Independent performance review: final report





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DISCLAIMER

The information contained in this document has been gained from anecdotal evidence and research. It has been prepared in good faith and is based on a review of selected documents and interviews with stakeholders including FRDC Board directors and management, Commonwealth Department of Agriculture and Water Resources personnel, members and executive of FRDC's representative organisations, research providers and other stakeholders. Neither Forest Hill Consulting nor its servants, consultants, agents or staff shall be responsible in any way whatsoever to any person in respect to the report, including errors or omission therein, however caused.

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EXECUTIVE SUMMARY

This report presents the findings of an independent performance review of the Fisheries Research & Development Corporation (FRDC). The purpose of the review, in broad terms, was to assess how well FRDC has met its obligations to levy payers and other stakeholders, as set out in its Funding Agreement 2015-19 with government, and in the Primary Industries Research & Development Act 1989 (PIRD Act). The Funding Agreement requires that the review be completed six months before the expiration of the agreement, that is by 5 December 2018.

The review involved an extensive review of documents (listed in Appendix 1) and consultation through faceto-face or telephone interviews with 37 individuals from among its stakeholders: FRDC Board and management, representative organisations, Research Advisory Committees, the Department of Agriculture and Water Resources, the Council of Rural R&D Corporations (CRRDC) and service providers to FRDC (research agencies, consultants and others). All stakeholders were provided the opportunity to make a submission to the review via a dedicated website.

The review has found that FRDC is a very well-managed, high-performing organisation that is respected by its stakeholders as a vital part of the fisheries sector. Management is highly regarded for its expertise and its navigation of a highly complex environment. Compliance is well managed. FRDC has strong relationships with stakeholders and collaborates constructively with other RDCs. There is good evidence of the delivery of benefits to levy payers, government and other investors from FRDC investments.

There is no evidence for FRDC having failed to fulfil, or being at risk of not fulfilling, all of the obligations imposed by its Funding Agreement with the Commonwealth or the PIRD Act.

A summary of the review findings against the terms of reference is shown below.

TERMS OF REFERENCE	SUMMARY
Assess the performance of the FRDC (entity) in meeting its obligations under the PIRD Act and the Funding Agreement with the Commonwealth.	FRDC has met all of its obligations under the PIRD Act and Funding Agreement. FRDC has a very strong focus on and thorough process for compliance risk management.
2. Assess the entity's development and implementation of its R&D Plan, Annual Operational Plan, Risk Management Plan, Fraud Control Plan and Intellectual Property Management Plan, and the entity's effectiveness in meeting the priorities, targets and budgets set out in those plans.	The RD&E Plan and annual operational plans (AOPs) have been developed through extensive consultation and are comprehensive. The RD&E plan is not an easy document to navigate and many of its key elements are either quite hidden or located at the end of the plan. AOP's have progressively improved in their quality over the period with increasing emphasis on clear targets. Consequently, there is reasonable 'line of sight' from the RD&E plan to the AOPs, although FRDC's



		complex 'investment matrix' is difficult to follow. Recommendations have been made for improvements in these areas. Risk management, fraud control and intellectual property plans are robust and actively followed.
3. Assess the efficiency and effectiveness with which the entity has carried out these plans	a. Liaison with stakeholders	Close and regular liaison with stakeholders, especially by the Managing Director, is a feature of FRDC's way of working and necessary in a complex environment.
including:	b. Cross-RDC collaboration	FRDC is a very active participant in CRRDC and a highly collaborative co-investor in RD&E activities, through the Rural Research & Development for Profit program, cross-sectoral RD&E strategies and a range of other programs and projects.
	c. Corporate governance	Corporate governance is strong. Opportunities for improvement through additional board committees and improved risk management and culture have been identified.
	d. Industry strategy and delivery, including the opportunity for stakeholders to influence the investment of funds and the return on investment achieved	FRDC's strategy appear to be sound and well-accepted and there are multiple mechanisms by which stakeholders influence FRDC's investments. A recommendation has been made for FRDC to consider how to reduce the complexity of its investment matrix to increase efficiency and transparency.
	e. Corporate operations	Corporate operations appear generally effective and efficient, although some concerns over slowness of response by managers were noted, apparently due to organisational over-commitment and complexity.
	stakeholders and the reshadowed by those plans, tof the degree to which the met the needs of the	FRDC uses a robust methodology to assess its delivery of benefits to fishing and aquaculture and the community in general. These assessments provide evidence that FRDC's investments are delivering substantial benefits.



entity's investments. effectively. Reducing the complexity of the	entity's investments.	investment matrix, as described above, may assist
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The review has identified several areas in which improvements might be made to the performance of FRDC. Ten draft recommendations are made. These are listed below, and each is rated either:

- Critical: should be implemented as a matter of urgency in order for FRDC to meet its legal and regulatory obligations.
- Important: actions that are expected to deliver significant benefits to the organisation and industry.
- Better practice: expected to deliver incremental performance improvements.

It is noteworthy that no recommendation is rated as 'critical'.

	RECOMMENDATION	PRIORITY
1	Based on a new RD&E plan, future FRDC AOPs should: # Simplify key targets per area of investment; and # Continue the refinement of management / governance targets that are more relevant to organisational performance (e.g. milestones achieved on time, contract turnaround times etc).	Important
2	FRDC should develop, produce and promote to stakeholders a stand-alone performance report that summarises the FRDC's key outputs and impacts relative to targets in its RD&E plan and AOP on an annual basis.	Important
3	During the development of the next RD&E plan, FRDC should review the way it organises and manages its RD&E program (its investment and evaluation framework) with the aim of simplifying it so that it is easily understood by the average stakeholder.	Important
4	The FRDC Board should consider options to assist it in its role in respect to RD&E, one of which would be the creation of a Research Committee of the Board.	Better practice
5	The FRDC Board should consider creating a People and Culture Committee of the Board to formalise the succession planning process for all senior management, including the MD, to recommend the remuneration of the MD, and to develop a board skills matrix.	Better practice
6	FRDC should develop a deeper understanding of risk appetite and risk tolerance across the key risk areas in line with new risk policy and ensure that this is monitored regularly by the FARM Committee. Risk appetite should be set by the Board with tolerances agreed between the Board and management.	Better practice



	RECOMMENDATION	PRIORITY
7	FRDC should strengthen its approach to extension, possibly by creating a specific position to oversee or coordinate extension across the organisation.	Better practice
8	FRDC should continue to conduct <i>ex-post</i> impact assessments of randomly selected projects as planned. The focus for FRDC should be on communicating the results to stakeholders using clear, simple language, as it did in its Annual Report 2016-17. FRDC could consider preparing and publicly releasing a short performance evaluation report each year, which would include results against its key performance indicators as well as the results from the impact assessments.	Better practice
9	FRDC should explore with its impact assessment provider the feasibility of providing in the impact assessment reports more detailed commentary on the likely distribution of benefits from the project clusters between regions and/or sectors of the Australian fisheries sector.	Better practice
10	FRDC should develop and implement with its impact assessment provider a project to assess willingness-to-pay studies of environmental attributes of fishery resources and externalities arising from aquaculture as input into future assessments of the environmental impacts of FRDC's Environment Program.	Better practice



ACRONYMS AND ABBREVIATIONS

AGVP	Average gross value of production
AICD	Australian Institute of Company Directors
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AOP	Annual operational plan
AFMA	Australian Fisheries Management Authority
ARFF	Australian Recreational Fishing Foundation
BCR	Benefit-cost ratio
CRRDC	Council of Rural Research & Development Corporations
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAWR	Department of Agriculture and Water Resources (C'th)
FARM	Finance, Audit and Risk Management (Committee)
FRDC	Fisheries Research and Development Corporation
FTE	Full-time equivalent
GM	General Manager
HR	Human resources
IP	Intellectual property
IPA	Industry Partnership Agreement
IRR	Internal rate of return
KPI	Key performance indicator
MIRR	Modified internal rate of return
M&E	Monitoring & evaluation
MD	Managing Director



NPV	Net present value
PGPA Act	Public Governance, Performance and Accountability Act 2013
PIRD Act	Primary Industries Research and Development Act 1989
R&D(&E)	Research & development (& extension)
RAC	Research Advisory Committee
RPM	Research Portfolio Manager
(R)RDC	(Rural) Research & Development Corporation
RR&D4P	Rural R&D for Profit (program)
SAFS	Status of Australian Fish Stocks
SIA	Seafood Industry Australia
WRLC	Western Rock Lobster Council



1. INTRODUCTION

1.1 PURPOSE OF THE REVIEW

As prescribed under its Funding Agreement 2015-19 with the Commonwealth Government, the Fisheries Research and Development Corporation (FRDC) is required to engage an independent organisation to undertake a comprehensive review of its performance six months prior to the end of the agreement, namely by 2 December 2018. This is one of several mechanisms, including annual reporting under the *Primary Industries Research and Development Act 1989* (PIRD Act), by which the organisation's performance is monitored.

The performance review requirements of the rural research and development corporations (RDCs) vary to some extent depending on their corporate structure and focus. Broadly, though, all require a comprehensive review of the organisation's performance against the provisions of their funding agreement and the extent to which the organisation is delivering benefits to its investors. This involves consideration of corporate governance; operations; planning, monitoring, evaluation and reporting; liaison with stakeholders; and delivery of benefits.

The Funding Agreement requires the performance review to:

- 1. Assess the performance of the FRDC (entity) in meeting its obligations under the PIRD Act and the Funding Agreement with the Commonwealth.
- 2. Assess the entity's development and implementation of its R&D Plan, Annual Operational Plan, Risk Management Plan, Fraud Control Plan and Intellectual Property Management Plan, and the entity's effectiveness in meeting the priorities, targets and budgets set out in those plans.
- 3. Assess the efficiency and effectiveness with which the entity has carried out these plans including:
 - a. Liaison with stakeholders
 - b. Cross-RDC collaboration
 - c. Corporate governance
 - d. Industry strategy and delivery, including the opportunity for stakeholders to influence the investment of funds and the return on investment achieved
 - e. Corporate operations.
- 4. Assess the delivery of benefits to the entity's fishing and aquaculture stakeholders and the community in general, foreshadowed by those plans, including an assessment of the degree to which the entity's investments have met the needs of the entity's fishing and aquaculture stakeholders.
- 5. Assess the efficiency and effectiveness of the entity's investments.

The performance review focused on the timeframe 2 June 2015 to 30 June 2019.



1.2 REVIEW METHODOLOGY

The following approach to the review was adopted. Note that the desktop review, consultation and reporting stages were overlapping.

- Inception meeting: an inception meeting was held at FRDC, involving the executive group and one of the consulting team, shortly after the project start. The meeting addressed FRDC's operating environment, the scope of the project, FRDC input requirements (including documentation, personnel, stakeholders to be interviewed), output and reporting requirements and finalisation of timeframes.
- Establishment of communication channels: a simple dedicated website for the review was established 2. with the address www.frdcreview.org. The site comprised a single page explaining the background to the review and detailing the terms of reference. The site also provided an email address (submissions@frdcreview.org) by which any stakeholders could provide a submission to the review or seek further information. The purpose of the site was to provide a transparent communication channel with stakeholders that was clearly independent of FRDC.
 - The website and the review itself were publicised by FRDC through June and September Stakeholder Briefings, which were emailed to over 7,000 stakeholders, as well as email messages to FRDC representative organisations and various stakeholders. By the closing date, no submissions had been received via the designated email address. At the same time, FRDC was undertaking its annual stakeholder survey. The review team was provided the opportunity for input to the survey questionnaire.
- Desktop review: a large number of relevant documents were made available to the consultants via a secure portal and were progressively reviewed. During the document review, FRDC's fulfilment of its various Funding Agreement obligations was checked and points of interest noted for discussion during the consultation stage.
 - A list of the documents reviewed is provided in Appendix 1.
- Consultation: a list of interviewees for the review, across a range of stakeholder groups, was drawn up in consultation with FRDC. Individuals on the list were approached and, if agreeable, were interviewed faceto-face (the majority of the FRDC and Department of Agriculture and Water Resources (DAWR) and some of the other interviews, depending on practicability) or by telephone. A semi-structured questionnaire was used as the basis for discussions. Interviewees were assured that their comments would be treated in confidence and, if reported, would be presented in a deidentified and aggregated way that did not allow the source to be identified.

A total of 37 interviews were conducted, distributed across stakeholder groups as follows:

- FRDC executive team and management (11 individuals);
- # FRDC Board (3);
- Representative organisations, individual members (7); #
- # Research Advisory Committee Chairs (5);
- # DAWR (5);
- 4 Council of Rural R&D Corporations (CRRDC) (1); and
- # Service providers to FRDC (research agencies, consultants and others) (5).



- In addition, the review team had the benefit of the FRDC stakeholder survey (200-300 people surveyed). One of the team attended an FRDC / DAWR Funding Agreement teleconference on 26 February 2018 and a meeting of FRDC representative organisations at FRDC on 26 March 2018.
- Presentation of interim findings: the interim findings of the review were presented to the executive team at FRDC on 23 July 2018, in order to test the findings for accuracy and completeness. Interim findings were also presented to the FRDC Board at its August 2018 meeting.
- 6. <u>Draft report</u>: the draft report was been presented to the FRDC Board on 21 November 2018. Feedback on the draft was considered by the review team and changes made where required to correct factual errors or misinterpretations.



2. OVERVIEW OF FRDC

2.1 LEGAL FRAMEWORK

The Fisheries Research and Development Corporation (FRDC) was declared to be established, under section 8 of the *Primary Industries Research & Development Act 1989* (PIRD Act) from 2 July 1991, to 'co-ordinate or fund the carrying out of R&D activities including extension for the Australian Fishing and Aquaculture Sector, following passage of the *Fisheries Research and Development Corporation Regulations 1991*⁷¹.

The objects of the PIRD Act, and therefore FRDC, as set out in section 3 of the Act are to:

- (a) make provision for the funding and administration of research and development relating to primary industries with a view to:
 - (i) increasing the economic, environmental and social benefits to members of primary industries and to the community in general by improving the production, processing, storage, transport or marketing of the products of primary industries; and
 - (ii) achieving the sustainable use and sustainable management of natural resources; and
 - (iii) making more effective use of the resources and skills of the community in general and the scientific community in particular; and
 - (iv) supporting the development of scientific and technical capacity; and
 - (v) developing the adoptive capacity of primary producers; and

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- (vi) improving accountability for expenditure on research and development activities in relation to primary industries; and
- (b) make provision for the funding and administration of marketing relating to products of primary industries.
- On 13 December 2013, the PIRD Act was amended to allow RDCs established under the Act to undertake marketing activities on behalf of their industries if there was a marketing levy attached to the corporation. The requirement for a statutory levy was a disincentive to smaller industries, though, due to the high cost of establishing and collecting such a levy. Further amendments were made through the Primary Industries Research and Development Amendment Bill 2017 which was passed by both houses of parliament on 24th August 2018. The new Act amends the PIRD Act to:
- Allow statutory R&D Corporations governed by the PIRD Act to undertake marketing activities funded by voluntary contributions;
- Remove the requirement that the statutory R&D Corporations can undertake marketing only where a marketing levy is attached to the corporation; and

¹ Funding Agreement, Recitals



Expand the definition of 'marketing activities' to allow incidental activities such as consulting about or planning marketing activities².

FRDC is a statutory, as distinct from an industry-owned, RDC. It is a corporate Commonwealth entity under the *Public Governance, Performance and Accountability Act 2013* (PGPA Act) and is an agency in the Agriculture and Water Resources portfolio. FRDC is solely owned by the Commonwealth and is therefore accountable to the Australian Parliament. As such, FRDC must meet the finance and administration arrangements detailed in the PGPA Act and associated instruments such as various Rules and General Policy Orders. FRDC is also required to meet other whole-of-government policies.

In 2013, the PIRD Act was amended to permit the Minister to enter into formal funding agreements with statutory RDCs. These funding agreements were until that time restricted to the industry-owned RDCs. FRDC entered into its first such agreement, the Funding Agreement 2015-19, in June 2015. The Funding Agreement supports the compliance framework of the PIRD and PGPA Acts and introduces some additional obligations, including the requirement to conduct an independent performance review during the term of each four-year Funding Agreement.

The levy on farmed prawns is governed by the *Primary Industries (Excise) Levies Act 1999*, the *Primary Industries (Customs) Charges Act 1999* and the *Primary Industries Levies and Charges Collection Act 1991*. The Australian Fisheries Management Authority (AFMA) collects funds from Commonwealth fisheries through the *Fishing Levy Act 1991*. Various state and territory acts also govern the collection of fishing and aquaculture sector funds that are voluntarily contributed to FRDC by the jurisdictions (see section 2.2).

2.2 SCOPE

The Fisheries Research and Development Corporation Regulations 1991 defines 'fish' as meaning:

- '...all living aquatic natural resources of:
- (a) rivers; or
- (b) estuaries; or
- (c) the sea; or
- (d) the seabed; or
- (e) waters within the limits of Australia.'

It defines the 'fishing industry' as including:

- "... any industry or activity carried on in or from Australia concerned with:
- (a) taking; or



² House of Representatives 2017, Primary Industries Research and Development Amendment Bill 2017: Explanatory memorandum

- (b) culturing; or
- (c) processing; or
- (d) preserving; or
- (e) storing; or
- (f) transporting; or
- (g) marketing; or
- (h) selling;

fish or fish products.'

It defines 'fish products' as meaning:

- "...all products derived from:
- (a) culturing; or
- (b) processing; or
- (c) preserving;

fish.'

FRDC does not use the word 'industry' in descriptions of its overall remit, despite its appearance in the regulations, preferring the term 'sector'. This is because the organisation identifies four broad areas of activity within fishing and aquaculture, only two of which are commercial:

- 1. Aquaculture: the farming of fish and other aquatic species, and their products;
- Commercial or wild-catch: fishers who harvest fish and other aquatic species, and their products, from the wild;
- Indigenous: communities with ties to the land and sea and undertaking traditional practices such as 3. fishing; and
- 4. Recreational: hobby or sporting fishers.

Recreational fishing was not formally recognised as part of the FRDC remit until 1996, and it is not clear when Indigenous became part of it. Post-harvest is also acknowledged in the FRDC's Research, Development and Extension Plan 2015-20 as a distinct sector.

