

Fisheries Resources Research Fund Annual Report 2003-04



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ABOUT THIS REPORT

This report covers the operations of the Fisheries Resources Research Fund (FRRF) during the 2003-2004 financial year. It describes the projects that were approved for funding during this period, the level of funding listed by research provider and details those projects from previous financial years that were completed during 2003-04.

The funding base for the FRRF is provided through an annual appropriation based on 0.25 per cent of annual gross value of national fisheries production (less specified budgetary reductions). This report provides details of how this appropriation was used during 2003-04 and how it was distributed to research service providers.

In 2003-04, the FRRF funded 51 projects, with researchers completing a total of 50 projects in the same time period. At the end of the financial year, 19 funded projects were ongoing.

Legislative requirements

There is no legislative requirement for the preparation of the FRRF Annual Reports or Annual Operating Plans. These documents are prepared by the Department of Agriculture, Fisheries and Forestry in the interests of accountability, transparency and the effective management of the Fund.

Secretary
Fisheries Resources Research Fund
February 2005

PART A: OPERATING ENVIRONMENT

1 ABOUT THE FISHERIES RESOURCES RESEARCH FUND (FRRF)

1.0 The Role of the Fund

The Australian Government established the Fisheries Resources Research Fund (FRRF) in 1991 as a component of the December 1989 government policy statement *New Directions for Commonwealth Fisheries Management in the 1990s*.

The FRRF was specifically established to support fisheries related research to be undertaken by the Australian Bureau of Agricultural and Resource Economics (ABARE) and the Bureau of Rural Sciences (BRS) in support of Commonwealth fisheries management. The resulting research was intended to provide for the accurate assessment of the status of the Australian Government managed fish stocks and of fisheries management priorities. The FRRF was also intended to support management-related research categorised as being “in the public interest”, or where industry or other funds were unavailable or inappropriate.

In 1994, a Task Force Review into Rural Research, which included an assessment of the FRRF, re-emphasized the intention of the 1989 policy statement that a major role for FRRF was to enable an independent assessment of Commonwealth fisheries management performance, including the status of stocks and progress reports on fisheries.

The Review recommended that the independent assessment component of the FRRF be revised to consist of the following components:

1. a rolling program of independent assessment of all Commonwealth fisheries;
2. a program of assessment development to improve independent assessment techniques; and
3. a program of policy development to provide research as an input to underpin public fisheries policy development.

The 1994 Review also led to the subsequent recommendation for the permanent transfer of \$1 million per annum from the FRRF to AFMA in recognition of AFMA’s obligation to arrange appropriate research in economically non-viable fisheries.

This was followed by a further review of the fund undertaken in 1999 by the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) and major stakeholder agencies. During these discussions, agencies met to determine if the approach identified in 1994 was consistent with what was required for fisheries management in 2000 and beyond.

The major outcome of these discussions was an agreement that FRRF should continue to priority fund ABARE and BRS to undertake their economic and biological assessments of Commonwealth fisheries management, but also acknowledged the growth of other issues such as aquaculture, regional fisheries management organisations (RFMOs), and customary fishing, and the need to fund research in these areas. The group also agreed to part fund a small number of regional conferences on a case by case basis.

Since the 1999 discussions, the FRRF has continued to deliver a rolling program of independent assessment of the Commonwealth managed fisheries, whilst also supporting a broader range of policy related research. Put simply, the current roles of the FRRF are to:

- fund an ongoing program of assessment of the management of Commonwealth fisheries, which is considered necessary for the ongoing stewardship of those fisheries; and
- fund economic and policy analysis of emerging issues in both domestic and international fisheries.

Under these arrangements, the FRRF's program of research is consistent with the National Research and Development (R&D) priority of "An Ecologically Sustainable Australia", whilst also supporting the achievement of at least two of the rural R&D priorities, namely "Sustainable Natural Resource Management" and "Improved Market and Trade Access". The FRRF also contributes to the achievement of the Australian Government Department of Agriculture, Fisheries and Forestry's (DAFF's) outcome of "*More sustainable, competitive and profitable Australian agriculture, food, fisheries and forestry industries*" and more specifically to the Department Output 3 "*Industry Development*".

1.1 FRRF's Funding Base for 2003-04

The Australian Government first allocated funding for the FRRF in the 1991-1992 financial year with an amount equivalent to 0.25 per cent of the average gross value of national fisheries production each year. This amount has been subsequently reduced by budgetary and productivity measures (including the provision of \$1 million in funding to AFMA and two budgetary cuts of \$1 million in 1993/94 and \$200,000 in 1997/98).

In the 2003-04 Budget, funds of \$2.67 million were originally made available by the Australian Government for use by the FRRF. This figure was later increased by \$1.1 million in February 2004 as a revised appropriation measure, providing a total budget of \$3.77 million for 2003-2004.

The late provision of these additional funds, when combined with changes made to the operation of Regulation 10 of the *Financial Management and Accountability Act 1997* (the FMA), meant that the FRRF was not in a effective position to fully utilise all of its 2003-04 funding allocation. As a result, the fund ended up spending a total of \$3,405,611 in 2003-04, (with an under spend of \$364,389 of its funding allocation).

In 2003/04, FRRF's funding was allocated on the following basis:

• BRS Administered Research Projects	\$1,206,802
• ABARE Administered Research Projects	\$ 856,910
• CSIRO Administered Research Projects	\$ 215,522
• AFMA Administered Research Projects	\$ 70,009
• Other Research Providers (FERM, AIMS, UOW, etc)	\$ 793,919
• Sponsorship of Conferences/Policy Development Workshops	\$ 117,907
• Administrative Costs ¹	\$ 144,540
Total:	\$ 3,405,611

¹ Administrative costs included the provision of DAFF staff to administer the fund, departmental corporate costs, travel expenses, consultancy costs (including payments made to Shellack Pty Ltd for work on the FRRF Advisory Committee), publishing costs, legal costs and so on.

1.2 General Administrative Arrangements

Prior to the 1994 review, decisions over FRRF expenditure were made directly by the Commonwealth Minister with responsibility for fisheries. However, with the completion of the review, the formalities of the FRRF funding approval were changed and formal Ministerial endorsement of proposed funding allocations was no longer sought.

Since this time, staff within the Fisheries and Aquaculture Branch (FAB) of DAFF have administered the allocation of FRRF money under the guidance of an independent Advisory Committee (the FRRF Advisory Committee) which oversees the evaluation of applications. FAB provides policy development, advice and coordination for national and international fisheries management issues, to ensure that Australia's fishing industry is internationally competitive and environmentally sustainable.

As the authority for the establishment of the FRRF is not provided in any legislation but is a result of policy decisions arising from the 1989 *New Directions* policy statement, authority to spend FRRF funds resides in the provisions of the FMA. Under current arrangements this authority is held by the Executive Manager of Fisheries and Forestry, who has a delegation under Regulation 9 of the FMA for expenditure of up to \$10,000,000.

For multi-year projects, FRRF is also required to comply with the arrangements set out under Regulation 10 of the FMA. Due to a revision of this regulation in October 2003, any FRRF projects seeking to establish funding commitments against future budgetary appropriations needed to be personally approved by the Minister for Finance. In 2003-04, only one project triggered this requirement, with the Crime in Fisheries Project being formally approved by the Minister for Finance for Regulation 10 purposes in early June 2004.

1.3 The Role of the FRRF Advisory Committee

The role of the Advisory Committee is to provide expert independent advice and to recommend priority funding for research proposals submitted to the FRRF.

DAFF appoints members of the FRRF Advisory Committee on the basis of their skills, background and experience in fisheries management, research and assessment. The Advisory Committee usually consists of four or five members who, apart from DAFF officers, may include members from the Fisheries Research and Development Corporation (FRDC), AFMA and the Department of the Environment and Heritage (DEH). The Committee membership is necessary to maintain the integrity of the Fund and to ensure that the commitment of public monies is an open and transparent process.

In 2003-04, the membership of the FRRF Advisory Committee was:

- Catherine Smith, Manager, Domestic Fisheries Section, DAFF
- Patrick Hone, Programs Manager, FRDC
- Ian Cresswell, Assistant Secretary, Sustainable Fisheries Section, DEH
- Bruce Wallner, Senior Research and Data Manager, AFMA
- Mary Lack, Independent Expert, Shellack Consulting Pty Ltd

FRRF administration is in turn managed by the FRRF Secretariat, which for the period of

2003/04 was Neil Garbutt of DAFF.

1.4 Selection of research and service providers

Consistent with the purpose of the fund, a large component of FRRF's budget is annually allocated to ABARE and BRS for research that will underpin an independent assessment of the status of the Commonwealth fisheries (over the last 5 years this has usually averaged around 23.3% (ABARE) and 40.1% (BRS) of FRRF's total budget).

