Australian Government

Fisheries Research and Development Corporation

ANNUAL REPORT 2010–11

CELEBRATING 20 YEARS OF FISHERIES RESEARCH AND DEVELOPMENT *and extension*

XX

HIGHLIGHTS IN 2010–11

» The Corporation received a gold award at the Australasian Reporting Awards for its 2009–10 annual report: its first at this level, following several awards both in this national scheme and that of the Institute of Public Administration Australia (ACT Division).

» The FRDC established an Indigenous Reference Group to develop a better way of addressing indigenous research, development and extension (RD&E) needs.

» An economic evaluation of 18 randomly selected clusters of FRDC's R&D investment across three programs during the previous five years found the average return on FRDC investment was 5.6 to 1.

» A streamlined project application process shortened the time needed for developing RD&E applications. The amount of information required was reduced to a two-page expression of interest, and FRAB endorsement was changed from ranking long lists to supporting only projects within an allocated budget for the jurisdiction.

» With FRDC assistance, the Australian Mussel Industry Association was formed to unify the industry under a national peak body covering production in five states. The association has committed to implementing both an R&D levy and a marketing and promotion levy.

» The Australian Seafood Cooperative Research Centre set up a research platform in China to improve market development of wild-caught abalone.

» A $1.9 million investment in targeted recreational fishing research resulted from the Department of Agriculture, Fisheries and Forestry engaging the FRDC to manage the Recreational Fishing Industry Development Strategy. Building capacity in the recreational sector and acquiring data to support decision making in recreational fisheries management are the strategy's two main priorities.

» Research into the New South Wales commercial beach-haul mullet fishery produced a significant drop in the catch of non-target species.

» Following adoption of FRDC research by the Commission for the Conservation of Antarctic Marine Living Resources, the Patagonian Toothfish fishery was acknowledged as one of the world's leading sustainable fisheries.

Quick guide to the Annual Report

If you do not have time to read this report in detail, look first in the following sections:

1. For an outline of the FRDC's investments and income, read pages iv to vii and the financial statements starting on page 103.
2. For an overview of operations during the past year, read 'The Directors' review of operations and future prospects' starting on page 7.

More detailed coverage is in these sections:

» The key strategic imperatives that drive the FRDC's activities are shown on pages 2–3 and 7–14.

» Outcomes by recent and current projects are in the RD&E programs reporting starting on page 26 (Environment), page 38 (Industry), page 48 (Communities), page 52 (People development) and page 59 (Extension and adoption).

» Performance reporting for the Management and accountability program is described on pages 77–95.

» Financial contributions by industry and governments are listed on pages v and 126.

» Coverage of corporate governance information is in the section starting on page 88.

» The financial statements start on page 103.

The graphical theme of this annual report is taken from XX (the roman numeral for 20), which is a shape found in nets used by the fishing community — both commercial and recreational.

Australian Government
Fisheries Research and Development Corporation

25 August 2011

Senator the Hon. Joe Ludwig
Minister for Agriculture, Fisheries and Forestry
Parliament House
CANBERRA ACT 2600

Dear Minister,

On behalf of the directors of the Fisheries Research and Development Corporation, I have pleasure in presenting the Corporation's annual report for the year ended 30 June 2011.

It has been prepared in accordance with section 28 of the *Primary Industries and Energy Research and Development Act 1989*; and approved by the Board in accordance with section 9 of the *Commonwealth Authorities and Companies Act 1997*.

The contents of the report highlight achievements and activities against the first year of the FRDC's Research, Development and Extension Plan 2010–2015. It is intended to enable an informed judgment of the Corporation's performance during the year ended 30 June 2011 by you, the Minister for Agriculture, Fisheries and Forestry and the Australian Parliament.

The report is also intended to inform the FRDC's other stakeholders — in particular the financial contributors from the fishing industry and other sectors; as well as the broader members of the commercial, recreational and indigenous sectors of the fishing industry; and members of the research and development community and general public.

I take this opportunity to acknowledge the strong support of my fellow directors in guiding the Corporation towards outcomes that will greatly benefit the fishing industry, the natural resources on which it depends, and the Australian community.

Yours faithfully,

The Hon. Harry Woods
Chairman

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Australian Business Number: 74 311 094 913

FISHERIES RESEARCH AND DEVELOPMENT CORPORATION

ANNUAL REPORT 2010–11

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2010–11 ACHIEVEMENTS THROUGH INVESTMENT

Five years at a glance

TABLE 1: FINANCIAL INDICATORS OF RD&E INVESTMENT

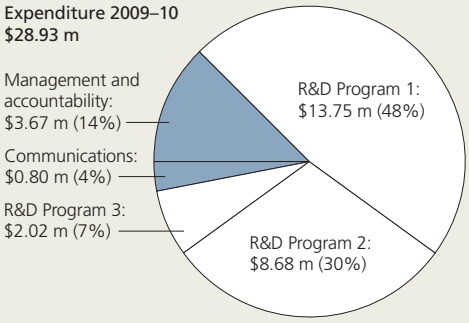
Expenditure	2006–07	2007–08	2008–09	2009–10	2010–11
	$m	$m	$m	$m	$m
Total expenditure	24.22	21.09	27.75	28.93	25.76
Total of RD&E projects §	20.67	17.35 §	23.62	24.45	21.56
RD&E Program 1 (Environment)*	11.07	8.70	11.97	13.75	10.14
RD&E Program 2 (Industry)*	8.52	7.55	9.77	8.68	8.34
RD&E Program 3 (Communities)*	This program did not exist in previous R&D Plan				0.16
RD&E Program 4 (People development)*	1.08	1.10	1.88	2.02	1.90
RD&E Program 5 (Extension and adoption)*	This program did not exist in previous R&D Plan				1.02
Communications	0.83	0.74	0.77	0.80	0.79
Management and accountability	2.72	3.00	3.36	3.67	3.40

Figures in this table have been rounded, hence totals may not agree with component figures. For exact figures see the financial statements beginning on page 103.

§ In 2007–08 the Board approved projects containing milestones valued at over $33.50 million; however project slippage was such that actual expenditure in the year only reached $17.35 million.

* In 2010–11 the research and development programs changed to be in line with the FRDC's Research, Development and Extension Plan 2010–2015, as such direct comparison with the previous year is not possible. This table provides only a historic snapshot of expenditure.

	2006–07	2007–08	2008–09	2009–10	2010–11	Direction
Number of approved new projects	53	127	135	128	120	–
Total number of active projects under management	399	430	436	384	412	+
Number of final reports completed	67	79	126	151	144	–



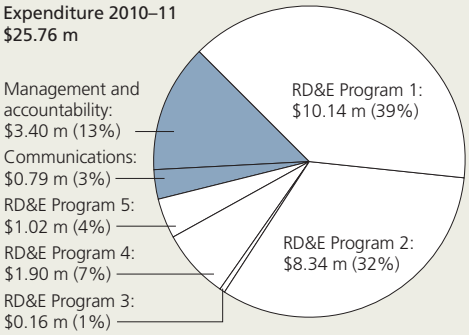


TABLE 2: INDUSTRY CONTRIBUTIONS TO FRDC AS A PERCENTAGE OF MATCHABLE GOVERNMENT CONTRIBUTIONS

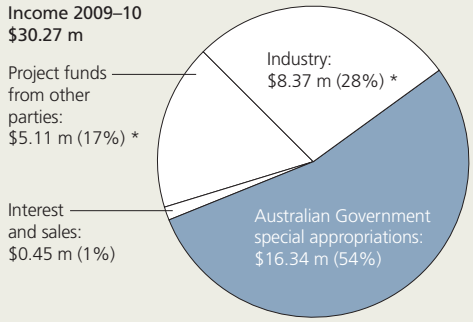
	2006–07	2007–08	2008–09	2009–10	2010–11
Commonwealth	120	195	322	195	189
Farmed prawns					106
New South Wales	122	134	74	111	105
Northern Territory	197	476	517	439	440
Queensland	100	94	90	99	121
South Australia	183	145	199	139	179
Tasmania	109	105	104	98	108
Victoria	131	108	110	205	365
Western Australia	116	89	164	110	133
Total all fisheries	129	130	169	136	153

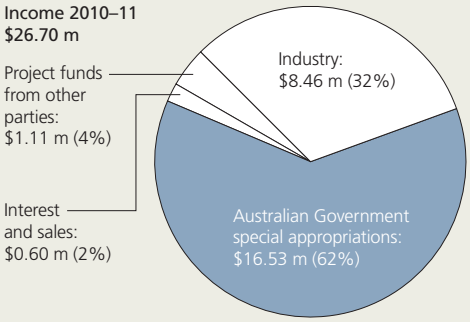
TABLE 3: INCOME TO THE FRDC

	2006–07	2007–08	2008–09	2009–10	2010–11
	$m	$m	$m	$m	$m
Industry contributions	6.90	7.47	9.52	8.37 *	8.46
Maximum matchable (government) contribution	5.35	5.45	5.50	5.50	5.51
Actual government matched (1)	5.29	5.38	5.30	5.36	5.50
Government unmatched (2)	10.69	10.90	11.00	10.97	11.03
Total government contributions	15.98	16.28	16.30	16.34	16.53
Project funds from other parties (3)	2.95	2.11	2.41	5.11 *	1.11

* See note below.

1. 'Maximum matchable contribution' is the maximum amount to which the Australian Government will match industry contributions in accordance with the criteria detailed on page 154 (including when industry contributions exceed 0.25% of average gross value of production (GVP)).
2. 'Government unmatched' is an Australian Government contribution set at 0.50% of average GVP, in accordance with the criteria detailed on page 154.
3. Included in 2010–11 project funds from other parties is $885,000 from Australian Government to fund the following:
   - » Game and shark fishing research
   - » Recreational Fishing Industry Development Strategy (RFIDS).





*. The 2009–10 industry contribution and the project funds from other parties have been updated to reflect new accounting treatments in 2010–11.

Summary of industry contributions

TABLE 4: INDUSTRY CONTRIBUTIONS, MAXIMUM MATCHABLE CONTRIBUTIONS BY THE AUSTRALIAN GOVERNMENT AND RETURN ON INVESTMENT, 2010–11

Fisheries [see note 1]	A	B	C	D	E	F
	Maximum matchable contribution (0.25% of AGVP) ($) [see note 2]	Actual industry contribution 2010–11 ($) [see note 3]	B÷A as per cent	Distribution of FRDC RD&E investments 2010–11 ($) [see note 4]	Return on contribution (D : B) [see note 5]	
					2010–11	5 years
Commonwealth total [6]	967,857	1,691,350	*175*	4,780,930	3.16	2.63
Commonwealth — prawn aquaculture [7]	166,332	176,932	*106*			
Commonwealth other	801,524	1,514,418	*189*			
New South Wales total	332,969	349,863	*105*	1,366,159	3.90	3.86
NSW oyster aquaculture	107,948	152,405	*141*			
NSW other	225,021	197,458	*87*			
Northern Territory total	140,995	620,569	*440*	954,420	1.54	1.37
NT pearls and other aquaculture	47,450	471,468	*994*			
NT other	93,545	149,101	*159*			
Queensland total	590,276	711,511	*121*	8,384,672	2.89	3.08
QLD Barramundi aquaculture	55,296	100,000	*181*			
QLD other	534,980	611,511	*114*			
South Australia total	956,422	1,711,830	*179*	3,670,873	2.14	2.55
SA Southern Bluefin Tuna	319,443	249,237	*78*			
SA Southern Rocklobster	229,247	460,726	*201*			
SA other	407,732	1,001,867	*245*			
Tasmania total	1,419,988	1,538,632	*108*	2,694,876	1.75	2.36
TAS salmon aquaculture	907,248	924,000	*289*			
TAS wild harvest abalone [6]	233,682	230,157	*98*			
TAS Pacific Oysters	53,608	84,000	*157*			
TAS Southern Rocklobster [6]	161,296	157,184	*97*			
TAS other	64,154	143,291	*223*			
Victoria total	159,522	582,792	*365*	1,017,314	1.75	3.00
VIC Southern Rocklobster	36,300	93,238	*257*			
VIC wild harvest abalone	72,048	78,932	*110*			
VIC other	51,174	410,622	*802*			
Western Australia total	947,681	1,258,430	*108*	4,427,304	3.52	3.33
WA pearls [6]	240,417	208,417	*87*			
WA other	707,264	1,050,013	*148*			

NOTES FOR TABLE 4 (INDUSTRY CONTRIBUTIONS)

[1] Individual fisheries are included just as an example for where there is an Australian Government levy or an Industry Partnership Agreement. As such not all contributions are shown and hence total may not agree with component figures.

[2] 'Maximum matchable contribution' is the maximum amount to which the Australian Government will match industry contributions in accordance with the criteria detailed on page 154.

[3] The industry contribution figures are accrual based.

[4] Distribution of FRDC RD&E investments is based on the estimated flow of RD&E benefits to the respective fisheries.

[5] Ratios in column F are derived from the distribution of FRDC investments (column D) for 2010–11 and the previous four years. The figures for these five years are relevant to the 1995 Ministerial direction, summarised on page 89, concerning spending of industry contributions.

[6] There are timing issues in some jurisdictions:

- » matching may not occur in the year in which the invoice is raised because:
  - – jurisdictions ask for invoices late in the financial year
  - – matching is triggered by cash received
  - – Department of Agriculture, Fisheries and Forestry (DAFF) closes its processing prior to financial year end.

[7] All Australian Prawn Farmers Association contributions are attributed to the Commonwealth total and are collected through the Levies Revenue Service of DAFF.

THE AUSTRALIAN FISHING INDUSTRY

The fishing and aquaculture industry is one of the most complex of Australia's primary industries in terms of both its structure and the natural resources on which it depends. Most of the industry's business environments are made more complex by their dependence on access to natural resources that are publicly managed in the interests of present and future generations. The Australian fishing industry comprises three main sectors:

» commercial sector comprising of wild catch fishing, aquaculture and through-chain activities undertaken by seafood importers, processors, manufacturers, handlers and retailers;

» recreational fishing, which includes the tackle, tour guides and charter sectors; and

» indigenous customary fishers.

The 'fishing industry' is further defined in the FRDC Regulations 1991 under the PIERD Act such that it includes any industry or activity carried on, in, or from Australia, concerned with:

» taking; or

» culturing; or

» processing; or

» preserving; or

» storing; or

» transporting; or

» marketing; or

» selling fish or fish products.

The commercial sector comprises approximately 120 wild catch fisheries and 70 aquaculture species. Commercial seafood and products (e.g. pearls) were valued at $2.2 billion in 2008–09. The recreational sector has 3.4 million participants, who were estimated in a 2001 survey to spend $1.9 billion on their fishing. Aboriginal and Torres Strait Islander people participate in commercial and recreational fishing, as well as customary fishing. The legal rights around indigenous fishing are being refined over time and some aspects are now part of existing legislation and courts decisions.

Employment statistics (Australian Bureau of Statistics) for the fishing industry indicate that commercial fishing employment in 2008–09 was 9215 persons.

Demand for seafood is rising in Australia with increasing awareness of seafood's prominent role in a healthy diet. In Asian markets consumption is also increasing with the growth of the middle class, especially in China and India. This will place demands on the supply of a limited resource.

Currently Australia's commercial seafood production provides about 35 per cent of domestic demand. Combined with the strength of the Australian dollar, the commercial sector is now looking to re-orient its market portfolio towards the Australian market. Increasingly, value chains will encompass both domestic and imported product. Other factors, such as further improvements in fisheries management and better utilisation of catch, will also be important in meeting domestic demand.

The FRDC has a significant responsibility in ensuring, on behalf of the Australian Government, that research is undertaken to assist in the management of the fisheries resource for ongoing sustainability. This means that a significant proportion of funding is directed at research that has a public good benefit.

TABLE 5: FISHING INDUSTRY RESULTS 2010–11 *

Australian Fisheries Statistics *	2006–07	2007–08	2008–09	2009–10	Change
The wild catch sector earned and caught slightly less	$1.45 b for 188,488 t	$1.38 b for 181,601 t	$1.4 b for 173,142 t	$1.3 b for 171,512 t	$: –1.0% t: –0.9%
The aquaculture sector produced and earned more	$806 m for 60,142 t	$869 m for 64,032 t	$867 m for 70,092 t	$870 m for 73,542 t	$: +0.3% t: +4.9%
Overall production was greater but the value was less	$2.21 b for 248,481 t	$2.21 b for 240,479 t	$2.21 b for 237,508 t	$2.18 b 241,123 t	$: –1.3% t: +1.5%

* The figures quoted from the *Australian Fisheries Statistics* are for 2010–11, and are from the latest edition that can be downloaded from the FRDC website — **www.frdc.com.au**

TABLE 6: FISHING INDUSTRY RESULTS 20 YEAR COMPARISON

Australian Fisheries Statistics *	1989–90	1999–2000	10 year change	2009–10	10 year change from 1999–00	20 year change from 1989–90
The wild catch sector	$908 m for 181,901 t	$1.3 b for 125,277 t	$: +30.0% t: –31.0%	$1.3 b for 171,512 t	$: 0.0% t: +27.0%	$: +30.0% t: –5.8%
The aquaculture sector	$182 m for 12,387 t	$687 m for 39,830 t	$: +73.5% t: +68.9%	$870 m for 73,542 t	$: +21.1% t: +45.8%	$: +79.1% t: +83.1%
Overall production	$1.09 b for 194,288 t	$2.38 b for 228,209 t	$: +54.2% t: +14.9%	$2.18 b 241, 123 t	$: –9.0% t: +5.4%	$: +50.0% t: +19.4%

TABLE 7: TRADE FIGURE COMPARISONS OVER 20 YEARS

1989–90		1999–2000		2009–10	
Top five species, by production (tonnes)					
Prawns	23,100 t	Prawns	26,700 t	Australian Sardines	40,700 t
Rocklobster	15,700 t	Rocklobster	20,400 t	Salmonids	31,900 t
Tuna	8,200 t	Tuna	16,200 t	Prawns	27,000 t
Scallops	6,800 t	Scallops	12,200 t	Oysters	14,800 t
Oysters	6,600 t	Oysters	12,000 t	Tuna	11,000 t
Top five species exports, by value ($ million)					
Rocklobster	$230 m	Rocklobster	$578 m	Rocklobster	$400 m
Prawns	$167 m	Prawns	$244 m	Abalone	$216 m
Abalone	$122 m	Abalone	$223 m	Tuna (whole)	$118 m
Scallops	$23 m	Tuna	$206 m	Prawns	$61 m
Tuna	$8 m	Scallops	$42 m	Scallops	$30 m
Top five imports, by value ($ million)					
Canned fish	$107 m	Frozen fish fillets	$175 m	Canned fish	$257 m
Fresh, chilled or frozen prawns	$88 m	Canned fish	$158 m	Frozen fish fillets	$232 m
Frozen fish fillets	$71 m	Fresh, chilled or frozen prawns	$148 m	Canned crustaceans and molluscs	$188 m
Fish meal	$21 m	Smoked, dried or salted fish	$29 m	Fresh, chilled or frozen prawns	$159 m
Scallops	$19 m	Scallops	$26 m	Fresh or chilled whole fish	$60 m
Top five species, by value ($ million)					
Rocklobster	$243 m	Rocklobster	$552 m	Salmonids	$369 m
Prawns	$225 m	Prawns	$431 m	Rocklobster	$369 m
Abalone	$91 m	Tuna	$255 m	Prawns	$324 m
Tuna	$66 m	Abalone	$221 m	Abalone	$174 m
Oysters	$35 m	Oysters	$53 m	Tuna	$125 m
Top five export destinations, by value ($ million)					
Japan	$381 m	Japan	$680 m	Hong Kong, China	$629 m
United States	$185 m	Hong Kong, China	$368 m	Japan	$265 m
Hong Kong	$64 m	Chinese Taipei	$211 m	United States	$64 m
Taiwan	$63 m	United States	$187 m	China	$44 m
Spain	$31 m	Singapore	$60 m	Singapore	$39 m
Top five import sources, by value ($ million)					
Thailand	$74 m	Thailand	$241 m	Thailand	$323 m
New Zealand	$66 m	New Zealand	$156 m	New Zealand	$220 m
Canada	$41 m	United States	$75 m	China	$179 m
Chile	$35 m	South Africa	$34 m	Vietnam	$154 m
Malaysia	$30 m	Japan	$34 m	Malaysia	$64 m

The figures quoted from the *Australian Fisheries Statistics* 1989 to 2010.

CONTENTS

FIGURES

TABLES

ABOUT THE FRDC

The Fisheries Research and Development Corporation (FRDC) is a co-funded partnership between its two stakeholders, the Australian Government and the fishing industry. It was formed as a statutory corporation on 2 July 1991, under the provisions of the *Primary Industries and Energy Research and Development Act 1989* (PIERD Act) and is responsible to the Minister for Agriculture, Fisheries and Forestry. For a short history of the evolution of the FRDC refer to www.frdc.com.au/aboutus/about-us.

The FRDC's role is to plan and invest in fisheries research, development and extension (RD&E) activities in Australia. This includes providing leadership and coordination of the monitoring, evaluating and reporting on RD&E activities, facilitating dissemination, extension and commercialisation. The FRDC achieves this through coordinating government and industry investment, including stakeholders to establish and address RD&E priorities. In addition the FRDC monitors and evaluates the adoption of RD&E to inform future decisions.

The FRDC's strategic investments in RD&E activities benefit the three sectors of the fishing industry: commercial (wild catch and aquaculture), recreational and indigenous.

The FRDC has a significant responsibility in ensuring, on behalf of the Australian Government, that research is undertaken to assist in the management of the fisheries and aquaculture resource for ongoing sustainability. This means that a significant proportion of funding is directed at research that has a public good benefit.

FRDC Board

A Chair and a Board of Directors govern the FRDC, while an Executive Director leads the Corporation's business activities on a day to day basis. The Board oversees corporate governance, sets strategic direction and monitors the ongoing performance of the FRDC and the Executive Director. The FRDC Board and the Executive Director are responsible for managing and evaluating the organisation and its investments, and for reporting to government and the fishing industry. During 2011–12 the focus for the FRDC Board will be on:

- ensuring value from investments that strengthen and build capacity
- strengthening and improved cross-sectoral investment processes between research and development corporations (RDCs)
- implementing the Council of Rural RDCs (CRRDC) evaluation process
- implementing the Primary Industries Standing Committee RD&E Framework
- developing strategic investment options to ensure delivery of outcomes against the Corporation's *RD&E Plan*
- responding to findings of the Productivity Commission inquiry into the RDCs and the Rural Research and Development Council's National Strategic Investment Plan.

Fisheries Research Advisory Bodies (FRABs)

The FRDC supports a network of FRABs covering Commonwealth fisheries and the fisheries and aquaculture of each state and the Northern Territory. The FRABs have an extremely important role in optimising the efficiency and priority setting of the FRDC's planning and investment processes. The FRDC works to ensure a majority of open call and tactical research fund applications are submitted through, or reviewed by, the FRABs.

The FRABs represent all sectors of the fishing industry, fisheries managers and researchers, and also other stakeholders.

Investment strategy

The FRDC invests in RD&E across the whole value chain of the commercial fishing and aquaculture industry, and for the benefit of both indigenous and recreational fishers. The FRDC seeks to achieve maximum leverage from its investment by providing research administration and services using a value adding model. Unlike the 'granting' model, the FRDC undertakes significant commissioning and management of RD&E through a variety of flexible approaches.

These include: open call applications; formal partnership agreements with industry sectors; subprograms and coordination programs tailored to industry sectors or activities; short-term tactical research investment; and specifically targeted commissioned RD&E.

While running a 'granting' model, research and development funding can achieved at minimal cost, however the cost of a leadership and leveraging approach is significantly higher. This value added model provides a greater return on investment and significantly increases the rate of adoption of research. The FRDC is able to achieve this result through its ongoing investment in systems that deliver best practice in integrated project, financial and human resource management.

The FRDC will focus its investment in the following areas.

Programs	Themes
Environment	1. Biosecurity and aquatic animal health
	2. Habitat and ecosystem protection
	3. Climate change
	4. Ecologically sustainable development
Industry	5. Governance and regulatory systems
	6. Resource access and allocation
	7. Production, growth and profitability
	8. Consumers, products and markets
	9. Value from aquatic resources
Communities	10. Resilient and supportive communities
People development	11. Leadership development
	12. Workforce development
	13. Innovation skills
Extension and adoption	14. Extension and adoption

Since its inception in 1981, the FRDC has grown and been enhanced by the many people that have been involved with the Corporation and its activities over the last 20 years. On these and similar pages are a small selection of images drawn from *R&D News* and previous annual reports.

Included are a few faces from Australia's seafood industry, and some of the FRDC staff who have made the Corporation into what it is today.

1995.
DIANA DAY

1995.
RICHARD A. STEVENS

1995.
TED LOVEDAY

1997.
MARY HARWOOD

1993

1994

HISTORY

1994.
IAN CARTWRIGHT

1998.
TOR HUNDLOE

1995.
PETER SHELLEY

1995.
SIMON BENNISON

1995

1996

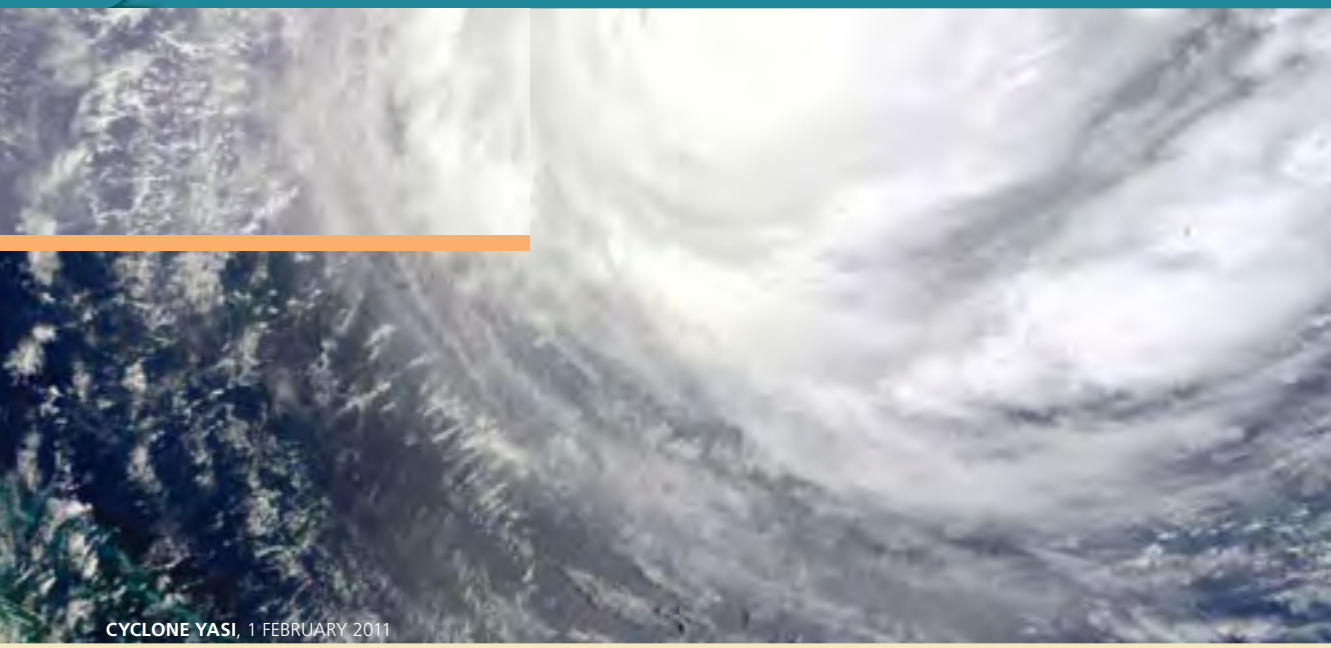
REPORT OF OPERATIONS

PART I

THE DIRECTORS' REVIEW OF OPERATIONS AND FUTURE PROSPECTS

XXX

VII—XXI



CYCLONE YASI, 1 FEBRUARY 2011

THE CORPORATION'S OPERATING ENVIRONMENT

Australian commercial wild catch and aquaculture industries, like a lot of the terrestrial farmers, had a difficult year with mixed performances reported.

Floods from heavy rainfall and tropical cyclone activity meant that some commercial fishers and aquaculture operators (farmed prawns and oysters) suffered significant losses — especially along the east coast from north of Cairns to Victoria.

Inversely, the Northern Prawn Fishery (NPF) is enjoying its best Banana Prawn season in a generation. The bumper season, a result of the silver lining from Cyclone Yasi and the Queensland floods combined with the adoption of earlier RD&E, means the economic outlook for the NPF has improved markedly.

The farmed Atlantic Salmon industry grew again over the year through increased production and domestic demand for its product. Likewise strong demand for Australian rocklobster in China allowed both the Western and Southern Rocklobster sectors to increase their price. However, issues with access to the China market meant that at some points trade and export were difficult. The value of the Australian dollar also dampened and reduced the attractiveness of most export markets. This has led to companies changing their sales portfolios and pushing more produce onto the domestic market.

The Commonwealth gillnet fishers and South Australian fisheries scientists identified interactions between sea lions and fishing gear used in the fishery as a major problem. A partnership to undertake on-boat research between the FRDC, fisheries management agencies, environment departments and non-government organisations has led to these interactions being significantly reduced.

The implementation of Marine Reserves and changes to access to key species was a major issue facing industry with the release of the South West Draft Marine Plan. Marine Reserves will continue to dominate industry issues into the foreseeable future, with the full impact not likely to be realised for several years.

A $1.9 million investment in targeted recreational fishing research resulted from the Department of Agriculture, Fisheries and Forestry (DAFF) engaging the FRDC to manage the Recreational Fishing Industry Development Strategy. Building capacity in the recreational sector and acquiring data to support decision making in recreational fisheries management are the strategy's two main priorities.

The FRDC continued to build its capacity with the indigenous sector by establishing an Indigenous Reference Group to develop better ways of addressing indigenous RD&E needs. Over the course of the year it also invested in building a formal RD&E plan for indigenous Australians.

Workforce development

The fishing industry is a significant primary industry. However, there remains a wide gap in the information needed for regional employment and in the skills, education and workforce development. This gap extends to a lack of knowledge about demographic trends affecting employment, demographic profiles of people employed, and certainty around the aggregate number of people actively involved in the industry.

The FRDC People development program as part of its plan highlighted the pressing need to address the paucity of data and information. This need has been confirmed by Agrifood Skills Australia, the National Seafood Industry Alliance and the FRDC's People Development Advisory Group. Over the coming 12 months the FRDC will invest in a project that will collate workforce participation data for the seafood industry.

Climate change

In 2010 the FRDC expanded its focus on understanding and adapting to the changing climatic conditions Australia is expected to face over the next 50 years by entering into a $5.5 million funding partnership with the Department of Climate Change and Energy Efficiency (DCCEE). While still in the early stages of the program, initial outputs from the projects undertaken in this area are already being used. Both industry and fishery managers are taking the results into consideration and are using the information to inform planning.

A new framework drives RD&E

On 13 July 2010 the Minister for Agriculture, Fisheries and Forestry approved the FRDC's fifth five-year plan *Investing for tomorrow's catch: the FRDC's Research, Development and Extension Plan 2010–2015*. The plan's five programs and 14 themes mirror those of the *Working Together: the National Fishing and Aquaculture Research, Development and Extension Strategy* released earlier in 2010.

The plan identifies both Australian Government and industry priorities, and where they have common ground. A shift in emphasis, to which the FRDC's stakeholders contributed substantially, resulted in the three principal RD&E programs being named "Environment", "Industry", and "Communities", and two enabling programs being created to add value to them: Program 4, People development, and Program 5, Extension and adoption. The renewed emphasis on extending RD&E outputs to end-users also resulted in "extension" being added to the title of the plan.

The inclusion of a program focused on extension has been driven by a clear need to transform RD&E innovation into productivity. It also aligns with former Minister for Agriculture, Fisheries and Forestry, the Hon. Tony Burke MP, who articulated his priorities for RDCs to consider in his February 2010 letter on 2010–11 annual operating plans. In addition, the direction taken by FRDC was supported by the Primary Industries Ministerial Council who approved the National Strategy for Fishing and Aquaculture RD&E on 23 April 2010 which sets out a high level framework under which FRDC operates.

Importantly, the strategy provides the necessary mechanism through the establishment of three groups to coordinate priority setting and advance the arrangements for RD&E activities to be better coordinated. The three groups are:

1. National Priorities Forum
2. Research Providers Network
3. Extension and Adoption Network

Role of the Board

On 1 September 2010, the Hon. Harry Woods was appointed by the Minister for Agriculture, Fisheries and Forestry as the new FRDC Chair. The new Chair brings much experience coming from a long and esteemed career that will help guide the Board into the future. The outgoing Chair Peter Neville played a significant role in ensuring the FRDC's activities addresses government and industry priorities.

The FRDC is committed to continual improvement in all its processes and practices, especially those relating to its Board. During the course of the year it commenced a review of the Board's performance. This review will ensure the FRDC's Board governance remains tightly focused; with the goal of identifying and implementing changes to deliver improvements that benefit the FRDC's stakeholders.

The Productivity Commission inquiry into the rural RDCs also kept the Board very focused on core FRDC business. The Board provided input into the FRDC's submission to the Productivity Commission inquiry. The Board saw this as an opportunity to demonstrate the value of the existing model — the collaborative partnership between government and industry — and develop options for improvements that would ensure the ongoing relevance of the model for all stakeholders. The PIERD Act was enacted in 1989, some 22 years ago, and as such stakeholders needs and expectations have changed. It is important that the PIERD Act continues to reflect their needs, in particular FRDC's largest funding contributor, the Australian Government. The Board has taken a strong leadership role among the RDCs pressing for changes to the model and how it is implemented.

Productivity Commission report

On 15 June 2011, the Australian Government released the final report of the Productivity Commission inquiry into the rural RDCs. On the same day the preliminary government response to the Productivity Commission's report was also released.

