



FRDC

The Commonwealth Research Advisory Committee RD&E Plan provides a framework to identify the key strategic research needs of the fisheries and aquaculture sectors under its jurisdiction from 2018 – 2023

Commonwealth Research Advisory Committee RD&E Plan

Research, Development and
Extension Plan 2018 – 2023

Commonwealth Research Advisory Committee RD&E Plan

EXECUTIVE SUMMARY

The Fisheries Research and Development Corporation (FRDC) invests in research, development and extension through the guidance of Research Advisory Committees (RACs). The Commonwealth Research Advisory Committee (COMRAC) is a board of experts responsible for facilitating the identification and delivery of efficient and effective research through a strategic and tactical approach to research prioritisation.

COMRAC has developed a 5-year Research, Development and Extension (RD&E) Plan that provides a framework to identify and invest in the research needs of Commonwealth stakeholders between 2018 and 2023. The intent is to ensure a healthy marine ecosystem, and efficient, productive and profitable fisheries (including commercial, Indigenous and recreational).

To achieve this outcome, COMRAC has established the following key research goals:

1. Ensure that the Commonwealth fisheries and aquaculture industries are sustainable and acknowledged to be so;
2. Improve productivity and benefits for Commonwealth fisheries and aquaculture;
3. Develop new and emerging growth opportunities and other benefits within Commonwealth fisheries and aquaculture; and
4. Inform and respond to community values in relation to Commonwealth fisheries and aquaculture.

In meeting these goals, COMRAC expects to invest up to \$8 million over 5 years into strategic RD&E that aligns to the following priority areas under the FRDC's investment programs:

Environment

- Improved monitoring and observation systems
- Better assessment approaches, and harvest and management strategies
- Better managed fishing impacts and interactions
- Reduced environmental impacts on fisheries

Industry

- Improved net economic returns for Commonwealth fisheries
- Effective and efficient fisheries management
- Strengthened access to resources
- New and emerging opportunities identified and benefits developed

Communities

- Community values identified, measured and equated to economic values
- Indigenous fishery values incorporated into decision making
- More inclusive and effective community consultation
- Increased stakeholder capacity to engage in fishery management and decision making

People

- Broader training and awareness programs across more stakeholders
- Future leaders and innovators identified and trained across all sectors
- Increased engagement across sectors and industry

Adoption

- Barriers to adoption identified
- Global best practice documented
- Adoption targets and delivery pathways defined
- Adoption strategies implemented

Commonwealth Research Advisory Committee RD&E Plan

CONTENTS

EXECUTIVE SUMMARY	2
CONTENTS	3
1. CONTEXT	3
1.1 Purpose	3
1.2 Fisheries Overview	3
Commercial Fisheries	3
Recreational Fisheries	5
Indigenous Fisheries	5
1.3 Commonwealth Research Advisory Committee's Role	6
COMRAC Consultation Process	6
2. COMMONWEALTH OPERATING ENVIRONMENT	7
2.1 The Co-Management Investment Model	7
2.2 Funding	7
2.3 COMRAC's Strategic Landscape	8
2.4 Challenges, Drivers and Opportunities	8
Challenges	9
Drivers	9
Opportunities	9
3. COMRAC RD&E PLAN 2017 – 2022	10
3.1 Goals	10
3.2 FRDC RD&E Investment Programs	11
Environment	11
Industry	11
Communities	11
People	11
Adoption	11
3.3 COMRAC RD&E Investment Framework	11
3.5 FORECAST INVESTMENT ACROSS STRATEGIC RD&E PRIORITIES	20
4. COMRAC RD&E PLAN DELIVERY	21
4.1 Project Extension	21
4.2 Collaboration	21
4.3 Evaluation of Projects	22
4.4 Review of the COMRAC RD&E Plan	22

Commonwealth Research Advisory Committee RD&E Plan

1. CONTEXT

Australia's Commonwealth fisheries resources span the tropics and sub-Antarctic, and are diverse in scope, scale, users and stakeholders. They include more than one hundred species harvested in single and multi-species fisheries, with commercial, recreational and Indigenous participants and interests. Commonwealth fisheries range from large, high-value fisheries with significant investment to smaller, lower value fisheries.

