



**FRDC**

FISHERIES RESEARCH &  
DEVELOPMENT CORPORATION

# **Annual Operational Plan 2019-20**

*Knowledge for fishing and aquaculture into the future*

## **FRDC Vision**

The FRDC's vision is for Australia to have vibrant fishing and aquaculture adopting world-class research to achieve sustainability and prosperity.

## **The planned outcome for the corporation**

Increased economic, social and environmental benefits for Australian fishing and aquaculture, and the wider community, by investing in knowledge, innovation, and marketing.

## **The Corporation**

FRDC is a statutory corporation within the Australian Government's Agriculture and Water Resources portfolio and is accountable to the Parliament of Australia through the Minister for Agriculture and Water Resources. Revenue for Research, Development and Extension (RD&E) investment comes via a co-funding model between the Australian Government and the commercial fishing and aquaculture industries.

The Corporation was formed on 2 July 1991 and operates under two key pieces of legislation the *Primary Industries Research and Development Act 1989* (PIRD Act), and the *Public Governance, Performance and Accountability Act 2013* (PGPA Act).

## **Portfolio Minister**

The portfolio Minister for Agriculture is Senator the Hon Bridget McKenzie. The Assistant Minister for Assistant Minister for Forestry and Fisheries is Senator the Hon Jonathon Duniam.

## **Stakeholders**

FRDC works with a diverse, complex and geographically dispersed group of stakeholders across fishing and aquaculture. For example, Indigenous fishers may participate in customary fishing, conduct aquaculture and commercial fishing, and fish recreationally.

## **Representative Organisations**

The FRDC has four ministerially declared representative organisations:

- Seafood Industry Australia (representing the seafood industry);
- 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).

The FRDC also involves the Indigenous Reference Group in all its representative organisation activities.

## Environmental Scan

### Financial Forecasts

The operating environment, looking forward in 2019-20 for the FRDC and fishing and its aquaculture stakeholders, poses a number of potential economic challenges, which may impact the FRDC on a number of fronts.

At the macro level, the Australian Bureau of Agricultural and Resource Economics and Sciences (Agricultural commodities December 2017) expects the world economic position to slow to around 3.4 per cent in 2019. Bringing to an end the global economic expansion that began in the second half of 2016 faded out in 2018. Strong income and population growth in emerging Asia are expected to support demand for Australian agricultural exports to 2023–24. Risks to growth in the short term are weighted to the downside and pose a significant threat to Australia's largest agricultural export markets. The Australian dollar is assumed to gradually strengthen against the US dollar over the medium term in the absence of negative shocks to global growth.

This follows 2018 where the Australian dollar depreciated by 10% against the US dollar and 6% on a trade-weighted basis. This includes an 11% decline against the Japanese yen and a 6% decline against the Korean won. However, changes to the interest rates may impact the ability for, and the cost of, industry borrowing for capital investment. Stronger than expected global growth could result in higher prices for Australian commodity exports. This possibility presents an upside risk to the exchange rate assumption.

The value of Australian fishing industry continues to see strong growth. The Gross Value of Production for fishing and aquaculture in 2018–19 was valued at \$3.16 billion. The value of Australia's fisheries and aquaculture production is forecast to rise by 4% to \$3.3 billion by 2023–24. The seafood industry will continue to see growth in the coming financial year, driven primarily by aquaculture. Volume increases in Tasmania's farmed salmonid sector will contribute most to lifting the production value of Australian farmed salmonids, which is projected to increase by \$36 million to nearly \$900 million by 2023–24. For rock lobsters, expected higher prices and production volume are projected to drive a \$34 million increase in production value in real terms to \$797 million by 2023–24. Australia's economic forecast remains positive, with the lower Australian dollar providing a boost to Australian agricultural export earnings. However, the wild Abalone fishery is expected to fall off the back of a number of stocks declining and quota cuts likely to be put in place.

### Environment Forecasts

Australian climate patterns are being influenced by the long-term increasing trend in global air and ocean temperatures. The Bureau of Meteorology Climate outlook indicates that the main climate drivers for Australia (e.g., El Niño/La Niña and the Indian Ocean Dipole) are neutral, which is why the rainfall outlook is not showing a tendency towards a wetter or drier than average three months ahead (i.e., close to a 50% chance of exceeding median). However, the Bureau's climate model suggests there is a chance El Niño will develop in autumn. If El Niño does develop, it would increase the chances of drier conditions in the south and east. The drought has impacted across most of agriculture in the east, though there has been less direct impact on fisheries – it has impacted severely on inland waterways.

Recent warming in the tropical Pacific Ocean and model outlooks suggest there is an increased chance of El Niño developing during autumn. Atmospheric indicators of El Niño-Southern Oscillation (ENSO) remain neutral. Ocean temperatures are currently 0.5 to 1 °C warmer than average to the north and east of Australia which marginally increases the likelihood of cyclones developing. Alongside this variable conditional events are likely to continue.

There will continue to be a focus on biosecurity partly as a result of the White Spot Disease outbreak in South Queensland in 2016, and the subsequent review and development of the Emergency Aquatic Animal Disease Response Agreement which will ensure a continued awareness across fishing and aquaculture. Key sectors like Atlantic Salmon and Barramundi will focus on increasing biosecurity readiness to reduce future risks. Likewise the continued occurrence of algal blooms across south east Australia requires fishing and aquaculture to ensure ongoing monitoring and evaluation of the environment.

Marine noise and seismic testing will continue to be issues for fishing and aquaculture; following a number of Australian research findings demonstrating impacts from seismic testing. Further research scheduled for the coming year will extend the knowledge of these impacts. The seafood and oil and gas industry will continue to negotiate a way to work with fishing and aquaculture.

A broader environmental debate on the management of non-seafood specific resources will continue. Primarily with a focus on increasing numbers of species (sharks, whales and fur seals) that are well on the path to recovery. As with all stock recoveries, or changes to environmental conditions, these will have to be factored into ongoing management plans and practices.

## Societal Forecast

Australians believe sustainability is a shared responsibility, across government, commercial and community interests, with governments and commercial fishers seen as the primary custodians, with the greatest potential to influence perceptions of the sector overall. Despite the interest in sustainability, there has been a swing away by consumers from focusing on sustainability – sustainability has become mainstream like food safety and is now just expected. Replacing the focus on sustainability has been an increased awareness and discussion on humane catching and processing – being seen in a number of consumer surveys in the UK and the US.

Ensuring the quality of scientific information used to manage Australia's fisheries and marine ecosystems is important in earning the trust of stakeholders and the community in the decision-making process. Work is underway across many fisheries to improve their status and management processes. However, community concerns extend beyond fish stocks and fisheries to include many broader challenges. A key challenge for the FRDC is to invest in the research that assists understanding drivers of industry behaviour and community preferences in relation to marine resources and resource users; and provide the supporting evidence-base for decision making processes and methods to effectively communicate them.

Understanding how Indigenous communities' value fishing resources and fishing access is a key component to achieving greater participation of Indigenous people in commercial fishing and remains a focus for the FRDC Indigenous Reference Group. Building a better understanding of Indigenous values and priorities will help to facilitate the development of policy and regulations to enable greater indigenous engagement in fishing by incorporating values held by Indigenous people in relation to fishing.

Angling and sports fishing will continue to maintain its relative share of recreational activities. However, those participating in recreational fishing will invest considerably more in technology and assets to support their pastime. This will require state, territory and local governments to invest in improved facilities to access aquatic habitats to accommodate bigger and improved fishing boats.

If Australia truly aspires to have the world's best recreational fishing experiences for local anglers and tourism – then we need knowledge on this sector to inform development to ensure we can say Australia is the best place in the world to go recreational fishing. To get a better understanding of the economic and social contribution, demographics, attitudes and behaviours of recreational fishers, the FRDC have invested with the Department of Agriculture to undertake a national survey. The survey is expected to begin late 2019 and will focus on collection of key social and economic data at a national, state and regional level.

## FRDC Focus for 2019-20

FRDC sets its strategic priorities in partnership with its stakeholders. New investments in 2019-20 will focus on the three national priorities, and the priorities set out in the specific subprogram and partnership RD&E plans – the priorities and performance indicators are outlined starting in the Performance measures – Planned Outputs Section.

In addition to these strategic priorities, the FRDC looks at its portfolio and identifies areas that require adjustment to investment or focus. This starts in August, when the board reviews the FRDC's business environment and strategic direction with input from its representative organisations. The following focus areas have been identified as priorities for FRDC in 2018-19.

- Biosecurity – prevention and risk management
- Animal Welfare – turning information into practise
- Digital Strategy - Data – Progress harmonisation and increased availability
- Work health and safety (WHS) – promoting and implementing on water and on farm safety.
- Building innovation platforms and networks.

The FRDC will deliver to the Australian Government the National Carp Control Plan, underpinned by the research program that will inform the Plan and an options paper for the Australian Government to consider.

### FRDC 2020-25 RD&E Plan development

The process of developing the FRDC 2020-25 RD&E Plan has commenced. The plan will be shaped by the priorities of the Australian Government, the Australian Fisheries Management Forum, and the needs and aspirations of the sectors and industries that make up Australia's rich fishing and aquaculture community. To assist, the FRDC will be conducting an extensive consultative process over coming months. The process will be designed to provoke thought and feedback on possible future states of fishing and aquaculture in Australia; activities to respond to key internal and external driving forces; and review systems, investment frameworks and processes to improve efficiency in delivery of outputs through investment in RD&E.

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## Our Role – What we do

The FRDC invests in knowledge, innovation, and marketing to deliver increased economic, social and environmental benefits for Australian fishing and aquaculture, and the wider community.