A further component is used to select other research and service providers, particularly where ABARE and BRS are unable to undertake the research. This is based on the following:

- *Targeted research:* DAFF selects organisations or individuals following one or two calls for applications per year. These calls may be conducted by open or selective invitation, depending on factors, such as the relative cost of evaluation processes and assessment by FAB of the potential number of research/service providers capable of delivering the required outputs.
- *Commissioned research:* DAFF selects organisations or individuals from known research providers, according to the type of research being commissioned, prior to scrutiny by the Advisory Committee.

In 2003-04, FRRF began the financial year with \$794,380 in existing financial commitments. A large percentage of these commitments came from established multiple year research projects, whilst a smaller percentage came from projects that had for one reason or another had re-negotiated milestones to fall within the 2003-04 financial year. When added to the ABARE and BRS work programs for 2003-04, this resulted in FRRF only having approximately \$390,000 in funds to develop a new research program with. As a result, a decision was made at the beginning of the financial year to forgo a formal targeted research round for 2003-04. Instead, the FRRF Secretariat worked with the FRRF Advisory Committee to develop a number of individually commissioned research projects.

With the provision of an extra \$1.1 million in funding in February 2004, further consideration was given as to whether a targeted research round should be run for the fund. However, given some of the constraints put in place by Reg 10 of the FMA and the time involved in running a full targeted round process, it was finally decided to not run a targeted round in 2003-04. For the remainder of 2003-04, the FRRF Secretariat worked with stakeholder agencies and research providers to develop a full research program.

1.5 Strategic Planning

The FRRF Strategic Plan 2000-2002 has been the primary guiding document for the administration of the Fund. This document explains the purpose of the fund and specifies the strategic directions in which FRRF funding will be used.

Development of a new Strategic plan was originally scheduled for late 2002, but was postponed until after the June 2003 completion of the "*Looking to the Future*" review of Commonwealth Fisheries Policy. However, a subsequent decision by the Australian Fisheries Management Forum (AFMF) in late 2003 to review current fisheries research arrangements, meant that any development of a new strategic plan was again postponed.

With the recent completion of both processes, a new strategic research plan for the fund is

currently being developed. The new Strategic Plan will be operational for 2005-2007 and is scheduled to be in place by early 2005.

2. FRRF FUNDING PRIORITIES FOR 2003-04

FRRF funding supports an agreed program of independent assessment of Commonwealth fisheries management performance. The FRRF also supports the development of new and improved policies for fisheries management in accordance with the two-program approach as identified in the FRRF Strategic Plan 2000-2002.

Under this arrangement, FRRF funds are allocated to the:

- *Fishing Industry Development Program*; and
- *Resources Sustainability Program*.

2.1 Program 1: Fishing Industry Development Program

Purpose

To achieve a fishing industry whose commercial (wild-catch and aquaculture), recreational and traditional sectors are socially and politically resilient, and whose commercial sector is profitable and internationally competitive.

Program Description

The program is consistent with the following Australian Government priorities for rural research and development (R&D):

- *Whole-of-chain approach*: A whole-of-chain approach to production, processing and marketing to ensure an effective supply chain approach that maximises Australia's competitive advantage.
- *Biotechnology*: Development of biotechnology to support Australia's aquaculture industries, along with sensitive handling to accommodate consumers' concerns, to supplement and replace wild-catch fisheries, where appropriate.
- *Increases in trade and market access*: A need for data and associated market analyses to allow for informed debate and to support Australia's negotiating position in international forums.
- *Clean and green*: Maintenance and enhancement of Australia's 'clean, green' image.
- *Food safety*: Addressing food safety concerns of consumers.
- *Improving human resources*: Cultivating creativity and innovation in the use of human capital.

These priorities for rural R&D within the Fishing Industry Development Program will be achieved through the following key strategies:

- Industry Growth and Competitiveness;
- Industry Sustainability; and
- Trade and Marketing.

Sub-Program 1: Industry Growth and Competitiveness

The strategy of Industry Growth and Competitiveness will include projects that provide for:

- review, assessment and development of policy to support restructuring and adjustment

schemes;

- review, assessment and development of strategies to deal with factors affecting development of the wild-catch and industry sectors of the fishing industry;
- review, assessment and development of strategies to deal with industry competitiveness;
- identification of economic and political impediments to the development of aquaculture;
- development of innovative applications for aquaculture;
- identification, development, review and assessment of sustainability criteria for aquaculture; and
- identification, development, review and assessment of strategies by which Aboriginal and Torres Strait Islander people may develop commercial fishing activities.

Sub-Program 2: Industry Sustainability

The strategy of Industry Sustainability will include projects that provide for:

- identification, review and assessment of innovative methods of incorporating fisheries and aquaculture in regional development;
- determining the social characteristics of populations in, and associated with, the fishing industry to support the development of equitable fisheries policy that may affect regional Australia; and
- acquisition and analysis of information that allows domestic and international fisheries policies to meet short-term and long-term challenges in the most efficient and effective way.

Sub-Program 3: Trade and Marketing

The strategy of Trade and Marketing will be achieved through projects that provide for:

- review and assessment of domestic marketing issues; and
- review and assessment of policy dealing with international trade negotiations.

2.2 Program 2: Resources Sustainability Program

Purpose

To achieve a sustainable resource base for the fishing industry.

Program Description

This program is consistent with the following Australian Government priority for rural R&D:

- *Sustainable management and use of our marine resource base:* through the integration of effective, scientifically-based resource assessments and mitigation strategies into our fishing and aquaculture industries.

This priority for rural R&D within the Resources Sustainability Program will be achieved through the following key strategies:

- Status of Fish Stocks, Environment and Industry;
- Fisheries Management, Regulation, Compliance and Improvement;
- Ecosystem Processes;
- External Fisheries Policy, Economic and Environmental Instruments; and
- Maintaining and Developing Linkages Overseas.

Sub-Program 1: Status of Fish Stocks, Environment and Industry

The strategy of Status of Fish Stocks, Environment and Industry will include projects that provide for:

- independent assessment of status and condition of Commonwealth fishing stocks and industry; and
- development, assessment and review of tools, indicators and methodologies to support environmental assessment and monitoring, and evaluation of fisheries performance against principles of ecologically sustainable development (ESD).

Sub-Program 2: Fisheries Management, Regulation, Compliance and Improvement

The strategy of Fisheries Management, Regulation, Compliance and Improvement will be achieved through projects that provide for:

- development of approaches for identifying and dealing with resource access and allocation issues;
- development, assessment and review of management strategies that support the sustainable utilisation of resources;
- assessment and review of management strategies, regulatory approaches and compliance arrangements;
- provide policy development to support specific fishery management plans;
- review and assessment of policy, legislation and jurisdictional issues (Commonwealth and Australia's Oceans Policy) to ascertain their support for an integrated ecosystem approach to fisheries resource management;
- identification, review and assessment of social and economic contributions, impacts and/or influences on sustainable management of the wild-catch and aquaculture sectors;
- development, review or assessment of alternative uses for bycatch; and
- identification and development of management strategies, indicators and methodologies to address aquaculture and land-use issues in coastal zones and inland Australia, such as

integrated coastal zone management.

Sub-Program 3: Ecosystem Processes

The strategy of Ecosystem Processes will encompass projects that provide for the:

- identification and development of a comprehensive understanding of key ecosystem processes and the impacts of fishing, pollution, habitat destruction, environment and climatic factors on fish stocks;
- review and assessment of economic and/or social factors influencing fisheries and their ecosystems; and
- development, assessment and review of management strategies, tools, indicators and methodologies related to the management of marine health, diseases and pest incursions.

Sub-Program 4: External Fisheries Policy, Economic and Environmental Instruments

The strategy of External Fisheries Policy, Economic and Environmental Instruments will be achieved through projects that provide for:

- development, assessment and review of high seas management;
- review and assessment of policy dealing with international obligations and agreements that affect Australian fisheries resources; and
- development, assessment and review of economic and environmental instruments to aid ESD.

Sub-Program 5: Maintaining and Developing Linkages Overseas

The strategy of Maintaining and Developing Linkages Overseas will focus potential benefits, to Australia and Australian industries – through shared research and development activity and membership of regional and international fisheries management or aquaculture organisations.

PART B: PROJECTS FUNDED IN 2003-2004

Table 1: Projects funded in 2003-2004

During 2003-2004, FRRF provided a total of \$3,261,071 in funding to 50 research projects, with an additional \$144,540 provided to FAB to cover the costs of administering the fund.

A full listing of the funding provided during the 2003-2004 financial year is set out below. All financial figures included in this table are GST exclusive.