2.3 FUNDING

FRDC's primary funding sources are the Commonwealth Government and commercial fishing and aquaculture sectors. They comprise:

Commonwealth Government funding equivalent to 0.5 per cent of average gross value of production (AVGP) across the entire sector. This contribution recognises the public interest in the sustainable use and development of fishing and aquaculture resources, the vast majority of which are publicly owned, as well as the social value of fishing and aquaculture research in relation to recreational and Indigenous use.



Contributions from commercial fishers and the aquaculture industry collected by the Commonwealth and by each state and territory under that jurisdiction's legislation. This revenue stream is very complex, certainly much more complex than that of any other RDC. The manner in which these contributions are collected varies between jurisdictions: for example, New South Wales charges aquaculture permit holders a fixed amount per hectare (\$45-158), whilst in Victoria aquaculture contributions are calculated as 0.25 per cent of AGVP. The Commonwealth Government agency AFMA collects a levy from commercial fishers in Commonwealth waters (greater than three nautical miles offshore). This levy is calculated as 0.25 per cent of each fishery's AGVP.

Under Section 33B of the PIRD Act, where a state or territory makes a payment to FRDC for R&D (or the Commonwealth makes such a contribution on behalf of a state or territory), then FRDC must, within five years of receiving the payment, spend an equal amount on R&D activities of relevance to that state or territory.

A very important point to note, in the context of this review, is that there is no obligation on the states / territories to remit the research contributions they collect to FRDC (indeed, during the period of the Campbell government, Queensland did not make contributions). This makes the state and territory governments very important stakeholders for FRDC.

One industry, farmed prawns (a 'separately levied' industry under the PIRD Act) pays a levy direct to the Commonwealth for investment by FRDC. Section 33C makes a similar provision to 33B in requiring that money received from a separately levied fishery must be spent for purposes related to that fishery.

Commonwealth funding to match these jurisdictional or industry contributions to a maximum of 0.25 per cent of AGVP. Each of the jurisdictions currently contributes an amount exceeding 100 per cent of the maximum matchable amount (overall, the ratio is 119 per cent – Table 1). This occurs for various reasons, for example where individual entities within a jurisdiction make additional project-specific contributions. The fact that contributions exceed the maximum matchable amount is a positive reflection on the perceived value of investing FRDC.



Table 1: Contributions by jurisdiction as a percentage of matchable amount

JURISDICTION	PER CENT OF MATCHABLE (%)
Commonwealth	107
New South Wales	169
Northern Territory	119
Queensland	143
South Australia	106
Tasmania	123
Victoria	103
Western Australia	116
Total	119
Australian farmed prawns	71

Source: FRDC

The AGVP is a three-year rolling average of the estimated GVP for the relevant financial year and the two previous financial years. FRDC is advised of the AGVP via a ministerial 'letter of determination' in June of the relevant year, which means that the organisation only knows its final revenue targets for the year within a few weeks of the year coming to an end.

Some state / territory recreational fishing trusts make contributions to FRDC. These amounts are not matchable by the Commonwealth but may receive leveraged funding from FRDC from the 0.5 per cent Commonwealth funding. FRDC also receives funding for managing specific projects or programs. For example, it has been contracted by DAWR to manage the National Carp Control Plan, a \$10.2 million program over two years.

Industries may also invest funds with FRDC for marketing activities. This a recent development (see section 7). Such contributions are voluntary and do not attract matching Commonwealth funds.

A summary of FRDC's revenues over the last five years is shown in Figure 1.



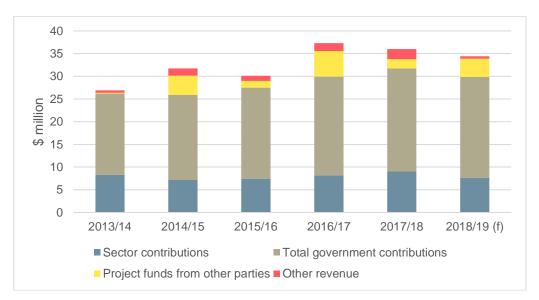


Figure 1: FRDC's revenues over the review period – the 2018/19 figure is a conservative forecast

Source: Annual Report 2017-18, AOP 2018-19

As Figure 1 shows, FRDC's total reportable revenue has increased substantially over the review period: by almost 39 per cent between 2013/14 and 2016/17. What the figures do not show, though, is the substantial leverage on FRDC funding through its investment in the Australian Seafood Cooperative Research Centre from 2007-15 (approximately \$5 million per year).



3. OPERATING ENVIRONMENT

3.1 FISHING AND AQUACULTURE SECTOR PROFILE

The fisheries industry had an AGVP of \$3 billion in 2017/18, up significantly from \$2.473 billion in 2013/14. The major products by value were salmonids, rock lobster and prawns, followed by abalone, tuna, oysters and pearls (Figure 2). In March 2018, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) forecast that the value of the industry would rise by 4 per cent in real terms between 2018/19 and 2022/23 to reach \$3.1 billion³.

Exports of fishery products are valued at \$1.5 billion. Rock lobster, abalone, tuna and prawns contribute around 80 per cent of export value. Salmonid aquaculture production, the largest contributor to gross value of production, is primarily consumed domestically.

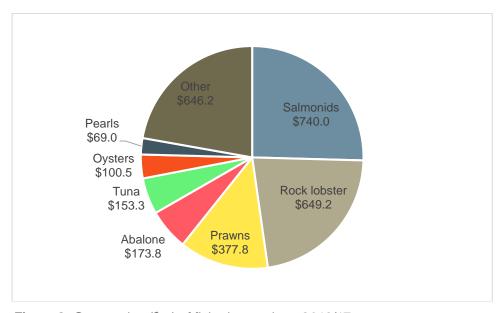


Figure 2: Gross value (\$m) of fisheries products 2016/17

Source: ABARES4



³ ABARES 2018, Annual fisheries outlook: Forecast to 2022-23, <u>www.agriculture.gov.au/abares/research-topics/fisheries-economics/fisheries-forecasts#data</u>, accessed 4 November 2018

⁴ ABARES 2018, Fisheries statistics – agricultural commodities, March

Recognition of the economic contribution of the recreational fishing sector has advanced significantly in recent years. A study for the Victorian Recreational Fishing Peak Body (VRFish) by Ernst & Young in 2015⁵ estimated that, in Victoria alone, 830,000 adults participated in recreational fishing each year and that the sector directly added \$1.6 billion of value to the economy (\$3.9 billion including indirect value added) in 2013/14. The study acknowledged but did not estimate further intangible benefits in general health and well-being,

3.2 SECTOR ISSUES AND DEVELOPMENTS

FRDC's Research, Development and Extension Plan 2015-20 notes eight drivers and opportunities for the five-year period, and these provide a good summary of the issues addressed by FRDC:

- Public perception and social licence, including sustainability of fishing and aquaculture, anti-'industrial food' sentiment, carbon neutrality, animal welfare, country-of-origin labelling, food fraud and workplace safety;
- Environmental health, including climate change and variability, ecosystem preservation, threatened and endangered species, marine parks, plastic and other contamination;
- Food security, globalisation and market access, including expanding demand, adding value to bycatch, discards and processing waste;
- Resource access and allocation, including increased competition from within and outside the sector (e.g. marine parks);
- Resource management, which overlaps substantially with environmental health;
- People development and capacity building, including the need to attract and retain a skilled workforce and foster leadership;
- 4 Aquatic animal health and biosecurity, including exotic, new and emerging pathogens; and
- # Technological advancements.

3.3 SECTOR BODIES

There are numerous representative bodies in fishing, aquaculture and related activities. There are species-specific associations at regional, state/territory and/or national levels. For example, Southern Rock Lobster Limited is the peak body for rock lobster councils or associations in South Australia, Tasmania and Victoria, as well as the Australian Southern Rock Lobster Exporters Association. The Western Rock Lobster Council (different species) operates only in Western Australia.

States and territories have cross-industry peak bodies. Examples are Seafood Industry Victoria and the Western Australian Fishing Industry Council.



⁵ Ernst & Young 2015, Economic study of recreational fishing in Victoria, November

Seafood Industry Australia (SIA) was created in 2017 as the national peak body for wild catch, aquaculture and post-harvest sectors. Its members include individual businesses, seafood industry associations and individuals. SIA replaced the National Seafood Industry Alliance as one of FRDC's representative organisations during 2017/18.

Recreational fishing is similarly served by numerous associations, reflecting the fact that the term 'recreational fishing' embraces a wide range of activities (such as game fishing, fly fishing and fishing competitions) and stakeholder groups (anglers, tackle suppliers, rod and reel manufacturers and so on). The representative organisation to FRDC is the national peak body Australian Recreational and Sport Fishing Industry Confederation Inc (trading as RecFish Australia). An alternative peak body, which is not recognised by government as a representative organisation to FRDC, is the Australian Recreational Fishing Foundation (ARFF). A nominee of RecFish Australia sits on the ARFF Board, ensuring there is communication between the two groups.

There was no voice to advocate for the fishing-related interests of Indigenous Australians until FRDC formed its Indigenous Reference Group (see section 8.1.1).



4. THE BOARD AND GOVERNANCE

4.1 STRUCTURE OF THE BOARD

The 2015-18 FRDC Board⁶ comprised eight directors, including the Chair and the Managing Director (MD). A new Board was announced as this report was being compiled. The new Board comprises a total of nine directors, the maximum number allowable under the PIRD Act.

The Chair is selected and appointed by the Minister, with the remaining non-executive directors appointed by the Minister based on the nomination of a selection committee. The selection committee is also appointed by the Minister following nomination by FRDC's representative organisations. FRDC plays no role in the board selection process other than to fund it.

Directors are selected on the basis of their expertise in the following fields, as set out in the PIRD Act:

- a. commodity production;
- b. commodity processing;
- c. commodity marketing;
- d. conservation of natural resources;
- e. management of natural resources;
- f. science;
- g. technology and technology transfer;
- h. environmental and ecological matters;
- i. economics:
- j. administration of research and development;
- k. finance;
- I. business management;
- m. communication;
- n. public administration.

In addition to selecting directors based on general expertise, it has been accepted practice for the FRDC board to also have expertise in recreational fishing, commercial wild catch, aquaculture, post-harvest and/or Indigenous. We note that the most recently appointed board has guite a different skill set to the previous board.

Non-executive directors are appointed for a term not exceeding three years and all directors, other than the MD, are appointed on a part-time basis. The 2015-18 FRDC Board had only one director who had served more than one three-year term. The new board includes five new appointments and two re-appointments among the seven non-executive directors.

The MD is selected and appointed by the Board, with the current MD holding the position since late 2004.



⁶ Term of appointment ceasing in August 2018

The current appointment process, in allowing all directors to be replaced every three years, is a risk for both FRDC and the Government, in that the lack of continuity of strategic corporate knowledge at the governance level could compromise the ability for the Board to provide appropriate oversight of the organisation and management. This does not represent best practice corporate governance and is a risk that could also exist in other statutory RDCs.

A more appropriate process would be to have no more than half the directors retire at the same time, which could be linked to the appointment term of the Chair. A way of achieving this would be to stagger director terms to ensure a balance of continuity with board renewal. A transition process could be implemented by, for example, appointing one-third of retiring Directors at the next selection process for a term of one year, onethird of retiring directors for a term of two years and one-third of retiring directors for a term of three years. Directors appointed to the one and two year terms could then be re-appointed for a three-year term. This would result in staggered director terms which would greatly improve the governance around the appointment process.

The relevant section of the PIRD Act is as follows:

- 66 Term of office
- (1) A director:
 - (a) is to be appointed with effect from the day specified in the instrument of appointment; and
 - (b) holds office, subject to this Act, for such term (not exceeding 3 years) as is specified in the instrument of appointment, but is eligible for re appointment in accordance with this Act.
 - (2) If a director ceases to hold office before the end of the term of appointment, another person may, in accordance with this Act, be appointed in the director's place until the end of the term.

This would seem to suggest that the above process for staggered director terms could be achieved without requiring amendments to the Act.

4.2 BOARD PRACTICE

The 2015-18 Board was very collegiate, and directors considered that there was an inclusive culture and democratic decision-making processes. Directors observed ample opportunity to understand other views and debate these. They believed there was a good process for providing management with sound oversight of corporate governance.

The relationships with stakeholders were very good and directors were able to interact with a wide range of stakeholders at events held in conjunction with Board meetings.

Board directors undergo an induction process at the commencement of their term, including a workshop run by the Australian Institute of Company Directors (AICD). The 2015-18 Board was in place for a full three-year term and therefore reached a good balance of working together as a team. However, this was a Board where all except one director was replaced at the previous appointment process in 2015. This resulted in considerable effort needing to be placed on directors being able to work with each other and some directors regarded this as being akin to establishing a Board from inception. Corporate knowledge and continuity at the Board level was vested in one director and management was placed under a lot of pressure to change processes and procedures.



Governance documents are comprehensive and transparent. There are detailed policies and procedures for the Board and the FARM Committee, as well as for management. There is a code of conduct in place which is very comprehensive.

The Board has one committee: The Finance, Audit and Risk Management (FARM) Committee. This committee works well and there is good interaction between the FARM Committee and the Board. There are no other committees, for example those that deal with research or human resources.

The Board receives a substantial amount of information in relation to research projects which come to the Board for approval. Due to the volume of material provided, a streamlined process has been introduced to attempt to reduce the time the Board needs to spend on reviewing research plans and enable it to focus on the key areas for decision-making, with a dashboard in the process of being implemented. This has not necessarily resulted in directors having a higher level of confidence in approving research projects. Notwithstanding these efforts to make the project approval process more efficient, there is an opportunity to consider whether a Research Committee should be established. This would provide the Board with a higher level of confidence in project approval, as it would be able to rely on specific scientific and other relevant expertise and attention being applied to project evaluation by the Research Committee. This Committee could also actively consider the basis upon which funding is provided and look to recommend an improved process of project triage to the Board, hence freeing up the Board to focus on the strategic outcomes of the project as part of their decision-making.

A Research Committee might also include one or more external experts, especially if the Board feels that additional skills would be beneficial.

Recommendation: The FRDC Board should consider options to assist it in its role in respect to RD&E, one of which would be the creation of a Research Committee of the Board.

Succession planning is being undertaken by the MD in relation to senior executive positions. However, there is no formal succession planning process for the MD position itself. This potentially represents a significant risk to the organisation, particularly given that the current MD has been in the position for some 13 years. This longevity can manifest itself in the MD being considered as the sole decision-maker, which increases the organisational risk even further should he no longer continue in the position. Increasing delegations will mitigate this risk to some extent, but the Board should consider a formal succession plan for the MD.

The Board undertakes a periodic review of its performance, however there has been no development of a skills matrix by the Board as part of this review process. If the Board was able to participate in a skills matrix process, it would be able to proactively identify the skills, expertise and diversity of thinking that it sees as being needed on the Board. This, in turn, would inform the Board selection committee when recommending new Board directors for appointment.

There is no separate committee that deals with succession, skills, remuneration or other people-related matters. Best practice governance would seek to ensure that these matters are being given due attention on an ongoing basis, with culture also becoming more important as a key strategic focus for Boards. Succession planning and the development of a Board skills matrix are tasks on which a People and Culture Committee could focus. The skills matrix could be used by the Board chair to inform the Presiding Member who chairs the



board selection process, noting that the PIRD Act provides the capacity for the Presiding Member to consult the FRDC Chair on their view of the future skills matrix need. The People and Culture Committee could also consider succession for senior management and the remuneration of the MD.

Recommendation: The FRDC Board should consider creating a People and Culture Committee of the Board to formalise the succession planning process for all senior management, including the MD, to recommend the remuneration of the MD, and to develop a board skills matrix.

4.3 RISK MANAGEMENT AND COMPLIANCE

The Board has a duty under section 16 of the PGPA Act to 'establish and maintain an appropriate system of risk oversight and management for the entity'. FRDC places a high level of attention to risk management and compliance. The FARM Committee is specifically focussed on risk management and compliance and the organisation is highly committed to meeting the highest levels of conformity.

FRDC has a 'calendar procedure' that identifies all compliance activities by month and for each, the relevant procedure, the frequency of the activity and the staff member responsible for ensuring its completion. The procedure also lists activities required to be carried out less frequently than once per year.

Under clause 11 of the Funding Agreement, FRDC must provide a compliance assurance report to DAWR within five months of the end of each financial year. The report must include 'a statement from an independent auditor which provides an opinion on whether the FRDC has complied with its obligations under clauses 6 and 7 [application and management of funds] of this Agreement during the relevant Financial Year'. Compliance assurance reports including independent audit reports have been provided to DAWR following each year of the review period.

In respect to risk, FRDC holds an annual risk workshop and has a comprehensive risk policy and attendant documents (risk register, fraud control framework etc). FRDC participates in an annual risk management benchmarking survey convened by the Commonwealth Department of Finance⁷ (as do the other statutory RDCs). The survey assesses risk maturity against the nine elements of the Commonwealth Risk Management Policy ('establishing a risk management policy', 'developing a positive risk culture' etc).

The results of the 2018 survey paint a positive picture of FRDC's risk management. On a scale of six 'risk maturity states' FRDC was rated as 'advanced', the second-highest level below 'optimal', which was achieved by only two per cent of entities. Thirty-four per cent of participants were rated as 'advanced'. Notably, FRDC showed a level of risk maturity for all nine elements that was significantly higher than the average for the subgroup of 45 portfolio-based entities including the RDCs. It should be noted, though, that not all entities aspire



⁷ Commonwealth of Australia Department of Finance 2018, Comcover risk management benchmarking survey 2018 executive report – Fisheries Research and Development Corporation

to 'optimal' maturity; the survey report acknowledges that risk maturity should be fit-for-purpose and that not all entities should have 'optimal' as a target.

Within FRDC, performance against all elements had improved slightly from 2017 to 2018. Its strongest capability was in 'defining responsibility for managing risk', 'embedding systematic risk management into business processes', and 'establishing a risk management framework'. The element with the largest scope for improvement was 'maintaining risk management capability' (because this part of the evaluation looked at the number of staff in this position, which will never be high in an organisation like FRDC).