The Fisheries Research and Development Corporation (FRDC) is one of Australia's leading authorities on fishing and aquaculture. It exists to invest public and industry money in research and development (R&D) related to fishing and aquaculture. The knowledge generated is a resource covering fishing and aquaculture issues for the public, industry and government. By virtue of the twenty-five plus years of investment in R&D, and experience gained from listening to stakeholders, FRDC has become a leader in fishing and aquaculture.

Over this period, the FRDC has evolved from being a body that simply approves money for research, to an organisation that strategically invests and guides how public and industry money is spent to improve and better understand Australian fisheries and aquaculture.

The FRDC is unique among the rural research and development corporations (RDCs) because it must balance its investment between natural resource management (sustainability), and industry productivity and development. In the case of recreational fishing, valuation does not occur in purely a market context; rather it can include societal dividends as well. Nonetheless, it still does generate economic benefit as a sector. Investment is underpinned by the goal of sustainability and profitability for fishing and aquaculture in Australia.

The FRDC aims to spread its investment in research, development and extension across the whole value-chain of the fishing and aquaculture. This means not only directly investing in research and development, but also seizing opportunities to encourage partnerships, and encouraging investment right along the supply chain, up to and including marketing. It is the FRDC's role to anticipate knowledge gaps that threaten the sustainability and value of Australia's fisheries and aquaculture before they become a problem.

The FRDC leads investment in research and development (R&D), and partners with other organisations that have the necessary capabilities to undertake varied and sometimes specialised activities. Results and outcomes of both the undertaking and extension of R&D are evaluated to measure and inform future investment.

The FRDC will however take a more hands on approach (undertaking the work) where necessary to maximise research outcomes. The FRDC itself aims to be a lean and flexible organisation able to adapt to the needs required for the best result.

The FRDC works closely with our four representative organisations and its Indigenous Reference Group to address their investment priorities. Stakeholders operate across environments that range from the northern tropics through to the southern temperate seas and cold Antarctic waters, across the country's freshwater rivers and lakes (natural and man-made), through the estuaries and to the depths of the ocean.

To this end the FRDC's strategic investments in RD&E activities are not purely economically driven but aim to benefit all stakeholders in fishing and aquaculture (commercial - wild catch and aquaculture, recreational, Indigenous) across Australia, as well the broader community.

The FRDC focus remains on Australian end users of its R&D investment; companies that participate in fishing and aquaculture, seafood consumers and the broader community. However, FRDC aims to take a worldview concerning research policy and practice for fisheries and aquaculture. The FRDC also looks to build links with key stakeholders globally, including researchers, industry and policy makers.

### Objects of the FRDC's enabling legislation—PIRD Act section 3

#### Object 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,
- (ii) achieving the sustainable use and sustainable management of natural resources,
- (iii) making more effective use of the resources and skills of the community in general and the scientific community in particular,
- (iv) supporting the development of scientific and technical capacity,
- (v) developing the adoptive capacity of primary producers,
- (vi) improving accountability for expenditure on research and development activities in relation to primary industries.

#### Object B—

Make provision for the funding and administration of marketing relating to products of primary industries.

## How we operate

The FRDC aims to spread its investment in RD&E across the whole value-chain of fishing and aquaculture, and for the benefit of both Indigenous and recreational fishers. The FRDC has a balanced investment portfolio approach to ensure its RD&E investment incorporates issues of critical national importance as well as sectoral or jurisdictional stakeholder priorities. The focus for FRDC investment remains to invest in the priorities of its stakeholders.

The FRDC RD&E Plan 2015-20 brought with it a significant change to the way planning and investment is undertaken. The plan focuses on achieving results against the three Strategic National Priorities through allocating direct investment in these areas.

### **LEAD: Strategic National Priorities**

1. Ensuring that Australian fishing and aquaculture products are sustainable and acknowledged to be so.
2. Improving productivity and profitability of fishing and aquaculture.
3. Developing new and emerging aquaculture growth opportunities.

FRDC also continues to lead on national RD&E infrastructure that addresses whole of industry and community issues and opportunities. This infrastructure consists of subprograms and coordination programs as follows:

- Indigenous Reference Group,
- Recfishing Research Subprogram,
- Aquatic Animal Health and Biosecurity Subprogram, and
- Human Dimensions Research Program,

The FRDC delivers key services to its stakeholders in the national interest and consistent with its RD&E mandate with current activities including: -Safefish, industry data collection and dissemination, and Fishnames.

**Collaborate:** FRDC will provide mechanisms and incentives for those sectors with partnership agreements to leverage their funding where there is alignment with priorities between jurisdictions and/or sectors and at the national level. The FRDC is using this model with jurisdictional Research Advisory Committees. This will see individual work plans developed and investment focused on their priorities.

**Partner:** The FRDC continues to improve the way it works with Industry Partnership Agreements (IPA). The IPA's provide greater industry control of the RD&E investment processes, and better aligns priorities with end-user needs. Funding for this RD&E comes from industry contributions, the matching contribution from the Australian Government, and additional funding from the jurisdictions.

### **FRDC's RD&E program areas**

The FRDC has five programs of RD&E investment that directly align with its governing legislation, the Primary Industry Research and Development Act 1989 (PIRD Act – see diagram previous page). The five FRDC programs are:

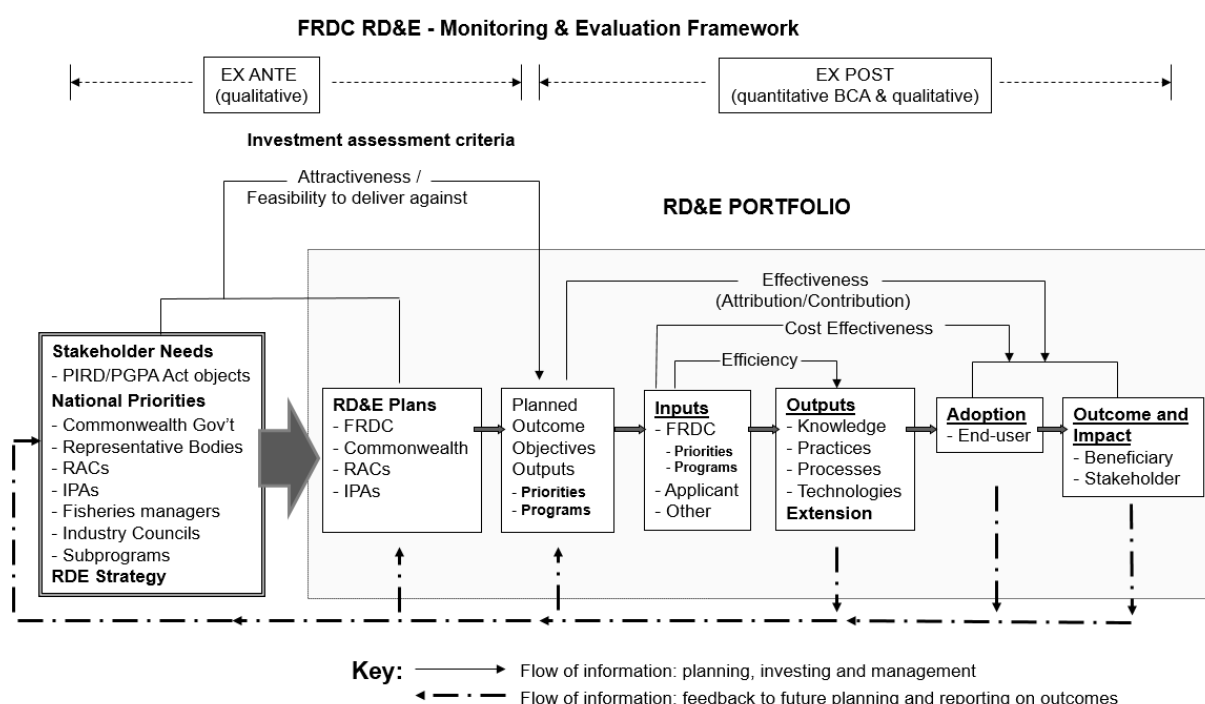
- Environment
- Industry
- Communities
- People
- Adoption.

## Aligning performance with planning

### Planning environment

The FRDC contributes to a strategic national approach by ensuring the relevant priorities for the National Marine Science Plan and the Fishing and Aquaculture RD&E Strategy are delivered. The diagram below highlights the linkages between planning processes and the delivery of outcomes. Partner priorities (industry and government) and previous RD&E are considered in planning and investment processes, to maximise leverage and reduce duplication.

On 1 July 2015 the FRDC RD&E Plan 2015-20 commenced. The Plan was developed through a comprehensive process of environmental scanning, consultation and analysis. Consultation included the Assistant Minister to the Minister for Agriculture and Water Resources, the Department of Agriculture, those involved in aquaculture, commercial fishers, Indigenous fishers, recreational fishers, research providers, post-harvest processors and fisheries managers from federal, state and territory governments. The RD&E Plan is reviewed by the board, as required by the Primary Industries Research and Development Act 1989, every year and if an update is required, it provided to the Minister for consideration.



### Stakeholder research priorities

One of the primary challenges for the FRDC is to gain a solid understanding of the needs and priorities of its diverse stakeholders. Governments are key stakeholders in establishing RD&E priorities, in particular the Commonwealth Government as the FRDC's major investor. FRDC, in assisting with developing the National RD&E Strategy and has consulted widely with these groups in developing its RD&E Plan. In addition, the FRDC has undertaken research to build on this knowledge. While there are common, national issues, each sector faces unique challenges and has specific research, development and extension needs, and these vary around Australia.

The FRDC holds regular planning and R&D prioritisation meetings at the industry partnership and jurisdiction levels. This culminates in an annual stakeholder workshop, which aims to provide an insight into the key issues around Australia at a higher level. The issues identified along with stakeholder feedback form an integral part of the priority setting for FRDC's partners and infrastructure investments. This then aligns with the processes for the call for applications either through open calls or tendering processes.