The report confirmed that the Australian Government should continue with the RDC model, since the research sponsored by the RDCs had, in aggregate, significantly benefited the rural sector and the wider community; and while much of this benefit came from research-induced productivity improvements, there had also been positive environmental and social impacts. The Commission also suggested mechanisms for increasing cross-sectoral RD&E and recommended permitting statutory RDCs to undertake industry-funded marketing and promotion activity, thereby removing the current difference with the industry-owned corporations.

Over the coming year the FRDC will work with the Australian Government to implement the agreed recommendations of the report.

Thank you

Continued support from the Australian Government and industry stakeholders across the three diverse sectors has been welcomed by the Board over the last 12 months. Government and industry have high regard for the FRDC, and this has been critical in ensuring high quality research outcomes. The Board thanks its three representative organisations for their continued strong support. FRDC is dependent on the support of numerous bodies and agencies for its success, these include:

» Industry councils (including recreational)

» Commonwealth, state and territory fisheries management and research agencies

» Fisheries Research Advisory Bodies

» FRDC Subprogram and coordination leaders and their committees

» Seafood Cooperative Research Centre (Seafood CRC)

» Seafood Services Australia

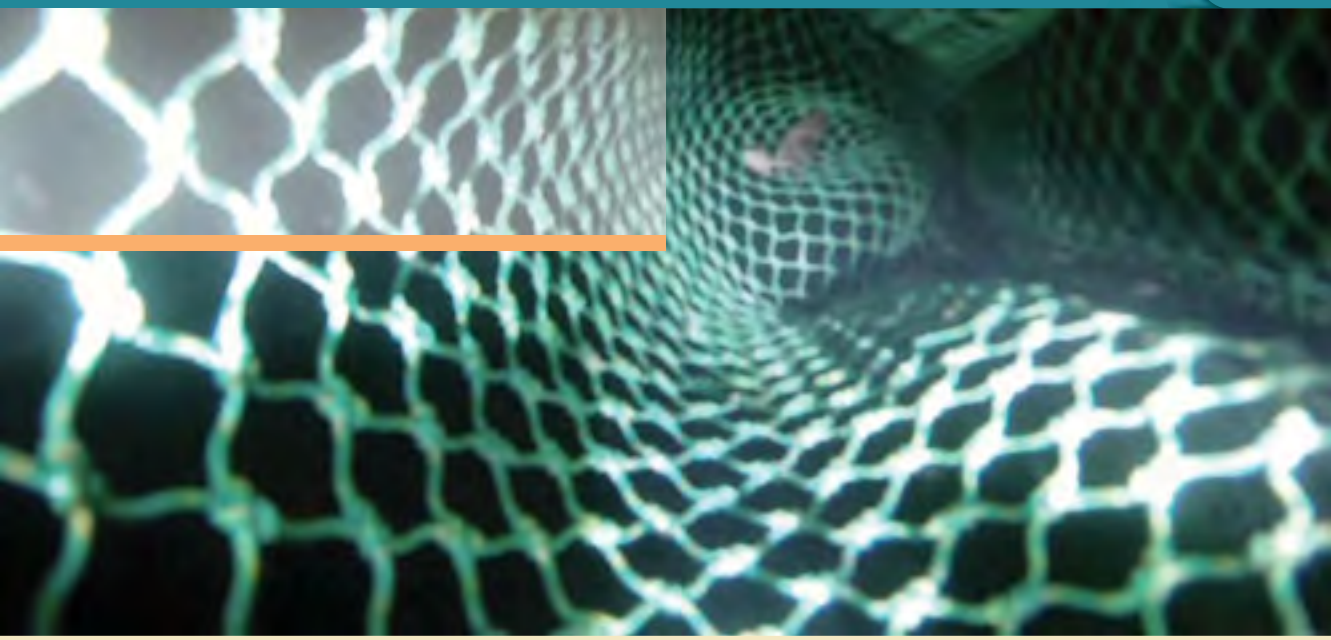
The dedication and passion that the FRDC staff provides is critical to the Corporation's success for which the Board is very thankful.

The Board would welcome your feedback and invites you to contact any director and let them know your thoughts after reading this annual report.

ANNUAL OPERATIONAL PLAN BUDGET 2011–12

REVENUE	$		$
Total revenues from the Australian Government			16,297,187
Australian Government 0.5% AGVP	*10,864,791*		
Australian Government matching of industry contributions	*5,432,396*		
Contributions revenue from jurisdictions			7,545,000
Projects revenue from other parties			2,100,000
Other revenue			385,000
TOTAL REVENUE			26,327,187
EXPENDITURE	$		$
Projects expenditure			**22,450,000**
Made up of:			
Environment	8,980,000	*40.0%* *	
Industry	9,653,500	*43.0%* *	
Communities	336,750	*1.5%* *	
People development	2,132,750	*9.5%* *	
Extension and adoption	1,347,000	*6.0%* *	
Total	22,450,000		
Made up of:			
Forecast payments against existing contracts	16,651,987		
Forecast payments against new contracts	5,798,013		
Total	22,450,000		
Management and accountability			**3,873,573**
TOTAL EXPENDITURE			**26,323,573**
NET RESULT FOR THE YEAR			**3,614**

* Target expenditure level.



THE YEAR AHEAD — PRIORITIES AND OUTPUTS FOR 2011–12

Reducing by-catch and incidental catch of threatened, endangered or protected species — By-catch and by-catch reduction will continue to be an area in which a range of investments will be made. Activities are underway to reduce the interactions between fishers and sea snakes, seals and other threatened, endangered and protected species.

Climate change — The FRDC has created a coordinated funding program to enhance the fishing industry's capacity to adapt, mitigate against, and take advantage of further climate change. The program partners are the DCCEE, DAFF and participating state government agencies. Over the course of the next three years the research funded will start to become available. FRDC will continue to participate with the other rural RDCs in the collaborative research initiative 'Climate Change Research Strategy for Primary Industries' (CCRSPI), to examine and respond to the impacts of climate change on primary industries.

Improving the profitability of the seafood sector — The FRDC's investment will aim to optimise the use of wild resources, and increase capacity in the aquaculture sector. Research in Western Australia will target under-utilised fish stocks, and improved retail chains. The FRDC is partnering with Seafood Services Australia to address trade and market access issues in a number of international markets, including China and the European Union.

People development — Professional development awards and leadership programs will build leadership, professionalism, and cross-sectoral understanding, and enhance opportunities for young people, Aboriginal and Torres Strait Islanders, and women, to participate and reach their potential. Opportunities to develop and share knowledge and skills will be provided through a visiting experts program, travel awards and conferences. Further, the FRDC is leading a change in culture around workforce training, and will invest in workforce attraction and retention strategies, including industry and research connections with the education sector. Social and personal values of recreational and customary fishers are also a focus.

Resource access and allocation — Resource access and allocation, and the delivery of performance indicators for spatial management will be completed. Work will continue on developing improved data collection techniques for recreational fishers, and how this can be incorporated into management models.

Improving customary values for indigenous fishers — Indigenous input into management, planning and project assessment is limited due to the complexities and costs of engaging effectively with indigenous Australians on fishing and seafood related issues. The FRDC has funded a number of projects to identify approaches that will result in improved consultative processes between representatives of the indigenous community and other fishers.

Increasing the emphasis on extension and adoption — The FRDC will assist in the development of a national Fisheries Extension and Adoption plan to facilitate the transfer of knowledge to its stakeholders. This may include the development of an extension network and a range of information resources for industry. It will also look to fund research to better target extension activities.

Joint rural RDC and government initiatives

National Fishing and Aquaculture RD&E Strategy — The FRDC has helped develop the Strategy, and will continue to take a lead role in its implementation in partnership with the Australian Fisheries Management Forum and FRDC's representative bodies.

Rural R&D Council — The FRDC will work with the Council of Rural RDCs (CRRDC) to ensure that the proposed national plan being developed by the Rural R&D Council delivers desirable outcomes to government, industry and other stakeholders. Integral to this development will be the implementation of the CRRDC strategic plan and the RD&E Framework for all rural sectors, in particular the fishing and aquaculture sector.

Shared services — In partnership with the Canberra based RDCs, FRDC is working to share services to reduce administrative costs and ensure efficient delivery of RD&E investment. Some of these shared services will have efficiency benefits for non-Canberra based RDCs.

Productivity Commission — FRDC will work with the Australian Government to implement the recommendations from the Productivity Commission's report.

FRDC'S PEOPLE

Portfolio minister

The portfolio Minister for Agriculture, Fisheries and Forestry is Senator the Hon. Joe Ludwig (pictured at centre, above left). The Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry is the Hon. Dr Mike Kelly AM, MP (pictured above right).

FRDC Board members during the year

The Hon. Harry Woods	Chair (from 1 September 2010)
Mr Peter Neville	Chair (from 1 July to 31 August 2010)
Mr Stuart Richey AM	Deputy Chair
Dr Patrick Hone	Executive Director
Ms Heather Brayford	Director
Ms Renata Brooks	Director
Mr Brett McCallum	Director
Dr Daryl McPhee	Director
Dr Keith Sainsbury	Director
Mr Richard Stevens OAM	Director

FRDC staff

Dr Patrick Hone	Executive Director
Mr John Wilson	Business Development Manager
Ms Cheryl Cole	Manager Corporate Services
Mr Timothy Yap	Office Administrator
Mr Crispian Ashby	Programs Manager
Ms Annette Lyons	Projects Manager — Finance
Ms Kylie Giles	Projects Manager — Research
Dr Carolyn Stewardson	Projects Manager — Research
Ms Jo-Anne Ruscoe	Projects Manager — Research
Mr Peter Horvat	Communications Manager
Ms Julie Haldane	Communications Officer

STRATEGIC PARTNERSHIPS

In developing projects that address the five programs, priorities are established in association with the FRDC's partners — government, industry stakeholders and research organisations.

The FRDC works with its partners to not only undertake program management in an effective manner, but also to disseminate the results and assist with their adoption and, when appropriate, commercialisation. Over the course of the year, the FRDC will continue to collaborate and work with its stakeholders.

The Australian Government

The Minister for Agriculture, Fisheries and Forestry and the Parliamentary Secretary are integral to the running of the FRDC. The Minister, the Parliamentary Secretary and their department help set out priorities that need to be addressed.

Australian Fisheries Management Forum

The Australian Fisheries Management Forum comprises the heads/Chief Executive Officers of Australian, state and territory government agencies responsible for the management of fisheries. The Forum discusses issues relating to fisheries and aquaculture management. The FRDC has worked closely with this group to develop, and now implement, the National Fishing and Aquaculture RD&E Strategy.

Consultation with representative organisations

The FRDC has three representative organisations with whom it consulted over the course of 2010–11. They are the:

» Australian Recreational and Sport Fishing Industry Confederation Inc. (trading as Recfish Australia)

» National Aquaculture Council Inc.

» Commonwealth Fisheries Association Inc.

More information on projects and funding of representative organisations can be found at Appendix E, on page 164.

Consultation with levy organisation

The FRDC administers a research and development levy on behalf of the Australian Prawn Farmers' Association (APFA). The FRDC's investments in prawn farming research and development is driven by the APFA's RD&E Plan. FRDC and the APFA enjoy a productive working relationship. The APFA has nominated that the majority of its investment is to be through co-investment with the Seafood CRC. The APFA has a lead role with FRDC in ensuring its priorities are met.

Sector industry bodies

The FRDC continued its relationship with the National Seafood Industry Alliance, a partnership between the state and territory seafood industry councils, the Commonwealth Fisheries Association and the National Aquaculture Council. It will build upon the partnerships established with individual industry sectors. It currently invests in, and partners, entities such as Southern Rocklobster Ltd, Australian Southern Bluefin Tuna Industry Association, Tasmanian Salmonid Growers' Association, and both the Prawn and Barramundi Farmers' Associations.

Seafood Services Australia

The FRDC continues to work with, and invest in, Seafood Services Australia (SSA). At present, the key focus of this partnership is to develop industry's capacity and knowledge, and to assist them to engage on key trade and market access issues. SSA has been instrumental in delivering a number of industry based initiatives, and extending the research and development activities of FRDC.

Rural research and development corporations

The FRDC will continue to partner with other RDCs on a range of activities to enhance joint strategic outcomes. Most significant of these include climate change, evaluation of RD&E, and the "Appetite for Excellence" primary producer's tour — a chef, waiter and restaurateur competition. Not only will the FRDC partner other RDCs at the project level, but it will also work more broadly to collaborate in functional areas. The FRDC will continue to attend meetings of the CRRDC, as well as meetings of Executive Directors, Business Managers and Communications Managers. In conjunction with other RDCs, the FRDC will assist in coordinating sponsorship and participate in events such as ABARES 2011 *Outlook* and other producer conferences. Additionally, the FRDC will continue to provide advice and services in relation to project management and the FRDC project management software — OmniFish.

Seafood Cooperative Research Centre

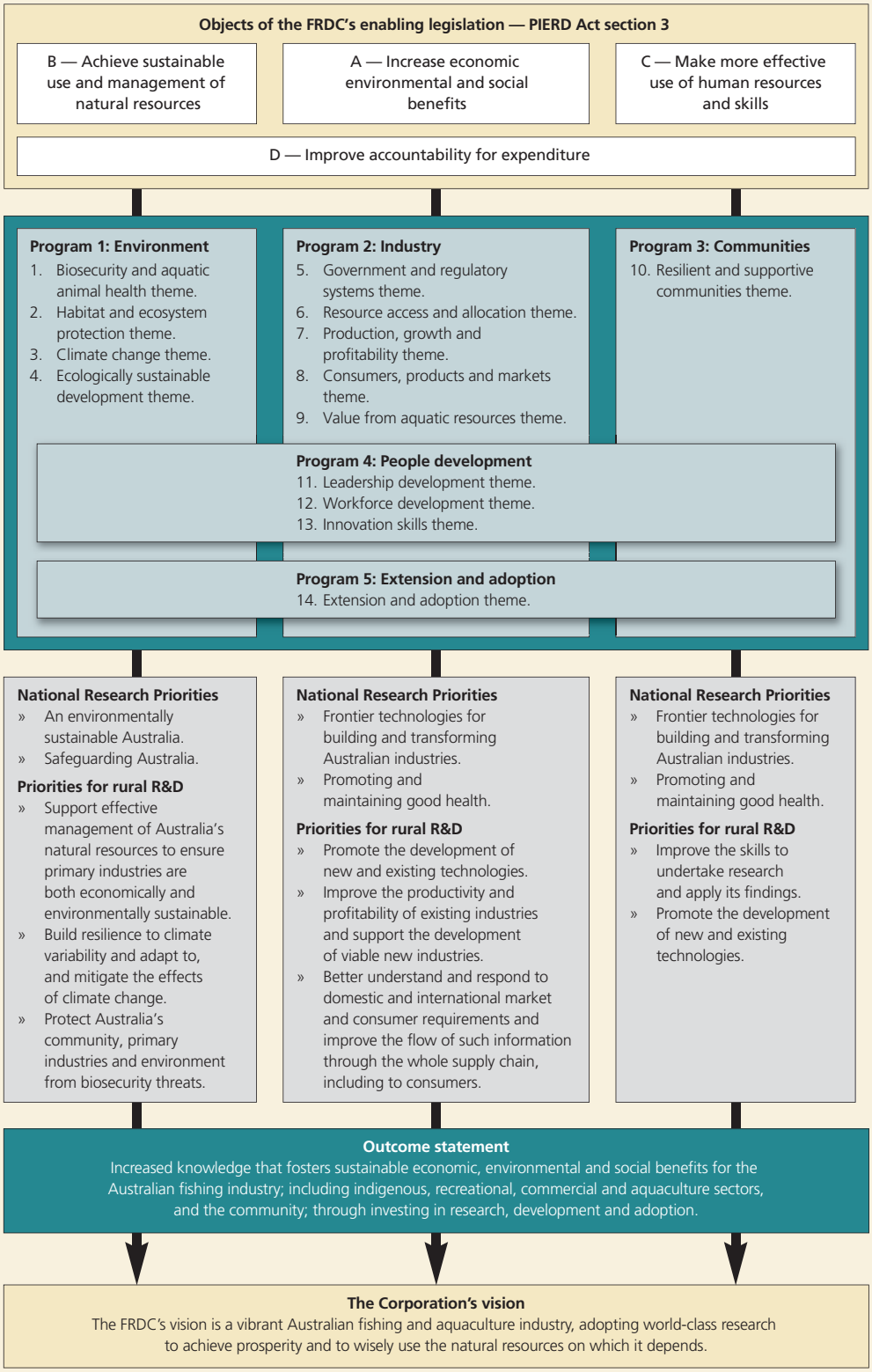
The FRDC is a core participant of the Seafood CRC whose research program aims to increase the profitability and value of the Australian seafood industry, increase access to premium markets and increase demand for Australian seafood. These priorities are aligned with the FRDC's RD&E programs, in particular Program 2: Industry. This partnership is one innovative way the FRDC extends its activities further along the value chain and enhances its focus on development.

Research partners

Investment in research is the FRDC's core business. As a result, it is vital to the FRDC's success that good relationships are built and maintained with its research partners. In any given year the FRDC will have around 400 active projects under management. The key research partners are:

- the Department of Agriculture, Fisheries and Forestry
- the Australian Fisheries Management Authority
- state fisheries research centres
- the Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- universities
- cooperative research centres
- Seafood Services Australia
- other rural RDCs and companies
- industry groups
- co-investors in the private sector.

FIGURE 1: FRDC'S FRAMEWORK FOR INTEGRATING LEGISLATIVE, GOVERNMENT AND INDUSTRY PRIORITIES



THE PLANNED OUTCOME FOR THE CORPORATION

Increased knowledge that fosters sustainable economic, environmental and social benefits for the Australian fishing industry, including indigenous, recreational, commercial and aquaculture sectors, and the community, through investing in research, development and adoption.

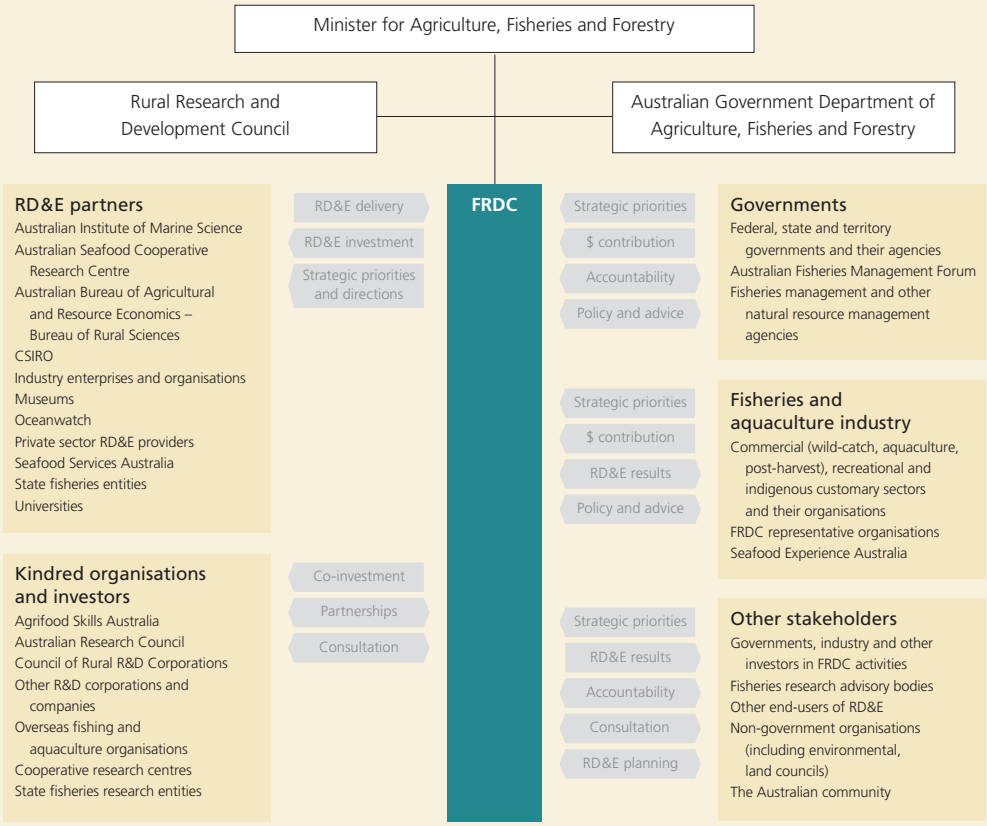
THE CORPORATION'S VISION

The vision of the FRDC is a vibrant Australian fishing and aquaculture industry, adopting world-class research to achieve prosperity and to wisely use the natural resources on which it depends.

STAKEHOLDERS

Stakeholders in the FRDC are the Australian Government and the fishing industry. There are many other partners, collaborators, beneficiaries and interest groups who all influence the FRDC in its priority setting processes and assist in the conduct of its business and the adoption of its research and development activities. These arrangements are addressed in this report. In addition, the legislation under which the Corporation operates recognises that the people of Australia, ultimately, are the principal beneficiaries of the work of the FRDC.

FIGURE 2: THE FRDC'S STAKEHOLDER FRAMEWORK



Not all entities involved with the FRDC are shown. For simplicity, only the relationships between the FRDC and other entities are shown — not relationships between those entities. Many of the entities have multiple relationships with the FRDC: for example, CSIRO is a co-investor and a research provider.

Patrick W. Kane

CELEBRATING 20 YEARS OF RESEARCH, DEVELOPMENT AND EXTENSION

FRDC Executive Director Patrick Hone talks about two decades of creating new knowledge

Neil Armstrong is quoted as saying "Research is creating new knowledge". This is exactly what the FRDC was established to do 20 years ago.

The FRDC was formed as a statutory corporation on 2 July 1991, under the provisions of the *Primary Industries and Energy Research and Development Act 1989*.

I have been part of the evolution and much of the work FRDC has invested in over the 20 years. Before joining the FRDC in 1997, some six years after its establishment, under the helm of Peter Dundas-Smith, I worked on a number of FRDC funded projects.

The FRDC has evolved and grown and I believe it is much better for doing so. Previous FRDC Chairs, shown on pages 69–73 have also highlighted how the organisation has changed over time. It is interesting to see their perspectives several years down the track.

A key change is that we now invest in areas that are priorities for our stakeholders. Early in the FRDC's development the focus was more about the priority of research, rather than research priorities. Given the diversity of our stakeholders, this is not always an easy task. But as the Corporation evolved and developed, our ability to better understand the needs of our stakeholders also changed, leading the Corporation to focus on a stakeholder outcome approach.

Another big change for the FRDC is how fisheries research evolved from dealing with simple problems to looking at the whole picture. This is no more evident than looking at fisheries themselves. We have moved from a simple single fishery focus to a much more complex framework that looks at the whole system, incorporating multi-fisheries and multiple users.

The key driver for all this change is without question the FRDC extended family. The FRDC at its core is only 11 very dedicated staff. However, the FRDC is much bigger than this. It is a virtual organisation with many partners that includes fishers, FRABs, industry bodies such as our representative organisations, and over 300 principal investigators and many more research staff. All of the FRDC family are important and will continue to play an active role in keeping the Corporation moving ahead.

The focus for the FRDC is to make sure that it continues to deliver outcomes for its stakeholders and is well placed for the future.

In the past year we have seen the launch of the *Working Together: the National Fishing and Aquaculture Research, Development and Extension (RD&E) Strategy* upon which the FRDC has developed its own *Research, Development and Extension Plan*. Both documents are important for guiding what we do. Importantly for the FRDC, our new plan for the first time includes a greater focus on research extension.

The key to the FRDC's future lies in getting better extension or simply put, getting the right information, to the right people at the right time. This will require us to focus on transforming what we have learned and re-package it in a way that people can use more effectively.

We have 20 years of achievements — some which can be seen in the subsequent pages and picking just a representative few was a hard task. The FRDC will continue to build on these achievements into the future. It will continue to develop new knowledge, but it will also aim to get that information more effectively to our stakeholders when they need it.

2001.
JOHN HARRISON.

1995.
GEORGE KAILIS

1997.
PHEROZE JUNGAWALLA

1997.
SANDY WOOD-MEREDITH

1997

1998

HISTORY

1998.
BRIAN JEFFRIESS

1997.
NICK RUELLO

1994.
HAGEN STEHR

2004.
NICK PASPALEY

1999

2000

REPORT OF OPERATIONS

PART II

THE FRDC'S OPERATIONAL RESULTS

XXX

XXVI–LXXIII

RD&E PROGRAM 1 — ENVIRONMENT

Australia has a broad range of freshwater and marine habitats that support a diverse range of aquatic species. Australia's maritime zone is one of the largest in the world covering about 13.6 million square kilometres: about twice the area of Australia's land mass. This zone contains about 4500 known species of finfish (and perhaps tens of thousands of invertebrate species) — most in relatively small numbers.

Federal, state and territory government agencies have legislative responsibility for managing the fisheries and aquaculture activities within their jurisdictions. Large components of the RD&E undertaken by the FRDC focus on providing information that will assist these agencies improve the sustainable use of Australia's aquatic resources. The projects outlined on the following pages highlight the diversity and excellence of the FRDC's current research portfolio.

For a full listing of projects and expenditure for 2010–11 visit the FRDC website — **www.frdc.com.au**

Principal inputs

During 2010–11, $10.14 million (about 47 per cent of the total RD&E investment) was invested in RD&E activities within this program.

Summary of performance indicators for Program 1

Strategic challenges	Performance indicators	Targets	Achievements
Biosecurity and aquatic animal health	Development and dissemination of protocols, techniques and technologies to mitigate and minimise the impact of disease outbreaks. Development of knowledge to assist industry to register vaccines and veterinary chemicals.	Development of diagnostic tests.	Polymerase Chain Reaction (PCR) test developed for abalone herpes-like virus (*Haliotis* spp.) — see story on page 36.
Habitat and ecosystem protection	Demonstrated improved sustainability performance from the use of RD&E outputs. Development of innovative technologies to reduce fishery take and interaction with by-catch and with threatened, endangered and protected species.	Two reports on improving management of by-catch and in particular Threatened, Endangered and Protected species (TEPs).	A number of reports related to this theme were submitted during the year. These include: **2008/048** Tactical Research Fund: Reducing dolphin by-catch in the Pilbara Finfish Trawl Fishery. **2009/083** Tactical Research Fund: Evaluating the impact of fishing on marine turtles relative to other impacts. **2009/069** Tactical Research Fund: By-catch and prawn size selectivity of conventional diamond versus novel T90 trawl mesh — see story on page 33.

Strategic challenges	Performance indicators	Targets	Achievements
Climate change	Improvement in understanding of the impacts of climate change that leads to adaptation by fisheries management and industry. Development of mitigation methods to reduce greenhouse gas emissions of industry.	Two reports outline adaption measures are used by industry.	A number of reports related to this theme were submitted during the year. These include: **2009/070** El-Nemo SE: Risk assessment of impacts of climate change for key species in south eastern Australia. **2008/103** Tactical Research Fund: Adapting to change — minimising uncertainty about the effects of rapidly-changing environmental conditions on the Queensland Coral Reef Fin Fish Fishery. **2010/309** Extension and adoption — Climate change effects on fish and fisheries: Forecasting impacts, assessing ecosystem responses, and evaluating management strategies — see story on page 64.
Ecologically sustainable development	Development of mechanisms and technologies to collect economic, environmental and social data to inform management processes. Improvement in knowledge of the relationship between environmental processes and known biological processes. Development of techniques for incorporation of ecosystem-based fisheries management in fisheries. Development of knowledge to help the industry to meet environmental standards.	One fishery incorporating oceanographic processes in fisheries management. Assessment methods for data poor fisheries extended to relevant stakeholders.	Outputs from project **2008/011** Prawn and crab harvest optimisation: A biophysical management tool — will assist fisheries manager in the management of the South Australian prawn and crab fisheries. Project **2010/044** Quantitatively defining proxies for biological and economic reference points in data poor and data limited fisheries — is developing and trialling a number of methods to extrapolate existing data across jurisdictions.

RD&E PROGRAM 1 — ACHIEVEMENTS AND ACTIVITIES

Scientists crunch numbers on food-chain kings

Project title — Innovative monitoring and estimating fishing mortality of major target species and species of conservation interest in the Queensland east coast shark fishery (project 2010/006)

An ambitious survey of shark numbers off the coast of far North Queensland will assess the sustainability of current shark fishing quotas.

Sustainable shark fishing is about more than just guaranteeing supply of a family favourite to the local fish and chip shop. It is also about maintaining the intricacies of Australia's marine ecosystem by protecting the kings of the food chain. The vulnerability of sharks is in their biology: they grow slowly, mature late and produce far fewer young than finfish do. These traits mean that the ability of sharks to repopulate following a disturbance can be low.

The theory behind a sustainable shark fishery is to catch them when they are young and juvenile, only taking a known proportion out and leaving enough to grow up as breeding stock to replenish the fished population.

This FRDC funded project aims to measure whether the current levels of shark fishing in Queensland waters — currently capped at 600 tonnes a year — will ensure sustainability of the many local shark species currently being captured.

The project combines previous research on shark biology with the tagging of more than 4000 sharks. The goal is to determine the capacity of each species to replenish itself, and to estimate rates of mortality due to fishing. Partners in the FRDC project are the Great Barrier Reef Marine Park Authority, Fisheries Queensland and the Queensland Seafood Industry Association. Meanwhile, the East Coast Inshore Finfish Fishery (ECIFF) is providing practical assistance for the study and insight into commercial shark fishing.

JASON SMART

In the earlier shark biology research undertaken by James Cook University (JCU), each species captured in the fishery was assigned a position on a shark productivity index. For example, the Milk Shark matures a year after birth and reproduces for the next five or six years until its death. It has a high productivity index, denoting a high capacity to withstand fishing.

In comparison, a species like the Bull Shark is much less productive, with slower growth, later maturity and fewer pups from less frequent pupping events. Therefore, the Bull Shark is less able to replace itself following disturbance and should be less intensively fished. Fortunately, this is the current trend at ECIFF.

Even sharks with low productivity can be fished, but more information is needed about shark numbers off the coast of Queensland. During the last 18 months of the project (2011–12) researchers and volunteer commercial fishers aim to tag a total of 3000 sharks. Undergraduate and postgraduate students from JCU have tagged about 1200 sharks in the first 12 months of the project in the Townsville area.

In the year after tagging is completed, the fishery will monitor the proportion of tagged sharks it recaptures. For example, if one in 10 captured sharks has a tag, this indicates the fishery is harvesting 10 per cent of the population each year. Some of the more productive species captured by the fishery may be able to sustain an annual harvest rate of 30 to 40 per cent.

When it comes to managing a sustainable shark fishery, sharks have one big advantage over finfish — the stability of their cycle. Finfish recruitment can be highly variable from year to year, based on water temperature, salinity, currents and food fluctuations. In comparison, shark recruitment is much more stable from year to year.

By late 2012 the research team expects to have a better idea of shark numbers and their resilience to fishing. The work provides a neat bookend to Andrew Tobin's former role as a member of the ECIFF Management Advisory Committee and part of the discussion about setting a quota for shark fishing.

For further information: Andrew Tobin, 07 4781 5113, andrew.tobin@jcu.edu.au.

A bright future for the raw prawn

Project title — Studies of the growth and mortality of school prawns (project 2001/029)

Whether it's swimming in garlic, on top of a steak or cold on Christmas day it seems the people of New South Wales will be able to enjoy local prawns for many years to come.

Industry & Investment (I&I) NSW scientists have just completed a comprehensive study into the growth and mortality of school prawns in New South Wales. This has provided the first detailed estimates of growth and mortality for these stocks, and enabled I&I NSW to assess the impact of fishing activities on school prawn stocks. The research was undertaken to assess the health of school prawn stocks, to learn how fast the prawns grow, how many die from natural causes and fishing, and to learn more about their movement patterns.

Prawns are a vital part of the aquatic food web and they are also one of the most economically valuable seafood resources in New South Wales, worth about $18 million at first point of sale. The research has shown that while the school prawn fishery has definitely been heavily exploited, if things remain at current levels, it is sustainable.

Each year about 2000 tonnes of prawns are landed by commercial fishers and about 50 tonnes by recreational fishers. King prawns and school prawns make up 97 per cent of all prawn catches. Researchers found that most deaths in prawn populations are due to natural causes rather than fishing. But records show that, at times, fishing of school prawns can account for at least 50 per cent of the mortality.

Two main methods were used in the research — tagging and measurement of the carapace (head). More than 21,000 tagged prawns were released into the Clarence River and Wallis Lake. With the help of fishers and the public, researchers tracked the growth and mortality of these prawns.

School prawns stay in ocean waters close to the estuary from which they migrated as adolescents. In contrast, king prawns travel north, covering distances of more than 1000 kilometres, further than any other prawn species in the world. To determine size and growth scientists used length frequency analysis, where the size of groups of prawns born at the same time are tracked monthly.

Research has now shown king prawns grow to about 70 millimetres carapace length or 150 grams, and live for up to three years; while school prawns grow to approximately 35 millimetres carapace length or 30 grams and lives for less than two years.

The work was funded by I&I NSW (now incorporating the NSW Department of Primary Industries) and the FRDC.

For further information: Steve Montgomery, steven.montgomery@industry.nsw.gov.au

Floods stimulate estuarine productivity

Project title — Flow and Fisheries. Theme: River flow impacts on estuarine prawns in the Gulf of Carpentaria (project 2007/003)

Flooding along Australia's eastern coast in estuarine and coastal areas could release a surge of productivity for fisheries when the water levels subside.

The vast amounts of flood water on the east coast of Australia, which started around December 2010, highlighted the devastating effects of climatic conditions on homes, businesses and farms. The floods have even resulted in calls to increase the number of dams to control the flow of water to coastal communities.

However, one aspect of flooding that is less appreciated is the effect on catches of crustacean and fish species (commercial and recreational) that rely on estuaries and coastal areas.

The FRDC study showed that floods have positive effects on estuaries in the months after flooding by stimulating productivity in the salt flat and mud flat habitats used by prawns and other fauna.

The focus of the study was the effect of flooding on productivity and Banana Prawn dynamics in a tropical estuary in the Gulf of Carpentaria.