Interviews with directors (of the 2015-18 Board) and senior management indicated a mismatch in perceptions of risk appetite, and effectiveness of management of risk, between the two groups. Until it was recently rewritten, the risk policy wassomewhat confusing in its description of risk appetite and tolerance. For example, in relation to strategic risk, it identified that there was a low appetite for risks arising from failure to meet stakeholder commitments or expectations. However, it would be expected that in relation to strategic risk, there may be a medium appetite to explore and stretch the organisation's approach to strategy development but a low tolerance of the failure to meet stakeholder commitments or expectations.

A more complex analysis of risk appetite and risk tolerance across the different areas of FRDC's work would bring a deeper level of understanding of risk across the organisation, a greater level of consistency and understanding of risk between the Board and management. The new risk policy is a great improvement in this respect. Also, it is noted that the previous FARM Committee had a heavy workload and that its focus and time was reportedly spent primarily on the finance and audit function. This resulted in the focus on risk being less than optimum.

Recommendation: FRDC should develop a deeper understanding of risk appetite and risk tolerance across the key risk areas in line with new risk policy and ensure that this is monitored regularly by the FARM Committee. Risk appetite should be set by the Board with tolerances agreed between the Board and management.

The review notes that FRDC carries ISO 9001 certification, and that it is the only RDC to do so.

4.4 MANAGEMENT TEAM

The FRDC team is quite small (20.4 full-time equivalents (FTE) across 22 people, including seven part-time staff in 2017/18). The leadership team comprises the MD and three General Managers (Research & Investment; Communications, Trade & Marketing; and Business). The growth of the organisation over the last few years means that there is a relatively high number of new appointees - in 2014/15 there were 12.7 FTE staff (15 people).

Like most RDCs of similar size and with a relatively flat structure, FRDC faces the challenge of offering a career path for staff members, particularly those who are fish and aquaculture specialists. Despite this, there has been very little staff turnover and many staff - including the MD and the GM Finance - have worked with FRDC for many years. This is undoubtedly due in no small part to the attractive workplace culture (see section 4.5). The organisational structure was reviewed by an HR consultant in October 2017 and recommended



changes are gradually being introduced. This has included the appointment of two Senior Research Portfolio Managers, reducing the reporting burden on the GM Research & Investment and improving the career progression opportunities available to Portfolio Managers.

FRDC opened offices in Adelaide and Port Stephens (NSW) in 2016. There are 5.6 FTE staff in Adelaide, including one of the Senior Research Portfolio Managers who is effectively the office manager. There are three full-time staff at the Port Stephens Fisheries Institute of NSW Department of Primary Industries. The Port Stephens team was appointed to deliver the National Carp Control Plan and is entirely funded by that program.

Most internal and external stakeholders interviewed for this review were of the opinion that the establishment of the Adelaide office was seamless and that the organisation has been able to maintain a consistent culture and good communications between offices. Others believe that further work is required on these fronts.

4.5 CORPORATE PERSONALITY AND CULTURE

The external view of FRDC generally is that it works very hard and with genuine intent on behalf of its sectors, including Indigenous and recreational fishing, and that staff are highly competent, engaged and open in their dealings with stakeholders. There is some criticism within government and among other stakeholders that FRDC sees itself as 'the industry' and should limit itself to being the fishing sector's RD&E manager. However, there is also an acknowledgement that until recently there was no real industry peak body, and also that FRDC is treated by elements of government as the key adviser on matters relating to the fishing sector. The MD's participation by invitation in meetings of the Australian Fisheries Ministers is an example (see section 8.3).

FRDC is also understood to be 'politically smart', very conscious of the line between advising on technical matters and advocating for particular policies.

One striking aspect of FRDC's corporate personality and culture is the prominence of the MD. The MD is very highly respected externally and internally. In some sense, the MD 'is' FRDC, especially with regard to engagement with government. This is the basis of concern among some stakeholders about succession for the MD position (see section 4.2). Others believe that there are suitable successors for the role and that FRDC would be 'different' under other management but not necessarily less effective.

We have not reviewed any other similar technically-based organisation in which the chief executive has been so thoroughly conversant with every element of the business, to the point where it appears he could do the job of any staff member, certainly in the Research & Investment division. Despite this, there is no sense of a micromanagement problem, although delegation is reported as being sometimes less than optimal.

The workplace culture of FRDC is, clearly, highly valued by staff. FRDC is reported to be a good place to work, having a friendly, informal and collegiate environment and a high degree of loyalty to its people. As noted above, the low rate of staff turnover is unsurprising. This low rate of turnover has both positive and negative implications, however. Corporate memory and external relationships benefit from the continuity.

An area identified as offering room for improvement is in relation to risk culture. Risk culture is addressed in the process sense but it is still considered a work in progress. While there is general appreciation of the need for a sound risk culture that is embedded across the organisation, there is the opportunity to elevate the level of sophistication: in other words, to go beyond process and focus on outcomes in relation to risk across FRDC and make this assessment more regular. This would cut across research, development, extension and



stakeholder engagement as well as governance and administration and would more broadly underpin corporate culture.

Perceptions of an excessive focus on compliance and a lack of agility and innovativeness are common among stakeholders of statutory RDCs in particular, not just FRDC, and it is sometimes (erroneously) thought that one is traded off against the other. Compliance is not negotiable if FRDC is to maintain its licence to operate and the compliance burden on all statutory RDCs is very high. Maintaining a high standard of compliance does not however preclude the organisation from being innovative and taking risks appropriate to the Board's risk appetite - except insofar as the compliance overhead reduces the thinking 'head space' available to staff.

Like a number of other RDCs, FRDC has several initiatives in place to change the way it manages its research, development and extension (RD&E). FRDC is funding a program called 'Fish-X', which 'provides a pathway for those who want to take innovative ideas that solve big industry challenges and turn them into reality [by giving] participants the tools and supportive environment they need to succeed'. Fish-X involves two-day workshops teaching design thinking, lean-start-up and agile methodologies, and a more advanced mentoring program, for people with new ideas for the industry. Another consultancy is preparing an 'FRDC Transformation Strategy 2020' that radically reconsiders the future structure of FRDC.

These are important initiatives because, while the corporate culture is healthy, it could be more dynamic and outward looking. There is a sense that there needs to be more internal challenge to the status quo and the ways things are currently done.

Another and perhaps more pressing issue in respect to corporate personality is the view of numerous internal and external stakeholders interviewed for this review that FRDC needs to become better at 'saying no'. According to this view, FRDC has been too willing to take on roles or respond to issues outside its traditional remit as a funder of RD&E, with the result that staff are too stretched. This review heard several stories of poor responsiveness to requests of staff including slow turnaround of reports or contracts. This is blamed on a combination of FRDC over-commitment and complexity (see section 6.1.5) rather than a poor attitude among staff.



5. PLANNING AND REPORTING

5.1 OVERVIEW

The form of FRDC's planning and reporting processes and mechanisms is highly prescribed by the Funding Agreement, the PIRD Act, the PGPA Act and the PGPA Rule 20148.

There are three principal documents:

- The 'RD&E Plan';
- The annual operational plan; and
- 4 The annual report.

Clause 10 of FRDC's Funding Agreement 2015-19 requires that FRDC develop and maintain a program framework (10.1 and 10.2) to support its planning, performance and accountability requirements under the PGPA Act (Chapter 2, Part 2-3). It must also prepare an evaluation framework (10.3) to support its program framework and ensure that FRDC systematically evaluates its performance.

In fulfilment of this obligation, FRDC has a program and evaluation frameworks document (November 2016), which is available on the FRDC website as required under section 10.5 of the Funding Agreement. The relevant RD&E plan for FRDC for the performance review period is 'Research, Development and Extension Plan 2015-2020 – Knowledge for fishing and aquaculture into the future'. FRDC is about to commence the development of a new RD&E plan and the program and evaluation frameworks document will need to be revisited as part of this process.

Further discussion of the program and evaluation frameworks document is provided in section 6.7 of this report.

5.2 RD&E PLAN (2015-2020)

Section 10.6 of the Funding Agreement requires that FRDC prepare an R&D Plan in accordance with sections 19-24 of the Act. Section 19 of the Act requires an RDC to prepare, in written form, an R&D plan for each successive period that includes:

- A statement of the Corporation's objectives and priorities for the period to which the plan is expressed to relate; and
- An outline of the strategies that the Corporation intends to adopt in order to achieve those objectives.

Section 20 requires these plans be submitted to the Minister for approval no later than two months, or such shorter period as the Minister, in special circumstances, allows, before the intended day of commencement of



⁸ The latter is a disallowable legislative instrument made by the Finance Minister under sections 101 to 105 of the PGPA Act 'prescribing matters required or permitted by the PGPA Act or necessary or convenient to be prescribed for carrying out or giving effect to the PGPA Act' (see https://www.finance.gov.au/resource-management/pgpa-glossary/rules/)

the period to which the plan relates. Section 21 relates to variation of R&D plans and requires the Corporation to review its plans annually and consider whether a variation of it is necessary.

Additional obligations in respect to the R&D Plan are found in Funding Agreement, clauses 10.6-10.12, and cover matters such as the publication of the plan, matters which must be covered in the plan, the requirement for a Commonwealth-approved consultation plan for the development or variation of the plan and the requirement to publish the consultation plan.

FRDC has produced a comprehensive Research, Development and Extension Plan 2015-20. It is our understanding from this review and consultation with representatives of DAWR and FRDC that the RD&E Plan and the process of its development complied with the requirements of the Funding Agreement and with the PIRD Act. In particular:

- The RD&E plan was submitted on time;
- It was approved by the Minister (note that DAWR staff considered it an improvement on the previous version);
- The Board advised the Minister following its August 2017 meeting that:
 - It had reviewed the 2015-20 RD&E Plan following the completion of two full years and determined that there were no indications that it required updating; and
 - It had consulted FRDC's four representative organisations who also advised that they did not see a need for a variation to the Plan.

The RD&E plan is largely a good document. It provides satisfactory coverage of the requirements of section 10.7 of the Funding Agreement (which details the contents of an RD&E plan), including:

- FRDC's mission;
- A range of subjective but relevant 'general targets' by 2020;
- ф A framework for RD&E investments (Lead, Collaborate, Partner);
- Key stakeholders; 4
- The (then) operating environment;
- Three national priorities, along with deliverables and targets for each;
- # Five programs of RD&E investment;
- 4 An evaluation framework; and
- High-level income and expenditure estimates over the course of the plan.

However, the plan is not an easy document to navigate and many of its key elements are either quite hidden or located at the end of the plan. A case in point, and perhaps one of the better elements of the plan, is table 2 which lists out 'Aims and targets for each of the three national priority areas during the life of the RD&E Plan'. This table, reproduced below (Table 2), provides at a glance the key outcomes sought by FRDC on a yearly basis across the planning period. However, it is hidden on page 43 of a 45 page document. It should have far greater prominence in the plan.



Table 2: Table 2 from the RD&E Plan 2015-20: Aims and targets for each of the three national priority areas during the life of the RD&E Plan

AIM	TARGET	2016	2017	2018	2019	2020
By 2020, the community has effective access to, and understanding of, RD&E that supports fishing and aquaculture sustainability and informs improved perceptions of Australian seafood.	The number of species in the national status of key fish stocks increases to include 200 species.	114 species		160 species		200 species
	The number of species classified as 'undefined' is reduced from the current figure of approximately 30% to less than 10%.	~30%		~20%		<10%
	Positive perceptions of the commercial fishing industry increase from 28% to 40% by 2020 as measured through independently commissioned FRDC stakeholder surveys.	28%	30%	34%	36%	40%
By 2020, deliver RD&E for fishing and aquaculture to increase productivity and profitability consistent with economic, social and environmental sustainability.	Provide RD&E to support increased trade of fishing and aquaculture products into countries with free trade agreements by some 300%.					300%
	Understand the quantity of potential production from Australia's fishing and aquaculture resources.			One report		
	Increase knowledge to improve the utilisation of fisheries resources by Indigenous Australians.					Two reports
	Increase knowledge to identify obstacles and opportunities to increase productivity through habitat.					Two reports
By 2020, deliver sufficient RD&E for significant commercialisation of at least two new or emerging aquaculture growth opportunities with demonstrated potential for profitable business operations.	Advance two or more new or emerging aquaculture opportunities/species for which RD&E has identified clear opportunities and technologies for good production and profitability growth, as measured by increases in harvest tonnages.	500 tonnes	1,000 tonnes	1,500 tonnes	2,000 tonnes	2,500 tonnes



Planning for FRDC would appear to be more complex than for many other RDCs. For example, FRDC is also required (sections 6.9 and 9.1 of the Funding Agreement) to 'contribute to the implementation of relevant Fishing and Aquaculture Sector and cross-sectoral strategies under the RD&E Framework' (see section 8.2). It must also take account of rural and national RD&E priorities and address priorities within the National Marine Science Plan9.

As noted above, it is understood that FRDC is commencing a process to develop the next 5-year RD&E plan. At the outset, FRDC needs to develop, communicate and confirm a clear consultation schedule with industry so that all stakeholders have an opportunity to contribute (as required under Section 24 of the PIRD Act).

Based on considerations during this review, we suggest that future editions of the plan would benefit from:

- Providing a 'plan on a page' at the front of the document to clearly communicate to stakeholders the key components (and targets) of the plan;
- Developing relevant targets for all aspects of the 'business' national infrastructure priorities, sector and jurisdictional partners and organisational performance;
- Building on the current targets (table 2 in the current plan) and providing an increased number of objective and stakeholder-relevant targets / key performance indicators for these priorities;
- Listing all priorities / targets at the front of the document; and
- Simplifying the current 'investment matrix' of 'RDE investment programs' x 'national priorities' x 'national RD&E infrastructure' x 'investment framework'. This complex structure is likely to hinder stakeholder understanding of and engagement with FRDC's key priorities. This is further discussed in section 6.1.5.

5.3 ANNUAL OPERATIONAL PLANS

Section 25 of the PIRD Act details the purpose of annual operational plans (AOPs) while section 10.14 of the Funding Agreement lists specific details in relation to AOP content.

There are four AOPs relevant to this review: 2015/16, 2016/17, 2017/18 and 2018/19. This review and discussions with FRDC management and representatives of DAWR have confirmed that all obligations listed within the Funding Agreement in relation to these four AOPs have been met.

Over the period, the quality of the plans has progressively improved. There have been some structural changes to the documents that have made them easier to read and there has been a welcome increase in focus on specific targets (excluding those required within Portfolio Budget Statements).

Each of the AOPs cover the following investment areas (although to a lesser extent in 2015/16, which is likely to be as a result of timing in relation to preparation of the AOP and the RD&E plan) which seek to achieve the objectives described in the R&D plan:

Three national priorities (sustainability, productivity / profitability and aquaculture growth);



⁹ National Marine Science Committee 2015, National Marine Science Plan 2015-2025: Driving the development of Australia's blue economy

- Four national RD&E infrastructure priorities that address whole-of-industry and community issues and opportunities (Indigenous Fishing Subprogram, Recfishing Research Subprogram, Aquatic Animal Health and Biosecurity Subprogram, and Human Dimensions Research Program); plus
- Five RD&E program areas (Environment, Industry, Communities, People, Adoption) as detailed in the RD&E plan.

Consequently, there is reasonable 'line of sight' from the RD&E plan to the AOPs, although FRDC's complex investment framework first appears in the 2016/17 AOP and remains exceptionally difficult to follow.

Key observations in relation to the AOPs are:

- In each plan, 'planned outputs' for the year are clearly listed for each of the national priorities, although specific alignment with targets in the RD&E plan do vary somewhat (for example, a target for 2016 in the RD&E plan was a 28 per cent positive perception of the commercial fishing industry compared to a target of 31 per cent in the AOP);
- In the first plan for the period (2015/16) there were no targets for national infrastructure priorities, nor were there targets for partner arrangements for sector-based plans or jurisdictional based plans. As noted above, this will have been a timing issue in relation to the RD&E plan and the first AOP in the period;
- The 2016/17 plan introduced a target for partners (90 per cent of partners have a current RD&E Plan. Investment results in a balanced portfolio);
- From 2017/18 onwards, the plans were further enhanced:
 - Targets for national priorities were listed on a yearly basis and closely aligned with the RD&E targets;
 - Targets for national infrastructure projects were introduced (although they seem quite operational rather than strategic);
 - Targets for partners were introduced (although again they were quite sporadic and quite operational); and
 - Targets for FRDC's five programs of RD&E investment (Environment, Industries, Communities etc) were introduced:
- The 2018/19 AOP made further progress by detailing, upfront, FRDC's key priorities for 2018-19 and included initial targets (e.g. 'establish a levy') for marketing activities;
- Plans have also progressively improved in relation to budget expenditure relative to area of investment; and
- FRDC also has management / governance targets across the various AOPs.

The improvement in content of AOPs is commendable. However, the complex investment matrix and the array of targets that have been progressively developed does not make for easy understanding of FRDC key areas of focus and performance against those.

Recommendation: Based on a new RD&E plan, future FRDC AOPs should:

- Simplify key targets per area of investment; and
- Continue the refinement of management / governance targets that are more relevant to organisational performance (e.g. milestones achieved on time, contract turnaround times etc).



5.4 ANNUAL REPORTS

FRDC's annual reports comply with the requirements of Commonwealth legislation. Key pieces of legislation are:

- PIRD Act;
- PGPA Act: and
- Environment Protection and Biodiversity Conservation Act 1999 (section 16A).

Section 11.10 of Funding Agreement also provides further details in relation to the annual report.

There are three relevant annual reports for the review period (2017/18, 2016/17 and 2015/16). Like most other RDC annual reports, they are very long (almost 200 pages each), detailed, and not particularly user-friendly. This is largely due to the requirement for the annual report to cover a very extensive list of content requirements as set out in the various acts and the Funding Agreement and is certainly not unique to FRDC. These requirements are listed in detail in an appendix (Appendix B) to each annual report, with a separate appendix indexing the location of the information in the annual report addressing each of the specific requirements of the various governing documents (Appendix C). These appendices provide a clear picture of how the organisation is complying with the various acts and agreements.