## **Funding Priorities for 2019-20**

## Key Priorities – delivering on the FRDC RD&E Plan

The FRDC RD&E Plan 2015-2020 brought with it a significant change to the way planning and investment is undertaken. The most significant is that the FRDC will directly invest to deliver results and outcomes against the national priorities. The FRDC has devolved some authority to jurisdictions through Research Advisory Committees (RACs) and industry sectors through Industry Partnership Agreements (IPAs) – to allow them greater ownership over setting research priorities and making recommendations on which projects to fund.

The key areas of focus for the FRDC priorities in the coming year are:

### LEAD

#### 1. Australian fishing and aquaculture products are sustainable and acknowledged to be so.

- Expansion of the Status of Australian Fish Stocks Reports to include information on bycatch, fisheries management and habitat, and reduce the number of undefined species in the report,
- progress the development and implementation of a national bycatch reporting framework,
- develop risk assessment tools for commercial fisheries and aquaculture,
- Best practise and on water performance,
- Ethical issues and risk assessments,
- extend new forms of communication with stakeholders and end users (consumers), and
- Finalise guidelines for Australian Fisheries Management Standards.

#### 2. Improved productivity and profitability of fishing and aquaculture.

- Implement new approaches to industry development and innovation,
- progress the development of the Easy Open Oyster,
- deliver innovation acceleration programs to assist industry development,
- develop new ways to utilise underutilised species and further improve post-harvest waste,
- invest in R&D projects to improve efficiency in wild fishery capture methods, and
- work towards understanding the social and economic contributions of recreational fishing in Australia.

#### 3. Development of new and emerging aquaculture growth opportunities.

- continuing the advances made in Yellowtail Kingfish production,
- explore options for developing aquaculture in northern Australia and scope the potential for novel species, systems and approaches, and
- invest in R&D projects that will assist grow production volumes of aquaculture species across Australia.

### National Infrastructure

- National Carp Control Plan – complete the development of the National Carp Control plan.
- Recfishing Research – Southern Bluefin Tuna Research and assist in the development of a national social and economic survey. The RD&E plan and/or priorities for this subprogram can be found at [frdc.com.au/Partners/National-Priorities-and-Subprograms/Recfishing-Research](http://frdc.com.au/Partners/National-Priorities-and-Subprograms/Recfishing-Research). This RD&E plan and associated priorities form the basis of investment for the coming financial year.
- Aquatic Animal Health and Biosecurity Subprogram – Procedures for operating in presence of disease and research towards resistant stock to enable enhanced disease resistance in industry. The RD&E plan and/or priorities for this subprogram can be found at [frdc.com.au/Partners/National-Priorities-and-Subprograms/Aquatic-Health-and-Biosecurity](http://frdc.com.au/Partners/National-Priorities-and-Subprograms/Aquatic-Health-and-Biosecurity). This RD&E plan and associated priorities form the basis of investment for the coming financial year.
- Indigenous Reference Group – Indigenous Capacity Building Program; Improved data on Aboriginal and Torres Strait Islanders fisheries resource use to better inform Indigenous community planning and fisheries agency decision making; Developing a concise summary of Indigenous R&D undertaken to date and how best to extend the outputs and Sharing and preserving knowledge through story. The RD&E plan and/or priorities for this subprogram can be found at [frdc.com.au/Partners/National-Priorities-and-Subprograms/Indigenous-Reference-Group](http://frdc.com.au/Partners/National-Priorities-and-Subprograms/Indigenous-Reference-Group). This RD&E plan and associated priorities form the basis of investment for the coming financial year.
- Human Dimensions Research Subprogram – Nationally-coordinated estimate of the economic contributions of commercial fisheries and aquaculture and effective engagement to achieve socially supported fisheries and aquaculture. The RD&E plan and/or priorities for this subprogram can be found at [frdc.com.au/Partners/National-Priorities-and-Subprograms/Human-Dimensions-Research-Subprogram](http://frdc.com.au/Partners/National-Priorities-and-Subprograms/Human-Dimensions-Research-Subprogram). This RD&E plan and associated priorities form the basis of investment for the coming financial year.

## **Partner**

### **Research Advisory Committees**

The FRDC holds an annual stakeholder workshop to gain an insight into the key issues set priorities for the jurisdictional Research Advisory Committees (RAC) annual call for applications. The RD&E plan and/or priorities for each RAC can be found on their individual webpages – [frdc.com.au/Partners/Research-Advisory-Committees](http://frdc.com.au/Partners/Research-Advisory-Committees). These RD&E plans and priorities form the basis of investment for the coming financial year.

### **Industry Partnership Agreement Priorities**

Each Industry Partnership Agreement (IPA) develops a RD&E Plan, which contain its specific priorities, from which it focuses its annual call for applications. The RD&E strategic plans for the Industry Partnership Agreements can be found on their individual webpages – [frdc.com.au/Partners/Industry-Partnership-Agreements](http://frdc.com.au/Partners/Industry-Partnership-Agreements). These RD&E plans and priorities form the basis of investment for the coming financial year.

## **Collaborate**

The FRDC encourages stakeholders – industry partners (IPAs), jurisdictions (RACs) and/or subprograms to co-invest in projects addressing common or mutual priority areas. Funds are set aside to encourage and facilitate this collaboration. It is up to each partner to identify and prioritise projects with the FRDC to access collaboration funding. The FRDC will then invest collaboration funds in these agreed activities with the RACs, IPAs and Subprograms.

## **FRDC Marketing Functions**

On 13 December 2013 the *Rural Research and Development Legislation Amendment Act 2013* amended the FRDC enabling legislation, the PIRD Act. These amendments extend the scope and range of activities the FRDC can undertake to include marketing for all its stakeholders.

The PIRD Act provides for FRDC to undertake a marketing function via voluntary contributions or where a statutory marketing levy has been implemented.

FRDC will work with industry stakeholders to develop and undertake marketing activities as required. If industry agrees to marketing activities FRDC will develop and publish a separate marketing plan in addition to its RD&E Plan. The two plans will be closely linked as RD&E will play a key role in underpinning and informing the development of any marketing activity. It will also provide the mechanism by which marketing activities will be evaluated.

### **Marketing Priorities**

- A key focus for the FRDC is to establish a robust industry marketing collection processes – whether voluntary or levy based. The FRDC will establish policies and procedures to ensure good governance of marketing funds.
- A key deliverable for the FRDC in the 2015-20 RD&E Plan is to increase exports of seafood to countries where Australia has signed a new free trade agreement (China, Korea, and Japan).

## Key Stakeholder Priorities

### Australian Prawn Farmers Association – FRDC levy payer

FRDC and the APFA enjoy a very close working relationship. The FRDC administers a research and development levy on behalf of the Australian Prawn Farmers' Association (APFA). The levy is collected by the Department of Agriculture. An administration cost is charged by the department to manage the levy.

Year	2018-19*	2019-20*	2020-21*	2021-22*
APFA R&D levy contribution	\$146,645	\$200,000	\$200,000	\$200,000
FRDC expenditure on RD&E projects	\$216,373	\$350,000	\$350,000	\$350,000

\* Estimated investment

The FRDC's investments in prawn farming R&D is driven by the APFA's RD&E Plan. The APFA has a lead role with FRDC in ensuring its priorities are met. The priorities for the APFA are available on the FRDC website [frdc.com.au/Partners/Industry-Partnership-Agreements/APFA](http://frdc.com.au/Partners/Industry-Partnership-Agreements/APFA).

## Representative Organisations

The FRDC Representative Organisations have outlined a range of priority issues. These include:

### Seafood Industry Australia

- Social licence
- Country of Origin Labelling
- Resource access
- Biosecurity
- Oil and gas
- Safety
- Mental health
- Fuel tax credits

### National Aquaculture Council

- Social/Economic Contribution
- Environmental Performance
- Animal Welfare
- Balancing industry needs with environmental obligations and responsibilities
- Biosecurity
- Aquatic Deed (Aquatic EADRA)
- Aquatic animal Health
- Aquavet Chemicals

### Indigenous Reference Group

- Primacy for Indigenous People
- Acknowledgement of Indigenous Cultural Practices
- Self-determination of indigenous rights to use and manage cultural assets and resources
- Economic development opportunities arising from Indigenous peoples cultural assets and associated rights
- Capacity building opportunities for Indigenous people are enhanced.

### Recfish Australia

#### Environment

- Habitat Restoration
- Harvest Strategy
- Natural and Artificial Reefs
- Alien Species
- Seagrass Habitat

#### Industry

- Economic value of recreational fishing
- Data
- Resource Sharing
- Social and lifestyle
- Tourism
- Funding

#### *Communities*

- Responsible Recreational Fishing
- Fishers From Culturally Diverse Backgrounds (CaLD)
- Non-fisher's
- Safety
- Recreational Fishing Only Areas
- Animal Welfare

#### *People Development*

- Future Leaders
- Representative Organisation Competency
- Fishing Clubs

#### *Adoption*

- Loss of Access
- Data Sets
- Fish Stocking

## **Fisheries Management**

The Australian Fisheries Management Forum (AFMF) have outlined in their statement of intent a range of priority issues. These include:

- Australia's fisheries and aquaculture industries are managed, and acknowledged, to be ecologically sustainable. Building broad community awareness, recognition and understanding of the status of Australia's fish stocks, and of the management structures in place for Australian fisheries and aquaculture.
- Secure access to fisheries and aquaculture resources. Lack of long term certainty, and limited progress, around access to and allocation within the fisheries and aquaculture sectors. Need for efficiency and fairness in allocation processes with outcomes providing 'optimal' benefit to the community
- Profitable and viable fisheries and aquaculture businesses. Impact of increasing costs on the profitability and viability of fisheries and aquaculture industries. Streamlining and reduction of "red tape" and more efficient delivery of management.
- Integrated aquatic resource management programs. Recognition of all users (commercial, recreational and Indigenous) in fisheries management programs to deliver sustainable and equitable outcomes.
- Supporting the health of habitats, and the broader environment, important to fisheries and aquaculture. Recognising and understanding the broader impacts of external factors on fish stocks, and ensuring adequate protection of habitats and environments on which fisheries and aquaculture depend.

