



FRDC

2020-21

Annual Operational Plan

Year 1

**Imagining the future
of fishing and aquaculture.**

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EXECUTIVE SUMMARY

Two key documents direct and outline the Fisheries Research and Development Corporation's strategy, operations and investment. These are the FRDC Research and Development Plan 2020-25 (R&D Plan) and the Annual Operating Plan (AOP). Both documents aim to help deliver the Fish Forever 2030 Strategy (currently in draft, and will form foundations for the Australian Government's National Fishing Plan).

FRDC's new R&D Plan commences on 1 July 2020. The Plan focuses on five R&D outcomes, supported by Enabling Strategies that build capability and provide foundational support to the delivery of the outcomes. The 2020-21 AOP will be the first of five that will drive the investment for the R&D Plan. Each AOP will build upon and be informed by previous investment. The proposed approach towards implementation promotes innovation aimed at growing Australia's fishing and aquaculture sectors. This includes increasing production from the same resources and embracing principles that underpin the circular economy. Investment by the FRDC also aims to better enable the commercial fishing and aquaculture sectors to make greater contributions towards the Government's target of Agriculture being valued at \$100 billion by 2030.



Planned activities for 2020-21 recognise the challenging environment for fishing and aquaculture resulting from COVID-19.

A decrease in the Gross Value of Production (GVP) for commercial wild-catch and aquaculture will have a downward impact on the FRDC income in both the immediate and medium term despite revenue being calculated using a 3-year rolling average of the GVP.

Contributions are likely to decline in 2020-21 by around 9.3 per cent, with a further decrease in 2021-22. Both R&D investments and corporate costs have been reviewed due to COVID-19. It is vital, especially at the start of the R&D Plan, to ensure sufficient investment to enable delivery of the R&D Plan Outcomes.

Existing investments are on track to deliver results both against the FRDC's Research, Development and Extension Plan 2015-20 and the new R&D Plan as these investments and activities align with the outcomes in both plans.

An initial focus for 2020-21 will be building the foundations for the delivery of the new R&D Plan. Starting with the development of 'road maps' to guide investment for each R&D Plan outcome.

The FRDC will implement a number of changes to its R&D Partnerships and engagement processes, designed to reduce complexity, increase collaboration, and improve effectiveness. These are the result of eighteen months of review and consultation. The proposed approach will also allow for adaptive and creative approaches to solving stakeholder problems faced by Australia's fishing and aquaculture sectors, especially through the current (COVID-19) period.

The changes reflect an ongoing evolution of the FRDC to better deliver outcomes for stakeholders. These changes will assist in focusing expenditure in an environment of reduced revenue, and delivering strategic priorities, while being well prepared for any alterations of course over the five years of the R&D Plan.

OVERVIEW

2030 Vision	The FRDC will invest to pursue the shared vision of Australia's fishing and aquaculture sectors of building collaborative, vibrant fishing and aquaculture, creating diverse benefits from aquatic resources, and celebrated by the community.
FRDC Outcome	Increased economic, social and environmental benefits for Australian fishing and aquaculture, and the wider community, by investing in knowledge, innovation and marketing.
FRDC Mission	The FRDC's Mission is to act as a national thought leader, facilitating knowledge creation, collaboration and innovation to shape the future of fishing and aquaculture in Australia, for the benefit of the Australian people.
FRDC Role	To plan, invest in and manage research and development for fishing and aquaculture, and the wider community, and ensure that the resulting knowledge and innovation is adopted for impact
R&D Plan outcomes	<ol style="list-style-type: none">1. Growth for enduring prosperity2. Best practices and production systems3. A culture that is inclusive and forward thinking4. Fair and secure access to aquatic resources5. Community trust, respect and value
Enabling strategies	<ol style="list-style-type: none">I. Drive digitisation and advanced analyticsII. Strengthen adoption for transformational changeIII. Promote innovation and entrepreneurshipIV. Build capability and capacityV. Provide foundational information and support services
Planning	The purpose of the AOP is to describe activities planned, and performance targets for the year to deliver on the outcomes of the R&D Plan.
Reporting	Progress against the AOP and R&D Plan will be measured against a performance management framework that sets out how progress will be evaluated using metrics that are appropriate, timely and provide an accurate picture of the impact of FRDC's investment. The framework aligns reporting and evaluation with the FRDC's statutory obligations, and international obligations such as the Sustainable Development Goals.
Stakeholders	The FRDC works with a diverse and geographically dispersed collective of stakeholders that share a connection and interest in fishing and aquaculture. Key amongst these are the portfolio Minister for Agriculture, Drought and Emergency Management, the Hon David Littleproud MP and the Assistant Minister for Forestry and Fisheries, Senator the Hon Jonathon Duniam. More broadly FRDC works with its four ministerially declared representative organisations (see www.frdc.com.au), as well members of commercial wild catch, aquaculture, recreational, indigenous and post-harvest sectors, fisheries managers, researchers, non-government organisations and the Australian community.

STRATEGIC CONTEXT	ENABLING STRATEGIES	R&D PLAN OUTCOMES
Increasing benefits from aquatic resources within sustainable bounds will require economic vitality, flourishing ecosystems, and thriving sectors.	I. Drive digitisation and advanced analytics	1. Growth for enduring prosperity Enduring and balanced ecological, social and economic growth, for community benefit.
Continual improvement and collaboration can deliver competitive advantage, healthier ecosystems, improved wellbeing and community support.	II. Strengthen adoption for transformative change	2. Best practices and production systems Diverse benefits from aquatic resources in a manner consistent with shared principles.
Enhancing diversity and openness to change offers competitive advantage and adaptability.	III. Promote innovation and entrepreneurship	3. A culture that is inclusive and forward thinking A community of fishing and aquaculture that is cooperative, diverse and well equipped to enable growth and adaptability in a complex and uncertain world.
More integrated management of aquatic resources can reduce disharmony among users and promote wise use.	IV. Build capability and capacity	4. Fair and secure access to aquatic resources Integrated management of Australia's aquatic resources, providing certainty and confidence.
Achieving growth potential will require community support, earned by demonstrating practices that align to community values and clear benefits.	V. Provide foundational information and support services	5. Community trust, respect and value People justifiably feel good about using the products, services and experiences provided by Australia's fishing and aquaculture community.