The structure of the reports presented over the review period follows a fairly set pattern. The most recent report included:

- An executive summary (although not classified as such) at the front of the document covering:
 - Key events for the year of reporting;
 - A quick guide on how to navigate the annual report; and
 - Investment overview by program, priorities and partners;
- The FRDC Chair's letter, which includes a useful summary of performance against targets internal and (some) external;
- Five detailed sections of a report on operations:
 - Directors' review:
 - FRDC operations (largely R&D reporting for programs, priorities and partners);
 - FRDC services;
 - Management and accountability; and
 - Corporate governance;
- Detailed financial statements; and
- Various appendices including the 'compliance index'.

Annual reports are not very useful as a communication document for stakeholders. Indeed, consultations for this review confirmed that few stakeholders actually read the report. However, it does contain important information which stakeholders would benefit from and value, were it made available in a more digestible form.

For example, within the 2017/18 report some information that would have value from a communication perspective to stakeholders includes:



- The Chair's key performance indicator (KPI) summary in his letter to the Minister;
- The summary of KPI achievements (and ranking of 'complete / on track to completion / underway / yet to start') for each national priority (starting on page 37). Perhaps a traffic light system as used by other RDC's (Sugar Research Australia, Cotton Research & Development Corporation, Wine Australia) may be more visually appealing and provide a clearer assessment;
- An equivalent summary of KPIs for national RD&E infrastructure priorities (although linkage of KPIs back to the AOP can be difficult for some areas, especially those related to program priorities such as 'People' (starting on page 45));
- Jurisdictional and industry sector research reporting (starting on page 51 again, several KPIs largely relate to implementing an RD&E plan (sector) or having 'people development included in the RAC's RD&E Plan'. That is not to say that such KPIs are not important - they are in the initial stages - but over time they need to become more focused on outcomes / impacts rather than outputs);
- Program reporting (starting on page 59);
- Reference to an example benefit-cost analysis within each program reporting area, but more specifically the summary table (pages 92 - 95) of all 20 analyses undertaken over the reporting period; and
- Management and accountability KPIs (page 108).

FRDC has many good stories to tell stakeholders but they are hidden / submerged within the detail of documents such as the annual report.

We note that the findings of this review are consistent with those of the 2018 stakeholder tracking study¹⁰ which found that:

While the barrier of engaging with a diverse range of stakeholders is obvious, the challenge for FRDC will be to establish frameworks and processes that enable this dialogue and sharing of information. The feedback indicates some of the lower satisfaction with the investments is driven by a lack of awareness and understanding of what and where FRDC invests.

Unfortunately, the annual report and other communication products of FRDC do not provide a simple summary of the key outputs and outcomes arising from its investments. This is not unique to FRDC. An easy-to-read summary of key FRDC outputs, outcomes and impacts may help position FRDC more clearly with its key stakeholders. This has been successfully adopted by other RDCs and may equally assist FRDC. For example, Sugar Research Australia produces an annual performance report that uses infographics and provides an example for FRDC to consider. Other RDCs have developed similar products.

Recommendation: FRDC should develop, produce and promote to stakeholders a stand-alone performance report that summarises the FRDC's key outputs and impacts relative to targets in its RD&E Plan and AOP on an annual basis.



¹⁰ Intuitive Solutions 2018, 2018 stakeholder tracking: Non-commercial stakeholders draft report, July

5.5 PERFORMANCE AGAINST PLANS

While section 9 (below) focuses on how well FRDC has delivered benefits to industry, it is worthwhile to assess FRDC's performance in meeting targets as detailed within the 5-year RD&E plan and AOPs.

The most recent annual report provides a table (in the Chair's letter to the Minister, page vii) in which the organisation's key targets are listed. This table (reproduced below as Table 3) indicates that FRDC has achieved or is on course to achieve most of its targets.

Table 3: FRDC's progress against performance targets

PORTFOLIO BUDGET STATEMENT PERFORMANCE MEASURES	TARGETS 2017–18	RESULTS
Projects focus on the FRDC Board's assessment of priority research and development issues.	Ninety-five per cent are a priority.	Achieved. All projects assessed were identified as a priority via funding process.
Projects are assessed as meeting high standards/peer review requirements for improvements in performance and likely adoption.	Ninety-five per cent are a high priority.	Achieved. All projects assessed were identified as a priority via funding process therefore likelihood of adoption is high.
Maintain ISO9001:2008 accreditation.	FRDC maintains certification.	Accreditation achieved, see page 108.
Submit planning and reporting documents in accordance with legislative and Australian Government requirements and time frames.	One hundred per cent met government requirements.	Achieved. All documents submitted on time.
Implement best practice governance arrangements to promote transparency, good business performance and unqualified audits.	Achieve unqualified audit result.	Achieved. FRDC audit received unqualified result, see pages 126–127.
Demonstrate the benefits of RD&E investments by positive benefit cost analysis results.	Benefit analysis undertaken on one investment area.	Achieved. FRDC undertook benefit cost analysis against each program area, see pages 62, 74, 78, 82 and 86.



PORTFOLIO BUDGET STATEMENT PERFORMANCE MEASURES	TARGETS 2017–18	RESULTS
Positive perceptions of the commercial fishing industry increase from 28% to 40% by 2020 as measured through the independently-commissioned FRDC stakeholder survey.	Perception of industry increases to 30%.	The results from the 2018 research into community perceptions of the sustainability of the industry show that 36% of respondents believe the industry is sustainable.
Provide RD&E to support increased trade of fishing and aquaculture products into countries with free trade agreements by 300 per cent by 2020.	One report completed on the quantity of potential production from Australia's fishing and aquaculture resources.	Not complete, report is in progress and due for completion 2018–19.
Provide RD&E to support increased trade of fishing and aquaculture products into countries with free trade agreements by 300% by 2020.	Report detailing non-tariff barriers to trade.	Reports completed and submitted to the Department of Agriculture and Water Resources.
There are two to three new aquaculture species that are seeing good productivity and profitability growth as measured by an increase in tonnage from other species.	One thousand tonnes of additional production.	National government production statistics not available. Forecasts and individual company records indicate that production will have exceeded the 2017–18 target.

Source: Annual Report 2017-18, p. vii

The table reproduced in Table 3 does not list all of FRDC targets listed in the RD&E plan, but other sections of the annual report do provide an update on progress against those other targets. They are listed below (Table 4) and further indicate that FRDC is making good progress toward their achievement.

Table 4: Progress against selected RD&E Plan targets

RD&E PLAN TARGET	PROGRESS AS LISTED IN THE 2017/18 ANNUAL REPORT
The number of species in the national status of key fish stocks increases to include 200 species.	Planning for the 2018 [December] SAFS [Status of Australian Fish Stocks] commenced. In 2018, the SAFS Reports will expand to cover 120 species.



RD&E PLAN TARGET	PROGRESS AS LISTED IN THE 2017/18 ANNUAL REPORT
The number of species classified as 'undefined' is reduced from the current figure of approximately 30% to less than 10%.	Current levels indicate undefined rates under 10%. Workshops have been undertaken in all jurisdictions to increase the use of methodologies to further reduce the number of 'undefined' species (project 2017-102).
Increase knowledge to identify obstacles and opportunities to increase productivity through habitat.	National Habitat Strategy in development (project 2015-501 Recfishing Research Subprogram: Empowering recreational fishers as champions of healthy fish habitat). Initiated project on calculating the value of habitat type to fishery production (project 2017-175: Linking ecosystem services to the profitability of prawn fisheries linked to project 2017-188). This is part of the Rural R&D for Profit Program.



RD&E MANAGEMENT AND DELIVERY

6.1 ORGANISATION AND ADVISORY STRUCTURES

6.1.1 **OVERVIEW**

The structures and processes by which FRDC engages with its stakeholders are complex. To some extent, this is due to reasons outside the control of FRDC:

- There are multiple commercial groups, as well as recreational and Indigenous sectors, and they have different goals;
- There is a large 'public good' component to FRDC's remit;
- The industry is spread all over Australia and includes a wide diversity of operating environments;
- Levy collection takes place through states and territories, not directly from the industries; and #
- Some stakeholder groups make financial contributions to FRDC, whether through their respective state or territory or some other channel, while others do not.

FRDC uses three mechanisms to organise and manage its RD&E program:

- Programs and subprograms; 1.
- Research Advisory Committees (RACs), one for each of the states, the Northern Territory and the Commonwealth; and
- Industry Partnership Agreements (IPAs) between FRDC and individual industries such as abalone. 3.

There is extensive interaction between these three mechanisms. Some IPAs contribute a proportion of their funding to the relevant jurisdictional Research Advisory Committee (RAC) budget(s) (see section 6.1.4).

FRDC has an 'Investment in research, development and extension (RD&E)' policy. The policy is given effect by a comprehensive suite of procedures governing aspects of RD&E management including applications, application evaluation and project management.

PROGRAMS AND SUBPROGRAMS 6.1.2

FRDC has five RD&E programs, aligning with the responsibilities of FRDC under the PIRD Act:

- 1. Environment;
- 2. Industry;
- 3. Communities;
- 4. People; and
- 5. Adoption.



In addition, FRDC establishes 'subprograms' where 'a planned research and development outcome could be more successful if a number of related projects were managed by employing higher levels of coordination, integration and communication'11. The FRDC website lists six subprograms:

- 1. Aquatic animal health and biosecurity;
- 2. Indigenous fishing;
- 3. Recreational fishing;
- 4. Human dimensions;
- 5. New and emerging aquaculture; and
- 'National Priority 1'. 6.

The first three of these appear in the 2015-2020 RD&E plan, and a 'Social science and economics research coordination' program described in the plan has since been subsumed into 'Human dimensions'. 'New and emerging aquaculture' appears in the AOP as 'National priority 3'. 'National priority 1' is 'Australian fishing and aquaculture products are sustainable and acknowledged to be so'. National priority 2, 'Improved productivity and profitability', does not appear as a subprogram.

Each subprogram has a Subprogram Leader, most of which are external to FRDC. There are committees for Aquatic animal health and biosecurity, Indigenous fishing and Recreational fishing subprograms.

Subprogram and coordination program steering committees report to FRDC and other groups as directed. Each committee is made up of relevant stakeholders and experts within the specified topic area and includes a representative from the FRDC. The committees aid in the preparation of an RD&E plan and/or a list of priorities or may assist in advising and managing the priorities of other entities through their expertise within specific areas of market failure such as social science. The plan and priorities need to give effect plus consistency to the FRDC's RD&E plan.

6.1.3 RESEARCH ADVISORY COMMITTEES

There are eight Research Advisory Committees (RACs), one for each of the states, the Northern Territory and the Commonwealth. The RACs 'provide advice to the FRDC on the priorities and investment needs in its jurisdiction for those sectors that are not covered under IPAs, and issues of public good within the jurisdiction'12.

The RACs replaced corresponding Fisheries Research Advisory Bodies (FRABs) in 2016 following a review. The new structure tightened the accountability of the jurisdictional bodies but accorded them a higher level of operational management and administrative support from FRDC.

The budget for a given RAC comprises the levy monies paid to the jurisdiction, less those diverted to industry partnership agreements (see section 6.1.4), plus Commonwealth matching funding and a proportion of FRDC's



¹¹ FRDC website

¹² RAC Management Procedure

public good funds. The latter allocation is based upon a combination of AGVP, population, remoteness and potential. FRDC retains an eight per cent service fee.

Each RAC develops a five-year RD&E plan and annual mechanisms to implement the plan, and essentially acts as an information conduit between FRDC stakeholders in its jurisdiction and the corporation. There is an independent chair who is 'knowledgeable of FRDC stakeholders' and in practice a person of considerable R&D experience and standing. RACs are skills-based, containing a mix of expertise across commercial wild catch, commercial aquaculture; recreational fishing; resource management; processing, post-harvest and marketing; Indigenous; RD&E execution and management; and (optionally) environmental and people development. Each RAC normally comprises six to eight members plus the Chair.

Each RAC has management and administration support from an FRDC Project Manager and Project Officer. Each Project Manager and Officer is responsible for four RACs. RACs meet at least three times per year. The RAC Management Procedure and roles and responsibilities of RACs, their annual planning and investment cycle and the roles of RAC project managers and project officers is very clear.

There is a formal RAC Management Procedure in place. It details matters such as:

- Composition of RACs:
- Appointment process, tenure and so on;
- Role of the RACs;
- # Conduct of meetings:
- # Management of conflict of interest; and
- FRDC's approaches to planning and priority setting, portfolio balancing, collaboration, RD&E applications, extension and evaluation.

FRDC requires each member of the RACs to sign a code of conduct which incorporates aspects of acting honestly, impartially and with due diligence. Members must also sign a separate deed of confidentiality. The deed contains the normal provisions and is comprehensive.

6.1.4 INDUSTRY PARTNERSHIP AGREEMENTS

FRDC has individual agreements with a number of sector bodies under which FRDC manages a portfolio of RD&E projects, for the benefit of the specific sector, against an agreed strategic plan. Eleven Industry Partnership Agreements (IPAs) are currently in place. For some industries, such as abalone, all of the industry levy is invested through the IPA. For other industries, a proportion of the levy is invested through the IPA in nationally-based priorities whilst the remainder is invested at the jurisdictional level through one or more RACs (for example, prawn fisheries):

- Abalone Council of Australia (100 per cent of funds invested through the IPA);
- 4 Australian Abalone Growers Association (100 per cent);
- Australian Barramundi Farmers Association (100 per cent);
- Australian Council of Prawn Fisheries (50 per cent);
- -Australian Prawn Farmers Association (100 per cent);
- Australian Southern Bluefin Tuna Industry Association (100 per cent);



- ф Oysters Australia (100 per cent);
- # Pearling (80 per cent);
- Southern Rock Lobster (100 per cent);
- Tasmanian Salmonid Growers Association (100 per cent);
- # Western Rock Lobster (80 per cent); and
- Southern Ocean¹³ (100 per cent). 4

Not all industries have IPAs - those that do tend to be larger and with more members involved. IPA RD&E plans follow a standard format to provide alignment with the five-year FRDC RD&E plan. Investments are grouped by the five FRDC programs. Whilst the sector drives the development of the plan and determines the investment priorities, the proposed portfolio must meet FRDC's requirements for portfolio balance (see below). Each plan must be approved by the FRDC Board.

The IPA process has reportedly worked well in most cases and has been well received by industry. A notable exception has been the IPA with the Western Rock Lobster Council (WRLC). There was considerable disagreement between FRDC and WRLC over the mechanics and operations of the WRL IPA, and project approval processes. This disagreement appears to have been at least partially resolved during the period that this review was undertaken.

6.1.5 THE INVESTMENT FRAMEWORK

The investment framework of programs / subprograms, RAC and IPA structures across the corporation is challenging and FRDC has not been able to communicate this integration well, despite a graphic that attempts to do so (Figure 3). As noted in section 5 above, it is difficult for the reader of FRDC's plans or annual reports to gain a clear sense of how FRDC's portfolio is organised. Many of the stakeholders interviewed for this review indicated that they did not understand the structure, despite being industry 'insiders'. This included RAC chairs who described the expectation on RACs to balance their respective investment portfolios across multiple balancing factors as impossible to meet.

This is an important issue for FRDC to address. Complexity makes it difficult for an organisation to explain its value to an industry or sector and the broader community, its priorities and that of its investors and how important partners such as research providers should best work with it. It is also likely to create additional work internally and externally. One research provider indicated to the review that they had 'given up trying to understand' FRDC's priorities and would instead simply submit project proposals and hope for the best.

This is not to say that any of the elements of the structure are not important or necessarily avoidable. For example, the move towards the development of IPAs appears to have been a positive one, placing greater ownership of RD&E in the hands of industry and also (reportedly) assisting to unify industry. However, the RACs remain important. The challenge for FRDC is to move to 'simplicity beyond complexity'.



¹³ Sub-Antarctic fisheries, e.g. toothfish

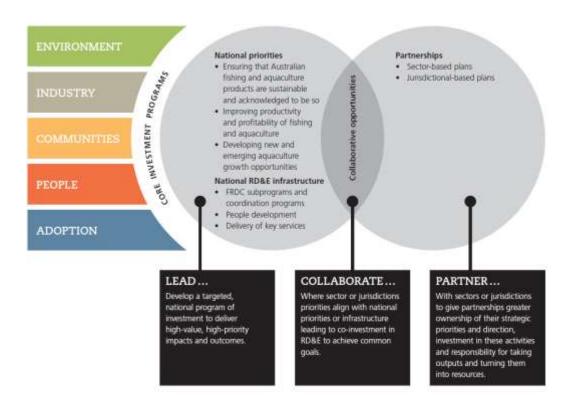


Figure 3: FRDC graphic illustrating its 'framework of RD&E investment'

Source: RD&E plan, p.5

Recommendation: During the development of the next RD&E plan, FRDC should review the way it organises and manages its RD&E program (its investment and evaluation framework) with the aim of simplifying it so that it is easily understood by the average stakeholder.

6.2 RD&E PROCUREMENT

RACs, subprograms and IPAs all use a combination of open call, select tender and direct commission to obtain project proposals.

There are three scheduled times of the year for projects calls by RACs: April, August and November. However, calls are only made if there are priorities that RACs, subprograms or IPAs wish to address. Applications for funding must be made through FRDC's FishNET portal. If there is a need to call for or receive applications outside of these timelines the request is made to FRDC.

FRDC has a formal application evaluation procedure. Project applications are evaluated by FRDC management, the relevant RAC, IPA and/or subprogram and possibly other experts against a series of criteria



relating to compliance (fit within FRDC's legislated mandate etc), attractiveness (relevance to RD&E plan, stakeholder support etc) and feasibility (likelihood of success, track record of investigators etc). Evaluations are recorded in FINO, FRDC's SharePoint®-based project management system (see below).

Project applications with a total budget exceeding \$200,000 (GST included), that are recommended for funding, must be assessed by the FRDC Board. The Board receives a summary of each application and a management recommendation to approve (with or without conditions) or reject. Applications below the \$200k level may be approved by the MD. An application with a budget less than \$200k that is nonetheless considered to carry significant risk (reputational, political, financial or in respect of Threatened Protected and Endangered Species) may be referred to the Board, at the discretion of management.

