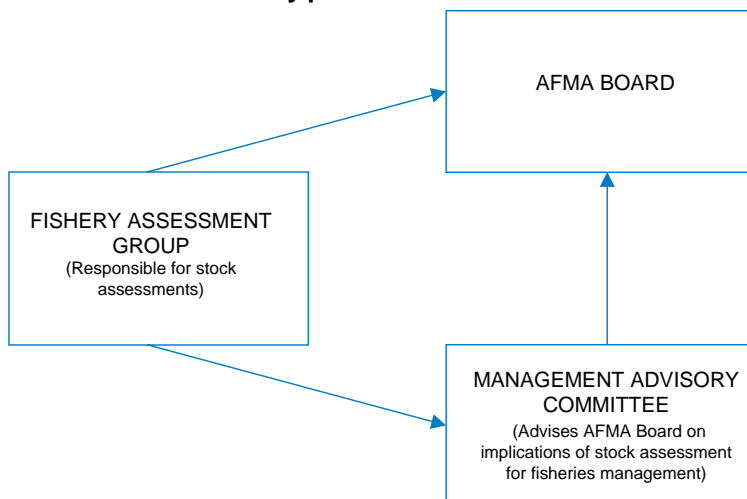
The stock assessment process is critical to fisheries management and to achieving AFMA's ESD outcome. The previous audit found that guidance was not available to those undertaking stock assessments on overall policy, the scope and nature of assessments, and timeframes for the work. Recommendations were made to this effect. The Standing Committee considered that mechanisms should facilitate greater involvement of industry and fishers' knowledge in the stock assessment process.⁴³

3.29 Fisheries/stock assessments are undertaken by Fishery Assessment Groups (FAGs). FAG members include marine scientists, industry members, economists and where relevant, other stakeholders such as environmental experts.

3.30 The fishery/stock assessments are provided to the MAC and directly to the AFMA Board. The MAC in turn can refer this to a MAC sub-Committee (at present this only happens in the South East Trawl Fishery). The MAC uses the stock assessments to advise the AFMA Board on fisheries management issues, for example total allowable catch (TAC) levels and the AFMA Board evaluates the MAC advice in the context of the relevant fishery or stock assessment report (see Figure 3.1).

Figure 3.1

Stock assessment advisory process



⁴³ ANAO recommendations 11 and 17; Standing Committee recommendation 16.

3.31 Since their initial establishment in 1993–94 FAGs have evolved as a mechanism whereby scientific advice on fishery/stock status is formulated independently from MACs and AFMA’s day to day management operations. Industry involvement in the fisheries/stock assessment process has increased so that each FAG now includes industry member/s to ensure industry input in the fishery/stock assessment process.

3.32 The operation of the FAG model at arm’s length from AFMA results in a considerable level of industry involvement and transparency of the stock assessment process. This contrasts with some other international arrangements. For example, in the European Union, the International Council for the Exploration of the Sea Advisory Committee on Fisheries Management (which comprises only scientists) submits proposals on TACs to the European Union Council of Fisheries Ministers. Before submission to the Council, the Scientific, Technical and Economic Committee on Fisheries (STECF) is also consulted on the implications of these proposed TACs. The STECF, made up of biologists and economists, has no industry or other stakeholder representatives as members.

3.33 The previous audit and Standing Committee reports emphasised the importance of stock assessment as essential underpinning of fisheries management and to assist AFMA in meeting its ecologically sustainable development objective. The ANAO also reported that, notwithstanding the complexities of the stock assessment process and the importance of shared understanding in an advisory framework, guidance on the scope, objective and nature of the stock assessment process had not been provided. AFMA indicated to the Standing Committee the intention to issue a policy paper to provide guidance in this area in June 1997.

3.34 However, AFMA has not issued such a paper, nor other alternative guidance material. As well, there is no structured induction program for FAG members to assist them in contributing effectively to the stock assessment process. AFMA does, however, recognise that much of the technical work of the FAGs is difficult to understand for non-technical industry members, and it seeks to appoint FAG members who can most usefully participate in order to achieve stakeholder ownership and minimise conflict. FAG members informed the ANAO that the provision of guidance on a number of procedural matters would be of considerable benefit to them in contributing to the FAGs’ work.

3.35 AFMA recently prepared a draft paper on the role of FAGs, but this has been held up as it is considering a review of the FAG process. AFMA also advised that the stock assessment process varies across fisheries, and that decisions on the scope and types of assessment are

devolved to the individual FAGs. Accordingly it does not wish to set out general guidelines for the scope and types of assessments, nor be prescriptive.

3.36 In such a devolved environment AFMA still retains the responsibility for ensuring that Commonwealth fisheries management is supported by stock assessments of appropriate quality. This requires quality assurance arrangements which ensure that the underlying scientific assessments and advice of the FAGs is consistent with required policy directions and standards. This is particularly relevant as the stock assessment process is highly technical and complex in nature, and complicated by the practical difficulties of scientific data and modelling which are often not conclusive, or subject to margins of error.

3.37 The ANAO considers that the evidence suggests that notwithstanding AFMA's measures and views, additional guidance to FAGs on the scope and nature of stock assessments would, *inter alia*, assist the participation of industry in the stock assessment process. For example, there are no standards or guidance to ensure that scientific assessments undertaken by consultants for FAGs are reported in a manner which facilitates clear communication of key issues and effective collaboration and advice by all FAG members. Some FAG members advised that the highly technical nature of some scientific documents can hinder effective participation of industry members, with a lack of transparency and clear articulation of some of the models used by scientists. The absence of a shared understanding in such circumstances risks, in the words of one FAG member, recommendations of the FAG being arrived at through a process more akin to 'horse trading' than scientific assessment.

3.38 The ANAO considers that guidance on this matter could be included as part of more general guidance on stock assessments. Such guidance need not be overly prescriptive but could at least provide a framework for assurance of appropriate standards and quality of stock assessments in support of effective fisheries management.

3.39 The ANAO notes that there are examples where enhanced stakeholder ownership and reduced conflict has been achieved through involvement of fishers in data gathering and active research.⁴⁴ The promulgation of such practical measures would also seem beneficial.

⁴⁴ For example, one initiative from the South East Trawl Fishing Industry Association resulted in a workshop led by the Chair of the South East Fisheries Assessment Group aimed at increasing industry participation. The workshop was national in scope and was funded by the Fisheries Research and Development Corporation.

Recommendation No.2

3.40 The ANAO recommends that AFMA provide guidance to Fisheries Assessment Groups on broad policy direction and standards and on the objectives, scope and types of stock assessments, and that this guidance include standards required of scientific service providers in communicating and presenting results.

AFMA's Response

3.41 Agreed. AFMA agrees that it should provide FAGs with broad policy direction, and expected standards (including those required for communicating and presenting results). AFMA will define specific management objectives for the FAGs. This will provide a framework within which the FAGs can decide the scope and types of assessments that may be useful in pursuing management objectives. This should enable these expert groups to inform AFMA about the best assessment approaches (including new approaches) and to carry these out.

4. Implementation of Fisheries Management Methods

This chapter examines AFMA's progress on a number of issues associated with the implementation of preferred management methods and Statutory Management Plans.

Introduction

4.1 The Government's 1989 Fisheries Policy Statement, *New Directions for Commonwealth Fisheries in the 1990s*, states that Statutory Management Plans (SMPs) are the preferred means of developing fishery management strategies. One of the key purposes for creating SMPs is to provide greater stability and certainty to the fishing industry through the allocation of Statutory Fishing Rights. Under legislation Statutory Fishing Rights can not be allocated until an SMP is in place. Development of SMPs is therefore a key deliverable for AFMA in implementing Government policy.

4.2 It is important to note that fisheries can be managed without an SMP, using management policies and through fishing permits. The permits set out the conditions of fishing. Furthermore industry input in fisheries management through the Management Advisory Committees (MACs) still occurs in those fisheries without an SMP. Stakeholders confirmed that while fisheries can be managed by the same methods independent of the development of an SMP, the long-term security that is provided by an SMP was highly valued as it greatly facilitates investment planning and decisions.

4.3 Fisheries can be managed through a range of controls which fall into two broad categories: output controls and input controls. Output controls restrict the output of a fishery by setting a maximum catch level for all or some of the species in that particular fishery. This catch limit is referred to as the total allowable catch (TAC). In some fisheries the TAC is allocated to individual fishers by individual transferable quotas (ITQs), which represent a share of the TAC and can be traded among the fishers in that fishery, permitting market forces to operate while meeting AFMA's ecologically sustainable development objective. The quantity of fish an individual operator is permitted to catch depends on the size of their ITQ and the TAC level.

4.4 Alternatively, the TAC can be managed on a competitive basis, whereby eligible operators can catch as much as they are able until the

TAC is reached, after which the fishery is closed for the remainder of the season for which the TAC was set.⁴⁵

4.5 Input controls seek to limit the amount of fish taken from a fishery by restricting the level of effort in the fishery. Input controls consist of restrictions on the types and size of fishing gear units (types of nets, number of hooks that can be set), number of boats, the period of entry in a fishery and area. The AFMA Board may alter the level of effort through input controls (for example by limiting the duration of the fishing season) based on the information provided in stock assessments and MAC advice.

4.6 The 1989 Fisheries Policy Statement identified output controls, and specifically ITQs, as the preferred management approach for protecting stocks and achieving efficient industry. The preferred management method for fisheries that are unsuited to management through ITQs is the use of tradeable gear units as input controls. As with ITQs, this permits market forces to operate, as fishers are able to trade their fishing gear units to achieve economies of scale.

Implementation of preferred management methods for Commonwealth fisheries

Previous issues

Since AFMA's establishment no Commonwealth fishery had been placed under output controls, the preferred management method under the 1989 Policy Statement.⁴⁶ At the time of the previous audit only one of the fisheries was managed by the alternative preferred method of tradeable input controls.⁴⁷

The previous audit and Standing Committee reports identified the value in planning and developing strategies for structural adjustment and implementation of preferred management methods.⁴⁸

⁴⁵ It is also possible for there to be non-transferable quota allocations, or trigger catch levels, that are used to review and decide if the fishery should remain open. This is a precautionary form of output controls that is sometimes used in new or developing fisheries where there is insufficient information to establish TACs.

⁴⁶ Southern Bluefin Tuna and the South East Fishery have been under quota management since 1992.

⁴⁷ Gear based management came into effect in the middle of 2000.

⁴⁸ ANAO recommendations 14, 15 and 18; Standing Committee recommendations 23, 25, 43 and 44.

4.7 Since 1996 AFMA has made substantial progress in planning and implementing management methods in all its fisheries. AFMA's approach is to deal with each fishery on a case by case basis. Factors considered include: jurisdictional arrangements; degree of industry acceptance of ITQs; the adequacy of existing management arrangements to meet AFMA's legislative objectives; and the specific management objectives in the particular fishery. In addition, AFMA has regard to the scale of operations (taking into account AFMA's cost effectiveness objective), species mixes, the state of development of the fishery, and the status of species in the fishery. As part of this process AFMA investigated, and consulted on, the amalgamation of some fisheries.⁴⁹

4.8 AFMA has implemented ITQs for six fisheries, and three fisheries are managed by a combination of both ITQs and input controls.⁵⁰ AFMA has also identified a further two fisheries where ITQs are the preferred management approach: Eastern, and Southern and Western, Tuna and Billfish Fisheries; it anticipates implementing ITQs for these fisheries by June 2002. One fishery (Norfolk Island) is managed under scientific permit, whereby fishing takes place for scientific rather than commercial purposes.

4.9 At the time of the current audit, AFMA managed the remaining 10 fisheries by input controls, of which the Northern Prawn Fishery is the only fishery that uses tradeable gear units (along with other input controls). The other nine are generally smaller in size and value, and AFMA advised that where required, alternative management arrangements for these fisheries will be developed in the future.

4.10 Under the current arrangements approximately 67 per cent of Commonwealth fisheries by value are managed in accordance with the 1989 Policy Statement, that is by ITQs or tradeable gear units. This is expected to rise to 90 per cent by June 2002. Table 4.1 contains more details on fishery management methods.

⁴⁹ The South East Trawl and Non-Trawl Fisheries will be combined under a single management plan. Consideration is being given to amalgamating the three tuna fisheries.

⁵⁰ An example of a combination of ITQs and input controls is that fishing can only take place during certain months of the year.