Commonwealth fisheries resources vary from being entirely or largely focussed on production for domestic consumption to having a substantial export orientation. Many Commonwealth fisheries are shared with Australia's Indigenous and recreational fishing sectors as well as the commercial fisheries of States and Territories; while some species move over the high seas and into the waters of other countries. Moreover, the many users of these renewable resources operate in complex, diverse and changing marine environments, with obligations to conserve and protect ecosystems and a range of threatened, endangered and protected species.

This is the complex and dynamic environment facing managers and users of Australia's Commonwealth fisheries resources. Reliable scientific knowledge is critical to meet these challenges, and the [Commonwealth Research Advisory Committee's](#) (COMRAC's) role is to work with stakeholders to identify the research priorities and ensure appropriate investments to address them.

1.1 Purpose

This COMRAC Research, Development and Extension (RD&E) Plan provides a framework to identify and invest in key strategic research needs in Commonwealth fisheries over the 5-year period 2018 to 2023. In this plan, COMRAC uses the term 'fishing' to include 'commercial, recreational and Indigenous fishing'.

The COMRAC RD&E Plan aims to ensure that the research program meets both jurisdictional and, where appropriate, national strategic RD&E goals and addresses the major challenges and opportunities facing the Commonwealth fishing and seafood industry. This plan links with other related strategies to enable efficiency and leverage research investment opportunities, including with other Fisheries Research and Development Corporation ([FRDC](#)) Research Advisory Committees ([RACs](#)), Industry Partnership Agreements ([IPAs](#)), [FRDC Subprograms and Advisory Groups](#).

1.2 Fisheries Overview

The Commonwealth Government recently amended the *Fisheries Management Act 1991* and the *Fisheries Administration Act 1991* to enable managers of Commonwealth fisheries to consider the interests of commercial, recreational and Indigenous fishing sectors. In acknowledging this change to policy, COMRAC aims to address the research needs of all Commonwealth stakeholder groups through targeted investment in RD&E.

Commercial Fisheries

Nationally, the fishing industry is Australia's sixth most valuable food-based primary industry. Australia's Commonwealth commercial fisheries generally extend from three nautical miles offshore to the boundary of the Australian Fishing Zone. Unless otherwise agreed with the Commonwealth, inside three Nautical Miles State and Territory governments are responsible for the management of fisheries. Variations subject to MOUs

Commonwealth Research Advisory Committee RD&E Plan

exist under the Offshore Constitutional Settlement. Several fishery resources of commercial importance to Australia include highly migratory species that range beyond Australian waters and shared stocks.

This table summarises the Commonwealth fisheries and their major/common commercial species.

FISHERIES	COMMERCIAL SPECIES
Bass Strait Central Zone Scallop	Commercial Scallop
Coral Sea	Tropical Rock Lobster; Bêche-de-mer; various fish, shark, crustacean & aquarium species
Eastern Tuna & Billfish	Yellowfin & Bigeye Tuna; Albacore; Swordfish
Heard Island & McDonald Island	Mackerel Icefish; Patagonian Toothfish
Macquarie Island	Patagonian Toothfish
High Seas Permits	Orange Roughy; Alfonsino; Blue-Eye Trevalla; Jackass Morwong; Yellowtail Kingfish; Smooth & Spikey Oreodory; Redthroat Emperor; Boarfish; Cardinal Fish; Rubyfish
Norfolk Island	Red Throat Emperor; Bar & Red Cod; Yellowtail Kingfish; Snapper; Silver Trevally
North West Slope Trawl	Scampi
Northern Prawn	Prawns (White, Brown & Red-Legged Banana; Brown Tiger; Blue & Red Endeavour)
Skipjack Tuna	Skipjack Tuna
Small Pelagic	Blue & Jack Mackerel; Redbait; Australian Sardine
Southern & Eastern Scalefish & Shark	Alfonsino; Bight Redfish; Blue Grenadier; Blue & Silver Warehou; Blue-Eye Trevalla; Deepwater Flathead; Deepwater Sharks; Eastern School Whiting; Elephantfish; Flathead; Gemfish; Gulper Sharks; Gummy & School Shark; Jackass Morwong; John & Mirror Dory; Ocean Jacket; Ocean Perch; Orange Roughy; Oreodory; Pink Ling; Redfish; Ribaldo; Royal Red Prawn; Sawshark; Silver Trevally
South Tasman Rise	Orange Roughy
Southern Bluefin Tuna	Southern Bluefin Tuna
Southern Squid Jig	Gould's Squid
Torres Strait	Prawns (Blue Endeavour; Brown Tiger; King); Bugs; Tropical Rock Lobster, Spanish Mackerel; Coral Trout; Gold- & Black-Lipped Pearl Shell; Trochus; Blue Swimmer Crab, Bêche-de-mer
Western Deepwater Trawl	Deepwater Bugs; Ruby Snapper
Western Tuna & Billfish	Yellowfin & Bigeye Tuna; Swordfish; Striped Marlin; Albacore