Referral to the Board of projects for reasons of risk is understandable as, almost uniquely among the RDCs, FRDC becomes involved in some highly contentious and potentially political matters - for example, research on the impact of seismic testing of the seabed. A delegation authority to the MD of \$200k though is very low by the standards of many RDCs and means that the Board spends more time at an operational level than might be ideal. Discussions with some Board members indicate that the Board is insufficiently strategic in its deliberations and the low delegation level is one contributor to this problem.

6.3 PROGRAM AND PROJECT MANAGEMENT

The Research and Development Investment division of FRDC comprises:

- The General Manager (GM) Research & Investment;
- ф Two Senior Research Portfolio Managers (RPMs) reporting to the GM;
- Four RPMs, of whom two report to each senior RPM; 4
- \oplus A National Carp Control Plan Coordinator reporting to the GM; and
- A Delivery Support Manager reporting to the GM.

The GM, senior RPMs and RPMs all have their own portfolios in addition to their line management roles. Depending on the individual, portfolios typically comprise a mix of RAC, IPA and program / subprogram responsibilities, a number of which are overseen by external contractors.

FRDC's project management system, FINO, is SharePoint®-based. It integrates the project application process, workflows and financials. RACs are gradually being provided access to the parts of the system relevant to them.

6.4 PORTFOLIO BALANCE

FRDC aims to balance its investment portfolio across:

- -The five programs (the main area of balance);
- National jurisdictional ('lead'), regional and sector-focused projects ('partner') and these working together for similar priorities ('collaborate');
- Project length;
- Project risk; and



Research type (strategic versus adaptive).

FRDC's program and evaluation frameworks document (see section 6.7) specifies the five-year forecast proportion of expenditure and tolerance against each of these balancing dimensions: for example, 10 per cent high-risk, 50 per cent medium-risk and 40 per cent low-risk projects. The balance of each individual portfolio (RAC, subprogram and IPA) is monitored and reported upon. The annual report provides a breakdown of investment by program within each of the collective RAC and IPA portfolios and also an analysis of investment across the entire FRDC portfolio by project length (long, medium and short).

6.5 INTELLECTUAL PROPERTY MANAGEMENT

FRDC has an intellectual property (IP) management policy, an IP procedure and register. The policy recognises FRDC's responsibilities and powers in respect to IP under the PIRD Act and refers to the ten principles of IP management developed to underpin the National Primary Industries RD&E Framework¹⁴.

FRDC's approach to IP management is appropriate and consistent with that of other RDCs. A notable feature is that FRDC is highly protective of IP where it confers a national competitive advantage, for example in the abalone or pearling sectors.

The IP-related documentation is current and there is evidence that procedures relating to IP are followed.

6.6 EXTENSION AND ADOPTION

Extension of R&D outputs and other forms of innovation is, to some extent, a different proposition for FRDC than it is for many other RDCs. A significant proportion of FRDC's R&D output informs government policy, for example in the management of particular fisheries, and therefore has a built-in adoption pathway. Projects funded under IPAs are less likely to present an adoption challenge because of the greater industry ownership of the research, especially where the industry comprises a small number of large players (for example, salmon farming). Other R&D outputs, though, present the usual adoption challenges of making the case for practice change to a target industry group and facilitating that change.

FRDC describes its general approach to extension as:

- 1. Fostering awareness amongst research providers of issues relating to extension and IP;
- 2. Requiring providers to have effective extension and IP management systems in place;
- 3. Requiring providers to detail an extension pathway for a project in the project application and to review it at key milestones during the project;
- 4. Reviewing proposed extension strategies for each project;



¹⁴ Australian Government 2012, Intellectual property manual and Primary Industries Standing Committee intellectual property (IP) management principles

- 5. Developing and updating an FRDC extension 'position' on each project;
- 6. Requiring providers to keep FRDC informed of any extension activity;
- 7. Working with other groups to develop 'products' and/or facilitate extension; and
- Supporting specific commercialisation arrangements¹⁵. 8.

Adoption is an explicit evaluation criterion for project applications as part of the assessment of project attractiveness: 'Are the outputs likely to be adopted or are readily adoptable and are the pathways of adoption clear and achievable?'16. The RAC Project Managers and Project Officers have, as part of their position description, roles in project extension and communication.

For those R&D outputs that do require a deliberate change management effort, however, FRDC does not appear to have the well-structured and systematic approach to extension and adoption that many RDCs do. As the list above demonstrates, extension is primarily the responsibility of the (research) project leader. Researchers are not always the best people to lead extension activities as they do not necessarily possess the appropriate skills. It appears that extension usually comprises little more than communication of the project results through FRDC's vehicles, direct communication with interested parties and possibly workshops. There was quite extensive commentary to this review that, while FRDC's R&D outputs and outcomes are well regarded, adoption could be improved, especially among smaller industry participants.

There are a number of challenges to FRDC with respect to extension and adoption, most notably the diversity across the stakeholder base in geography, operating environments and objectives. We also understand that state or territory government-funded extension officers have not historically been a feature of the sector as they have been in most agricultural industries. However, there appears to be a need for FRDC to strengthen this aspect of its operations. One option would be to upgrade the importance of the RACs in extension, facilitated by strengthening the extension skills of the RACs themselves and/or those of the FRDC Project Managers and Officers. One of the Project Managers or Officers, appointed or trained accordingly, could be designated as the FRDC 'extension specialist' and have a role supporting all of the RAC management team.

Recommendation: FRDC should strengthen its approach to extension, possibly by creating a specific position to oversee or coordinate extension across the organisation.

MONITORING AND EVALUATION

The FRDC document 'FRDC's Program and Evaluation Frameworks' (November 2016) describes the organisation's approach to monitoring and evaluation (M&E). It specifically addresses clause 10 of the Funding



¹⁵ FRDC RAC management procedure

¹⁶ FRDC application evaluation procedure

Agreement which requires FRDC to have in place and publish a 'program framework' (10.1-10.2) and an 'evaluation framework' (10.3-10.5).

The document notes that FRDC 'has adopted the Commonwealth input, output, outcome reporting framework policy'. 'Impacts' is also added to the FRDC program logic.

The evaluation framework includes:

- Input assessment: how the portfolio will be balanced, including targets for expenditure by portfolio characteristics and by program;
- Output assessment: a series of 'deliverables, strategies and investment opportunities' against each of the national priorities, national infrastructure and partner key drivers;
- Outcome assessment: showing aims, KPIs and targets and linkages between the RD&E programs and outcomes; and
- Impact assessment: describing how FRDC will undertake economic assessments of project clusters, following the CRRDC Guidelines (see section 9).

The evaluation framework is somewhat disjointed and not easy to comprehend. As noted in section 5.1, the framework will need to be rewritten when the next RD&E plan is prepared, and this presents an opportunity to substantially upgrade it, in association with the simplification of the investment matrix as recommended in section 6.1.5. There are several good examples of strong (monitoring and) evaluation frameworks among other RDCs including, for example, the Cotton Research & Development Corporation. These frameworks usually include, among other features, the following elements that are not in the current FRDC framework:

- Program logics for each area of work, that is, a defensible sequence from 'inputs' to 'impacts' and performance measures with targets at different steps;
- Definitions of the various stages in the logic (for example, 'outputs');
- # Any key assumptions; and
- How evidence of performance against targets will be gathered and reported (for example, by surveys, use of publicly-available data).



7. MARKETING & RELATED ACTIVITIES

As discussed in section 2.1, FRDC has been able to undertake marketing activities on behalf of industries with marketing levies since 2013, but no industry sector has yet been able to establish a marketing levy. However, both the Australian Prawn Farmers Association and the Abalone Council of Australia are currently seeking to establish such levies. Likewise, FRDC has not undertaken any voluntary marketing activities since the PIRD Act was amended in August 2018 to allow this to occur. The latter change to the PIRD Act to allow this additional function was anticipated by FRDC for five years prior to this since the previous round of amendments.

FRDC's Five-Year RD&E Plan 2015-2020 notes that: 'The PIRD Act now includes a legislative objective that allows for the FRDC to undertake marketing activities. The FRDC will work with industry stakeholders, if requested, to develop and engage in promotional activities. Likewise, it will publish a separate marketing plan closely linked to this RD&E Plan, linking RD&E to marketing activities. An evaluation process will also be developed'. According to the Annual Report 2017-18, 'As part of developing the appropriate systems and knowledge, the FRDC has continued to meet with the levies area of DAWR as part of assisting [the Australian Prawn Farmers Association] and the Abalone Council Australia to move to implement a marketing levy'.

FRDC argues that it offers three key advantages as a marketing body: economy of scale for the smaller industries, especially in respect to market insights and knowledge; linkage with sector RD&E; and cross-sector collaboration. These are reasonable arguments and similar to those put forward by Horticulture Innovation Australia, which also runs RD&E and marketing programs on behalf of multiple small industries. FRDC intends to out-source marketing activities until a critical level of marketing funding is reached (\$1-1.5 million).

Not all stakeholders believe that FRDC should be involved with marketing. This commentary is largely derived from perceptions that FRDC is already over-committed for its current resourcing and that it is fundamentally an RD&E organisation, not one with a marketing culture – 'it should stick to its knitting'. Whether FRDC should be delivering marketing programs is a matter for it and its industries to determine but the organisation will need to take care to demonstrate that the additional role does not adversely affect the delivery of its other key functions, notably RD&E and its effective communication to stakeholders.

FRDC does fund some activities which seem more targeted at the consumer end of the value chain. An example is the Fish and Chip Awards established by FRDC in 2017 and run again in 2018 as an experiment in extending R&D outcomes about sustainability, fish names (truth in labelling) and so on. Its value in providing support for, or direction to, industry RD&E requirements is somewhat unclear. Similarly, FRDC's 'Fishfiles' (see section 8.1.4 below) is a corporate communications vehicle that 'aims to provide access to the latest information on fish species, find advice on buying, handling, storing, cooking seafood and discover delicious recipes, chef tips, events, fisher profiles and more'17.



¹⁷ www.fishfiles.com.au

8. LIAISON WITH STAKEHOLDERS

8.1 LIAISON WITH SECTOR PARTICIPANTS

8.1.1 REPRESENTATIVE ORGANISATIONS

FRDC has four ministerially-declared representative organisations:

- Seafood Industry Australia (representing the seafood industry), which replaced the National Seafood Industry Alliance in 2017/18¹⁸;
- Australian Recreational and Sport Fishing Industry Confederation Inc., trading as Recfish Australia (representing recreational and sport fishers);
- Commonwealth Fisheries Association (representing commercial fishers operating in Commonwealth waters); and
- National Aquaculture Council (representing the aquaculture industry).

In addition to these groups, FRDC established an Indigenous Reference Group which effectively interacts with FRDC as a representative organisation.

The representative organisations meet formally with members of the FRDC Executive Team four times per year, two of these meetings face-to-face and also including a meeting with the FRDC Board. A DAWR officer also attends the representative organisation meetings.

Personnel from the representative organisations who were interviewed for this review indicated that FRDC is very genuine and transparent in its engagement with them, both formally at the meetings and through informal channels. However, there was some comment that the meetings should involve more structured identification of RD&E priorities and less FRDC 'downloading'. The suggestion was made that each meeting might be focussed on a particular strategic issue. Also, there was some evidence of confusion among members about FRDC's complex RD&E architecture, as discussed in sections 5.2 and 6.1.5 above.

8.1.2 INDUSTRY MEMBERS (AND ASSOCIATIONS)

FRDC meets with a range of industry members on a semi-regular basis via meetings, workshops, conferences and direct site visits.



¹⁸ Seafood Industry Australia was launched in June 2017 as a whole-of-industry peak body, including wild catch, aquaculture and post-harvest sectors

8.1.3 ANNUAL STAKEHOLDER PLANNING WORKSHOP

Since 1993, FRDC has hosted an annual two-day stakeholder planning workshop. The participant list has evolved over that time to reflect prevailing plans and priorities. The three most recent workshops have been held in September/October and have involved representatives from each RAC, IPA, subprogram and representative organisation, as well as a number of FRDC staff and consultants.

The purposes of the workshop are to provide attendees with an update on FRDC's activities since the previous workshop, with greater depth on key subprograms and projects; and to identify priorities and areas for collaboration for the upcoming twelve months. Detailed proceedings from the workshops are available on the FRDC website.

Whilst the stakeholder workshop does not solve the problem of complexity referred to in sections 5.2 and 6.1.5, it does ensure some level of integration between FRDC's various 'swim lanes' and provides an excellent opportunity for cross-fertilisation of ideas among industry stakeholders.

8.1.4 GENERAL COMMUNICATIONS

The FRDC website, www.frdc.com.au, contains the normal corporate information as well as material targeted at sectoral/industry groups, researchers and the general public. The site is quite difficult to navigate, although to a large extent this is a product of the complexity of FRDC's investment framework, and there is some inconsistency of formatting. FRDC is aware of this issue and is reportedly taking steps to address it. Some of the material on the site would probably be better located on the www.fishfiles.com.au website. Again, we understand that FRDC has plans to address this, making 'fishfiles' a repository for all information on seafood species including cooking, taste, nutrition, where it is caught, how it is caught, its sustainability and relevant research being undertaken.

FRDC has commenced a process of upgrading its online presence and in 2017/18 made several changes to consolidate the 'back-end' database from which several sites draw information. The objective of creating one central source of information that can be promulgated out to all FRDC platforms will provide a powerful base for future development. Further upgrades to the usability of the corporate website to address the issues raised above are encouraged.

FRDC also hosts a suite of other websites in addition its corporate site, including www.fishfiles.com.au, www.fishfiles.com.au, www.whichfish.com.au (to allow businesses to assess the environmental risk associated with wild-caught seafood).

In addition to being a website, 'Fishfiles' provided a fortnightly email newsletter for a trial period to April/May 2018 when it was discontinued. Fishfiles carries articles on industry technical developments and issues, but a significant proportion of the content pertains to the preparation and consumption of seafood, including recipes. Reportedly, this content was developed as a means of extending the outputs of a number of projects to consumers as the target audience.

FRDC's main communications vehicle to industry is the quarterly FISH magazine. According to the Annual Report 2017/18, FISH is sent to over 17,000 stakeholders and has a readership (based on reader surveys) of around 50,000–60,000 per edition. It is circulated in hard copy and digitally. Reportedly, hard copy remains attractive to many stakeholders, especially those often at sea. Interviewees for this review held FISH in high regard.



FISH is clear and easy to read and contains a good mix of articles on R&D, policy and other relevant topics. There is a statement about FRDC and its funding sources on the contents page. But whilst there is a small tab in the top right corner of each article, often linking the article to a specific FRDC project, it is not always clear which articles are being supported by FRDC levy funds and which ones are not. This could be improved to ensure FRDC, levy payers and governments are gaining full recognition for their investments.

FRDC also utilises social media as part of its communications strategy to achieve two-way engagement with stakeholders. The Annual Report 2017/18 states that FRDC has over 40,000 followers on social media platforms, including 22,000 on Facebook and 1,000 on Twitter. It also has a library of YouTube videos on topics from cooking seafood to fishing and aquaculture practices.

Stakeholder engagement research for FRDC in 2015 by Intuitive Solutions¹⁹ showed that FRDC's communications efforts had been effective in raising awareness of FRDC, showing 52 per cent unprompted and 92 per cent prompted awareness of FRDC among the 274 stakeholders interviewed, up from 36 per cent / 88 per cent in 2011. The research also demonstrated a reasonable level of satisfaction with FRDC's engagement with industry: an average score of 5.8 / 10 (although no comparison with 2011). FISH magazine was by far the most commonly quoted means by which interviewees had 'seen or heard anything about FRDC'.

The 2018 stakeholder engagement survey²⁰ also asked a number of questions in relation to FRDC's communications. Notable findings were that:

- Overall, FRDC's communications were positively regarded;
- FISH magazine was acknowledged as a high quality publication and generally strikes the right balance in its content;
- The website was reported to be used less than it was as a 'go to' source of information, as people increasingly use other resources although there were no particular criticisms of the site itself; and
- Social media is an important part of the communications mix.

This review received similar feedback, although it also heard some criticism of the website, as described above. Some stakeholders also felt that FRDC has a tendency to make some communications too technical for rank-and-file fishers and that more effort needed to be made to simplify language.

8.2 LIAISON WITH RD&E FUNDERS AND PROVIDERS

FRDC engages with the research community in a number of ways. FRDC is a party to 'Success through innovation: The national fishing and aquaculture research, development and extension strategy 2016', the fishing sector strategy under the National Primary Industries RD&E Framework. Other partners include the Commonwealth, state and territory departments responsible for fisheries; the Commonwealth Scientific and



¹⁹ Intuitive Solutions 2015, FRDC stakeholder engagement research: Exhibit catalogue, March

²⁰ Intuitive Solutions 2018, 2018 stakeholder engagement study: Management report, draft, July

Industrial Research Organisation (CSIRO); and FRDC's representative organisations. FRDC invests in RD&E in line with the strategy.

The strategy has a Governance Committee and an associated Research Provider Network, in both of which FRDC participates. The Governance Committee brings:

- # FRDC:
- Research Provider Network; 4
- Australian Fisheries Managers Forum;
- ф The four representative organisations; and
- **DAWR** •

under one governance body to oversee RD&E planning.

RD&E providers engage with FRDC as members of the various RACs and other advisory committees. They also have direct engagement with FRDC on a number of project (not just FRDC) and activity events (i.e. conferences and meetings). FRDC is in regular contact with researchers regarding project milestones and in particular extension and media activities. FRDC provides feedback, input and approval for media related activities for every project.

RD&E providers consulted for the review indicated that their engagement with FRDC is strong and constructive.

8.3 LIAISON WITH GOVERNMENT

As noted above, FRDC (essentially, the MD) has a relationship with the Commonwealth and state/territory governments that is quite unique among the RDCs. FRDC has become the point of reference for all technical matters relating to the fishing sector. By the very nature of the sector (large, technically complex, significant Commonwealth involvement, major public good and public interest aspects) this engagement is extensive. FRDC also manages projects directly for DAWR, notably the National Carp Control Plan.

The relationship between FRDC and government is highly regarded by most DAWR officers. FRDC is considered to be accessible, transparent and responsive to requests and an invaluable source of advice. Some, however, are uncomfortable that FRDC's activities can sometimes come 'close to crossing the line' into a policy-setting role.