Table 4.1
AFMA fisheries by management methods May 2001

<i>Fishery</i>	<i>GVP \$'000'</i>	<i>Management Method</i>
Bass Strait Central Zone Scallop	–	ITQs. The Fishery has recently been reopened
Christmas Island	16	Input controls including limited entry
Cocos (Keeling) Islands	Unknown	Include controls including limited entry and area restrictions, and total allowable catch set for aquarium fish species
Coral Sea Fishery	314	Input controls based on limited entry. Interim management arrangements are in place
Eastern Tuna and Billfish	54 908	Input controls including limited entry, zoning, boat size restrictions, by-catch provisions and gear restrictions
Great Australian Bight Trawl	6 841	Input controls, including limited entry of vessels demersal trawling, limited cod and mesh size, area restrictions for vessels over 40 metres in length
Heard Island and McDonald Islands	*	Allocated TAC with ITQs from December 2001
Jack Mackerel	628	Combination of input and output controls, including limited entry and trigger total allowable catches
Macquarie Island	*	Output controls and limited entry
Norfolk Island	Unknown	Offshore fishery—strict environmental and management restrictions, including catch limits on individual species. In-shore fishery restricted to subsistence fishing by local inhabitants
Northern Prawn	90 835	Input controls, including limited entry, seasonal and area closures, gear restrictions and operational controls to contain fishing effort
Southern Bluefin Tuna	73 460	Output controls based on total allowable catch and individual transferable quotas for the domestic fishery
South East Non-Trawl	5 561	Output controls in the form of individual transferable quotas and total allowable catches for 16 South East Fishery quota species together with input controls including limited entry and some gear and area restrictions
South East Trawl	67 461	Combination of input and output controls, including TACs and ITQs for 18 species, limited entry and mesh size and area restrictions

continued next page

Fishery	GVP \$'000'	Management Method
Southern Shark	13 831	Output controls in the form of individual transferable quotas on two species and total allowable catches together with input controls including limited entry, gear limitations (hook and net limits) and area restrictions
Southern Squid Jig	443	Input control, limited entry
South Tasman Rise	835	Extension of the area to which the <i>Fisheries Management Act 1991</i> applies, limited entry to Australian vessels and precautionary total allowable catches set for orange roughy and areo dory
Southern and Western Tuna and Billfish	23 590	Input controls, limited entry
Torres Strait Fisheries	31 226	Dugong and turtle can only be taken for traditional purposes only. Non-Islander participation is managed through input controls (number of licenses and effort). Under the <i>Torres Strait Treaty</i> there are no limits on the number of Islanders participating in commercial or traditional fishing
Western Deep Water Trawl	409	Input controls based on limited entry. Fishing activity is also monitored using a Vessel Monitoring System
North West Slope Trawl	420	Input controls limited entry with cod end mesh size restrictions. This Fishery is accessed as an adjunct to other major fisheries
<p>* To maintain operator confidentiality, the gross value of production (GVP) for this Fishery has not been included.</p> <p>1. GVP for 1999–2000.</p>		

Source: AFMA

4.11 The Standing Committee suggested that in developing and implementing management regimes, AFMA have regard to the cost of management. The Government supported this to the extent to which AFMA is ensuring that its other legislative objectives are not compromised. The ANAO found that AFMA undertakes industry consultation to obtain industry views on the effect of a preferred management method for a particular fishery. In addition, as is discussed in Chapter 3, industry views and advice on fisheries management are achieved through the MAC advisory process.⁵¹

⁵¹ Standing Committee recommendation 25.

Development and implementation of Statutory Management Plans

Previous issues

Progress in implementing Statutory Management Plans (SMPs) had been limited; AFMA had implemented three SMPs for the 10 fisheries it had identified as requiring SMPs. AFMA indicated that it anticipated it would be more successful in the near future and provided a timetable to the Standing Committee, indicating that it intended to have a total of 10 SMPs in place by 1998. Both reports suggested that policy/procedural guidance would assist in this process, not the least to assist stakeholders in understanding and participating in the process.

The previous audit report also found that the objectives, strategies and performance indicators of the SMPs could be better linked to AFMA's objectives.⁵²

Progress of SMPs against timetable

4.12 In the timetable provided to the Standing Committee in 1997, AFMA reported its intention to develop and implement a further seven SMPs by the end of 1998. Since then progress has been limited and AFMA has not met this target. AFMA has completed and implemented just one new SMP (South East Trawl Fishery) and reviewed the existing SMP for the Northern Prawn Fishery. This brings the total number of SMPs to four (see Table 4.2).

⁵² ANAO recommendations 7 and 8; Standing Committee recommendations 12 and 13.

Table 4.2**AFMA priorities and target dates for completing Statutory Management Plans**

<i>Fishery</i>	<i>Priority at time of 1995–96 audit report</i>	<i>Target completion date at time of ANAO Audit 1995–1996</i>	<i>Target completion date provided to the Standing Committee in 1997</i>	<i>Current status</i>
Great Australian Bight Trawl	Not applicable	In force	In force	In force
Southern Bluefin Tuna	Not applicable	In force	In force	In force
Northern Prawn	Not applicable	In force 12/5/95	In force	In force
South East Trawl	1	October 1996	After public comment in 1997	In force
East Coast Tuna and Billfish	2	June 1996	Implement by mid 1997	Expected to be implemented by 30 June 2002
North West Slope Trawl	3	June 1996	Implement by 1996/97	No progress because of the low level of fishing
Southern Shark	4	On hold	Implemented by 1/1/1998	Consultation commenced on combined South East Fishery Management Plan
Western Deep Water Trawl	5	1996	Implemented by 1996/97	No progress because of the low level of fishing
East Coast Deepwater Trawl (was North East Deepwater trawl)	6	No date	Management arrangements under review	No progress because of the low level of fishing in this area
Southern and Western Tuna and Billfish	7	No date	Options for future management under consideration	Expected to be implemented by 30 June 2002
Jack Mackerel (Zone A)	8	No date	Managed by Tasmanian Department of Primary Industries and Fisheries	Not applicable

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Fishery	Priority at time of 1995–96 audit report	Target completion date at time of ANAO Audit 1995–1996	Target completion date provided to the Standing Committee in 1997	Current status
South East Non-Trawl	9	No date	SMP intended to be implemented 1997/98	Consultation commenced on combined South East Fishery Management Plan
Albacore	Not applicable	SMP not required	Not managed under SMP	Not applicable
Bass Strait Scallop	No priority given	On hold	Implemented during 1998	Expected to be implemented by 1 January 2002
Christmas and Cocos Islands	Not applicable	SMP not required	Not managed under SMP	Not warranted under <i>Fisheries Management Act 1991</i>
East Coast Deep Water trawl	Not applicable	SMP not required at that time	Not managed under SMP	Not applicable
Jack Mackerel	Not applicable	SMP not required	Not managed under SMP (other zones)	A revised Management Policy is being developed, which may be followed by an SMP
Norfolk Island Fishery	Not applicable	No SMP required at that time	Options paper in preparation	Not warranted under <i>Fisheries Management Act 1991</i>
Heard Island and McDonald Islands	Not applicable	Not applicable	Not applicable	Expected to be implemented by 1 January 2002
Squid	Not applicable	No SMP required at that time	Consultative Committee to advise on future management options	Management Plan not considered appropriate at this stage

Sources: ANAO Report No.32 1995–96 vol. 2, p. 43; Report of House of Representatives Standing Committee on Primary Industries, Resources and Rural and Regional Affairs, 1997; and AFMA 1999–2000 Annual Report

4.13 AFMA advised the ANAO that it was committed to the development and implementation of SMPs but progress had been limited due to a number of factors, in particular the time required to achieve consensus among stakeholders, and delays in finalising Offshore Constitutional Settlement (OCS) agreements.⁵³ AFMA also advised that other deliverables had taken greater priority. For example, the new *Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)* requires AFMA to undertake environmental impact assessments of all its fisheries which further necessitated a reassessment of priorities. Since 1 July 2000 new SMPs can only be introduced after such an assessment.⁵⁴

4.14 The difficulties AFMA has experienced in developing SMPs as a result of the need to reach consensus among stakeholders was highlighted during consultations held by the ANAO. Stakeholders indicated that there was sometimes a lack of consensus amongst them on the value of a particular management method, the benefits of ITQs, and there was sometimes a misunderstanding that AFMA's role was to implement the preferred management methods under the 1989 Policy Statement rather than set new policies.

4.15 The ANAO also found that the challenges in reaching consensus were exacerbated by the high degree of uncertainty, and differing views amongst industry, about the effect of a change in management regime on the economic livelihood of fishers. For example, one group of fishers in the Northern Prawn Fishery stated that the proposed changes to revise the SMP for that fishery disadvantaged their group while providing advantages to other fishers in that industry. There was a Senate inquiry into the Northern Prawn Fishery before implementation of the revised SMP.

4.16 OCS arrangements are in place for all States. In February 1995, new OCS arrangements and associated Memoranda of Understanding were agreed between the Commonwealth, Queensland, Western Australia and the Northern Territory. OCS Arrangements between the Commonwealth and Tasmania and South Australia came into effect on 1 January 1997. OCS arrangements with Victoria were made in 1997. A further round of OCS arrangements with Tasmania, South Australia and Victoria in relation to school and gummy shark was completed by the end of 2000. At the time of the current audit revised OCS agreements had not been developed and implemented for New South Wales.

⁵³ Offshore Constitutional Settlements are described in 1.9.

⁵⁴ Planning and management of these assessments—known as strategic assessments—is considered further at paragraphs 5.11–5.22.

4.17 AFMA advised that it has continued to learn from its experience with the initial SMPs, and the content and structure continues to be refined. AFMA further advised that it has substantially progressed a further four proposed SMPs, and that it anticipates completing these by 30 June 2002 (see Table 4.2). There would then be eight SMPs in force covering over 90 per cent of Commonwealth fisheries by gross value of fisheries production.

4.18 The ANAO found that progress against the implementation timetable presented to the Standing Committee in 1997 has not been regularly reported to the AFMA Board. Rather, the Board is informed as progress occurs in specific fisheries. While AFMA reports on the status of existing SMPs in its Annual Reports, it has not reported progress on the development and implementation of new SMPs in its recent Annual Reports, in the light of its intentions expressed in 1997. Nor has it assessed the consequential impact on its pursuit of fisheries management objectives for the benefit of Parliament and stakeholders.

Guidance for staff and stakeholders on management methods and SMPs

4.19 The previous audit and Standing Committee reports recommended that, to assist in the development and implementation of SMPs, AFMA provide appropriate guidance and information for staff and stakeholders. AFMA advised the Standing Committee that it would prepare a policy paper on the SMP process by December 1997 to meet this need. However, progress with the policy paper has been limited, and it has not yet been issued.

4.20 AFMA has advised that other priorities have prevented completion of the paper, but it now expects the paper to be available in December 2001. The ANAO notes that, by then (or more precisely, January 2002), AFMA expects 90 per cent of Commonwealth fisheries by gross value of fisheries production will already be covered by SMPs.

4.21 Effective participation by stakeholders remains, as acknowledged by AFMA, critical to progress and implement effective SMPs. This follow-up audit has reinforced the value of guidance and information to industry and stakeholders to facilitate their contribution to the development of an SMP. For example, the ANAO found variable and differing understanding among stakeholders of some aspects of SMPs and their underpinning management methods. Timely completion of the policy paper would seem to warrant priority management attention for appropriate support to AFMA's efforts to implement SMPs.

Alignment of SMPs' objectives, strategies and performance indicators with AFMA's corporate and legislative planning and reporting requirements

4.22 The previous audit report identified that the SMPs did not closely align with AFMA's legislative objectives. The ANAO found that the recently developed and amended SMPs have far closer alignment, as illustrated by the performance criteria for the amended Northern Prawn Fishery SMP (as set in Figure 4.1), which assesses AFMA's outcomes against its key outcomes and principal output.

Figure 4.1

Performance criteria of the Northern Prawn Fishery Management Plan

Performance criteria

- 1) The performance criteria against which measures may be assessed are:
 - a) the status of economic efficiency of the Northern Prawn Fishery;
 - b) the status of the biological resources and environmental conditions in the Northern Prawn Fishery area; and
 - c) the cost effectiveness of the management arrangements for the Northern Prawn Fishery.
- 2) AFMA and the Northern Prawn Fishery Management Advisory Committee must, from time to time, conduct assessments of the effectiveness of the measures taken to implement the objectives of this plan by reference to the performance criteria.
- 3) AFMA must publish an Annual Report assessing the performance of this plan with reference to the most recent assessment carried out under subsection (2).

4.23 The ANAO notes that the value of these performance indicators in supporting effective fisheries management is dependent on the quality and availability of relevant data to measure and assess these criteria. As discussed at paragraphs 2.21–2.24, this is an area that AFMA is still developing and on which it expects to be able to report further in its 2000–2001 Annual Report.

4.24 The ANAO notes that AFMA's outcomes and outputs framework and the new reporting performance measures included in its Corporate Plan are not reflected in the SMPs that were developed prior to the introduction of this framework.⁵⁵ AFMA has advised that it will seek to review and amend, as appropriate, the performance measures when the SMPs are due for review.

⁵⁵ AFMA states that the legislative nature of the SMPs and the time that is involved in obtaining approval for legislative change makes it not practical to review and change SMPs on a regular basis. However, when required, the Northern Prawn Fishery SMP was reviewed and amended. AFMA stated it had no set guidelines to trigger a review of SMPs, this was the result of a range of factors that differed from fishery to fishery.

Cost recovery

Previous issues

AFMA's performance information and reporting in relation to its cost recovery legislative objective was limited and provided insufficient transparency to stakeholders.⁵⁶

4.25 The ANAO found that AFMA's methodology and results for cost recovery are now more transparent and are generally administered in accordance with AFMA's legislative objectives, a finding that was confirmed by stakeholders. AFMA's approach to cost recovery, allocation of overheads etc. is set out in Fisheries Administration Papers. AFMA prepares annual budgets for the recoverable fisheries, containing carried forward deficits/surpluses, revenue projections and expenditure projections. The budgets are discussed with the relevant MAC and outcomes acquitted to the MAC.