The research was conducted by Griffith University and CSIRO's Wealth from Oceans Flagship, in collaboration with the Tropical Rivers and Coastal Knowledge (TRaCK) program, a large research program involving research institutions and Commonwealth and state agencies across Australia.

The effect on juvenile Banana Prawns living in the estuary was dramatic, with all animals leaving the estuary to escape the freshwater. It was expected that nutrient levels in the estuary would rise with the increased runoff from the land, but in contrast to agricultural and urban areas, nutrient levels did not increase. Most of the nutrients were washed out in a coastal flood plume.

The contribution of the vast salt flat areas to the productivity of the system during floods was an unexpected finding. These areas that make up a large proportion of the coastal land in the southern Gulf are dry in the dry season, except during the highest tides. However, when they are wet, algae start to grow quickly, which provides a food source for the fish and crustacean species that access these areas.

In addition, high concentrations of nutrients are released from the salt flats, fuelling production in the system, and this shows that salt flats are likely to play an important role in fisheries production. With increased pressure to dam and regulate water supplies, ensuring moderate to large flows continue to flood the salt flats will be important in the future.

This research was also conducted in collaboration with the fishing company, Raptis and Sons, which operates a fleet of prawn trawlers in the Gulf. The fishery's northern division manager, Mike O'Brien, says understanding the role flooding plays in affecting prawn catches is critical to help prevent future land development and climate change negatively impacting the fishery.

For further information: Michele Burford, m.burford@griffith.edu.au

Prawn fisheries net promising by-catch designs

Project title — Tactical Research Fund: By-catch and prawn size selectivity of conventional diamond versus novel T90 trawl mesh (project 2009/069)

Testing of trawl net designs in South Australia's temperate waters is producing promising results in reducing by-catch and providing more precision in prawn selectivity. The FRDC funded project, led by the South Australian Research and Development Institute (SARDI) is co-funded by the Adelaide and Mount Lofty Ranges Natural Resources Management Board.

The project had its genesis in the 2009 Gulf St Vincent Prawn Fishery Assessment Report, which highlighted the high-priority need to develop and test enhanced gear technologies to reduce the incidental capture of by-catch species, and reduce capture of small prawns.

This follows on from previous valuable catch-selectivity research (square mesh) and will provide management and industry with options for by-catch mitigation. The project's sea trials have been conducted under specific survey exemptions granted by Primary Industry and Resources SA Fisheries, with survey catch offsetting vessel costs, ensuring cost-effective and participative research.

Also part of the project, SeaNet is providing personnel, technical expertise and gear acquisition, as well as its commitment to improving the adoption of enhanced by-catch reduction technology for fisheries, while SARDI provides scientific assessment of results.

Researchers attribute the study's good progress to the close collaboration between all participants including the Gulf St Vincent prawn industry, in particular Jim Raptis and Trevor Simms, SeaNet's Nathan Bicknell and commercial netmakers such as Fisheries Supply of Queensland.

A number of different trawl net designs were tested, with some success. Importantly, researchers identified a process by which industry can continue refining the net designs with help from all of the project participants.

A new mesh design (T90 mesh) has shown promising results. The use of T90 mesh instead of the standard diamond mesh has reduced by-catch, primarily small fish, and also allowed small prawns to escape. Although a small reduction in total prawn catch was observed, this was only in the smaller size grades, which are of lesser commercial value. However, these prawns can now grow and add to the yield of future catches.

The collaboration with SeaNet and Fisheries Supply involves testing two more by-catch reduction devices: the witch's hat and the Thorsteinn grid. Researchers says the witch's hat reduced the number of small fish being caught (they can escape from the net), while the grid showed a marked reduction in sponges being caught, with further refinements anticipated to reduce large by-catch, mainly stingrays, which are common in this fishery.

The next phase will be adoption of the modified gear. This requires robust assessment of the spatial and temporal differences in catch rates between standard diamond mesh and the preferred gear configuration.

A technique to capture footage of operational trawl nets that is both cheap and relatively easy to use has been developed. The footage captured is of high quality and has provided valuable insights for researchers and industry about the operational performance of conventional and novel trawl gear, as well as the behaviour of the species being caught during trawling. This has greatly enhanced the ability to refine the gear and provides inspiration for further gear modifications.

While South Australian prawn trawl fisheries will be the main beneficiaries of the study, benefits will also flow to other Australian penaeid prawn trawl fisheries. The reduced impact on by-catch species will also indirectly benefit other commercial and recreational fisheries.

Study results will be made available to industry and the scientific community primarily through the final FRDC report, and the DVD documentary.

For further information: Shane Roberts, 08 8207 5483, shane.roberts@sa.gov.au

Related by-catch research projects

1998/201	By-catch Solutions: A handbook for fishers in non-trawl fisheries
1998/204	Effects of Trawling subprogram: Maximising yield and reducing discards in the South East Trawl Fishery through gear development and evaluation
2000/172	By-catch assessment of the estuarine commercial gill net fishery in New South Wales
2001/006	Effects of Trawling subprogram: Promoting industry uptake of gear modifications to reduce by-catch in the South East and Great Australian Bight trawl fisheries
2003/013	Sea turtle mitigation for Australian pelagic long-line fisheries
2005/053	Effects of Trawling subprogram: Reducing the impact of Queensland's trawl fisheries on protected sea snakes
2007/040	Selectivity and by-catch reduction of Tiger Flathead and Eastern School Whiting nets in the Danish seine fishery
2007/059	Assessing and managing interactions of protected and listed marine species with commercial fisheries in Western Australia
2008/036	Tactical Research Fund: Effectiveness of larger mesh size in reducing the capture of juvenile target species in select New South Wales ocean beach seine operations
2009/069	Tactical Research Fund: By-catch and prawn size selectivity of conventional diamond versus novel T90 trawl mesh

FRDC project team wins Victorian DPI Science Award

A research team (shown above) drawn from the Victorian Department of Primary Industries (DPI) and CSIRO's fish diseases section at the Australian Animal Health Laboratory (AAHL) has been awarded a 2010 Victorian DPI Science Award for research.

The Abalone Virus Project team's work was undertaken as part of FRDC project 2007/006 — Aquatic Animal Health Subprogram: Development of molecular diagnostic procedures for the detection and identification of herpes-like virus of abalone (*Haliotis* spp.).

The DPI Science Awards promote excellence in science and innovation within Victoria's regional communities and universities, as well as among DPI scientists.

The team won the Daniel McAlpine DPI Science Award, which is a $5000 reward for outstanding achievement in science, completed in the past three years, to an individual or team working within and collaborating with DPI and to be used for professional development.

Mark Crane, project leader at the AAHL Fish Diseases Laboratory, said the award was great recognition for the joint DPI Victoria–AAHL team.

Closing the gap

Project title — Competition to collaboration: Exploring co-management models for the Spencer Gulf Prawn Fishery (project 2007/025)

The Spencer Gulf Prawn Fishery (SGPF) participates in a co-management framework. A gap remains between fishers creating effective business outcomes and the legislative management framework adopted by government. The SGPF is striving for co-management to promote more effective, efficient and equitable management. A new management regime, built on strong partnership between government, industry and other key stakeholders such as the conservation sector, has the potential to integrate sustainability within a context of industry's business needs. This project explored and evaluated alternative management models for the SGPF.

The project outcomes have contributed to:

- constructive working relationships between three stakeholders (industry, government and the conservation sector)
- identification, documentation and evaluation of new SGPF management models
- development of a preferred fishery management model with discussion of implications and potential risks
- equipping fishers with skills and understanding to pursue alternative strategies to implement a new co-management model

» broader involvement and understanding within industry, government and the community of what is required for a commercial fishery to move towards a greater level of responsibility under a co-management model, while ensuring long-term sustainability of the resource

» Conservation Council of SA representation on the Spencer Gulf and West Coast Prawn Fishermen's Association Inc. research sub-committee (12-month trial).

For further information: 08 8682 4600, eo@prawnassociation.com.au

Populations heading south

Project title — Implications of environmental change and mortality estimates for sustaining fish populations in south coast estuaries (project 2006/044)

This project examined the implications of environmental change and mortality estimates for sustaining fish populations in south coast estuaries. Managers, scientists and fishers now have an understanding of the implications of the age and size compositions, growth and total mortality of Black Bream and Estuary Cobbler and their current stock status. In particular, the fisheries-independent data showed Estuary Cobbler abundance in Wilson Inlet, home to the species' largest commercial catch, has declined markedly over the past 20 years.

The project outcomes will help develop plans to sustain the commercial and/or recreational fisheries for Black Bream and Estuary Cobbler and maintain the estuary environments on Western Australia's south coast. Management plans can be based on sound fisheries-independent data on the species' biology and status and knowledge of their relationships with the environment. Managers can be confident closing certain areas within estuaries is an effective tool to protect Estuary Cobbler stocks. Implications of hyper-salinity for Black Bream estuary stocks are also now well understood by fishery managers and local communities. Fishers' and local community understanding of the study's significance and benefits was created through engagement with the research team during the study.

Additionally, two honours students and a PhD student have been trained in contemporary techniques in fisheries science and population and community ecology.

For further information: Ian Potter, i.potter@murdoch.edu.au


WILSON INLET

RD&E PROGRAM 2 — INDUSTRY

Demand for high-quality seafood is predicted to outstrip supply in both domestic and export markets. Similarly in the recreational and customary sectors the demand for high-quality fishing experiences will outstrip supply. There is a need to increase both the production and the value of the catch, and to take advantage of future opportunities. For the commercial sector, business profitability and international competitiveness is an overriding concern. This program aims to assist all sectors improve their overall performance. The following pages provide examples of the RD&E currently underway.

For a full listing of projects and expenditure for 2010–11 visit the FRDC website — **www.frdc.com.au**

Principal inputs

During 2010–11, $8.34 million (about 38.6 per cent of the total RD&E investment) was invested in RD&E activities within this program.

Summary of performance indicators for Program 2

Strategic challenges	Performance indicators	Targets	Achievements
Governance and regulatory systems	Development of processes and technologies to improve the efficiency of governance and regulatory systems for fishing and aquaculture. Development of methods to incorporate economic knowledge into fisheries management.	Two fisheries adopt co-management arrangements. One remote electronic tool developed and trialled.	The Australian Fisheries Management Authority (AFMA) through project **2008/045** Co-management in Commonwealth fisheries — is trialling various co-management options in the Northern Prawn and Great Australian Bight Trawl Fisheries as well as localised trials at Lakes Entrance Fisherman Cooperative relating the South East Scalefish and Shark Fishery. AFMA is trialling on-board electronic observing systems via project **2009/048** Electronic on board monitoring pilot project for the Eastern Tuna and Billfish Fishery and Pilbara Trawl Fishery. This will evaluate the utility and effectiveness of cameras as a compliance tool.
Resource access and allocation	Development of processes for efficient, transparent allocation of shares and associated property rights for all aquatic resource users.	Two new projects to look at allocation and access issues.	Two projects have been initiated during the year on resource access and allocation. They are: Project **2011/215** Resource access and resource allocation and **2010/317** Tactical Research Fund: maximising benefits of ITQ management in the Western Rocklobster fishery. In addition, work has been undertaken in Queensland in project **2009/211** Whose fish is it anyway? Investigation of co-management and self-governance solutions to local issues in Queensland's inshore fisheries looking at co-management that has raised questions regarding access and allocation.
Production, growth and profitability	Development of knowledge, processes and technologies to improve productivity and profitability of the commercial sectors. Development of knowledge and technologies in the areas of domestication and breeding genetics to support growth of the aquaculture sector.	One new product developed. New breeding program implemented.	Project **2010/212** Further development of commercialisation of Artemia culture has developed new feed options for aquaculture operators. This will significantly reduce the reliance on international supplies. FRDC has invested in the breeding program for Southern Bluefin Tuna. This program will continue with the Seafood CRC and Cleanseas Tuna looking to build towards commercial production in the future.

Summary of performance indicators for Program 2 (continued)

Strategic challenges	Performance indicators	Targets	Achievements
Consumers, products and markets	Development of knowledge and technologies to support the industry's development of new products. Development of knowledge and technologies to improve seafood value chains and support trade and market access.	Market research undertaken on one market. One supply chain mapped and recommendations made.	**2009/723** Seafood CRC: Analysis of product differentiation opportunities for Australian wild caught abalone in China — is a market development initiative that was launched in China by the 'wild harvest' sector of the Australian abalone industry. The $1.8 million research project was a partnership between the Abalone Council of Australia and the Seafood CRC (funded by the FRDC) and aims to develop a new and improved trade route and marketing strategy for abalone products into China. **2009/221** Tactical Research Fund: Improving the economic efficiency of the Southern Squid Jig Fishery (SSJF). The project mapped the supply chain for the SSJF and assessed factors affecting the economic viability of the SSJF for arrow squid in southern Australia and identified a broad range of practical solutions.
Value from aquatic resources	Development of knowledge, processes and technologies to understand and enhance the societal and personal values obtained from recreational and indigenous customary fishing. Development of knowledge regarding indigenous customary fishing practices, and processes to incorporate this knowledge into fisheries management.	Projects commenced and undertaken on increasing knowledge of the societal benefits of recreational and customary fishing and development of knowledge of customary fishing practices.	In partnership with DAFF and the Recreational Fishing Industry Development Strategy, the FRDC funded **2011/217** RFIDS: Identifying the health and well-being benefits of recreational fishing — is a project that will investigate the impact of recreational fishing on the health and well-being of Australians. Knowledge of aquatic organisms and catching methods of cultural significance is being gathered through project **2009/038** Aboriginal fisheries in New South Wales: Determining catch, cultural significance of species and traditional fishing knowledge needs. This project will build the capacity of indigenous people and develop ongoing research partnerships. The FRDC has also developed an indigenous reference group to assist it in prioritising indigenous RD&E needs, to ensure that research outputs are of relevance to indigenous Australians.

RD&E PROGRAM 2 — ACHIEVEMENTS AND ACTIVITIES

Puberty discovery in humans inspires aquaculture biotechnology

Project title — The advancement of reproductive development in Southern Bluefin Tuna using hormonal manipulations of kiss peptin, the gatekeeper of puberty; and

Atlantic Salmon Subprogram: Effect of temperature on reproductive development of maiden and repeat spawning Atlantic Salmon: understanding the basis for improved egg survival and quality (project 2008/745, 2008/217)

A recently discovered gene sequence as part of a FRDC funded project could benefit those aquaculture operations dealing with too-slow maturing species by providing a measure of control over the onset of puberty.

The era of sex hormone discoveries was thought to be over years ago. So the amazement was real when in 2003 scientists first realised that an endocrine system crucial for the onset of puberty had somehow — even in an era of fully sequenced genomes — been missed. The discovery was originally made in humans following research into why some individuals fail to undergo puberty. Changes in a novel 'receptor' were discovered that triggered a hunt for the mystery hormone responsible for binding to this molecule and relaying the puberty-inducing signals.

The hormone-encoding gene was subsequently isolated by scientists from the North American city of Hershey who named it after a chocolate — Kiss1. Only then was it realised that this tiny protein had previously surfaced on the radar of cancer researchers who knew it as metastatin, a molecule expressed by tumour cells that do not metastasise (or spread).

RESEARCHER ABIGAIL ELIZUR

While the discovery has created new therapeutic opportunities for humans it has also spawned a burst of research activity in fisheries, with implications for both aquaculture and conservation.

In a separate CRC project, researchers have isolated the Kiss genes from Southern Bluefin Tuna, a species that normally requires 12 years to reach sexual maturity. The goal is to test whether puberty can be induced in younger, smaller tuna using Kiss — an innovation that could ease broodstock husbandry costs and infrastructure constraints at the Clean Seas aquaculture facility.

The exciting thing about the new Kiss system is that it appears to regulate the balance between metabolic growth versus reproduction — that is, whether the individual invests in its own growth or on producing offspring. That has a number of important implications for aquaculture. Currently a GnRH (gonadotrophin releasing hormone) is used to overcome the tendency of captive conditions to inhibit spawning and reproduction in mature fish of other aquaculture species. GnRH stimulates the pituitary gland into releasing hormones that activate gonadal development. But Kiss, sits above GnRH in the control pathway.

That is the amazing thing, people did not know there was this other step above GnRH in the signalling pathway that links the brain, pituitary gland and gonads. Researchers are also learning that Kiss in some fish species is also involved in the response to photoperiods, so it is associated with seasonality, which has a role in reproduction and metabolic responses as well. Chemically, the active Kiss is a tiny protein — a peptide — just 10 amino acids in length so it is very easy to make in the laboratory.

For further information: Abigail Elizur, aelizur@usc.edu.au

New pot triggers octopus sustainability research

Project title — Innovative development of the *Octopus tetricus* fishery in Western Australia (project 2010/200)

As the allure of octopus extends its market reach from bait to a gourmet delicacy, a new approach to harvesting the species has initiated parallel research into the environmental effects of expanding production levels.

The emerging Western Australian Octopus Fishery (WAOF) is seeking to take advantage of diners' increasing appetite for octopus, with the development of a pot design that has the potential to lift production.

Established just over a decade ago in 1999, the WAOF recorded a modest catch-rate of about 30 tonnes from 2007 to 2009. But following introduction of the 'trigger pot', octopus catches increased to almost 100 tonnes by 2010.

The trigger pot lures in the octopus with a small plastic crab, illuminated by a LED light, connected to a trigger, which closes a trapdoor the moment a tentacle grasps the imitation prey.

Configured in cradles of three pots, this new gear type has also allowed fishers to harvest in deeper waters than was previously possible with standard shelter pots, which are set individually on long-lines and rely on the octopus making the pot their home.

The research project identified the trigger pot to be significantly more efficient than the conventional single shelter pot. The effectiveness of its design has prompted the Western Australian Department of Fisheries to investigate the WAOF's harvest potential to ensure long-term sustainability of the target species, *Octopus tetricus*.

With the fishery's climbing catch numbers attracting significant interest from both industry and research sectors, the FRDC is contributing $371,000 to help facilitate the new research project.

The research aims to provide new insights into the biology and populations dynamics of both *O. tetricus* and cephalopods in general.

The WAOF has been identified as one of Australia's few expanding fisheries and this research is a great opportunity for fishers, managers and scientists to combine their efforts and develop a fishery.

As one of the nation's youngest fisheries, the WAOF has the unique opportunity to get it right from the start. The research comes at a time when consumer perceptions of octopus are rapidly transforming from seeing it as bait to a delicacy.

The enthusiasm of the fishing community to contribute to the research is evident in the quality and quantity of the data researchers are receiving. Although cephalopods are ecologically and, increasingly, economically important, they have historically received minimal research attention.

The Western Australian Department of Fisheries is hoping to develop a blueprint over the next two years that provides Australia with one of the best-managed and most sustainable octopus fisheries in the world.

For further information: Anthony Hart, 08 9203 0163, anthony.hart@fish.wa.gov.au; Stephen Leporati, 08 9203 0133, stephen.leporati@fish.wa.gov.au

Research grades an automated approach

Project title — FRDC–DCCEE: Ensuring that the Australian oyster industry adapts to a changing climate — a natural resource and industry spatial information portal for knowledge action and informed adaptation frameworks (project 2010/534)

Research has helped develop a proof-of-concept project to show how automated oyster graders can be used to monitor oyster performance.

Automated graders are becoming popular among Australian oyster growers. These graders clean and sort oysters, but can also help growers to more accurately and consistently gauge oyster size and mortality rates, along with market quality and quantity.

This research tested whether batchfiles created and saved by the oyster grader could help growers to monitor oyster mortality and growth, and assess the performance of growing sites to aid management decisions. Batchfiles are basically computer files that contain summary information of the oysters being graded. Growers are not paying enough attention to these files, which include valuable information that could be used to help growers manage their businesses.

Growers tend to only use the graders towards the end of the cultivation cycle for marketable-sized oysters. However, these machines can accurately grade oysters with a minimum shell length of 30 to 40 millimetres, which allows growers to keep batches containing oysters that are similar in size together. This minimises competition among oysters, as larger specimens in a batch can 'hog' the shared resources, starving nearby oysters. By using the grader from earlier life stages, growers can exploit these machines for other purposes.

This project aimed to develop a system that would enable oyster growers to quantify rates of productivity and mortality, and characterise their oyster leases and cultivation systems.

Three questions that were posed by oyster growers were examined by using the graders' output batchfiles, which are routinely generated as batches of oysters are graded.

The first question was to identify whether more oysters grow in response to various cultivation methods, which involved comparing intertidal trays, Seapa oyster baskets set at an adjustable height and Seapa oyster baskets set in floating, long-line systems. With a variety of cultivation methods available, it can be difficult to decide on the best method in a certain area or for oysters of a particular size. In this project, three cultivation methods set at similar densities were compared and growth and mortalities were followed over nine months.

The second question was to identify how often growers should grade their stock. An important factor in optimising the cultivation process is the number of times per year that oysters are graded, which allows growers to remove dead oysters, cull over-catch and conduct health-checks.

As grading with automated machines has become easier and quicker, more frequent handling is now possible. However, this approach incurs high operational costs, such as fuel and operational resources, and different handling frequencies may have adverse effects on oyster performance.

The third question was to determine what stocking density results in the best oyster performance. Quantifying optimal stocking densities is complicated because it depends on the site characteristics for growing oysters, including the availability of food and nutrients, variable growth rates under different cultivation methods, and geographical and seasonal changes in environmental and physical characteristics of waterways. Oyster growth and condition appears to vary significantly across growing estuaries/bays and across cultivation areas within an estuary/bay.

Having a good understanding of capacity and performance of these areas, such as oyster leases, will assist growers in managing their cultivation space in a more sustainable and productive way.

Useful information can be derived from subsequent batchfiles (from one grade to the next), as long as the methodology remains consistent. In most cases, oyster growers have a good understanding of their systems, but growers could benefit from monitoring and quantifying oyster performance and mortality. These practices can help growers characterise growing sites, and identify unusual mortalities, lack of growth and explore new management approaches. In addition, the information gained could be correlated with climatological or environmental data to identify proxies for improved oyster production.

For further information: Ana Rubio, 0427 285 999, anarubio.zuazo@gmail.com

Tuna research nets award

FRDC funding of the Australian Seafood CRC, has been rewarded with the organisation taking out awards this year for work on Southern Bluefin Tuna propagation.

The Seafood CRC received an award for Excellence in Innovation from the CRC Association at an Alice Springs presentation ceremony, before winning a second award for Excellence in Research Collaboration at the South Australian Science Excellence Awards in Adelaide in August 2010.

The accolades both acknowledged a series of research developments that have enabled breeding and rearing of the prized Southern Bluefin Tuna (SBT) in land-based hatcheries. The commercial development of SBT aquaculture by Clean Seas Tuna is the result of a major collaborative scientific effort.

Over the past three years, scientists from more than 15 institutes around the world and across Australia have worked together to deliver this outcome for the seafood industry.

The research, based in Arno Bay, Adelaide, Port Stephens, Hobart, Darwin and the Sunshine Coast, is recognised as ground-breaking by aquaculture businesses all over the world and provides a major leap towards commercialisation.

Award for Western Australian microalgae venture

The FRDC-supported microalgae project in Western Australia — the Hutt Lagoon WA Artemia project — has won the Developing the Economy Award in the 2010 Western Australian Premier's Awards.

The project — a joint effort between the FRDC, the Western Australian Department of Fisheries and Cognis Australia — overcame considerable technical issues in the company's quest to produce natural carotenoids to help meet the growing world demand for high-quality beta carotene. One of these issues was controlling the brine shrimp, Artemia, which feed on the microalgae and were threatening the venture's viability.

Researchers from the Department of Fisheries and Cognis found a way to safely filter out the Artemia, protecting the valuable microalgae and at the same time creating a whole new enterprise in the harvest and supply of Artemia, which are prized as high-quality food in the aquaculture and aquarium industries.

The award specifically recognised how the project provided opportunities to stimulate the local economy and support regional employment and growth.

The five-year research project resulted in the development of a special facility for farming Artemia to complement Cognis' microalgae plant at Port Gregory — turning a problem into an opportunity.

The joint project is expected to benefit regional businesses and position Western Australia as a leading supplier of an integral food source for growing juvenile fish and shrimp for aquaculture.

RESEARCHER SAGIV KOLKOVSKI

Pale by comparison

Project title — Silver Warehou value adding (project 2007/209)

At the project's initiation, Silver Warehou (*Seriolla punctata*) had one of the highest global total allowable catches (3227 tonnes in 1998) in the Southern and Eastern Scalefish and Shark Fishery and was one of five main species captured in the fishery that was not classified as overfished. However, the flesh of Silver Warehou turns an off-white colour when exposed to air, reducing consumer demand, and many hundreds of tonnes have been discarded at sea due to lack of markets.

Through this project, McLaughlin Consolidated was able to develop a method of bulk handling, processing and packaging that preserved the flesh's white appearance and was appealing to consumers. Local interest was very strong and the fish sold reasonably quickly. Local wholesalers of seafood products have begun to copy the method. The knowledge that Silver Warehou can be bulk frozen and processed in this manner has resulted in an overall increase in the base-level price that this species achieves on the market floor.

For further information: Malcolm McLaughlin, mclaughlin_consolfish@yahoo.com

Just a small serve

Project title — Microdiets commercialisation (project 2004/258)

This project focused on developing formulated diets for marine fish larvae, targeting more physical aspects of microdiets such as feeding methods, feed availability and particle recognition. A commercially ready microdiet formulation was developed that achieved better ingestion, digestion and survival for Yellowtail Kingfish than other commercially available diets. Two manufacturers of aquaculture feeds have shown interest in the formulations.

A previously developed world-first automatic microdiet dispenser was further developed to commercial standards. Handmade in the past, the feeders were redesigned to be produced in quantity and a touch-screen controller developed, allowing individual control of each feeder. The feeding systems have been sold to research and commercial hatcheries around the world, with reports of substantial cost savings through the more efficient use of microdiets and labour.

For further information: Sagiv Kolkovski, Western Australian Department of Fisheries, 08 9203 0111

Getting the low down on biofuel

Project title — Biofuel for Rocklobster Industry (project 2007/241)

The major outcome of this feasibility study is a framework that will enable the Western Rocklobster industry to make informed decisions about using biodiesel as a fuel source for its boats. The project examined:

- Western Rocklobster industry fuel use, including distribution, infrastructure and logistics
- biofuel production possibilities for the industry, including sources of raw materials, by-product opportunities and logistics of manufacture, storage and distribution
- technical and economic advantages/disadvantages of biofuel for the industry, including appropriate fuel standards and engine warranty issues
- potential business cases, possible business structures and sources of capital for the development of a biofuel industry serving the industry.

For further information: William Ryan, Kondinin Group, 08 9478 3343

RD&E PROGRAM 3 — COMMUNITIES

The fishing industry forms an integral part of many rural and regional communities. For the long-term sustainability of the fishing industry, it is important the interactions and co-dependence between the community and industry are understood.

For a full listing of projects and expenditure for 2010–11 visit the FRDC website — **www.frdc.com.au**

Principal inputs

During 2010–11, $0.16 million (about 0.7 per cent of the FRDC's RD&E investment) was invested in RD&E activities within this program.

Summary of performance indicators for Program 3

Strategic challenge	Performance indicators	Target	Achievement
Resilient and supportive communities	Development of knowledge to better inform the community's perceptions of the industry and to increase support for the industry. Development of knowledge that can help the industry to adapt to change.	One report published.	Project **2009/054** Tactical Research Fund: Social Science Research Coordination Program — a socio-economic evaluation of the commercial fishing industry in the Ballina, Clarence and Coffs Harbour regions was completed. The report provides a picture of the value that the commercial fishing sector delivers to the community of the mid north coast of New South Wales.

RD&E PROGRAM 3 — ACHIEVEMENTS AND ACTIVITIES

Study profiles eastern gamefishers

Project title — A regional socioeconomic evaluation of gamefishing in eastern Australia (project 2010/050)

A new profile of the eastern Australian gamefishing sector is emerging from a study exploring the activities of fishers, businesses and community members.

A series of surveys are central to the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) study that aims to evaluate the gamefishing sector's economic and social significance. The FRDC is contributing funding to the study.

By the end of the project researchers will have distributed the eight-page surveys in Bermagui and Port Stephens in New South Wales, and Mooloolaba in Queensland. The groups targeted in these areas include gamefishers competing in tournaments and those who fish independently of competitions, along with businesses and community members.

Having an idea of the value of fishing activities helps government decide how to allocate resources for efforts such as research, management and monitoring.

The Commonwealth Government is responsible for managing the highly migratory tunas and billfish, and these tend to be the targets of gamefishing. But state governments are responsible for managing recreational gamefishers, so there needs to be cooperation between jurisdictions.

The study is also assessing the social value of the sector because regional communities may depend on gamefishing activities that can be affected by fisheries management decisions. About 1000 surveys have been distributed to fishers participating in Bermagui's Blue Water Classic, Port Stephens' Interclub Gamefishing Tournament and Mooloolaba's Billfish Bonanza.

Initial observations highlight how much gamefishing is going on and how important it is to small communities. During a competition off Port Stephens researchers counted almost 200 gamefishing boats in just one hour.

More than 300 surveys were returned to researchers in the first phase and support from gamefishing organisations and tournament organisers helped secure a substantial body of data for the study.

To quantify the economic value of the sector the ABARES study is using the travelcost method, which examines the value people attribute to gamefishing through their expenditure, such as fuel costs for the distances travelled by car and boat.

It is expected the study findings will be released in December 2011.

For further information: Peter Ward, 02 6272 4163, peter.ward@abares.gov.au

Education program links students with fishers

Project title — Tactical Research Fund: Seafood industry partnerships in schools — program pilot, Tasmania (project 2009/328)

A schools-based pilot project underway in Tasmania has been established by OceanWatch Australia and the Tasmanian Seafood Industry Council and Department of Education.

The project comprises two program streams, including 'Adopt a Fishing Boat' and 'Adopt a Marine Farm'. Both these streams involve creating partnerships between industry members and school classes from Year 1 to Year 10.

The project enables students to learn that fisheries are an important part of their community, and gain an understanding of the industry's steps to improve sustainability and meet a variety of environmental challenges.

The FRDC funded project is also expected to improve knowledge of the fisheries industry among older students and introduce them to career options within the sector.

By partnering with a class, fishers and marine farmers will help to educate students about the marine environment, the complexities of using marine resources and the daily experience of fishers and marine farmers.

The first 'Adopt a Fishing Boat' partnership in 2009 was developed between fisher Bryan Denny and a Year 4 class at Lauderdale Primary School in southern Tasmania.

As an abalone diver and rocklobster fisher, Bryan Denny brought an aluminium dinghy and scuba diving gear into the classroom to demonstrate use of the equipment he relies on. The students were able to ask Bryan questions about target catch, fishing location, occupational health and safety, accessing marine resources, logistics and career opportunities.

Bryan Denny also engaged with the Year 4 students by sending regular fishing updates from onboard his fishing vessel and providing a navigational chart that allowed the class to map his progress in a science journal.

Industry members and educators interested in 'Adopt a Fishing Boat' or 'Adopt a Marine Farm', are urged to contact Jennifer Hemer.

For further information: Jennifer Hemer, 0428 026 356, jennifer@oceanwatch.org.au, www.oceanwatch.org.au

The inside story

Project title — Inshore fishery socioeconomics (project 2007/048)

This project's outputs include a detailed socioeconomic baseline for commercial, charter and recreational fishers and seafood consumers within the Queensland East Coast Inshore Finfish Fishery (ECIFF), prior to management change. This baseline will aid assessment of the impacts of management change on the fishery stakeholders (a Fisheries Queensland priority), and assessment of the performance of the ECIFF Management Plan (a Department of the Environment, Water, Heritage and the Arts requirement).

The project provides a suite of the most important and useable socioeconomic indicators for long-term monitoring of ECIFF stakeholders. The indicators will be incorporated within the fishery performance measurement system, adding to the ecological indicators and meeting the goals of ecologically sustainable development. The socioeconomic indicators are fishery and sector specific, however the project adjusted and tested a process for selecting indicators, which can be applied to other case studies.

For further information: Renae Tobin, James Cook University, 07 4781 5196

RD&E PROGRAM 4 — PEOPLE DEVELOPMENT

People are the cornerstone of any industry. For the seafood industry, it is vital that it continues to attract and develop people who will take the industry forward towards a sustainable and prosperous future. The FRDC has taken a strong role in supporting people development, from employing and developing young researchers, through to facilitating access to leadership development for all levels of industry.

Projects funded under Program 4 primarily address the FRDC's People development themes. However, people development underpins all FRDC's programs. For a full listing of projects and expenditure for 2010–11 visit — **www.frdc.com.au**

Principal inputs

During 2010–11, $1.90 million (about 8.8 per cent of the FRDC's RD&E investment) was invested in RD&E activities within this program.

Summary of performance indicators for Program 4

Strategic challenges	Performance indicators	Targets	Achievements
Leadership development	Provision of knowledge and opportunities to develop leadership skills and diversity across all sectors of the industry and across aligned stakeholder groups, including researchers and resource managers. Development of knowledge, skills and processes to support industry to engage in debate, adapt to change, and move toward co-management of fisheries.	Seventeen participants complete leadership courses.	Seventeen stakeholders (pictured opposite) from across Australia participated in the National Seafood Industry Leadership Program. Participants came from a variety of backgrounds and industry sectors. For more information see story on page 56.
Workforce development	Development of knowledge and tools to meet future workforce and skill needs.	One health and safety project funded through Collaborative Partnership for Farming and Fishing Health and Safety.	Two projects were undertaken with the Collaborative Partnership for Farming and Fishing Health and Safety.
Innovation skills	Mechanisms and tools to attract and nurture RD&E capability in priority areas. Opportunities to acquire insights, knowledge and skills to create innovative, market-driven enterprises and organisations.	Fifteen participants complete bursary program.	During the course of the year 15 bursaries were awarded to stakeholders from across Australia. A number are outlined on the following pages.

RD&E PROGRAM 4 — ACHIEVEMENTS AND ACTIVITIES

The FRDC is continuing to invest in the future of the Australian seafood industry by focusing on its most valuable resource — its people.