Research Organisation	Project Title	2003/04 Funding \$	Scheduled Completion
ABARE	Alternative Management Instruments 2001-02	\$16,473	Completed
ABARE	Alternative Management Instruments 2002-03	\$90,474	Completed
ABARE	Alternative Management Instruments 2003-04	\$95,522	Completed
ABARE	Cost and Benefit Analysis of Foreign Catch Landing Arrangements in Australia	\$39,838	Completed
ABARE	Fishing Industry Import Competitiveness	\$9,924	Completed
ABARE	Performance Monitoring 2002-03	\$118,794	Completed
ABARE	Performance Monitoring 2003-04	\$270,119	Completed
ABARE	Sustainable Ecosystems 2002-03	\$155,284	December 2004
ABARE	Sustainable Ecosystems 2003-04	\$60,482	Completed
AFMA	A Review of Interactions Between Commonwealth Managed Fisheries	\$23,515	24 September 2004
AFMA	International Marine Protected Areas Conference	\$20,000	October 2005
AFMA	Torres Strait Prawn Data Project	\$26,494	30 July 2004
AIC	Study into Crime in Australian Fisheries	\$42,500	December 2005
AIMS	Shark Abundance	\$32,177	Completed
APFA	2003 Australian Prawn Farmers Association AGM	\$4,000	Completed
BRS	Analysis of AFMA Seabird Mitigation Trials	\$41,542	June 2005
BRS	Community Perceptions of Aquaculture	\$85,000	December 2004
BRS	Development and Implementation of National Strategies for Conservation of Sharks and Seals	\$79,040	31 August 2004
BRS	Refinements of the Ballast Water Decision Support System	\$50,000	Completed

BRS	Service Level Agreement <ul style="list-style-type: none"> Scientific Support for International Fisheries Policy Development Science for Sustainable Development of Marine Resources Scientific Data and Fishery Advisory Services 	\$841,104	Completed
BRS	Social Impacts of Implementing Revised Green Zones Under the Representative Areas Program for the Great Barrier Reef Marine Park	\$80,000	Completed
BRS	Summary of Data Provision Requirements for RFMO's and UN Fish Stocks Agreement	\$26,259	Completed
BRS	Spatial Management Workshop	\$3,857.46	Completed
CSIRO	A Scoping Study of the Development of a New Catch Sharing Model for the Torres Strait Rock Lobster Fishery	\$28,180	Completed
CSIRO	Evaluation of Complex Population Models used for the Assessment and Management of Migratory Fish Stocks	\$27,338	Completed
CSIRO	Monitoring the Longline Catch of SBT landed in Indonesia 2002-03	\$30,000	Completed
CSIRO	Monitoring the Longline Catch of SBT landed in Indonesia 2003-04	\$80,004	Completed
CSIRO	Understanding the Nature of SBT Bycatch in the ETBF	\$50,000	Completed
Department of Fisheries, WA	International Conference on Resource Allocation	\$125,000	30 September 2005
FAB	Aquaculture Industry Development for Indigenous Australians	\$62,500	31 December 2004
FAB	Australian NPOA to Prevent, Deter and Eliminate IUU Fishing	\$57,328	Completed
FAB	Contribution to the OECD Ministerial Task Force on IUU fishing	\$160,402	Completed
FAB	Implementation of Strategy for Maintaining and Increasing Market Access for Australia's Fishing Industry	\$120,754	Completed
FAB	Inaugural Australian Fisheries and Seafood Forum	\$20,376	Completed
FAB	WCPFC Human Resource Benchmarking Project	\$38,430	Completed
FAB	WCPFC Management options Paper	\$14,066	Completed
FAB	Working Group on Marine Affairs and Fisheries Meeting	\$15,299	Completed
FAB	World Fisheries Congress Attendance	\$25,414	14 May 2004
FAB	Administration Costs Associated with the Fund	\$144,540	Completed
FERM	SETF Restructure	\$66,059	31 July 2004
FRDC	Workshop to Develop a National System of Secure Funding for Recfish Australia	\$30,000	31 December 2004
Independent	Future of Mariculture Conference	\$3,636	Completed

Independent	Legal Review of Catch Landing	\$10,000	31 July 2004
Independent	Pectinid Conference	\$10,000	30 October 2005
MIEB	APEC Workshop on Introduced Pests	\$9,090	Completed
NNTT	Indigenous Fishing Rights Conference 2003	\$5,000	Completed
NZMoF	Deep Sea 2003 Conference	\$7,072 ²	Completed
NSW Fisheries	4 th International Fisheries Observer Conference	\$25,000	12 November 2004
OECD	OECD Workshop on IUU and FOC Fishing	\$8,396	Completed
TAFI	7 th International Conference on Lobster Biology and Management	\$5,000	Completed
UoW	Observer Programs in Commercial Fisheries	\$14,327	Completed
Total Expenditure 2003-04		\$3,405,611	

² \$44,891 in funding was originally provided as underwriting for the DeepSea 2003 Conference. Upon completion of the conference, FRRF was reimbursed \$37,819 from conference profits. This lead to a net expenditure of \$7,072.

PART C: PROJECTS COMPLETED IN 2003-04

Overview:

During 2003-04, a total of 50 FRRF projects, worth a total of \$3,287,319.70 were completed. Outputs from the completed projects were consistent with FRRF funding guidelines.

With fisheries research there is often a significant time lag between a project being completed and its outputs contributing to a tangible policy/management outcome. As a result, evaluation of the effectiveness of completed projects tends to occur at a number of stages. The first stage is usually an evaluation of the completed project against its stated objectives. Subsequent stages normally relate to the usefulness and effectiveness of the research's outputs as inputs to other related work.

In assessing the effectiveness of the FRRF projects completed during 2003-04, this section of the report has restricted itself to looking at the tangible outputs that were generated by these projects. Where possible, additional information has also been included on how a project was further utilized in a policy/management sense, but the major focus is still on how the projects satisfied their stated research objectives.

During 2003-04, several projects from ABARE and BRS provided direct inputs to the FRRF's first role, i.e. to provide an independent assessment on the status of various Commonwealth fish stocks and of fisheries management. The remainder of the projects contributed to FRRF's role of providing research that will underpin the development of effective fisheries policy in light of emerging domestic and international issues.

The majority of the projects completed by ABARE during this time period were delivered as part of its four major fishery research programmes of "Sustainable Ecosystems", "Assessing Alternative Management Instruments", "Performance Monitoring" and "Australian Aquaculture". This report details each of the programmes completed during in 2003-04 and also details each of the individual sub-projects that were delivered under these "umbrella" programmes.

Several of the projects completed during 2003-04 suffered from serious delays in their delivery. As a result, a significant effort was undertaken by the FRRF Secretariat to resolve this issue, with a number of changes made to how FRRF paid its research providers and discussions undertaken with "offending" research agencies. By the end of 2003-04, only a limited number of projects were overdue.

A summary of projects completed during 2003-2004 is provided below:

1. ABARE - Fishing Industry Import Competitiveness

Total Funding - \$9,924

Objectives - To provide a detailed brief for the Fisheries and Aquaculture Branch on the causes and effects of recent macroeconomic and price developments that are affecting the domestic fishing industry, particularly operators in the Commonwealth fisheries.

Outcome - Fishers were surveyed and the report *Current Competitiveness of the Australian Fishing Industry* was completed. This report was provided to AFMA and

the Minister's Office for their consideration in June 2004.

2. ABARE – Sustainable Ecosystems 2001-02

Total Funding – \$101,971

Objectives – Provide economic information that will assist in improving the management of environmental issues that affect commercial fisheries. Specific outputs for this project include:

Managing uncertainties associated with fisheries management: Provide information about the risks associated with alternative management tools through the development of a modeling approach, which incorporates key biological and economic parameters.

Disease Management: Assist in the provision of efficient disease management services by developing a model to determine the optimal level of quarantine activity and the best response, in terms of quarantine, containment or eradication measures, to the discovery of a disease in a fishery.

Outcome – ABARE seminar delivered and final report received for '*Managing uncertainties associated with fisheries management*'. Final report '*Disease Management*' received and seminar delivered.

3. ABARE – Sustainable Ecosystems 2003-04

Total Funding – \$60,482

Objectives – To provide economic analysis of the impacts on commercial fishing of policies established to address environmental issues. Specific outputs for this project include:

Economics of Fishery Closures: Develop a practical model of fisheries closures, and in particular answer the question of whether Commonwealth fisheries would benefit from marine reserves and how large these reserves should be.

Outcome – A final report on "*The Economics of Fishery Closures*" was received in February 2004.

4. ABARE – Assessing Alternative Management Instruments 2001-02

Total Funding – \$157,538

Objectives – To provide AFMA fishery managers and policy makers with the economic information necessary to make informed decisions when choosing management instruments. Specific outputs for this project include:

Effectiveness of ITQs in fisheries with seasonal variability in abundance: Investigate the effectiveness of ITQs as a management tool in fisheries that have seasonal variability in abundance.