4.26 AFMA's Annual Report provides information on cost recovery outcomes, including information on funds generated and amounts outstanding for each of its fisheries.

⁵⁶ ANAO recommendation 39.

5. Managing AFMA's Environmental Responsibilities

This chapter examines AFMA's initiatives to address issues raised in the previous audit and Standing Committee reports in relation to AFMA's environmental responsibilities.

Introduction

5.1 AFMA is required to manage fisheries consistent with the ESD objective as set out in Section 3(b) of the *Fisheries Management Act 1991*, that is:

... that the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle, in particular the need to have regard to the impact of fishing activities on non-target species and the long-term sustainability of the marine environment.

5.2 The previous audit and Standing Committee reports identified the challenges for AFMA in managing its legislative ESD obligations. Several areas were identified where strengthened management arrangements could better support this objective:

- management and liaison arrangements for environmental matters;
- processes and procedures for assessing environmental impact;
- management of bycatch; and
- the management of stock targeted by non-commercial fishers (for example, blue and black marlin).

5.3 Since the previous audit, AFMA has given substantially greater emphasis to its ESD objective and made progress in addressing these matters. This is discussed below.

Management and liaison arrangements for environmental matters

Previous issues

There was limited management focus and direction with respect to AFMA's ESD objective, and liaison with external agencies could be improved.⁵⁷

⁵⁷ ANAO recommendations 9(b) and 9(c).

5.4 AFMA's management structure and liaison arrangements have been strengthened since the previous audit to better support its environmental responsibilities. It now has an Environment Unit which provides advice within AFMA on environmental matters, and seeks to facilitate communication with stakeholders, and education of the fishing industry, environmental organisations and the community on the interactions between fisheries, fisheries management and environmental issues.⁵⁸

5.5 Environmental responsibilities are also now reflected in the management arrangements of the AFMA Board. The Board established an Environment Committee in 1999, which includes representatives of Environment Australia (EA) and of a Non Government Organisation (NGO).

5.6 All Management Advisory Committees (MACs) now have an environment/conservation member. These are generally nominated by NGOs such as Traffic Oceania, the World Wide Fund for Nature, and the Australian Conservation Foundation, or by appropriate individuals. AFMA also advised that in addition to obtaining input on environmental matters through the MAC process it may consult with other environmental organisations on specific environmental matters of concern.

5.7 In addressing the environmental aspects of fisheries management, AFMA also has to have regard to the areas of shared or closely aligned jurisdiction between AFMA, EA, and the Department of Agriculture, Fisheries and Forestry—Australia (AFFA). The responsibilities of EA in these arrangements have been enhanced by the passage of the *Environment Protection and Biodiversity Conservation Act 1999*.

5.8 While AFMA did not agree with the previous audit's recommendation of formalising arrangements with the then Environment Protection Agency (now part of EA) through a Memorandum of Understanding, the ANAO found that liaison between the two agencies has since improved. There is regular interaction between AFMA's Environment Unit, EA and AFFA on matters of environmental significance affecting fisheries management. AFMA held a one-day workshop with staff from Environment Australia's Marine Group in 1999 to further cooperation and better understanding.

⁵⁸ The Environment Unit was established in 1996. It has one outcome: *Ecologically sustainable and economically efficient Commonwealth fisheries*, and two outputs: *Fisheries policy and planning*, and *Environmental advice and liaison*. Source: *AFMA Environment Unit Workplan*.

5.9 The ANAO considers that the above represents substantially strengthened arrangements for, and focus on, AFMA's environmental responsibilities. Stakeholders consulted by the ANAO also considered that there was a greater focus in AFMA's operations on its environmental objective. They also commented that the fishing industry in general has become increasingly more aware of the value of environmental responsibilities for the industry's long-term sustainability.

5.10 Notwithstanding these improvements, the ANAO found that the boundaries of responsibility between the various government agencies are not always adequately understood by external stakeholders, particularly environment/conservation NGOs, with some mentioning there was a perception that agencies were not always working in harmony. AFMA has recognised the need to strengthen communication on these matters, and conducted a one-day workshop with NGOs to clarify AFMA's role in managing environmental aspects of Commonwealth fisheries.

Assessing environmental impact

Previous issues

Processes and procedures for assessing environmental impact were not well developed.⁵⁹

5.11 At the time of the previous audit there were no legislative requirements to conduct environmental impact assessments for all Commonwealth fisheries. However, AFMA was required to seek clearance from the then Environmental Protection Agency (EPA) on any further SMPs. AFMA had completed no environmental impact assessments for its fisheries, although it had referred at least four decisions to the then EPA and had obtained written clearance for the Northern Prawn Fishery Management Plan and the Southern Bluefin Tuna Management Plan prior to their acceptance by the Minister in 1995.⁶⁰

5.12 Since the previous audit, one environmental impact assessment has been completed, for the South East Trawl Fishery, and there has been an exchange of letters between AFMA and the then EPA in relation to the great Australian Bight and Southern Bluefin Tuna Fisheries. In addition decisions in relation to impact assessments have been referred to EA

⁵⁹ ANAO recommendation 9(a).

⁶⁰ AFMA advised that EA had determined that no environmental impact assessment was required for any of these decisions.

addressing: Heard Island and McDonald Islands policies; Macquarie Island; and the re-introduction of a commercial total allowable catch for eastern gemfish.

5.13 The legislative context in which environmental impact assessments of Commonwealth fisheries are to be undertaken changed significantly with the introduction of the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. This Act, which is the responsibility of EA,⁶¹ requires that all Commonwealth fisheries be strategically assessed by AFMA and have the assessment approved for environmental impacts, safeguards and mitigation measures by the Minister for the Environment and Heritage. These are referred to as strategic assessments.

5.14 AFMA advised the Standing Committee that, in response to the previous audit, it would prepare a policy paper by June 1997 providing guidance on how to undertake environmental impact assessments. This did not occur, and at the time of the audit fieldwork AFMA had not made guidance available for its staff and stakeholders on how it seeks to give effect to its key environmental responsibilities.

5.15 AFMA has now advised that it has now held workshops with 12 fisheries to explain the requirements of strategic assessment; identify the areas in the management of the fishery which are and are not likely to meet the requirements; and to assist the environment section in preparing assessment reports. Outcomes from each workshop have been provided to the MACs to prioritise and address the issues. AFMA has yet, however, to prepare a policy paper to provide guidance.

5.16 The *EPBC Act* requires that agreements to assess all 21 AFMA fisheries be in place by 2005. Two-thirds of these agreements are to be in place by 2003. The legislation does not set out when the strategic assessments are to be completed. However, EA expects assessments to be completed within 12 months of completing an agreement.

5.17 As at July 2001, AFMA had entered agreements with the Minister for the Environment and Heritage for assessment of the Bass Strait Central Zone Scallop; Heard Island and McDonald Islands; and the Northern Prawn Fisheries.

⁶¹ The *EPBC Act* replaced five Commonwealth statutes. Under the Act, actions that are likely to have a significant impact on matters of national environmental significance are subject to an assessment and approval process.

5.18 The ANAO found that there has been limited progress in completing strategic assessments so far. This contrasts with the importance to all stakeholders of meeting requirements for finalising agreements and completing assessments. In these circumstances the ANAO considers that a structured project management approach, taking into account the risks inherent in the process and including regular monitoring and reporting, would provide greater assurance to all stakeholders that AFMA can meet obligations for strategic assessments.

5.19 AFMA has introduced a framework for managing key deliverables in each fishery including strategic assessments. The framework includes timelines, and has identified the AFMA officer responsible for the project. Prioritisation of each project is to be undertaken by AFMA management with a view to available resources. However, the approach is not underpinned by a structured risk assessment nor does it explicitly address the many challenges in meeting these key deliverables, which past experience has shown can substantially delay AFMA's planned timelines. For example, the gathering of environmental data on the marine environment is a crucial component of the strategic assessment process, but only limited environmental data is currently available to AFMA. This is reinforced by the fact that, largely because of data issues, AFMA is currently only confident of meeting strategic assessment guidelines negotiated with EA with respect to target species and less so in relation to bycatch, ecosystem, and habitat issues.⁶²

5.20 Consequently, the ANAO concluded that the introduction of a more structured project management approach incorporating detailed risk assessments for each strategic assessment would better assist AFMA in providing appropriate assurance to the Board, Parliament and key stakeholders that policy guidelines, legislative requirements and timeframes for conducting strategic assessments will be met.

⁶² AFMA has been negotiating with EA over the objectives and terms of reference for strategic assessments, including application of the *Guidelines for ecological sustainable fisheries management* issued by the Commonwealth government. AFMA considered the initial terms of reference to be highly prescriptive, and has worked with EA and achieved a more streamlined outcome to identify more clearly the respective roles and responsibilities of parties involved in strategic assessments. Generic terms of reference have now been approved by the Minister for the Environment and Heritage.

Recommendation No.3

5.21 The ANAO recommends that AFMA implement a structured project management approach that takes into account the risks inherent in the process of implementing AFMA's key deliverables.

AFMA's Response

5.22 Agreed. AFMA supports the adoption of a structured project management approach which it considers will serve to formalise processes already being undertaken within AFMA.

Bycatch management

Previous issues

Bycatch⁶³ was an important fisheries environmental issue that warranted further management attention and measures to reduce the extent of bycatch.⁶⁴

5.23 Since the previous audit and Standing Committee reports, the policy framework for bycatch management has strengthened substantially.⁶⁵ A *National Bycatch Policy* was endorsed by all Australian Governments in October 1999, providing a national framework for coordinating efforts to manage bycatch. The *Commonwealth Policy on Fisheries Bycatch* was launched jointly in June 2000 by the Ministers for Agriculture, Fisheries and Forestry and Environment and Heritage. AFMA, as the lead agency for managing Commonwealth fisheries, is responsible for implementing programs and measures relating to bycatch.

⁶³ Bycatch are species taken incidentally in a fishery where other species are the target. (See Glossary, Appendix 1).

⁶⁴ Standing Committee recommendations 17, 18 and 19.

⁶⁵ The 1998 *Oceans Policy* committed the Government to finalising both Commonwealth and National Bycatch policies and to the development of fisheries specific action plans, including the formal incorporation of Bycatch Action Plans in Commonwealth fisheries management arrangements.

5.24 The primary reason⁶⁶ for the *Commonwealth Policy on Fisheries Bycatch* was to ensure that direct and indirect impacts on marine systems are taken into account and managed appropriately since:

*Discarding unwanted catch is a wasteful practice that may pose a threat to marine systems over time. Bycatch also poses a direct threat to the survival of some species or populations of marine animals, such as turtles and dugongs, seabirds and others that may be unable to sustain additional mortality from fishing.*⁶⁷

Bycatch Action Plans

5.25 The *Commonwealth Policy on Fisheries Bycatch* contained a commitment to prepare Bycatch Action Plans for all major Commonwealth fisheries.⁶⁸ Bycatch Action Plans identify the specific bycatch issues in a fishery and detail actions required to address those issues. For example, these actions may be to refine fishing practices based on existing information, or to monitor bycatch and collect information. These plans were being developed at the time of this follow-up audit, and AFMA has advised that in their development it has had regard to the recommendations of the Standing Committee on bycatch matters.

5.26 AFMA's approach is to integrate Bycatch Action Plans into the management arrangements for each major fishery. Bycatch Action Plans will be reviewed biennially in line with Commonwealth policy.

5.27 AFMA has met its obligation to complete Bycatch Action Plans for all Commonwealth fisheries by 31 March 2001 (except the Torres Strait Line and Net Fishery which are to be completed in October 2001). AFMA advised that the existing plans for the Northern Prawn and Torres Strait Prawn Fisheries are currently being reviewed.

⁶⁶ A policy on bycatch was also timely due to changes in Australia's international obligations in relation to management of fish stocks with the *United Nations Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, ratified by Australia on 23 December 1999, containing a number of obligations regarding the conservation and management of these stocks. Among these obligations are provisions which relate to the impact of fishing on non-target species, and the application of the precautionary approach to the management of fisheries.

⁶⁷ Commonwealth Bycatch Policy, p. 3.

⁶⁸ The 'major' fisheries being: South East Trawl, South East Non-Trawl, Southern Shark, Heard Island, McDonald Island, Macquarie Island, Southern Bluefin Tuna, East Coast Tuna and Billfish, Western Tuna and Billfish, Northern Prawn, Torres Strait Prawn, Torres Strait Line and Net, Great Australian Bight, Bass Strait Central Zone Scallop, and Southern Squid.

Development of bycatch reduction measures

5.28 The development of bycatch policy and structured Bycatch Action Plans add a strategic dimension to actions previously taken by AFMA to develop and implement a number of bycatch reduction measures. AFMA advised that it obtains feedback from fisheries managers on the effect and impacts of bycatch strategies in an informal manner and that feedback is also obtained through the MAC process via the fisheries manager or the AFMA Board. The following examples describe some recent bycatch reduction measures. They also illustrate the complexity of bycatch management as it relates to matters of jurisdiction, and the management of fisheries in an atmosphere that can sometimes be highly controversial.

5.29 Many of the industry stakeholders consulted by the ANAO stated that industry was actively participating with the conduct of research in this area, which AFMA considers essential to research of this nature.