Operating through its People development program, the FRDC is investing in a range of RD&E activities to address the three program themes — leadership, workforce development, innovation skills.

The Corporation's investment is being delivered through a range of self-initiated activities, including personal and professional development opportunities, bursaries, conferences, awards, commissioned work and tenders. Projects are also regularly funded through the FRDC's annual open call for RD&E applications and its tactical research fund.

In 2010–11, the People development program funded the following activities.

Development scholarships and bursaries

The FRDC People development program offered a suite of programs, scholarships and bursaries to help build leadership, skills, networks and knowledge within the Australian seafood industry. During the year the FRDC announced a number of scholarships and bursaries, which included the following:

- FRDC Governance Scholarship for Women — Odette Lennane (Tasmanian Seafood Industry Council) and Katie Phillis (Western Australian Fishing Industry Council)
- FRDC Emerging Leader Governance Scholarship — Martin Exel (Commonwealth Fisheries Association) and Paul Watson (South Australian Sardine Industry Association)
- International travel bursaries — Abigail Elizur, Adam Main, Gretta Pecl
- FRDC/Women's Industry Network Seafood Community Professional Development Scholarship — Karen Collard
- World recreational fishing conference bursaries — Russell Conway, John Douglas, Chad Lunow, Andrew Rowland
- Science and Innovation Awards — Leigh Atkinson

Nuffield scholarship

Shellfish cultivation techniques

Current hatchery manager for Spring Bay Seafood Pty Ltd, Tasmanian shellfish producer Ian Duthie believes that in addition to the well-established oyster industry, there is great potential for the farming of mussels, clams and scallops in Australia if technical issues related to hatchery cultivation and grow-out can be overcome.

"There is a significant opportunity for the future of the Australian shellfish industry. There is a strong market for clams already, although production is currently limited by the available fishery," Ian says. With clam aquaculture well established in other parts of the world, Ian was keen to tap into that knowledge.

Following the six week Global Focus Program that Nuffield offers, scholars go their own way to investigate specific study areas. Ian visited aquaculture operations and research facilities in North America, Canada, Spain, Italy, France, Netherlands and the United Kingdom.

International travel bursary

Global summit tackles fisheries future

OceanWatch Australia Executive Officer Lowri Pryce (pictured) joined the World Ocean Council's Sustainable Oceans Summit in Belfast, Northern Ireland, as part of a 2010 FRDC international travel bursary.

The 2010 Sustainable Ocean Summit was the first international cross-sectoral ocean sustainability conference for industry. Organised by the World Ocean Council — the only international business leadership alliance on ocean stewardship — it brought together a wide range of industries that use marine space and resources. Shipping, oil and gas, fisheries, aquaculture, ports, mining, insurance, renewable offshore energy, tourism, dredging and marine technology industries were among those represented.

Through the FRDC international travel bursary, OceanWatch Australia (OWA) also had a presence. This has allowed OWA to stay abreast of best practice developments for improving the sustainability of the Australian seafood industry and discover ways to improve the reporting of its achievements.

The main benefits of the bursary outcomes — an enhanced ability of the OWA team to engage the community in 'telling the story' of the seafood industry's positive environmental performance — is expected to be evident through OWA work in the SeaNet, Tide to Table and the Seafood Industry Partnerships in Schools programs.

Leadership programs to bolster industry

Project title — Australian Rural Leadership Program (project 2008/308)

Samara Miller hopes the Australian Rural Leadership Program (ARLP) she has joined will provide her with a better understanding of how to support the people she works with.

As Executive Officer of the Abalone Industry Association of South Australia and the Seafood Training Centre of Excellence, as well as being an Eyre Peninsula Natural Resource Management community board member, she also hopes her involvement in the program will have a ripple effect.

There are challenges facing regional Australia and there is a need to support and develop primary industries.

Samara is one of two FRDC-sponsored participants, along with Tasmanian Association for Recreational Fishing (TARFish) Chief Executive Officer Mark Nikolai, in the 18th ARLP cycle.

Comprising an influential network of more than 500 graduates from a range of rural industries, the 17-month program includes challenge-based education, workshops, discussion and overseas field study.

Samara was thrilled to be selected for the program and acknowledged the FRDC for their investment.

For further information: Australian Rural Leadership Foundation, 02 6281 0680, info@rural-leaders.com.au

Looking for the next generation of industry leadership

Project title — National Seafood Industry Leadership Program: 2009–11 (project 2009/310)

The National Seafood Industry Leadership Program (NSILP) and its 2011 cycle remains the only national, industry-specific leadership program for the Australian fishing industry, thanks to FRDC funding and support.

Now in its 11th year, the NSILP, with sponsorship from Sydney Fish Market and delivery by Rural Training Initiatives, develops skills at three levels: personal, business and national industry.

In a recent NSILP development, the 'Mile in My Shoes' program now enables participants to share time in each other's workplace, and last year this involved Tasmanian oyster farmer Ben Cameron and Tasmanian Seafood Industry Council project manager Sarah Reinhart.

Seventeen leaders (shown on page 52) from across the seafood industry graduated from the six-month program in 2010. This year, participants will engage in developing and implementing a strategic vision for the Australian seafood industry. They will also learn techniques in effective conflict resolution, meeting management, team building, media training and communications.

The NSILP will be rolled out in 2011 through three residential sessions in Hobart, Sydney and Canberra, which will be held in March, June and September respectively.

2011 National Seafood Industry Leadership Program participants

Name	Organisation/company	State/territory
Shane Geary	Coffs Harbour Fishermans Co-operative	New South Wales
Alistair Dick	Pacific Reef Fisheries	Queensland
Eric Perez	Queensland Seafood Industry Association	Queensland
Peter Sturman	Prawn fisher	South Australia
Fraser Perry	Recreational Fishing Alliance of NSW	New South Wales
Claire Webber	Australian Southern Bluefin Tuna Association	South Australia
Jamie Damaso	Department of Resources, NT Fisheries	Northern Territory
Ewan McAsh	McAsh Oysters	New South Wales
Ashley Oliver	Western Australian Fishing Industry Council	Western Australia
Michelle Haase	Ocean Watch Australia	Queensland
Joshua Fielding	Australian Fisheries Management Authority	Australian Capital Territory
Phil Bolton	Industry & Investment NSW	New South Wales
Zachary McGee	Spring Bay Seafoods	Tasmania
Nigel Cocks	Sydney Fish Market	New South Wales
Karen Collard Fisher	Queensland Seafood Industry Association	Queensland
William Bowman	Tasmanian Seafoods	Northern Territory
Anthony Mezic	Spencer Gulf & West Coast Prawn Fisherman's Association Inc.	South Australia

For further information: Jill Briggs, 02 6035 7284, jill@ruraltraininginitiatives.com.au, www.ruraltraininginitiatives.com.au

Forum helps establish indigenous fishers' priorities

Project title — Shaping advice for Indigenous fishing and aquaculture RD&E within the national strategy (project 2010/401)

The FRDC has moved a step closer to developing a formal RD&E plan for indigenous Australians following a forum in Cairns in March. Torres Strait Islander and Aboriginal people with an interest in fishing and seafood attended the forum to help identify key RD&E needs for the indigenous sector.

In the past, indigenous communities have had little input into defining research issues and priorities, and the forum was the beginning of a new approach that would allow them to define their own needs.

The connection indigenous peoples have with the environment, including fisheries, goes beyond the sectoral approach commonly used to define research priorities. It is a subset of everything they do and identifying the right research and development can help people gain the most they can from their interaction with fisheries, whether that is on a customary or subsistence basis, a commercial basis, or in some other way.

Fisheries-related issues commonly raised among indigenous communities include the possibility of establishing businesses that meet cultural needs and that also provide employment and income to communities.

At the moment indigenous rights are recognised for spiritual or cultural reasons, but they do not allow for commercial activity. While recognising a potential opportunity, these communities also recognise that they do not have the skills needed to run a commercial prawn operation for instance as they do not have the fishing, processing or marketing skills.

Another issue is the recognition and incorporation of cultural fishing practices into fisheries management practices, and allowing the two approaches to work together.

The forum has helped to establish a network among participating members of the indigenous communities and others involved in fisheries research. A formal reference group has now been set up to generate and refine ideas that could be developed into an action plan. It is expected the reference group will report back to a second meeting of the forum.

The forum brought together Torres Strait Islander and Aboriginal participants with experience and expertise from all Australian jurisdictions. In addition, a number of non-indigenous people with specific interests or skills were given an opportunity to attend. The forum proved extremely successful in identifying and documenting a wide range of issues. In total there were 35 attendees.

The 11 key needs for Aboriginal and Torres Strait Islander people identified by the forum were that RD&E:

- seeks to enhance Aboriginal and Torres Strait Islander recognition
- resolves issues around access
- improves governance and provides pathways to better representation and management models
- provides resourcing options in a user friendly and culturally appropriate manner
- leads to improved capacity that empowers Aboriginal and Torres Strait Islander people
- develops the capacity of agencies to recognise and utilise Aboriginal and Torres Strait Islander expertise, processes and knowledge
- recognises customary rights and knowledge, including processes to incorporate traditional fishing knowledge and traditional fisheries management
- improves knowledge and awareness of impacts on the environment and traditional harvest
- provides management arrangements that lead to improved access, protection and incorporation of traditional fishing knowledge and traditional fisheries management input to processes
- leads to an increased value for Aboriginal and Torres Strait Islander people (economic, social, cultural, trade, health, environmental)
- leads to benefit sharing.

For further information: Chris Calogeras, 0401 692 601, calogeras@iinet.net. au

Want a job?

Project title — Rocklobster employment web page (project 2007/307)

The Western Rocklobster industry is experiencing a labour shortage, with many fishers experiencing difficulty obtaining skilled crew. To address these issues, the Western Rock Lobster Council (WRLC) developed a job search page on its website.

The WRLC employment website was relaunched before the 2008–09 commercial season. Design input from the project steering committee and WRLC Board improved the website functionality and it has since been linked to another popular fishing industry website, Crayzone. Contact with potential employees from TAFE colleges has also been made. Unfortunately the employment website was not as successful as hoped in placing skilled workers in the Western Rocklobster Fishery. Lessons learnt from this initiative will be used to compile a more extensive national seafood industry employment website.

For further information: Western Rock Lobster Council, 08 9340 5002

RD&E PROGRAM 5 — EXTENSION AND ADOPTION

Knowledge arising from RD&E will be used and transformed into appropriate mediums to support stakeholder decision making, assist with achieving their objectives, and inform the broader community.

For a full listing of projects and expenditure for 2010–11 visit the FRDC website — **www.frdc.com.au**

Principal inputs

During 2010–11, $1.02 million (about 4.7 per cent of the FRDC's RD&E investment) was invested in RD&E activities within this program.

Summary of performance indicators for Program 5

Strategic challenge	Performance indicators	Target	Achievement
Extension and adoption	Have timely access to RD&E project outputs and other knowledge. Be part of appropriate knowledge management systems that build extension and adoption capacity.	Increase in rates of adoption.	As part of the evaluation work undertaken by the FRDC in the past three years, measurement of extension and rates of adoption have been estimated. In the following year further evaluation work will be carried out that will provide a measure of the rates of adoption.

RD&E PROGRAM 5 — ACHIEVEMENTS AND ACTIVITIES

As part of the consultation in developing the FRDC's RD&E Plan 2010–2015, industry identified extension and adoption (E&A) as a high priority. As a result, the Corporation has focused on developing a new approach towards funding E&A activities and during 2010–11 will start building the framework that will enable the best possible delivery of E&A activities for the fishing industry.

A better future based on using what we have learnt

Project title — Development of National Extension and Adoption Framework for Fishing and Aquaculture (project 2010/321)

Extension and adoption activities never seem to receive the same level of respect as research, but the FRDC is planning to change that with a renewed focus on extension activities. Industry adoption is, after all, where research begins to gain value.

The FRDC has set itself a goal in its RD&E Plan 2010–2015 to invest about 10 per cent of its annual budget to ensure the results of projects reach industry and can be translated into positive outcomes.

At its simplest, it is getting the right information to the right people at the right time. But this is only part of the story. It is also about converting a project output (whether it be technology, data, knowledge) to gain an outcome (such as catching fish more efficiently).

However it is not quite that easy. For a start, not everyone is in the same place regarding practice. One fisher's daily practice may be the aspiration of another, requiring radical change to get there. Likewise, timing may be an issue. For example, a fisher who buys a new net or engine may not explore new options until that net or engine needs replacing.

Second, we all learn differently, so the most effective learning strategies will also differ. For example, some people like to learn via a 'one on one' approach, with an extension officer sitting on the boat explaining and showing what works and why. Others prefer to learn through school or group-learning activities, such as TAFE or university courses. Then there are those people who use a variety of means — surfing the web, asking other fishers — and then speak to an expert before doing anything.

And third, the outputs and objectives from individual projects differ. For example, the research may be targeted directly towards achieving a change in management, so will require extension with fisheries managers and may be used as part of a suite of research to make a decision. This will require very different extension methods compared to encouraging a fisher or aquaculturist to use a new piece of technology.

Development of a National Fisheries and Aquaculture E&A strategy

On 23 April 2010, the Primary Industries Ministerial Council approved the National Strategy for Fishing and Aquaculture Research, Development and Extension. This strategy establishes the future direction for improving the focus, efficiency and effectiveness of RD&E to support Australia's fishing and aquaculture industry.

As part of the strategy, three working groups were established to work on key areas and to develop specific activity plans. These three groups are the National Priorities Forum, Research Networks and Extension and Adoption (E&A). The FRDC is the secretariat for both the priorities forum and the E&A group.

To develop the E&A strategy a working group made up of members of industry councils/sectors, fisheries management agencies, and extension and education providers and was formed in October 2010.

The group met in October 2010 and March 2011 and has identified several key issues to address including:

» agreement on the need for more focus and resourcing of E&A activities from all stakeholders

» the need for better coordination of E&A between all fisheries stakeholders

» the need for better integration of extension into research and development projects.

The working group is also considering how to assess whether Australia actually does fisheries and aquaculture extension well, and how to define successful adoption.

Working group members have assessed past projects against a simple framework and found that the most successful extension begins to share the results when a research project is underway and continues once it is complete. Projects assessed included both wild and aquaculture fisheries.

Future directions

The next step for the working group is to develop a plan for extension and adoption for the fishing and aquaculture industries. The plan will outline the core priorities, issues and areas of activity that need to be addressed. The plan will then go to the national priorities forum for discussion and endorsement.

For further information: Peter Horvat, 02 6285 0414, peter.horvat@frdc.com.au

Comic draws in indigenous children

Project title — Tactical Research Fund: Indigenous turtle and dugong conservation comic (project 2008/307)

A comic about turtles and dugongs is crossing the cultural divide to pass on important sustainability messages to Torres Strait Islander children.

Drawing on his own broad education growing up on Erub Island in the Torres Strait — which ranged from the traditional (stories, dance, art and hands-on experience, including learning to hunt turtles and dugong) to gaining tertiary qualifications — project leader Stan Lui joined traditional indigenous knowledge with modern conservation messages in the resulting comic book, *Turtle Trails*.

As a participant in the 2008 Advance in Seafood Leadership program, Stan chose to work on a project that would convey information about the life cycle and sustainable hunting of turtles and dugong to Torres Strait Islander children. With many young minds from the Torres Strait schooled 'down south' on the mainland, away from their traditional culture and in the thick of North American and Australian popular culture, he saw a need to pass on to them messages of sustainability in relation to traditional hunting.

The comic format is a marriage of the old and new and was seen as the right choice to convey important conservation messages to young people. The resulting comic book, *Turtle Trails*, is not just about the knowledge young men must grasp to be good hunters — the need to conserve as well as catch turtles and dugong — it is about the interconnectedness of the people and the animals. The story also explores the many impacts on turtle and dugong populations, both natural (the dangers of eels, sea eagles and sharks) and unnatural (the effects of an oil-tanker spill) and the comic has been well received by Torres Strait readers.

To develop the comic, two workshops were run in the Torres Strait to get initial input for the story (including from hunters), sketched the characters, developed the story and produced the illustrations. The project team then worked together to refine the storyline and characters, a process that took more than a year.

The final product is both information-rich and colourful, effortlessly balancing science with indigenous spirituality. At the heart of the book are the words of Uncle George, a Torres Strait elder. "Today, young fellas chasing 'em down," he says. "No culture, no law, no discipline. We go on like that, then no turtle or dugong." And with these words he encourages the young men to talk about a plan for managing the fishery: a modern way of incorporating issues of sustainability, animal biology and the environment.

"Our ancestors hunted turtle and dugong with patience and traditional law," continues the character of Uncle George. "We know their life cycle. We know the herd leader. We never kill him because he will bring them back to us next year."

Stan Lui explains that Torres Strait Islanders are concerned about the sustainability of turtles and dugong. They are concerned about the next generation — what will be left for them and their children? It's not about taking away people's right to hunt, we're all concerned — including AFMA, DAFF, the FRDC and the Torres Strait Regional Authority — and turtles and dugong have value to everyone.

For further information: Stan Lui, 02 6225 548, stan.lui@afma.gov.au

INTERNATIONAL RESEARCH BROUGHT HOME

There is a growing bank of international knowledge that is being generated which has direct benefits for the Australian fishing industry but also the community at large. In an endeavour to tap into this research the FRDC funded two extension bursaries to capture some of this knowledge and bring it home.

Throttle control for fuel savings

Project title — Extension and adoption: E-Fishing Conference (project 2010/308)

FRDC sent Martin Bowerman and Stuart Richey to the 1st International Symposium on Fishing Vessel Energy Efficiency (E-Fishing 2010) to find out what the world was doing and then report back to the Australian fishers.

International researchers who are working to improve the fishing industry's fuel-efficiency are recommending a more prudent use of the throttle.

More than 100 researchers involved in research on ways to save energy in fishing operations gathered in Vigo, Spain, earlier this year to hear the latest developments on vessel energy efficiency.

Thirty speakers from a dozen countries addressed topics ranging from energy audits and water flows around trawler hulls, to magnet motors and sky sails, at the symposium.

The overarching message conveyed to delegates was that while there may be promising innovations on the horizon, for now the best fuel-saving device is also the oldest: a skipper's control of the throttle.

This advice took into account that many of the world's fishing fleets face higher costs and lower prices for their catch, along with more restrictions on where they can fish and how much they catch, and that consequently fewer new vessels are being built.

Conference speakers encouraged industry members to focus on how existing vessels can be made more fuel efficient, as well as looking to suitable designs for the next generation of boats.

Some presentations highlighted how restrictions on vessel length forced inefficiency on fishers. Length restrictions, familiar to Australian fishers, are used by management agencies in several countries to curb fishing efforts.

The theme of fuel inefficiencies generated by vessel length limits was continued by naval architect Christian Knapp, who presented a paper on a new project focused on improving the energy efficiency of the existing fishing fleet. Initially, they are mapping energy consumption patterns of the fleet by collecting data from seven representative vessels, which have been fitted with fuel meters, weather stations and motion sensors.

Christian Knapp said the larger, longer-term challenge is to find ways to make machinery systems that are more energy efficient and not so dependent on fossil fuels. He said hybrid systems, fuel cells, wind power and solar energy are all technologies that need exploration and further development before any significant practical applications are likely.

For further information: A factsheet and reports from the 1st International Symposium on Fishing Vessel Energy Efficiency (E-Fishing 2010) are available at www.frdc.com.au

Symposium measures our changing oceans

Project title — Extension and adoption: Climate change effects on fish and fisheries — forecasting impacts, assessing ecosystem responses, and evaluating management strategies (project 2010/309)

Presentations at the symposium included molecular genetics and population dynamics modelling to look at adaptation, but also to disentangle the influence of fisheries and climate variation in fish stock dynamics.

The symposium provided an extensive overview of the impacts that have been observed on marine ecosystems as a result of a changing environment. Now it is up to industry groups, managers, scientists and policymakers to set strategies to prepare for anticipated impacts on fish and fisheries.

Ocean species have evolved to be well adapted to the natural range of conditions that they normally experience. As such they can usually adapt to moderate changes in the environment. The problem is that the changing environment is deviating beyond the normal range and species are now experiencing new extremes.

Additional effects (for example, warming plus acidification or changes in salinity and warming) have the potential to overwhelm key species and whole ecosystems. If overall environmental conditions exceed the range of optimal values, acclimatisation fails, mortality risks increase, fitness reduces and communities of species decline or become locally extinct.

These temperature-related changes have serious implications for marine organisms and fisheries. For instance, thermal stratification will change the quantity and biodiversity of microalgae species (or phytoplankton) as a result of modified nutrient inputs from the deep ocean. This can structurally change the base of foodwebs, with knock-on effects for higher trophic levels.

A result is that the distribution and migration pattern of certain species is also changing. As the oceans warm, there has been a general migration towards the poles by pelagic fish, larvae and passive drifters such as jellyfish. A 30 kilometre northward shift has been observed in the distribution of groundfish species in the eastern Bering Sea and an associated shift in the transition zone between Arctic and sub-Arctic communities. Likewise, the anchovies south of Taiwan are also gradually being replaced by anchovy species from warmer waters coming from northern Australia.

Other species are adapting to rising temperatures, causing reduced developmental times (for example, quicker larval growth or earlier spawning). This has resulted in timing mismatches between larval development and availability of suitable food. For instance, the Saffron Cod (*Eleginus gracilis*) spawns under sea ice. Warmer water affects the sea ice conditions and therefore when the species spawns. This is believed to be the cause of catch variations in areas such as the Japan Sea.

All these changes have major implications for the fisher. It changes where fish are, when they spawn and when and what they feed on.

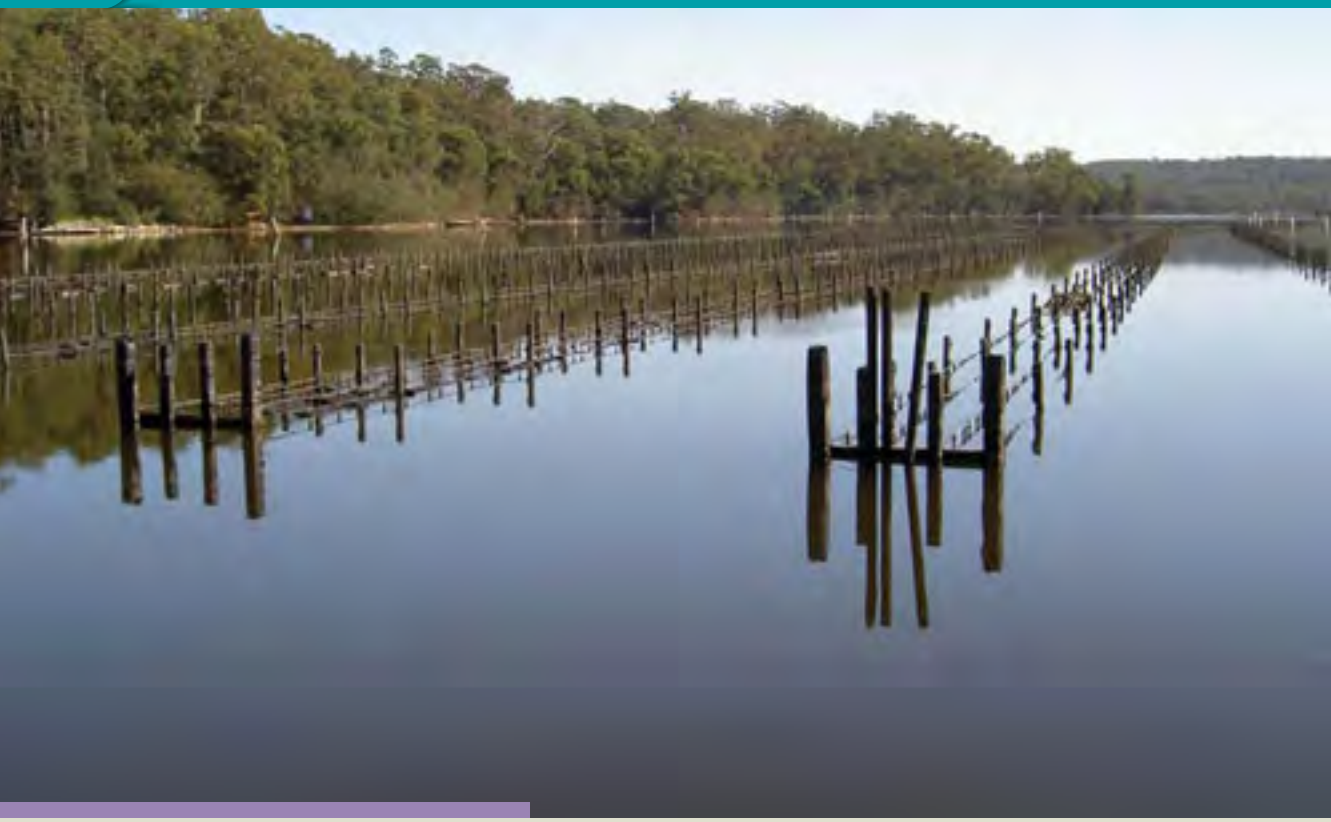
Commercial species, such as sole and flounder in the North Atlantic, are increasing the depth at which they swim, while others are using additional grounds as part of their life cycle.

For Pacific Bigeye Tuna, the spawning habitat has improved in subtropical and the eastern tropical Pacific as surface waters have reached optimal levels for spawning. Feeding habitats have also improved as a result of increased dissolved oxygen in the sub-surface, allowing adults access to deeper forage.

There was consensus among researchers that an 'ecosystem approach to fisheries' management is needed to adapt to recent and projected changes. Fisheries scientists are conducting extensive research to forecast impacts on our fisheries, however, there is still a long way to go.

For further information: Climate Change Effects on Fish and Fisheries,
www.pices.int/climatechange2010.aspx

SHARK BAY PHYTOPLANKTON IN BLOOM



CASE STUDY — TWENTY YEARS OF EXTENSION IN THE OYSTER INDUSTRY

Since the 1980s, the FRDC and its predecessor have funded over 150 research projects into the oyster species grown in Australia. This research provides a solid foundation on which oyster farmers can base their growing systems, some of which may only now be coming to fruition. This case study highlights one example of a producer using research to build his business.

New South Wales inspires rare oyster delicacy

The dedication of New South Wales oyster producer David Maidment has been crucial in bringing the Native Oyster to the menus of Australia's fine dining establishments.

For almost 20 years David has been involved in establishing a viable commercial industry for the Native Oyster (*Ostrea angasi*), and feels that the time may be right for expanding the enterprise.

He produces both Native (or flat) Oysters and Sydney Rock Oysters at the family company, Australian Native Shellfish, based at Wagonga Inlet, near Narooma, New South Wales. However, it has been the challenge of breeding, growing and promoting the Native Oyster that has maintained his interest in, and enthusiasm for, the oyster industry.

A baby Native Oyster is a "gorgeous thing", he says. "You get the shape in them when they're young and they will keep it. With a deeper, cup-like shell and a round, scallop shape, they really are a good-looking oyster."

The oysters are native to the Wagonga Inlet, where the company is based, although historically New South Wales didn't have a commercial industry for the species, unlike Victoria, Tasmania and South Australia. However, the industry in these states collapsed as a result of disease and overfishing in the early 1900s.

David (pictured) first became involved with Native Oysters in the early 1990s when he decided to collect a few from the wild, raising them to sell locally. His initial efforts were limited to a dozen or two here and there, but he felt there was greater potential and he headed to Queenscliff in Victoria to review the results of FRDC funded research done in the 1980s.

Armed with new information, he changed his grow-out systems, trying submerged trays, some deeper water baskets on deeper racks, but still managed to kill plenty of oysters.

Trying Seapa baskets on long-lines to control the depth proved to be a better system. This is particularly important when flooding sends a flush of fresh water into the inlet. The oysters can be lowered to deeper water where there is an inversion layer of salt water beneath the fresh water. This is an ongoing issue for operations in the inlet, which has a water catchment of 84 square kilometres.

"The baskets have worked especially well in the estuarine environment and we have expanded this now to 10,000 baskets for both Sydney Rock Oysters and Native Oysters."

"You have to grow Native Oysters lower as they don't like coming out of water as much as other oysters. They are grown at about 100 to 150 millimetres lower than the Sydney Rock Oysters so they come out at approximately a 0.2 metre tide for probably two hours of sun if the salinity is up, but if it gets extremely hot that's when they can get into trouble."

Native Oysters are grown on a two to two-and-a-half-year rotation — one rotation less than Sydney Rock Oysters. The infrastructure required is limited, capital costs are lower and there is a bigger turnover of stock. "This is quite encouraging — that we can sell them and get a good margin. It's ticking all the right boxes," David says.

From developing a grow-out strategy the next step in developing a successful commercial operation was to start breeding the Native Oyster. A group of oyster growers along the south coast collected wild animals and took them to NSW Fisheries at Port Stephens where scientists Mike Heasman and John Deimar were the hatchery managers at the time. The oysters were strip spawned, and the larvae, once set, were reared in upwellers at the south coast farms. "We were getting small quantities through and selling to markets but couldn't guarantee supply," David says. "A couple of us who knew growing Native Oysters was not too complicated decided to breed them to guarantee supplies of spat."

"NSW Fisheries gave us some background in growing algae and we set up a little micro hatchery with their help. Now we breed all our own stock and we have breeding stock we have selected over six years that we consider the best."

His business is vertically integrated from hatchery to grow-out and marketing. He feels it is nearly time to step up production to meet the growing demand for this unique and rare oyster. And although he refers to his operation as "a little tin-pot set-up", he now commands $1 an oyster and expects the price to rise with demand.

Today, there are several growers established in strategic locations including Batemans Bay and Pambula, helping to diversify the production base and protect against environmental risks.

Last year David had trouble with algae in Wagonga Inlet. The algae occur naturally but can be toxic in the right conditions. He couldn't supply oysters for five months. He was a major producer of Native Oysters in Australia at the time and it proved difficult to maintain supplies to restaurants.

"We have slowly developed the marketing. Initially we went to the wholesalers who deal with the Sydney Rock Oyster, but they didn't know how to handle the Native Oyster, which doesn't keep as long. We changed tack and have an agent (Steve Feletti of Moonlight Flat Oysters) who deals with the top end of the market. We go direct to restaurants and we get a premium price for the oysters because they are rare. And the market is growing. We have interest from some of the best restaurants in Melbourne, Sydney and Canberra.

"The future is looking quite promising, so we are expanding — we probably have about a million Native Oysters out there now."

David is quick to point out that many people have contributed to the growing success of the Native Oyster industry. He has sought advice from producers and researchers in Victoria, Tasmania and overseas, with visits to Sweden, Norway, France, the United Kingdom, Ireland, New Zealand and Canada.

Key research related to this case study includes:

1988/111	Transportation and shelf life of Australian Flat Oysters
1988/066	Development of commercial field nursery and on-growing systems for Flat Oyster production in open waters
1984/077	Experimental culture of the Native Oyster (*Ostrea angasi*) in Victoria
1985/021	Genetic improvement of the Sydney Rock Oyster
1993/153	Control of winter mortality and QX disease in Sydney Rock Oysters
1999/230	Inventory and assessment of Australian estuaries
1999/421	Development of an automated oyster grader (see story starting on page 44)
2003/063	Adoption of an environmental management systems by New South Wales commercial estuary fishers and oyster farmers

IN GOOD HANDS — PAST PRIORITIES AND FUTURE SUCCESS

As the FRDC celebrates its 20th anniversary, the corporation's chairmen of the past two decades and its inaugural executive director reflect on the evolution of the organisation and the challenges facing the fishing industry and aquaculture.

It would be fair to say relations between commercial fishers, researchers and governments were strained when the FRDC was established on 2 July 1991, says inaugural chairman Bill Widerberg.

He recalls a disconnect between industry and research; in fact, research was used more as a weapon against the industry rather than as a resource for its benefit. "Up to the time of the FRDC's formation, fisheries managers and researchers had determined research priorities, largely to improve their understanding of fish stocks," Bill Widerberg says. "Information was often then used against industry, to cut or reduce quotas."

"What was missing was industry's views on how R&D could assist its development, including whole-of-chain issues; catch to consumption."

Industry support

So gaining the support of industry was a crucial first step for the FRDC if it was to succeed, particularly as it was established with voluntary industry contributions as the basis of its funding. (The FRDC is Australia's only research and development corporation that relies on voluntary industry contributions, matched by the Australian Government.) "We needed to convince industry that the research would benefit them and that they would have a say in establishing priorities," Bill Widerberg says. Without industry support the FRDC's capacity to act would have been severely limited.

The strong commercial focus of the inaugural Board helped to win industry over. Bill Widerberg himself came from corporate food production and marketing. He encouraged research that focused on the entire value chain, from fish stocks to retailing. This included the first national seafood consumption study to establish a benchmark for consumer behaviour and preferences. "I think we managed to initiate quite a change in retail culture, in the way fish were handled and presented for sale," he says.

He also helped to initiate a cultural change in the fisheries research community. Researchers had to demonstrate a collaborative approach with industry consultation and support for research proposals, and recognisable benefits for industry.

Never one to lose an opportunity, Bill Widerberg also recalls an early initiative, based on a single telephone call from Brian Jeffriess, outlining a plan to capture and raise juvenile Southern Bluefin Tuna. He says the Board agreed to the project almost immediately, and it has proved to be the precursor for the successful farming of tuna, which has become one of Australia's great fishing industry successes.


BILL WIDERBERG


RUSSELL REICHELT


PETER DUNDAS-SMITH

Growing sophistication

Taking the helm from Bill Widerberg in 1995 was Russell Reichelt, who was head of the Bureau of Resource Sciences (Fisheries) in Canberra at the time, but also a tropical marine ecosystem scientist and mathematical modeller.

Russell Reichelt says his time with the FRDC was marked by a steady increase in the professionalism and sophistication of the industry. "The industry was dominated by wild caught commercial fishing when I joined the FRDC. Aquaculture was an element, but not as large as it is today," Russell Reichelt says.