Management Options in a Multi-Species Fishery Under Uncertainty: Improve current methods used to set and assess the effectiveness of management instruments in multi-species fisheries.

Outcome – An ABARE seminar was held and a report produced that covered the '*Effectiveness of ITQs in fisheries with seasonal variability in abundance*'. The report '*Management Options in a multi-species fishery under uncertainty*' was delivered to

FRRF in November 2003.

5. ABARE – Performance Monitoring 2002-03

Total Funding – \$348,642

Objectives – To provide the economic information necessary for the performance of AFMA fishery managers to be assessed against economic efficiency and cost effective management criteria. Specific outputs for this project include:

2002-03 Fish Surveys: This project will collect and analyse information regarding the economic and financial performance of selected Commonwealth fisheries. The 2002-03 project assessed the performance of the South East Trawl Fishery, the Northern Prawn Fishery, the Torres Strait Prawn Fishery and the South Western Tuna and Billfish Fishery.

Enhancing Efficiency in the South East Trawl Fishery: This project will provide an assessment of the efficiency of the current system of ITQs in the South East Trawl Fishery. This research will also provide advice on ways to enhance efficiency and fishery returns in the SETF, extending previous work at ABARE on efficiency gains from ITQs.

Outcome – The *Australian Fishery Surveys 2003* were completed and released to the public in February 2004. The final report on '*Enhancing efficiency in the South East Fishery*' was delivered to FRRF in June 2004 (ABARE later released the report to the public in November 2004).

6. ABARE – Alternative Management Instruments 2002-03

Total Funding – \$174,225

Objectives – To provide AFMA fishery managers and policy makers with the economic information necessary to make informed decisions when choosing management instruments. Specific outputs for this project include:

Assessment of management options in the northern prawn fishery: This project will provide an economic assessment of possible alternative management options for the Northern Prawn Fishery (NPF). This will include an analysis of the relative effectiveness of ITQs and input controls in the NPF; an examination of the costs and benefits of separate management arrangements for tiger and banana prawns; and will recommend management strategies that will maximise the economic efficiency in the fishery

Options for the management of uneconomic fisheries: In this project, a number of alternative approaches to managing smaller fisheries will be explored with the aim of assisting policy makers and managers develop management arrangements that ensure a positive net return from management. Criteria for determining when management of a fishery should be undertaken will also be discussed. Case studies of two relevant Commonwealth fisheries will be undertaken.

Outcome – Workshops and seminars were held on the management of uneconomic fisheries, with a report delivered to FRRF in May 2004.

A final report on alternative management options in the NPF was provided to FRRF in June 2004. This report has led to the AFMA Board implementing a number significant

changes to NPF management arrangements.

7. ABARE – Australian Aquaculture 2002-03

Total Funding – \$45,252

Objectives – To provide potential aquaculture operators and investors with an idea of the type of information they will need when seeking finance, or thinking of investing in new operations or expanding existing operations. To identify and highlight any problems associated with investment in aquaculture.

Outcome – The report *Australian Aquaculture: information requirements for investors* was released in October 2003.

8. ABARE – FAO Aquaculture Review

Total Funding – \$8,998

Objectives – To prepare a short review of the state of information (statistical data and other information) and procedures for status and trends reporting of aquaculture in Australia, according to the terms of reference and outline forwarded by the FAO.

Outcome – The report *Australian Aquaculture Statistics: information sources status and trends reporting* was released in January 2004, providing a stock take of what aquaculture statistics were being collected and by whom.

9. ABARE – Performance Monitoring 2003-04

Total Funding – \$270,119

Objectives – To provide the economic information necessary for the performance of AFMA fishery managers to be assessed against economic efficiency and cost effective management criteria. Specific outputs for this project include:

2003-04 Fish surveys - This project will collect information regarding the economic and financial performance of selected Commonwealth fisheries. The 2003-04 project assessed the performance of the Gillnet Hook and Trap Fishery, the Eastern Tuna and Billfish Fishery and the Southern Squid Jig fishery (it is important to note that this project only included the collection of the survey data – the actual analysis of this data was to be undertaken as part of the 2004-05 work program).

Share payments and measures of the costs of fishing - This project proposes to investigate if skipper and crew payments do include profits payments and if so, decide on the best way to disaggregate share payments into wage and profit components. This will increase the accuracy of ABARE surveys and could add to models that until now have not accounted for any possible profit sharing by skippers and crew.

Fishery economics extension and education - ABARE will develop and run a short course in the economics of fishery management and policy for AFMA, DAFF and other relevant Commonwealth officers.

Outcome – Surveys of the GHAT, ETBF and Southern Squid Jig fisheries were

completed. The report "*Share payments and measures of the costs of fishing*" was delivered to FRRF in June 2004.

A short course on fisheries economics was successfully presented to officers from FAB, BRS, AFMA and DPIWE in May 2004. Overall reaction to the program was very favorable, with most organizations supporting the continued delivery of this course.

10. AFMA – A New Approach to Fishing Power Analysis for the Northern Prawn Fishery

Total Funding – \$116,840 (representing FRRF 50% share, jointly funded by AFMA)

Objectives – Improve knowledge of engine power performance, effective fishing time and catch efficiency. Validate the Prawn Trawl Performance Prediction Model. Improve estimates of changes in fishing power in the Northern Prawn Fishery and reassess stock status in light of these changes. Investigate possible management strategies to control fishing effort and its effects on sustainability and the industry.

Research conducted for AFMA by the CSIRO, Division of Marine Research.

Outcome – A final report "*A New Approach to Fishing Power Analysis for the Northern Prawn Fishery*" was delivered to both AFMA and FRRF in August 2003.

11. Australian Institute of Marine Science (AIMS) – Shark Abundance

Total Funding – \$64,353

Objectives – To develop and test a rapid, non-destructive technique for assessment of shark abundance that can be used in marine habitats throughout Australia. To provide a preliminary assessment of shark abundance on oceanic reefs in northern Australia that are protected and unprotected from shark fishing.

Outcome – The report '*Non-destructive Techniques for Rapid Assessment of Shark Abundance in Northern Australia*' was submitted to FRRF in February 2004. The results of this project were widely circulated via an AIMS media release. Follow up presentations were also made to AFMA and DAFF staff.

12. ASIC – Seafood Directions 2003 – Sponsorship

Total Funding - \$8,250

Objectives – To examine issues from both a national and international perspective that impact on the industry, to stimulate debate, explore new initiatives and to set strategic directions for the future. It aims to produce an assessment of the current status develop a guide for future action.

Outcome – The Conference was successfully held in September 2003.

13. Australian Prawn Farmers Association (APFA) – 2003 Australian Prawn Farmers Association Annual General Meeting - Sponsorship

Total Funding – \$4,000

Objectives – The conference will bring together national and international speakers covering industry development, new technologies, export market economies and opportunities, domestic market issues, quarantine and animal health, and training.

Outcome – The conference was successfully held in July 2003.

14. BRS - Social Impacts of Implementing revised Green Zones under the Representative Areas Program for the Great Barrier Reef Marine Park (GBRMP)

Total Funding - \$80,000

Objectives – To identify potential social and socio-economic impacts of implementing 'No Take' (Green Zones) under the representative areas program on the commercial fishing users of the GBRMP and associated regions and communities.

Outcome – The final '*Implementing the Representative Areas Program in the Great Barrier Reef Marine Park*' report was received in November 2003. This report directly contributed to the larger cross-industry report prepared by the Great Barrier Reef Marine Park Authority (GBRMPA). This in turn lead to a number of important decisions over how the commercial fishing industry is compensated for the introduction of marine protected areas.

15. BRS – Spatial Management Workshop

Total Funding - \$3,857.46

Objectives – To hold a conference on “Spatial Management: An alternate paradigm for fisheries management in Australia?” This will facilitate discussion of temporal and spatial fisheries management, and result in a better understanding of the requirements for effective implementation of spatial and temporal closures for the management of Australian fisheries.

Outcome – The workshop was successfully held in March 2004. The workshop was successful in highlighting multiple spatially explicit government processes within DEH, AFMA and State/Territory jurisdictions. The workshop identified the NOO as the lead agency to facilitate integration between responsible agencies and developed an agenda for identifying potential overlaps and synergies. There has subsequently been a second workshop (NOO sponsored) focusing on the southeast and there will be a further workshop in early 2005 focusing on the Northern Planning Area.

16. BRS – Striped Marlin Status in Relation to Measures of Ecologically Sustainable Development

Total Funding – \$33,880

Objectives – Summarise information on striped marlin biology. Describe research, assessment and management of existing striped marlin fisheries. Identify ways of mitigating striped marlin bycatch and evaluate their potential effectiveness. Analyse

evidence of longline activities affecting angler strike rates for striped marlin. Propose indicators and reference points for the sustainability of activities taking striped marlin. Report on the status of striped marlin against proposed reference points.