Fisheries resources are shared between sectors, including commercial, recreational (especially sports and game fishers) and Indigenous fishers. Other marine users in these waters include the oil and gas industry and maritime shipping. Aquaculture is not yet an active sector in Commonwealth waters, and provides an opportunity for future development.

Australia's Commonwealth fisheries are managed by the Australian Fisheries Management Authority (AFMA), which is responsible for the efficient and sustainable management of Commonwealth commercial fisheries on behalf of the Australian community. This is in line with the overarching policy directive of the Department of Agriculture and Water Resources (DAWR). The commercial fishing industry pays for costs directly attributed to, and recoverable from, the fishing industry, while the government pays for activities that benefit the broader community (i.e. "public good").

Commonwealth Research Advisory Committee RD&E Plan

Commonwealth statutory fishing rights are granted in most Commonwealth fisheries. Commonwealth fisheries target more than 100 species of scalefish, elasmobranchs, crustaceans and shellfish. Commonwealth fisheries comprise a range of businesses, from the small owner-operator to the larger businesses, with many specialising in species or markets, including international markets. It is a high performing industry, with increasing productivity over much of the last decade, while progressively becoming more environmentally sustainable.

Commonwealth fisheries supply sustainable and healthy seafood for Australian and overseas consumers, and contribute a 13% share to the GVP of Australia's seafood industry.

The Commonwealth fishing industry is a part of the economy of rural and regional Australia. The industry operates out of 26 main ports and many smaller landing and refuelling ports throughout Australia; primarily in remote areas. The industry provides employment for people in fisheries production and processing and in downstream industries including transportation, storage, wholesaling, retailing, catering, and tourism; as such there can be substantial multiplier effects on the value of community based fisheries.

Recreational Fisheries

The recreational and charter fishing industry includes the estimated 3 to 5 million Australians who fish recreationally and the large, medium and small businesses that provide goods and services to these fishers.

Recreational fishing is one of Australia's most popular outdoor leisure and sporting activities, and is an important part of Australia's tourism industry. Moreover, recreational fishing is being recognised for its health and well-being benefits.

Improvements in fishing and boating technology and affordability have seen a significant increase in the number of recreational fishers accessing Commonwealth fisheries. The increase in recreational fishers now accessing the Commonwealth's Southern Bluefin Tuna resource is an example of this. The increasing incidence of shared resource access requires a paradigm shift in how these resources are allocated among fishing stakeholders and how these resources are managed.

Indigenous Fisheries

Aboriginal and Torres Strait Islander people are involved in the commercial and recreational sectors, in addition to fishing in continuance of their customary rights. They therefore have interests in a range of fisheries and their wider interactions. In addition, Aboriginal and Torres Strait Islander people have a range of legal rights that guarantee their access to, and use of, traditional flora and fauna.

Commercial fishing is one of the most economically important activities in the Torres Strait and provides a significant opportunity for financial independence for the traditional inhabitants of the region. Commercial fishers target a range of fish and invertebrate species.

Outside of the Torres Strait, Indigenous fishing generally takes place in State and Territory managed waters and as such is managed by States and the Northern Territory. However, there may be Indigenous fishing interests in Commonwealth fisheries and the species taken or interacted with, which in some cases operate within three Nautical Miles of the coast.