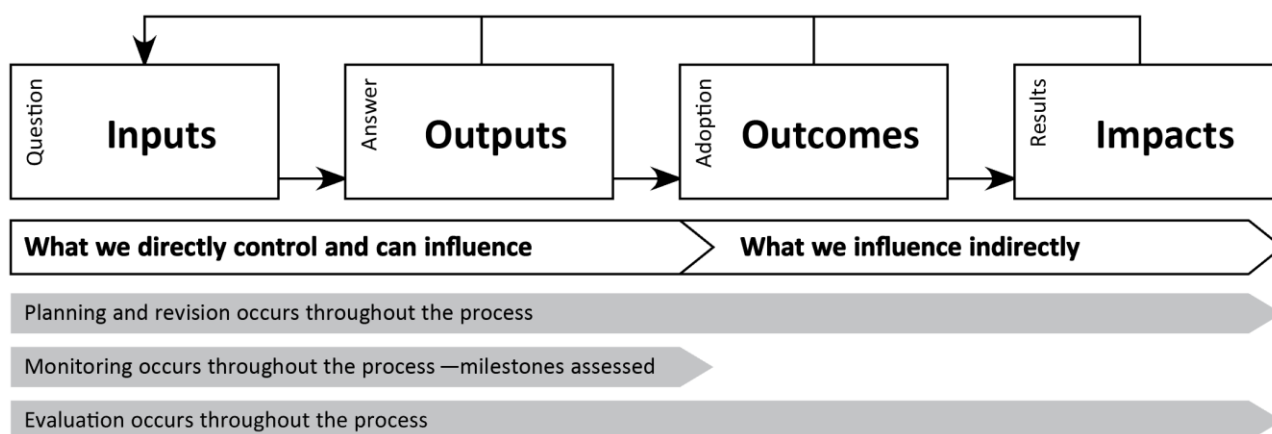
## How we measure performance

### Performance evaluation

A monitoring and evaluation (M&E) framework has been implemented to assess the progress of the FRDC RD&E Plan. The M&E framework guides the gathering of information to measure the progress in achieving delivering the outputs and outcomes. See [http://frdc.com.au/about\\_frdc/corporate-documents/Documents/FRDC%20Program%20and%20Evaluation%20Frameworks%20November%202016%20V2.pdf](http://frdc.com.au/about_frdc/corporate-documents/Documents/FRDC%20Program%20and%20Evaluation%20Frameworks%20November%202016%20V2.pdf)

The program logic model below outlines the four key areas (inputs, outputs through to outcomes and impact) that underpin the M&E framework. This model will also be used as the M&E framework for the FRDC Annual Report and the RD&E Plan 2015-20. Central to this will be a series of benefit cost analysis (BCA) evaluations undertaken against each of the FRDC programs.

The Public Governance, Performance and Accountability Act 2013 (PGPA Act) specifies requirements for good governance, performance and accountability. As a result the FRDC has adopted the Commonwealth input, output, outcome reporting framework policy. The Department of Finance has determined that the FRDC's outcome is *"increased economic, social and environmental benefits for Australian fishing and aquaculture, and the wider community, by investing in knowledge, innovation, and marketing"*. The FRDC's performance is measured against its ability to deliver this outcome.



FRDC's performance measures are designed to assess the effectiveness, efficiency and quality of its activities to meet its strategic objectives over the five years of the RD&E Plan and the coming year for this Annual Operating Plan. These include measures also published in the Portfolio Budget Statements.

The success of the FRDC's investment policy ([https://frdc.com.au/about\\_frdc/corporate-documents/Pages/corp\\_policies.aspx](https://frdc.com.au/about_frdc/corporate-documents/Pages/corp_policies.aspx)) is measured by an evaluation process that ensures the framework is based on adaptive management. The investment evaluation framework has the following structure:

- evaluation of the FRDC's performance against its priorities in its RD&E Plan
- evaluation of the Partnership Agreements performance against their priorities in its RD&E plan
- a balanced approach to investment
- total portfolio evaluation based on the rural RDC evaluation methodology ([ruralrdc.com.au/impact-assessment-performance/](http://ruralrdc.com.au/impact-assessment-performance/))
- regular review of investment policy by the board against the FRDC's and partners' plans and priorities.

The FRDC reports each year on performance (achievements of specified targets and overall performance) to the Department of Agriculture and to the Parliament via its Annual Report. The annual Portfolio Budget Statements and Funding Agreement requirement with Department of Agriculture provide the template and performance indicators for the Annual Report.

## **Performance measures for 2019-20**

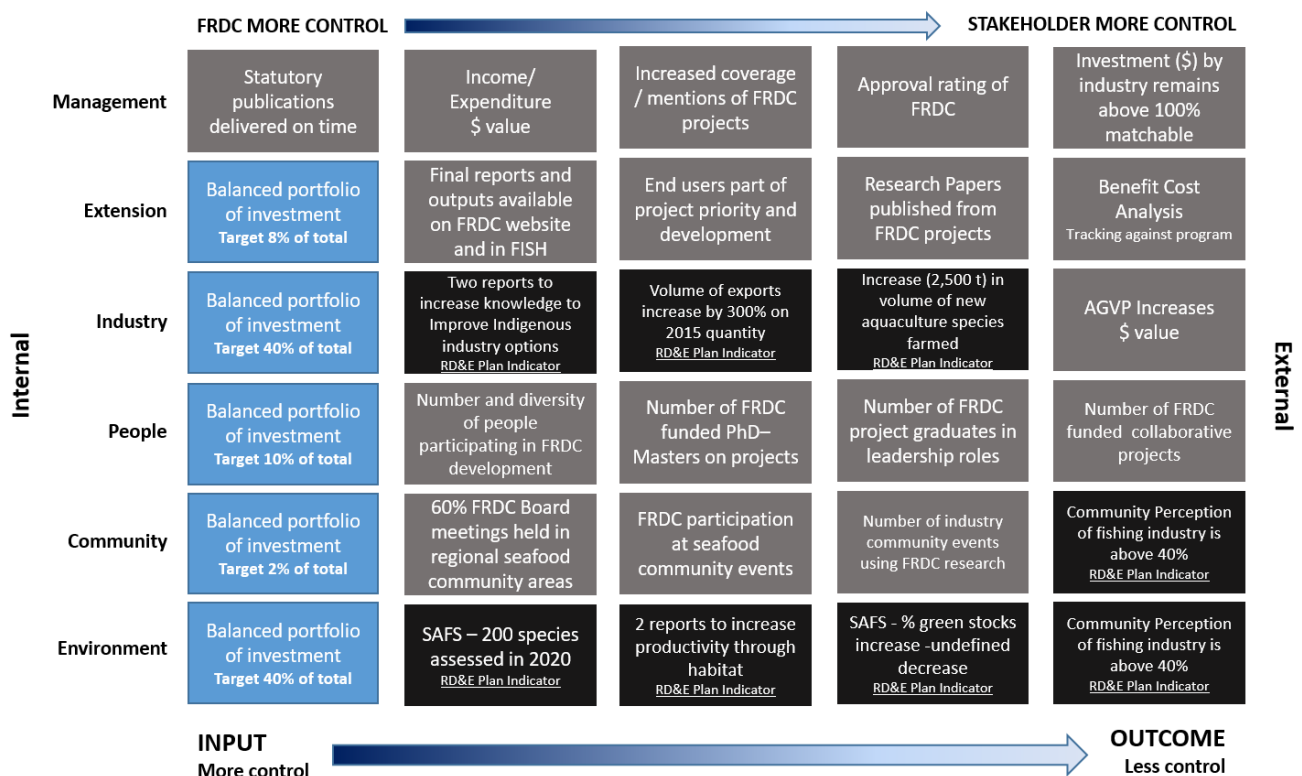
## Performance Matrix

The FRDC Finance, Audit and Risk Management (FARM) Committee continually review the key performance metrics to ensure that they are consistent with FRDC's strategic direction, and reflected the target outcomes for its investments. The challenge in developing performance indicators has been establishing what to report on – keeping in mind that the AOP only looks at a one year slice of activity and that most of the projects run over multiple years. Further, showing or measuring outcomes is difficult and may take many years. To accommodate for this the FRDC have opted to identify proxies for those measures.

In 2018-19 the FRDC undertook a Performance Review as part of the Statutory Funding Agreement, and the report noted that FRDC AOP performance measures had improved in the last 3 years. However, they have recommended that FRDC improve the performance matrix and make it easier to understand and quantify performance.

This recommendation resulted in the FRDC developing the below performance framework which includes a suite of new metrics that encapsulate:

- Inputs, outputs and outcomes;
- Internal and external measures;
- Balanced portfolio measures; and is aligned to the
- Five broad programs areas (Extension, Industry, People, Communities and Environment) and management and accountability.





## Balanced Portfolio Approach

The FRDC assesses its RD&E investments to ensure it delivers a balanced portfolio that meets the short and long-term needs of its stakeholders, including the Australian Government and community. Additionally the FRDC spreads its investment across the whole value-chain of the commercial fishing and aquaculture industry, and for the benefit of both Indigenous and recreational fishers. The FRDC delivers a balanced RD&E portfolio by investing in:

1. the FRDC's five programs
2. national jurisdictional (lead); regional and sector-focussed projects (partner); and these working together for similar priorities (collaborate)
3. long and short-term projects (an indicator of adaptive versus strategic research)
4. high and low risk projects (percentage chance of success)
5. strategic and adaptive research projects

All RD&E Plans (FRDC, sector, and jurisdictional) will demonstrate how they will achieve a balanced portfolio of RD&E investment. Note that each of these may not achieve a balanced approach individually, but in aggregate the FRDC's investment through its partners, will aim to achieve a balanced portfolio.