As required under the Funding Agreement (section 14.1), the FRDC Chair and Deputy Chair meet with DAWR every six months to provide a briefing on progress towards implementation of the RD&E plan and AOP, corporate governance and other matters specified in the Funding Agreement.

In addition to FRDC's relationship with DAWR, the MD also participates in meetings of the Australian Fisheries Ministers. This is very unusual - chief executives of other RDCs do not participate in the equivalent Agriculture Ministers' Forum – and reflects both the unique nature of the fishery sector and the esteem in which FRDC's MD is held.

FRDC also engages directly with a number of line areas in DAWR in its day-to-day operations - including corporate governance and compliance, finance, and media sections. These engagements include coordination of media activities and provision of compliance documents (AOP, annual report and so on).



8.4 COLLABORATION WITH OTHER RDCS

Arguably, there are fewer opportunities for FRDC to collaborate with other RDCs than there are between the 'terrestrial-based' organisations.

Nonetheless, FRDC is an active participant in and contributor to the Council of Rural Research & Development Corporations (CRRDC), including CEO and Chairs meetings and Communications, Business and Program Managers Working Groups. The MD of FRDC chairs the CRRDC Impact Assessment Working Group.

FRDC also collaborates with other RDCs in a range of specific projects and programs. Recent initiatives include the 'Accelerating precision agriculture to decision agriculture' project (P2D), aimed at facilitating the development of digital technology in Australian agriculture. P2D was funded under the Commonwealth's Rural R&D for Profit (RR&D4P) program and involved all 15 of the RRDCs. Other RR&D4P projects involving FRDC are 'Natural capital accounting in the primary industries' (led by Forest & Wood Products Australia and also involving Cotton Research & Development Corporation) and 'Market and consumer insights to drive food value chain innovation and growth' (Meat & Livestock Australia and Horticulture Innovation Australia).

Other examples of FRDC collaboration are:

- The Australian Rural Leadership Program;
- # Nuffield scholarships (Australia is the only country to fund Nuffield scholars in fishing and aquaculture);
- Rural Women's Awards, evokeAG and the Primary Industries Health and Safety Program, led by AgriFutures Australia; and
- Fish-X, including activities co-funded with Cotton Research & Development Corporation.

In addition to the fishing and aquaculture sectoral strategy, FRDC is party to three of the cross-sectoral strategies of National Primary Industries RD&E Framework: animal welfare, animal biosecurity and climate change.



DELIVERY OF BENEFITS

9.1 INTRODUCTION

FRDC cannot rely on a profit, share price or dividends to shareholders to demonstrate the value, benefits and impacts it delivers to its stakeholders, be they government, companies in the Australian fishing industry or the Australian public. This is a challenge common to all RDCs. Instead, FRDC relies on other measures of its value and impact through both quantitative economic measures and qualitative measures. This value and impact go beyond economic benefits and includes impacts which cannot have a dollar estimate attached, notably environmental and social benefits.

In 2016, FRDC reviewed its performance assessment and reporting mechanisms in light of its Research, Development and Extension (RD&E) Plan 2015-2020 and its 2016 Funding Agreement. As a result, FRDC developed a new evaluation framework based around the five FRDC Programs (Environment, Industry, Communities, People and Adoption). This includes a five-year program of economic impact assessments on its investments in RD&E based on triple-bottom line reporting (economic, environmental and social). These impact assessments provide input to FRDC's tracking of project performance and informing investment decisions; FRDC's annual reporting to the Australian Government; FRDC's report in 2019 to DAWR under the Funding Agreement; reporting to industry stakeholders; and contributing to the performance assessment of RDCs compiled by the Council of Rural Research and Development Corporations (CRRDC).

9.2 MEASUREMENT METHODOLOGY

FRDC contracted Agtrans Research and Consulting in early 2017 to prepare its economic impact assessments. This continues the long-term relationship between FRDC and Agtrans Research. Agtrans Research also conducted the economic impact assessments for FRDC in 2010, 2012 and 2015.

Over a five-year period beginning in July 2017, Agtrans Research will each year assess 20 randomly-selected projects for impact assessment based on benefit-cost analysis. These ex post impact assessments follow the guidelines²¹ set down by the CRRDC and are independent from FRDC.

The methodology followed by Agtrans Research for FRDC is sound and robust, producing conservative estimates of the economic benefits of projects. A crucial feature of the methodology is the selection of the 20 projects for assessment each year (from a total of around 130-140 projects which are completed in the financial year). This selection is based on a stratified random sample technique which ensures that projects from each of the five FRDC Programs (Environment, Industry, Communities, People and Adoption) are included, as are a mix of small, medium and large projects. The stratification weights the project selection towards the program areas which have the larger expenditure. Some of the projects selected have no measurable economic benefits, even though they produce industry, social or environmental benefits which are identified even if they



²¹ CRRDC 2014, Impact assessment guidelines and CRRDC 2018, CRRDC impact assessment guidelines revision – April 2018

are not measurable. This is an improved selection process from previous economic impact assessments, which were based on themes (14 different themes in the case of the 2015 impact assessments).

Agtrans Research follows a clear, set routine in assessing each project:

- Qualitative assessment and description of the project;
- Calculation of the investment in the project, both by FRDC and others (including a cost of managing the FRDC funding, based on a multiplier), deflated to a common year;
- Clear identification and description of the triple-bottom line impacts (economic, social and environmental);
- # Identification of the private versus public impacts;
- Commentary on the likely distribution of the private impacts along the supply chain to the consumer, and domestic versus international;
- Analysis of how the impacts match with Australian Government priorities and which priorities;
- Valuing the impacts, based on independent research and data, as well as interviews with research staff, program managers and others using experience and judgment to ensure that impacts are realistic;
- Clearly setting out the assumptions used for each benefit in a summary table for each project (including scientific citations);
- Taking risk into account through risk factors (probabilities) along the pathway to impact such as probability of output, outcome and/or impact;
- Describing the impacts that were not valued and why they could not be valued (this can be due to lack of data, a high degree of uncertainty about the impact or the likely low relative significance of the impact); and
- Preparing the economic analysis of the impacts

Quite correctly, these assessments are compared with the reasonable counter-factual – that is, what would otherwise have occurred if the project had not been done. This acknowledges that the world does not stand still. Furthermore, the assessments also include all the costs involved in the project, both the project and fund management costs incurred by FRDC and the costs incurred by fishery companies and other stages in adopting the new technology.

The assessments report on key economic investment measures: net present value (NPV), benefit-cost ratio (BCR), internal rate of return (IRR) and modified internal rate of return (MIRR) for various time periods after the last year of investment (0, 5, 10, 15, 20, 25 and 30 years). Each assessment also reports on the sensitivity of the results to key assumptions. In addition, each report includes a table of confidence ratings of the coverage of benefits and of the assumptions. These confidence ratings are high, medium or low.

9.3 DEMONSTRATED BENEFITS

There have been two batches of impact assessments prepared since July 2017. The final reports of the first batch of the impact assessments prepared by Agtrans Research were delivered in November 2017. The draft reports for the second tranche were delivered in July 2018, with final versions delivered in October and November 2018.



In November 2017, Agtrans Research provided detailed aggregate and summary aggregate reports for the first batch of 20 project assessments, as well as a full report for each project. These 20 projects accounted for \$6.31 million of FRDC investment or around 25 per cent of the total FRDC investment for the 136 projects with a final deliverable submitted in 2015/16. Table 5 provides a summary of the aggregate results from the 20 project impact assessments. The present value of the net benefits from the 20 projects totalled \$73.72 million, with a BCR of 4.47 and an MIRR of 12.0 per cent over 30 years.

Table 5: Summary of ex-post evaluations of 20 FRDC projects completed in 2015/16

ECONOMIC MEASURE	YEARS AFTER LAST YEAR OF INVESTMENT			
	5	10	20	30
Present value of benefits (\$m)	\$40.78	\$58.40	\$81.25	\$94.95
Present value of costs (\$m)	\$21.23	\$21.23	\$21.23	\$21.23
Net present value (\$m)	\$19.55	\$37.17	\$60.02	\$73.72
Benefit-cost ratio	1.92	2.75	3.83	4.47
Internal rate of return (%)	19.27%	22.60%	23.69%	23.80%
Modified internal rate of return (%)	28.89%	20.95%	14.68%	11.96%

Source: FRDC (November 2017), Evaluation of R&D projects completed in years ending June 2016 to June 2018: 2015/16 Evaluations (Year 1) detailed aggregate report, Agtrans Research

Results were also provided by the five FRDC Programs (Environment, Industry, Communities, People and Adoption). These are shown in Table 6. As can be seen, the Industry and People programs give the best economic investment results.

However, of the 20 projects, the present value of the benefits for seven projects could not be assessed. In general, this was because there was a shortage of necessary evidence and data, a high degree of uncertainty about the impacts, the low importance of the impact or because projects were targeted at capacity building (for example, the project to establish a Common Language Group to enable a common understanding of issues to facilitate resolution of contentious issues amongst stakeholders). As well, many of the impacts identified in the Environment Program projects were not valued because the benefits were 'non-market', making them hard to value without considerable additional non-market valuation techniques which was beyond the scope of the impact assessments. As a result, the return to the Environment Program is an underestimate.

In its report to FRDC, Agtrans Research suggested that some additional valuations of the environmental impacts were attempted as this would improve the credibility of the Environment Program. Agtrans suggested that a "...project be undertaken to summarise willingness to pay studies associated with environmental



attributes of fishery resources and aquaculture externalities... A starting point may be to review existing literature.' This is a very good suggestion.

Of the 13 individual projects that could be valued, the assessed BCR after 30 years for each project ranged from 1.15 to 15.74, while the MIRR ranged from 5.67 per cent to 16.10 per cent.

Table 6: Ex-post evaluations of 20 FRDC projects completed in 2015/16 by Program

ECONOMIC MEASURE	MIC MEASURE PROGRAM				
	Environment	Industry	Communities	People	Adoption
Present value of benefits (\$m)	\$19.79	\$56.64	\$0.00	\$12.96	\$2.58
Present value of costs (\$m)	\$10.66	\$6.13	\$0.61	\$2.57	\$1.26
Net present value (\$m)	\$9.12	\$50.51	-\$0.61	\$10.40	\$1.32
Benefit-cost ratio	1.86	9.23	NR	5.05	2.05
Internal rate of return (%)	12.25%	28.18%	NR	40.89%	NC
Modified internal rate of return (%)	7.60%	13.91%	NR	12.34%	10.28%

Source: FRDC (November 2017), Evaluation of R&D projects completed in years ending June 2016 to June 2018: 2015/16 Evaluations (Year 1) detailed aggregate report, Agtrans Research

NR: not reported, NC: not calculable due to sign changes in the NPV which gives multiple values of the IRR

For the second tranche of projects, Agtrans Research provided to the review team a full draft report for each project in July 2018 and a draft aggregate summary report in September 2018. The final versions of these reports together with a detailed aggregate report were delivered in October and November. The 20 projects selected for the second batch accounted for \$5.62 million of FRDC investment or around 26 per cent of the total FRDC investment of \$21.32 million over the 96 projects with a final deliverable submitted in 2016/17. Table 7 provides a summary of the aggregate results from the second round of project impact assessments. As can be seen, the NPV of the net benefits from the 20 projects totalled \$76.07 million, with a BCR of 5.71 and an MIRR of 10.8 per cent over 30 years.



Table 7: Summary of ex-post evaluations of 20 FRDC projects completed in 2016/17

ECONOMIC MEASURE	YEARS AFTER LAST YEAR OF INVESTMENT			
	5	10	20	30
Present value of benefits (\$m)	\$20.08	\$40.02	\$72.28	\$92.21
Present value of costs (\$m)	\$16.15	\$16.15	\$16.15	\$16.15
Net present value (\$m)	\$3.93	\$24.05	\$56.13	\$76.07
Benefit-cost ratio	1.24	2.49	4.48	5.71
Internal rate of return (%)	9.2%	18.4%	21.4%	21.7%
Modified internal rate of return (%)	8.1%	13.0%	12.3%	10.8%

Source: FRDC (November 2018), Evaluation of R&D projects completed in years ending June 2016 to June 2018: 2016/17 Evaluations (Year 2) draft detailed aggregate report, Agtrans Research

Results were again provided by the five FRDC programs (Environment, Industry, Communities, People and Adoption). These are shown in Table 8. As can be seen, the Industry and People Programs give the best economic investment results.

There were six projects out of the 20 randomly-selected projects where impacts were not valued in monetary terms. As with the first batch of impact assessments, the reasons varied as to why impacts could not be valued. In many of these projects, the benefits could not be assessed because there was no evidence that the intended benefits were delivered, either because the project did not deliver them, because of a lack of crucial follow-up support or there being too short a period between outputs being finalised and when the assessment was undertaken. This is unsurprising as R&D carries a risk of failure. As the projects were selected randomly, it should be expected that some projects may deliver no benefits. As with the first tranche of projects, many of the impacts identified in the Environment Program projects were not valued because the benefits were 'nonmarket'.

Of the remaining 14 projects, the assessed BCR after 30 years for each project ranged from 1.16 to 15.09. This is a very similar range to that seen in the first batch of assessments. The MIRR ranged from 5.5 per cent to 14.6 per cent.



Table 8: Ex-post evaluations of 20 FRDC projects completed in 2016/17 by Program

ECONOMIC MEASURE	PROGRAM				
	Environment	Industry	Communities	People	Adoption
Present value of benefits (\$m)	\$14.45	\$74.50	\$2.75	\$0.14	\$0.38
Present value of costs (\$m)	\$6.35	\$8.39	\$1.05	\$0.16	\$0.0.20
Net present value (\$m)	\$8.09	\$66.11	\$1.70	-\$0.03	\$0.19
Benefit-cost ratio	2.27	8.88	2.62	0.84	1.95
Internal rate of return (%)	13.6%	26.1%	11.5%	4.3%	26.2%
Modified internal rate of return (%)	7.8%	12.1%	8.2%	4.7%	7.9%

Source: FRDC (November 2018), Evaluation of R&D projects completed in years ending June 2016 to June 2018: 2016/17 Evaluations (Year 2) draft detailed aggregate report, Agtrans Research

COMMUNICATING THE DEMONSTRATED BENEFITS

The results from the two batches of impact assessments demonstrate that FRDC's RD&E activities are delivering significant value to industry. This may not be evident to all in the industry. This is likely to be due to a lack of understanding about the benefit-cost methodology leading to scepticism about the results. This is always a challenge for RDCs, so a focus needs to be on clear communication of the methodology and the results, perhaps using case studies.

From the first tranche of impact assessments, FRDC provides on its website22 the aggregate report from assessment and all but one of the individual project impact assessment reports. This allows those inclined to access and read the results. These reports may be, however, difficult for the casual reader and layperson to read and understand.

The FRDC Annual Report 2016-17 included the aggregate results from the first round of assessments, summary results from the economic investment criteria for each project and a two-page summary of the impact



²² www.frdc.com.au/en/Research/Benefits-of-research/2017-Portfolio-Assessment

assessments for five individual projects. Those reported in more detail included both projects that reported net commercial benefits as well as those projects that delivered benefits which could not be monetarily valued.

As well, FRDC reported at a high level the results from the November 2017 assessments in the March 2018 edition of FISH. The article included more detail about the benefits from the 'Innovative development of the Octopus tetricus fishery in Western Australia' project. None of the Stakeholder Briefings released since November 2017 (December 2017, March 2018 and June 2018) included information on the first round of impact assessments delivered in November 2017.

Industry participants may also not appreciate the value being delivered by FRDC because there is variation in the share of benefits between regions or industry sectors. The methodology used by Agtrans Research does not permit an assessment of the share of benefits between regions or sectors (as a partial equilibrium modelling approach would allow). Agtrans Research does, at times, comment within the individual project reports about the possible share of benefits from a project between sectors. As well, some projects are clearly specific to a region (such as the Octopus tetricus fishery project) and so most if not all of the benefits would accrue to the industry within that region.

Finally, as the projects assessed are only a portion of all the projects funded by FRDC, projects that benefit some segments of the diverse aquaculture and fishing industry in Australia may not be assessed. The projects that are selected for assessment may not be relevant to these segments, leading them to conclude that FRDC is not delivering benefits.

Recommendation: FRDC should continue to conduct ex-post impact assessments of randomly selected projects as planned. The focus for FRDC should be on communicating the results to stakeholders using clear, simple language, as it did in its Annual Report 2016-17. FRDC could consider preparing and publicly releasing a short performance evaluation report each year, which would include results against its key performance indicators as well as the results from the impact assessments.

Recommendation: FRDC should explore with its impact assessment provider the feasibility of providing in the impact assessment reports more detailed commentary on the likely distribution of benefits from the project clusters between regions and/or sectors of the Australian fisheries sector.

Recommendation: FRDC should develop and implement with its impact assessment provider a project to assess willingness-to-pay studies of environmental attributes of fishery resources and externalities arising from aquaculture as input into future assessments of the environmental impacts of FRDC's Environment Program.

9.5 STAKEHOLDER PERCEPTIONS OF VALUE

In addition to the interviews conducted for this review, evidence for stakeholder perceptions of the value delivered by FRDC is available in the commercial stakeholder tracking surveys carried out for FRDC. These



surveys include a number of questions about industry participants' understanding of and attitudes towards FRDC.

Satisfaction ratings from the 2018 survey²³ are summarised in Table 9. The ratings indicate a generally positive reflection on FRDC. There are some differences between sectors, with businesses in the aquaculture sector more satisfied with FRDC than the wild-catch-only sector. This is understandable given differences in accessibility for communication / engagement between the two groups.