New R&D Plan – New Focus

On 1 July 2020 the FRDC R&D Plan commenced. The R&D Plan was developed through a comprehensive process of environmental scanning, consultation and analysis. The R&D Plan considers key national initiatives such as the *National Marine Science Plan*, the Government's target to grow Australian agriculture to \$100 billion by 2030 and a draft shared vision for all sectors of fishing and aquaculture entitled "*Fish Forever: A shared 2030 vision for Australia's fishing and aquaculture community*". It also recognises key international plans and obligations such as the Sustainable Development Goals.

The FRDC R&D Plan identifies five R&D outcomes that will be delivered with the assistance of investment in five enabling strategies.

The new R&D Plan also brings with it some changes to the way engagement, planning and investment will be undertaken.

The FRDC will continue to invest in delivering outputs and impacts to achieve the R&D outcomes. However, how that investment is made (procurement/selection and contracting) will be determined by the type of activity. It will focus on ensuring the highest level of probity while providing agility in responding to the ever-changing environment faced by fishing and aquaculture in Australia.

Few challenges are ever without opportunity. The focus of the R&D Plan is to meet these challenges, responding and wherever possible capitalising on them. The FRDC will work with stakeholders to ensure existing partnership and engagement structures (such as Industry Partnership Agreements) are best able to provide the insight on priorities and assist the FRDC to respond to issues and take full advantage of opportunities when they arise.

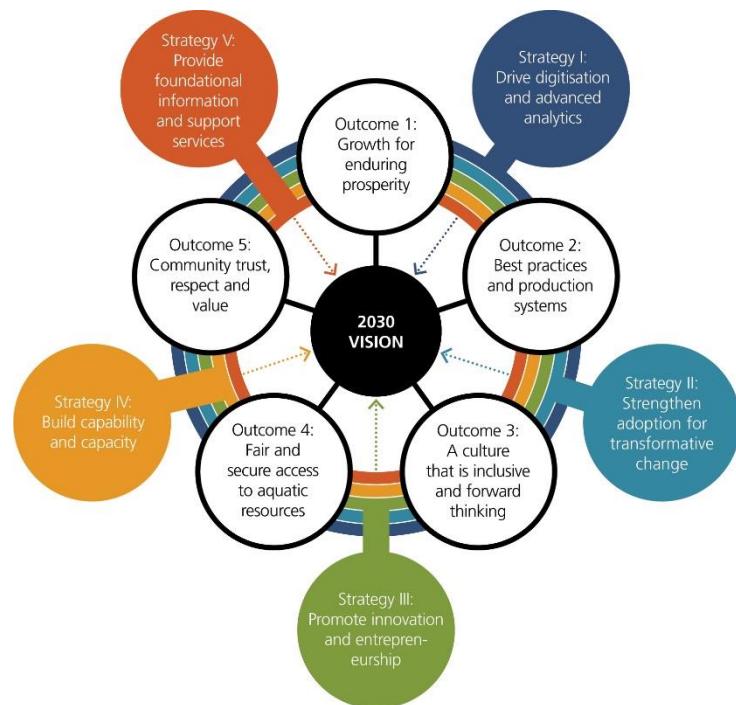


Figure 1: The FRDC's R&D Plan 2020–25: five outcomes (white circles) supported by five enabling strategies.

OPERATING ENVIRONMENT

When the FRDC began developing the R&D Plan in 2019 and the AOP early in 2020, few could have foreseen Australia would face not one but two major events: widespread, intense bushfires, followed by the coronavirus (COVID-19) pandemic – both off the back of one of the country's worst droughts. These events have had significant impact on Australia and those working in fishing and aquaculture.

COVID-19

The ongoing impact of the novel coronavirus (COVID-19) will remain uncertain for some time. In developing this AOP the FRDC has assessed the associated impacts on both stakeholders and the organisation. It is clear the GVP for fishing and aquaculture will decline; with the most exposed being those with products destined for export markets or associated with food service, those feeding into manufacturing processes or those related to tourism such as recreational fishing.

Financial Forecasts – At the macro level, the Reserve Bank of Australia (May Statement on Monetary Policy) indicates recession is likely and combating the spread of COVID-19 has led to severe restrictions on economic activity in Australia and many countries around the world. The result has been a large and near simultaneous contraction across the global economy. Heightened uncertainty about the future has exacerbated the contraction, both directly through weaker investment and consumer spending and via tighter financial conditions. Australia's economic output will contract significantly over the first half of 2020 and while the exact size of the contraction is still uncertain, a decline in GDP of around 10 per cent is expected.

The short-term outlook for Australia's primary production sectors remains uncertain. The value of Australian fishing and aquaculture industry is likely to be depressed over the coming years from the high of 2018-19. Workforce shortages, supply chain and logistic disruptions, stored product and a potential second wave of infection will create the most significant risk in the future.

Environment Forecasts – Australia's ecosystems will continue to be influenced by a range of issues such as climate, urbanisation and use by humans.

There will continue to be a focus on Australia's marine and aquatic environments. The broader community focused on its long-term sustainability. Ensuring the quality of scientific information used to manage Australia's fisheries and marine ecosystems will be important in

earning the trust of stakeholders and the community in the decision-making process.

There will continue to be a focus on biosecurity partly as a result of the re-emergence of White Spot Disease in South-Queensland. All sectors are focused on increasing biosecurity readiness to reduce risks. The FRDC will continue to support research designed to augment and cross-check previous scientific work relating to biocontrol of Carp to inform future decision-making.

Societal Forecast – Fear, worry, and stress are normal responses to perceived or real threats, and at times when we are faced with uncertainty or the unknown. While COVID-19 is a physical illness, it also brings potential for intensifying mental health issues. The impacts on how we interact personally and as a society (conduct normal life) are changing, and will require monitoring.

A key concern going forward will remain around vulnerable populations and how to best protect them. In particular Indigenous communities face greater challenges both from a health and economic perspective.

Understanding Indigenous communities' values and priorities and considering these in the development of policy and regulations will enable Indigenous people to achieve a greater engagement in fishing.

It is likely however, that some societal views will change – what people value and trust (local versus imported) which will impact on patterns of behaviour, such as purchase decisions.

INVESTMENT APPROACH

The FRDC invests in Research and Development (R&D) that supports all fishing and aquaculture – commercial wild-catch, aquaculture, Indigenous and recreational fishers, the post-harvest sector, and Australian community.

The FRDC investment policy establishes a framework for informing and governing investment decisions. Knowledge generated from partnerships and past research, development and extension (RD&E) activities are considered in the FRDC policy planning and investment processes, to ensure the adoption of previous research, maximise leverage and reduce duplication.