## Balanced Portfolio Performance Targets to 30 June 2020

### Total RD&E Expenses broken down by Program

Programs	2018–19 /%	2019–20 /%	NEW RD&E PLAN
Environment	40	40	TBC
Industry	40	40	TBC
Communities	4	2	TBC
People	8	10	TBC
Adoption	8	8	TBC
<b>Total programs expenditure</b>	<b>100</b>	<b>100</b>	

\* Note the percentages from year to year may vary depending on changes to priorities and the funding of differing size projects to meet the FRDC's balanced portfolio – long/short – big/small.

### Targets by Research Type

<b>Strategic</b>	90%	<b>Adaptive (blue sky)</b>	10%
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### Investment Targets by Project Length

<b>Short</b>	30%	<b>Medium</b>	50%	<b>Long</b>	20%
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### Investment Targets by Project Risk

<b>Low</b>	40%	<b>Medium</b>	50%	<b>High</b>	10%
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### PIRD Act requirements

	2018–19 / \$,000	2019–20 / \$,000	2020–21 / \$,000	2021–22 / \$,000
Remuneration and allowances to directors members	405	420	420	420
Cost recovery expenses to pay to the Commonwealth	15	15	15	15
Selection committee expenses and liabilities	10	NIL	60	NIL

## Financial Targets 2019-20

### Financial income targets 2015–2020

REVENUE	2018–19	2019–20	2020–21	2021-22
	\$m	\$m	\$m	\$m
<i>Australian Government 0.5% AGVP</i>	15.08	15.60	16.16	16.70
<i>Matching of industry contributions</i>	7.42	7.80	8.08	8.34
Total revenues from the Australian Government	22.50	23.40	24.24	25.04
Contributions revenue from Industry	10.00	8.59	9.70	9.95
Projects revenue from other parties	3.19	1.00	3.00	3.00
Other revenue	2.32	1.51	1.85	1.85
Marketing and promotion	0.00	0.50	1.00	2.00
<b>TOTAL REVENUE</b>	<b>38.01</b>	<b>35.00</b>	<b>39.79</b>	<b>41.84</b>

### Financial expenditure targets 2015–2020

EXPENDITURE	2018–19	2019–20	2020–21	2021-22
	\$m	\$m	\$m	\$m
Total RD&E expenditure	31.00	34.00	31.80	32.60
Total Marketing expenditure	0.00	0.45	0.90	1.80
Total Communications	0.00	0.67	0.70	0.70
Total Corporate costs	5.75	6.31	6.38	6.65
<b>TOTAL EXPENDITURE</b>	<b>36.75</b>	<b>41.43</b>	<b>39.98</b>	<b>41.75</b>

### Australian Gross value of Production

	2017-2018	2018-2019	2019-2020*
Australia	\$3,028 m	\$3,132.85 m	\$3,236.23 m
COM	\$493.36 m	\$465.88 m	\$481.25 m
NSW	\$147.50 m	\$158.58 m	\$163.81 m
VIC	\$89.99 m	\$107.58 m	\$111.13 m
QLD	\$224.53 m	\$222.40 m	\$229.74 m
WA	\$602.17 m	\$612.66 m	\$632.88 m
SA	\$457.73 m	\$452.60 m	\$467.54 m
TAS	\$947.13 m	\$1039.10 m	\$1,073.39 m
NT	\$65.71 m	\$74.01 m	\$76.45 m

\* AGVP forecast data

### RD&E Expenditure by Investment Area

Activities	2018–19	2019–20	2020–21	2021-22
LEAD				
National priorities	4.68	5.45	5.08	5.21
National infrastructure	6.09	6.78	6.35	6.50
COLLABORATE				
Collaboration fund	0.45	0.36	0.35	0.35
Response fund	1.83	1.35	1.26	1.30
PARTNER				
Partnership agreements (industry sectors)	8.52	11.20	10.46	10.75
Partnership agreements (jurisdictions)	6.45	8.86	8.30	8.49
<b>Total activities expenditure</b>	<b>28.00</b>	<b>34.00</b>	<b>31.80</b>	<b>32.60</b>

## Portfolio RD&E Expenditure

The FRDC made a conscious decision as part of the development of the 2015-20 RD&E Plan to increasingly devolve responsibility to the FRDC portfolio entities (RACs and IPAs) regarding the prioritisation and management of research investment processes, and also take responsibility for tactical and strategic investment as well as balance across the 5 programs of FRDC including people development. This provided these groups with a more flexible approach to investment with three competitive calls per year; the ability to undertake select and direct tender processes; and the ability for the Managing Director to assess applications at any time throughout the year (limited by his financial delegation).

The FRDC board is focused on being strategic, and to put in place the governance, systems and processes that will allow it to be so. This involves delegating to FRDC management those matters that it is best suited to manage, with strong governance and oversight by the board.

A portfolio approach to evaluation will allow for direct reporting on the KPIs, inputs and outcomes for the FRDC Annual Report and Annual Operational Plan. It will be centred on the RD&E Plans developed by FRDC's portfolios (IPAs and RACs) as well as the national priorities and infrastructure (subprograms).

These groups will

- undertake an annual review of their plan and priority setting process
- attend the annual FRDC stakeholder workshop to compare their portfolio against those of the other sectors/jurisdictions
- form collaborative linkages where possible
- finalise the work program for the coming year

Once finalised, the relevant FRDC portfolio manager will develop a synopsis of the planning activity considering the activities completed and future work programs. It will take the form of a report to the board by the portfolio managers. The portfolio report would have the following format and will outline:

- a summary of the portfolios activities
- progress against their RD&E Plan including progress against their nominated KPIs
- an annual report outlining achievements against the previous year's inputs and outputs such as investment against previously nominated priorities and completed RD&E activities
- current gaps based on the activities of the year such as priorities that have not yet been actioned
- an update on the current budget including available funds to the end of the plan
- an outline of the future years proposed activities with a budget allocation against it

The FRDC board will assess the suite of portfolios annually and sign off on the portfolio investment plan. Thereafter:

- portfolio management will call for applications as per the Investment in RD&E policy
- applications will be submitted and evaluated by portfolio management (using additional external review where required)
- an evaluation sheet will be prepared for the FRDC Managing Director for a decision on the application
- the FRDC portfolio manager and portfolio management will jointly monitor activities against the portfolio RD&E plan (including the budget allocation) to ensure they are meeting the agreed outcomes (and FRDC board approval is not exceeded)

Four times during the year, the board will assess one of the following:

- combined RAC report
- combined IPA report
- combined Subprogram report
- combined National Priority report

A risk based approach will be used on the applications submitted against the portfolio report. The following risks will be considered:

- Reputational – is there a risk to the reputation/brand or its stakeholders, could activities generate negative publicity?
- Political - does the proposed activity contravene government policy - requested/supported by a political party - could the activity cause embarrassment to the government
- 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

The outlined expenditure includes both current commitments and future investment in activities outlined in the respective RD&E plans and priorities nominated (see page 10 of this AOP). Variances in investment may vary within a given year depending on allocation of available funds within the respective portfolio.

## Portfolio Expenditure

	2019–20	2020–21	2021–22	2022–23	TOTAL
<b>National Priorities (Lead)</b>	\$	\$	\$	\$	\$
Priority 1 - Sustainability	2,949,322				2,949,322
Priority 2 - Industry	940,328				940,328
Priority 3 - Aquaculture	1,315,713	175,000			1,490,713
Response fund	2,197,162	1,412,293	1,365,540	1,200,000	6,174,995
Collaboration fund	2,315,693	13,275			2,328,968
<b>Subprograms (Lead)</b>					
Human Dimensions Research	580,783	600,000	600,000	600,000	2,380,783
Indigenous Reference Group	420,372	600,000	600,000	600,000	2,220,372
Recfishing research	1,150,140	600,000	600,000	600,000	2,950,140
Aquatic Animal Health & Biosecurity	1,291,735	644,000	644,000	644,000	3,223,735
<b>Industry Partnership Agreement (Partner)</b>					
Australian Abalone Growers' Association	213,875	196,000	196,000	196,000	801,875
Australian Barramundi Farmers' Association	563,826	174,800	174,800	174,800	1,088,226
Abalone Council of Australia Ltd	762,369	689,000	689,000	689,000	2,829,369
Australian Council of Prawn Fisheries	2,552,995	673,000	673,000	673,000	4,571,995
Australian Prawn Farmers Association	598,486	379,000	379,000	379,000	1,735,486
Australian Southern Bluefin Tuna Industry Association LTD	641,337	386,400	404,800	417,000	1,849,537
Oysters Australia	59,797	493,000	493,000	493,000	1,538,797
Pearl Consortium	219,791	368,000	368,000	368,000	1,323,791
Southern Ocean	1,947,759	625,600	575,600	575,600	3,724,559
Southern Rocklobster Limited	1,407,886	1,097,000	1,097,000	1,097,000	4,698,886
Tasmanian Salmonid Growers' Association Ltd	3,240,139	2,258,534	2,258,534	2,258,534	10,015,740
TSGA - Huon	2,420,356	654,508	654,508	654,508	4,383,880
TSGA - Petuna	464,955	258,116	258,116	258,116	1,239,303
TSGA - Tassal	1,845,434	921,842	921,842	921,842	4,610,961
Western Rocklobster Council Inc	4,814,144	1,890,000	1,890,000	1,890,000	10,484,144
<b>Research Advisory Committee (Partner)</b>					
Commonwealth	3,184,041	1,702,545	1,702,000	1,702,000	8,290,586
New South Wales	1,600,108	994,145	993,600	993,600	4,581,453
Northern Territory	1,835,628	703,339	597,200	552,000	3,688,167
Queensland	2,460,760	1,012,545	1,012,000	1,012,000	5,497,305
South Australia	1,131,541	1,152,545	1,153,000	1,104,000	4,541,086
Tasmania	2,448,240	920,545	920,000	920,000	5,208,785
Victoria	2,087,112	789,949	782,000	782,000	4,441,061
Western Australia	2,290,287	1,188,545	1,188,000	1,188,000	5,854,832
<b>Total activities expenditure</b>	<b>51,952,114</b>	<b>24,326,186</b>	<b>22,077,186</b>	<b>21,986,262</b>	<b>120,341,748</b>