Table 9: Net positive ratings of FRDC performance in 2018 survey of commercial stakeholders

ATTRIBUTE	SATISFACTION RATING*
Satisfaction that contributions to FRDC are being invested wisely	6.2
Satisfaction that contributions are being invested in areas that matter to the fishing industry	6.0
Satisfaction that contributions are being invested in areas that matter to your business	5.0
The importance of fishing and aquaculture having an organisation like FRDC	8.1
Satisfaction with the way FRDC engages with businesses	5.7
Adequate opportunity for you and your representative bodies to have a say in how your contributions are invested	5.8

Source: Intuitive Solutions 2018



^{*} Average of responses on a scale of between 0 (lowest) and 10 (highest)

²³ Intuitive Solutions 2018, 2018 stakeholder tracking: Commercial stakeholders draft report

10. CONCLUSIONS AND RECOMMENDATIONS

This review has found that FRDC is a well-managed, high-performing organisation that is generally highly respected by its stakeholders as a vital part of the fisheries sector. Management is highly regarded for its expertise and its navigation of a highly complex environment. Compliance is well managed. FRDC has strong relationships with stakeholders and collaborates constructively with other RDCs. There is good evidence of the delivery of benefits to levy payers, government and other investors from FRDC investments.

There is no evidence for FRDC having failed to fulfil, or being at risk of not fulfilling, all of the obligations imposed by its Funding Agreement with the Commonwealth or the PIRD Act.

The review has identified several areas in which improvements might be made to the performance of FRDC. These are primarily concerned with the way FRDC organises its investments and reports on its performance against them. Ten recommendations are made. These are listed below, and each is rated either:

- Critical: should be implemented as a matter of urgency in order for FRDC to meet its legal and regulatory obligations.
- # Important: actions that are expected to deliver significant benefits to the organisation and industry.
- Better practice: expected to deliver incremental performance improvements.

	RECOMMENDATION	PRIORITY
1	Based on a new RD&E plan, future FRDC AOPs should:	Important
	# Simplify key targets per area of investment; and	
	# Continue the refinement of management / governance targets that are more relevant to organisational performance (e.g. milestones achieved on time, contract turnaround times etc).	
2	FRDC should develop, produce and promote to stakeholders a stand-alone performance report that summarises the FRDC's key outputs and impacts relative to targets in its RD&E plan and AOP on an annual basis.	Important
3	During the development of the next RD&E plan, FRDC should review the way it organises and manages its RD&E program (its investment and evaluation framework) with the aim of simplifying it so that it is easily understood by the average stakeholder.	Important
4	The FRDC Board should consider creating a Research Committee of the Board to assist it in its role in respect to RD&E.	Better practice
5	The FRDC Board should consider creating a People and Culture Committee of the Board to formalise the succession planning process for all senior management, including the MD, to recommend the remuneration of the MD, and to develop a board skills matrix.	Better practice



	RECOMMENDATION	PRIORITY
6	FRDC should develop a deeper understanding of risk appetite and risk tolerance across the key risk areas in line with new risk policy and ensure that this is monitored regularly by the FARM Committee. Risk appetite should be set by the Board with tolerances agreed between the Board and management.	Better practice
7	FRDC should strengthen its approach to extension, possibly by creating a specific position to oversee or coordinate extension across the organisation.	Better practice
8	FRDC should continue to conduct <i>ex-post</i> impact assessments of randomly selected projects as planned. The focus for FRDC should be on communicating the results to stakeholders using clear, simple language, as it did in its Annual Report 2016-17. FRDC could consider preparing and publicly releasing a short performance evaluation report each year, which would include results against its key performance indicators as well as the results from the impact assessments.	Better practice
9	FRDC should explore with its impact assessment provider the feasibility of providing in the impact assessment reports more detailed commentary on the likely distribution of benefits from the project clusters between regions and/or sectors of the Australian fisheries sector.	Better practice
10	FRDC should develop and implement with its impact assessment provider a project to assess willingness-to-pay studies of environmental attributes of fishery resources and externalities arising from aquaculture as input into future assessments of the environmental impacts of FRDC's Environment Program.	Better practice



APPENDIX 1: DOCUMENTS REVIEWED

STATUTORY

- Funding Agreement 2015-19
- 4 Primary Industries Research and Development Act 1989
- Public Governance, Performance and Accountability Act 2013 4
- Public Governance, Performance and Accountability Rule 2014
- Fisheries Research and Development Corporation Regulations 1991

CORPORATE AND GOVERNANCE

- # Evolution of the FRDC to 2017, April 2018 edition
- Terms of reference for Indigenous Reference Group 0
- Representative organisation financial support policy #
- Material personal interests for FRDC committees policy
- Intellectual property management policy
- Public interest disclosure policy #
- Privacy policy
- # Quality policy
- ф Investment in research, development and extension (RD&E) policy
- Risk policy
- Delegations policy
- Calendar procedure 4
- 4 Employee performance planning and evaluation procedure
- Remuneration review procedure
- Partnerships and stakeholder relationships procedure
- Funding Agreement compliance update to Board #
- Synergy Group Audit, Independent compliance audit reports to DAWR, 2017, 2018
- Australian Business Class, Board performance review, 2017
- Organisational chart and partners 4
- Mercer, FRDC role review, 2017
- AGVP determination letters 2017, 2018 #
- AFMA levy arrangements guide 2017-18 #
- National Archives of Australia, Snapshot of progress on Digital Continuity 2020 Policy: FRDC, 2017
- Department of Finance, Comcover Risk Management Benchmarking Survey 2018: FRDC



STRATEGIC AND OPERATIONAL PLANS, ANNUAL AND RELATED REPORTS

- # RD&E Plan 2015-2020: Knowledge for fishing and aquaculture into the future
- # Annual operational plans 2015-16 to 2018-19
- Annual reports 2014-2015 to 2018-19
- # Annual review of the FRDC's RD&E Plan, 2017
- Stakeholder planning workshops proceedings, October 2016 and April 2017
- National Marine Science Council, National Marine Science Plan 2015-2025: Driving the development of Australia's blue economy, 2015
- Success through innovation: the national fishing and aquaculture RD&E strategy, 2016
- Australian Council of Prawn Fisheries RD&E plan 2016-2020
- 4 Australian Prawn Farmers' Association 5 Year R&D Strategic Priorities 2015-2019
- Southern Rock Lobster Limited IPA
- # FRDC planning workshop presentation, October 2016
- # Fish and Chips Awards business case, 2017
- 4 ACIL Allen Consulting, Agriculture a \$100 billion dollar sector, report to AgriFutures Australia, 2018
- # FRDC transformation strategy 2020, 2018
- # FRDC's 2025 growth vision for Australian fishing & aquaculture, 2018
- # RD&E Plan performance report (presentation), 2018
- # Emerging National Rural Issues Forum, project idea summaries. AgriFutures Australia, 2018
- Western Rock Lobster alternate funding model proposal including Australasian Institute for Spiny Lobster Research concept report, 2018
- Human Dimensions Research RD&E Plan 2017-2020, 2018
- Aquatic Animal Health Subprogram Research and Development Plan 2009-2012, 2009

EXTENSION AND COMMUNICATION

- # FishFiles email newsletters
- # FISH magazine: June 2017, September 2017, December 2017, March 2018
- # FISH magazine reader evaluation and feedback, April 2016

MONITORING AND EVALUATION

- # CRRDC, Impact assessment guidelines, May 2014
- Agtrans Research, AgEconPlus, EconSearch, Cross-RDC impact assessment and performance reporting update. Stage 1: Cross-RDC impact assessment for the period 1 July 2009 to 30 June 2015, October 2016
- # Agtrans Research, CRRDC impact assessment guidelines revision April 2018, companion document



- FRDC's program and evaluation frameworks, November 2016
- Agtrans Research, Proposal for evaluation of FRDC projects completed June 2016 to June 2017, January 2017
- Agtrans Research impact assessments 2017
 - Project 2008-002: Targeting and CPUE definition in the SESSF trawl fishery
 - 2008-306: Building economic capability to improve the management of marine resources in Australia
 - 2008-327: FRDC agribusiness scholarship
 - 2009-303: Australasian aquaculture 2010 to 2014
 - 2009-710: Bioeconomic evaluation of commercial scale stock enhancement in abalone
 - 2010-200: The innovative development of the Octopus tetricus fishery in Western Australia
 - 2010-777: Analysis of the core leadership group and network structure of East Coast Trawl
 - 2011-030: Evaluating candidate monitoring strategies, assessment procedures and harvest control rules in the spatially complex Queensland coral reef fin fish fishery
 - 2012-032: Pacific Oyster Mortality Syndrome (POMS) risk mitigation, epidemiology and OsHV-1 biology
 - 2012-047: Characterising benthic pelagic interactions in Macquarie Harbour
 - 2012-058: Limiting impacts of the spread of urchins by rebuilding abalone populations
 - 2012-225: Technical reviews of formal harvest strategies
 - 2013-008: Movement, habitat utilisation and population status of the endangered Maugean skate
 - 2013-053: Summer spawning patterns and preliminary daily egg production method survey of jack mackerel and sardine
 - 2013-753: A new refrigeration system reference design and demonstration prototype
 - 2014-030: Status of key Australian fish stocks (SAFS) reports 2014 and beyond
 - 2014-714: Writing our history The people and achievements of the Australian Seafood CRC
 - 2015-406: Development of a National Pacific Oyster Mortality Syndrome (POMS) response plan
 - 2012.500.20: Common Language Group
 - Evaluation of R&D projects completed in years ending June 2016 to June 2018: 2015/16 FRDC evaluations (year 1) aggregate report and aggregate summary report, November 2017
- Agribusiness Tasmania, A national industry response to Pacific Oyster Mortality Syndrome (POMS), April 2016
- Agtrans Research impact assessments 2018
 - 2012-015: Improving confidence in the management of the blue swimmer crab (Portunus armatus) in Shark Bay
 - 2012-024: INFORMD2
 - 2012-403: Development of the East Arnhem Fisheries Network Training Framework



- 2013-051: The Australian Aquatic Animal Health and Vaccine Centre: First phase to establish Atlantic salmon biosecure fish facility capabilities and develop strategy for an Australian Centre of Excellence
- 2013-056: Revision of the Australian Shellfish Quality Assurance Program Manual in light of the FRDC funded PST review
- 2014-001: Aquatic Animal Health Subprogram: Strategic approaches to identifying pathogens of quarantine concern associated with the importation of ornamental fish
- 2014-012: Tasmania's coastal reefs: deep reef habitats and significance for finfish production and biodiversity
- 2014-036: First implementation of an independent observer program for the charter boat industry of NSW: data for industry-driven resource sustainability
- 2014-204: Implications of current spatial management measures for AFMA ERAs for habitats
- 2014-301: Social and economic evaluation of NSW coastal commercial wild-catch fisheries
- 2014-729: Improving the palatability, bioavailability and efficacy of orally administered praziquantel for yellowtail kingfish with lipid nanoparticles and hybrid lipid carrier systems
- 2015-044: The development of a mobile application for the aquatic animal diseases significant to Australia: Identification field guide
- 2015-232: Australian Seafood Industries Pacific Oyster Mortality Syndrome (POMS) investigation into the 2016 disease outbreak in Tasmania – ASI emergency response
- 2016-057: Workshop to identify research needs and a future project to reduce bycatch and improve fuel efficiency via Low Impact Fuel Efficient (LIFE) prawn trawls
- 2016-228: Phase 1: Traceability systems for wild caught lobster, via sense-T and pathways to market
- 2016-266: A plan for the Australian prawn farming industry's initial response to the white spot disease incident in summer 2016-17
- 2016-411: Skills and capability building priorities
- 2016-501: Seafood with ET

RD&E MANAGEMENT

- Application evaluation procedure
- Decision notification letter
- # Expression of interest template
- # Full application template
- Standard project agreement template

RESEARCH ADVISORY COMMITTEES

Deed of confidentiality



- # Committee Member's Code of Conduct
- RAC management procedure #
- # Application for membership of RAC
- Tas RAC priority list for August or November 2018 calls

SURVEYS AND INDUSTRY STATISTICS

- Intuitive Solutions, Stakeholder tracking reports 2011, 2015, 2018 draft (commercial stakeholders, noncommercial stakeholders, management report)
- Intuitive Solutions, Community perceptions of the sustainability of the fishing industry in Australia, 2011, 2013, 2015, 2017
- Intuitive Solutions, Unpacking the consumer seafood experience, 2016



APPENDIX 2: OBLIGATIONS OF FRDC UNDER THE FUNDING AGREEMENT: **SUMMARY OF PERFORMANCE**

The following table provides a listing of FRDC's obligations under the its Funding Agreement. In each case, this review found that:

- There was positive evidence of fulfilment of the obligation;
- There was indirect evidence that the obligation had been fulfilled, for example the advice of DAWR representatives; or
- The obligation was not relevant during the review period.

FUNDING AGREEMENT OBLIGATION	CLAUSE(S)
Compliance with legislation	
Comply with the PIRD Act 1989, the Regulations and the PGPA Act	3.1
Corporate governance and Board performance	
Comply with corporate governance requirements in the PGPA Act and implement a framework of good corporate governance practice, drawing on better practice guidance as appropriate	4.1
Report on steps consistent with 4.1 at 6-monthly meetings	4.2, 14.1



FUNDING AGREEMENT OBLIGATION	CLAUSE(S)
Ensure that up to date information is available on web site on R&D plan; priorities used to determine funding; desired outcomes, key activities and key achievements; and key RDE and marketing activities that are being funded	4.3
Information in 4.3 not to include personal information (Privacy Act 1988), confidential information etc, or information that might damage FRDC, the fishing and aquacultures sector or the national interest	4.4
Persons appointed to FRDC committees, panels etc to disclose any related pecuniary interests	4.5
Payment of funds	
Pay within 30 days any amount invoiced to FRDC by the C'th for expenses relevant to levy collection, administration etc	5.2
Provide invoice and evidence to C'th of R&D expenditure for matching funding; final claim for financial year to be supported by independent audit report	5.4-5.8
Application of the funds	
Spend the funds in accordance with R&D plan, annual operation plan and guidelines	6.1
Spend funds on R&D only if consistent with functions and powers under the PIRD Act and if they relate to and are of benefit to the fishing and aquaculture sector; and/or are for the benefit of the sector and for the Australian community generally; and/or address fisheries-related public good priorities	6.2
Spend funds on marketing only if activities relate to and are of benefit to the fishing and aquaculture sector	6.3
Not use the funds to engage in agri-political activity or advocacy, e.g. act as industry representative body (IRB)	6.4



FUNDING AGREEMENT OBLIGATION	CLAUSE(S)
Payments to declared representative organisation(s) for consultation to be made in accordance with section 15 of the PIRD Act and PGPA Act	6.5
Funds not to be spent on IRBs except for membership fees where this contributes to achievement of FRDC objects, or to acquire goods or services or to fund R&D or marketing activities only if funding occurs in accordance with PGPA Act, C'th Grant Rules and Guidelines and C'th Procurement Rules, and funding arrangement includes measures to allow performance assessment (latter to be provided to the C'th on request)	6.6
Determine appropriate balanced portfolio through R&D plan and annual operating plan (AOP) and explain approach to this in R&D plan	6.7, 10.7
Seek consultation with C'th on any matter connected with the Act or Agreement if needed	6.8
Contribute to the implementation of relevant Fishing and Aquaculture Sector and cross-sectoral strategies under the RD&E Framework	6.9, 9.1
Provide feedback on the outcomes of funding applications to all applicants	6.10
Management of the funds	
Establish appropriate accounting systems, procedures and controls in accordance with PGPA Act including cost allocation policy	7.1
Extension of research	
Carry out functions under section 11 of the PIRD Act, contribute to implementation of RD&E Framework strategies	9.1
Demonstrate that pathways to extension and adoption are incorporated into the planning and approval process	9.2, 10.7



FUNDING AGREEMENT OBLIGATION	CLAUSE(S)
Planning	
Develop and maintain a program framework to support planning, performance and accountability requirements under the PGPA Act (Chap 2, Part 2- 3) and this agreement within 6 months of agreement date	10.1
Program framework to inform development of key planning and reporting documents and include specifications of planned outcomes (results, consequences and impacts). Outcome statements to be specific, focused and easily interpreted; identify intended outputs and level of achievement against intended outcomes being measurable; specify target groups (where identifiable) for outcomes; specify programs, subprograms, key deliverables and activities; and be agreed by key stakeholders and C'th as pat of R&D plan development. Each program to have KPIs that provide an accurate and succinct story of performance, KPIs to be: in the R&D plan, strategic and linked to planned outputs and outcomes; in the AOP, linked to deliverables; in the annual report, KPIs from R&D plan and AOP brought together to demonstrate how deliverables advanced the outcomes; and clear, unambiguous, measurable and timebound. Program framework also to include expected total costs (direct and indirect) of each program, and an evaluation framework	,
Evaluation framework to be developed within 6 months of agreement date, which must: support the program framework; ensure key performance-related information is generated by the program framework and routinely collected and monitored; include structured plan for the systematic evaluation of the efficiency, effectiveness and impact of key investments; and include a means of publishing and disseminating relevant R&D outcomes and outcomes of evaluations undertaken	
Consult with C'th in preparing the evaluation plan, participate in any cross-RDC evaluation project relevant to FRDC, demonstrate commitment to provide adequate expenditure for evaluation	10.4
Publish evaluation framework on web site within 30 days of adoption	10.5
Prepare R&D plan per sections 19-24 of the PIRD Act, ensure consistency with program framework, publish on web site within 30 days of approval by the Minister	10.6



FUNDING AGREEMENT O BLIGATION	CLAUSE(S)
R&D plan to cover at least: assessment of operating environment including SWOT, current and future trends and implications; collaboration with other RDCs on priority R&D issues; broad overview of priorities and outcomes from stakeholder consultation; consultation with fishing and aquaculture sector and explanation on extent to which its priorities are reflected in the plan; key strategies, objectives, investment priorities and outcomes; planned R&D and marketing activities; key deliverables; performance indicators; how the R&D and marketing activities align with and give effect to the guidelines; extension, technology transfer and commercialisation; estimates of income and expenditure over the life of the plan (R&D and marketing separately); and an explanatory statement on approach to balanced portfolio	
In developing or varying the plan, develop a consultation plan including C'th, representative organisations, fisheries management agencies and fishing and aquaculture sectors and other stakeholders including other RDCs	10.8
For minor variations to the R&D plan, consult in accordance with section 24 of the PIRD Act but may seek C'th approval not to develop a consultation plan	10.9
Consultation plan to be agreed with C'th prior to commencement	10.10
Consultation plan to be published on web site prior to commencement	10.11
Prepare an AOP in accordance with section 25 of the PIRD Act, provide to C'th by 1 July each year	10.13, 10.14
AOP to set out how and to what extent R&D and marketing activities to be funded give effect to the R&D plan and its objectives and the guidelines; the key R&D and marketing activities to be funded during the financial year under each program; key deliverables arising from the R&D and marketing activities planned; performance indicators, timetables and milestones relating to the R&D and marketing activities and expenditure which enable the progress being made towards achieving planned outcomes to be monitored and reported upon; and statement on how the FRDC intends to implement and operationalise balanced portfolio appropriate to the sector for the year	
Submit all AOPs and material variations or updates to C'th within 30 days of adoption by FRDC	10.15