There was a growing realisation then that Australia's fisheries would not match the bounty of the North Atlantic waters, as many had believed they would only a decade before. The industry began focusing on high value, low volume exports for products such as rocklobster. There was also an increasing recognition of the potential of aquaculture.

He says a small but telling sign of an increasingly professional approach was the name change of the national representative body from the National Fishing Industry Council to the Australian Seafood Industry Council (ASIC). "That name change alone tells you that these people recognised that they were in business, and their business was to produce and sell seafood," Russell Reichelt says.

Recreational fishing was recognised as a significant part of the fishing sector in 1996, the same year that the FRDC launched its second five-year strategic plan, *Investing in Tomorrow's Catch*, which attempted to balance recreational and commercial interests.

Russell Reichelt says the SeaQual program — an early initiative to develop value chain research and food-safety support systems — also emerged in 1996. This was later absorbed into Seafood Services Australia (SSA), partially funded by the FRDC.

SSA emerged in 2002, on the back of seven to eight years of research and debate about how best to support whole-of-chain production improvements in this area through the management of issues such as chemical residues and international trade requirements.

There were also gains being made in the industry's environmental performance, as the public became more aware of the impact of fishing on the environment. "Internationally, there was a ban on high seas drift nets and we were able to support the refinement of turtle excluder devices, which are now compulsory in trawl fisheries, to reduce by-catch," Russell Reichelt says.

"There is an environmental benefit in this, but also a benefit to industry; initiatives like this help to improve the esteem of the industry in the minds of the public."

He says the main challenges the industry faced during his term as chairman continue to dog the industry. The first is the difficulty in establishing national representative bodies to support the industry, and perhaps to take on marketing and promotional activities. The second is the constant balancing of research needs between industry and the environment.

Focus and impact

Working with Bill Widerberg and Russell Reichelt, and later with Denis Byrne, Peter Dundas-Smith was the FRDC's executive director from 1992 until 2005.

Administratively, he says, the most important step for the FRDC was to establish Fisheries Research Advisory Bodies (FRABs) for Commonwealth, state and territory fisheries jurisdictions. The role of the FRABs was to provide advice to the FRDC and R&D priorities and introduce a high level of accountability in the way R&D was planned, invested in and managed nationally.

The FRABs continue to provide R&D end-users, including industry and fisheries managers, with equal say in determining R&D priorities. "The FRABs took away industry's excuse for criticising researchers for undertaking research that industry didn't agree with," Peter Dundas-Smith says.

He says the second most important administrative step was to establish a total quality management work ethic, which was a priority for the Board from the beginning: the need to ensure that the FRDC was effective and efficient. Industry did not want the FRDC imposing big overheads on the industry, and administrative costs were capped at eight per cent of budget. The FRDC was certified to AS/NZS ISO 9002 in 1998.

Peter Dundas-Smith highlights two other major achievements during his time with the FRDC. The first was national agreement to concentrate aquaculture-related R&D on just a few key species. At the time researchers were experimenting with farming as many as 50 different species.

The general agreement to narrow the R&D focus resulted in the FRDC supporting about five key species with the most commercial potential. These included Atlantic Salmon, pearls, Southern Bluefin Tuna, oysters and prawns. It also invested in species assessed at the time as having longer term potential, such as rocklobster, abalone and Barramundi.

The second major development was the recognition of the potential impact of indigenous and recreational fishers. In 2001 the FRDC completed a benchmark survey of recreational anglers, which found that about 19 per cent of the Australian population (about 3.6 million people) fished, taking 35,000 tonnes of various fish, crustacean and mollusc species.

"If we are looking to establish sustainable wild catch fisheries and introduce harvest strategies then we can't afford to ignore recreational fishers. They can have a significant impact on the wild resource and I still don't think this has been fully recognised," Peter Dundas-Smith says.

Fisheries restructure

With a background as a mergers and acquisitions lawyer involved in the restructuring of major agricultural industries, Denis Byrne, chairman from 2002–07, describes himself as a "big picture" person, focusing on overall strategic objectives and directions. "I had a mission from the Government to effect change, and I think we were able to deliver on that," he says. He came to the FRDC after helping to restructure the wool, dairy and horticultural industries. Major changes were also on the agenda in the fishing industry, including restructuring of the fishers in some regions to improve overall industry profitability.


DENIS BYRNE


PETER NEVILLE


HARRY WOODS

Denis Byrne says the essence of good investment in research is that it can provide the information and evidence required to carry a whole community of stakeholders forward. This includes moving through the process of structural adjustment, and he says the FRDC worked closely with stakeholders to achieve this during the early 2000s. The same approach was used to provide scientific evidence in negotiating the Commonwealth's South-East Marine Protected Areas in 2006.

Denis Byrne says the research priorities were driven by the need to produce measurable outcomes for industry. "One of the problems for primary industries is that their contribution to the national GDP [gross domestic product] is diminishing and they have a diminished role in the economy. But the expenditure on R&D is still higher than in many other parts of the economy," he says.

Improved performance

"There has to be research, but it needs to address areas of market failure to justify investment, or issues that private investors would not necessarily undertake, but which can help the industry jump to a higher level of performance," Denis Byrne says.

Research during his time with the FRDC included continued investment in occupational health and safety and in environmental management. Denis Byrne also strongly advocated investment in leadership programs to help unify a fundamentally disparate industry.

Despite the many advances he knows have been implemented, he says the industry's good record has not been effectively articulated. "Fishing boats today have $200,000 or more worth of environmental management systems on board to deal with sustainability issues, but organisations like Greenpeace have got the PR [public relations] jump on the industry. The fishing industry will become extinct if it doesn't learn to sell its image better," he says.

Return on investment

One of the greatest challenges as chairman for Peter Neville (2007–10) was to better define return on investment in FRDC research for its funding organisations — both government and industry.

"We were trying to measure two different aspects: returns to the fishing industry in terms of dollars in fishers' pockets and the return to the community in terms of protection and sustainability of the resource, which is much more difficult to assess," Peter Neville says.

"It's important that we can demonstrate that we are doing well rather than just saying so, and the methodologies we developed during that time are now an ongoing function of FRDC reporting."

The published rates of investment were generally very positive. "Investment in research is essentially speculative, so there will always be some negative returns. Even so, this can help identify other, more productive avenues of research."

He came to the FRDC after many years as the deputy director of the Queensland Department of Primary Industries and Fisheries, in charge of the department's fisheries portfolio. He says working with a state agency he focused on the requirements of the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999*. This requires the states to justify all their fisheries related activities based on proof that fishing activity is sustainable. Without this evidence the Australian Government can refuse to issue export permits for commercial fisheries.

Industry sustainability

At the FRDC Peter Neville's focus changed to include the sustainability of the industry as well as the resource. "There's not much point having a sustainable fisheries resource if there is no one left to fish it," he says. The impacts of fisheries management changes on communities and the commercial fishing industry became a much stronger research direction during his chairmanship.

"There's plenty of information on the sustainability of the resource, but not on the sustainability of industry, although industry has always pushed for more information in this area. I certainly have a much greater appreciation of the economics of fishing business and the impacts of constant changes on regional communities."

Following Peter Neville into the FRDC chairman's role in 2010 was the Hon. Harry Woods, who has a long involvement with the fishing industry as a federal and state Member of Parliament, representing the interests of the New South Wales Clarence River region. He also spent a brief period as a professional lobster fisher — his "retirement plan" — before health issues forced him to give it away.

A responsible industry

Harry Woods says that today one of the overarching and very real issues for the industry is climate change impacts. These include changes to where fish are found and the FRDC is funding research to identify actual and potential changes to fishing grounds to support better management decisions.

With much of the management based on geographic zones, Harry Woods says there are potential problems emerging with current fisheries management strategies that rely on these. They may restrict where fishers operate, but will not stop fish moving away from areas where they have traditionally been found.

In terms of improving the productivity of the Australian seafood industry sector he says he expects continued investment in aquaculture initiatives will lead the way. "If you look at past performance, wild catch has become static, so increases in seafood production are likely to come from aquaculture."

More problematic for the FRDC in terms of investment are ongoing concerns about the public image of the industry itself. Harry Woods says the image of the fishing and aquaculture industry and perceptions about the sustainability of the resource are major issues, although not issues the FRDC has a mandate to address directly through promotion.

"By and large there is no overfishing, but this is not reflected in the public view. Effort is needed to bring this to the public's attention, and I think the FRDC Board has a role to play in providing the evidence to support this," he says.

2001.
IAN KNUCKEY

1999.
ROY PALMER

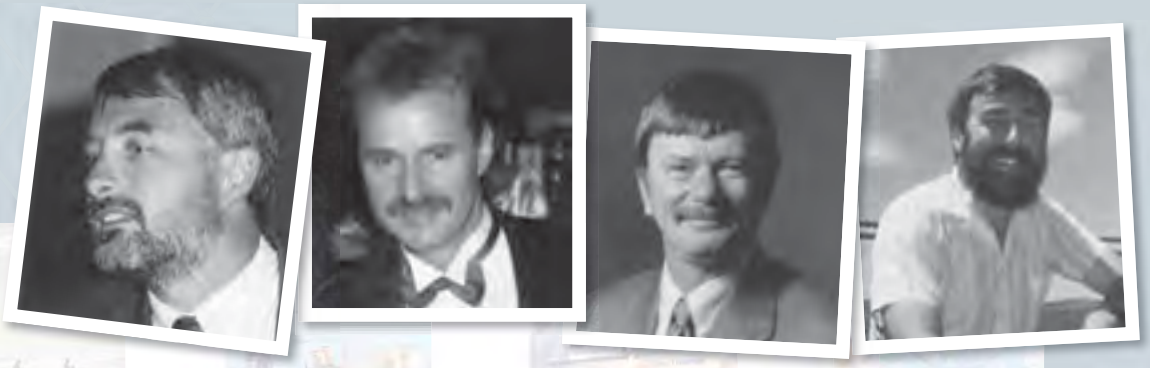
1997.
DUNCAN LEADBITTER

2003.
STUART RICHEY

2001

2002

HISTORY



1998.
GEOFF ALLAN

1995.
NIGEL SCULLION

1997.
BILL SAWYNOK

1998.
KEITH SAINSBURY

2003

2004

REPORT OF OPERATIONS

PART III

MANAGEMENT AND ACCOUNTABILITY AND CORPORATE GOVERNANCE

XXX

LXXVII–XCV

MANAGEMENT AND ACCOUNTABILITY AND CORPORATE GOVERNANCE

Planned outputs for this program are focused on continually improving the FRDC management and accountability activities. Each year, information on explicit planned outputs is provided in the annual operational plan. Since these outputs contribute to the planned outcomes of the five RD&E programs, they are crucial to the FRDC's effectiveness and efficiency. The FRDC's ISO-certified quality management system encompasses all these activities.

Principal inputs

During 2010–11, $3.40 million (around 13.2 per cent) was invested in activities within management and accountability, in addition $0.79 million was spent on communications activities.

Performance indicators

Since the management and accountability outputs contribute to the planned outcome of the FRDC's RD&E programs, they are crucial to the FRDC's effectiveness and efficiency. These outputs are outlined on the following pages under the headings:

- Business strategy and planning
- Information management systems
- Corporate communications
- Risk management
- Quality system
- Human resources management
- Finance and administration
- Corporate governance

Performance indicators	Target	Achievement
Maintain ISO 9001:2008 accreditation.	100%	FRDC maintained ISO 9001 accreditation following an external audit.
Submit planning and reporting documents in accordance with legislative and Australian Government requirements and timeframes.	100%	Achieved: All corporate documents were submitted according to required timeframes.
Implement best practice governance arrangements to promote transparency, good business performance, and unqualified audits.	100%	Achieved: FRDC received an unqualified audit report for 2010–11 financial statements.
Minimise administrative costs as a percentage of total expenditure.	Under 15%	Achieved: FRDC administrative costs were 13.2% in 2010–11.
Demonstrate the benefits of RD&E investments by positive benefit cost analysis results.	100%	Achieved: FRDC is part of the CRRDC evaluation process. Agtrans Research and Consulting evaluates FRDC projects.

MANAGEMENT AND ACCOUNTABILITY

Business strategy and planning

FRDC strategic planning and reporting documents (comprising RD&E Plan, annual operating plan and annual report) were completed and presented within their duly legislated timeframes to the Minister for Agriculture, Fisheries and Forestry.

Over the course of the year FRDC directors and staff worked together to develop a corporate plan for the Corporation. The plan aims to identify the key issues that face the FRDC, and outline a work program to minimise or mitigate against negative risks and take advantage of opportunities.

To increase the effectiveness and ensure the views of stakeholders are heard, the FRDC Board and staff use a range of mechanisms. These include consulting with representative organisations, FRABs, sector industry bodies, government and other R&D corporations through the Council of Rural Research and Development Corporations' Chairs.

Fisheries Research Advisory Bodies

The FRDC supports a network of FRABs covering Commonwealth fisheries and the fisheries of each state and the Northern Territory. The FRABs have an extremely important role in maximising the efficiency of the FRDC's planning and investment processes. In the 2010–11 funding round approximately 100 per cent of all open call applications were submitted through, or reviewed by, the FRABs.

The FRABs represent all sectors of the fishing industry, fisheries managers and researchers, and almost all include environmental and other community interests. Their Chairs in 2010–11 are listed on the opposite page.

Chairs of FRABs 2010–11

Commonwealth	Mr Ian Cartwright
New South Wales	Professor Steve Kennelly
Northern Territory	Mr Ian Curnow
Queensland	Mr James Fogarty
South Australia	Ms Catherine Cooper
Tasmania	Mr Ian Cartwright
Victoria	Nil
Western Australia	Ms Anna Cronin

For further information on the FRABs — www.frdc.com.au

Sector industry bodies

The FRDC has continued to build partnerships with individual industry sectors. These partnerships offer both parties a number of advantages. For industry they provide more involvement in determining and undertaking RD&E. For the FRDC they provide a more certain flow of funds and a greater understanding of the fishing industry.

Other consultation structures

On 7 April 2010, the FRDC ran a stakeholder workshop in Canberra to discuss a number of issues including the new structure for its RD&E Strategic Plan, as well as proposed changes to the application funding process and the development of a new Extension and adoption program.

In addition to the Corporation's fundamental operating philosophy of openness and accountability to stakeholders, a number of other structures reinforce effective and ethical performance by the FRDC. They include steering committees at project and subprogram level, conferences, workshops and meetings.

Information management systems

OmniFish and FRDC's online application program FishNet are at the heart of FRDC processes and constitute a fully integrated online funding application system, and project and financial management system.

In 2010–11 the FRDC has upgraded its IT infrastructure — hardware and software. These upgrades will ensure the FRDC remains at the leading edge of technology. Key changes that have been made include:

» new Active Server Directory

» new security firewalls

» Voice Over Internet Protocol

» SharePoint 2010 upgrade

» Phase 2 of disaster recover testing.

Quality system

The FRDC is a certified AS/NZS ISO 9001:2008 organisation and undertakes both internal and external audits annually with a recertification audit of its quality system triennially. In September 2010, the FRDC underwent and passed its three year re-certification audit. This is a significant achievement and reinforces FRDC's commitment to quality of the work it undertakes.

The FRDC aims to meet or exceed the expectations of its stakeholders and organisations with whom it does business and operates on a continual improvement philosophy. The FRDC's quality management system encompasses the features of a service charter.

Corporate communications

Communication is integral to how the FRDC operates. In 2010–11, the FRDC's *FISH* magazine was again a central tool for communicating with industry and stakeholders. It provides a vehicle for the FRDC to deliver and extend information on RD&E projects that are both underway or have been finalised. The publication is now the leading fisheries research magazine in Australia and has gained widespread recognition for its quality.

During 2011–12, FRDC will continue to look for opportunities to improve the magazine by undertaking benchmarking research with consumers. The research will focus on how they rate the current offering, where it could be improved and options for future delivery, such as via electronic tablets.

The FRDC website was promoted widely during the year and this has led to an increase in usage. Central to this increase was the successful review and upload of RD&E final reports. In excess of 1000 reports are now available for free download. FRDC will continue to wherever possible make all final reports available for download from the website — **www.frdc.com.au**.

As part of Program 5: Extension and adoption, FRDC again sponsored the television series *Escape with ET*. This partnership provides a strong vehicle through which the FRDC can communicate to the broader Australian community about the breadth and value of fisheries research being undertaken. Stories developed this year included: what oysters really taste like, recreational data collection, development of octopus aquaculture, Longtail Tuna research, Ballina Marine Discovery Centre and an evaluation of the performance of Australia's marine capture fisheries.

Another key activity in 2010–11 was the maintenance of industry relationships that underpin the FRDC's partnership approach to RD&E. Staff maximised their time and opportunities by networking with researchers, industry and government colleagues at many meetings over the course of the year.

Risk management

There was no incidence of fraud during 2010–11.

The Board reviewed and approved a revised 2010–11 risk management framework at its February 2011 meeting. All staff participated in an internal risk workshop on 15 October which was used to update the Corporation's risk register. Additionally, the Board reviews the highest ranked risks at every meeting.

The FRDC participated in Comcover's Risk Management and Benchmarking Survey 2010 which is conducted annually and provides an independent review of the FRDC's existing risk framework, involving a survey and a review of the documentation.

FRDC achieved a rating of 7.1 against the 10 elements of the Comcover benchmarking model. The average for individual peer group agencies (as defined by Comcover) was 6.2 compared to the average for the total 119 agencies evaluated which was 6.4 out of 10.

Risk management is incorporated into FRDC activities in accordance with its risk management policy, which is integrated into the Corporation's quality management system and internal audit program. The risk management policy also incorporates a fraud control framework in accordance with the Fraud Control Guidelines produced by the Attorney-General's Department which seeks to minimise the likelihood and impact of fraud. The FRDC also participated in an Australian Institute of Criminology survey during the year.

Indemnities and insurance premiums for officers

The FRDC is required by the Australian Government's self-insurance provisions to use Comcover for its insurance needs. Comcover's confidentiality requirements prohibit the release of information on the nature and limits of liabilities covered and the amount of contribution paid.

When appropriate, the FRDC takes out insurance policies to mitigate insurable risk.

Finance and administration

The 2010–11 audit report by the Australian National Audit Office confirmed that the FRDC's 2010–11 financial statements gave a true and fair view of the financial position of the Corporation and there were no findings associated with the audit.

The FRDC has continued to build partnerships with individual industry sectors. It currently invests in and partners entities such as Southern Rocklobster Ltd, Australian Southern Bluefin Tuna Industry Association, Tasmanian Salmonid Growers Association, Australian Prawn Farmers Association and the Australian Barramundi Farmers Association. These partnerships offer both parties a number of advantages. For industry they provide more involvement in determining and undertaking RD&E. For the FRDC they provide a more certain flow of industry funds and ultimately a greater understanding of the fishing industry. In 2010–11 FRDC developed a new $5 million Industry Partnership Agreement with the Tasmanian Salmonid Growers Association.

A sample of the sectors that have contributed significantly to the maximum matchable contribution is shown in table 2: Industry contributions, maximum matchable contributions by the Australian Government and returns on investment, 2010–11 (page v).

FRDC also holds a share in Australian Seafood Co-products (ASCo) which is a company developed to look at alternate uses for fish processing waste. During the year ASCo has been finalising an agreement with Incitec Pivot to produce the organic fertiliser Biophos.

Agreements and contracts

Each year the FRDC engages companies, research institutions, and government agencies to undertake research. The process for applying for funding is clearly outlined on the Corporation's website. Each organisation selected is directly engaged under contract for that project. A list of projects approved by the FRDC Board is published in *FISH* magazine and is available on the website — **www.frdc.com.au**

Consultancy services and selection of suppliers

During the year, the FRDC engaged seven consultancies (as defined in the Department of Prime Minister and Cabinet document, *Requirements for Departmental Annual Reports*) to the value of $10,000 or more.

Name of consultant Nature and purpose of consultancy Cost (exclusive of GST)	Strategic Fitness Noosa Pty Ltd Information technology advice $99,048.76
Name of consultant Nature and purpose of consultancy Cost (exclusive of GST)	Blake Dawson Legal advice $62,120.67
Name of consultant Nature and purpose of consultancy Cost (exclusive of GST)	DLA Phillips Fox Legal advice $20,980.00
Name of consultant Nature and purpose of consultancy Cost (exclusive of GST)	Gnarwarre Group Review services $15,022.50
Name of consultant Nature and purpose of consultancy Cost (exclusive of GST)	Oakton AA Services Pty Ltd Accounting services $34,443.00
Name of consultant Nature and purpose of consultancy Cost (exclusive of GST)	Mercer Human Resources Consulting Review services $22,390.00
Name of consultant Nature and purpose of consultancy Cost (exclusive of GST)	Intuitive Solutions Review services $38,000.00

When selecting suppliers of goods and services, the FRDC follows its procurement procedure — which seeks to achieve value for money and to deal fairly and impartially. Obtaining value for money does not necessarily require the cheapest supplier to be selected. Other factors considered are urgency, quality, ethical conduct of the supplier, and whole-of-life costs.

Human resources management

The FRDC sets strategic directions with key stakeholders, then directly engages partner organisations from all over Australia to undertake the (RD&E) activities. As a result, the Corporation has linkages to many research organisations across Australia. This approach to project management provides the FRDC with a great deal of flexibility, but at the same time gives it the capacity of an organisation many times its size.

To put this into perspective, the FRDC currently has over 100 partner organisations that employ over 200 principal investigators, and many more researchers, communicators and technicians — not to mention the hundreds of industry people who work on numerous projects.

Staff

In 2010–11, the FRDC operated with 11.7 full-time-equivalent staff members (on average). In December 2010 Tina Lin left the FRDC to pursue an accounting career. Timothy Yap joined the Corporation in November 2010 as the Office Administrator. The FRDC staff are the Corporation's most important resource and a key factor in the ongoing success of the organisation.

All staff are employed under terms and conditions determined by the FRDC. As part of ensuring staff activities align with the organisation, each staff member has in place a Performance Appraisal and Development plan (PAD). The agreement outlines the key areas each staff member will focus on, and the key activities to be undertaken, to assist the FRDC deliver its outcomes.

Liabilities to staff

The FRDC provides for liabilities to its staff by ensuring that its financial assets (cash, receivables and investments) are always greater than its employee provisions. Compliance with this policy is evidenced in the Statement of Financial Position in the Corporation's monthly financial statements.

Behaviour

Corporate governance practices are evolving rapidly, both in Australia and overseas. The FRDC is proactive in integrating these practices, including those governing ethical behaviour, into its own processes. The Corporation has a code of conduct that is appropriate to the Corporation's structure and activities and complies with division 4 of the *Commonwealth Authorities and Companies Act 1997* (CAC Act), to which all directors and staff are required to adhere. New directors and staff are briefed on the code during induction training.

Occupational health and safety

No injuries occurred on FRDC premises during 2010–11.

The FRDC is committed to providing a safe and healthy environment for all staff, contractors and visitors to its workplace. The FRDC recognises that its people are its greatest asset and its most valuable resource. The FRDC's ultimate goal is that its workplace is free of injury, illness and disease. The FRDC complies with its legislative obligations under the *Occupational Health and Safety Act 1991* (OH&S Act) and takes all reasonably practicable steps to ensure a safe working environment. The FRDC's working environment is reviewed periodically by occupational health and safety consultants and training is provided in workplace health and prevention of injury.

The FRDC's Health and Safety Management Arrangements (HSMAs) Policy, has been developed in accordance with the requirements under 16(2)(d) of the OH&S Act in consultation with FRDC's employees. The FRDC also recognises that the continued reviewing and improvement of its health and safety management system makes good sense legally, morally and from a business perspective.

Comcare Australia is responsible for worker's compensation insurance coverage within the Corporation. The insurance premiums are levied each year based on the level of salaries and wages costs and experience in claims made by the employees. Comcare also assesses compliance with the OH&S Act, associated regulations and approved codes of practices.

Section 74 of the *Occupational Health and Safety Act 1991*

Statistics of any accidents or dangerous occurrences during the year that arose out of the conduct of undertakings by FRDC that are required the giving of notice under Section 68.	» No injuries occurred on FRDC premises during 2010–11.
Details of occupational, health and safety (OH&S) management arrangements.	» Consultation of OH&S issues includes all staff. » Agreed Health and Safety Management Arrangements policy and procedures.
Initiatives undertaken during the year to ensure the health, safety and welfare at work of employees and contractors.	» Health and safety awareness and incidents are brought to the attention of all staff at the weekly staff meetings. » Occupational rehabilitation physiotherapist provides ergonomic assessments to all new staff in their immediate working environment, and when requested. » Staff are provided with access to influenza vaccinations. » Workplace safety training. » Annual fire safety and warden training, and six monthly checks of fire safety equipment. » Annual testing and tagging of electrical appliances. » Qualified first aid officer and fire warden. » Assessment of risks in line with the risk framework annual review.
Health and safety outcomes including the impact on injury rates of employees and contractors.	» Increased awareness of roles and responsibilities in OH&S including responsibilities of managers.
Any investigations conducted during the year that relate to undertakings carried on by the employer, including details of all notices given to the employer under sections 29, 46 or 47 during the year.	» No requests were received from staff and no undertakings were given by the Corporation. » No directions or notices were given to the Corporation.

Notifiable incidents	2009–10	2010–11
Deaths	0	0
Dangerous occurrences	0	0
Serious personal injury	0	0
Incapacity	0	0
Total	0	0

Disabilities

The FRDC implements the Commonwealth Disability Strategy on two levels: as a provider of services resulting from RD&E, and as an employer.

The FRDC's recruitment and staff development practices seek to eliminate disadvantage that may be contributed by disabilities. Consultation with people with a disability and when required, with appropriate specialist organisations is a component of the FRDC's policies and practices, recognising that the effect of a disability differs widely between individuals and that often a little thought makes a big difference in meeting a person's needs.

Remuneration policy

Remuneration of non-executive directors is determined by the Remuneration Tribunal.

Remuneration of the Executive Director and staff is determined by an FRDC policy set by the Board, and is administered through the Board's Remuneration Committee. The amount of individual remuneration of the Executive Director and staff is based on advice by Mercer Human Resource Consulting Pty Ltd. The amount is also influenced by performance measured against individual performance agreements and by the size of the program support component within the total FRDC budget, from which salaries are paid.

FRDC have, in line with government policy commenced the process to develop a certified agreement for all staff that will cover a range of employment conditions.

Equal employment opportunity

The FRDC has a policy of equal employment opportunity. Merit-based principles are applied in recruitment and promotion to ensure that discrimination does not occur. Of the FRDC's staff of 11 as at 30 June 2011, six are female.

Industrial democracy

The FRDC's staff members work as a team in which all contribute freely. This process is strongly reinforced by the FRDC's total quality management philosophy and the attendant emphasis on continual improvement. Staff are provided with the opportunity at staff meetings to raise issues and discuss options as to resolve how they are handled.

CORPORATE GOVERNANCE

Governance refers to processes by which organisations are directed and controlled — including, characteristics such as authority, accountability, stewardship and leadership. Corporate governance is concerned with structures and processes for decision making, and with controls and behaviour within organisations that support effective accountability for performance outcomes.

The Corporation's general governance arrangements are largely established by legislation and government policies, procedures and reporting requirements. In addition to the requirements of the PIERD Act, which includes an annual operational plan, a research and development plan and an annual report, the Corporation also operates under the provisions of the CAC Act which applies high standards of accountability for statutory authorities.

The Board and staff are strongly committed to ensuring good corporate governance. In doing so, the focus is on structures, processes, controls, behaviour and transparency. To support the FRDC's high level of commitment to these principles, a full list of FRDC policies and copies of the financial statements are available from the FRDC website — www.frdc.com.au

Representative organisations

In addition to its reporting to the Minister and Parliament, the FRDC formally reports to the annual meetings of its Ministerially appointed representative organisations: the Commonwealth Fisheries Association, the National Aquaculture Council, and Recfish Australia. Appointment of the representative organisations, and the Corporation's consultation with and reporting to them, are in accordance with its enabling legislation.

Under section 15(2) of the PIERD Act and the *Guidelines on funding of consultation costs by primary industry and energy portfolio statutory authorities*, the FRDC may meet travel and other expenses incurred in connection with consultation between the Corporation and its representative organisations. During 2010–11 the FRDC incurred $4392 (rounded to the nearest dollar) in such expenses. FRDC has budgeted for approximately $30,000 expenditure during 2010–11.

This support is governed by the *Guidelines on funding of consultation costs by primary industry and energy portfolio statutory authorities* which were issued by the Hon. John Anderson MP, Minister for Primary Industries and Energy in July 1998. These guidelines require the FRDC to provide details of all project related activities and costs in which the representative organisations have an interest. The list of project payments made to FRDC representative organisations is located at Appendix E (page 164).

Enabling legislation

The FRDC was formed as a statutory corporation on 2 July 1991 under the provisions of the PIERD Act. It also operates under the provisions of the CAC Act, which applies high standards of accountability while providing for the independence required by the Corporation's role as a statutory authority.

The FRDC's objects, deriving from section 3 of the PIERD Act and shown in Appendix C, are incorporated in the FRDC's vision and planned outcomes. As reflected in figure 1 on page 18, the Corporation's five RD&E programs mirror the industry development, natural resources sustainability and people development themes of, respectively, sub-sections 3(a), (b) and (c) of the Act. This alignment has brought simplicity and robustness to the FRDC's RD&E planning, implementation and reporting, and to many of the organisations with which it does business. Importantly, the alignment ensures that the RD&E outputs resulting from the Corporation's investments fully address the legislative objects.

More information about the FRDC's legislative foundations can be found in Appendix C.

Responsible minister and exercise of ministerial powers

The portfolio Minister for Agriculture, Fisheries and Forestry is Senator the Hon. Joe Ludwig.

The Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry is the Hon. Dr Mike Kelly AM, MP.

Ministerial directions

The PIERD Act provides that the Minister may give direction to the Corporation with respect to the performance of its functions and the exercise of its powers. In addition, the Minister, under the CAC Act, may notify the Board of any general Australian Government policies that apply to the Corporation. At the date of this report, the following Ministerial Directions and Notifications have been received:

» In May 1995, the Minister issued a directive in accordance with the PIERD Act that spending of industry contributions is to be of direct relevance, within a five year period, to the fishery, industry sector, or state/territory in which funds were collected. The FRDC is to have regard to advice from management agencies and industry sectors, including FRABs.

» In July 1998, the Minister issued a directive in accordance with section 16(1)(b) of the CAC Act requiring the Corporation to comply with the reporting requirements of the *Guidelines on funding of consultation costs by primary industry and energy portfolio statutory authorities*.

» The Minister has notified the Corporation under section 28 of the CAC Act that the following policies apply to the Corporation.

  – On 21 August 2002, Commonwealth Fraud Control Guidelines 2002.

  – On 28 August 2002, Finance Circular No. 2002/01 — Foreign Exchange (Forex) Risk Management.

  – On 14 April 2003, Finance Circular No. 2002/02 — Cost Recovery by Government Agencies.

  – On 13 October 2003, National Code of Practice for the Construction Industry and the Commonwealth's Implementation Guidelines.

» On 23 September 2008 the Minister notified the Corporation under section 143 of the PIERD Act requiring the Corporation to comply with the Australian Government Bargaining Framework when exercising their power to engage employees.

In addition, on 9 February 2010 the former Minister for Agriculture, Fisheries and Forestry, Tony Burke MP, wrote to the RDCs articulating his priorities for the 2010–11 annual operating plans.

Government policy

The FRDC during 2010–11 complied with all relevant Australian Government policy requirements, including:

» Commonwealth Fraud Control Guidelines 2002

» Cost recovery policy

» Australian Government Property Ownership Policy 2005

» Protective Security Manual 2005 as a general policy of government

Minimisation of administration

To increase its production of outputs in the face of greatly increasing demand for fisheries RD&E, the FRDC continually strives to improve the way in which it goes about its business.

Productivity has been increased through improved management procedures, aided by the FRDC quality management system, and through the innovation, application and professional development of staff members. As part of this process, the FRDC aims to maximise the proportion of funds expended on RD&E programs by minimising the cost of administration.

Energy efficiency

The Commonwealth Government's Energy Efficiency in Government Operations Policy seeks to improve energy efficiency in relation to vehicles, equipment and building design.

The FRDC adheres to the policy. The Corporation is a minority tenant occupying part of an office building and does not own motor vehicles or large equipment. Prudent management of power consumption is followed within the FRDC office. For example timer switches have been placed in offices to reduce the time lights are left on.

Freedom of information

During 2010–11, the FRDC did not receive any inquiry pursuant to the *Freedom of Information Act 1982* (FOI Act).

The FRDC is required to comply with the FOI Act. In many cases it may not be necessary to request the information under the FOI Act — the FRDC may simply provide it to you when you ask for it. At all times, however, you have the option of applying under the FOI Act.

From 1 May 2011 agencies subject to the FOI Act are now required to publish information to the public as part of the Information Publication Scheme (IPS). This requirement is in Part II of the FOI Act and has replaced the former requirement to publish a section 8 statement in an annual report. An agency plan showing what information is published in accordance with the IPS requirements is accessible from the FRDC website — **www.frdc.com.au**.

More information on freedom of information see Appendix F on page 165.

FRDC DIRECTORS AT THE VAN DIEMEN AQUACULTURE FARM, ROWELLA, TASMANIA.

THE BOARD

The Board comprises up to nine directors who are appointed in accordance with sections 17 and 77 of the PIERD Act. Directors are selected on the basis of their expertise in a variety of fields derived from the PIERD Act. These include commodity production and processing, conservation, science, economics, and business and finance management.

Directors are appointed for a term not exceeding three years. All directors except the Executive Director are appointed on a part-time basis.

The Board ensures that FRDC staff is provided with strong leadership, and that their qualifications, skills and experience are enhanced with formal, and on-the-job, training. This includes a formal induction process on the FRDC and a two-day workshop run by the Australian Institute of Company Directors. In addition the FRDC Board meets outside Canberra three times a year in regions key to the fishing industry. This provides directors with the opportunity to liaise and discuss issues with relevant industry stakeholders, as well as see first-hand, fishing industry in action.

Details of the directors who held office during the year are shown on the following pages.