Outcome – The final report '*Striped Marlin: biology and fisheries*' was accepted in December 2003. The report was officially released in mid-January 2004 and highlighted the need for an assessment of the status of striped marlin in the southwest Pacific. This later resulted in AFMA funding an assessment that is due to be completed in December 2005. The assessment will provide managers with information regarding the sustainability of current catches being taken by domestic fisheries. The report also reviewed all data pertaining to recreational and commercial fisheries catching or tagging striped marlin off the east coast, providing a comprehensive information base which decision makers have used to inform their considerations of resource allocation issues for this species.

17. BRS – Estimation of the Volume and Value of Exported Product for Australian Seafood Species

Total Funding – \$38,374

Objectives – Determine the full range of seafood species exported from Australia within the past three years. Determine the feasibility of estimating total annual volume and value of exports for fish and invertebrate species. Produce reliable estimates of annual volume and value of exports for species that form a predetermined major proportion of exports.

Outcome – The report '*Estimation of the volume and value of exported product for Australian seafood species*' was received February 2004. A number of concerns were raised over the timeliness of this report, as it was delivered three years after its original project deadline. Given the delay, there were difficulties in applying the information contained in the report.

18. BRS - The Use of Potential Biological Removals (PBR) in Australia

Total Funding – \$99,757

Objectives – To identify and review the information available for those fisheries where the incidental catch of marine animals is perceived as a problem and where the PBR approach may provide a management strategy for reducing or minimising that problem. This project included an analysis of the PBR approach for two selected marine species.

Outcome – A final report '*A Review of the Conservation and Utilisation of Australian Marine Wildlife*' received by FRRF. Project extended to produce the report '*Bycatch management strategies in Australia*' which was received by FRRF in June 2004. Both of these reports were kept as internal reference documents by DAFF.

19. BRS – Review of Straddling Fish Stocks between Australia and East Timor

Total Funding – \$58,003

Objectives – Identify commercially fished species whose distributions straddle the Australian exclusive economic zone (EEZ) and the probable East Timor EEZ. Review both domestic and relevant international fisheries for these species. Provide advice to FAB on the fisheries relevant to discussions on the interaction between the two EEZs.

Outcome – Final report '*Review of straddling fish stocks between Australia and East Timor*' received. Project finalised April 2004. This report provided information on the living resources and fisheries of the area between Australia and East Timor to support discussions on the management of shared fisheries resources of the region.

20. BRS – Status of Australian Fisheries 2002-03

Total Funding – \$333,918

Objectives – Assess and report on the status of Commonwealth-managed fish stocks.

Outcome – The report on the Status of Australian Fisheries 2002-03 was released in May 2004. A website was established presenting rolling updates of the status of fisheries as they occur. Although Australia's fisheries management is generally considered sound by international standards, the reports have highlighted that a number of stocks are over-fished and have provided an impetus to improve management arrangements for these stocks.

21. BRS – Summary of Data Provision Requirements for Regional Fisheries Management Organisations (RFMOs) and UN Fish Stocks Agreement³

Total Funding – \$86,259

Objectives – Identify policy directions and future long-term needs for handling of data. Assemble a database of catch, fishing effort, port and onboard biological sampling for species subject to data requests from RFMOs. Document the process of obtaining the raw data, data management considerations, and filtering or processing methods applied. Identify relevant data holdings of State/Northern Territory fisheries management agencies and promote their cooperation in contributing data to RFMO data reports.

Outcome – The final report '*Summary of data provision requirements for RFMOs and UNFSA*' was received in February 2004. This project provides ongoing benefit in terms of agreed data processing procedures that are efficient, re-producible and clearly described in supporting documents. The project clarified roles and responsibilities of BRS, CSIRO Marine and AFMA in the annual schedule of data submissions for Regional Fisheries Management Organisations and provided the necessary framework for ongoing development of information systems.

³ Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995

22. BRS – Towards Ecosystem-based Fisheries Management – The Nature and Extent of Land-based Marine Pollution and its Impacts on Fisheries Ecosystems

Total Funding – \$32,555

Objectives – Conduct a pilot project to assess the potential impacts of land-based pollution on important wild fisheries and aquaculture resources.

Outcome – Due to a number of difficulties encountered with the data needed for this project, it was decided to cut this project short. A project report detailing the progress made and detailing the reasons for the project's demise were provided to FRRF in March 2004.

23. BRS – Refinements of the Ballast Water Decision Support System (DSS), and Scientific Support for Introduced Marine Pests Policy

Total Funding – \$100,000

Objectives – Provide science/policy advice to support the Invasive Marine Species Program policy development. Oversight and liaise with the CSIRO Centre for Research on Introduced Marine Pests on marine pest projects to develop, and refine the ballast water DSS.

Outcome – This project was completed in June 2004. A full report detailing the level of advice provided under this project was provided to FRRF at the end of the project. This project has underpinned the development of a table-based risk assessment methodology for managing marine pest translocation risks and will underpin management arrangements for the movement of ballast water between Australian ports as part of the National System for the Prevention and Management of Marine Pest Incursions.

24. BRS – 16th Meeting of the Standing Committee on Tuna and Billfish

Total Funding – \$10,000

Objectives – To facilitate the successful organisation and running of the 16th Meeting of the Standing Committee on Tuna and Billfish in Mooloolaba, to be held in July 2003.

Outcome – The meeting was held successfully. A full meeting report was received by FRRF in August 2003.

25. BRS – A Strategic Approach to Ornamental Fish

Total Funding – \$9,600

Objectives – To develop a strategic plan to progress the issues raised in the report of the Ornamental Fish Workshop, held at Coffs Harbour in September 2002, and the draft Action Plan.

Outcome – Final report 'A strategic approach to ornamental fish' was received in July

2003. The report was considered by the Australian Fisheries Managers Forum (AFMF) and the Marine and Coastal Committee of the NRM Standing Committee (MACC) at their July 2003 meetings. Both agreed to the formation of a national policy working group (including funding) to progress the issues raised in the strategic approach document. This group has recently tabled their draft final Strategic Plan for the management of Ornamental fish addressing issues of national noxious species and regulatory frameworks. AFMF and MACC have agreed to retain the group to progress issues related to the implementation of the strategy.

26. BRS - Contribution to the OECD Ministerial Task Force on IUU fishing

Total Funding – \$160,402

Objectives – The Australian Government has indicated that IUU fishing is a key priority as it threatens Australia's sovereign interests and the sustainability of valuable stocks. To support this view the Government contributed a full time fisheries specialist to the Secretariat for the OECD Ministerial Task Force on IUU fishing. This contract was managed through BRS, but paid through FRRF.

Outcome – The 2003/04 part of the contract represented the initial start up process and was structured in 5 separate instalments. The major outputs during this period of the project were 12 monthly reports detailing the progress of the taskforce. These reports were received by the IUU Fishing Section of DAFF and BRS.

27. CSIRO - Monitoring the Longline Catch of SBT landed in Indonesia 2002-03

Total Funding – \$95,573

Objectives – Monitor the Indonesian longline fishery operating out of Benoa – Bali, Muara Baru – West Java, and Cilacap – Central Java, including species composition of landings, and the measurement of length and weight of a representative sub-sample of the key species caught. Monitor changes in the spawning population of SBT including size and age distribution, and temporal patterns of abundance on the spawning ground. Evaluate the accuracy of the Provincial Fisheries Service, Bali data on export tuna to address discrepancy between CSIRO estimates of Indonesian SBT exports and Japanese export statistics. Provide the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) with an estimate of the Indonesian SBT catch.

Outcome – Final report '*Monitoring the longline catch of SBT landed in Indonesia 2002-2003*' received in August 2003. The data used to create this report was used to make critical decisions (such as the setting of annual national allocations and TAC of SBT for CCSBT members at annual commission meetings - the next of which is 11-14 October 2005) relating to protection of the SBT spawning ground, which is the only one known to exist in the World and located within Indonesian waters.

28. CSIRO – Understanding the Nature of SBT Bycatch in the Eastern Tuna and Billfish Fishery (ETBF)

Total Funding – \$141,392

Objectives – Determine the level of SBT by-catch taken by a range of vessels within the ETBF over the June – September period. Describe the extent to which by-catch varies with geographical location, time and targeting practices. Determine the life status of the SBT caught by the ETBF longliners and, in particular, the proportion of the catch that is dead when brought to the vessel. Determine the extent of post-release mortality in SBT after capture by longline and examine whether this varies with life status and set time.

Outcome – The final report ‘*Southern Bluefin Tuna Bycatch in the Eastern Tuna and Billfish Fishery*’ was received by FRRF in February 2004.