As part of the Statutory Funding Agreement with the Department of Agriculture, Water and Environment the FRDC is required to invest in a diverse range of RD&E activities (balanced investment portfolio approach) that take a risk-based approach and deliver impact on short and longer-term timescales.

The FRDC aims to spread its investment in R&D across the whole value-chain of fishing and aquaculture, as well as address the needs of both Indigenous and recreational fishers. The FRDC remains focussed on investing to address the priorities of stakeholders (jurisdictions and sectors) while addressing challenges that have a national and/or cross sectoral benefit.

The FRDC has agreed to be an inaugural member of the new joint collaborative Research and Development Corporation (RDC) investment vehicle that will establish a pooled investment fund. The purpose of this new investment vehicle is to address national cross-sector issues at scale. The focus for impact from FRDC activities is on end-users. To this end, the FRDC also invests and facilitates extension of the R&D that will lead to adoption and commercialisation.

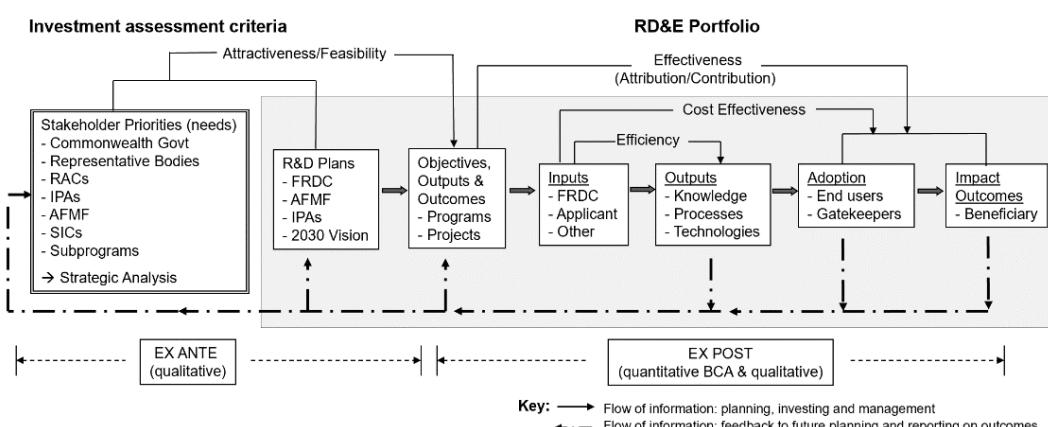
Stakeholder research priorities

A primary challenge for the FRDC is to continue to understand the needs and priorities of stakeholders as they evolve. The FRDC also works and holds regular planning and prioritisation meetings with the fishing and aquaculture community at sector, jurisdictional, regional and national levels to identify priorities and mechanisms for adoption important to them. In addition to industry, the FRDC works and meets with government and fisheries managers. These relationships are important in establishing R&D priorities, in particular the interaction with the Commonwealth Government as one of FRDC's major investors. They have a key role in not only the management of Australia's fisheries but also in setting priorities and assisting in adoption and use of R&D outputs. Issues identified from all stakeholders form an integral part of priority setting and go into the FRDC's planning and monitoring framework.

Transitioning between R&D Plans

The FRDC project investments cross multiple years – in any year around 60-70% of the investment is committed. As a result, at the end of each R&D plan there is a transition and mapping between priority areas and cross over for investment. The FRDC aims to ensure continuity of investment across plans.

FIGURE 2: FRDC Planning and monitoring framework



FINANCE

Income summary

Income for 2020-2021 is expected to be impacted from the flow on effects from COVID-19 and the decrease in income in 2019-2020 due to a decrease in GVP and reduction in industry and government contributions. A full profit and loss statement is at the start of the Portfolio Budget Section (page 21).

Industry: The GVP for fishing and aquaculture will decrease in 2019-20 by around 14.5%, due to the impacts of COVID-19. As a result, some industry contributions are likely to decrease. It is estimated the FRDC will see a reduction of industry contributions from \$7.5 million down to \$6.8 million in 2019-2020 (this excludes \$1.6 m direct project income).

The decrease in industry contributions has a secondary impact as it will reduce the amount of Government Matching payments the FRDC can claim.

Forecast 2020-21 – some uncertainty remains around the level of industry contribution in future years. Taking a conservative approach, the

FRDC are forecasting \$7.3 million in industry contributions (excludes \$3.88 m project income).

Government: The Average Gross Value of Production (AGVP – is the average gross value of fisheries production for the current year and the two preceding financial years) declined by approximately 9.9% compared with the original 2019-20 Portfolio Budget forecast.

The AGVP is expected to remain lower over the following 3 years until GVP of fishing and aquaculture starts to recover with an average growth rate of 5%.

Table 1: Income Overview 2020-21

FORECAST INCOME	2020–21
	\$m
Total revenues from the Australian Government	21.78
<i>Australian Government 0.5% AGVP</i>	14.52
<i>Matching of industry contributions</i>	7.26
Contributions revenue from Industry	7.30
Projects revenue from other parties	3.88
Other revenue (such as interest)	0.20
Marketing and promotion	0.00
TOTAL INCOME	33.16

Table 2: Australian Prawn Farmers' Levy

Year *Estimated investment	2020-21*
FRDC expenditure on R&D projects	\$368,000
APFA R&D levy contribution	\$200,000

Australian Prawn Farmers' Levies are collected under the Primary Industries Research and Development Act 1989 (PIRD Act) and the Fishing Levy Regulations. This Levy is paid to FRDC by the Department of Agriculture Water and the Environment under a special appropriation as per the PIRD Act.

Expenditure summary

The expenditure shortfalls in 2019-20 as a result of COVID-19 will impact on the 2020-21 expenditure targets. This is in part due to unavoidable delays experienced by research teams in progressing existing projects due to social distancing requirements. This has delayed expenditure originally planned for 2019-2020, which will now occur in the 2020-21 financial year. The flow on effect of this will see expenditure skewed toward existing projects and less on new investment – Table 3. A full profit and loss statement is at the start of the Portfolio Budget Section (page 21).

Overview and process

The 2020-21 budget is based on a rigorous review and analysis of FRDC's financial position in light of the impacts from COVID-19.

Table 3: Expenditure Overview provides a top-line summary of the forecast expenditure for 2020-21.