Example 1

Turtles

All marine turtles in Australia are protected by the *National Parks and Wildlife Act 1975*, and are declared as either endangered or vulnerable. Prawns and turtle habitats overlap in the shallow waters of the Northern Prawn Fishery. As a result, trawls dragged along seabeds to catch prawns also sometimes capture turtles. In 1996, based on logbook records, at least 1493 turtles were caught in the Fishery, of which 841 were released alive, the condition of 567 was unknown and 85 were dead.

AFMA has introduced regulations to reduce the number of turtles killed or injured in the Northern Prawn Fishery. It has been compulsory since 15 April 2000 for fishers to use Turtle Excluder Devices and Bycatch Reduction Devices. As well as the environment benefit, this development has potential economic benefits—the United States Government announced that the Fishery had met the requirements for certification to enable product to be imported into the United States.

The ANAO found that for several years AFMA logbook data showed that turtles were also being caught on long-lines in other fisheries. However, this data was not analysed for management purposes (or forwarded to Environment Australia for verification purposes with turtle catches that were reported by fishers to Environment Australia) until the recent development of Bycatch Action Plans. AFMA explained that this was due to competing work demands and priorities and limited budgets, which often do not allow for full analysis of all available data and that the turtle catches had only relatively recently come under management focus. This example illustrates the value of collecting and analysing data to monitor bycatch. This is considered at 5.30–5.38.

Example 2

Seals

Environmental issues facing the fishing industry are often complex and controversial.

Following the capture of 87 seals in 1999 by two processing vessels targeting blue grenadier in the South East Trawl Fishery, specific arrangements for seal interactions were implemented in 2000. These included: industry codes of conduct, limits on the acceptable number of seals which could be incidentally drowned as a result of processing vessel activities (15 per processing vessel); and a seal interaction research program with Environment Australia's approval. The research program involves the collection of biological samples, use of underwater cameras, observers and exclusion devices.

Notwithstanding these measures, the complexity and controversy that can be generated and within which AFMA has to manage fisheries is illustrated by some stakeholders' concerns about the process and the outcome. For example there were concerns that the seal death limit had been decided without the involvement of all interested parties, and that it effectively authorises a 'seal kill quota'. Some stakeholders commented that the process had commenced without consideration by an ethics committee. (The research program has applied for ethics approval and a permit under the *EPBC Act*).

Environment Australia received over one hundred letters condemning the arrangements but supporting the trial of seal exclusion devices.

These measures appear to have reduced accidental deaths, for example ANAO consultants advised that the available information suggests that deaths reduced by 75 per cent over the previous year.

Availability of data on bycatch

5.30 The *Commonwealth Policy on Fisheries Bycatch* identifies the availability of data and its usefulness as one of the first steps in developing Bycatch Action Plans.

5.31 The ANAO found that, although AFMA has consistently collected data on the commercial catch in its fisheries, bycatch data has not been collected consistently across all fisheries, and the data that has been available has not been regularly analysed by AFMA. Management of data analysis is complicated further as AFMA does not have an in-house research function but is dependent on external agencies for analysing a lot of its key management data needs.

5.32 AFMA agrees that data is a key requirement for bycatch management and it advised at the conclusion of the audit that it has now made provision for collecting bycatch data in all its logbooks. AFMA advised, however, that it would take time to collect sufficient data to support analysis and management decision making for bycatch. The ANAO found that recently completed Bycatch Action Plans have been developed with little data on which to inform the plans. Nevertheless, the plans do identify the need for strategies to address data requirements.

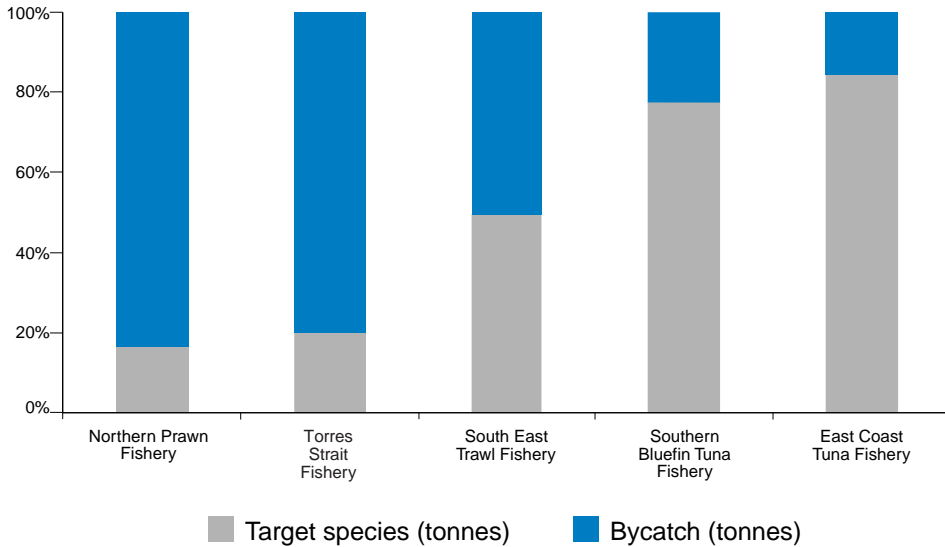
5.33 Although bycatch data for reporting purposes is not readily collected and analysed by AFMA, the Bureau of Rural Sciences (BRS) did prepare a one-off review of the bycatch in Commonwealth fisheries in 1999, based primarily on 1995 data.⁶⁹ It is important to note that the review addressed the situation over five years ago; furthermore, the data available in 1995 was limited because of partial collection, as explained above.

5.34 A summary of this limited data on catches of target and bycatch species for the five largest fisheries is shown in Table 5.1. It shows that bycatch as a percentage of target species (by weight) ranged from some 16 per cent in the East Coast Tuna Fishery to between 75 and 85 per cent in the Northern Prawn Fishery. The range of non-target catch among fisheries was for a large part the result of the fishing methods employed (such as trawl versus more selective gear).

⁶⁹ Harris, A. and Ward, P. (1999) *Non-target species in Australia's Commonwealth fisheries—A Critical Review*, Bureau of Resource Sciences. Due to the limited data available, the review does not disaggregate by-product from bycatch.

Figure 5.1

Proportion of bycatch to target species by weight: five major Commonwealth fisheries 1995⁷⁰



Source: Harris, A and Ward, P. (1999) *Non-target species in Australia's Commonwealth fisheries—A Critical Review*, Bureau of Rural Sciences, pp. 117–119

5.35 The BRS review also showed that:

- some 95 per cent of the bycatch in the Northern Prawn Fishery is discarded;
- the Torres Strait Prawn Fishery had similar bycatch rates to the Northern Prawn Fishery; and
- between 50 and 86 per cent of the total bycatch in the Southern Bluefin Tuna, South East Trawl and East Coast Tuna Fisheries is discarded.

5.36 Since 1995, changes in fishing technology and practices have taken place, such as the catch of bluefin tuna for farming purposes and the introduction of turtle exclusion devices and bycatch reduction devices in the Northern Prawn Fishery. This should have reduced the level of bycatch from the levels identified at the time of the review; however, in the absence of more up to date supporting data this cannot be verified, assessed or reported for the benefit of all stakeholders, including Parliament.

⁷⁰ Landed catch amounts and bycatch amounts are mainly for 1995. Other periods between mid 1980s and mid 1990s (Northern Prawn Fishery and Torres Strait Prawn Fishery) have been used depending on available data. Median bycatch figure used for Northern Prawn Fishery 30 000–60 000 tonnes; and Torres Strait Fishery 4000–8000 tonnes.

5.37 The ANAO concludes that AFMA has been unable to report systematically on bycatch and related issues and to provide assurance of performance in managing its environmental reporting responsibilities for non-target species, and the improvements achieved as a result of environmental management initiatives.

5.38 AFMA intends to enhance its data on bycatch in support of managing its environmental responsibilities and to meet its intended reporting requirements in its 2000–2001 Annual Report.

Recommendation No.4

5.39 The ANAO recommends that, to better inform bycatch management practices, AFMA give priority to the development of appropriate data holdings on bycatch, and regularly monitor and report against performance measures based on this information.

AFMA's Response

5.40 Agreed. AFMA accepts that data is a key requirement for bycatch management purposes and, to this end, has made provision for collecting bycatch data in its logbooks. However, it must be recognised that it takes time and resources to collect meaningful and reliable (verifiable) data. In many cases an information base for decision making purposes will not be immediately available.

5.41 In addition, data collection requires education and a level of industry involvement, acceptance and commitment. Like any new process, this will require time and is not always easy to come by. This process has commenced but it will take some years to provide meaningful information and a suitable time series of data which can be used for management purposes.

5.42 In addressing this issue AFMA will have to consider funding availability and priorities. There are a number of competing demands for research funding. There is also a limit to how much the fishing industry can be expected to contribute to collection of information especially when it can be argued that there is a community benefit involved.

Management of blue and black marlin

Previous issues

The Standing Committee suggested that management arrangements be put in place to protect blue and black marlin.⁷¹

5.43 In response to concerns from the gamefishing sector about the sustainability of blue and black marlin the Standing Committee report recommended that AFMA impose a ban on the take, possession and landing of blue and black marlin by commercial fishers.

5.44 The Government implemented this recommendation in 1998 by amending the *Fisheries Management Act 1991* to ban the commercial fishing of blue and black marlin. Pursuant to the legislation, AFFA tabled a report in the Senate on 28 June 2000: *Report of the Black and Blue Marlin Working Group—Assessment of black marlin and blue marlin in the Australian fishing zone*. The report concluded that there were many gaps in knowledge of the species and understanding of fishing activities. It made a number of recommendations, primarily relating to the need for more research.

5.45 AFMA advised that it would have regard to these recommendations in preparing the Eastern and Southern and Western Tuna and Billfish Fisheries SMPs.⁷²

5.46 Stakeholders from the recreational and gamefishing sector acknowledged that they had membership on some MACs, but believed that their input in Commonwealth fisheries management could be strengthened.

⁷¹ Standing Committee recommendation 37.

⁷² The ANAO has noted that based on its consultations, the gamefishing industry has further policy concerns on striped marlin and the food sources for blue and black marlin (for example the establishment of a slimy mackerel cannery at Eden). Striped marlin may still be taken, landed and sold as bycatch. Blue and black marlin may still be taken by recreational fishers and charter boat fishers. The marlin can also be caught for legitimate research purposes. Scientific permits are issued on a limited basis for this purpose. As these matters related to Government policy, they fall outside the scope of this follow-up audit.

6. Compliance, Monitoring and Enforcement Responsibilities

This chapter examines AFMA's initiatives to address issues raised in the previous audit and Standing Committee reports in relation to its compliance monitoring and reinforcement responsibilities.

Introduction

6.1 AFMA is responsible for ensuring compliance with the management approach adopted for its fisheries, which may include ensuring that:

- particular areas of ocean are off-limits;
- fishing is only undertaken during certain times of the year; and
- individual fishers do not exceed their share of total allowable catch (TAC).

6.2 AFMA seeks to achieve compliance by monitoring, inspection, observation and control of AFMA regulated fishing activity; surveillance of the Commonwealth's fishing zone for illegal fishing activity; and advice to fishers regarding relevant laws and regulations, notices and management plans.

6.3 The previous audit and Standing Committee reports suggested that AFMA's management of its compliance, monitoring and enforcement activities could be strengthened in the following areas:

- planning of compliance activities;
- greater use of technology in support of monitoring;
- formalising arrangements with the States and the Northern Territory; and
- strengthening in-house compliance operations.

6.4 Progress in each of these issues is discussed below.

Compliance operational planning

Previous issues

AFMA's approach to fulfilling its compliance, monitoring and enforcement responsibilities was not supported by robust and systematic planning, and risk assessment and management. The previous audit made recommendations aimed at a more risk-based approach to the development of compliance operational plans and budgets, with plans reviewed regularly.⁷³

6.5 AFMA has since introduced a risk-based approach for its compliance, monitoring and enforcement responsibilities for the eight major fisheries.⁷⁴ AFMA holds annual compliance risk workshops and Management Advisory Committees (MACs) receive a copy of the risk assessment for comment. This is used to determine compliance priorities and to develop the compliance operational plans of the fisheries.