29. CSIRO – Evaluation of Complex Population Models used for the Assessment and Management of Migratory Fish Stocks

Total Funding – \$130,104

Objectives – Evaluate the performance of Statistical Catch-at-Age/Length Integrated Assessment (SCALIA) models in relation to the advice and stock status parameters needed for the formulation of management policies. Provide advice on the appropriateness and implications of these models for application in the provision of stock status advice in an RFMO context on SBT specifically, and tuna in general. Provide a non-technical description of the key scientific issues and critical assumptions in SCALIA assessments that fisheries managers will have to deal with in negotiations, and formulation of policy in the CCSBT and other tuna RFMOs.

Outcome – The final report ‘*Stimulation-Estimation Stock Assessment Model Evaluation*’ was received in May 2004.

30. CSIRO - A Scoping Study of the Development of a New Catch Sharing Model for the Torres Strait Rock Lobster Fishery

Total Funding - \$28,180

Objectives – To set a sustainable TAC for the shared PNG/Australia Torres Strait Rock Lobster Fishery through a thorough assessment of the current stock status.

Outcome – A final report “*A scoping study of the Development of a New Catch Sharing Model for the Torres Strait Rock Lobster Fishery*” was delivered to FRRF in June 2004. This report provided the conceptual model which will be used to details how the rock lobster stocks will be assessed and then shared according to the Treaty formula. This will help ensure the sustainable exploitation of rock lobster stocks in the Torres Strait region, when it will be fed into bilateral talks between Australia and PNG in the middle of 2005.

31. FAB – Development of a National Plan of Action for the Conservation and

Management of Sharks (Sharkplan)

Total Funding – \$50,490

Objectives – Develop Sharkplan by addressing the issues raised in the Shark Assessment Report, and taking account of a range of initiatives including the development of fisheries management plans, implementation of bycatch action plans, the Standing Committee on Fisheries and Aquaculture ESD process, meeting the requirements of the *Environment Protection and Biodiversity Conservation Act 1999*, and State and Northern Territory legislative and regulatory requirements.

Research conducted for FAB by Shellack Pty Ltd.

Outcome – The Sharkplan was produced and considered by the Natural Resource Management Ministerial Council (NRMMC). After some amendments, the NPOA was formally approved in May 2004.

The implemented shark plan is expected to lead to improvements in domestic fishery management practices, data collection measures, the development of a comprehensive community education strategy and provide input into negotiations undertaken with neighbouring countries to manage shark species sustainably and responsibly.

32. FAB – Regional Marine Plans: Fisheries Management Challenges under Australia’s Ocean Policy

Total Funding – \$23,100

Objectives – Identify critical issues in implementation of fisheries management within regional marine plans under Australia’s Oceans Policy.

Research conducted for FAB by Liz Foster, University of Tasmania (under the Strategic Partnerships with Industry – Research and Training Scheme).

Outcome – Reports 1-4 “*Regional Marine Plans: Fisheries Management Challenges Under the Australian Oceans Policy*” were accepted and delivered as due, with the final report being received in May 2004. These papers have formed the basis of further discussions between DAFF and other agencies over the adoption of a number of new initiatives eg the development of regional fisheries advisory councils, integration of fisheries assessments, full ESD reporting for fisheries and so on.

33. FAB – 1st International Ballast Water Risk Assessment Workshop, Melbourne, September 2003 - Sponsorship

Total Funding – \$21,000

Objectives – To provide funding, allowing three scientists from each of the six Pilot Countries to attend the workshop. To facilitate greater global coordination regarding the concept of practicable and sound ballast water risk assessment.

Outcome – The Workshop was held successfully. The Workshop assisted in directly improving the capacity of developing nations to consider the implications of marine pest incursions and develop local arrangements to manage ballast water. It also assisted

these countries to implement the international Convention for the Control and Management of Ships' Ballast Water and Sediments and improve the effectiveness of the Globallast Program run by the International Maritime Organisation.

34. FAB - Inaugural Australian Fisheries and Seafood Forum

Total Funding - \$20,376

Objectives – To establish the Australian Fisheries and Seafood Forum. This project looked at what was necessary to make the Forum a viable forum of discussion and to decide what issues should be addressed at the meetings. The inaugural meeting also considered what policy and management issues should form the focus for the next 1–2 years of discussion and whether there are common issues for industry & government to advance over the next 1 – 2 years.

Outcome – The forum was held successfully in June 2004 and a summary report provided to FRRF later in that month. Forum participants identified a number of challenges and opportunities currently facing the fishing and seafood industry. Outcomes of the forum included the identification of common issues for industry and the Government to advance in partnership.

35. FAB – Implementation of the Strategy for Maintaining and Increasing Market Access for Australia's Fishing Industry

Total Funding – \$244,249

Objectives – Development of a targeted market access agenda, including participation in the current World Trade Organization (WTO) round of negotiations and in impending bilateral agreements. Publish industry-identified export market guides. Development of a strategy to promote greater coordination and cooperation between the Australian seafood industry and Commonwealth, State and Territory governments in dealing with market access issues. Development of a program to alleviate current inadequacies in the collation and dissemination of market information.

Outcome – The project produced the working paper “*How does Government Address Market Access Issues?*”. Market assessment and trade analysis was provided for Australian seafood positions for Australia's Free Trade Negotiations, and World Trade Organisation Negotiations. Work was undertaken on the reopening of the United States prawn market to Australian prawn fisheries. Reports produced included:

- “*A\$34 Billion reasons to access the US seafood market – A guide to Exporting Australia's fisheries products to the United States*”
- “*A\$40 Billion reasons to access the EU seafood market – A guide to exporting Australia's fisheries products to the European Union*”
- “*The FishBook – A Guide to Australian Government Programs, Grants and Services for the Australian Seafood Industry*”

36. FAB - Working Group on Marine Affairs and Fisheries Meeting

Total Funding - \$15,299

Objectives – The establishment of the Indonesia-Australia Shared Fish Stocks Management Committee and agreement to a Terms of Reference for the Committee. The meeting is also a forum for discussion of cooperative measures between Indonesia and Australia.

Outcome – The meeting was successfully held in March 2004

37. FAB – World Fisheries Congress - Attendance

Total Funding - \$25,414

Objectives – The focus of the congress is to examine fresh, interdisciplinary ways to evaluate and maintain the economic and social benefits of healthy fisheries, in the face of global climate change, competing habitat demands, and the expressed desire for a future world of aquatic ecosystems endowed with natural diversity and resilience.

Outcome – Two departmental officers attended the conference in May 2004. A summary report was received from both officers.

38. FAB - Australian National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (AUS-NPOA-IUU)

Total Funding - \$57,328

Objectives - To complete a National Plan of Action to Prevent, Deter and Eliminate IUU Fishing (AUS-NPOA-IUU) by mid 2004, as called for in the IPOA-IUU. The AUS-NPOA-IUU will address the requirements of Australia under the IPOA-IUU.

Outcome – The AUS-NPOA-IUU was completed in May 2004. It was subsequently provided to the FAO. The NPOA documents the measures that Australia has in place to combat IUU fishing as well as additional measures that, once implemented, will further strengthen our campaign against illegal fishers.

39. FAB – Future of Mariculture in Australia’s Marine Environment Conference – Sponsorship

Total Funding - \$4,000

Objectives – To discuss the development of a sustainable mariculture plan for Queensland, highlighting innovative advancements in mariculture and provide an interactive forum to discuss the environmental, social and economic benefits and issues for all coastal communities. To sponsor the attendance of Dr Muki Shpigel at the conference.

Outcome – The workshop was held successfully.

40. FAB – OECD Workshop on Illegal, Unreported and Unregulated (IUU) and Flag of Convenience (FOC) Fishing – Sponsorship

Total Funding – \$8,396.31 (EU 5,000)

Objectives – The workshop will support the current OECD study into IUU fishing practices and will look at the economic and social aspects of IUU/FOC fishing. The workshop will be an opportunity to tap into knowledge of RFMO's and NGO's that are active in the field.

Outcome – The workshop was held successfully on 19-20 April 2004. A number of observations and findings were made across the four workshop themes of: the state of play of IUU fishing; data and information needs; economic and social drivers; and possible future actions.

41. FAB – Fisheries Management Options Paper for the Western and Central Pacific Ocean Fisheries Commission

Total Funding – \$15,290

Objectives – To produce a paper that will canvas the broad range of options available for the effective management of the highly migratory fisheries resource of the Pacific and will facilitate the understanding of and application of management arrangements by the members of the Commission.

Outcome – Report produced in February 2004 and provided to PrepCon V. The Management Options paper has been used by members of the Western and Central Pacific Fisheries Commission as the basis for commencing the process of addressing some of the sustainability concerns in respect of bigeye and yellowfin tuna raised by the Scientific Co-ordination Group. In particular, the paper has been useful in highlighting deficiencies in data on the fishery that will now be resolved.