The FRDC will continue to invest to pursue R&D Plan outcomes, retain core competencies and capacity and address new critical business activities. The 2020-21 AOP responds to these challenges and the changing circumstances mentioned above.

Driving the FRDC's future investment will be the development of a series of implementation 'road maps' aligned to each R&D Plan outcome. Implementation road maps will be developed using input from stakeholders over the first quarter of 2020-21.

2020-21 Investment Allocation

The FRDC's new investments in 2020-21 will centre on the R&D Outcomes, priorities outlined by industry partners and jurisdictions, as well as those strategic investments identified during the course of developing the R&D Plan road maps.

Expenditure comprises two elements – existing investments and new. The existing investments will account for a majority of expenditure in 2020-21 – as can be seen in Table 4.

Table 4 outlines the available funds for 2020-21. Note Table 4 does not account for retained earnings or slippage in delivering project milestones.

Retained earnings

The FRDC Board has implemented a policy to ensure that the FRDC's retained earnings are based on the financial needs of the organisation and FRDC's approach to risk management. The policy is commensurate with levels of uncertainty in the current operating environment.

Table 3: Expenditure Overview 2020-21

FORECAST EXPENDITURE	2020–21
	\$m
Research and Development	26.87
<i>I. Drive digitisation and advanced analytics</i>	0.20
<i>II. Strengthen adoption for transformational change</i>	0.20
<i>III. Promote innovation & entrepreneurship</i>	0.07
<i>IV. Build capability & capacity</i>	0.20
<i>V. Provide foundational information and support service</i>	0.03
TOTAL R&D	27.57
Communications	0.78
Corporate costs (includes ICT)	4.76
TOTAL EXPENDITURE	33.11

Table 4: Investment Allocation

Public good allocation to outcomes	20–21 / \$m	21–22 / \$m	22–23 / \$m	23–24 / \$m
Committed investment	14.25	5.71	2.45	0.54
Potential New Investment	2.90	6.41	10.88	13.51
Industry Non-IPA				
Committed investment	5.17	3.28	1.75	0.45
Potential New Investment	1.25	1.64	1.74	1.81
Industry Partnership Agreements				
Australian Abalone Growers' Association				
Committed investment	0.36	0.07	0.00	0.00
Potential New Investment	0.12	0.13	0.20	0.20
Australian Barramundi Farmers' Association				
Committed investment	0.01	0.06	0.00	0.00
Potential New Investment	0.36	0.09	0.16	0.16
Abalone Council of Australia Ltd				
Committed investment	0.60	0.50	0.47	0.29
Potential New Investment	0.38	0.04	0.08	0.26
Australian Council of Prawn Fisheries				
Committed investment	0.21	0.11	0.02	0.00
Potential New Investment	1.83	0.43	0.54	0.55
Australian Prawn Farmers Association				
Committed investment	0.03	0.06	0.00	0.00
Potential New Investment	0.51	0.26	0.32	0.32
Australian Southern Bluefin Tuna Industry Association				
Committed investment	0.66	0.30	0.15	0.05
Potential New Investment	0.32	0.07	0.23	0.33
Oysters Australia				
Committed investment	0.09	0.00	0.00	0.00
Potential New Investment	0.88	0.32	0.32	0.39
Pearl Consortium				
Committed investment	0.32	0.30	0.00	0.00
Potential New Investment	0.00	0.00	0.00	0.00
Southern Ocean				
Committed investment	0.71	0.50	0.11	0.00
Potential New Investment	0.92	0.09	0.46	0.57
Southern Rocklobster Limited				
Committed investment	0.91	0.54	0.19	0.09
Potential New Investment	1.14	0.27	0.62	0.72
Tasmanian Salmonid Growers' Association				
Committed investment	5.55	2.69	2.13	0.97
Potential New Investment	0.00	0.00	0.00	0.00
TSGA - Huon				
Committed investment	0.50	0.80	0.06	0.05
Potential New Investment	0.70	0.00	0.53	0.54
TSGA - Petuna				
Committed investment	0.10	0.02	0.00	0.00
Potential New Investment	0.47	0.21	0.23	0.23
TSGA - Tassal				
Committed investment	0.65	0.02	0.00	0.00
Potential New Investment	1.84	0.81	0.83	0.83
Western Rocklobster Council Inc				
Committed investment	1.33	0.50	0.31	0.00
Potential New Investment	5.12	1.57	1.77	2.08
TOTAL COMMITTED INVESTMENT	31.45	15.46	7.64	2.44
TOTAL POTENTIAL NEW INVESTMENT	18.74	12.34	18.91	22.5

R&D INVESTMENTS AND OUTPUTS 2020-21

Investments and Outputs

FRDC's R&D investments span multiple years. In any year FRDC R&D investment will cover both new and existing projects. The following tables outline a selection of these activities against the R&D Plan by the five outcomes. Noting that in any year the FRDC will invest in, and complete around 100 projects.

- ‘investments’ are new initiatives/projects that will be funded during the year
- ‘outputs’ are initiatives/projects that will complete a deliverable or be completed during the year.

Key: explaining linkages between R&D Plan investments/outputs and Enabling Strategies.

(E1) = Drive digitisation and advanced analytics, (E2) = Strengthen adoption for transformational change, (E3) = Propagate innovation and entrepreneurship, (E4) = Build capability and capacity of our people, (E5) = Deliver foundational information and support services. Note not all projects will link to Enabling Strategies.

OUTCOME 1: Growth for enduring prosperity

R&D Plan Key Activities	R&D Investments/Outputs 2020-21
<p>FRDC will explore opportunities to invest in, manage and promote adoption of R&D to:</p> <ul style="list-style-type: none"> • support a sustainable, efficient and effective increase in production, value and price; • guide a coordinated and evidence-based strategy for growth; • develop more effective and cost-efficient solutions for understanding and responding to biosecurity risks driven by a changing climate and increased global movement of goods; • promote a circular economy to design waste out of the system, keep products and materials in use and promote repair of natural systems; • improve understanding of and increase community benefits from fishing and aquaculture; • build economic security and better connect Indigenous communities with fisheries and aquaculture initiatives, providing economic opportunities for regional and remote areas where desired; • improve understanding of the cause and extent of impacts to aquatic systems and mechanisms to improve them; • build necessary skills, networks and expertise, including application of knowledge, innovation and practices of Indigenous Australians (Traditional Knowledge) to understand, restore and create healthy aquatic ecosystems; and, • build partnerships to develop system-wide understanding, and identify ways to maintain and maximise benefits from aquatic systems. 	<p>Investments</p> <ul style="list-style-type: none"> • Cultivation trials of red seaweed (E3) • Investigation of Indigenous knowledge, nutritional health and wellbeing benefits and values of seafood for supporting Indigenous fisheries development (E2) • Develop a strategic plan for fish habitat research and aquatic offsets for Queensland • Estimating the biomass of fish stocks using novel and efficient genetic techniques (E1) • e-fish - Integrated data capture and sharing Project (E3) • Participation in cross RDC planning and investment to address cross-cutting issues (E2) <p>Outputs</p> <ul style="list-style-type: none"> • Implementation of the road map to guide investment • Options for the use of Urchin waste in agriculture identified (E3) • Development of an industry wide biosecurity situation report for farmed prawns (E4) • Develop management options to rebuild Southern Rock Lobster stocks on the east coast of Tasmania • Successful trials of innovation investment platforms with partners to address priority areas (E3) • Develop tools for developers to test investment readiness using Deckhand as a case study (E4)