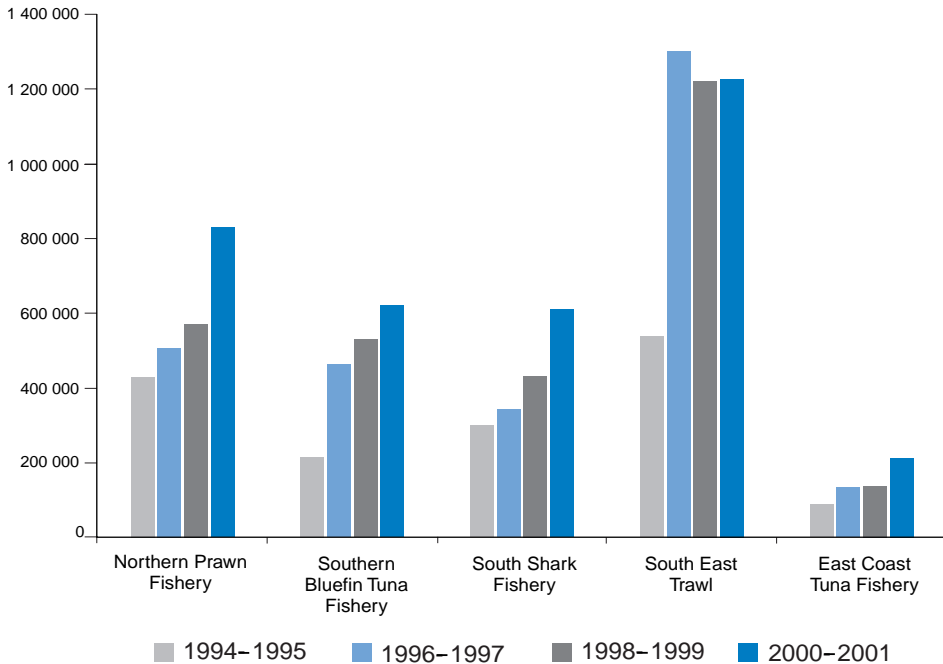
6.6 The ANAO concludes that overall, this is a much sounder risk-based approach to compliance activities. However, as noted at paragraph 2.28 there would be merit in aligning this with an overall risk management strategy or framework for fisheries management.

Funding of the compliance function

6.7 In parallel with the more risk-based approach to compliance there has been a marked increase in the funding of the surveillance-compliance activities. As illustrated in Figure 6.1 for the five largest fisheries, the increase in fishing was reflected in an increase in surveillance-compliance activity. This contrasts with the situation at the time of the previous audit when compliance expenditure had been broadly stable for some time.

⁷³ ANAO recommendations 25, 26 and 27; Standing Committee recommendation 43.

⁷⁴ The focus of the previous audit was on AFMA's domestic compliance role only. During that audit AFMA disagreed with recommended changes to their compliance budget allocation processes.

Figure 6.1**Surveillance-compliance-prosecution budgets: five largest fisheries**

Source: Data provided by AFMA

6.8 The previous audit noted that the arrangements whereby MACs provide advice to the AFMA Board on Compliance Operational Plans and budgets created the potential for conflicts of interest with respect to their advice on compliance budgets, which required careful management. (This is because industry members make up the majority of the MAC).

6.9 Such tensions flow from the Commonwealth's fisheries management model which seeks to obtain the benefits of input and advice from industry and other stakeholders. The challenge for AFMA is to manage this in a way which is consistent with its responsibilities for compliance.

6.10 The ANAO found that AFMA's procedures are now more robust in this respect; for example, as discussed in paragraphs 3.24-3.26 there is overall guidance to MACs on managing conflicts of interest. The risk-based approach to Compliance Operational Plans also presents a more robust and objective framework and MACs are asked to discuss risk issues before Compliance Operational Plans and budgets are approved. Furthermore, decisions on Compliance Operational Plans are taken finally by the Board, on advice from both AFMA management and the relevant MAC.

6.11 The risk of potential conflict of interest is further reduced by ensuring that MAC members are not informed of the operational details of specific compliance activities in a fishery.

6.12 Overall, these arrangements seem sound. The ANAO found that most industry stakeholders consulted accepted the importance of effective compliance as part of fisheries management. This acceptance is further reflected in increased compliance expenditure, half of which is contributed by industry. Nevertheless continuous monitoring is required to ensure that, in practice, the checks and balances are effective.

Pursuing technological means of enhancing compliance monitoring

Previous issues

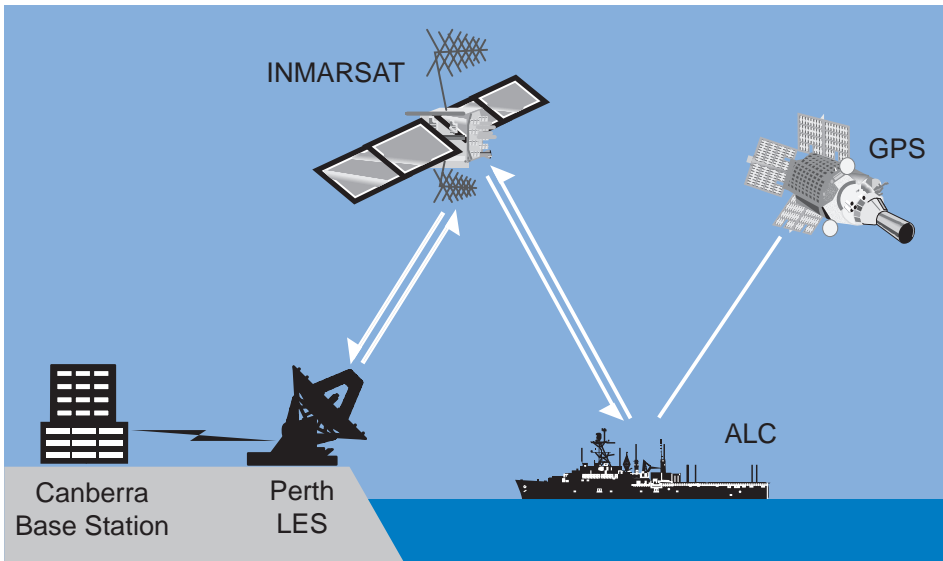
AFMA was exploring alternative methods of surveillance through the use of technology, and particularly the use of a Vessel Monitoring System. The previous audit and Standing Committee reports made recommendations aimed at extending the use of a Vessel Monitoring System to enhance compliance monitoring.⁷⁵

6.13 The Vessel Monitoring System (VMS) is an electronic means of providing AFMA with vessel monitoring information. By monitoring a vessel's position, AFMA is able to obtain information on a vessel's whereabouts and likely activities and where possible fishing is undertaken (for example, checking whether the areas are closed for fishing). VMS provides a useful guide on the duration of possible fishing activity of individual vessels.

6.14 The VMS comprises three main components, the Automatic Location Communicator (ALC), the transmission medium and the base station. Vessels are fitted with ALCs, with a built-in Global Positioning System (GPS), which regularly beam information on vessel position, course and speed via a communications satellite to a land station in Perth. This information is then sent by land line to a computer base station at AFMA's head office in Canberra. AFMA can request automatic reports from vessels at any time as required (see Figure 6.2). At the time of the previous audit there were approximately 60 boats on the VMS.

⁷⁵ ANAO recommendation 31; Standing Committee recommendation 29.

Figure 6.2
Vessel Monitoring System



6.15 AFMA has undertaken a staged expansion of the use of VMS where this is considered cost effective for compliance and management purposes, and where industry recognises and supports the benefits of the system. The number of boats with VMS had increased to approximately 340 by December 2000.

6.16 The VMS is mainly used in the Northern Prawn, Bass Strait Central Zone Scallop, South East Trawl Orange Roughy sector, Heard Island and McDonald Islands, the Great Australian Bight Trawl, Coral Sea and Western Deep Water Trawl fisheries and, for special circumstances involving boundaries and quota, in the Tuna Fisheries on the east coast. In consultation with industry, AFMA is also considering introducing VMS into the Western Tuna and Billfish Fishery (40 boats), the Eastern Tuna and Billfish Fishery (120 boats) and the Southern Shark Fishery (some 230 boats).

Surveillance-compliance arrangements with States and the Northern Territory

Previous issues

AFMA did not have formal arrangements with States and the Northern Territory addressing the surveillance-compliance activities that they undertake on its behalf.

Better guidance was desirable for enforcement officers on matters such as the balance between penalties and education when addressing offences/infringements.⁷⁶

Surveillance-compliance arrangements

6.17 Since the previous audit AFMA has sought to negotiate formal compliance arrangements with the States and the Northern Territory, but progress has been slower than it anticipated. AFMA advised that this was due to the number of agencies involved and their different approaches to fisheries management. However, Memoranda of Understanding (MOU) have now been established with New South Wales, Queensland, Tasmania, Western Australia and South Australia. Negotiations are continuing with Victoria and the Northern Territory.

6.18 AFMA has also signed an MOU with Coastwatch, the organisation that coordinates international apprehension resources and undertakes compliance-surveillance activities relating to international aspects of Commonwealth fisheries management.⁷⁷ The States and the Northern Territory report to AFMA on their compliance activities.

Guidance to field staff involved with compliance/investigations

6.19 AFMA has continued to provide training to the State Fisheries' Officers who undertake compliance surveillance activities on behalf of AFMA.⁷⁸ Recently the Commonwealth Law Enforcement Board has sought to establish national competency standards, and the Australian National Training Authority is developing a training package along with a process to develop the requisite training manuals. AFMA intends that the officers who carry out functions on its behalf will meet the competency standards. For these reasons the Government did not support a recommendation of the Standing Committee report that AFMA prepare a compliance investigations manual.

⁷⁶ ANAO recommendation 24.

⁷⁷ Audit Report No.38 1999–2000, *Coastwatch*, addressed Coastwatch surveillance activities undertaken on behalf of AFMA. It recommended that MOUs be finalised with all key Coastwatch client agencies.

⁷⁸ ANAO recommendation 24.

6.20 The ANAO recognises that, under the new arrangements, a detailed compliance manual may be of limited value. Notwithstanding this, AFMA does require a framework to communicate and guide its compliance activities so that they are conducted in accordance with its strategies, risk assessments and Compliance Operational Plans. Broader guidance on these matters would assist in assuring AFMA and stakeholders that compliance operations appropriately address its responsibilities for compliance.

Enhancing surveillance-compliance capability

Previous issues

The arrangements whereby States and the Northern Territory undertake compliance work risked limiting AFMA's flexibility to appropriately target, or redirect, its surveillance compliance work. The previous audit recommended that AFMA strengthen its in-house investigative capability.⁷⁹

6.21 Since then, AFMA has regularly assessed the balance between field surveillance and in-house operations. This has resulted in a shift towards enhancing its in-house role, consistent with the previous ANAO recommendation. For example, AFMA plans the execution of special investigative actions undertaken on its behalf by other agencies as part of its involvement. The organisation has established a 24 hour 'help line' to provide guidance to its agents in the field.

⁷⁹ ANAO recommendation 32.

7. Management of Information and Research

This chapter examines AFMA's progress in addressing issues identified in the previous audit and Standing Committee reports concerning improving management of fisheries data and research.

Introduction

7.1 Earlier parts of this report have emphasised the importance of sound data, information and research to support effective fisheries management, not only for performance management purposes, but also to underpin key aspects of the management and advisory process, including stock assessments and environmental sustainability.⁸⁰ The previous audit and Standing Committee reports found that the marine environment presented particular challenges to AFMA in obtaining and utilising the relevant information but that, nonetheless, improvements could be made to management of:

- data collection and management information; and
- research projects.

Progress in these areas is discussed below.

Data collection and management information

Previous issues

Whilst recognising the difficulty of capturing and using relevant and accurate data on the marine environment, AFMA's data collection and management information systems required improvements, most notably to enhance the quality and reliability of fishers' logbook data. This was necessary to fulfil AFMA's information needs for managing Commonwealth fisheries.⁸¹

7.2 A range of data sources on catch and fishing effort are used by AFMA for the management of fisheries. Catch data refers to the fish and other marine species that are caught and includes both commercially targeted species and non targeted species referred to as bycatch and by-product. Logbooks are the main source for catch data. Fishers are required to fill out a logbook while fishing for every fishing episode (or shot) and for every day they are at sea.

⁸⁰ 2.8–2.24, 3.29–3.39, 5.11–5.20 and 5.30–5.38.

⁸¹ ANAO recommendations 16, 20, 21, 28, 29 and 30; Standing Committee recommendation 28.

7.3 Catch disposal records are another source of catch data. The fisher and purchaser are required to sign off on the catch disposal records when the fish is sold. This data is referred to as landed catch data. Catch and landing data are the main sources of information on the output from fishing activities.

7.4 AFMA also collects data on the input to fishing activity, referred to as effort data. Effort data on licences, boats, fishing rights, and fishing technology (for example, net size, engine capacity) are collected as part of AFMA's fisheries management procedures. Effort data on the duration and location of fishing activities is collected through logbooks or the Vessel Monitoring System, where this has been introduced (see paragraphs 6.13–6.16)

7.5 Agencies such as the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Bureau of Rural Sciences (BRS), and some State and Northern Territory fisheries also collect data on fish species and the marine environment as part of specific research projects. A substantial part of this data collection is funded by AFMA either through the AFMA Research Fund or industry levies.

Consistency in nomenclature and recording

7.6 The previous reports identified that inconsistencies in data and naming can hamper the effective use of fisheries data. The responsibility to establish and review a consistent naming regime for Commonwealth fisheries rests with the BRS rather than AFMA. The Ministerial Council on Fisheries and Aquaculture has set up a Research sub-Committee with responsibility for research and data matters across Commonwealth, State and Territories. At this forum, consistencies in fisheries data collection are addressed. AFMA does not currently have a member on the Research sub-Committee, but has indicated its intention to approach the Chair to seek membership.

7.7 The ANAO found that consistency in the reporting of catch data has improved, with no anomalies identified in Fisheries reports. Stakeholders did not consider inconsistency in nomenclature of fish between the Commonwealth and States to remain an issue.

Importance of logbook data

7.8 The high cost of collecting at-sea scientific data, a cost which tends to be relatively independent of the size and value of the resource, means that most of the data on the marine environment required for fisheries management, and the data necessary for scientific assessments of fish stocks, come from the logbooks filled out by fishers.