42. FAB – Work Value Assessment for Executive Staff within the Secretariat of the Western and Central Pacific Fisheries Commission

Total Funding - \$38,430

Objectives – To provide the Commission with an informed comparative assessment on the remuneration package for the Commission's four management positions including pay component structure and a Performance Management Framework.

Outcome - The Work Value Assessment report was completed in June 2004. A copy of the final report was provided to the Chair of the Preparation Conference to the Western and Central Pacific Fisheries Convention in August 2004. By expediting this process, Australia has helped to ensure the timely establishment of the Commission and its Secretariat. Australia was concerned that any delay in the appointment process would result in the important fisheries management work of the new Commission being delayed.

43. FRDC – Identification of the Role of a Peak Industry Body for the Australian Aquaculture Industry, and its Role in the Implementation of an industry-driven National Aquaculture Action Agenda

Total Funding – \$30,000 (FRRF share is 38% of total project funds, in partnership with the National Aquaculture Council –38%, and FRDC - 24%)

Objectives – To provide an options paper that identifies how the recommendations of the Action Agenda and the Prime Minister’s Science, Engineering and Innovation Council will be implemented. Provide a draft constitution of the new peak industry body.

Research conducted by the National Aquaculture Council and ACIL Economics.

Outcome – Final report “*The Establishment of a Peak Aquaculture Body: Issues Paper*” was received by the FRDC. A copy of this report was subsequently provided to FRRF.

44. FRDC – Preparation of a Field Guide to Sharks and Rays Caught by Australian Fisheries

Total Funding – \$30,000

Objectives – Produce a cost-effective, user-friendly field guide for the sharks and rays caught by Australian fisheries.

Research conducted for FRDC by CSIRO, Division of Marine Research.

Outcome – The Field Guide to Australian Sharks and Rays was printed and distributed. The Field Guide was officially launched in Hobart by Wendy Craik in August 2003.

45. FRDC – Southern Bluefin Tuna Research Review

Total Funding – \$28,623 (FRRF share is 33% of total project funds, in partnership with FRDC – 67%)

Objectives – Analyse outcomes/expected outcomes of past, ongoing and current SBT research projects. Identify gaps in current research. Ensure the processes for developing, prioritizing, selecting and funding SBT research projects are effective and appropriate.

Research conducted by Shellack Pty Ltd.

Outcome – The review was successfully completed, with a final report delivered to FRDC and FRRF in December 2003.

46. MES – APEC Marine Resource Conservation Working Group Workshop on Introduced Marine Pests – Attendance

Total Funding - \$9090

Objectives – Attendance at a workshop to develop options for regional action to address the growing threat of Introduced Marine Pests. To garner support for raising biofouling as an issue.

Outcomes – The meeting was successfully held in May 2004 and was attended by a

range of professionals working on marine pests. The workshop came up with a number of recommendations about how to take forward management of the Introduced Marine Pest issue in the APEC region.

47. NNTT – Indigenous Fishing Rights Conference 2003 – Sponsorship

Total Funding - \$5,000

Objectives – To examine domestic and international experiences in Indigenous rights as they relate to fisheries, and to explore opportunities for equitable, rights based outcomes within a broader framework.

Outcome – The Indigenous Fishing Rights Conference 2003 was held successfully in October 2003.

48. NZMoF – Deep Sea 2003 Conference, Queenstown New Zealand, December 2003 – Sponsorship

Total Funding – Approximately \$61,947 (\$NZ70,000)

Objectives – To provide sponsorship and underwriting assistance to the Deep Sea 2003 conference, to be held in Queenstown, New Zealand in December 2003.

Outcomes – The Deep Sea 2003 Conference was held successfully in December 2003. \$37,819 in underwriting funds was returned to FRRF in June 2004.

49. University of Wollongong – Approaches for Mitigating Bycatch in Commonwealth Fisheries

Total Funding – \$65,230

Objectives – Review and analyse policy and operational approaches for mitigating bycatch overseas, especially in the United States. Identify schemes that have successfully mitigated bycatch. Recommend approaches that may be adopted by DAFF, AFMA and EA to meet the requirements of the *Environment Protection and Biodiversity Conservation Act 1999*.

Outcome – The report “*Policy Approaches to the Mitigation of Marine Wildlife Bycatch*” was produced, and a summary document of findings and recommendations submitted in December 2003.

50. University of Wollongong – Observer Programs in Commercial Fisheries: A Global Review and Lessons for Australia

Total Funding – \$41,600

Objectives – Identify and describe domestic observer programs in use in commercial fisheries in Australia, around the world, and under the auspices of regional fisheries management agreements. Evaluate the efficacy of these programs with respect to their operational characteristics including the level of fleet coverage; cost attribution and recovery; evidentiary burdens and legal admissibility; sampling units and the

extrapolation of data; and worker safety and welfare. Document and report on the overseas experience with at-sea observation and distil advice for the Australian situation.

Outcome – The final report “*Fisheries Observer Programs – Lessons and Policy Options for Australia*” was received in July 2003. This document was widely distributed at the 4th International Fisheries Observer Conference in November 2004.

PART D: CURRENT PROJECTS AS AT 30 JUNE 2004

At 30 June 2004, a total of 19 FRRF projects, worth \$2,033,010 in funding, were being undertaken. A brief summary of each of these projects is set out below, in order of research provider.

1. ABARE – Sustainable Ecosystems 2002-03

Total Funding – \$320,091

Due Completion Date – December 2004.

Objectives – Provide economic information that will assist in improving the management of environmental issues that affect commercial fisheries. Specific outputs for this project include:

Cost effective solutions to discarding in fisheries: This project will examine the incentives faced by fishers to discard and the likely costs and benefits of alternative policies to minimise discarding. Experiences in other countries (particularly New Zealand) will also be examined. Recommendations regarding discarding policies will be provided.

Charter and recreational fishing values in the eastern tuna and billfish fishery: This project will examine the economic values associated with recreational and charter fishing in the Eastern Tuna and Billfish Fishery.

2. ABARE – Assessing Alternative Management Instruments 2003-04

Total Funding – \$95 522

Due Completion Date – May 2004 (overdue)

Objectives – To provide AFMA fishery managers and policy makers with the economic information necessary to make informed decisions when choosing management instruments. Specific outputs for this project include:

The costs of structural adjustment and excess capital: This research proposes to provide a general survey of research on structural adjustment and how this research can be applied to specific Commonwealth fisheries. Secondly, this research hopes to construct measures of productivity losses and increases in costs as the result of excess capacity and structural change using a new index number measure of productivity changes being developed at ABARE.

3. ABARE - Cost and Benefit Analysis of Foreign Catch Landing Arrangements in Australia

Total Funding – \$39,838

Due Completion Date – 30 April 2004 (overdue)

Objectives – To undertake a detailed analysis of the costs and benefits of Australia's current approach to catch landings from foreign fishing vessels, providing information to support Australian Government consideration of the foreign catch landing policy.

3. AFMA - A Review of Interactions Between Commonwealth-Managed Fisheries.

Total Funding - \$47,030

Due Completion Date – 24 September 2004

Objectives – To develop a detailed matrix of Commonwealth fisheries, species, fishing methods and jurisdictions; to identify key interactions; and to discuss findings in light of current and developing management plans, EPBC Act requirements and bycatch action plans, and OCS agreements and future negotiations regarding these.

4. AFMA – Ecological Indicators for Fishery Management: Non-target Species, Habitats and Food Chains

Total Funding – \$171,382 (representing FRRF 33.3% share, jointly funded by AFMA and EA)

Due Completion Date – 31 July 2004

Objectives – To review the current use of ecological indicators in fisheries management. To identify robust ecological indicators and reference points for fisheries management.

Research conducted for AFMA by the CSIRO, Division of Marine Research.

5. AFMA - International Marine Protected Areas Conference (IMPAC1)

Total Funding - \$20,000

Due Completion Date – October 2005

Objectives – To progress discussion on the adoption and effective implementation of Marine Protected Areas. In contributing to this discussion, AFMA will attempt to ensure that any debate over the future use and development of MPA's is well balanced and considers the needs of all users of Australia's marine environment, including the commercial fishing industry and the communities that rely upon it.

6. AFMA – Torres Strait Prawn Data Project

Total Funding – \$37,849

Due Completion Date – 30 July 2004

Objectives – To reinforce the scientific advice provided to the Torres Strait Protected Zone Joint Authority (PZJA) in an independent review, before it makes its decision on a strategy for reducing effort in the Torres Strait Prawn Fishery down to sustainable levels at its next meeting.