This outcome aligns with the following SDGs:



OUTCOME 2: Best practices and production systems

R&D Plan Key Activities	R&D Investments/Outputs 2020-21
<ul style="list-style-type: none"> minimise impacts on non-target species and ecosystems; better understand and increase wellbeing, equity and safety of participants within each sector; develop innovative ways to conduct and communicate independent validation of sustainable practices and outcomes to markets and consumers; improve animal welfare outcomes; promote learning and sharing among sectors and industries, including identifying, documenting and promoting Indigenous traditional fisheries management systems and practices; effective management of climate change impacts through adaptation and mitigation; explore ways to capitalise on new opportunities presented by climate change; and, develop improved decision-making tools better able to respond to biological variability, and increased revenue volatility and risks. 	<p>Investments</p> <ul style="list-style-type: none"> Review of guidance documents and legislation for aquatic animal welfare Climate driven shifts in benthic habitat composition as a potential demographic bottleneck for Western Rock Lobster (E5) Understanding the status, biological and catch dynamics of threatened Hammerhead Sharks encountered by the Northern Territory offshore net and line fishery (E5) scope alternative fish observation and catching technologies (E3) Determination of the impacts of direct harvest of coral species in northern Australia (E5) Invest in informing the future strategy for workforce needs for the fishing industry (E4) Council of Rural RDC Climate Initiative <p>Outputs</p> <ul style="list-style-type: none"> Implementation of the road map to guide investment Jurisdictional SAFS reporting template finalised (E1) 2020 Status of Australian Fish Stock (SAFS) Reports (E5) Trial of alternative investment methods to innovate production in aquaculture and wild catch fisheries (E3) Finalisation of risk-based reporting of fisheries via Whichfish (E5) Ensuring monitoring and management of bycatch in Southern Rock Lobster fisheries is best practice Report examining options for adaptation of Commonwealth fisheries management to climate change (E2) Developing alternative strategies for managing seal-fisher interactions in South Australian Lakes and Coorong Fishery (E3)

This outcome aligns with the following SDGs:



OUTCOME 3: A culture that is inclusive and forward thinking

R&D Plan Key Activities	R&D Investments/Outputs 2020-21
<ul style="list-style-type: none"> Understand and address factors that hold back positive cultural and behavioural change; promote greater inclusiveness, creative thought and solution-seeking; promote sharing among stakeholders to encourage learning from those who are already producing results; encourage openness to new ideas, approaches and ways of thinking and behaving, recognising that needs may differ among sectors; and, strengthen collaboration across sectors to enable the full benefit of collaborative partnerships. 	<p>Investments</p> <ul style="list-style-type: none"> Rural Safety & Health Alliance - A joint RDC initiative (E2) invest in future leaders (E4) <p>Outputs</p> <ul style="list-style-type: none"> Implementation of the road map to guide investment Develop a national, culturally appropriate capacity building program for involvement of Indigenous Australians in fisheries management (E4) Establish an online skills platform to provide access to training by women in rural and regional areas that will support greater diversity in seafood enterprises, research agencies and industry associations (E4) Develop custom training and technical support for the fishery stock assessment software 'stock synthesis' (E4)

This outcome aligns with the following SDGs:



OUTCOME 4: Fair and secure access to aquatic resources

R&D Plan Key Activities	R&D Investments/Outputs 2020-21
<ul style="list-style-type: none"> support more integrated and effective management of Australia's aquatic resources; promote development and adoption of management measures well suited for resilience to change, including: <ul style="list-style-type: none"> harvest strategies that are flexible to account for the dynamic nature of resource use; dynamic, flexible spatial arrangements, decision-making tools better able to transparently deal with biological variability, climate change, harvest uncertainty, management of revenue volatility and risks; management approaches that pursue fairness; and, participative management across Australia's fisheries to improve efficiency and reduce costs. 	<p>Investments</p> <ul style="list-style-type: none"> Develop a traditional fishing harvest strategy to support the sustainable harvest of Quampie in Queensland (E3) Implementation of dynamic reference points and harvest strategies to account for environmentally driven changes in productivity in Australian fisheries (E5) Integrate recreational fishing information into harvest strategies for multi-sector fisheries (E1) <p>Outputs</p> <ul style="list-style-type: none"> Implementation of the road map to guide investment In partnership with the Department of Agriculture Water and Environment develop a resource sharing arrangement with Commonwealth fisheries with the view to national guidelines (E4) Undertake a review that looks at options for security of resource access Develop triple bottom line harvest strategies that include environmental aspects for multi-sector fisheries (E5)

This outcome aligns with the following SDGs:



OUTCOME 5: Community trust, respect and value

R&D Plan Key Activities	R&D Investments/Outputs 2020-21
<ul style="list-style-type: none"> facilitate action across sectors in pursuit of a shared vision; nurture relationships and communications between stakeholders and with the community; encourage adoption of transparent decision-making tools and best practice in management of fisheries and aquaculture to ensure appropriate distribution of economic and societal benefits; and, improve seafood traceability and integrity from capture through to end-user. 	<p>Investments</p> <ul style="list-style-type: none"> Measuring, interpreting and monitoring economic productivity in Commercial Fisheries (E1) Economic mapping of Australia's wild-catch Prawn supply chain (E1) Engagement for Success: evaluation of engagement events to inform industry management strategies (E4) Establish new portal for tracking emerging issues relevant to fishing and aquaculture (E5) <p>Outputs</p> <ul style="list-style-type: none"> Implementation of the road map to guide investment Community trust in seafood industry is mapped alongside other primary production sectors (E4) Traceability Systems review for Wild Caught Lobster, via Sense-T and Pathways to Market (E1) Socio-ecological assessment of the ecosystems, industries and communities of Spencer Gulf (E5) Complete a prawn fishery case study in Environmental and Economic accounting for Primary Industries (Natural Capital Accounting) (E5)

This outcome aligns with the following SDGs:



ENABLING STRATEGIES

The FRDC's investment in the five enabling strategies will assist achieving the R&D Plan Outcomes. Enabling Strategy investments will be focused on assisting and achieving R&D Outcomes rather than investing in an Enabling Strategy activity by itself. The linkages are shown in the above tables with a designation (E1), (E2), (E3), (E4), (E5).