Commonwealth Research Advisory Committee RD&E Plan

Nationally there is a need for capacity building activities to assist Indigenous stakeholders in effectively engaging in research, fisheries management, compliance and other commercial activities. Similarly, there is a need for fishery managers, researchers and compliance officers to better understand the needs and values of Indigenous stakeholders so as to improve two-way communication and understanding. This process should seek to enhance recognition, engagement and integration of Indigenous fishing knowledge into aquatic resource management processes.

Currently, there is limited data on Aboriginal and Torres Strait Islander fishing and interactions with Commonwealth fisheries.

1.3 Commonwealth Research Advisory Committee's Role

The Commonwealth Research Advisory Committee (COMRAC) is a board of experts in commercial fishing, aquaculture, recreational and Indigenous fishing, socio-economics research and marine conservation. COMRAC is established to facilitate the identification and delivery of efficient and effective research. Together with the Australian Fisheries Management Authority's (AFMA's) Research Committee and key research providers, they provide strategic planning and investment entry points for research proposals for Commonwealth fisheries research funding.

COMRAC achieves this by considering and making recommendations to the FRDC on funding applications, as well as evaluating relevant projects submitted to FRDC throughout the funding cycle. Additional roles of COMRAC are:

- Research priority setting;
- Prioritising RD&E such that the available funding best meets the needs of stakeholders;
- Recommending funding for projects and the appropriate funding mix including industry contributions and joint funding (e.g. with AFMA, research providers and/or industry); and
- Guiding and supporting how research outcomes are communicated and adopted.

COMRAC Consultation Process

COMRAC's research priorities are identified through consultation with stakeholders that articulates the priorities from each Commonwealth fishery and sector into the COMRAC Plan. COMRAC also works collaboratively with industry groups, such as the Commonwealth Fisheries Association (CFA), Australian Recreational Fishing Foundation (ARFF), Recfish Australia, Indigenous Reference Group (IRG), conservation groups (NGOs), and individual sectors to identify priorities drawn from their membership and stakeholders. In addition, COMRAC research priorities are identified through a situational scan of the jurisdiction to identify any areas of RD&E need that require short-term or immediate action. These priorities also feed into COMRAC's strategic planning and research prioritisation process.

COMRAC also collaborates with the AFMA Research Committee (ARC), whereby AFMA managed sector-based Management Advisory Committees (MACs) and Resource Assessment Groups (RAGs) highlight the research needs of each sector. This 'bottom-up' planning process solicits input from relevant industry members, fishery scientists, fishery economists, AFMA management and other interest groups. The ARC considers each fishery's research priorities and identifies potential priorities for consideration by COMRAC.

Finally, COMRAC works with many other stakeholders to drive RD&E investment in Australia's Commonwealth fisheries. RD&E investment and approval are achieved via a collaborative process between COMRAC, industry