7. BRS - Development and Implementation of National Strategies to Address Marine Wildlife Conservation and Management Issues

Total Funding - \$120,518

Due Completion Date – 31 August 2004

Objectives – The project focuses on sharks and seals, and particularly interactions with the fishing industry. The overall objective of the project is to develop a national, coordinated strategy to manage seal-human interactions at the national level, involving all relevant sectors.

8. BRS – Community Perceptions of Aquaculture

Total Funding – \$130,000

Due Completion Date – December 2004

Objectives – To build a critically important knowledge base about the community, specialist and cultural values of marine and coastal aquaculture to underpin the long term sustainability of aquaculture and improved aquaculture management.

9. BRS – Analysis of AFMA seabird mitigation trials - past and present

Total Funding – \$103,856

Due Completion Date – June 2005

Objectives – To gain an understanding of the characteristics of seabird bycatch in the trials carried out in the ETBF and the possible measures that can be adopted to reduce this bycatch. This will be achieved through analysis of existing factors that contributed to previous trials failing to meet the TAP target and to determine key factors that could contribute to mitigation. The project will also provide information on potential mitigation measures that should be explored and use this to develop and revise new and ongoing trials.

10. CSIRO – Monitoring the Longline Catch of SBT Landed in Indonesia 2003-04

Total Funding – \$115,004

Due Completion Date – August 2004

Objectives – Monitor the Indonesian longline fishery operating out of Benoa – Bali, Muara Baru – West Java, and Cilacap – Central Java, including species composition of landings, and the measurement of length and weight of a representative sub-sample of the key species caught. Monitor changes in the spawning population of SBT including size and age distribution, and temporal patterns of abundance on the spawning ground. Evaluate the accuracy of the Provincial Fisheries Service, Bali data on export tuna to address discrepancy between CSIRO estimates of Indonesian SBT exports and Japanese export statistics. Provide the Commission for the Conservation of Southern Bluefin

Tuna (CCSBT) with an estimate of the Indonesian SBT catch.

11. FAB – Aquaculture Industry Development for Indigenous Australians

Total Funding – \$250,000

Due Completion Date – 31 December 2004.

Objectives – Establish an aquaculture unit to implement the National Indigenous Aquaculture Development Strategy and enhance the quality of the Australian Government's program and service delivery to current and prospective Indigenous clients. Generate employment, training and education opportunities and to achieve long-term commercial outcomes and sustainable development for Indigenous communities.

12. FAB – Pectinid Workshop

Total Funding - \$10,000

Due Completion Date - April 2005

Objectives – The Workshop is designed to support the dissemination of knowledge on scallop biology, fisheries, aquaculture, economics and related topics to industry, research institutes and government on a global basis. The Workshop will include keynote speakers addressing broad topics at a high level, delivered papers and posters on specific topics and focus-area workshops.

13. FAB – Assessment of the Legal and International Implications of Australia's Foreign Catch Landing Arrangements

Total Funding – \$15,000

Due Completion Date – 22 March 2004 (overdue)

Objectives – The aim of this project is to produce an assessment of the legal and international policy implications of Australia's approach to catch landings from foreign fishing vessels. The consultancy will consider whether Australia should change its current policy, and if so, examine the justification for these changes and consider any broader legal impacts of such a change.

14. FAB - International Conference on Resource Allocation

Total Funding - \$125,000

Due Completion Date - 30 September 2005

Objectives – To provide fora to review the issues of resource allocation and sustainability, bringing together scientists, managers and specialists working on resource allocation to explore avenues of common interest relating to resource allocation issues.

15. FAB – Study into Crime in Australian Fisheries

Total Funding – \$170,000

Due Completion Date – December 2005

Objectives – To produce reports that provide a thorough analysis of the extent of the crime in the fishing industry and also report on the current legislative and management measures designed to deter such crime. These will include: recommendations on effective policing models; effective collaboration between fisheries and police agencies; legislative reform; and ongoing monitoring of organized criminal involvement in the fishing industry.

16. FERM – SETF Restructure

Total Funding – \$86,920

Due Completion Date – 30 April 2004

Objectives – To review the current status of the South East Trawl Fishery and recommend on issues such as future management arrangements, harvesting regimes and industry funded approaches to structural adjustment in the trawl sector.

17. FRDC – Development of a Disease Zoning Policy for Marteilliosis to Support Sustainable Production, Health Certification and Trade in the Sydney Rock Oyster

Total Funding – \$120,000

Due Completion Date – 31 December 2004.

Objectives – Implement and field test the zoning policy framework developed under *Australia's National Strategic Plan for Aquatic Animal Health 1998-2003* (Aquaplan) in a practical context. Facilitate further zoning policy development for other significant diseases of aquatic animals.

Research conducted by Queensland Museum.

18. FRDC – Proposal to Develop a National System of Secure Funding for Recfish Australia

Total Funding - \$30,000 (jointly funded with the FRDC, who provided an additional \$20,000 to the project)

Due Completion Date – 11 November 2004

Outcome – To develop a system of secure funding for the national recreational fishing peak body, Recfish Australia. This will include examining: the need for a national peak body for recreational fishers; the roles and responsibilities of this peak body; and the potential sources of funding for the peak body, and their relative merits.

19. NSW Fisheries – 4th International Fisheries Observer Conference – Sponsorship

Total Funding - \$25,000

Due Completion Date – 12 November 2004

Objectives – To bring together a broad representation from the international fisheries and observer communities to address some of the key fisheries observer issues. Includes sessions on program design, observer training and obstacles to establishing observer programs.

PART E: FRRF - HISTORICAL EXPENDITURE

The following table shows a summary of FRRF expenditure, by service provider, for the period 1991-92 to 2003-04. Note that from 1995-96, \$1 million was allocated annually to AFMA for the management-related component of research. This allocation (not shown below) recognises AFMA's obligation to arrange appropriate research in economically non-viable fisheries.

Table 2: FRRF disbursements for 1991-92 to 2003-04

Provider	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
AFMA	\$2,270,212	\$1,942,778	\$1,467,243	\$724,006	\$38,702	nil
ABARE	\$232,000	\$362,522	\$359,257	\$300,317	\$775,555	\$564,462
BRS	\$230,000	\$641,700	\$408,500	\$1,002,283	\$816,880	\$843,936
OTHER	nil	nil	nil	nil	\$182,580	\$413,800
TOTAL	\$2,732,212	\$2,947,000	\$2,235,000	\$2,026,606	\$1,813,717	\$1,822,198

Provider	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
AFMA	nil	nil	\$318,218	\$111,535	\$98,151	\$60,759	\$70,009
ABARE	\$511,273	\$784,270	\$420,214	\$459,412	\$542,903	\$875,339	\$856,910
BRS	\$1,062,213	\$901,751	\$1,381,058	\$940,143	\$762,706	\$980,725	\$1,206,802
OTHER	\$305,236	\$884,077	\$874,332	\$857,309	\$635,219	\$836,177	\$1,271,890
TOTAL	\$1,878,722	\$2,570,098	\$2,993,822	\$2,368,399	\$2,038,979	\$2,753,000	\$3,405,611

PART F: FRRF - ABBREVIATIONS

ABARE	Australian Bureau of Agricultural and Resource Economics
AFFA	Department of Agriculture, Fisheries and Forestry – Australia (formerly DPIE, now DAFF)
AFMA	Australian Fisheries Management Authority
AIC	Australian Institute of Criminology
AIMS	Australian Institute of Marine Science
APEC	Asia Pacific Economic Cooperation
APFA	Australian Prawn Farmers Association
BRS	Bureau of Rural Sciences
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
DPIE	Department of Primary Industries and Energy (now DAFF)
DEH	Australian Government Department of the Environment and Heritage
EEZ	Exclusive economic zone
ESD	Ecologically sustainable development
ETBF	Eastern Tuna and Billfish Fishery
FAD	Fish aggregating device
FAB	Fisheries and Aquaculture Branch, DAFF
FAO	Food and Agriculture Organization of the United Nations
FRDC	Fisheries Research and Development Corporation
FRRF	Fisheries Resources Research Fund
ITQ	Individual Transferable Quota
IUU fishing	Illegal, Unreported and Unregulated fishing
MIEB	Marine Industries Environment Branch, DAFF
NNTT	National Native Title Tribunal
NPOA	National Plan of Action
OCS	Offshore Constitutional Settlement
PBR	Potential biological removals
QX	<i>Marteilia sydneyi</i>
R&D	Research and development
RFMO	Regional Fisheries Management Organisation
SBT	Southern Bluefin Tuna
SCALIA	Statistical Catch-at-Age/Length Integrated Assessment
SCTB	Standing Committee on Tuna and Billfish
TAP	Threat Abatement Plan
UN Fish Stocks Agreement	Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995
UoW	University of Wollongong
WTO	World Trade Organization