Enabling Strategy	Key Activity
Drive digitisation and advanced analytics	<ul style="list-style-type: none">• data capture and usability;• costs and usage of energy and other inputs;• targets species behaviour and distribution; and• markets and prices.
Strengthen adoption for transformational change	<ul style="list-style-type: none">• take a new approach to driving adoption over coming years, moving beyond knowledge transfer to helping end users make necessary changes; and,• support end users in forming 'communities of practice'—informal groups that work together to use their local knowledge, networks and experience to refine and improve adoption.
Propagate innovation and entrepreneurship	<ul style="list-style-type: none">• the shared conceptualisation of problems;• exploring possible alternative solutions; and,• partnering, planning, investing, managing and promoting adoption of R&D in different ways to foster longer-term, high impact innovations, seeking to expand capabilities, and generate entirely new capabilities.
Build capability and capacity of our people	<ul style="list-style-type: none">• digital and technological proficiency,• leadership and change management,• conflict resolution,• effective communication• biosecurity, and• environmental stewardship
Provide foundational information and support services	<ul style="list-style-type: none">• sustainability status of fish stocks and performance of fisheries;• environmental impacts and risk;• international trade and market access;• harmonisation of best practice; and,• consumer and community perceptions and behaviour, to inform sectors about emerging trends.

PERFORMANCE EVALUATION

The FRDC's performance measures are designed to assess the effectiveness, efficiency and quality of its activities to meet the strategic objectives of the R&D Plan and each Annual Operating Plan. These include measures also published in the Portfolio Budget Statements.

The FRDC reports each year on performance (achievements of specified targets and overall performance) to the Department of Agriculture, Water and Environment and to the Australian Parliament via its Annual Report.

Underpinning FRDC's performance reporting is a Performance Management Framework that the FRDC is required to develop as part of its Statutory Funding Agreement. The Performance Management Framework guides the gathering of information to measure the progress in achieving delivery of the outputs and outcomes.

Central to this are benefit cost analyses (BCA) undertaken against each of the FRDC programs. This BCA program being undertaken by the FRDC is part of the CRRDC work to collaboratively implement a framework of benefit cost analysis to evaluate R&D activities.

The FRDC has looked at improving performance measures plotting them against an input, output and outcome matrix to make it easier to understand and quantify performance. The suite of metrics used encapsulates:

Research and Development

- A balanced portfolio of project investment (type, length and risk)
- Outputs (project milestone and report)
- Five Outcomes and enabling areas (investment and project delivery); and
- Outcomes (benefit cost analysis).

Business and Support Services:

- Financial (monthly budgets, income and variance and reserve monitoring)
- Business (internal and external audit and risk)
- Staff (Board evaluation and employee survey)
- Communication (digital and media engagement, stakeholder tracking and sentiment)
- Information Communication and Technology (ICT)

Research and Development

	Measure of Success	Measure
Project investment	Projects align with the FRDC's R&D Plan Outcomes.	Align with the R&D Plan Outcomes.
	Projects application/scope are assessed as meeting end-user needs and pathways for adoption identified.	high priority
Balanced Portfolio Approach	Projects reported by research type	Basic Applied
	Projects reported by length	Short (less 18 months) Long (more than 18 months)
	Projects by risk category	Low Medium High
Output measures	R&D Outcome	Development of Road Maps
	Sustainable Development Goals	Development of Sustainable Development Goal Report
Outcome measures	Demonstrate the benefits of R&D investments by positive benefit cost analysis results.	Benefit analysis undertaken on one investment area.
	Improve value and profitability of fishing and aquaculture.	Gross Value of Production rises

Business and Support Services

	Measure of Success	Measure
Financial	Planning and reporting documents submitted in accordance with Australian Government and legislative requirements and timeframes.	Compliance with obligations
Business	Implement best practice governance arrangements, promote transparency, good business performance and unqualified audits.	Achieve unqualified audit result
	Maintain appropriate levels of risk management	Compliance with Risk Framework
Staff	Employee and director survey undertaken, and actions developed to respond for improvement.	Employee and director satisfied with FRDC as a workplace.
Communications	Media engagement and reporting of key messages continues to grow.	Media engagement undertaken regularly
	Two-way dialogue and understanding with stakeholders	Engagement mechanisms developed and used
ICT	External and internal stakeholders are able to access systems.	Availability of systems with no unplanned outages

GOVERNANCE FRAMEWORK

The FRDC Board

The Board's authority to govern the FRDC is granted under the PIRD Act. The direction and control of the FRDC, including its business and affairs, is vested in the Board as a whole. The objectives of the Board are to add value by ensuring that appropriate governance is in place by:

- setting the strategic direction of the organisation.
- developing policy to help implement this direction.
- monitoring and supervising systems that deliver the results of the organisation
- ensuring accountability (including engaging with, and reporting to, stakeholders)
- ensuring legal compliance

The Board will meet a minimum of five times annually, not including special meetings. During the year the Board will visit various locations as part of Board meetings, to meet industry, management agencies, research providers and other stakeholders providing an opportunity to inform the FRDC of its R&D needs.