Commonwealth Research Advisory Committee RD&E Plan

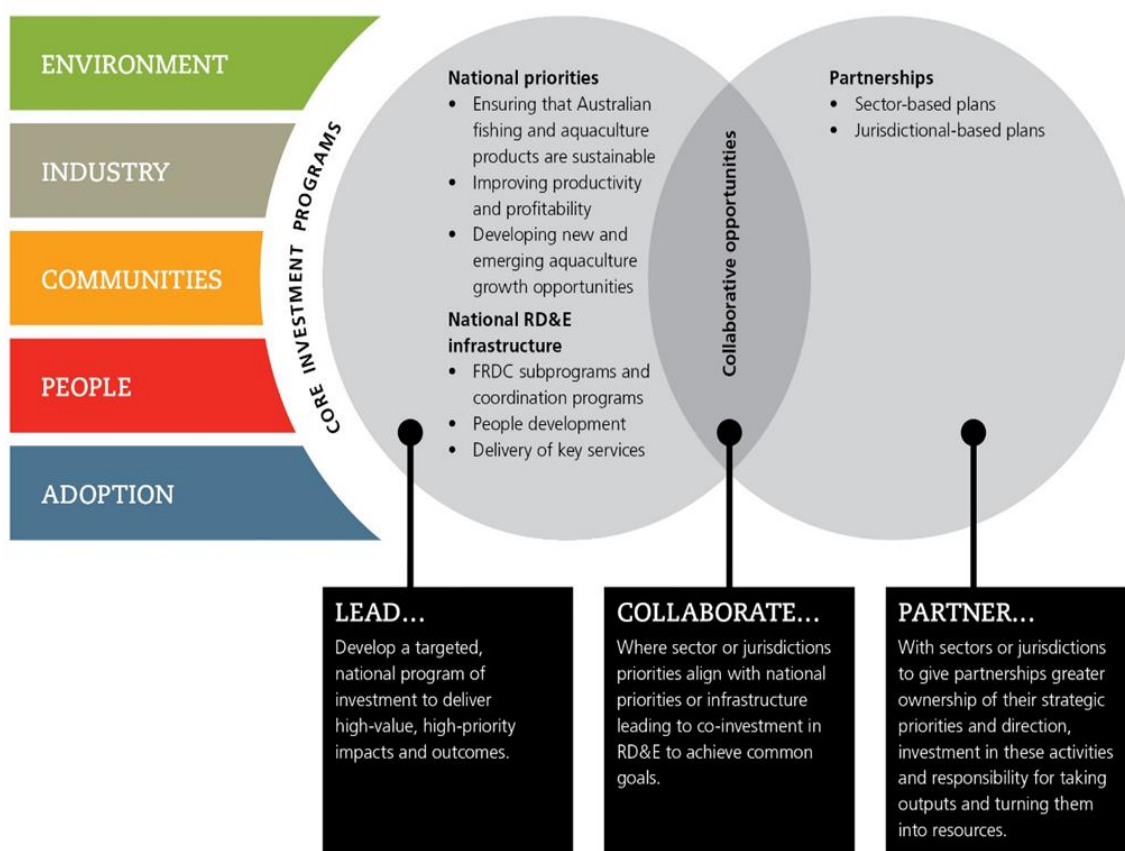
and research providers, with priorities developed and agreed at RD&E meetings. This strategic RD&E planning approach provides clear direction on priority areas, roles, responsibilities, timelines and expected outputs and outcomes.

2. COMMONWEALTH OPERATING ENVIRONMENT

2.1 The Co-Management Investment Model

Under the [FRDC's RD&E Plan 2015 – 2020](#), the FRDC provides greater ownership and authority to industry sectors in developing RD&E priorities, through Industry Partnership Agreements (IPAs) and to jurisdictions through Research Advisory Committees (RACs).

The framework for RD&E investment by the FRDC for 2015–20.



A key component of this investment model is the development of a multi-year RD&E Plan for each IPA and RAC aligned with the FRDC's 5-year RD&E Plan. This assists in developing a tailored RD&E program that:

- Meets both jurisdictional and national strategic RD&E priorities;
- Is balanced across FRDC programs (Environment, Industry, Communities, People, and Adoption);
- Balances short, medium and longer-term RD&E outcomes; and
- Is supported by a consistent RD&E planning framework across all RACs.