7.9 Fishers are required to sign off that the data reported in the logbook is accurate and send a copy to AFMA, which is responsible for the collation and management of logbook data. AFMA then provides these data to the BRS and the Australian Bureau of Agricultural and Resource Economics (ABARE) which use these data to prepare Fisheries reports. The data are also critical to the advisory/management process, in particular to the work of the Fishery Assessment Groups (FAGs).

7.10 The substantial reliance on industry data presents real benefits by allowing cost effective targeting of information gathering in the complex marine environment, and in the participation of stakeholders in the collection process. However, it also carries risks; as stakeholders commented there are few immediate benefits to fishers for filling out logbooks and some disincentives in accurately entering logbook data as this can be an administrative burden.

7.11 Managing this balance between benefits and risks is a challenge, as processes to assure the quality of data collected in this way may be costly or difficult to implement and alternative approaches such as on vessel observers (see paragraph 7.16) may be prohibitively expensive and require negotiation with stakeholders. It follows that management of data gathering and its use would benefit from development and implementation of a risk management strategy to address the requirement for quality and integrity of key fisheries management information.

7.12 The ANAO found that AFMA has not supported its data management with a risk assessment. AFMA disagreed with a recommendation of the previous audit to this effect. The Standing Committee report recommended that AFMA undertake a review of options and implement processes to enhance verification of logbook data and report on its strategies in the 1996–97 Annual Report.⁸² Although it has since taken a number of actions to improve the quality of logbook data, as discussed below, AFMA advised it had not been feasible to review and introduce measures for inclusion in its 1996–97 Annual Report.

Recommendation No.5

7.13 The ANAO recommends that AFMA undertake a risk assessment of its data collection and information management systems to ensure that the data that is available is collected and managed in accordance with quality assurance principles.

⁸² Standing Committee recommendation 28.

AFMA's Response

7.14 Agreed. AFMA collects a variety of data and makes use of a number of different data management systems and agrees that some improvement is necessary in its data management practices. AFMA acknowledges that formal identification of the risks would be useful.

Improving the quality of recording of logbook data

7.15 To address the issue of the quality of logbook data AFMA has focused on increasing consistency in the design of logbooks and the accuracy of data entry. To ensure greater consistency in the design of logbook data AFMA now involves the scientists in the development and revisions of logbook data collection categories.

7.16 The most obvious way to improve the accuracy of data entered by fishers in logbooks is through the presence of observers on fishing vessels. On-vessel observers are used by AFMA in a number of fisheries that have a small number of operators, such as the Heard Island and McDonald Islands, Sub-Antarctic and Macquarie Island, Norfolk Island and Cocos (Keeling) Islands. However, industry stakeholders commented to the ANAO that some members of the industry perceive the presence of on-vessel observers as an implicit suggestion that fishers do not fill out logbooks correctly. More importantly, as the cost of observers is borne by fishers, extensive use across the board has practical constraints. AFMA therefore needs to rely on other methods to address the accuracy of logbook data.

7.17 The previous audit report recommended that one means of improving the quality of logbook data was through better informing and educating industry of the importance of data collection. Although AFMA disagreed with this recommendation at the time,⁸³ its recent strategies for improving the quality of logbook data have had a focus on educating industry about the importance of data collection. It has distributed two Fisheries Fact Sheets for stakeholders that set out AFMA's data collection and collation processes. In addition, information on these processes is available from AFMA's website.

⁸³ ANAO recommendation 21(d) recommended providing education programs stressing the longer-term benefits of better records. AFMA disagreed with this recommendation as it lacked the resources to undertake a major education program in this area.

7.18 AFMA also indicated in its response to the previous audit report that it would seek to increase penalties and administrative sanctions for serious offences and broaden the powers of Commonwealth fisheries officers conducting inspections. The *Fisheries Legislation Amendment Act 2000* has since enhanced the enforcement provisions for quota management, which relies upon accurate reporting of catches, including penalties ranging from on the spot fines to forfeiture of boats and gear.

7.19 AFMA has also been exploring the use of electronic data management to reduce the administrative burden on fishers to increase the accuracy of logbook data. AFMA sought initially to address this through developing a catch landing monitoring system, incorporating electronic transfer of landings data, however, the costs of the system were considered to be prohibitive. AFMA's focus has since been on the development and implementation of an electronic logbook data system, which is reinforced by the trend for industry to become more aware of the benefits of on-board electronic recording and transmission of data for commercial purposes.⁸⁴

7.20 AFMA is currently trialing electronic logbook data entry on a few boats in the South East Trawl Fishery with the data transmitted electronically to AFMA after the completion of the fishing trip.

Data quality assurance

7.21 AFMA has a policy of achieving a 100 per cent return rate. Users of the logbook data confirmed that AFMA is very good at monitoring its logbook returns.

7.22 The logbook data entry function is undertaken by data entry contractors. The ANAO found that AFMA does not have a robust quality control system for its logbook data entry, and that there is no manual to provide guidance for data entry or articulated standards for consistency and accuracy. End-users of the data consulted by the ANAO expressed concerns about the quality of the data and the checks undertaken (examples of misreporting included a catch occurring in central Queensland).

7.23 AFMA has advised that it is aware of data quality issues. The ANAO considers that the risk of misreporting of data would be better managed through implementing relevant quality assurance processes. Such processes could address, *inter alia*, verification of logbook data by cross-checking with other information sources such as:

- landing data—collected through catch disposal records;

⁸⁴ In addition, AFMA is required under the *Electronic Transactions Act 1999* to be able to receive electronic information by 30 June 2001.

- compliance data collected by inspectors undertaking spot checks of catch disposal data for fisheries managed by individual transferable quotas;
- fish processor records—AFMA has progressively introduced the requirement for processors to keep records of catch from Commonwealth fishers; and
- data on location and duration of the fishing activity through the VMS.

7.24 However, while AFMA has acknowledged the benefits of cross validating data to increase accuracy, the ANAO found that this is utilised rarely. AFMA advised this is due to the high cost associated with cross validating data. The ANAO considers that a more systematic and comprehensive approach to cost effectively cross-validating data would enhance the quality of logbook data in support of AFMA's fisheries management.

Management and industry participation in research projects

Previous issues

The importance of research for the management of Commonwealth fisheries required a structured and systematic approach to developing, evaluating and prioritising research projects, to maximise the value of research effort and to incorporate industry input, for a risk assessment and cost benefit analysis of research projects.⁸⁵

7.25 AFMA has a five-year Strategic Research Plan that sets out the priority areas for fisheries research. Within this framework Management Advisory Committees (MACs) develop their own research plans. In addition, the Department of Agriculture Fisheries and Forestry—Australia (AFFA) also develops research priorities, as does the Fisheries Research and Development Corporation (FRDC).

7.26 The research projects that are funded by AFMA are overseen by the AFMA Research Committee (ARC), a six-member committee drawn from AFMA's Board of Directors and executive management. In addition, the ARC is responsible for advising the AFMA Board and other Commonwealth agencies on research priorities and advising the AFMA Board on research policy and issues.

⁸⁵ ANAO recommendation 22; Standing Committee recommendation 32.

7.27 The ARC doubles as the Commonwealth Fisheries Advisory Body, advising the FRDC on priorities and making recommendations about applications for funding.

7.28 The ANAO found that there is considerable cross membership across the different research funding bodies and a large degree of joint membership on advisory panels for the selection of research projects. For example, the FRDC holds an annual workshop where AFMA's research manager is present and where research projects are prioritised. This furthers communication of a shared view on research priorities.

7.29 The process for developing research includes a cost benefit analysis in the allocation of funding to the research projects. AFMA reports on the research projects and funding by fishery in its Annual Reports.

7.30 The MAC process provides stakeholder input in the prioritisation of research projects by the ARC in particular through their MAC research sub-Committees (or FAGs in some fisheries). In addition MACs can commission their own research and raise funds through their ability to increase fisheries levies.

7.31 These arrangements result in a high level of industry participation in research, with industry contributing some \$2.3 million out of \$4.5 million AFMA research expenditure in 1999–2000.

7.32 The ANAO also found that industry involvement is also facilitated by sending questionnaires to MACs seeking comment on the relevance of the completed research.

7.33 Stakeholders were generally satisfied with the manner in which AFMA managed the research process.

7.34 The ANAO considers that overall AFMA has a structured and systematic approach to developing, evaluating and prioritising research projects, including involving industry input.



Canberra ACT
9 August 2001

P. J. Barrett
Auditor-General

Appendices

Appendix 1

Glossary

Australian fishing zone (AFZ)	Waters adjacent to Australia and its external territories (excluding Torres Strait and the Antarctic Territories) which extend from defined baselines to 200 nautical mile seawards, but not including coastal and excepted waters. Agreed boundaries apply where these zones intersect the 200 nautical mile zones of other nations. Within the AFZ, Australia exercises jurisdiction over all fishing by Australian and foreign boats.
Automatic Location Communicator (ALC)	Tracking unit on a fishing vessel. Part of the Vessel Monitoring System (VMS).
Billfish	Marlins, sailfish, spearfish and swordfish; that is, fish where the snout is extended into a bill or 'spear'.
Branch line chute	A branch line chute allows bait to be set a few metres under water so that birds are not aware that there is bait in the water.
Bycatch	Species taken incidentally in a fishery where other species are the target; bycatch species may be of lesser value than the target species, and are often discarded. In many cases, bycatch species have some commercial value and are retained for sale. (see also non-target species).
Bycatch reduction device	A modification to fishing gear to reduce the catch or kill of bycatch species during fishing operations.
By-product	Any part of the catch which is kept or sold by the fisher which is not the target species.
Discards	Any part of the catch which is returned to the sea, whether dead or alive.
Effort	See fishing effort.
Effort restriction	A type of input control used as a management tool whereby the amount of fishing effort expended by fishers in a particular fishery is restricted by law.

Fish	A vertebrate animal (animal with a backbone) that has gills and lives in water, but generally used more broadly to include any harvestable animal living in water ('fishes' refers to more than one type of fish; 'finfish' refers to sharks and some rays, and bony fishes; 'scalefish' refers to fish bearing scales).
Fishery	A term used to describe the collective enterprise of taking fish. A fishery is usually defined by a combination of the species caught (one or several), the gear and/or fishing methods used and the area of operation.
Fishing capacity	The total fishing effort that can be expended by the fleet operating in a fishery.
Fishing concession	A Statutory Fishing Right, or a Fishing Permit or a Foreign Fishing Boat Licence granted under the provisions of the <i>Fisheries Management Act 1991</i> .
Fishing effort	Amount of fishing taking place, usually described in terms of gear type and frequency or period for which it is in use; for example, 'hook sets', 'trawl hours', 'searching hours'.
Fully fished	A fish stock for which current catches are close to optimum sustainable levels (the definition of which may vary between fisheries; for example, catches are close to maximum sustainable yield, or fishing effort is close to an agreed biological reference point). Categorising a species as 'fully fished' suggests that any increase in levels of fishing effort or catches above the current levels (allowing for annual variability) may lead to overfishing.
Fishing permit	A type of fishing concession granted under Section 32 of the <i>Fisheries Management Act 1991</i> to a person and authorising the use of a specified Australian boat by that person, or a person acting on that person's behalf, for fishing in a specified area of the Australian fishing zone (AFZ), or a specified fishery for specified species using specified equipment.

Gear restriction	A type of input control used as a management tool whereby the amount and/or type of fishing gear used by fishers in a particular fishery is restricted.
Global Positioning System (GPS)	A device which uses satellite signals to determine a vessel's position and course accurately. Is used in Vessel Monitoring System (VMS) and is built-in to Automatic Location Communicators (ALC).
Individual transferable quotas (ITQs)	ITQs refer to individual portions of a total allowable catch (TAC)—units of quota—which allow the holder to catch that portion of the TAC each season. The weight value of the ITQs change proportionally to changes in the TAC set for a species each season. ITQs are fully tradeable and can be sold or leased to other persons.
Input controls	Restrictions placed on the amount of effort put into a fishery, for example by restricting types and size of fishing gear and boats and the amount of fishing time.
Logbook	An official record of catch and effort data made by fishers. In many fisheries, logbooks are compulsory as a condition of licensing.
Longline fishing	Method of fishing that can be either surface set (pelagic) or bottom set (demersal) line fishing. Both methods comprise a main line to which are attached branch lines, each fitted with one or more baited hooks or artificial lines.
Nautical mile	Unit of distance equivalent to 1 minute of the great circle of earth (= 1852 metres).
Non-target species	Any part of the catch, except the target species, and including bycatch and by-product.
Offshore Constitutional Settlement (OCS)	Arrangement commenced in 1982 whereby the State or the Commonwealth (or in some cases a Joint Authority) is given jurisdiction for a particular fishery occurring in both coastal waters and the Australian fishing zone (AFZ). When no OCS agreement has been reached the fishery remains under the jurisdiction of the State out to 3 nautical miles and the Commonwealth from 3 to 200 nautical miles.