Directors' biographies

The Hon. Harry Woods: Chair

Appointed as Chair 1 September 2010.

Harry Woods comes from a diverse background having been an auditor, bookmaker and publican before serving many years as a politician in both federal and state governments. He was the member for Page from 1990 to 1996. Following this, Harry was elected as the Member for Clarence in the New South Wales Legislative Assembly. During his time in New South Wales Parliament he was Minister for Regional Development and Minister for Rural Affairs from 1997–99 and Minister for Local Government, Minister for Regional Development and Minister for Rural Affairs from 1999 to his retirement in the 2003.

Since then, Harry has spent time as a professional fisherman, undertaken policy review work for the New South Wales Government, worked as an accredited mediator and has been involved in the development and building of commercial property. Harry has a good understanding of not only the fishing industry, but the broader primary industries arena. As the member for Page his responsibilities included a diverse range of issues — dairy cattle, pigs, maize, tropical fruit, sugar cane, fishing, prawning, oyster farming, butter and bacon factories, breweries, timber mills, and tourism.

Mr Peter Neville: Chair

Chair 1 September 2007 to 31 August 2010. Chair of the Remuneration Committee.

Peter Neville is a former Deputy Director-General of the Queensland Department of Primary Industries and Fisheries, and was actively involved in introducing reforms into fisheries management in Queensland. Peter now consults on fisheries management, business analysis, environmental and strategic planning. He is the Chairman of the Southern Bluefin Tuna Management Advisory Committee of the Australian Fisheries Management Authority.

Stuart Richey AM: Deputy Chair

Appointed as a director 28 September 2006 and re-appointed 1 September 2009.
Chair of the Finance, Audit and Risk Management Committee.

Stuart Richey is Managing Director, Richey Fishing Company Pty Ltd and Richey Services. Stuart has held a number of senior positions in the fishing industry on behalf of industry and government. He holds Master Class IV (trading) and Skipper Class II (fishing) qualifications. He chairs the Northern Prawn Management Advisory Committee and was a founding director of the Tasmanian Fishing Industry Council, a director for a number of years of the South East Trawl Fishing Industry Association, and a previous deputy chair of the Australian Fisheries Management Authority.

Dr Patrick Hone: Executive Director

Appointed Executive Director from 21 April 2005.

Patrick Hone is Executive Director of the FRDC, Director of the Seafood CRC and a member of the Ocean Policy Science Advisory Group. Patrick has extensive knowledge of all sectors of the fishing and aquaculture industries. Over the last 14 years working for FRDC he has played a key role in the planning, management and funding of fishing and aquaculture related research, development and extension in Australia. Patrick has a PhD from Adelaide University, and previously worked for SARDI on a wide range of aquaculture research for Southern Bluefin Tuna, Pacific Oysters, mussels, Yellowtail Kingfish and abalone.

Heather Brayford: Director

Appointed 1 September 2009. Member of the Remuneration Committee.

Heather Brayford has extensive experience in fisheries and aquatic resource management including senior management and policy roles related to commercial fisheries, recreational fisheries, pearling and aquaculture and fish habitat protection. Heather is currently the Director Aquatic Management with the Western Australian Department of Fisheries and has also held the position of Executive Director of Fisheries in the Northern Territory.

Renata Brooks: Director

Appointed 1 September 2009.

Renata Brooks is Executive Director, Agriculture and Primary Industries Science and Research, New South Wales Department of Primary Industries. She leads the Science and Research Division to develop innovative solutions and technologies to enhance the growth, sustainability and biosecurity of primary industries. Renata holds a Bachelor of Veterinary Science from the University of Sydney, with first class honours, a Graduate Certificate in Bioethics from the University of Technology, Sydney, and is a graduate of the Australian Institute of Company Directors. She co-chairs the Boards of the Animal Genetics and Breeding Unit and the Primary Industries Innovation Centre and is a member of the EH Graham Centre Board.

Brett McCallum: Director

Appointed 9 September 2009. Member of the Finance, Audit and Risk Management Committee.

Brett McCallum is Chief Executive Officer of the Pearl Producers Association. He has held a number of senior roles in the fishing industry and has been involved in a number of industry and government advisory committees. Previous roles include Chief Executive Officer of the Western Australian Fishing Industry Council, National Aquaculture Council director and several executive management positions in major commercial fishing companies.

Dr Daryl McPhee: Director

Appointed 1 September 2009.

Dr Daryl McPhee is Associate Professor of Environmental Science at Bond University and Director of McPhee Research Consultants. Daryl has worked on behalf of industry and government on projects involving all sectors of the fishing industry. This has included industry development and technology transfer and the development and implementation of environmental management systems. He has published numerous papers and reports on topics related to fisheries and marine ecology and fisheries economics and is the author of the textbook *Fisheries Management in Australia*. He also has extensive experience in the environmental assessment of port-related activities.

Professor Keith Sainsbury: Director

Appointed 15 September 2009.

Keith Sainsbury is Professor of Marine System Science, University of Tasmania and a director of SainSolutions Pty Ltd. Keith is Vice-Chair, Marine Stewardship Council, Science Advisor for the CSIRO Wealth from Oceans Flagship, and a commissioner of the Australian Fisheries Management Authority. He was the 2004 laureate of the prestigious Japan Prize for Science for his work in understanding shelf ecosystems and their sustainable utilisation.

Richard Stevens OAM: Director

Appointed as a director 28 September 2006 and re-appointed 1 September 2009.
Member of the Finance, Audit and Risk Management Committee.

Richard Stevens is a fisheries management and government relations adviser. Richard is also a commissioner of the Australian Fisheries Management Authority and a member of the Fisheries Council of South Australia. He chairs the Southern Bluefin Tuna Research Council and a number of fishery management advisory committees. Previous roles include New South Wales Fisheries Resource Conservation Advisory Council chair and member of the Council of the Australian Maritime College, Tasmania.

Independent committee member

Mr Robert Seldon — Independent member

Appointed as an independent member of the Finance, Audit and Risk Committee August 2008.

Robert Seldon has more than 40 years experience in merchant banking, including 15 years as chief executive of a major United States banking subsidiary in Australia. He has had substantial exposure to both food and agribusiness activities, with an active participation in the provision of advice on mergers and acquisitions within that sector. Robert is currently on the Board of Horticulture Australia Ltd and Chair of that company's Finance and Risk Committee. He was formerly a Director of the Australian Fisheries Management Authority and also a Chair of their Finance and Audit Committee.

Board committees

Currently the Board has two committees:

» **The Finance, Audit and Risk Management Committee**. The Board at the 12 August 2008 meeting, agreed to appoint Mr Robert Seldon to the Committee as an independent member. Mr Seldon has continued in this role during this financial year.

  – The Finance, Audit and Risk Management Committee comprises at least two non-executive directors and the Business Development Manager. The Committee provides a forum for the effective communication between the Board and the external and internal auditors. It also oversees the FRDC Risk Management Framework.

» **The Remuneration Committee**.

  – The Remuneration Committee comprises the FRDC Chair (Chair of the Committee) and two non-executive directors elected by the Board.

  – The Committee reviews the remuneration packages of the Executive Director and senior management on annual basis and makes recommendations to the Board. The packages will be reviewed with due regard to performance and other relevant factors including market relativity.

For more information on the terms of reference for these committees please visit the FRDC website — www.frdc.com.au

Attendance at Board meetings held during 2010–11

On this and the opposite page are tables showing attendance at Board meetings held during 2010–11. The Chairman approved all absences from Board meetings in accordance with section 71(2) of the PIERD Act.

TABLE 8A: ATTENDANCE BY DIRECTORS AND OFFICER AT BOARD MEETINGS

Date	16/7/ 2010	20/8/ 2010	25/10/ 2010	22–23/ 11/2010	15–16/ 2/2011	13/4/ 2011	15–16/ 6/2011
Board meeting number	113	114	115 T/C	116	117	118	119
Mr Peter Neville (Chair)	Yes	Yes					
Mr Stuart Richey (Deputy Chair)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dr Patrick Hone (Executive Director)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mr Richard Stevens OAM	Yes	Yes	No	Yes	Yes	Yes	Yes
Ms Heather Brayford	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ms Renata Brooks	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mr Brett McCallum	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dr Daryl McPhee	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dr Keith Sainsbury	Yes	Yes	No	Yes	Yes	Yes	Yes T/C
The Hon. Harry Woods			Yes	Yes	Yes	Yes	Yes
Mr John Wilson (Company Secretary)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

T/C is a teleconference. The grey cells signify the director was not eligible to attend the meeting (either they had not yet been appointed or their tenure had ended).

TABLE 8B: ATTENDANCE BY DIRECTORS, INDEPENDENT MEMBER AT FINANCE, AUDIT AND RISK MANAGEMENT COMMITTEE MEETINGS

Date	16/8/2010 T/C	19/8/2010	22/11/2010	14/2/2011
Mr Stuart Richey (Chair)	Yes	Yes	Yes	Yes
Mr Brett McCallum	Yes	Yes	Yes	Yes
Mr Richard Stevens	Yes	Yes	No	Yes
Mr Robert Seldon (Independent member)	Yes	Yes	Yes	Yes
The Hon. Harry Woods			Yes	Yes
Mr John Wilson (Company Secretary)	Yes	Yes	Yes	Yes

T/C is a teleconference. The grey cell signifies the director was not eligible to attend the meeting, as he had not yet been appointed.

TABLE 8C: ATTENDANCE BY DIRECTORS AT REMUNERATION COMMITTEE MEETINGS

Date	17/5/2011	14/6/2011
The Hon. Harry Woods	Yes	Yes
Ms Heather Brayford	Yes	Yes
Ms Renata Brooks	Yes	Yes

Directors' interests

The FRDC's policy on directors' interests, of which the following is a summary, complies with section 21 of the CAC Act. The policy centres on the principle that a director must disclose an interest whenever he/she considers there is a potential conflict of interests.

Participation by director with conflict of interests

A standing notice about directors' interests is updated at each Board meeting. All declarations of interests, and their consideration by the Board, are recorded in the minutes.

1997.
WILL ZACHARIN

1995.
PETER LAST (LEFT) AND GORDON YEARSLEY

2007.
MAL MALONEY AND DAPHNE BRYAN

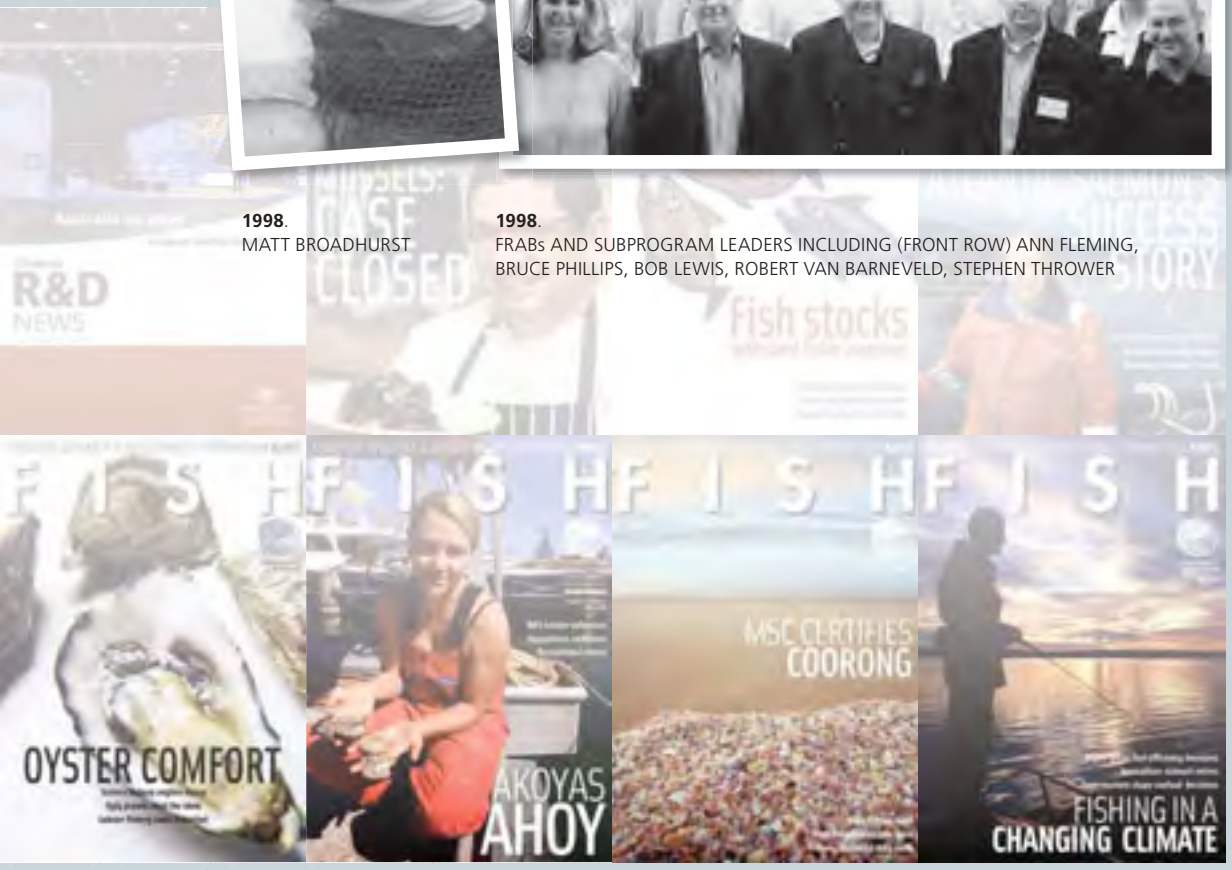
2005

2006

HISTORY

1998.
MATT BROADHURST

1998.
FRABs AND SUBPROGRAM LEADERS INCLUDING (FRONT ROW) ANN FLEMING, BRUCE PHILLIPS, BOB LEWIS, ROBERT VAN BARNEVELD, STEPHEN THROWER



2007

2008

2010–11

AUDITOR-GENERAL'S REPORT

Australian National
Audit Office

INDEPENDENT AUDITOR'S REPORT

To the Minister for Agriculture, Fisheries and Forestry

I have audited the accompanying financial statements of the Fisheries Research and Development Corporation for the year ended 30 June 2011, which comprise: a Statement by the Directors, Executive Director and Chief Financial Officer; the Statement of Comprehensive Income; Balance Sheet; Statement of Changes in Equity; Cash Flow Statement; Schedule of Commitments; Schedule of Contingencies; Schedule of Asset Additions; and Notes comprising a Summary of Significant Accounting Policies and other explanatory information.

Directors' Responsibility for the Financial Statements

The directors of the Fisheries Research and Development Corporation are responsible for the preparation of the financial statements that give a true and fair view in accordance with the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997*, including the Australian Accounting Standards, and for such internal control as the directors determine is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on the financial statements based on my audit. I have conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. These auditing standards require that I comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Authority's preparation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial statements.

GPO Box 707 CANBERRA ACT 2601
19 National Circuit BARTON ACT 2600
Phone (02) 6203 7300 Fax (02) 6203 7777

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Independence

In conducting my audit, I have followed the independence requirements of the Australian National Audit Office, which incorporate the requirements of the Australian accounting profession.

Opinion

In my opinion, the financial statements of the Fisheries Research and Development Corporation:

(a) have been prepared in accordance with the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997*, including the Australian Accounting Standards; and

(b) give a true and fair view of the matters required by the Finance Minister's Orders including the Fisheries Research and Development Corporation's financial position as at 30 June 2011 and of its financial performance and cash flows for the year then ended.

Australian National Audit Office

Peter Kerr

Executive Director

Delegate of the Auditor-General

Canberra

26 August 2011

FISHERIES RESEARCH AND DEVELOPMENT CORPORATION

FRDC

FINANCIAL STATEMENTS

FOR THE YEAR ENDED
30 JUNE 2011

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CIII—CXLIX

STATEMENT BY DIRECTORS, EXECUTIVE DIRECTOR AND CHIEF FINANCIAL OFFICER

In our opinion, the attached financial statements for the period ended 30 June 2011 are based on properly maintained financial records, and give a true and fair view of the matters required by the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997* (CAC Act), as amended.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the FRDC will be able to pay its debts as, and when, they become due and payable.

This statement is made in accordance with a resolution of the directors.

Signed..... 26 August 2011

The Hon. Harry Woods
Chair

Signed..... 26/8 2011

Stuart Richey AM
Chair Finance, Audit and Risk Management Committee

Signed..... 26/8 2011

Patrick Hone
Executive Director

Signed..... 26 AUG 2011

John Wilson
Chief Financial Officer

STATEMENT OF COMPREHENSIVE INCOME

for the period ended 30 June 2011

	Notes	2011 $	2010 $
EXPENSES			
Employee benefits	3A	1,795,526	1,779,614
Supplier expenses	3B	1,809,598	2,040,666
Depreciation and amortisation	3C	537,805	512,132
Projects expenditure	3D	21,563,477	24,454,834
Finance costs	3E	49,377	139,883
Total expenses		25,755,783	28,927,129
LESS:			
OWN-SOURCE INCOME			
Own-source revenue			
Interest	4A	521,959	341,671
Contributions	4B	8,694,053	8,581,974
Sale of goods and rendering of services	4C	63,133	112,967
Grants	4D	885,000	4,900,000
Other	4E	4,273	227
Total own-source revenue		10,168,418	13,936,840
Total own-source income		10,168,418	13,936,840
Net cost of services		(15,587,365)	(14,990,289)
Revenue from the Australian Government	4F	16,527,667	16,335,463
Surplus attributable to the Australian Government		940,302	1,345,174
OTHER COMPREHENSIVE INCOME			
Changes in asset revaluation reserves		–	82,553
Total other comprehensive income		–	82,553
Total comprehensive income attributable to the Australian Government		940,302	1,427,728

THE ABOVE STATEMENT SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING NOTES.

BALANCE SHEET

as at 30 June 2011

	Notes	2011 $	2010 $
ASSETS			
Financial assets			
Cash and cash equivalents	5A	**8,494,643**	7,935,738
Trade and other receivables	5B	**1,566,960**	2,001,083
Other investments	5C	**5,001**	5,001
Other	5D	**60,000**	–
Total financial assets		**10,126,604**	9,941,822
Non-financial assets			
Property, plant and equipment	6A,C	**183,764**	242,640
Intangibles	6B,C	**2,220,810**	2,455,433
Total non-financial assets		**2,404,574**	2,698,073
Total assets		**12,531,178**	12,639,895
LIABILITIES			
Payables			
Suppliers	7A	**174,409**	160,135
Projects	7B	**188,380**	939,781
Other	7C	**924,333**	1,306,002
Total payables		**1,287,122**	2,405,918
Provisions			
Employee provisions	8A	**538,243**	468,466
Total provisions		**538,243**	468,466
Total liabilities		**1,825,365**	2,874,384
Net assets		**10,705,813**	9,765,511
EQUITY			
Reserves		**177,519**	177,519
Retained earnings		**10,528,294**	9,587,993
Total equity		**10,705,813**	9,765,511

THE ABOVE STATEMENT SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING NOTES.

STATEMENT OF CHANGES IN EQUITY

for the period ended 30 June 2011

	Retained earnings		Asset revaluation reserve		Total equity	
	2011	2010	**2011**	2010	**2011**	2010
	$	$	**$**	$	**$**	$
Opening balance						
Balance carried forward from previous period	**9,587,993**	8,242,818	**177,519**	94,965	**9,765,512**	8,337,783
Adjusted opening balance	**9,587,993**	8,242,818	**177,519**	94,965	**9,765,512**	8,337,783
Comprehensive income						
Other comprehensive income	–	–	–	82,553	–	82,553
Surplus for the period	**940,302**	1,345,174	–	–	**940,302**	1,345,174
Total comprehensive income	**940,302**	1,345,174	–	82,553	**940,302**	1,427,728
of which:						
Attributable to the Australian Government	**940,302**	1,345,174	–	82,553	**940,302**	1,427,728
Closing balance as at 30 June	**10,528,294**	9,587,993	**177,519**	177,519	**10,705,813**	9,765,511
Closing balance attributable to the Australian Government	**10,528,294**	9,587,993	**177,519**	177,519	**10,705,813**	9,765,511

THE ABOVE STATEMENT SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING NOTES.

CASH FLOW STATEMENT

for the period ended 30 June 2011

	Notes	2011 $	2010 $
OPERATING ACTIVITIES			
Cash received			
Receipts from the Australian Government		**17,287,476**	17,736,974
Contributions		**9,182,187**	10,887,848
Grants		**885,000**	4,300,000
Interest		**502,729**	341,671
Net GST received		**1,439,132**	1,841,702
Other		**67,407**	113,195
Total cash received		**29,363,930**	35,221,390
Cash used			
Employees		**(1,725,749)**	(1,743,276)
Suppliers		**(4,196,088)**	(1,970,364)
Projects expenditure		**(22,314,877)**	(26,261,232)
Total cash used		**(28,236,715)**	(29,974,872)
Net cash from operating activities	9	**1,127,215**	5,246,518
INVESTING ACTIVITIES			
Cash used			
Purchase of property, plant and equipment		**(31,860)**	(32,450)
Purchase of intangibles		**(212,447)**	(307,790)
Total cash used		**(244,307)**	(340,240)
Net cash used by investing activities		**(244,307)**	(340,240)
FINANCING ACTIVITIES			
Cash used			
Repayment of borrowings		**(324,004)**	(648,008)
Total cash used		**(324,004)**	(648,008)
Net cash used by financing activities		**(324,004)**	(648,008)
Net increase in cash held		**558,905**	4,258,270
Cash and cash equivalents at the beginning of the reporting period		**7,935,738**	3,677,468
Cash and cash equivalents at the end of the reporting period	5A	**8,494,643**	7,935,738

THE ABOVE STATEMENT SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING NOTES.

SCHEDULE OF COMMITMENTS

as at 30 June 2011

	2011	2010
	$	$
BY TYPE		
Commitments receivable		
Net GST recoverable on operating lease commitments	**22,607**	33,414
Net GST recoverable on project commitments	**4,742,189**	4,111,108
Total commitments receivable	**4,764,796**	4,144,521
Commitments payable		
Other commitments		
Operating leases [1]	**248,680**	367,549
Project commitments [2]	**52,164,077**	45,222,183
Total other commitments	**52,412,757**	45,589,733
Net commitments by type	**47,647,961**	41,445,212
BY MATURITY		
Commitments receivable		
One year or less	**3,072,987**	2,532,933
From one to five years	**1,691,809**	1,611,588
Over five years	**–**	–
Total commitments receivable	**4,764,796**	4,144,521
Commitments payable		
Operating lease commitments		
One year or less	**119,367**	118,869
From one to five years	**129,314**	248,680
Over five years		
Total operating lease commitments	**248,680**	367,549
Project commitments		
One year or less	**33,683,493**	27,743,396
From one to five years	**18,480,584**	17,478,787
Over five years		
Total project commitments	**52,164,077**	45,222,183
Net commitments by maturity	**47,647,961**	41,445,212

THIS SCHEDULE SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING NOTES.

Note: Commitments are GST inclusive where relevant.

(1) Operating leases included were effectively non-cancellable. The lease for the office accommodation at 25 Geils Court, Deakin expires on 31 July 2013. Lease payments are subject to an annual increase in accordance with upwards movements in the Consumer Price Index. The initial period of office accommodation lease is still current and may be renewed for up to three years at FRDC's option, following a once-off adjustment to rental to current market level.

(2) Project commitments comprise the future funding of approved projects that are contingent on achievement of agreed milestones over the life of those projects (project agreements are exchanged prior to release of the first payment on a project). Projects, where amounts were payable but were unpaid at the end of the period, have been brought to account as project payables. The FRDC contracts to fund projects in future years in advance of receipt of the income needed to fund them. It manages this risk by having the project agreement allow for termination due to insufficient funds or change of Australian Government policy. If the FRDC were to terminate a project agreement, it would only be liable to compensate the research partner for reasonable costs in respect of unavoidable loss incurred by the research partner and directly attributable to the termination.

SCHEDULE OF CONTINGENCIES

as at 30 June 2011

	2011	2010
	$	$
Contingent liabilities		
Seafood CRC Company Ltd	**7,600,030**	9,221,731
Total contingent liabilities	**7,600,030**	9,221,731

Details of contingent liabilities are disclosed in Note 10: Contingent liabilities and assets.

At 30 June 2011, the FRDC had no contingent assets.

THE ABOVE SCHEDULE SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING NOTES.

SCHEDULE OF ASSET ADDITIONS

for the period ended 30 June 2011

The following non-financial non-current assets were added in 2010–11:			
	Property, plant and equipment	Intangibles	Total
	$	$	$
Additions funded in the current year			
By purchase	**31,860**	–	**31,860**
Internally developed	–	**212,447**	**212,447**
Total additions	**31,860**	**212,447**	**244,307**
The following non-financial non-current assets were added in 2009–10:			
	Property, plant and equipment	Intangibles	Total
	$	$	$
Additions funded in the current year			
By purchase	32,450	–	32,450
Internally developed	–	307,790	307,790
Total additions	32,450	307,790	340,240

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS FOR THE PERIOD ENDED 30 JUNE 2011

Table of contents — notes

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1.1 THE OBJECTIVE OF THE FISHERIES RESEARCH AND DEVELOPMENT CORPORATION

The Fisheries Research and Development Corporation (FRDC) is an Australian Government controlled entity, established as a statutory corporation on 2 July 1991, under the provisions of the *Primary Industries and Energy Research and Development Act 1989* (PIERD Act). The objective of the FRDC is to optimise economic, environmental and social benefits for its stakeholders through effective investment and partnership in research, development and extension (RD&E). The FRDC aims to invest in RD&E to maximise the benefit from its investment, by ensuring that the activity is well targeted, meets the Australian Government and industry RD&E priorities, and builds on previous achievements.

The FRDC is structured to meet the following outcome:

> *Increased knowledge that fosters sustainable economic, environmental and social benefits for the Australian fishing industry; including indigenous, recreational, commercial and aquaculture sectors, and the community; through investing in research, development and adoption.*

The continued existence of the FRDC in its present form and with its present programs is dependent on Australian Government policy, and on continuing funding by the Parliament for the FRDC's administration and program.

1.2 BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

The financial statements are general purpose financial statements, and are required by clause 1(b) of Schedule 1 to the *Commonwealth Authorities and Companies Act 1997* (CAC Act).

The financial statements have been prepared in accordance with:

a) Finance Minister's Orders (FMOs) for reporting periods ending on, or after, 1 July 2010; and

b) Australian Accounting Standards and Interpretations issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and in accordance with the historical cost convention, except for certain assets and liabilities at fair value. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position.

The financial statements are presented in Australian dollars, and values are rounded to the nearest dollar unless otherwise specified.

Unless an alternative treatment is specifically required by an accounting standard or the FMOs, assets and liabilities are recognised in the balance sheet when, and only when, it is probable that future economic benefits will flow to the entity; or a future sacrifice of economic benefits will be required, and the amounts of the assets or liabilities can be reliably measured. However, assets and liabilities arising under executor contracts are not recognised unless required by an accounting standard. Liabilities and assets that are unrecognised are reported in the schedule of commitments or the schedule of contingencies.

Unless alternative treatment is specifically required by an accounting standard, income and expenses are recognised in the statement of comprehensive income when, and only when, the flow, consumption or loss of economic benefits has occurred and can be reliably measured.

1.3 SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES

No accounting assumptions or estimates have been identified that have a significant risk of causing a material adjustment to carrying amounts of assets and liabilities within the next accounting period.

1.4 NEW AUSTRALIAN ACCOUNTING STANDARDS

Adoption of new Australian Accounting Standards requirements

No accounting standard has been adopted earlier than the application date as stated in the standard.

The new standards, revised standards, interpretations and amending standards that were issued prior to the signing of the statement by the Board Chair, Chair Finance, Audit and Risk Management Committee, Executive Director and the Chief Financial Officer, and are applicable to the current reporting period, did not have a financial impact and are not expected to have a future financial impact on the FRDC.

Future Australian Accounting Standards requirements

The new standards, revised standards, interpretations and amending standards that were issued prior to the signing of the statement by the Board Chair, Chair Finance, Audit and Risk Management Committee, Executive Director and Chief Financial Officer, and are applicable to the future reporting period, are not expected to have a future financial impact on the FRDC.

1.5 REVENUE

Contributions are paid to the FRDC under Section 30A of the PIERD Act. Contributions are recognised when they are entitled to be received by the FRDC.

Revenue from the sale of goods is recognised when:

a) the risks and rewards of ownership have been transferred to the buyer;

b) the FRDC retains no managerial involvement or effective control over the goods;

c) the revenue and transaction costs incurred can be reliably measured; and

d) it is probable that the economic benefits associated with the transaction will flow to the FRDC.

Revenue from rendering of services is recognised by reference to the stage of completion of contracts at the reporting date. The revenue is recognised when:

a) the amount of revenue, stage of completion, and transaction costs incurred can be reliably measured; and

b) the probable economic benefits associated with the transaction will flow to the entity.

The stage of completion of contracts at the reporting date is determined by reference to the proportion that costs incurred to date bear to the estimated total costs of the transaction.

Receivables for goods and services, which have 30 day terms, are recognised at the nominal amounts due, less any impairment allowance account. Collectability of debts is reviewed as at the end of each reporting period. Allowances are made when the collectability of the debt is no longer probable.

Interest revenue is recognised using the effective interest method as set out in *AAS8 139 Financial Instruments: Recognition and Measurement*.

Other contributions, including Australian Government grants, are recognised when:

a) the FRDC obtains control of the contribution or the right to receive the contribution;

b) it is probable that the economic benefits comprising the contribution will flow to the FRDC; and

c) the amount of the contribution can be reliably measured.

Project refunds from research organisations are brought to account when received.

Revenue from the Australian Government

Funding received or receivable from the Australian Government (appropriated to the agency as a CAC Act body payment item for payment to the FRDC), is recognised as revenue from the Australian Government, unless it is in the nature of an equity injection or a loan.

Parental leave payment scheme

Amount received under the Parental Leave Payments Scheme by the FRDC not yet paid to employees will be presented gross as cash and a liability (payable). The total amount received under this scheme is disclosed as a footnote to the Note 4F: Revenue from the Australian Government.

1.6 GAINS

Sale of assets

Gains from disposal of assets are recognised when control of the asset has passed to the buyer.

1.7 EMPLOYEE BENEFITS

Liabilities for 'short-term employee benefits' (as defined in *AASB 119 Employee Benefits*) and termination benefits due within 12 months of the end of reporting period are measured at their nominal amounts.

The nominal amount is calculated with regard to the rates expected to be paid on settlement of the liability.

Other long-term benefits are measured as net total of the present value of the defined benefit obligation at the end of the reporting period minus the fair value at the end of the reporting period of plan assets (if any) out of which the obligations are to be settled directly.

The FRDC acts so as to ensure that its 'financial assets' (cash, receivables and investments) are greater than its 'employee provisions' (leave entitlements).

Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting, and the average sick leave taken in future years by employees of the FRDC is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that will apply at the time the leave is taken, including the FRDC's employer superannuation contribution rates, to the extent that the leave is likely to be taken during service rather than paid out on termination.

The liability for long service leave has been determined by reference to the work of an actuary as at 30 June 2011. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

All leave provision calculations are based on remuneration packages as at 1 July 2011, see Note 8: Provisions.

Separation and redundancy

Provision is made for separation and redundancy benefit payments. The FRDC recognises a provision for termination when it has developed a detailed formal plan for the terminations, and has informed those employees affected that it will carry out the terminations.

Superannuation

The FRDC's staff are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS), or the PSS accumulation plan (PSSap).

The CSS and PSS are defined benefit schemes for the Australian Government. The PSSap is a defined contribution scheme.

The liability for defined benefits is recognised in the financial statements of the Australian Government, and is settled by the Australian Government in due course. This liability is reported by the Department of Finance and Deregulation as an administered item.

The FRDC makes employer contributions to the employees' superannuation schemes at rates determined by an actuary to be sufficient to meet the current cost to the Australian Government. The FRDC accounts for the contributions as if they were contributions to defined contribution plans.

1.8 LEASES

A distinction is made between finance leases and operating leases. Finance leases effectively transfer from the lessor to the lessee substantially all the risks and rewards incidental to ownership of leased assets. An operating lease is a lease that is not a finance lease. In operating leases, the lessor effectively retains substantially all such risks and benefits.

Where an asset is acquired by means of a finance lease, the asset is capitalised at either the fair value of the lease property or, if lower, the present value of minimum lease payments at the inception of the contract and a liability is recognised at the same time and for the same amount.

The discount rate used is the interest rate implicit in the lease. Leased assets are amortised over the period of the lease. Lease payments are allocated between the principal component and the interest expense.

Operating lease payments are expensed on a straight-line basis that is representative of the pattern of benefits derived from the leased assets.

The FRDC does not currently have any finance leases.

1.9 PROJECTS

The FRDC recognises project liabilities through project agreements that require the research partner to perform services or provide facilities, or to meet eligibility criteria. In these cases, liabilities are recognised only to the extent that the services required have been performed, or the eligibility criteria have been satisfied by the research partner to the FRDC's satisfaction.

1.10 CASH

Cash is recognised at its nominal amount. Cash and cash equivalents includes:

a) cash on hand; and

b) demand deposits in bank accounts with an original maturity of 3 months or less that are readily convertible to known amounts of cash and subject to insignificant risk of changes in value.

In accordance with section 42 of the PIERD Act, the Treasurer has approved the FRDC overdrawing its bank account to a limit of $900,000 on the basis that sufficient funds are held in related accounts to offset any overdrawing, with these funds to be transferred as soon as possible to clear any debt.

1.11 FINANCIAL RISK MANAGEMENT

The FRDC's activities expose it to normal commercial financial risk. As a result of the nature of the FRDC's business, FRDC's internal policies, and Australian Government policies dealing with the management of financial risk, the FRDC's exposure to market, credit, liquidity, cash flow and fair value interest rate risk is considered to be low.

1.12 FINANCIAL ASSETS

The FRDC classifies its financial assets in the following categories:

a) held-to-maturity investments; and

b) loans and receivables.