In interpreting this table you should note that:

1. the numbers align with the budgets in the investment fund reports and are based on forecast dates
2. some of the activities do not continue past 2019-20, as the funds currently allocated to them will be invested in new activities identified by the 2020-25 RD&E Plan planning process.
3. it has been assumed all the partnerships (Industry Partnership Agreements and Research Advisory Committees) will continue with their existing funding formulae; albeit that assumption will be tested during 2019-20.
4. it has been assumed that the level of investment in subprograms will continue over the four years – noting that the composition of those subprograms may change over time.
5. the 2019-20 total of \$52m represents the new income expected for that year, plus the carryover unspent funds from prior years. As the FRDC has budgeted for project expenditure of \$34m in 2019-20 (generating a \$6.4m loss), the remaining \$18m will carry forward to future years

## Performance Indicators 2019–20

<b>PRIORITY 1 – Australian fishing and aquaculture products are sustainable and acknowledged to be so</b>	
<i>RD&amp;E Plan 2015-20 Performance criteria</i>	<i>Year target</i>
Perception of the commercial fishing industry increased from 28 per cent to 40 per cent by 2020.	Perception of industry increases to 36 per cent.
<b>PRIORITY 2 – Improved productivity and profitability</b>	
<i>RD&amp;E Plan 2015-20 Performance criteria</i>	<i>Year target</i>
Understand the quantity of potential production from Australia's fishing and aquaculture resources.	One report completed on quantity of potential production from Australia's fishing and aquaculture resources.
<b>PRIORITY 3 – Developing new and emerging aquaculture growth opportunities</b>	
<i>RD&amp;E Plan 2015-20 Performance criteria</i>	<i>Year target</i>
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.	2,000 tonnes of additional production.
<b>Partner and collaboration</b>	
<i>RD&amp;E Plan 2015-20 Performance criteria</i>	<i>Year target</i>
Partners have a RD&E plan.	90 per cent of partners have an RD&E Plan.
Partners invest in a balanced portfolio across the FRDC purpose themes – environment, industry, communities, people and extension.	Investment portfolios include investment across FRDC purposes.
<b>Corporate governance</b>	
<i>Performance criteria</i>	<i>Year target</i>
Projects focus on the FRDC Board's assessment of priority research and development issues.	95 per cent are a priority.
Projects are assessed as meeting high standards/peer review requirements for improvements in performance and likely adoption.	95 per cent are a high priority.
Maintain ISO9001:2008 accreditation.	FRDC maintains Certification.
Submit planning and reporting documents in accordance with legislative and Australian Government requirements and timeframes.	100 per cent met Government requirements.
Implement best practice governance arrangements to promote transparency, good business performance and unqualified audits.	Achieve unqualified audit result.
Demonstrate the benefits of RD&E investments by positive benefit cost analysis results.	Benefit analysis undertaken on one investment area.
<b>Marketing</b>	
<i>Performance criteria</i>	<i>Year target</i>
Marketing funds collected for marketing events.	\$350,000 collected
Establish full statutory marketing levy collection with industry sectors for sectors – where requested and pending Levy being established.	One marketing levy established

## Performance Indicators 2020–21

<b>PRIORITY 1 – Australian fishing and aquaculture products are sustainable and acknowledged to be so</b>	
<i>RD&amp;E Plan 2015-20 Performance criteria</i>	<i>Year target</i>
Perception of the commercial fishing industry increased from 28 per cent to 40 per cent by 2020.	Perception of industry increases to 40 per cent.
<b>Partner and collaboration</b>	
<i>RD&amp;E Plan 2015-20 Performance criteria</i>	<i>Year target</i>
Partners have a RD&E plan.	90 per cent of partners have an RD&E Plan.
Partners invest in a balanced portfolio across the FRDC purpose themes – environment, industry, communities, people and extension.	Investment portfolios include investment across FRDC purposes.
<b>Corporate governance</b>	
<i>Performance criteria</i>	<i>Targets</i>
Projects focus on the FRDC Board's assessment of priority research and development issues.	95 per cent are a priority.
Projects are assessed as meeting high standards/peer review requirements for improvements in performance and likely adoption.	95 per cent are a high priority.
Maintain ISO9001:2008 accreditation.	FRDC maintains Certification.
Submit planning and reporting documents in accordance with legislative and Australian Government requirements and timeframes.	100 per cent met Government requirements.
Implement best practice governance arrangements to promote transparency, good business performance and unqualified audits.	Achieve unqualified audit result.
Demonstrate the benefits of RD&E investments by positive benefit cost analysis results.	Benefit analysis undertaken on one investment area.
<b>Marketing</b>	
<i>Performance criteria</i>	<i>Year target</i>
Marketing funds collected for marketing events	\$400,000 collected

## The Australian fishing and aquaculture sectors

Fishing and aquaculture in Australia is one of the most complex of Australia's primary industries in terms of both its structure and the natural resources on which it depends. Their business environment is more complex by their dependence on access to natural resources managed for the long-term interests of present and future generations. Australian fishing and aquaculture comprises five sector groupings:

- Aquaculture;
- Commercial;
- Indigenous;
- Post-harvest; and
- Recreational.

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

The commercial sector comprises approximately 120 wild catch fisheries and 70 aquaculture species. Commercial seafood and products (e.g. pearls) were valued at \$3.0 billion in 2017–18. The recreational sector has 3.4 million participants, who were estimated in 2013, to provide a combined economic value of around \$2.56 billion.

The aquaculture sector can generally be described as business 'smart', value-adding ventures, with larger operators processing, packaging and branding their own products. The sector is currently dominated by Atlantic Salmon, with significant contributions from oyster producers and ranching of Southern Bluefin Tuna.

The wild-catch industry is made up of about 15,000 licence holders. A small number of operators take a large portion of the harvest (by value and volume). These are diverse operations that may hold multiple licences. They may operate in a range of fisheries and, in some instances, are integrated along the supply chain. The remainder of the wild-catch sector is made up of a large number of small owner-operator businesses. They are vital to sustaining small coastal communities, contribute substantially to regional employment and regional identity, and are passionate about what they do—supplying Australia with seafood.

Recreational fishing provides for millions of Australians a variety of opportunities from exercising and relaxing, socialising with friends and family, meeting new people, seeing new places, engaging with nature, and providing a source of fresh individually sourced food.

Australia's commercial seafood production only accounts for around 20-30 per cent of domestic consumption. Combined with the relative strength of the Australian dollar, the commercial sector is re-orienting its market portfolio towards better serving the Australian market. Increasingly, value chains will encompass both domestic and imported product. Other factors, such as further improvements in fisheries management and better utilisation of catch, will become more important. However, it is not only seafood for consumption that Australia produces. Australian pearls are high value items that are produced at the highest level of quality through leading edge technology by a long standing and iconic industry.

Aboriginal and Torres Strait Islander people participate in commercial and recreational fishing, as well as customary fishing. The legal rights around Indigenous fishing are being refined over time and some aspects are now part of existing legislation and court decisions.

**Table 1: Gross value of production and production for Australian fishing and aquaculture results 2016–17\***

Australian Fisheries Statistics *	2014-15	2015-16	2016-17
The wild catch sector	\$1.62 billion	\$1.75 billion	\$1.74 billion
	152,432 tonnes	174,247 tonnes	166,022 tonnes
The aquaculture sector	\$1.2 billion	\$1.31 billion	\$1.46 billion
	89,318 tonnes	97,208 tonnes	93,966 tonnes
Overall production	\$2.80 billion	\$3.02 billion	\$3.06 billion
	236,803 tonnes	266,556 tonnes	255,301 tonnes

\* The figures quoted from 2018 *Australian Fisheries Statistics* (published December 2018), and are from the latest edition that can be downloaded from the FRDC website — [www.frdc.com.au](http://www.frdc.com.au)

## Relationships with stakeholders

FRDC works to a diverse and geographically dispersed group of stakeholders and the four main sectors (aquaculture, commercial fishing, Indigenous fishing and recreational fishing) are not mutually exclusive. For example, Indigenous fishers may participate in customary fishing, conduct aquaculture and commercial fishing, and fish recreationally.

FRDC's stakeholders include:

- Commonwealth, state and territory governments, including fisheries and natural resources managers,
- four ministerially declared representative organisations to which FRDC is accountable under legislation.
- all fishing and aquaculture sectors – in particular levy paying sectors (APFA),
- Indigenous Australians
- the Australian community, on whose behalf aquatic natural resources are managed,
- seafood consumers ,
- the research community, including universities, government fisheries organisations, further education organisations (e.g. TAFE), international research organisations and private-sector research providers,

FRDC regularly engages with its stakeholders through a range of mechanisms including:

- regular meetings with FRDC's four representative organisations, and the Indigenous Reference Group
- biannual meetings with Department of Agriculture to discuss progress on implementing the Funding Agreement,
- the Governance Committee that supports the National Fishing and Aquaculture RD&E Strategy and the National Research Providers Network which represents fisheries researchers (FRDC is a member of both groups),
- Research Advisory Committees (RACs),
- partnerships between FRDC, industry sectors and jurisdictions,
- the Australian Fisheries Management Forum, representing government agencies responsible for fisheries management (FRDC is an observer),
- FRDC subprograms and coordination programs,
- membership of the Council of Rural Research and Development Corporations and its sub-committees and working groups, and
- membership of the National Marine Science Committee.