Key Governance Measures

Element	Scope
Enabling legislation	The Primary Industries Research and Development Act 1989 which sets out the legislative framework and rules for the establishment and operation of the FRDC.
Governance legislation	The <i>Public Governance, Performance and Accountability Act 2013</i> (PGPA Act) which specifies requirements for good governance, performance and accountability.
Quality management system	Systematic, ISO-certified processes CAS/NZS ISO 9001:2008 designed to meet or exceed the expectations of stakeholders and other people and organisations with which FRDC does business. Incorporates management of FRDC policies.
Board governance	Key functions include overseeing corporate governance, systems and processes used to direct and control its operations and investment decisions. This is enhanced by the Board's spread of skills and experience and ongoing development in directorship.
Statutory Funding agreement	The Australian Government enters into funding agreements with the RDCs as a means to define and govern aspects of their relationship. The agreement between the government and FRDC specifies the terms and conditions on which money is paid to the R&D Corporation by the Commonwealth, will be spent. The funding agreement is accompanied by a companion document providing performance principles to guide the RDC performance and its approach to accountability and reporting.
Strategic planning and priority-setting	FRDC works with jurisdictions and sectors to undertake planning and priority setting for R&D in consultation with government, AFMF, industry, stakeholders and research partners.
Delegation	The Board oversees the policy and issues an instrument that delegates specific powers of the board to FRDC directors and employee
Portfolio Investment	FRDC investment is overseen by the Board. The Board can approve funding by portfolio where deemed appropriate.
Performance monitoring	Includes monitoring and measuring of performance to continually improve the FRDC's effectiveness and efficiency.
Annual report	Requirement of legislation; Reports to the Australian Parliament and FRDC stakeholders on R&D activities during the financial year and on measures to ensure good governance.
Reporting to stakeholders	The FRDC reports to stakeholders on R&D investment activities and issues through formal and informal approaches – including the Annual Report, Stakeholder Briefings, FISH Magazine; and face to face meetings. The FRDC is required under the PIRD Act to consult and report to the Government and the statutory appointed Representative Organisations.

R&D INVESTMENT ALLOCATION

The FRDC board sets the overarching direction and strategy for the organisation. It has ensured that the necessary governance (policies), systems and procedures are in place to enable the organisation to invest in priority areas and specific RD&E activities. This involves delegating to the FRDC management those matters that it is best suited to manage – with the Board providing the necessary governance and oversight. In addition, the board approves the AOP and available investment (Table 4: Investment Allocation) which includes both current commitments, such as contracted projects, and new investment), allowing management to invest in activities, projects and programs – within board agreed delegations that align with the priorities of stakeholders, the AOP and R&D Plan. In doing so, management will:

- develop applications as per the Investment in RD&E policy and associated procedures
- evaluate applications submitted using additional external review where required
- assess the level of risk of an investment and determine whether an application should be elevated to be assessed by the FRDC board
- prepare an evaluation sheet for the FRDC Managing Director or board to make a decision on the application
- jointly monitor activities of FRDC's partners and stakeholders (including budget allocations) to ensure that agreed priorities, needs and outcomes are being realised, and budgets are not exceeded within agreed levels of project slippage

The objective is to provide a more flexible and nimble approach to investment, whereby the FRDC can assess applications at any time throughout the year. Variances in investment may occur within a given year depending on allocation of available funds and due to timing of contracting projects.

Road maps, informed by the needs of FRDC stakeholders including those identified by the FRDC's Partnership Agreements and jurisdictions, will outline the path for investment in the R&D Plan. This is supported and delivered through the yearly AOP with outputs reported through the Annual Report.

The board oversight takes the form of:

- being provided updates on the road maps and achievements against the R&D Outcomes on a rotational timeframe (one per board meeting per year)
- a summary of the proposed investment areas for the given period in the AOP
- an update on the current budget, including available funds for a period of four years in the AOP

Applications will be assessed using a risk-based approach against the following:

- Reputational – is there a risk to the reputation/brand of its stakeholders, could activities generate negative publicity?
- Political – does the proposed activity contravene government policy – the activity is requested by a political party.
- Ethical – potential for deaths of threatened and endangered or protected species, any material implications for Work Health and Safety (WHS), animal welfare, or human welfare.

GOVERNMENT PRIORITIES

Australian Government research priorities

The FRDC aims to ensure that it delivers results in line with the Australian Government's National Science and Research Priorities and the Rural Research, Development and Extension priorities.

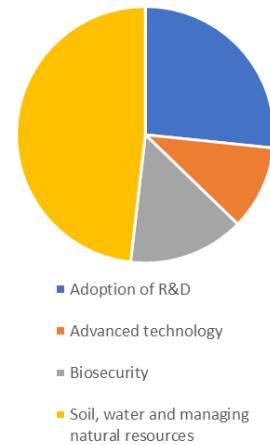
The FRDC invests in projects that will contribute to the delivery of these Australian Government priorities. The Government's priorities are consistent and align with the FRDC's legislated objects (section 3 of the PIRD Act).

Government Research Priorities attributed to each R&D Program (\$ and %)

Rural Research, Development and Extension Priorities

<http://agriculture.gov.au/ag-farm-food/innovation/priorities>

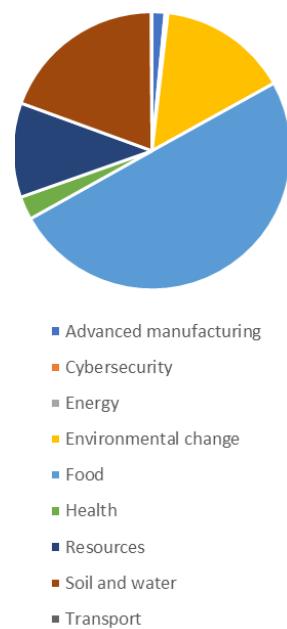
Priorities	Total expenditure	
	\$	%
Adoption of R&D	7,361,724	26.7%
Advanced technology	2,922,632	10.6%
Biosecurity	4,025,512	14.6%
Soil, water and managing natural resources	13,289,704	48.2%
TOTAL	27,572,000	100%



National Science and Research Priorities

<http://science.gov.au/scienceGov/ScienceAndResearchPriorities/Pages/default.aspx>

Priorities	Total expenditure	
	\$	%
Advanced manufacturing	413,580	1.5%
Cybersecurity	55,144	0.2%
Energy	27,572	0.1%
Environmental change	4,163,372	15.1%
Food	13,758,428	49.9%
Health	744,444	2.7%
Resources	3,032,920	11.0%
Soil and water	5,321,396	19.3%
Transport	27,572	0.1%
Total	27,572,000	100%



PORTFOLIO BUDGET STATEMENT DRAFT

Note due to COVID-19 the Federal Budget was moved to October 2020. The FRDC Portfolio Budget Statements included in the AOP are the same as those that will be presented as part of the 2020-21 Federal Budget.