FUNDING AGREEMENT OBLIGATION	CLAUSE(S
Develop, maintain and implement risk management and internal control systems consistent with the PGPA Act, including fraud control plan and risk management plan; and intellectual property (IP) management plan	10.17
Review the IP management plan at intervals of no more than four years	10.18
Provide fraud control, risk management and IP management plans or amendments to the C'th within 30 days of Board approval	10.19
Reports	
Provide to the C'th a compliance assurance report regarding compliance with obligations under the PIRD Act and the agreement during the relevant financial year	11.1
Compliance audit report to include statement from independent auditor providing opinion on whether FRDC has complied with clauses 6 and 7 of the agreement during the financial year, which must be prepared in accordance with Australian Auditing and Assurance Standards; include statement that FRDC has complied with clause 6.6 and that accounting systems processes and controls comply with 7.1; include a review of amounts spent on R&D and marketing and verify claims made for matching R&D funding are consistent; indicating any limitations to the report; and indicating any incidences of non-compliance and assessing and reporting on the impact of those incidences.	11.2
Compliance assurance report to also include certification from the Board, signed by Chair and Executive Director certifying that in the Board's opinion FRDC has materially complied with its obligations under the PIRD Act and the agreement during the relevant financial year, or has not, with explanation of non-compliances	11.3
Compliance assurance report to also include statement that it has been prepared for the C'th for purposes of the agreement and acknowledgement that it will be relied upon by the C'th	11.4
Compliance assurance report need not include an opinion on whether the funds have been applied for the benefit of the fishing and aquaculture sector, or have been spent in a proper manner or on advocacy or agri-political activities	11.5



FUNDING AGREEMENT OBLIGATION	C LAUSE (S
If the C'th requests an audit report or opinion on compliance, comply with C'th request at own expense	11.6-11.7
Prepare annual report in accordance with the PIRD Act, section 46 of the PGP Act and the agreement – additional information required only by the agreement may be provided to the C'th separately	11.8-11.9
Include in the annual report: a report on contribution to implementation of relevant fishing and aquaculture sector and cross-sectoral strategies under the RD&E Framework; rationale for the mix of projects in balanced portfolio; research extension activities; collaboration with fishing and aquaculture and other research providers; sources of income allowing for separate identification of R&D and C'th matching payments and any other forms of income and, if applicable marketing payments and voluntary contributions; the full cost of R&D and marketing programs with costs allocated in accordance with the cost allocation policy; progress made in implementing R&D Plans, including progress against KPIs and achievement of key deliverables and associated outcomes specified in the plans; an assessment of the efficiency and effectiveness of investments; progress in implementing the guidelines; consultation with the representative organisation on R&D plan and AOPs, R&D and extension and marketing activities; and other relevant matters notified by the C'th	
Provide to the C'th any other report requested within specified timeframe and in consultation with the C'th on any action required	11.11-11.12
Review of performance	
Complete a performance review 6 months before expiry of agreement; engage independent organisation to undertake and report on review; agree terms of reference of the review 6 months prior to commencement with the C'th; provide the C'th with the draft review report and any Board comments within 7 days of the Board considering the draft; provide the C'th with the final review report within 14 days of acceptance by the Board; develop a response to final review report and proposed implementation plan for recommendations within 3 months of Board acceptance; provide response to the C'th within 30 days of Board's acceptance of response; report to the C'th progress in implementing the review recommendations at 6-monthly meetings; and publish performance review report and response on website	
Independent organisation engaged to do review no to have carried out corporate governance or related activities for FRDC within term of the agreement	12.2



FUNDING AGREEMENT OBLIGATION	CLAUSE(S)
Terms of reference for review to take into account the performance of FRDC in meeting its obligations under the PIRD Act and agreement; development and implementation of R&D plan, AOP, risk management, fraud control and IP management plans and effectiveness in meeting priorities, targets and budgets set out in the plans; efficiency with which plans were carried out; efficiency and effectiveness of FRDC investments; delivery of benefits to fishing and aquaculture sector foreshadowed in the plans and assessment of the degree to which investments have met the needs of the sector; and any other matters required by the Minister	12.3
Cooperate with and respond to any other review of FRDC undertaken by the C'th	13.1-13.3
Consultations	
Chair or other director nominee to meet with the C'th at no more than 6-monthly intervals from agreement date or at any other requested time on reasonable notice to brief the C'th on performance of functions including progress on implementing the AOP and R&D plan; progress on implementation of relevant RD&E Framework strategies; consultation with other RDCs and representative organisation; measures taken to enhance corporate governance; progress in developing and implementing the evaluation framework; progress on implementing the recommendations from the most recent performance review; and development and implementation of additional systems, processes and controls to meet the agreement (7.1)	14.1
Ensure that section 29 of the PIRD Act is complied with and meet with representative organisation(s) at not more than 6-monthly intervals to review sector priorities for R&D and marketing investments, including regional equity considerations; and report on performance against the R&D plan and AOP	14.2
Meet periodically with fisheries management agencies and fishing and aquaculture sectors to review sector priorities for R&D and marketing investments, including regional equity considerations; and report on performance against the R&D plan and AOP	14.3
Directors to notify the C'th if any proposed change to the guidelines by the Minister would require the directors to act, or omit to act, in a manner that may breach any duty owed by the directors to any person, cause the contravention of any law, be likely to prejudice commercial activities carried on by or on behalf of FRDC, or be contrary to the public interest	14.4-14.6



FUNDING AGREEMENT OBLIGATION	CLAUSE(S)
Access to records and use of information	
Grant access to premises or data, accounts etc if required by the Minister or the Finance Minister under the PGPA Act	15.1-15.4
Use any confidential information provided for proper purpose and not disclose	15.5-15.6
Grant the C'th a permanent, irrevocable, royalty-free worldwide non-exclusive licence to use, reproduce, modify, adapt, distribute, communicate and publish all or part of any report or plan provided to the C'th excluding any confidential information and any material, including any image or text, identified by the FRDC as being material in which a third party owns the copyright	15.8
Notification of significant issues	
In addition to the duties under the PGPA Act, give the C'th reasonable notice of any significant issues that may affect or have affected FRDC or any of its subsidiaries	16.1
Acknowledgement of funding	
Ensure all significant publications and publicity acknowledge the provision of Australian Government funding where applicable	17.1



APPENDIX 3: OBLIGATIONS OF FRDC UNDER THE PIRD ACT: SUMMARY OF **PERFORMANCE**

The following table provides a listing of FRDC's obligations under the its PIRD Act. In each case, this review found that:

- There was positive evidence of fulfilment of the obligation;
- There was indirect evidence that the obligation had been fulfilled, for example the advice of DAWR representatives; or
- The obligation was not relevant during the review period.

PIRD ACT OBLIGATION	SECTION
Part 2 – Research and Development Corporations	
Division 1 - Establishment, functions and powers of Research and Development Corporations	
R&D Corporation is a body corporate etc.	10
Functions: investigate etc R&D requirements; prepare, review etc R&D plan; prepare AOP; coordinate and fund R&D monitor, evaluate and report activities; assess and report impacts; disseminate and commercialise R&D results; carry out marketing if applicable; do anything else conferred by PIRD or other Acts	11
Powers: enter into agreements, manage IP, acquire property etc	12
Agreements for carrying out R&D activities and marketing activities by other persons: provisions that may be included in agreements	13



PIRD ACT OBLIGATION	SECTION
Agreements for carrying out R&D activities and marketing activities with other persons: provisions that may be included in agreements	14
Consultations with persons and organisations: provisions to consult with industry persons and bodies, meet travel expenses incurred by consultees and other expenses subject to Ministerial guidelines	15
Division 2 – Constitution of Research and Development Corporations	
Constitution: RDC comprises Chair, Executive Director, 5-7 other directors as determined by the Minister; vacancies do not affect exercise of powers of RDC	16
Appointment of directors: appointed by Minister from nominations of Selection Committee; appointment not invalid because of defect or irregularity in nomination or appointment	17
Members of executive of representative organisation not eligible for appointment etc	18
Division 3—R&D plans and annual operational plans	
R&D Plans: must prepare, to include statement of objectives and priorities for the period; first plan for 4 years 9 months to 5 years 3 months to align with FY; subsequent plans for 5 years	19
Approval of R&D plans: to be submitted to the Minister no later than 2 months before intended commencement unless otherwise allowed; Minister may seek revisions, RDC must consider and respond; plans to be submitted to President of representative organisations at same time as Minister; RDC to notify rep orgs of approval within 1 month; plan commences day of approval or commencement date, whichever later	20



PIRD ACT OBLIGATION	SECTION
Variation of R&D plans: RDC to review plan as soon as practicable after each 30 June following commencement and consider whether variation needed; consider any Ministerial request for variation; RDC may vary the plan, must provide Minister with explanation, Minister may approve/reject with reasons; where variation approved, RDC must notify Presidents of rep orgs within 1 month	
Approval for varied R&D plans to run for 4 years from next 1 July: if variation requested/approved, RDC may request Minister for plan to be in effect for 4 years from following 1 July	22
When variations of R&D plans take effect: July 1 under s22 unless otherwise specified, otherwise day of approval	23
Consultation: before requesting a variation, RDC must consult with Minister, rep orgs and others as considered appropriate	24
Annual operational plans: must prepare for each FY; plan must specify broad groupings of R&D and marketing activities; describe how and to what extent these activities will give effect to R&D plan; provide an estimate of total amounts to be spent on each activity grouping and other costs	25
Commencement of annual operational plan etc.: first day of period to which plan relates; must be provided to Minister and rep orgs before commencement	26
Compliance with R&D plans and annual operational plans: must ensure performance of functions and exercise of powers consistent with current R&D and annual operational plan	27
Application of the Public Governance, Performance and Accountability Act 2013: s35 (operational plans) does not apply to RDCs	27A



PIRD ACT OBLIGATION	SECTION
Division 4 – Accountability	
Annual report: to be prepared by directors and given to Minister under s46 of PGPA Act to include: (a) particulars of R&D and marketing activities funded; the amount spent on each activity; the impact of the activities on the industry(ies); revisions to the R&D plan during the period; agreements entered into under s13 or s14 and activities in relation to these; activities relating to patents etc; activities of any company in which RDC has an interest or relating to the formation of a company; and significant acquisitions / disposals of property; (b) assessment of extent of achievement of objectives of R&D plan and implementation of annual operational plan; (c) assessment of the extent to which RDC has met objects of PIRD Act; for RDCs prescribed in the regulations, particulars of sources and expenditure of funds including by commodity or region and from transfer of assets etc.	
Accountability to representative organisations: (not applicable to RDCs to which Division 7 applies, as specified in regulations) Chair must, as soon as practicable after submission to Minister, provide annual report to rep orgs and arrange to attend each rep org's annual conference or meeting of executive to enable annual report to be considered; Chair to deliver address on activities during report period and intended for next period, and for prescribed industries e.g. grain, particulars of expenditure by commodity, region etc, transfer of assets etc; Chair to take questions	
Division 5 – Finance	
Fishing industry payments (not applicable to separately levied fishery) – provisions concerning levy payments to be paid to an RDC by Government, also matching payments, including provisions for determination of GVP	30A
As for 30A, in respect of separately levied fishery payments	30B
Government matching payments not to exceed levy and certain other payments	31
Retention limit for Commonwealth's matching payments: payments exceeding GVP to be refunded or withheld	32



PIRD ACT OBLIGATION	SECTION
Expenditure of money of R&D Corporations: only on broad groupings of R&D activities in annual operational plan, on expenses and liabilities incurred as part of its business, for payments to directors and committee members, to the C'th as required elsewhere in the Act, for expenses relating to a selection committee, or for other authorised payments; RDC liable for costs of selection committee; after 230/6/15, only with a funding agreement in place; funding agreement to be published on website	
R&D money must not be spent on marketing	33A
State and Territory fisheries R&D money – RDC must within 5 years of receiving the payment, spend an equal amount on R&D activities of relevance to the State or Territory	33B
Separately levied fisheries money – money received by an RDC under s.30B may be spent for purposes related to the separately levied fishery only.	33C
Commonwealth to be paid levy expenses from R&D Corporations: RDC pays for levies collection and administration	34
Commonwealth to be reimbursed for refunds of levy: reimbursement by RDC	35
Transfers of money where levies redirected: where levy is moved from one RDC to another, provisions for transfers	36
Payment of amounts of levy where levies redirected: as for s36, with respect to levy amounts owed by the C'th to the RDC(s)	37
Payment of matching contributions where levies redirected: as for s36, with respect to matching amounts owed by the C'th to the RDC(s)	38
Treatment of amounts received, after levies redirected, as a result of earlier expenditure	39
Separate accounting records: regulations may require RDC to keep separate accounting records of funding of specified classes of activities, and specify amounts to be credited/debited and manner of calculation	40



PIRD ACT OBLIGATION	SECTION
Borrowing from Commonwealth: Finance Minister may lend to RDC	41
Borrowing from persons other than the Commonwealth: RDC may borrow from other person with Finance Minister's approval, including foreign currency	42
Guarantee of borrowing: C'th may guarantee RDC borrowing under s42	43
Borrowing not otherwise permitted	44
R&D Corporations may give security: over its assets for the performance of obligations under s41 or s42 or payment to C'th of amounts relating to s43	45
Liability to taxation: RDC subject to C'th taxation except income tax; not subject to State/Territory tax unless specified by State/Territory or regulations; subject to stamp duty of State/Territory	46
Delegation by Finance Minister: powers may be delegated	46A
Division 6 – Meetings of Research and Development Corporations	
Times and places of meetings: must hold such meetings as necessary; Chair may call meeting any time; Chair must call meeting if majority of directors request	47
Presiding at meetings: Chair to preside at all meetings at which present; if Chair not present, Deputy Chair must preside if present; otherwise directors to appoint one of their number to preside	48
Quorum: majority	49
Voting at meetings: question decided by majority; presiding person has deliberative vote and casting vote if necessary	50



PIRD ACT OBLIGATION	SECTION
Conduct of meetings: RDC to regulate as appropriate, telephone or other participation allowed	51
Resolution without meetings: can occur where majority of directors indicate consent	52
Minutes must be kept	53
Persons may be invited to attend meetings	55
Division 7 – Annual general meetings	
Application of this Division: to RDCs with levies attached and declared applicable by regulations	56
List of levy payers: each FY RDC must list persons known to have become liable to pay a levy, within the immediately preceding FY or 3 months after it; must complete this list between zero and 30 days after day applications must be received by RDC for AGM; RDC not to use list for any other purpose	57
R&D Corporation to convene annual general meetings: where required by rep org, each FY; no longer than 15 months between AGMs	58
Notice of the convening of an annual general meeting: publish notice in Gazette not later than 70 days before AGM, specifying day, time and place of meetings and date (no earlier than 14 days after publication date) by which applications to be entered on levy list for the FY must be received; copies of notice to be provided to rep orgs	59
Purpose of annual general meeting: for levy payers to consider most recent annual report; receive address by Chair concerning RDC performance during FY and outlook for industry in next FY; question directors; debate and vote upon motions including no confidence	60
Regulations may provide for notifying RDC of terms of motions to be moved at AGM; notifying RDC's eligible levy payers of matters relating to AGM; appointment of proxies; methods of passing motions; method of determining votes; ensuring confidentiality of levy liability in voting	61



PIRD ACT OBLIGATION	SECTION
AGM may be attended by directors, eligible levy payers, members of rep orgs, invitees of the RDC, employees and consultants as determined by Chair; Chair must preside; eligible levy payers entitled to vote; record of proceedings to be kept	62
Where motion of no confidence moved at AGM, chair to be replaced by RDC employee during vote; where no confidence in RDC passed, directors' positions vacated and Minister to terminate within one month and appoint alternatives; terminated directors may be reappointed	63
RDC to notify rep orgs of all motions passed at AGM within one month	64
Division 8 – Provisions relating to directors other than Executive Directors	
Director defined as other than Executive Director	65
Director appointed according to instrument of appointment, term not exceeding 3 years; another person may be appointed to the end of term where a director ceases to hold office	66
Directors old office on part-time basis	67
Director remuneration determined by Remuneration Tribunal; allowances as prescribed	68
Director holds office on terms and conditions set out by Minister	69
Director must not engage in paid employment that creates conflict of interest	70
Minister may grant leave of absence to Chair; Chair may grant to director	71



PIRD ACT OBLIGATION	SECTION
Director may resign by written notice to Minister	72
Minister may terminate appointment of Chair or director for misbehaviour, incapacity, bankruptcy etc (also under the PGPA Act); may terminate appointment of Chair or director if absent for 3 consecutive meetings without leave	73
Minister must appoint a director as Deputy Chair in consultation with Chair; appointment may be terminated etc; acts for Chair when required and has same powers	74
Division 9 – Executive Director	
Each RDC to have an ED	75
ED to conduct the affairs of the RDC as directed by the RDC	76
ED to be appointed by the RDC; cannot be Chair or nominated director or executive of rep org; appointment of ED is not invalid because of irregularity in connection with appointment	77
ED appointed from day in instrument of appointment and holds office at RDC's pleasure	78
ED full-time or part-time	79
ED not to engage in other paid employment of full-time, other paid employment that presents a conflict if part-time	80
ED appointed on terms and conditions as set by RDC	81
Chair may grant leave to ED on terms and conditions as set by the RDC	82



PIRD ACT OBLIGATION	SECTION
ED may resign by written notice to Chair	83
RDC may appoint person other than director to act as ED during absence	85
ED or acting ED not to be present during deliberations regarding ED appointment, terms and conditions etc	86
Division 10 – Employees and consultants	
RDC may engage employees as required; remuneration not to exceed that of ED	87
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