The FRDC board regularly meets at locations where it can meet first hand and engage with those involved in fishing and aquaculture and discuss their issues. In developing the projects that address the FRDC's five programs, priorities are established in association with the FRDC's stakeholders.

The FRDC works with its stakeholders and partners to undertake program management in an effective manner, and to disseminate the results and assist with their adoption, including when appropriate, commercialisation. Over the course of the year, the FRDC will continue to collaborate and work with its stakeholders and partners.

### Research Advisory Committees (RACs)

The FRDC supports a network of RACs – one covering Commonwealth fisheries and one in each state and the Northern Territory. The RACs play an important role in delivering on efficient, effective planning and investment processes; and the development of project applications. The FRDC works to ensure a majority of research funding applications are submitted through, reviewed and prioritised by the RACs. The RACs represent all fishing and aquaculture, fisheries managers and researchers; and most also have environmental and other community interest representation.

### Australian Government

The Minister for Agriculture and the Department provide the key priorities that need to be addressed from an Australian government perspective. The Department acts as the day to day policy intermediary between the office of Minister, Assistant Minister and the FRDC. The Australian Fisheries Management Authority (AFMA) and the Department of the Environment also play an important role in contributing to identifying research priorities.

### Australian Fisheries Management Forum (AFMF)

AFMF is attended by the heads of the Commonwealth, state and territory government agencies responsible for management of fisheries and aquaculture. AFMF discusses issues relating to fisheries and aquaculture management.

The FRDC understands that adoption of research outputs by management agencies is a key to optimising management outcomes. It will continue to work with AFMF, participating as an invited representative to its meetings, providing advice and ensuring AFMF priorities are incorporated into planning and prioritisation processes.



## **Consultation with representative organisations**

The FRDC has four representative organisations with which it consults with:

- Seafood Industry Australia (SIA).
- Australian Recreational and Sport Fishing Industry Confederation Inc. (trading as Recfish Australia)
- National Aquaculture Council Inc. (NAC).
- Commonwealth Fisheries Association Inc. (CFA).

Under section 6.6 of the FRDC Funding Agreement with the Department of Agriculture, the FRDC may meet travel and other expenses incurred in connection with consultation between the FRDC and each of its representative organisations. These meetings are often held in Canberra. The FRDC only reimburses direct costs associated with this consultation.

Consultation with its representative organisations allows the FRDC to gain valuable insights and their views on the RD&E priorities for their sectors. It also provides a mechanism for the FRDC to report the outcomes from the relevant RD&E investment.

## **Indigenous Australians**

Aboriginal and Torres Strait Islander people have close, interdependent relationship with land, water and living resources through customary fishing practices over tens of thousands of years. Fishing helps communities and families to retain their connection to country, reinforces social networks through the sharing of food and maintaining traditional knowledge through generations.

Australia's Indigenous communities are increasingly seeking opportunities to develop their fishery resources to achieve outcomes that include improved diets, nutrition and health; retention of young people in communities; local employment, trade and business skills; collaboration in investments and demonstration of cultural heritage. The FRDC established an expertise based Indigenous Reference Group, which is advisory in nature, to make recommendations on strategic issues relevant to Indigenous RD&E in the fishing and seafood industry.

## **Sector industry bodies**

The FRDC continues its close relationship with jurisdictional and sector bodies. The FRDC builds upon the partnerships established with individual industry sectors to funding research priorities of these, such as Southern Rocklobster Ltd, Australian Southern Bluefin Tuna Industry Association, Tasmanian Salmonid Growers' Association, Australian Pearl Producers, Oysters Australia, Western Rock Lobster Council and both the Prawn and Barramundi Farmers' Associations.

## **Rural research and development corporations**

The FRDC will continue to partner with other RDCs on a range of activities to enhance strategic outcomes. Most significant of these include environmental change, evaluation of RD&E, and the "Appetite for Excellence" primary producer's tour – a chef, waiter and restaurateur competition. Not only will the FRDC partner other RDCs at the project level, but it will also work more broadly to collaborate in functional areas. The FRDC will continue to attend meetings of the Council of Rural Research and Development Corporations (CRRDC), as well meetings of Executive Directors, Business Managers, Research Program Managers and Communications Managers. In conjunction with other RDCs, the FRDC will assist in coordinating sponsorship and participation at events like the ABARES Outlook and producer conferences. The FRDC will continue to provide advice and services in relation to project management.

## **Research Partners**

Investment in research is the FRDC's core business. As a result, it is vital to the FRDC's success that good relationships are built and maintained with its research partners. In any given year FRDC will have under management around 350+ active projects. The key research partners are:

- Industry;
- Department of Agriculture;
- Australian Fisheries Management Authority (AFMA);
- State/Territory fisheries governments and research centres;
- Commonwealth Scientific and Industrial Research Organisation (CSIRO);
- Universities;
- Cooperative Research Centres (CRCs);
- Other Rural RDCs and companies; and
- Private sector.

## The FRDC Governance framework

### The Board

The FRDC Board oversees corporate governance of the corporation and sets its strategic direction. The key areas of focus are:

- Ensuring implementation of the FRDC RD&E Plan for 2015-20;
- Delivering investment to reflect FRDC's stakeholders priorities;
- Improve Board monitoring and response to improve stakeholder engagement;
- Ensuring completion of the four year performance review under the Funding Agreement with the Department of Agriculture and implementing the recommendations from the review;
- Driving strategy to increase the uptake and commercialisation of R&D;
- Setting risk appetite and tolerance and monitoring strategies to identify evaluate and manage risk, and
- Ensuring the smooth induction of new non-executive directors

The Board will meet five times during the year and will conduct a number of meetings in regional fishing ports around the country. The board considers it essential to visit the key fishing regions to gain firsthand feedback and an appreciation of the key issues facing fishing and aquaculture.

Element	Scope
<b>Enabling legislation</b>	The Primary Industries Research and Development Act 1989 which sets out the legislative framework and rules for the establishment and operation of the FRDC.
<b>Governance legislation</b>	The <i>Public Governance, Performance and Accountability Act 2013</i> (PGPA Act) which specifies requirements for good governance, performance and accountability.
<b>Board governance</b>	Key functions include overseeing corporate governance, including the 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.
<b>Funding agreement</b>	The Australian Government enters into funding agreements with the RDCs as a means to define and govern aspects of their relationship. This is to ensure the performance of all RDCs as it is important to ensure accountability and help foster a culture of continuous improvement. The agreement between the government and FRDC establishes a framework for periodic, independent reviews.
<b>Priorities of key stakeholders</b>	Australian Government National Science and Research Priorities and Rural Research Priorities. The RD&E priorities of representative organisations: National Seafood Industry Alliance, Recfish Australia, Commonwealth Fisheries Association and National Aquaculture Council.
<b>Annual report</b>	Requirement of various legislation; Reports to the Australian Parliament and FRDC stakeholders on RD&E activities during the financial year and on measures to ensure good governance.
<b>Quality management system</b>	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.
<b>Strategic planning and priority-setting</b>	FRDC works with nation-wide Research Advisory Committees (RACs) to undertake planning for RD&E in consultation with governments, AFMF, industry, stakeholders and research partners. Priorities for RD&E at state, regional or fishery level are significantly determined by the RACs, managed subprograms and other priority-setting structures, with the FRDC determining the balance between projects funded within the RD&E programs.
<b>Performance monitoring</b>	Includes monitoring and measuring of performance to continually improve the FRDC's effectiveness and efficiency.
<b>Reporting to stakeholders</b>	Includes consultation with, and formal reporting to the three representative organisations; reporting of RD&E investment activities via FISH; and participation in conferences, workshops and other activities.

## How we manage risk

FRDC directors and management actively engage in FRDC's risk management process, with associated responsibilities and roles that reflect the individual and collective risk management environments.

Risk Management is part of the governance framework for Commonwealth agencies, and a required management tool. In addition, the FRDC also has obligations to manage its risks under the Public Governance, Performance and Accountability (PGPA) Act 2013. It is also embedded within the construct of the FRDC's Quality Management System (QMS) – which encompasses all of the FRDC's policies and procedures. FRDC's risk management framework endeavours to cover the full spectrum of risks faced by FRDC. This involves the following steps:

- **identifying** and **analysing** the main risks facing FRDC
- **evaluating** those risks and making judgements about whether they are acceptable or not
- **implementing** appropriately designed control systems to manage these risks in a way which is consistent with FRDC's risk appetite statement
- **treating** unacceptable risks by formulating responses following the identification of unacceptable risks, including actions to reduce the probability or consequences of an event and formulation of contingency plans
- **documenting** these processes, with summary tables (risk register) the main forms of documentation, supplemented by the risk management procedure, Fraud control plan procedure, Quality management system (QMS) or related documents as appropriate
- Ongoing **monitoring, communication** and **review**

The overarching risk management policy clearly outlines the FRDC's appetite for risk and the activities which are in place to ensure it is reduced to a level acceptable to the FRDC, and opportunities are maximised.

## Our strategic risks

The board sets and monitor the FRDC'S risk tolerances and appetites with a focus on strategic risks. The risk management procedure provides guidance and examples on how risk appetite and tolerance are applied.

The FRDC applies a systematic processes to identify, analyse, manage, monitor, report and control threats (mitigate) and opportunity (maximise). The result is that risk is reduced to a level acceptable to the FRDC, and opportunities are maximised.

## Our risk appetite

Risk appetite refers to the amount of risk an entity is willing to accept or retain to meet its purpose, goals or objectives. It is a statement or series of statements that describes the entity's attitude toward risk taking. Risk tolerance refers to the levels of risk taking that are acceptable in order to achieve a specific objective or manage a category of risk.