Output controls	Restrictions imposed on the quantity of fish that can be taken from a fishery within a specified period of time. This can be by either a competitive total allowable catch (TAC) or a TAC allocated to participants as individual transferable quotas (ITQs).
Overfished	A fish stock for which levels of fishing or catches are excessive, or which still reflects the effects of prior excessive fishing. In the former case, yields may be higher in the long-term if the fishing level is reduced in the short term. A classification of 'overfished' may continue after reduction of fishing levels which the stock rebuilds to a desired level or until resumption of fishing is acceptable.
Precautionary principle	Where there are threats of serious irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by: (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment and; (ii) an assessment of the risk-weighted consequences of various options.
Quota	Amount of catch allocated; could refer to a fishery as a whole (total allowable catch) or to that amount allocated to an individual or company (see individual transferable quotas (ITQs)).
Quota (ITQ) management	A method of management based on output controls where by the total allowable catch (TAC) is allocated among eligible operators and allocated as shares in the annual TAC.
Species	Group of animals or plants having common characteristics and able to breed together to produce fertile (capable of reproducing) offspring, so that they maintain their 'separateness' from other groups; for example, yellowfin tuna and bigeye tuna are two distinct tuna species, whereas general terms like 'tuna' and 'trout' each represent groups of species.

Species group	Group of similar species often difficult to differentiate without detailed examination.
Statutory Fishing Rights (SFRs)	Rights granted under Section 21 of the <i>Fisheries Management Act 1991</i> . The nature of SFRs in a fishery is detailed in the plan of management which creates those rights. An SFR may be a right to use a boat, or a quantity of catch, or other rights as identified in the plan.
Sustainable yield	Catch that can be removed over an indefinite period without causing the stock to be depleted. This could be either a constant yield from year to year, or a yield which is allowed to fluctuate in response to changes in abundance.
Target species	The most highly sought component of the catch taken by fishers.
Threat Abatement Plan (TAP)	A plan formalised under endangered species legislation to counter the effects of a listed key threatening process (a process that threatens the survival, abundance or evolutionary development of a native species or ecological community, requiring the formal development of a Threat Abatement Plan).
Total allowable catch (TAC)	The amount of fish of a particular species that can be taken from a fishery in prescribed period. TACs are set for fish species managed through individual transferable quotas (ITQs).
Tradeable gear units	A unit of fishing capacity related to gear (a hook or hooks, a length of headrope, a trap, a pot etc) which is specified for the purpose of management and which is tradeable by operators in a fishery.
Turtle exclusion device	A modification to prawn trawl nets which, while retaining prawns, allows turtles to escape.
Underfished	A fish stock that has potential to sustain catches higher than those currently taken. The classification is not applied to stocks that are subject to limited catches while rebuilding from overfishing.

Uncertain	A fish stock that may be underfished, fully fished or overfished but for which there is inadequate or inappropriate information to form a reliable assessment of status.
Vessel Monitoring System (VMS)	A satellite based electronic system that provides real time monitoring of vessels.
Yield	Total weight of fish harvested from a fishery.

Appendix 2

Recommendations of ANAO Report No.32 1995–96 and AFMA’s responses

The following table summarises the recommendations of ANAO Audit Report No.32 1995–96, entitled *Commonwealth Fisheries Management—Australian Fisheries Management Authority*. It also shows AFMA’s summary responses to each recommendation and, where appropriate, references to the relevant parts of the text.

Recommendations	AFMA’s response	Report reference
Recommendation No.1 AFMA should undertake an assessment of the new and proposed Offshore Constitutional Settlement agreements to identify and prioritise those features that have a risk of reducing its efficient and effective management of Commonwealth fisheries and devise appropriate strategies to manage those risks effectively.	Disagreed	N/A
Recommendation No.2 AFMA should undertake a review of the instruments and other relevant agreements establishing Joint Authorities and, where appropriate, recommend to the Government changes to overcome inefficiencies.	Agreed in principle	N/A ⁸⁶
Recommendation No.3 AFMA should analyse the 1989 Fisheries Policy Statement with a view to identifying any deficiencies and differences between the Policy and current operational requirements and, where appropriate, seek Ministerial resolution.	Agreed in principle	N/A ⁸⁶
Recommendation No.4 Using the evidence indicating that the powers provided to AFMA under its existing legislation are insufficient to allow it to achieve its legislative ESD objective in situations of uncertainty regarding the status of fish stocks, AFMA should, as a matter of urgency, seek Ministerial resolution with a view to obtaining legislative changes.	Disagreed	N/A ⁸⁶
Recommendation No.5 AFMA should expand its existing policy guidance to AFMA officers and the MACs and include priorities for future policy development in its corporate and operational plans.	Agreed in principle	3.7–3.14
Recommendation No.6 AFMA should use its legislated objectives as the key objectives in its Corporate Plan and include as sub-objectives any particular aspects or themes on which it intends to focus during the planning period.	Agreed in principle	2.3–2.7

⁸⁶ Actions considered complete, as these are now matters for Government. The ANAO notes that a review of the 1989 fisheries policy: *New Directions for Commonwealth Fisheries in the 1990s: A Government Policy Statement* is currently underway.

Recommendations	AFMA's response	Report reference
<p>Recommendation No.7</p> <p>To clarify, formalise and facilitate the generation of Statutory Management Plans, AFMA should formally state and promulgate:</p> <ul style="list-style-type: none"> • criteria for the identification of fisheries; • criteria for determining which fisheries should have a Statutory Management Plan; • criteria for determining the most appropriate scheme of management to be applied in the fishery, eg output or input controls; and • procedural steps for the development of Statutory Management Plans. 	Disagreed	4.12–4.24
<p>Recommendation No.8</p> <p>AFMA should develop a uniform Statutory Management Plan structure for the presentation of the objectives and the methods of attaining them that is directly linked to AFMA's legislative objectives. In addition, AFMA should ensure that the performance indicators, amongst other things, reflect the 'criteria for preferred management controls' identified in the 1989 Policy.</p>	Agreed in principle	4.12–4.24
<p>Recommendation No.9</p> <p>Further to AFMA's statutory responsibility for assessing the environmental impact of its decisions, AFMA should:</p> <ol style="list-style-type: none"> a) develop a schedule for the conduct of environmental impact assessments for all of its fisheries; b) issue a statement within its policy paper series that will provide guidance to its staff and the MACs regarding the processes and procedures for taking environmental impact into account; and c) expeditiously negotiate an MOU with the EPA regarding referrals of environmentally significant decisions. 	<p>a) Disagreed</p> <p>b) Agreed</p> <p>c) Disagreed</p>	5.4–5.21
<p>Recommendation No.10</p> <p>AFMA should refine its corporate definition of the ESD objective in its governing legislation to provide a clearer linkage between its statutory role and the management activities required to achieve that objective.</p>	Agreed	2.3–2.7
<p>Recommendation No.11</p> <p>Within its series of Policy Papers, AFMA should provide guidance on the primary purpose of the stock assessments, the scope of matters to be considered, the type of assessment required, the fish types to be included and the time frame for achieving relevant milestones. It should also examine the issues raised by the Bureau of Resource Sciences, together with any other matters identified as impediments to the successful implementation of the stock assessment process, and develop a prioritised program to overcome these deficiencies.</p>	Agreed	3.29–3.39
<p>Recommendation No.12</p> <p>In its series of Policy Papers, AFMA should provide clear policy direction on the development of both long- and short-term fishery management strategies.</p>	Agreed	3.7–3.14

Recommendations	AFMA's response	Report reference
Recommendation No.13 AFMA should, in conjunction with its fishery-specific planning, introduce an additional form of monitoring and planning based upon groupings of fishers operating in more than one fishery.	Disagreed	N/A
Recommendation No.14 In compliance with the 1989 Fisheries Policy Statement, AFMA should endeavour to introduce output controls in Commonwealth fisheries wherever possible and, where this is not feasible, implement input controls using tradeable units of gear.	Agreed	4.7–4.11
Recommendation No.15 AFMA should develop strategies for monitoring and managing the impact of technological change on fishing capacity.	Agreed in principle	4.7–4.11
Recommendation No.16 The ANAO recommends that AFMA improve the accuracy of its boat, licenses, permits and fishing rights statistics.	Agreed	7.2–7.24
Recommendation No.17 In its series of Policy Papers, AFMA should provide guidance to the various planning elements of AFMA and the MACs on the criteria to be satisfied before recommending a total allowable catch higher than that recommended by stock assessment groups, having particular regard to the policy that fisheries managers should adopt a conservative approach.	Agreed in principle	3.29–3.39
Recommendation No.18 In view of the policy preference for output controls and the greater economic efficiency arising from such controls, AFMA should formally identify the impediments to the introduction of output controls in Commonwealth fisheries and systematically develop strategies designed to overcome them.	Agreed in principle	4.7–4.11
Recommendation No.19 AFMA's Strategic Information Systems Plan should (<i>inter alia</i>) be designed to capture data directly addressing AFMA's legislative objectives.	Agreed in principle	2.8–2.27
Recommendation No.20 AFMA should press for the establishment of a national register of Australian fisheries catch data, including standard formats, protocol systems and procedures.	Agreed in principle	7.2–7.7
Recommendation No.21 AFMA should examine and implement options for improving the quality of catch and effort data. Options that could be considered include: (a) seeking Government endorsement to a proposal guaranteeing the confidentiality of logbook data other than for scientific purposes, similar to confidentiality afforded the statistics acquired by the Australian Bureau of Statistics; (b) increasing the extent of independent verification; eg. through on-board observers; (c) undertaking more dockside inspections and cross-checking of landing and processor records; (d) providing education programs stressing the longer-term benefits of better records; and (e) simplifying record keeping procedures, especially in respect of fish discarded.	a) Disagreed b) Agreed in principle c) Agreed in principle d) Disagreed e) Disagreed	7.2–7.24 7.18

Recommendations	AFMA's response	Report reference
Recommendation No.22 AFMA should develop a process for the evaluation of research options and a methodology to enable an analysis of the costs and benefits of these options, so as to assist in the determination of priorities for the allocation of research funds.	Agreed	7.25–7.34
Recommendation No.23 AFMA should develop a timetable for the responses to the <i>Fisheries Reviewed Inquiry</i> and include in its Annual Report a report on progress.	Agreed	Provided in Appendix 7 of AFMA Annual Report 1995-96
Recommendation No.24 AFMA should develop criteria to guide its officers in determining the circumstances in which an education or advisory service is more appropriate than imposing a penalty when a breach of regulations occurs.	Agreed in principle	6.21
Recommendation No.25 AFMA should finalise the details of the surveillance-compliance planning process as soon as possible and establish a timetable for its implementation into Commonwealth fisheries.	Agreed	6.5–6.12
Recommendation No.26 After seeking comments from all relevant parties, including the MACs, compliance operational plans and surveillance-compliance budgets should be finalised and submitted to the AFMA Board for approval by AFMA's Operational Branch.	Disagreed	6.5–6.12
Recommendation No.27 The base-line surveillance-compliance budgets should reflect the results of AFMA's risk assessment and continue to be reviewed and updated in light of operational experience, changes to fisheries control mechanisms and surveillance-compliance needs in each fishery.	Agreed in principle	6.5–6.12
Recommendation No.28 AFMA should include in its formal risk assessment process the risk of misreporting in the logbook, landing, transport and fish receiver recording systems and introduce systems which appropriately counter the areas of risk.	Disagreed	7.2–7.14
Recommendation No.29 Where AFMA's risk assessment process indicates that logbook data is unreliable, AFMA should introduce alternative mechanisms to secure accurate and verifiable catch and fishing effort statistics, such as landing and transport records to provide the first catch record in the management trail for comparison with the fish receiver records.	Agreed in principle	7.2–7.14
Recommendation No.30 For fisheries which have only logbook requirements, AFMA should establish a quality assurance program to determine the reliability of the logbook data and, where the logbook data is found to be unreliable, expedite the implementation of fish receiver record requirements, or some other form of objective verification, at the earliest possible date.	Disagreed	7.2–7.14

Recommendations	AFMA's response	Report reference
Recommendation No.31 AFMA should assess the costs and benefits of extending the vessel monitoring and communication satellite systems currently in operation for a small number of selected fisheries to all fisheries to strengthen the surveillance function in a way which benefits both the fishers and AFMA.	Agreed in principle	6.13–6.16
Recommendation No.32 AFMA should develop a headquarters-based, surveillance-compliance capability or infrastructure, to undertake special surveillance-compliance activities at its discretion in any Commonwealth fishery.	Disagreed	6.21
Recommendation No.33 AFMA should initiate action with a view to seeking a government-to-government agreement on surveillance-compliance arrangements in the ACT covering the movement and processing of fish caught in Commonwealth waters.	Disagreed	N/A Now a government to government matter.
Recommendation No.34 In addition to its current performance indicators which can be categorised as of a 'work flow' nature, AFMA should develop specific performance indicators which enable Parliament, industry and the general public to make an objective assessment of its achievement of legislative objectives.	Agreed	2.8–2.27
Recommendation No.35 AFMA should include in its Annual Report a short summary report for each fishery containing details of management strategies, performance standards, actual performance and factors influencing performance, including confidence in standards and data.	Agreed	2.27
Recommendation No.36 In relation to its first legislative objective, AFMA should endeavour to provide more comprehensive information on achievements relating to OCS arrangements, stock assessments, annual management strategies, research plans, cost reduction measures and productivity.	Agreed	2.8–2.27; 4.13–4.16
Recommendation No.37 Regarding AFMA's ESD objective, in addition to the currently used 'work flow' performance indicators, AFMA should report on the following performance indicators: <ul style="list-style-type: none"> • targets for various fish species and reported catch statistics to indicate the degree of success in short-term strategies designed to achieve ecologically sustainable development; • the species for which biological reference points have been established and whether fish stock levels have remained above the reference points set; • information about the level of discarding and the impact on resources of the catch of non-target species; • an assessment of the degree of confidence in its knowledge of the resources in each fishery; and • information regarding broader environmental issues affecting each fishery and any environmental impact assessments undertaken. 	Agreed in principle	2.8–2.27

Recommendations	AFMA's response	Report reference
<p>Recommendation No.38 AFMA should improve the quality of reporting its performance in relation to the objective of 'maximising economic efficiency' by reporting information such as the following in its Annual Report:</p> <ul style="list-style-type: none"> • whether there has been any increase or decrease in fishing capacity (providing specific details of the measure of capacity); • the results, in quantitative terms, of changes in controls implemented by AFMA; • details of any inherent impediments to the achievement of economic efficiency; and • comparative statistics for the previous two years, as well as current figures for the number of boats, permits and Statutory Fishing Rights in the fisheries under its management control. 	Disagreed	2.8–2.27
<p>Recommendation No.39 AFMA should report its cost recovery achievement against each of the fisheries indicating which fisheries are generating funds and where payments remain outstanding.</p>	Agreed	4.25–4.26

Appendix 3

Standing Committee Recommendations and Government responses

The following table summarises the House of Representatives Standing Committee on Primary Industries, Resources and Rural and Regional Affairs report: *Managing Commonwealth Fisheries: The Last Frontier*, recommendations that were directed at AFMA and supported by the Government.⁸⁷ It excludes Standing Committee recommendations addressing policy or legislative change. The table also refers to those parts of the report that address the relevant issues leading to the recommendations.