The classification depends on the nature and purpose of the financial assets, and is determined at the time of initial recognition.

Financial assets are recognised and derecognised upon trade date.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial asset and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset, or, where appropriate, a shorter period.

Income is recognised on an effective interest rate basis, except for financial assets that are recognised at fair value through profit or loss.

Held-to-maturity investments

Non-derivative financial assets with fixed or determinable payments and fixed maturity dates that the FRDC has the positive intent and ability to hold to maturity, are classified as held-to-maturity investments. Held-to-maturity investments are recorded at amortised cost using the effective interest method less impairment, with revenue recognised on an effective yield basis.

Loans and receivables

Trade receivables, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest rate.

Impairment of financial assets

Financial assets are assessed for impairment at the end of each reporting period.

» *Financial assets held at amortised cost* — if there is objective evidence that an impairment loss has been incurred for loans and receivables or held to maturity investments held at amortised cost, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount is reduced by way of an allowance account. The loss is recognised in the statement of comprehensive income.

» *Financial assets held at cost* — if there is objective evidence that an impairment loss has been incurred, the amount of the impairment loss is the difference between the carrying amount of the asset and the present value of the estimated future cash flows discounted at the current market rate for similar assets.

1.13 FINANCIAL LIABILITIES

Financial liabilities are classified as either financial liabilities 'at fair value through profit or loss' or other financial liabilities. Financial liabilities are recognised and derecognised upon 'trade date'.

Other financial liabilities

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. These liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis.

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period.

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

1.14 CONTINGENT LIABILITIES AND CONTINGENT ASSETS

Contingent liabilities and contingent assets are not recognised in the balance sheet, but are reported in the relevant schedules and notes. They may arise from uncertainty as to the existence of a liability or asset, or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain; and contingent liabilities are disclosed when settlement is greater than remote.

1.15 ACQUISITION OF ASSETS

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred on exchange and liabilities are undertaken. Financial assets are initially measured at their fair value plus transaction costs where appropriate.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and income at their fair value at the date of acquisition, unless acquired as a consequence of restructuring of administrative arrangements. In the latter case, assets are initially recognised as contributions by owners at the amounts at which they were recognised in the transferor's accounts immediately prior to the restructuring.

1.16 PROPERTY, PLANT AND EQUIPMENT

Asset recognition threshold

Purchases of property, plant and equipment are recognised initially at cost in the balance sheet, except for purchases costing less than $5,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

Revaluations

Fair values for each class of asset are determined as shown below:

Asset class	*Fair value measured at*
Leasehold improvements	Depreciated replacement cost
Property, plant and equipment	Market selling price

Following initial recognition at cost, property, plant and equipment are carried at fair value less subsequent accumulated depreciation and accumulated impairment losses. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The FRDCs independent valuation is completed annually, in May.

All property, plant and equipment assets were reviewed for fair value as at 30 June 2011 by the Australian Valuation Office.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve, except to the extent that it reversed a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit, except to the extent that they reversed a previous revaluation increment for that class.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset, and the asset restated to the revalued amount.

Depreciation

Depreciable property, plant and equipment assets are written-off to their estimated residual values over their estimated useful lives to the FRDC using, in all cases, the straight-line method of depreciation.

Depreciation rates (useful lives), residual values and methods are reviewed at each reporting date, and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation rates applying to each class of depreciable asset are based on the following useful lives:

	2011	2010
Plant and equipment	3 to 5 years	3 to 5 years
Leasehold improvements	Lease term	Lease term

Impairment

All assets were assessed for impairment as at 30 June 2011. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to sell, and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if the FRDC were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

No indicators of impairment were found for assets at fair value as at 30 June 2011.

Derecognition

An item of property, plant and equipment is derecognised upon disposal, or when no further future economic benefits are expected from its use or disposal.

1.17 INTANGIBLES

The FRDC's intangibles comprise internally developed software for internal use. This asset is carried at cost, less accumulated amortisation and accumulated impairment losses.

Internally developed software is amortised on a straight-line basis over its anticipated useful life. The useful life of software is 10 years (2009–10: 10 years).

All software assets were assessed for indications of impairment as at 30 June 2011.

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.18 TAXATION

The FRDC is exempt from all forms of taxation except fringe benefits tax (FBT), payroll tax and the goods and services tax (GST).

Revenues, expenses and assets are recognised net of GST except:

a) where the amount of GST incurred is not recoverable from the Australian Taxation Office; and

b) for receivables and payables.

1.19 COMPARATIVE FIGURES

Comparative figures have been adjusted so they conform with changes in the presentation of these financial statements where required. In the Statement of Comprehensive Income the reclassification of "Grants" (previously included under "Revenue from the Australian Government") has resulted in a different sub-total for "Net cost of services" to that originally reported in 2009–10. The reclassification is a result of a clarification of the disclosure requirements in respect of this revenue item notified to the FRDC in 2010–11.

NOTE 2: EVENTS AFTER THE REPORTING PERIOD

No reportable events have occurred after the balance sheet date.

NOTE 3: EXPENSES

NOTE 3A: EMPLOYEE BENEFITS

	2011	2010
	$	$
Wages and salaries	**1,348,058**	1,397,065
Superannuation:		
Defined contribution plans	**138,669**	97,173
Defined benefit plans	**239,022**	242,988
Leave and other entitlements	**69,777**	42,388
Total employee benefits	**1,795,526**	1,779,614

NOTE 3: EXPENSES (CONTINUED)

NOTE 3B: SUPPLIERS

	2011	2010
	$	$
Goods and services		
Audit fees	**28,100**	28,100
External service providers	**106,052**	121,365
Insurance — general	**16,068**	16,807
Information technology	**322,145**	438,931
Legal	**64,534**	105,896
Asset purchases less than $5,000	**21,096**	38,528
Communications [1] (see next page)	**794,834**	804,858
Office supplies	**32,333**	25,162
Property	**33,375**	28,703
Recruitment / director selection costs	**–**	40,259
Representation	**15,189**	13,016
Telecommunications	**58,666**	55,752
Training	**34,922**	31,039
Travel	**126,445**	140,627
Other	**35,664**	37,469
Total goods and services	**1,689,423**	1,926,511
Goods and services are made up of:		
Provision of goods and services — related entities	**117,890**	89,825
Provision of goods and services — external parties	**1,571,533**	1,836,686
Total goods and services	**1,689,423**	1,926,511
Other supplier expenses		
Operating lease rental — external parties:		
Minimum lease payments	**106,963**	101,817
Workers compensation expenses	**13,212**	12,339
Total other supplier expenses	**120,175**	114,156
Total supplier expenses	**1,809,598**	2,040,667

NOTE 3: EXPENSES (CONTINUED)

NOTE 3B: SUPPLIERS

	2011	2010
	$	$
(1) Communications are represented by:		
Annual Report	**28,995**	26,063
Australian Agricultural Natural Resources on-line (AANRO)	**–**	9,620
Fisheries Research Advisory Bodies	**206,283**	233,011
Joint Research & Development Corporation activities	**70,144**	59,887
Media activities	**30,247**	24,778
Other stakeholder consultation	**49,785**	11,250
FISH magazine	**321,375**	283,541
RD&E Plan	**24,825**	18,966
Representative organisations consultation	**4,392**	19,144
Website	**9,581**	33,913
Sponsorship	**14,540**	27,742
Other	**34,666**	56,943
Total communications	**794,834**	804,858

NOTE 3C: DEPRECIATION AND AMORTISATION

Depreciation:		
Property, plant and equipment	**90,736**	98,660
Total depreciation	**90,736**	98,660
Amortisation:		
Intangibles	**447,069**	413,473
Total amortisation	**447,069**	413,473
Total depreciation and amortisation	**537,805**	512,132

NOTE 3D: PROJECTS EXPENDITURE

	2011	2010
	$	$
Public sector:		
Australian Government entities (related entities)	**2,237,386**	3,002,111
State and territory governments	**3,695,888**	5,196,395
Overseas	**18,000**	–
Other	**15,612,203**	16,256,327
Total project expenditure	**21,563,477**	24,454,834

NOTE 3E: FINANCE COSTS

DAFF debt — unwinding of discount	**49,377**	139,375
ASCo loan — unwinding of discount	–	508
Total finance costs	**49,377**	139,883

Department of Agriculture, Fisheries and Forestry (DAFF) debt — **unwinding of discount** expense represents the discount to the present value of the future cash flows for the DAFF debt payable (refer Note 7C) in accordance with AASB 739 Financial Instruments: Recognition and Measurement.

Australian Seafood Co-Products Pty Ltd (ASCo) loan — **unwinding of discount** expense represents the discount to the present value of the future cash flows for the ASCo loan receivable (refer Note 5B) in accordance with *AASB 739 Financial Instruments: Recognition and Measurement*.

NOTE 4: INCOME

OWN-SOURCE REVENUE

NOTE 4A: INTEREST

	2011	2010
	$	$
Deposits	521,959	341,671
Total interest	**521,959**	341,671

NOTE 4B: CONTRIBUTIONS

Fisheries:		
Australian Prawn Farmers Association	176,932	144,155
Australian Fisheries Management Authority	1,514,418	1,432,065
Australian Capital Territory	0	124,772
New South Wales	349,863	383,124
Northern Territory	620,569	595,114
Queensland	711,511	570,914
South Australia	1,711,830	1,837,690
Tasmania	1,538,632	1,247,301
Victoria	582,792	821,707
Western Australia	1,258,430	1,212,658
Sub-total	**8,464,977**	8,369,500
Projects		
Project funds received from other parties	16,792	82,069
Project refunds of prior years expenditure	212,283	130,404
Sub-total	**229,076**	212,473
Total contributions revenue	**8,694,053**	8,581,974

NOTE 4C: SALE OF GOODS AND RENDERING OF SERVICES

Provision of goods and rendering of services — related entities	42,157	53,681
Provision of goods and rendering of services — external parties	20,976	59,286
Total sale of goods and rendering of services	**63,133**	112,967

NOTE 4: INCOME (CONTINUED)

NOTE 4D: GRANTS

	2011	2010
	$	$
Public sector:		
Department of Agriculture, Fisheries and Forestry		
Funding for game and shark fishing research [1]	**95,000**	600,000
Funding for the Recreational Fishing Industry Development Strategy [1]	**790,000**	800,000
Department of Climate Change and Energy Efficiency		
Funding for National Climate Change Adaptation Research Plan [2]	**–**	3,500,000
Total grants	**885,000**	4,900,000

(1) Research program funding for Department of Agriculture, Fisheries and Forestry research (refer Note 14). The FRDC received in 2010–11: $885,000 (2009–10: $1,400,000).

(2) Research program funding for the National Climate Change Adaptation Research Plan. The FRDC received in 2010–11: $Nil (2009–10: $3,500,000).

NOTE 4E: OTHER REVENUE

Gain from penalties for late levies payers	**4,273**	227
Total other revenue	**4,273**	227

REVENUE FROM THE AUSTRALIAN GOVERNMENT

NOTE 4F: REVENUE FROM THE AUSTRALIAN GOVERNMENT *

Department of Agriculture, Fisheries and Forestry:		
CAC Act body payment item:		
Australian Government contribution of 0.50% of GVP [1]	**11,031,419**	10,974,370
Matching of industry contributions [2]	**5,496,248**	5,361,093
Total revenue from the Australian Government	**16,527,667**	16,335,463

* The FRDC received in 2011: $0 (2010: $0) under the Paid Parental Leave Scheme.

(1) GVP is the average gross value of fisheries production for the current year and the two preceding financial years. The Australian Government's contribution of 0.50% of GVP is made on the grounds that the FRDC exercises a stewardship role in relation to fisheries resources on behalf of the Australian community.

(2) Matching of industry's contributions (up to 0.25% of GVP) by the Australian Government.

NOTE 5: FINANCIAL ASSETS

NOTE 5A: CASH AND CASH EQUIVALENTS

	2011	2010
	$	$
Cash at bank	751,523	1,992,961
Deposits on call	5,743,120	2,742,778
Funds on term deposit	2,000,000	3,200,000
Total cash and cash equivalents	**8,494,643**	7,935,738

NOTE 5B: TRADE AND OTHER RECEIVABLES

Goods and services:		
Goods and services — related entities	149,388	63,377
Goods and services — external entities	995,028	543,511
Total receivables for goods and services	**1,144,416**	606,888
Department of Agriculture, Fisheries and Forestry:		
Receivable	294,212	1,161,063
Total receivable from Department of Agriculture, Fisheries and Forestry	**294,212**	1,161,063
Other receivables:		
GST receivable from the Australian Taxation Office	123,333	228,391
ASCo loan (1)	5,000	4,742
Total other receivables	**128,333**	233,133
Total trade and other receivables	**1,566,960**	2,001,083
Receivables are expected to be recovered in:		
No more than 12 months	1,566,960	2,001,083
Total trade and other receivables	**1,566,960**	2,001,083
Receivables are aged as follows:		
Not overdue	1,412,959	1,962,583
Overdue by:		
0 to 30 days	27,500	38,500
30 to 60 days	–	–
61 to 90 days	126,501	–
More than 90 days	–	–
Total receivables	**1,566,960**	2,001,083

(1) **ASCo shareholder's loan**

Included in receivables above is a loan by the FRDC to ASCo of $5,000 under clause 14.3 of the shareholder agreement (refer also Note 5C). The FRDC expects this loan will be repaid in due course. The FRDC does not consider the loan to be impaired or overdue — it is expected to be repaid from future profits. The value of the loan has been discounted to represent a present value of the future cash flows.

NOTE 5C: OTHER INVESTMENTS

	2011	2010
	$	$
Shares in other company — unlisted [1]	5,001	5,001
Total other investments	**5,001**	5,001
Total other investments are expected to be recovered in:		
More than 12 months	5,001	5,001
Total other investments	**5,001**	5,001

Australian Seafood Co-Products Pty Ltd (ASCo)

(1) **Shares in unlisted company**

Australian Seafood Co-Products Pty Ltd (ASCo) is an unlisted company in which the FRDC owns a one-fifteenth share. The FRDC is not represented on the ASCo Board. The principal activity of ASCo is to invest in ASCo Fertilisers Pty Ltd, which carries on the business of commercialisation of know-how and technical information relating to the conversion of fish waste and fish nutrient into agricultural fertiliser products, and the development of production facilities for those products. As the shares do not have a quoted market price in an active market, and cannot be reliably measured, they have been carried at cost in accordance with AASB 139.

NOTE 5D: OTHER FINANCIAL ASSETS

Pre-paid sponsorships [1]	60,000	–
Total other financial assets	**60,000**	–
Total other financial assets are expected to be recovered in:		
No more than 12 months	60,000	–
Total other financial assets	**60,000**	–

(1) Pre-paid sponsorships are amounts paid to sponsor the biennial Seafood Directions conference.

NOTE 6: NON-FINANCIAL ASSETS

NOTE 6A: PROPERTY, PLANT AND EQUIPMENT

	2011	2010
	$	$
Property, plant and equipment:		
Fair value	**274,500**	242,640
Accumulated depreciation	**(90,736)**	–
Total property, plant and equipment	**183,764**	242,640

Revaluations of non-financial assets

All revaluations were conducted in accordance with the revaluation policy stated at Note 1. On 30 June 2011, an independent valuer, the Australian Valuation Office, conducted a review of the fair value of the FRDC's infrastructure, plant and equipment.

A revaluation increment/decrement of $Nil for plant and equipment (2010; increment of $82,553) were credited to the asset revaluation reserve by asset class and included in the equity section of the balance sheet.

No indicators of impairment were found for property, plant and equipment. No property, plant and equipment is expected to be sold or disposed of within the next 12 months.

NOTE 6B: INTANGIBLES

Computer software:		
Internally developed — in use	**4,471,035**	4,258,589
Accumulated amortisation	**(2,250,225)**	(1,803,156)
Total computer software	**2,220,810**	2,455,433
Total intangibles	**2,220,810**	2,455,433

No indicators of impairment were found for intangible assets.

No intangibles are expected to be sold or disposed of within the next 12 months.

NOTE 6C: RECONCILIATION OF THE OPENING AND CLOSING BALANCES OF PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLES (2010–11)

	Property, plant and equipment	Intangibles	Total
	$	$	$
As at 1 July 2010			
Gross book value	242,640	4,258,589	4,501,229
Accumulated depreciation/amortisation	–	(1,803,156)	(1,803,156)
Net book value 1 July 2010	242,640	2,455,433	2,698,073
Additions*	31,860	212,447	244,307
Revaluations recognised in other comprehensive income	–	–	–
Depreciation/amortisation expense	(90,736)	(447,069)	(537,805)
Net book value 30 June 2011	183,764	2,220,810	2,404,574
Net book value as of 30 June 2011 represented by:			
Gross book value	274,500	4,471,035	4,745,535
Accumulated depreciation/amortisation	(90,736)	(2,250,225)	(2,340,961)
	183,764	2,220,810	2,404,574

* Disaggregated additions information are disclosed in the schedule of asset additions on page 112.

NOTE 6: NON-FINANCIAL ASSETS (CONTINUED)

RECONCILIATION OF THE OPENING AND CLOSING BALANCES OF PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLES (2009–10)

	Property, plant and equipment	Intangibles	Total
	$	$	$
As at 1 July 2009			
Gross book value	226,296	3,950,799	4,177,095
Accumulated depreciation/amortisation	–	(1,389,683)	(1,389,683)
Net book value 1 July 2009	226,296	2,561,115	2,787,411
Additions *	32,450	307,790	340,240
Revaluations recognised in other comprehensive income	82,553	–	82,553
Depreciation/amortisation expense	(98,660)	(413,473)	(512,132)
Net book value 30 June 2010	242,640	2,455,433	2,698,073
Net book value as of 30 June 2010 represented by:			
Gross book value	242,640	4,258,589	4,501,229
Accumulated depreciation/amortisation	–	(1,803,156)	(1,803,156)
	242,640	2,455,433	2,698,073

* Disaggregated additions information are disclosed in the schedule of asset additions on page 112.

NOTE 7: PAYABLES

NOTE 7A: SUPPLIERS

	2011	2010
	$	$
Trade creditors and accruals	142,778	125,301
FBT payable	2,811	1,440
PAYG payable	28,820	33,394
Total supplier payables	174,409	160,135
Supplier payables expected to be settled within 12 months:		
Related entities	32,694	29,540
External parties	141,715	130,595
Total	174,409	160,135
Total supplier payables	174,409	160,135

Settlement is usually made within 30 days.

NOTE 7B: PROJECT PAYABLES

Public sector:		
Australian Government entities (related entities)	70,345	–
State and territory governments	–	159,067
Private sector:		
Other	118,035	780,715
Total project payables	188,380	939,781
Total project creditors are expected to be recovered in:		
No more than 12 months	188,380	939,781
Total project payables	188,380	939,781

Project creditors are recognised at their nominal amounts, being the amounts at which the liabilities will be settled. They relate to payments approved on achievement of agreed milestones, but which were unpaid at the end of the reporting period. Settlement is usually made within 60 days.

NOTE 7: PAYABLES (CONTINUED)

NOTE 7C: OTHER PAYABLES

	2011	2010
	$	$
Debt payable to DAFF [1]	924,333	1,198,960
Australian Government 'matching' overpayment refundable to DAFF [2]	–	107,042
Total other payables	**924,333**	1,306,002
Total other payables are expected to be settled in:		
No more than 12 months	**324,004**	431,046
More than 12 months	**600,329**	874,956
Total other payables	**924,333**	1,306,002

(1) The debt payable to DAFF represents the recovery of GVP overpayments to the FRDC. DAFF inadvertently used an incorrect formula to determine the GVP for fisheries for the financial years between 2001–02 and 2006–07. DAFF and the FRDC have agreed the total value of the debt is $1,944,024 ($1,371,565 in relation to 0.50% GVP; and $572,459 in relation to the matching contributions). DAFF and the FRDC have also agreed that the debt will be repaid over six years and FRDC has recognised it as other payables.

In accordance with *AASB 139 Financial Instruments: Recognition and Measurement*, the debt has been recognised initially at its fair value, and has been discounted to represent a present value of the future cash flows. Because the DAFF debt has been discounted, there will be an expense recognised in the statement of comprehensive income in future periods as each debt repayment is made (refer Note 3E). The quantum of that expense will be the difference between the nominal and discounted value.

(2) The comparison year represents an overpayment caused by DAFF making the GVP determination late in the financial year.

NOTE 8: PROVISIONS

NOTE 8A: EMPLOYEE PROVISIONS

	2011	2010
	$	$
Leave	**538,243**	468,466
Total employee provisions	**538,243**	468,466
Employee provisions are expected to be settled in:		
No more than 12 months	**478,744**	394,176
More than 12 months	**59,499**	74,290
Total employee provisions	**538,243**	468,466

NOTE 9: CASH FLOW RECONCILIATION

Reconciliation of cash and cash equivalents as per balance sheet to cash flow statement		
Cash and cash equivalents as per:		
Cash flow statement	**8,494,643**	7,935,738
Balance sheet	**8,494,643**	7,935,738
Difference	**0**	0
Reconciliation of net cost of services to net cash from operating activities:		
Net cost of services	**(15,587,365)**	(14,990,289)
Add revenue from the Australian Government	**16,527,667**	16,335,463
Adjustments for non-cash items		
Depreciation / amortisation	**537,805**	512,132
Finance costs	**49,377**	139,375
Changes in assets / liabilities		
(Increase) / decrease in net receivables	**374,123**	2,228,522
Increase / (decrease) in employee provisions	**69,777**	46,545
Increase / (decrease) in supplier payables	**14,273**	(19,396)
Increase / (decrease) in project payables	**(751,401)**	887,124
Increase / (decrease) in other payables	**(107,042)**	107,042
Net cash from operating activities	**1,127,216**	5,246,518

NOTE 10: CONTINGENT LIABILITIES AND ASSETS

	2011 $	2010 $
Contingent liabilities		
Balance from previous period	**9,221,731**	11,111,495
New	**1,679,719**	2,251,000
Expired	**(3,301,420)**	(4,140,764)
Total contingent liabilities [1]	**7,600,030**	9,221,731

At 30 June 2011, the FRDC had no contingent assets.

(1) Quantifiable contingencies

The schedule of contingencies reports contingent liabilities in respect of Seafood CRC Company Ltd (Seafood CRC) in which FRDC is a participant. The FRDC has agreements with the Seafood CRC which commits the FRDC to investing $28,634,719 over the life of the CRC, which finishes in 30 June 2014. The FRDC recognises commitments as contracts are signed. The FRDC recognised $21,034,689 in Seafood CRC contracts as at 30 June 2011 ($15,353,392 as at 30 June 2010). This leaves a contingent liability of $7,600,030 as at 30 June 2011 ($9,221,731 as at 30 June 2010). As the FRDC commits to further Seafood CRC contracts this contingent liability will reduce.

Unquantifiable contingencies

The FRDC had no unquantifiable contingencies at 30 June 2011. As at 30 June 2010 the FRDC disclosed an unquantifiable contingency due to uncertainty around DAFF commonwealth matching payments. No debts have crystallised between DAFF and the FRDC; and any future uncertainty has been resolved by the signing of a memorandum of understanding on 9 March 2011.

Significant remote contingencies

The FRDC had no significant remote contingencies.

NOTE 11: DIRECTORS REMUNERATION

	2011	2010
	No.	No.
The number of non-executive directors of the FRDC included in these figures are shown below in the relevant remuneration bands:		
less than $150,000	9	12
Total	9	12
	$	$
Total remuneration received, or due and receivable, by directors of the FRDC	220,059	219,620

Remuneration of the Executive Director is included in Note 13: Senior executive remuneration.

NOTE 12: RELATED PARTY DISCLOSURES

The directors of the FRDC during the year were:

Dr P. Hone	Executive Director
Ms H. Brayford	Director (Member Remuneration Committee)
Ms R. Brooks	Director (Member Remuneration Committee)
Mr B. McCallum	Director (Member Finance, Audit and Risk Management Committee)
Dr D. McPhee	Director
Mr S. Richey AM	Director (Deputy Chair) (Chair Finance, Audit and Risk Management Committee)
Dr K. Sainsbury	Director
Mr R. Stevens OAM	Director (Member Finance, Audit and Risk Management Committee)
The Hon. Harry Woods	Chair (Chair Remuneration Committee) (Commenced 1 September 2010)
Mr P. Neville	Chair (Chair Remuneration Committee) (Retired 31 August 2010)

TRANSACTIONS WITH DIRECTOR-RELATED PARTIES

The FRDC's practice is to disclose all transactions with an entity with whom a director has an association. This means that directors that have disclosed a "material personal interest" have attributed to them all the transactions of that entity with the FRDC. Typically, the FRDC will not transact with all the entities for which a director has made such a declaration.

The FRDC Board Governance Policy provides guidance to directors on how the FRDC deals with "material personal interests". Where a director has an association with an entity where a conflict has the potential to arise, in addition to the duty to disclose that association, the director absents him/herself from both the discussion and the decision making process.

No loans were made to directors or director-related entities during the year.

NOTE 12: RELATED PARTY DISCLOSURES (CONTINUED)

TRANSACTIONS WITH DIRECTOR-RELATED PARTIES

Director	Organisation and position held	Nature of interest	Income received from entity $	Expenditure paid to entity $
Ms H. Brayford	Department of Fisheries Western Australia *Director Aquatic Management*	Research projects or work undertaken by the organisation	1,169,786	1,378,481
Ms R. Brooks	Department Primary Industries (NSW) — formerly Industry and Investment NSW *Executive Director, Agriculture and Primary Industries Science and Research*	Research projects or work undertaken by the organisation	296,943	535,267
Dr P. Hone	Seafood CRC Company Ltd *Director*	Research projects or work undertaken by the organisation	31,583	4,723,902
Dr D. McPhee	McPhee Research Consultants Pty Ltd *Director*	Research projects or work undertaken by the organisation	0	47,901
Mr P. Neville	Southern Bluefin Tuna Management Advisory Committee (Australian Fisheries Management Authority (AFMA)) *Chair*	Research projects or work undertaken by the organisation	350,184	36,300
	Queensland Seafood Industry Association *Consultant*	Research projects or work undertaken by the organisation	0	3,206
Mr S. Richey AM	Australian Fisheries Management Authority *Chairman of Northern Prawn Management Advisory Committee*	Research projects or work undertaken by the organisation	1,649,457	474,596
	Tasmanian Aquaculture and Fisheries Institute (TAFI) University of Tasmania *Spouse of Director*	Research projects or work undertaken by the organisation	0	2,292,874

All transactions were conducted under normal terms and conditions and include GST.

NOTE 12: RELATED PARTY DISCLOSURES (CONTINUED)

TRANSACTIONS WITH DIRECTOR-RELATED PARTIES

Director	Organisation and position held	Nature of interest	Income received from entity $	Expenditure paid to entity $
Dr K. Sainsbury	University of Tasmania *Professor Marine System Science*	Research projects or work undertaken by the organisation	0	2,817,122
	Australian Fisheries Management Authority *Commissioner*	Research projects or work undertaken by the organisation	1,649,457	474,596
	SainSolutions Pty Ltd *Director*	Research projects or work undertaken by the organisation	0	14,289
Mr R. Stevens OAM	Australian Fisheries Management Authority *Commissioner*	Research projects or work undertaken by the organisation	1,649,457	474,596
	Recreational Survey for the Greater Sydney Region (Department of Industry and Investment — Primary Industries and Energy (NSW)) *Chair*	Research projects or work undertaken by the organisation	296,943	535,267
	Department of Regional Development, Primary Industry, Fisheries and Resources (NT) *Chair, Mud Crab and Spanish Mackerel Fishery MACs Chair, Barramundi Fishery MAC*	Research projects or work undertaken by the organisation	682,625	89,892
	Primary Industries and Resources SA *Member of the South Australian Fisheries Council* (wild fisheries only — not aquaculture)	Research projects or work undertaken by the organisation	1,720,763	278,308
	Australian Southern Bluefin Tuna Industry Association *Chair of Southern Bluefin Tuna Research Council for FRDC project 2008/227*	Research projects or work undertaken by the organisation	0	50,870

All transactions were conducted under normal terms and conditions and include GST.

NOTE 13: SENIOR EXECUTIVE REMUNERATION

NOTE 13A: SENIOR EXECUTIVE REMUNERATION EXPENSE FOR THE REPORTING PERIOD (1),(2)

	2011	2010
	$	$
Short-term employee benefits		
Salary	**662,329**	665,837
Annual leave accrued	**18,968**	(3,716)
Total short-term employee benefits	**681,297**	662,121
Post-employment benefits:		
Superannuation	**152,581**	117,778
Total post-employment benefits	**152,581**	117,778
Other long-term benefits:		
Long service leave	**35,722**	(20,259)
Total long-term benefits	**35,722**	(20,259)
Total	**869,600**	800,158

During the year no termination benefits were paid to senior executives (2010: $Nil).

Notes:

(1) Note 13A was prepared on an accrual basis.

(2) Note 13A excludes acting arrangements and part-year service (noting that the FRDC does not pay higher duties to its employees).

NOTE 13B: ACTUAL ANNUAL REMUNERATION PACKAGES AND BONUS PAID FOR SUBSTANTIVE SENIOR EXECUTIVES AS AT THE END OF THE REPORTING PERIOD

	as at 30 June 2011			
		Fixed elements		
Fixed elements and bonus paid [1]	Senior executives no.	Salary	Total	Bonus paid [2]
		$	$	$
Total remuneration (including part-time arrangements)				
less than $150,000	2	259,374	259,374	–
$150,000 to $179,999	1	165,780	165,780	–
$180,000 to $209,999	–	–	–	–
$210,000 to $239,999	1	237,175	237,175	–
Total	4			

	as at 30 June 2010			
		Fixed elements		
Fixed elements and bonus paid [1]	Senior executives no.	Salary	Total	Bonus paid [2]
		$	$	$
Total remuneration (including part-time arrangements)				
less than $150,000	2	248,578	248,578	–
$150,000 to $179,999	–	–	–	–
$180,000 to $209,999	1	189,700	189,700	–
$210,000 to $239,999	1	227,559	227,559	–
Total	4			

Notes:

(1) This table reports on substantive senior executives who were employed by the FRDC as at the end of the reporting period. Fixed elements are based on the annual employment performance appraisal of each individual — each row represents an annualised figure (based on headcount) for the individuals in that remuneration package band (i.e. the 'Total' column).

(2) Represents average actual bonuses during the reporting period. During the year no bonus were paid to senior executives (2010: $Nil) (the FRDC does not pay its senior executives bonuses).

NOTE 13: SENIOR EXECUTIVE REMUNERATION (CONTINUED)

Variable elements

With the exception of bonuses, variable elements were not included in the 'Fixed elements and bonus paid' table above. The following variable elements were available as part of the senior executives' remuneration package:

(a) On average senior executives were entitled to the following leave entitlements:

- Annual leave (AL): entitled to 20 days (2010: 20 days) each full year worked
- Personal leave (PL): entitled to 15 days (2010: 15 days) or part-time equivalent; and
- Long service leave (LSL): in accordance with the *Long Service Leave (Commonwealth Employees) Act 1976*.

(b) Senior executives were members of the following superannuation fund:

- Public Sector Superannuation Scheme (PSS): this scheme is closed to new members, with current employer contributions set at 15.3 per cent (2010 15.3 per cent) (including productivity component). More information on PSS can be found at http://www.pss.gov.au.

(c) Super salary sacrifice arrangements were available to senior executives.

NOTE 13C: OTHER HIGHLY PAID STAFF

During the reporting period, there were no employees whose salary or performance bonus was $150,000 or more (noting that the FRDC does not pay its employees bonuses).

NOTE 14: OTHER RELATED PARTIES

AGRIFOOD SKILLS AUSTRALIA

On 13 August 2010, the FRDC became a member of Agrifood Skills Australia Ltd (ASA). ASA is a company limited by guarantee contracted to the Australian Government to provide advice and support to industry and enterprises on skills and workforce development. ASA was established in May 2004 as one of 11 Industry Skills Councils.

DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY (DAFF)

In 2009–10, the FRDC entered into funding agreements for the following initiatives:

» Recreational Fishing Industry Development Strategy (RFIDS)

» Electronic monitoring of sea lion interactions with shark fishing nets

» Socio-economic fisheries research in fishing game sector

The FRDC develops and manages projects for DAFF in accordance with the agreements above. The Minister for Agriculture, Fisheries and Forestry has detailed the projects to be undertaken, and has provided funds under these agreements. The projects have been developed by DAFF in consultation with the FRDC. The FRDC has recognised in 2010–11: $885,000 (2009–10: $1,400,000) (refer Note 4D: Grants), from DAFF in accordance with the agreements.

NOTE 14: OTHER RELATED PARTIES (CONTINUED)

DEPARTMENT OF CLIMATE CHANGE AND ENERGY EFFICIENCY (DCCEE)

On 29 March 2010, the FRDC entered into a Heads of Agreement (HOA) with DCCEE and Griffith University through the National Climate Change Adaptation Research Facility. The HOA relates to the funding of research addressing priorities in the National Climate Change Adaptation Research Plan: Marine Biodiversity and Resources. The FRDC has recognised in 2010–11: $Nil (2009–10: $3,500,000 from DCCEE on commencement of the HOA for use on projects approved in accordance with the HOA) (refer Note 4D: Grants).

NOTE 15: REMUNERATION OF AUDITORS

	2011	2010
	$	$
The fair value of the services provided was:		
Auditing the financial statements	**28,100**	28,100
Total	**28,100**	28,100

Financial statement audit services were provided to the FRDC by the Auditor-General for Australia. RSM Bird Cameron is contracted by the Australian National Audit Office (ANAO) to provide audit services on the ANAO's behalf. Fees for these services are included above. No other services were provided by the ANAO or their contractors, RSM Bird Cameron.