2.2 Funding

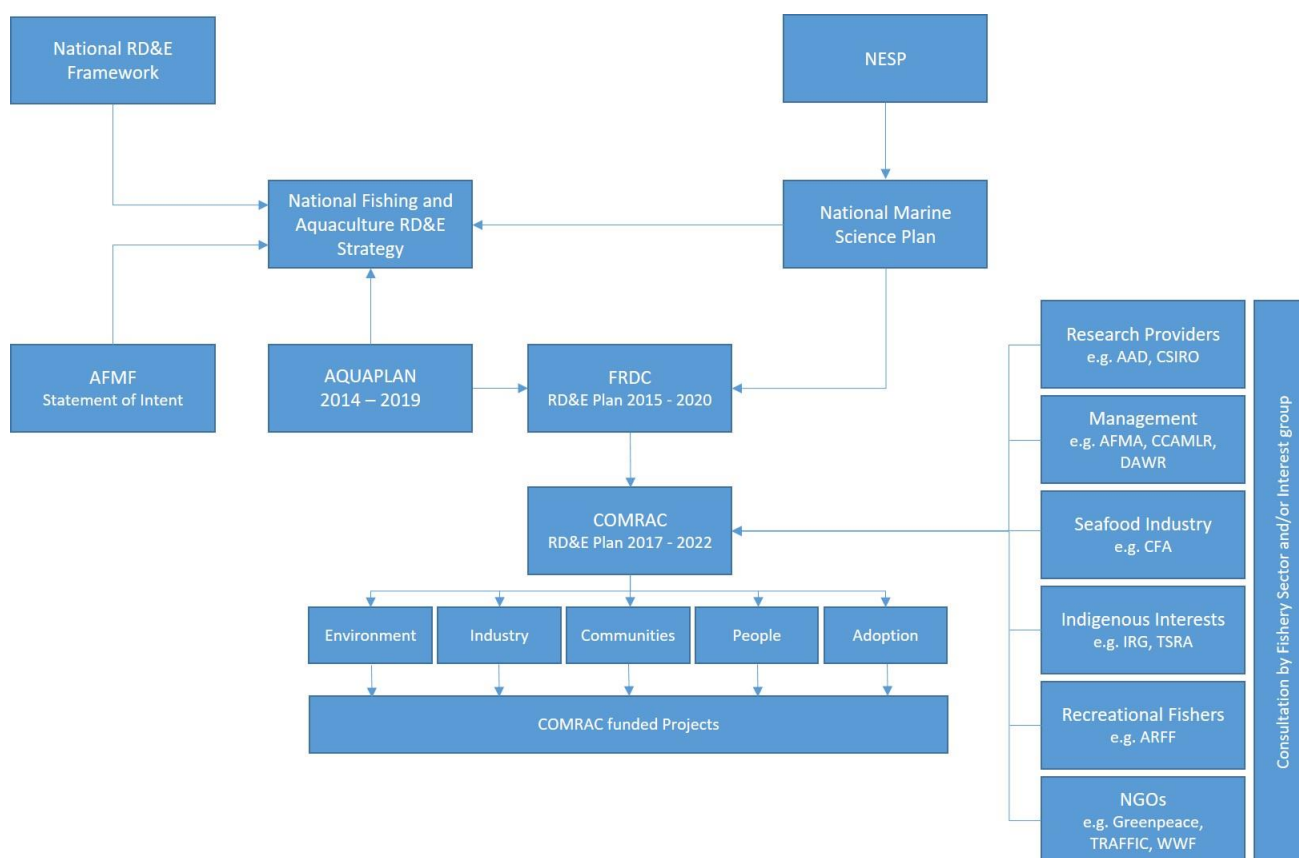
COMRAC receives an annual budget allocation from the FRDC to invest in research and development activities directed at Commonwealth fisheries priorities. The FRDC receives:

Commonwealth Research Advisory Committee RD&E Plan

- Funding from the commercial fishing sector – up to 0.25% of average gross value of production (AGVP);
- Matching funding from the Australian Government up to 0.25% of the AGVP, based on the contribution of the commercial sector; and
- “Public good” funding from the Australian Government – 0.5% of AGVP, which underpins the stewardship role Government exercises in relation to fisheries resources on behalf of the community.

2.3 COMRAC's Strategic Landscape

COMRAC works with commercial, recreational and Indigenous fishers, seafood processors, value chain partners, Commonwealth government departments and agencies, AFMA (as fisheries managers), and many stakeholders to drive RD&E Investment in Australia’s Commonwealth fisheries. This diagram summarises COMRAC’s strategic landscape, which is informed by consultation with stakeholders groups, research partners and collaborators. COMRAC is guided by the strategic direction and national policies that govern the Commonwealth’s marine and fisheries activities – for example, the National Marine Science Plan, the National Fishing and Aquaculture Strategic Plan, the National Harvest Strategy, and the National By-Catch and Discards Policy.



2.4 Challenges, Drivers and Opportunities

In developing this strategic RD&E Plan, COMRAC consulted with commercial, Indigenous and recreational stakeholders regarding the risks and issues to be faced over the coming decade. In addition, COMRAC reviewed the broad issues facing Commonwealth fisheries and their operating environment.

Commonwealth Research Advisory Committee RD&E Plan

Challenges

The geography, scale and diversity of Australia's Commonwealth fisheries resources present challenges to investors and managers of RD&E. Several fishery resources of commercial and recreational importance to Australia include species that range between Australia's Commonwealth and State-based waters and other areas of the ocean including high seas areas and the waters of other countries. Effective management of these resources can only be achieved through regional and international cooperation.