The FRDC recognises that it is not possible, or necessarily desirable, to eliminate all of the risks inherent in our work. Accepting some degree of risk in our business practices promotes efficiency and innovation. However, in other areas, for example, the safety of our staff the risk appetite (the level of risk FRDC are willing to accept) must be very low.

## Our assurance processes

FRDC is a quality-certified organisation (AS/NZS ISO 9001:2008) and its RD&E investment is supported by a rigorous, quality-management system which includes a framework of policies and procedures for reviewing performance and implementing changes to ensure continuous improvement.

FRDC's Audit Committee provides independent assurance and assistance to the Board on its risk, performance, control and compliance framework and our external accountability responsibilities.

## Our fraud control

The FRDC applies the Commonwealth's Fraud Control Framework as a matter of best practice. The FRDC aims to reduce the likelihood and impact of fraud by implementing policy that is consistent with the requirements of the Commonwealth Fraud Control Framework.

Staff members are responsible for managing the risk of fraud within the scope of their activities by integrating fraud control into everyday business management practices. Staff members have an understanding of their roles and responsibilities with respect to fraud control and how they can contribute to preventing fraud in their area.

The FRDC fosters the highest standards of ethical behaviour and mitigates the risk of fraud through the FRDC's financial, management and operating systems.

## List of abbreviations and acronyms

AGVP	average gross value of production
AOP	annual operational plan
APFA	Australian Prawn Farmers Association
DA	Australian Government Department of Agriculture
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
FRDC	Fisheries Research and Development Corporation
GVP	gross value of production
IPA	Industry Partnership Agreement
IRG	Indigenous Reference Group
ISO	International Organization 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 Statements
R&D	research and development
RAC	Research Advisory Committees
RD&E	research, development and extension
RDC	Research and Development Corporation
SAFS	Status of Australian Fish Stocks

## Investment Against Government Research Priorities

### Australian Government research priorities

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

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

### Government Research Priorities attributed to each RD&E Program (\$ and %)

#### Rural Research, Development and Extension Priorities

[agriculture.gov.au/ag-farm-food/innovation/priorities](http://agriculture.gov.au/ag-farm-food/innovation/priorities)

RD&E Priorities	Total expenditure	
	\$	%
Adoption of R&D	7,990,000	23.5
Advanced technology	5,678,000	16.7
Biosecurity	3,570,000	10.5
Soil, water and managing natural resources	16,762,000	49.3
<b>TOTAL</b>	<b>34,000,000</b>	<b>100</b>

#### Science and Research Priorities

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

	Total expenditure	
	\$	%
Food	5,372,000	15.8
Advanced manufacturing	1,020,000	3.0
Cybersecurity	340,000	1.0
Energy	340,000	1.0
Environmental change	5,644,000	16.6
Health	1,462,000	4.3
Resources	680,000	2.0
Soil and water	18,802,000	55.3
Transport	340,000	1.0
<b>Total</b>	<b>34,000,000</b>	<b>100</b>

**Portfolio Budget Statements 2019-20**

## Corporate Entity - General Government Sector Not-For-Profit

Table 3.1 Comprehensive Income Statement (Showing Net Cost of Services) for the period ended 30 June

	2018–19 Estimated actual \$'000	2019–20 Budget \$'000	2020–21 Forward estimate \$'000	2021–22 Forward estimate \$'000	2022–23 Forward estimate \$'000
<b>EXPENSES</b>					
Employee benefits	3,824	4,021	4,183	4,350	4,524
Supplier expenses	1,733	2,097	2,000	2,100	2,200
Grants	31,000	34,000	31,800	32,600	33,580
Depreciation and amortisation	200	200	200	200	200
Other	-	1,120	1,600	2,500	2,950
<b>Total expenses</b>	<b>36,757</b>	<b>41,438</b>	<b>39,783</b>	<b>41,750</b>	<b>43,454</b>
<b>LESS:</b>					
<b>OWN-SOURCE INCOME</b>					
<b>Own-source revenue</b>					
Interest	440	410	350	350	350
Contributions	8,948	7,384	8,500	8,755	9,100
Other	3,052	2,600	5,500	6,500	7,000
<b>Total own-source revenue</b>	<b>12,440</b>	<b>10,394</b>	<b>14,350</b>	<b>15,605</b>	<b>16,450</b>
<b>Total own-source income</b>	<b>12,440</b>	<b>10,394</b>	<b>14,350</b>	<b>15,605</b>	<b>16,450</b>
<b>Net cost of (contribution by) services</b>	<b>24,317</b>	<b>31,044</b>	<b>25,433</b>	<b>26,145</b>	<b>27,004</b>
Revenue from Government <sup>(a)</sup>					
Commonwealth contribution	25,570	24,607	25,443	26,243	27,069
<b>Total revenue from Government</b>	<b>25,570</b>	<b>24,607</b>	<b>25,443</b>	<b>26,243</b>	<b>27,069</b>
<b>Surplus/(deficit) attributable to the Australian Government</b>	<b>1,253</b>	<b>(6,437)</b>	<b>10</b>	<b>98</b>	<b>65</b>
<b>Total comprehensive income/(loss) attributable to the Australian Government</b>	<b>1,253</b>	<b>(6,437)</b>	<b>10</b>	<b>98</b>	<b>65</b>

(a) Revenue from Government includes a Commonwealth contribution under the PIRD Act and levies collected from industry by the Department of Agriculture and Water Resources for R&D activities.

Prepared on Australian Accounting Standards basis.

Table 3.2: Budgeted departmental balance sheet (as at 30 June)

	2018–19 Estimated actual \$'000	2019–20 Budget \$'000	2020–21 Forward estimate \$'000	2021–22 Forward estimate \$'000	2022–23 Forward estimate \$'000
<b>ASSETS</b>					
<b>Financial assets</b>					
Cash and cash equivalents	22,411	15,657	15,785	15,919	15,718
Trade and other receivables	3,468	3,493	3,197	2,996	3,096
Investments	5	5	5	5	5
<b>Total financial assets</b>	<b>25,884</b>	<b>19,155</b>	<b>18,987</b>	<b>18,920</b>	<b>18,819</b>
<b>Non-financial assets</b>					
Property, plant and equipment	132	122	126	126	132
Intangibles	940	1,100	1,260	1,420	1,580
Other	10	10	10	10	10
<b>Total non-financial assets</b>	<b>1,082</b>	<b>1,232</b>	<b>1,396</b>	<b>1,556</b>	<b>1,722</b>
<b>Total assets</b>	<b>26,966</b>	<b>20,387</b>	<b>20,383</b>	<b>20,476</b>	<b>20,541</b>
<b>LIABILITIES</b>					
<b>Payables</b>					
Suppliers	172	190	188	188	188
Projects	250	250	250	250	250
<b>Total payables</b>	<b>422</b>	<b>440</b>	<b>438</b>	<b>438</b>	<b>438</b>
<b>Provisions</b>					
Employee provisions	957	797	785	780	780
<b>Total provisions</b>	<b>957</b>	<b>797</b>	<b>785</b>	<b>780</b>	<b>780</b>
<b>Total liabilities</b>	<b>1,379</b>	<b>1,237</b>	<b>1,223</b>	<b>1,218</b>	<b>1,218</b>
<b>Net assets</b>	<b>25,587</b>	<b>19,150</b>	<b>19,160</b>	<b>19,258</b>	<b>19,323</b>
<b>EQUITY*</b>					
Reserves	413	413	413	413	413
Retained earnings	25,174	18,737	18,747	18,845	18,910
<b>Total Equity</b>	<b>25,587</b>	<b>19,150</b>	<b>19,160</b>	<b>19,258</b>	<b>19,323</b>

\* 'Equity' is the residual interest in assets after deduction of liabilities.

Prepared on an Australian Accounting Standards basis.



**Table 3.4: Budgeted departmental statement of cash flows (for the period ended 30 June)**

	2018–19 Estimated actual \$'000	2019–20 Budget \$'000	2020–21 Forward estimate \$'000	2021–22 Forward estimate \$'000	2022–23 Forward estimate \$'000
<b>OPERATING ACTIVITIES</b>					
<b>Cash received</b>					
Receipts from Australian Government	25,570	24,607	25,443	26,243	27,069
Contributions	11,211	9,959	14,282	15,446	15,984
Interest	440	410	350	350	350
<b>Total cash received</b>	<b>37,221</b>	<b>34,976</b>	<b>40,075</b>	<b>42,039</b>	<b>43,403</b>
<b>Cash used</b>					
Employees	3,879	4,181	4,195	4,355	4,524
Suppliers	1,817	3,199	3,602	4,600	5,150
Projects	31,058	34,000	31,800	32,600	33,580
<b>Total cash used</b>	<b>36,754</b>	<b>41,380</b>	<b>39,597</b>	<b>41,555</b>	<b>43,254</b>
<b>Net cash from (used by) operating activities</b>	<b>467</b>	<b>(6,404)</b>	<b>478</b>	<b>484</b>	<b>149</b>
<b>INVESTING ACTIVITIES</b>					
<b>Cash used</b>					
Purchase of property, plant and equipment	50	50	50	50	50
Purchase of Intangibles	300	300	300	300	300
<b>Total cash used</b>	<b>350</b>	<b>350</b>	<b>350</b>	<b>350</b>	<b>350</b>
<b>Net cash from (used by) investing activities</b>	<b>(350)</b>	<b>(350)</b>	<b>(350)</b>	<b>(350)</b>	<b>(350)</b>
<b>Net increase (decrease) in cash held</b>	<b>117</b>	<b>(6,754)</b>	<b>128</b>	<b>134</b>	<b>(201)</b>
Cash and cash equivalents at the beginning of the reporting period	22,294	22,411	15,657	15,785	15,919
<b>Cash and cash equivalents at the end of the reporting period</b>	<b>22,411</b>	<b>15,657</b>	<b>15,785</b>	<b>15,919</b>	<b>15,718</b>

Prepared on Australian Accounting Standards basis.

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