NOTE 16: FINANCIAL INSTRUMENTS

NOTE 16A: CATEGORIES OF FINANCIAL INSTRUMENTS

	2011	2010
	$	$
Financial assets		
Loans and receivables:		
Cash and cash equivalents	**8,494,643**	7,935,738
Trade and other receivables	**1,438,627**	1,767,950
Shares	**5,001**	5,001
Loan	**5,000**	4,742
Prepaid sponsorship	**60,000**	–
Total	**10,003,271**	9,713,431
Carrying amount financial assets	**10,003,271**	9,713,431
Financial liabilities		
Other financial liabilities:		
Trade creditors	**142,778**	125,301
Project creditors	**188,380**	939,781
Other payables	**924,333**	1,306,002
Total	**1,255,491**	2,371,084
Carrying amount financial liabilities	**1,255,491**	2,371,084

NOTE 16B: NET INCOME AND EXPENSES FROM FINANCIAL ASSETS

	2011	2010
	$	$
Loans and receivables:		
Interest revenue (Note 4A)	**521,959**	341,671
Net gain from loans and receivables	**521,959**	341,671
Net gain from financial assets	**521,959**	341,671

NOTE 16C: FAIR VALUE OF FINANCIAL INSTRUMENTS

	Carrying amount	Fair value	Carrying amount	Fair value
	2011	2011	2010	2010
	$	$	$	$
Financial assets				
Loans and receivables				
Cash and cash equivalents	**8,494,643**	**8,494,643**	7,935,738	7,935,738
Trade and other receivables	**1,438,627**	**1,438,627**	1,767,950	1,767,950
Shares [1]	**5,001**	**–**	5,001	–
Loan	**5,000**	**–**	4,742	–
Pre-paid sponsorship	**60,000**	**60,000**	–	–
Total	**10,003,271**	**9,993,270**	9,713,431	9,703,689
Financial liabilities				
Other financial liabilities				
Trade creditors	**142,778**	**142,778**	125,301	125,301
Project creditors	**188,380**	**188,380**	939,781	939,781
Other payables	**924,333**	**924,333**	1,306,002	1,306,002
Total	**1,255,491**	**1,255,491**	2,371,084	2,371,084

(1) There are no significant differences between the carrying amounts and fair values of financial assets and liabilities; with the exception of the value of ASCo shares and loans, which are carried at cost because they do not have a quoted market price in an active markets, and a fair value cannot be reliably measured.

NOTE 16D: CREDIT RISK

The FRDC is exposed to minimal credit risk as the majority of its receivables are from government agencies, industry, universities and program contributors who have long standing relationships with the FRDC.

The FRDC held no collateral to mitigate against credit risk.

Credit quality of financial instruments not past due or individually determined as impaired

	Not past due nor impaired	Not past due nor impaired	**Past due or impaired**	Past due or impaired
	2011	2010	**2011**	2010
	$	$	**$**	$
Cash and cash equivalents	**8,494,643**	7,935,738	**–**	–
Receivables for goods and services	**1,438,627**	1,767,950	**154,001**	38,500
Shares	**5,001**	5,001	**–**	–
Loan	**5,000**	4,742	**–**	–
Other (pre-paid sponsorship)	**60,000**	–	**–**	–
Total	**10,003,271**	9,713,431	**154,001**	38,500

Ageing of financial assets that were past due but not impaired for 2011

	0 to 30 days	**31 to 60 days**	**61 to 90 days**	**90+ days**	**Total**
	$	**$**	**$**	**$**	**$**
Receivables for goods and services	**27,500**	**0**	**126,501**	**–**	**154,001**
Total	**27,500**	**0**	**126,501**	**–**	**154,001**

Ageing of financial assets that are past due but not impaired for 2010

	0 to 30 days	31 to 60 days	61 to 90 days	90+ days	Total
	$	$	$	$	$
Receivables for goods and services	38,500	–	–	–	38,500
Total	38,500	–	–	–	38,500

As of 30 June 2011, other receivables in the amount of $154,001 ($38,500 in 2010) were past due, but not impaired. These relate to debtors for whom there is no recent history of default. The FRDC has been in contact with the relevant debtors, and is satisfied that the payment will be received in full.

Other balances within other receivables do not contain impaired assets and are not past due. It is expected these balances will be received when due.

NOTE 16E: LIQUIDITY RISK

The FRDC's financial liabilities are project payables, supplier payables and other payables. The exposure to liquidity risk is based on the notion that the FRDC will encounter difficulty in meeting its obligations associated with these financial liabilities. This is highly unlikely due to Australian Government funding and internal policies and procedures put in place to ensure there are appropriate resources for the FRDC to meet its financial obligations.

Maturities for non-derivative financial liabilities in 2011

	Within 1 year	1 to 2 years	2 to 5 years	Total
	$	$	$	$
Suppliers	142,778	–	–	142,778
Projects	188,380	–	–	188,380
Other payables	324,004	307,842	292,487	924,333
Total	655,162	307,842	292,487	1,255,491

Maturities for non-derivative financial liabilities in 2010

	Within 1 year	1 to 2 years	2 to 5 years	Total
	$	$	$	$
Suppliers	125,301	–	–	125,301
Projects	939,781	–	–	939,781
Other payables	431,046	307,258	567,698	1,306,002
Total	1,496,128	307,258	567,698	2,371,084

The FRDC has no derivative financial liabilities in both the current and prior year.

NOTE 16F: MARKET RISK

The FRDC holds basic financial instruments that do not expose the FRDC to certain market risks. The FRDC is not exposed to 'currency risk' or 'other price risk'.

NOTE 17: REPORTING OF OUTCOME

The FRDC is a co-funded partnership between its stakeholders, the Australian Government and the Australian fishing industry (wild catch commercial, aquaculture, recreational and indigenous fishers).

The role of the FRDC is to invest in fisheries research, development and extension (RD&E) activities in Australia. This includes providing leadership and coordinating the monitoring, evaluating and reporting on RD&E activities; and facilitating its dissemination, extension and commercialisation. The FRDC achieves this through coordinating government and industry investment, based on a collaborative approach involving stakeholders to establish and address RD&E priorities.

NOTE 17A: NET COST OF OUTCOME DELIVERY

	Outcome 1	
	2011	2010
	$	$
Expenses	25,755,783	28,927,129
Income from non-government sector		
Contributions	8,694,053	8,581,974
Sale of goods and rendering of services	63,133	112,967
Interest	521,959	341,671
Other	4,273	227
Total	9,283,418	9,036,840
Other own-source income	885,000	4,900,000
Net cost of outcome delivery	15,587,366	14,990,289

Outcome 1 is described in Note 1.1.

NOTE 17B: MAJOR CLASSES OF EXPENSES, INCOME, ASSETS AND LIABILITIES BY OUTCOME

	Outcome 1	
	2011	2010
	$	$
Expenses		
Employee benefits	**1,795,526**	1,779,614
Suppliers	**1,809,598**	2,040,666
Depreciation and amortisation	**537,805**	512,132
Projects expenditure	**21,563,477**	24,454,834
Finance costs	**49,377**	139,883
Total	**25,755,783**	28,927,128
Income		
Income from the Australian Government	**16,527,667**	16,335,463
Contributions	**8,694,053**	8,581,974
Sale of goods and services	**63,133**	112,967
Interest	**521,959**	341,671
Grants income	**885,000**	4,900,000
Other	**4,273**	227
Total	**26,696,085**	30,272,303
Assets		
Cash and cash equivalents	**8,494,643**	7,935,738
Trade and other receivables	**1,566,960**	2,001,083
Other investments	**5,001**	5,001
Other	**60,000**	–
Property, plant and equipment	**183,764**	242,640
Intangibles	**2,220,810**	2,455,433
Total	**12,531,178**	12,639,895
Liabilities		
Supplier	**174,409**	160,135
Project payables	**188,380**	939,781
Other payables	**924,333**	1,306,002
Employee provisions	**538,243**	468,466
Total	**1,825,365**	2,874,384

FRDC STAFF 1996–97. (left to right)
Alex Wells, Marty Walsh, Patrick Hone,
Peter Dundas-Smith, Annette Lyons,
Helen King, Geraldine McGregor

FRDC STAFF 1998–99. (left to right)
Alex Wells, Kylie Paulsen, Peter Dundas-Smith,
Marty Walsh, Ryan Talsma, Annette Lyons,
Patrick Hone, Geraldine McGregor, Helen King

2009

HISTORY

FRDC STAFF 2001–02. (left to right)
Back row: Patrick Hone, Crispian Ashby, Michael Parolin. Centre row: Peter Dundas-Smith, Annette Lyons, John Wilson. Front Row: Kylie Paulsen, Deborah Bowden, Kristina Jarnjevic, Jane Harris

FRDC STAFF 2004–05. (left to right)
Peter Horvat, John Wilson, Tara Ryan, Annette Lyons, Crispian Ashby, Patrick Hone, Debbie Bowden, Matt Barwick, Cheryl Cole. Absent: Jane Graham

2010

Two issues of *FISH* for 2011 are shown on the right of page 82.

APPENDICES

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CLIV—CLXVI

APPENDIX A: THE FRDC'S PRINCIPAL REVENUE BASE

As stipulated in the PIERD Act, and shown in figure 3, the FRDC's primary revenue source is based on:

A. the Australian Government providing unmatched funds equivalent to 0.50 per cent of the average gross value of Australian fisheries production (AGVP) for the current year plus the two preceding years;

B. fishers and aquaculturists providing contributions; and

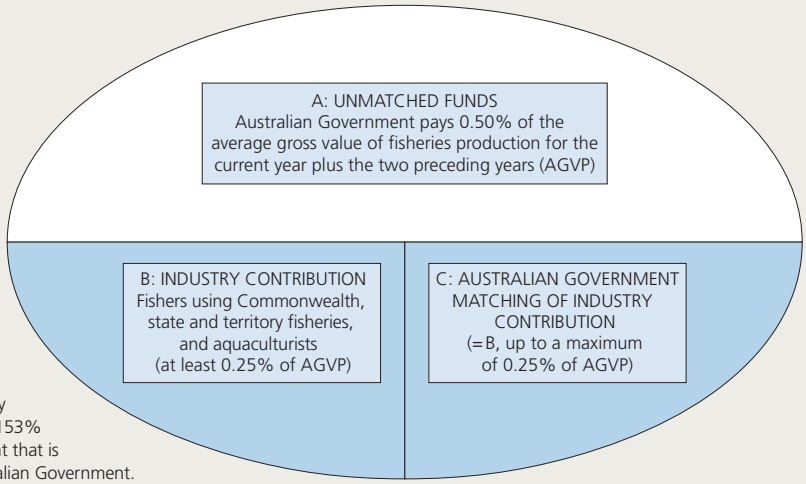
C. the Australian Government matches this amount up to a maximum of 0.25 per cent of AGVP.

There is no legislative impediment to fishers and aquaculturists contributing to the FRDC above the maximum level at which the Australian Government will provide a matching contribution.

Industry contributions for the past financial year and trends for the past five years are shown on page v.

Details of all FRDC revenue (including investments, royalties, and sales of products, information and services) are in the financial statements starting on page 103.

FIGURE 3: PROPORTIONS OF THE FRDC'S PRINCIPAL REVENUE BASE



In 2010–11, the industry contributed more than 153% of the maximum amount that is matchable by the Australian Government.

Rationale for the FRDC's revenue base

The high component of public good in the operating environment of the fishing industry, has significance for the FRDC's revenue base. The Australian Government's contribution of 0.50 per cent of AGVP is made on the grounds that the Australian Government exercises a stewardship role in relation to fisheries resources on behalf of the Australian community.

Industry makes its contributions to the FRDC recognising that fisheries RD&E will be oriented to its needs and will deliver economic and social benefits. In turn, the Australian Government's matching of the industry contributions is in line with policy principles that:

» beneficiaries from research should pay roughly in proportion to the benefits received; and

» the greater the spill-over benefits, the greater the proportion the Australian Government should contribute.

APPENDIX B: PRINCIPAL LEGISLATIVE REQUIREMENTS FOR REPORTING

This annual report complies with the requirements of Commonwealth legislation. The principal reporting requirements, and some of their consequences for the FRDC, are outlined in this appendix. The Acts are:

» the *Commonwealth Authorities and Companies Act 1997* (CAC Act);

» the *Primary Industries and Energy Research and Development Act 1989* (PIERD Act); and

» the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

CAC Act requirements

The CAC Act is the principal legislation that specifies the content and standards of presentation of statutory authorities' annual reports for parliamentary scrutiny.

Section 9 of the CAC Act requires the FRDC's directors to prepare an annual report in accordance with Schedule 1 each financial year, and to give it to the responsible minister by 15 October. Clause 10 of the CAC Orders specifies that the report of operations and future prospects (one of the three main elements of the annual report, the others being financial statements and a report by the Auditor-General) are to include, among other things:

» a review of how the FRDC has performed during the financial year in relation to its statutory objects and functions, its R&D plan and its principal outputs and contribution to outcomes;

» factors influencing its performance over the financial year and in the future;

» significant events;

» operational and financial results, including principal outputs, major investing and financing activities, and key financial and non-financial performance indicators;

» significant changes in the FRDC's state of affairs or principal activities;

» developments since the end of the financial year; and

» matters required to be included by the PIERD Act and any other legislation.

PIERD Act requirements

The PIERD Act also specifies matters that must be reported. In particular, section 28 states:

(1) The directors must include in each report on an R&D corporation prepared under section 9 of the *Commonwealth Authorities and Companies Act 1997*:

(a) particulars of:

(i) the R&D activities that it coordinated or funded, wholly or partly, during the period; and

(ii) the amount that it spent during the period in relation to each of those activities; and

(iia) which (if any) of those activities related to ecologically sustainable development; and

(iii) revisions of its R&D plan or annual operational plan approved by the Minister during the period; and

(iv) the entering into of agreements under sections 13 and 14 during the period and its activities during the period in relation to agreements entered into under that section during or prior to the period; and

(v) its activities during the period in relation to applying for patents for inventions, commercially exploiting patented inventions and granting licences under patented inventions; and

(vi) the activities of any companies in which the Corporation has an interest; and

(vii) any activities relating to the formation of a company; and

(viii) significant acquisitions and dispositions of real property by it during the period; and

(b) an assessment of the extent to which its operations during the period have:

(i) achieved its objectives as stated in its R&D plan; and

(ii) implemented the annual operational plan applicable to the period; and

(c) an assessment of the extent to which the Corporation has, during the period, contributed to the attainment of the objects of this Act as set out in section 3; and

(d) in respect of the grain industry or such other primary industry or class of primary industries as is prescribed in the regulations, particulars of sources and expenditure of funds, including:

(i) commodity, cross commodity and regional classifications; and

(ii) funds derived from transfer of:

(A) assets, debts, liabilities and obligations under section 144; and

(B) levies attached to Research Funds under the *Rural Industries Research Act 1985* under section 151 of this Act.

Further information on the PIERD Act in relation to the FRDC is in Appendix C.

EPBC Act requirements

Section 516A of the EPBC Act requires the FRDC to report on ecologically sustainable development and environmental matters. The specific reporting required by section 516A, and the FRDC's responses, are as follows.

» **The extent to which the principles of ecologically sustainable development (ESD) have been internalised in decision-making systems and processes**. The objects of the FRDC, specified in the enabling legislation and detailed in Appendix C, focus its activities on economic, environmental and social matters (that is, the principal elements of ESD), including 'sustainable use and sustainable management of Australia's fisheries natural resources'. The first three of the legislated objects underlie the FRDC's vision, and are the basis for the planned outcomes of the FRDC's programs. In pursuing these outcomes, the FRDC has fully internalised the principles of ESD in its decision-making systems and processes.

» **The contribution to ESD of the social, economic and environmental outcomes that the Australian Government is seeking**. Reporting of the FRDC's programs (pages 25–65) addresses this requirement. In addition, Appendix D: Government priorities on pages 161–163 outlines expenditure against the broader government priorities including an environmentally sustainable Australia.

» **The environmental impacts of the FRDC's operations and actions, the measures being taken to minimise the impact on the environment, and the mechanisms for reviewing and improving performance**. The FRDC implements section 516A through two functions, as follows:

  – *RD&E project management*. The FRDC identifies RD&E needs, and the means of addressing them, through a planning process and by entering project agreements with research providers; it does not undertake research itself. Management of fisheries RD&E involves reporting against economic, environmental and/or social outcomes — at a strategic level through this annual report and in more detail in the final reports for projects. Before RD&E projects start, the FRDC assesses their environmental impacts and ensures that appropriate approvals are obtained. The FRDC also has an entire RD&E subprogram dedicated to developing an ESD reporting and assessment framework so that the industry can meet its obligations under the Act.

  – *FRDC internal operations*. Mechanisms for reviewing and improving performance are incorporated in the Corporation's ISO-certified quality management system, which provides a structure for continual improvement that permeates all management processes. The FRDC manages the process through the Management and accountability program.

A compliance index (starting on page 170) shows the page numbers on which the FRDC has reported on matters specified in Australian Government legislation and policies.

APPENDIX C: THE FRDC'S LEGISLATIVE FOUNDATION AND THE EXERCISE OF MINISTERIAL POWERS

Enabling legislation

The FRDC's enabling legislation is the *Primary Industries and Energy Research and Development Act 1989* (Commonwealth) (PIERD Act).

The FRDC Board is responsible to the Minister for Agriculture, Fisheries and Forestry and, through him, to the Parliament of Australia.

The objects, functions and statutory powers of R&D corporations are specified in the PIERD Act, the text of which is available via the FRDC website.

In the interests of clarity, the following statements of the FRDC's objects, functions and statutory powers mirror the wording of the PIERD Act but are specific to the FRDC and its business environment. Similarly, the statements of the FRDC's functions and statutory powers have been made shorter and simpler than the wording of the Act.

Objects

The objects of the FRDC, deriving from section 3 of the PIERD Act, are to make provision for the funding and administration of fisheries RD&E with a view to:

» increasing the economic, environmental and social benefits to members of the Australian fishing industry and to the community in general by improving the production, processing, storage, transport or marketing of fish and fish products;

» achieving the sustainable use and sustainable management of Australia's fisheries natural resources;

» making more effective use of the resources and skills of the community in general and the scientific community in particular; and

» improving accountability for expenditure on fisheries RD&E.

Functions

The functions of the FRDC, deriving from section 11 of the PIERD Act, are to:

» investigate and evaluate the requirements for fisheries research and development and, on that basis, prepare a five year R&D plan, review it annually and revise it if required;

» prepare an annual operational plan for each financial year;

» coordinate or fund the carrying out of R&D activities that are consistent with the annual operational plan;

» monitor and evaluate fisheries R&D activities that are funded and report on them to the Parliament; the Minister for Agriculture, Fisheries and Forestry; the Australian Seafood Industry Council; and the Australian Recreational and Sport Fishing Industry Confederation (trading as Recfish Australia); and

» facilitate the dissemination, adoption and commercialisation of the results of fisheries R&D.

Statutory powers

Subject to the PIERD Act, the FRDC is empowered under section 12 of the Act to do all things necessary or convenient to be done for, or in connection with, the performance of its functions, which may include:

» entering into agreements for the carrying out of R&D activities by other persons;

» entering into agreements for the carrying out of R&D activities by the FRDC and other persons;

» making applications, including joint applications for patents;

» dealing with patents vested in the FRDC and other persons;

» making charges for work done, services rendered, and goods and information supplied by it;

» accepting gifts, grants, bequests and devices made to it, and acting as trustee of money and other property vested in it on trust;

» acquiring, holding and disposing of real and personal property;

» joining in the formation of a company; and

» doing anything incidental to any of its powers.

The description of ministerial powers on the following page has been drawn from several sections of the PIERD Act and has been condensed from the original in the interests of clarity.

Ministerial powers

Ministerial powers under the enabling legislation may be exercised by the Minister for Agriculture, Fisheries and Forestry. They relate to:

- directing the FRDC in writing as to the performance of its functions and the exercise of its powers;
- approving the RD&E plan and the annual operational plan;
- requesting and approving variation to the RD&E plan and the annual operational plan;
- requesting the establishment of a selection committee and determining certain conditions relating to the selection committee;
- appointing the presiding member and members of a committee for the selection of directors;
- determining the number of directors;
- determining the terms and conditions of appointment of directors (other than the Executive Director) in relation to matters not provided for by the PIERD Act;
- appointing the Chairperson;
- appointing directors, other than the Chairperson and Executive Director, from persons nominated by a selection committee;
- appointing a nominated director to be the Deputy Chairperson;
- declaring one or more specified organisations to be representative organisations in relation to the FRDC;
- determining the gross value of production of the fishing industry for the purposes of establishing the maximum payments by the Australian Government to the FRDC;
- establishing written guidelines covering the payment by the FRDC to an eligible industry body, or member of an eligible industry body, for expenses reasonably incurred in connection with consultation with the FRDC;
- causing, at least once in each financial year, a coordination meeting to be held of all R&D corporations;
- granting leave of absence to the Chairperson; and
- terminating the appointment of the Chairperson or a director other than the Executive Director.

Additional powers under the CAC Act relating to corporate governance and reporting are available to the Minister for Agriculture, Fisheries and Forestry; and the Finance Minister.

Exercise of ministerial powers during 2010–11 is described on page 89.

APPENDIX D: GOVERNMENT PRIORITIES

The National Research Priorities can be viewed at http://www.innovation.gov.au/Section/AboutDIISR/FactSheets/Pages/NationalResearchPrioritiesFactSheet.aspx

The Rural Research Priorities can be viewed at http://www.daff.gov.au/agriculture-food/innovation/priorities

National research priorities and their associated goals (for use with the tables on the following pages).

Priority 1 — An environmentally sustainable Australia

A1 Water — a critical resource
A2 Transforming existing industries
A3 Overcoming soil loss, salinity and acidity
A4 Reducing and capturing emissions in transport and energy generation
A5 Sustainable use of Australia's biodiversity
A6 Developing deep earth resources
A7 Responding to climate change and variability

Priority 2 — Promoting and maintaining good health

B1 A healthy start to life
B2 Ageing well, ageing productively
B3 Preventive healthcare
B4 Strengthening Australia's social and economic fabric

Priority 3 — Frontier technologies for building and transforming Australian industries

C1 Breakthrough science
C2 Frontier technologies
C3 Advanced materials
C4 Smart information use
C5 Promoting an innovation culture and economy

Priority 4 — Safeguarding Australia

D1 Critical infrastructure
D2 Understanding our region and the world
D3 Protecting Australia from invasive diseases and pests
D4 Protecting Australia from terrorism and crime
D5 Transformational defence technologies

TABLE 9: 2010–11 TOTAL INVESTMENT — COMPOSITION OF GOVERNMENT RESEARCH PRIORITIES ATTRIBUTED TO EACH RD&E PROGRAM ($ AND %)

2010–11 total investment — National Research Priorities												
Rural Research and Development Priorities (RRDP)	Program 1: Environment		Program 2: Industry		Program 3: Communities		Program 4: People development		Program 5: Extension and adoption		Total expenditure	
	$000	%	$000	%	$000	%	$000	%	$000	%	$000	%
Productivity and adding value			2683	12.44			427	1.98	1206	5.59	4316	20.02
Supply chain and markets	304	1.41	1913	8.87	7	0.03	320	1.48	200	0.93	2744	12.73
Natural resources Management	6165	28.59	1365	6.33	29	0.13	512	2.37	317	1.47	8388	38.91
Climate variability and climate change	1492	6.92	89	0.41			98	0.45	48	0.22	1727	8.01
Biosecurity	811	3.76	59	0.27			89	0.41	32	0.15	991	4.60
Innovation skills	244	1.13	541	2.51	4	0.02	178	0.83	82	0.38	1049	4.87
Technology	428	1.99	1092	5.06			15	0.07	3	0.01	1538	7.13
Other research	367	1.70	301	1.40	2	0.01	64	0.30	73	0.34	807	3.74
Total	9811	45.51	8043	37.31	42	0.19	1703	7.90	1961	9.10	21560	100.00

Figures in this table have been rounded, hence totals may not agree with component figures.

TABLE 9: (CONTINUED)

2010–11 total investment — National Research Priorities													
National Research Priorities (NRP)		Program 1: Environment		Program 2: Industry		Program 3: Communities		Program 4: People development		Program 5: Extension and adoption		Total expenditure	
		$000	%	$000	%	$000	%	$000	%	$000	%	$000	%
An environmentally sustainable Australia	A1												
	A2	755	3.83	1218	6.17	12	0.06	15	0.08	372	1.88	2372	12.02
	A3												
	A4			50	0.25							50	0.25
	A5	6238	31.61	858	4.35	20	0.10	738	3.74			7854	39.80
	A6												
	A7	1401	7.10	60	0.30							1461	7.40
Promoting and maintaining good health	B1												
	B2												
	B3	18	0.09	572	2.90			250	1.27	236	1.20	1076	5.45
	B4	58	0.29			7	0.04	40	0.20			105	0.53
Frontier technologies for building and transforming Australian industries	C1	452	2.29	317	1.61			25	0.13	170	0.86	964	4.88
	C2	288	1.46	2258	11.44			4	0.02			2550	12.92
	C3	93	0.47	436	2.21			8	0.04			537	2.72
	C4	185	0.94	79	0.40			4	0.02			268	1.36
	C5	10	0.05	872	4.42			314	1.59			1196	6.06
Safeguarding Australia	D1												
	D2												
	D3	713	3.61	312	1.58	10	0.05	123	0.62	144	0.73	1302	6.60
	D4												
	D5												
Total		10211	51.74	7032	35.63	49	0.25	1521	7.71	922	4.67	19735	100.00

Figures in this table have been rounded, hence totals may not agree with component figures.

APPENDIX E: REPRESENTATIVE ORGANISATIONS

Guidelines on funding of consultation costs by primary industry and energy portfolio statutory authorities were issued by the Hon. John Anderson MP, Minister for Primary Industries and Energy in July 1998 under the relevant enabling legislation and in association with paragraph 16(1)(b) of the *Commonwealth Authorities and Companies Act 1997* (CAC Act) which obliges directors of a Commonwealth authority to provide the responsible Minister with such reports, documents and information as he or she requires.

As required by Section 5(b) of the Guidelines FRDC is required to report:

> *Where the statutory authority has authorised an industry organisation, with which it has a formal relationship under its enabling legislation, to undertake a discrete project or consultancy on its behalf as per Section 1(b) of these guidelines, then details of the nature, purpose and expected or final outcome of the project or consultancy should be provided concurrently, with details of any consultation funding, in the main body of the annual report.*

The following tables are a list of all project payments made to FRDC representative bodies in 2010–11.

Commonwealth Fisheries Association

Nil

National Aquaculture Council

2009/303	Australasian Aquaculture 2010 to 2014	$20,000
Total		$20,000

Recfish Australia

2008/329	People development program: FRDC world recreational fishing conference bursaries	$6,000
2010/211	Recfishing Research: Addressing recreational fishing research priorities and improving extension	$114,874
Total		$120,874

APPENDIX F: FREEDOM OF INFORMATION STATEMENT

The *Freedom of Information Act 1982* (FOI Act) requires each Australian Government agency to publish a statement setting out its role, structure and functions, the documents available for public inspection, and access to such documents. Section 8 of the FOI Act requires each agency to publish information on the way it is organised, its powers, decisions made and arrangements for public involvement in its work.

As part of the establishment of the Information Publication Scheme (IPS), section 8 has now been amended with effect from 1 May 2011.

The following statement, in conjunction with information contained in this annual report, is intended to meet the requirements of the FOI Act for the reporting period from 1 July 2010 to 30 April 2011.

The Commonwealth's FOI legislation is administered by the Privacy and FOI Policy Branch of the Department of the Prime Minister and Cabinet (PM&C). More information is available from the PM&C website — http://www.pmc.gov.au/foi/index.cfm

Role, structure and functions

The FRDC's role is described on page 1 of this annual report; its structure and functions and legislation under which it is established are described in Appendices A to C.

Documents available for inspection

RD&E Plan (the FRDC's strategic plan)	File, publication and website *
FRDC policies	Unpublished documents, list on website *
Annual operational plan	File, publication and website *
Project details	Database, files and website *
Project agreements	Files and generic copy on website *
Final reports and non-technical summaries	Publications and website *
RD&E funding applications	Files
Annual report	File, publications and FRDC website *
FISH magazine	File, publications and FRDC website *
Administration	Files, unpublished document
Mailing lists	Database

* The FRDC's website address is www.frdc.com.au

Some other information may be subject to assessment of access for such matters as commercial confidentiality or personal privacy in accordance with the FOI Act.

Access to documents

To seek access to FRDC documents, please contact the FRDC's FOI Officer: address, telephone, fax and e-mail details are shown inside the back cover of this report. It may not be necessary to request the information under the FOI Act — the FRDC may simply provide it to you when you ask for it. At all times, however, you have the option of applying under the FOI Act.

The standard FOI application fee is nil when making your application, however processing charges will apply.

Documents are usually made available for direct access at the FRDC's office in Canberra. They may also be provided, depending on your preference:

» by post (photocopies) to an address specified in your request, or

» at the Information Access Office (established by the Attorney-General) nearest where you live.

LIST OF ABBREVIATIONS

AASB	Australian Accounting Standards Board
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AFMA	Australian Fisheries Management Authority
AGVP	average gross value of production
ASCo	Australian Seafood Co-products
CAC Act	*Commonwealth Authorities and Companies Act 1997*
CRC	cooperative research centre
CRRDC	Council of Rural RDCs
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry
DCCEE	Department of Climate Change and Energy Efficiency
DPI	Victorian Department of Primary Industries
E&A	extension and adoption
ECIFF	East Coast Inshore Finfish Fishery
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESD	ecologically sustainable development
FOI Act	*Freedom of Information Act 1982*
FRAB	Fisheries Research Advisory Body
FRDC	Fisheries Research and Development Corporation
GST	goods and services tax
GVP	gross value of production
ISO	International Organization for Standardisation
IT	information technology
ITQ	individual transferable quotas
LED	light-emitting diode
NSW	New South Wales
OH&S	occupational health and safety
PhD	Doctor of Philosophy
PIERD Act	*Primary Industries and Energy Research and Development Act 1989*
R&D	research and development
RD&E	research, development and extension
RDC	research and development corporation
RFIDS	Recreational Fishing Industry Development Strategy
SARDI	South Australian Research and Development Institute
SSA	Seafood Services Australia Ltd
TAFE	Technical and Further Education (college)

INDICES

XX

CLXX—CLXXVIII

COMPLIANCE INDEX

This index shows the page numbers on which the FRDC has reported on matters specified in Australian Government legislation and policies, and in the Global Reporting Initiative.

When this annual report has not addressed a compliance subject (usually because no activity occurred under that heading during the year), the subject entry is followed by '—' rather than by a page number.

Australian Government legislation and policies

The Australian Government legislation and policies with which the FRDC complies include the following:

- the FRDC's enabling legislation, the *Primary Industries and Energy Research and Development Act 1989* (PIERD Act);
- the *Commonwealth Authorities and Companies Act 1997* (CAC Act) and its supporting Commonwealth Authorities and Companies (Report of Operations) Orders 2008 made under section 48 of the Act (CAC Orders);
- the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- other legislation, such as the *Freedom of Information Act 1982*, the *Occupational Health and Safety (Commonwealth Employment) Act 1991*, the *Disability Discrimination Act 1992* and the *Commonwealth Electoral Act 1918*;
- ministerial notifications of Australian Government policy, including national priorities for research and priorities for rural R&D;
- *Requirements for annual reports*, Department of the Prime Minister and Cabinet (PM&C), June 2001, approved by the Joint Committee of Public Accounts and Audit under sub-sections 63(2) and 70(2) of the *Public Service Act 1999*;
- other Australian Government guidelines; and
- recommendations by the Australian National Audit Office.

The document *Requirements for annual reports* acknowledges that agencies vary in role and size and there is discretion as to the extent of information to include in annual reports and the sequence in which it is presented. The Joint Committee on Publications has also observed that a departmental report will necessarily be different from that of a statutory authority; a statutory authority, while accountable for its activities, has a degree of independence not shared by departments and its annual reports will thus have a greater freedom of expression and comment. The FRDC's reporting is, accordingly, appropriate to its legislative basis, functions and size.

Commonwealth Authorities and Companies Act 1997 and CAC (Report of Operations) Orders 2008

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PUBLICATIONS AND OTHER INFORMATION

The following information is available from the FRDC	Printed	Website
The RD&E Plan (*Investing for tomorrow's fish: the FRDC's Research, Development and Extension Plan 2010–2015*), which provides comprehensive information on the Corporation; its business environment; the outlook for the fishing industry and the natural resources on which it depends; and the way in which the FRDC plans, invests in and manages fisheries RD&E.	Yes	Yes
This and the previous annual report.	Yes	Yes
RD&E plans for Commonwealth, states, Northern Territory, regions and industry sectors.	Yes	Yes
FISH magazine (published in March, June, September and December, and on other occasions for special themes), which provides information on FRDC activities, summarises final reports on completed RD&E projects released during the previous quarter, and lists projects that have been newly funded.	Yes	Yes
Information on completed projects (final reports and other related products).	Yes (see note 1)	Yes
Non-technical summaries of all final reports of FRDC projects.	No	Yes
Hyperlinks to other websites containing full final reports and fisheries RD&E strategies, and to other important websites.	No	Yes
RD&E funding application details.	No	Yes
Coming events of significance for the industry.	No	Yes
Research databases.	No	Yes

Note 1: Information on completed projects (final reports and other related products) are also available from:

» the National Library of Australia, Parkes ACT 2600

» the Librarian, CSIRO Marine Research, GPO Box 1538, Hobart Tasmania 7001

» state libraries and research institutions that the researcher considers appropriate.

www.frdc.com.au

The FRDC's website (www.frdc.com.au) provides easy access to information and publications, including the items on this page.

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ABOUT THIS REPORT

This report describes the extent to which the Corporation implemented its approved annual operational plan during the previous financial year. It meets the requirements for reporting legislated by the Australian Government and informs the FRDC's other stakeholders — especially those in the commercial, recreational and indigenous sectors of the fishing industry and in the research and development community.

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FRDC is co-funded by our stakeholders, the Australian Government, and the fishing industry.

The FRDC invests strategically across all of Australia in research, development and extension activities that benefit all sectors of the fishing industry. Our goal is for Australia's fisheries to be sustainably managed.