Specific challenges identified for RD&E investment in Commonwealth fisheries over the coming 5-year (2018-2023) period include:

- social acceptability of fisheries and management structures
- two-way engagement with the Indigenous and recreational fishing sectors
- harvest strategies to account for cumulative impacts of all sectors
- transparent and accountable bycatch policies
- threatened, endangered or protected species
- under-caught allowable catches
- maximising profit
- resilience for fisher livelihoods
- resource assessment
- utilising pelagic species
- an aging fleet, and underinvestment in fisheries
- synthesising existing knowledge with adoption strategies
- climate change

Drivers

Strategic drivers are forces that will shape COMRAC's strategy over the next 5 to 10 years. Many of these forces for change are global across the triple bottom line, and are well beyond the control of COMRAC and its fishery stakeholders. COMRAC and Commonwealth fisheries, the recreational sector and the Indigenous community must adapt to or leverage these forces for best advantage.

Specific drivers identified for RD&E investment in Commonwealth fisheries over the coming 5-year (2018-2023) period include:

- public perceptions and social licence
- environmental health
- resource management
- food security
- animal welfare
- globalisation
- market access and competition
- resource access, sharing and allocation
- aquatic animal health and biosecurity
- legislation that mandates improved engagement with the Indigenous and recreational sectors
- innovation and technology

Opportunities

Within the context of the identified Challenges and Drivers, COMRAC will actively pursue strategic opportunities through its actions, tactics, and the creation of tools.

Commonwealth Research Advisory Committee RD&E Plan

Specific opportunities identified by stakeholders for RD&E investment in Commonwealth fisheries over the coming 5-year (2018-2023) period include:

- multi-use marine and coastal resources
- genomics applications
- electronic monitoring
- people and career development and capacity building
- ecological risk and value assessment across users
- resilience to climate change
- co-invest across sectors to leverage key research
- vessel design and efficiency
- harvest under-caught total allowable catches (TACs)
- fishery and chain data access & traceability
- multi-year crew skilling and safety programs
- economic and social indicators and data
- engage fishers and communicate
- inform public and consumers about fishery contributions
- create travel bursaries
- attract new crew recruits
- integrate social values into fisheries
- maritime safety standards adopted
- better management of threatened, endangered and protected (TEP) species
- RD&E to assess global best practice and create tools for fishers
- decision support tools for optimal utilisation and resource sharing
- development of off-shore aquaculture initiatives

3. COMRAC RD&E PLAN 2018 – 2023

3.1 Goals

Over the life of this RD&E Plan, COMRAC will invest up to \$8 million in RD&E to ensure a healthy marine ecosystem; and efficient, productive and profitable fisheries (including commercial, Indigenous and recreational). To achieve this outcome, COMRAC has developed the following four key research goals:

1. Ensure that the Commonwealth fisheries and aquaculture industries are sustainable and acknowledged to be so,
2. Improve productivity and benefits for Commonwealth fisheries and aquaculture,
3. Develop new and emerging growth opportunities and other benefits within the Commonwealth fisheries and aquaculture,
4. Inform and respond to community values in relation to Commonwealth fisheries and aquaculture.

These goals reflect the National Priorities of the FRDC's RD&E Plan 2015 – 2020.

Commonwealth Research Advisory Committee RD&E Plan

3.2 FRDC RD&E Investment Programs

The FRDC has five [RD&E investment programs areas](#) that directly align with its governing legislation, the PIRD Act. The programs include RD&E investment that contribute to outcomes in five ways.

Environment

Support natural resource sustainability in managing fishing and aquaculture activities in Commonwealth, state and territory waters. Many components of FRDC-funded RD&E focus on improving the sustainable use of Australia's aquatic resources.

Industry

Assist the production and value of seafood and recognise and develop the economic benefits and opportunities of recreational fishing and improved Indigenous opportunities. It could be in the form of business profitability, international competitiveness, opportunities for productivity increases, resource access, and experience or wellbeing benefits. This program aims to help all sectors improve their overall performance.

Communities

Maintain the long-term sustainability of the commercial sector by understanding the interactions and co-dependence between fishing and aquaculture, and the wider community. It is enhanced by knowledge about the social importance of fisheries.