Annual Operational Plan 2020-21 Budget

REVENUE	\$
<i>Opening cash balance brought forward at 1 July</i>	24,900,000
Total revenues from the Australian Government	
Australian Government 0.5% AGVP	14,518,729
Matching of industry contributions	7,259,365
<i>Total revenues from the Australian Government</i>	21,778,094
Contributions revenue from the jurisdictions	9,173,142
Projects revenue from the Australian Government	1,010,000
Other revenue	1,000,000
Interest	200,000
TOTAL REVENUE	33,161,236
EXPENDITURE	
R&D Projects Expenditure	
Research and Development	26,870,000
Enabling Strategies	
I. Drive digitisation and advanced analytics	200,000
II. Strengthen adoption for transformational change	200,000
III. Promote innovation & entrepreneurship	72,351
IV. Build capability & capacity	200,000
V. Provide foundational information and support services	30,000
TOTAL R&D	27,572,351
Communications	780,000
Corporate costs (includes ICT)	4,763,446
TOTAL EXPENDITURE	33,115,797
NET RESULT FOR THE YEAR	45,438
CLOSING BALANCE	24,945,438

STATEMENT OF COMPREHENSIVE INCOME

for the period ended 30 June

	2019–20 Estimated actual \$'000	2020–21 Budget \$'000	2021–22 Forward estimate \$'000	2022–23 Forward estimate \$'000	2023–24 Forward estimate \$'000
REVENUE					
AGVP revenue from Australian Government	21,737	21,778	21,991	24,007	25,262
Interest	302	200	200	200	200
Project revenue from Australian Government	48	1,010	1,000	1,000	1,000
Contributions (a)	8,343	9,173	8,464	8,718	8,979
Other	1,049	1,000	1,000	1,000	1,000
Total revenue	31,479	33,161	32,655	34,925	36,442
EXPENSES					
Employee benefits	3,203	3,119	3,244	3,374	3,509
Suppliers	1,778	1,454	1,527	1,603	1,683
Project expenditure	26,963	27,572	26,830	28,860	30,110
Communications	532	780	819	860	903
Depreciation/amortisation	190	190	200	200	200
Total expenses	32,666	33,116	32,620	34,897	36,405
Operating surplus/deficit	(1,187)	45	35	28	37

(a) The tabled Portfolio Budget Statement will disclose the Commonwealth research levy collected under the PIRD Act and the Prawn levies collected from industry for R&D activities, in "Revenue from Government". The table above discloses these items in "Contributions".

STATEMENT OF FINANCIAL POSITION (as at 30 June)

	2019–20 Estimated actual \$'000	2020–21 Budget \$'000	2021–22 Forward estimate \$'000	2022–23 Forward estimate \$'000	2023–24 Forward estimate \$'000
ASSETS					
Financial assets					
Cash and cash equivalents	24,900	25,602	26,115	25,913	26,038
Trade and other receivables	3,123	2,414	1,861	2,011	1,843
Investments	5	5	5	5	5
Total financial assets	28,028	28,021	27,981	27,929	27,886
Non-financial assets					
Property, plant and equipment	29	29	39	49	59
Intangibles	675	745	815	885	955
Other	439	516	242	518	413
Total non-financial assets	1,143	1,290	1,096	1,452	1,427
Total assets	29,171	29,311	29,077	29,381	29,313
LIABILITIES					
Payables					
Suppliers	190	200	200	200	200
Projects	250	250	250	250	250
Total payables	440	450	450	450	450
Interest bearing liabilities					
Lease	429	506	232	508	403
Total interest bearing liabilities	429	506	232	508	403
Provisions					
Employee provisions	797	785	790	790	790
Total provisions	797	785	790	790	790
Total liabilities	1,666	1,741	1,472	1,748	1,643
Net assets	27,505	27,570	27,605	27,633	27,670
EQUITY					
Asset revaluation reserve	433	453	453	453	453
Retained earnings	27,072	27,117	27,152	27,180	27,217
Total Equity	27,505	27,570	27,605	27,633	27,670

CASH FLOW STATEMENT
(for the period ended 30 June)

	2019–20 Estimated actual \$'000	2020–21 Budget \$'000	2021–22 Forward estimate \$'000	2022–23 Forward estimate \$'000	2023–24 Forward estimate \$'000
OPERATING ACTIVITIES					
Cash received					
Receipts from Australian Government	22,481	22,522	22,735	24,151	26,006
Contributions	10,685	10,825	10,269	10,523	10,784
Grants	48	1,187	1,000	1,000	1,000
Interest	302	200	200	200	200
Other	1,569	1,520	1,588	1,578	1,568
Total cash received	35,085	36,254	35,792	37,452	39,558
Cash used					
Employees	3,426	3,353	3,473	3,603	3,739
Suppliers	2,603	2,423	2,232	2,587	2,656
Projects	27,923	28,532	28,909	30,600	31,973
Other	546	994	415	614	815
Total cash used	34,498	35,302	35,029	37,404	39,183
Net cash from operating activities	587	952	763	48	375
INVESTING ACTIVITIES					
Cash used					
Purchase of property, plant and equipment	40	50	50	50	50
Purchase of Intangibles	200	200	200	200	200
Total cash used	240	250	250	250	250
Total funds from other sources	(240)	(250)	(250)	(250)	(250)
Net increase (decrease) in cash held	347	702	513	(202)	125
Cash and cash equivalents at the beginning of the reporting period	24,553	24,900	25,602	26,115	25,913
Cash and cash equivalents at the end of the reporting period	24,900	25,602	26,115	25,913	26,038

ABBREVIATIONS AND ACRONYMS

AGVP	Average Gross Value of Production
AOP	Annual Operational Plan
APFA	Australian Prawn Farmers Association
DAWE	Australian Government Department of Agriculture, Water and Environment
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
FRDC	Fisheries Research and Development Corporation
GVP	Gross Value of Production
IPA	Industry Partnerships Agreement
IRG	Indigenous Reference Group
ISO	International Organisation for Standardisation
KPI	key performance indicator
m	million
PGPA Act	Public Governance, Performance and Accountability Act 2013
PIRD Act	Primary Industries Research and Development Act 1989
PBS	Portfolio Budget Statement
R&D	research and development
RD&E	research, development and extension
RDC	Research and Development Corporation
SAFS	Status of Australian Fish Stocks
SFA	Statutory Funding Agreement

For more information on the FRDC

Post: Locked Bag 222
Deakin West ACT 2600

Telephone: +61 2 6122 2110
Email: frdc@frdc.com.au
Web: www.frdc.com.au