Recommendations	Government's response	Report reference
Recommendation No.1 That the Australian Fisheries Management Authority, in consultation with the Department of Primary Industries and Energy and with industry, establish, and periodically review, a consistent naming regime for Commonwealth fisheries that can be used readily by managers, industry and researchers.	Supported	7.6–7.7
Recommendation No.7 That the Australian Fisheries Management Authority ignore recommendation 1 of the Australian National Audit Office's report. ⁸⁸	⁸⁹	N/A
Recommendation No.8 That the Australian Fisheries Management Authority continues to broaden the membership of Management Advisory Committees providing always that: <ul style="list-style-type: none"> • only legitimate stakeholders participate in the management process; • broader public concerns over the management of fisheries resources are addressed; and • it ensures that the concerns of individual industry operators can be taken into account. 	Supported	3.5–3.6

continued next page

⁸⁷ The Government responded in March 2001.

⁸⁸ ANAO recommendation 1: AFMA should undertake an assessment of the new and proposed Offshore Constitutional Settlement agreements to identify and prioritise those features that have a risk of reducing its efficient and effective management of Commonwealth fisheries and devise appropriate strategies to manage those risks effectively.

⁸⁹ The Government recognised that the recommendation would require considerable resources with unreliable outcomes. However, in finalising OCS arrangements, the Government will take into account the concerns expressed by the ANAO.

Recommendations	Government's response	Report reference
<p>Recommendation No.11</p> <p>That explicit disclosure provisions be introduced requiring persons proposed for appointment to a Management Advisory Committee to reveal possible conflicts of interest, and that this information should be provided to all operators in the fisheries covered by the Committees. This requirement should also apply to all members including persons elected to membership of Committees, as proposed in Recommendation 10.⁹⁰</p>	Current practice is already consistent with the recommendation	3.24–3.26
<p>Recommendation No.12</p> <p>That the Australian Fisheries Management Authority develop and implement management plans in Commonwealth fisheries in line with the timetable provided in its submission to the Committee (submission 13, attachment 5). AFMA should report progress in the development and implementation of management plans in each fishery in its Annual Reports.</p>	Supported	4.18
<p>Recommendation No.13</p> <p>That the Australian Fisheries Management Authority develop and widely disseminate a policy paper which would be a practical guide explaining what a management plan is, how it is developed and reviewed, and the opportunities for stakeholders to participate in this process. The policy paper should be completed by 31 December 1997.</p>	Supported	3.7–3.14; 4.19–4.21
<p>Recommendation No.15</p> <p>That the Australian Fisheries Management Authority report its performance against the objective of implementing efficient and cost effective fisheries management for each Commonwealth fishery in its Annual Report. This requires AFMA to detail the strategies it will use, as well as the actions it has taken, to achieve this objective in each fishery.</p>	Intent has been addressed	2.25–2.26
<p>Recommendation No.16</p> <p>That the Australian Fisheries Management Authority ensures the stock assessment process makes greater use of fishers and their knowledge about fisheries resources.</p>	Supported	3.29–3.39
<p>Recommendation No.17</p> <p>That the Australian Fisheries Management Authority trial the use of cluster quotas in a fishery to support efforts to overcome bycatch problems. AFMA should report the findings of its trial at its Annual General Meeting.</p>	Supported in principle	5.23–5.39

continued next page

⁹⁰ Standing Committee recommendation 10: That the *Fisheries Administration Act 1991* be amended so that a majority of industry members of a Management Advisory Committee are selected through a democratic process determined by the Minister. Elected members of a Management Advisory Committee should be required to give the same undertakings about their participation as is given by appointed members.

Recommendations	Government's response	Report reference
Recommendation No.18 That as a matter of priority, the Australian Fisheries Management Authority develop surrender provisions for each Commonwealth fishery to reduce the current high levels of dumping of bycatch. AFMA should use incentives to ensure fishers make use of the surrender provisions introduced without leading to bycatch species becoming commercially targeted.	Supported in principle	5.23–5.39
Recommendation No.19 That any funds recovered by the Australian Fisheries Management Authority from the surrender of bycatch, after providing sufficient incentive for fishers to surrender bycatch, should be directed towards research.	Supported; consideration will be given to this option.	5.23–5.39
Recommendation No.22 That in complying with recommendation 21, ⁹¹ the Australian Fisheries Management Authority develop performance indicators in relation to the objective of maximising economic efficiency in the sustainable harvest of fisheries resources. This should involve outlining the strategies that will be used in each fishery to improve economic efficiency in that fishery. The impact and effectiveness of these strategies should appear in its Annual Report.	Supported	2.10–2.14
Recommendation No.23 That in complying with recommendation 21, the Australian Fisheries Management Authority also consider which fisheries require structural adjustment and detail the strategies being used to achieve the necessary outcomes for each fishery.	Supported	4.7–4.11
Recommendation No.24 That for all Commonwealth fisheries, the Australian Fisheries Management Authority conduct industry wide annual workshops in which Management Advisory Committee members can be questioned about their decisions and recommendations to the Australian Fisheries Management Authority Board.	Supported	3.17–3.23
Recommendation No.25 That the Australian Fisheries Management Authority, in developing and considering the most appropriate management regime for a fishery, should make allowances for the capacity of industry to meet the management costs that result from different types of management. In doing this the Authority must ensure that its capacity to meet its other legislative objectives is not compromised.	⁹²	4.11

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⁹¹ Standing Committee recommendation 21: That the *Fisheries Management Act 1991* be amended to define and clarify the objective of maximising economic efficiency in the sustainable harvest of fisheries resources. Government response: Not supported. As this recommendation required legislative changes it fell outside the scope of the current audit.

⁹² The costs and benefits of a management strategy is one aspect that must be considered; the determination of levies is done through a consultative process.

Recommendations	Government's response	Report reference
<p>Recommendation No.28</p> <p>That the Australian Fisheries Management Authority review options and implement processes that will enhance independent verification of logbook data. This review should be completed prior to tabling its 1996–97 Annual Report and recommended strategies and actions should be presented in this report.</p>	Supported	7.15–7.24
<p>Recommendation No.29</p> <p>That the Australian Fisheries Management Authority undertake a phased in installation of VMS in all Commonwealth fisheries. AFMA should determine an order of priority for the introduction of VMS in the Commonwealth fisheries.</p>	Supported	6.13–6.16
<p>Recommendation No.32</p> <p>That the Australian Fisheries Management Authority consult with industry to investigate ways to improve the participation of industry in the research process and that AFMA make reference to industry participation in their Annual Reports.</p>	Supported	7.25–7.34
<p>Recommendation No.37</p> <p>That the Australian Fisheries Management Authority impose a ban on the take, possession and landing of blue and black marlin in the Australian Fishing Zone by commercial fishers.</p>	Supported	5.43–5.46
<p>Recommendation No.40</p> <p>That the Australian Fisheries Management Authority, through its presence on the Torres Strait Protected Zone Joint Authority, seek greater consultation and cooperation with Papua New Guinea over management and surveillance in the fisheries of the Torres Strait Protected Zone.</p>	Supported	N/A
<p>*Recommendation No.41</p> <p>That the Australian Fisheries Management Authority involve traditional fishers in the management of Commonwealth fisheries where they are legitimate stakeholders, in line with the broadening representation occurring in the management environment. Where appropriate, this should involve representation on Management Advisory Committees, either as full members or as observers.</p>	Supported	3.5–3.6

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Recommendations	Government's response	Report reference
<p>Recommendation No.43 That the Australian Fisheries Management Authority regularly review the way its administrative processes and procedures place compliance requirements on industry and report in its Annual Report steps that have been taken to streamline these requirements, in particular through greater use of technology. A key element of the review process should be a requirement for Management Advisory Committees to nominate areas of burdensome administration and paperwork to AFMA.</p>	Supported	2.27; 4.11; 4.25–4.26; 6.13–6.16; 7.15–7.20
<p>Recommendation No.44 That the Australian Fisheries Management Authority review the number of Commonwealth fisheries in order to reduce the number of designated fisheries in such a way that will provide greater administrative efficiency and streamline regulation.</p>	Supported	4.7

Appendix 4

Audit criteria

The following criteria were adopted for the audit:

AUDIT CRITERIA
AFMA's Corporate objectives/planned outcomes are aligned to and give effect to its legislative objectives and responsibilities, including those related to achieving Ecologically Sustainable Development.
AFMA has a performance information and reporting framework that supports effective management decision making, as well as enabling sufficient and appropriate reporting to Parliament and stakeholders on Commonwealth fisheries management performance and issues. Matters to be addressed include: <ul style="list-style-type: none">– performance against legislative objectives;– performance and strategies for each fishery; and– information systems that support appropriate data capture.
AFMA provides sufficient and appropriate guidance to its staff and MACs in order to facilitate consistent and effective implementation of key operational matters including: <ul style="list-style-type: none">– objectives, scope and methodology for stock assessments;– fisheries management strategies;– criteria for assessing and setting total allowable catch;– appropriate responses to breaches of regulation; and– development use and nature of SMPs.
Where appropriate, AFMA provides feedback to policy makers where it considers changes to policy or legislation would enhance its operations. This might include matters relating to the review of the 1989 Fisheries Policy, Joint Authority relationships, etc.
Management Plans: <ul style="list-style-type: none">– have been completed (in accordance with the timetable provided to the Standing Committee);– have objectives, strategies and performance indicators that are linked to AFMA's corporate and legislative planning and reporting requirements; and– progress is reported annually and reviewed regularly.
Management of the MAC's consultative/decision making process is effective: <ul style="list-style-type: none">– appropriately reflects the range of industry and other stakeholder views;– addresses the potential for conflicts of interests; and– is accountable to key stakeholders.
Commonwealth fisheries are managed through output controls wherever possible. Where output controls are not used, the means of managing catch are kept under regular review and appropriate alternative strategies are implemented.
Cost recovery arrangements: <ul style="list-style-type: none">– are administered in accordance with AFMA's legislative objectives;– incorporate all commercial users (including recreational fishers where relevant) of a particular fisheries; and– employ a methodology that is transparent to industry and other stakeholders.

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AFMA has data collection and management information systems that fulfil its information needs to effectively manage Commonwealth fisheries and including its performance information and compliance monitoring needs. In particular AFMA:

- manages risks to the quality of catch and effort data, including managing risks to compliance with requirements [consider QA, verification, education, etc.];
- utilises all relevant knowledge for stock assessments (including local fishers);
- ensures its use of information reflects consistency in its data systems; and
- achieves, through consultation and cooperation, greater consistency in catch data across all Commonwealth and State/Territory fisheries.

AFMA has a structured and systematic approach to developing evaluating and prioritising research projects to maximise the value of research effort. Specifically to include:

- risk assessment and cost benefit analysis; and
- stakeholder input.

AFMA's approach to fulfilling its compliance, monitoring and enforcement responsibilities is based upon a systematic approach to risk management, including:

- compliance operational plans and budgets, for all fisheries based on objective risk assessments and treatments, which are reviewed regularly;
- pursuing technological (eg. electronic) means of enhancing compliance monitoring to reduce reliance on manual logbooks; and
- the ability to undertake special investigative activities as required.

Matters of environmental significance, for each Commonwealth fishery are appropriately and effectively addressed through:

- effective arrangements with Environment Australia and other relevant parties;
- effective processes and procedures for assessing environmental impact;
- management of by-catch; and
- management of stock targeted by recreational fishers (eg. Black and Blue Marlin).

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