People

Attract and advances people who will lead fishing and aquaculture towards a sustainable and profitable future. The FRDC has taken a strong role in this area, from employing and developing young researchers, through to facilitating access to leadership development for all sectors of fishing and aquaculture.

Adoption

Project outputs are delivered so they can be easily adopted and support stakeholder decision making and practices. The FRDC continually works with researchers and end users to determine and implement the best way of extending these results. In addition, the FRDC is continuing to develop its systems to ensure its 'knowledge bank' is widely accessible.

3.3 COMRAC RD&E Investment Framework

RD&E investments across these program areas will be assessed to ensure the FRDC maintains a balanced portfolio that meets the short- and long-term needs of its stakeholders, including the Australian Government and the Australian community. It is important to note that some of these priorities areas overlap multiple investment programs.

RD&E Program 1. Environment

Priority Area. Improved Monitoring and Observation Systems

Actions:

- Progressively improve monitoring, control and observation systems through data sharing among Commonwealth fisheries and other industries
- Ensure monitoring and management systems cover all target and non-target, threatened, endangered and protected species, habitats and ecosystems
- Understand trophic and spatial processes in order to better coordinate monitoring, assessment and management across spatial management arrangements (e.g. MPA categories & fishery management zones)
- Develop and promote appropriate monitoring and observation systems, and guided by next generation advancements (e.g. e-monitoring)

Priority Area. Better Assessment Approaches, and Harvest and Management Strategies

Actions:

- Identify and promote stakeholder awareness and adoption of best systems
- Ensure approaches and strategies employed result in demonstrable improvements in (i) data quality and availability, and (ii) improved decision-making over time
- Develop harvest strategies that account for cumulative impacts of all sectors/stakeholders, including data-limited situations
- Quantify the catches of recreational and Indigenous fisheries; and develop harvest strategies that account for cumulative impacts of all sectors
- Identify optimal utilisation target reference points for multispecies fisheries – including biological, economic, social indicators
- Identify cross-jurisdictional and/or cross-sectoral resource sharing arrangements

RD&E Program 1. Environment (continued)

Priority Area. Better Managed Fishing Impacts and Interactions

Actions:

- Ensure effective and efficient spatial management to minimise impacts and interactions
- Enable genomic applications, including for population assessments and stock structure of target and non-target, threatened, endangered and protected species, as well as for market volume reconciliations/compliance
- Develop decision support tools for resource sharing
- Identify and adopt best practice technological solutions
- Demonstrate environmental sustainability
- Promote awareness of animal welfare and best practices in all fisheries
- Inform the development of national management standards and quality control systems to improve and promote consistent governance

Priority Area. Reduced Environmental Impacts on Fisheries

Actions:

- Raise awareness of strategies to mitigate impacts from climate change and climate variability
- Safeguard aquatic resources and ecosystems from regime shifts
- Identify and quantify significant cumulative impacts on the aquatic natural environment – including Ecological Risk Assessment and Ecological Risk Management
- Identify and preserve key fish habitat, including where habitat is subject to multiple uses

RD&E Program 2. Industry

Priority Area. Improved Net Economic Returns for Commonwealth Fisheries

Actions:

- Establish accurate understanding of the economic and social value forgone by the community, due to under-caught TACs
- Increase economic returns from selective and aggregate development of underutilised resources
- Reduce the economic loss arising from fishery and seafood waste – e.g. by-catch, processing
- Raise awareness of the economic impacts that RD&E investments contribute to the resilience and profitability of Commonwealth fisheries
- Establish traceability through supply chains (import and export) related to illegal, unreported and unregulated catches, labour, product safety, environmental assurance
- Determine the economic and social value of each sector

Priority Area. Strengthened Access to Resources

Actions:

- Increase utilisation of under-caught and undervalued species
- Inform the optimisation of access for Commonwealth harvests to preferred domestic and export markets

RD&E Program 2. Industry (continued)

Priority Area. Effective and Efficient Fisheries Management

Actions:

- Inform comprehensive management of the multi-use marine and coastal space for all resource users (includes fishing and non-fishing sectors)
- Ensure economic and financial systems are in place to identify, and optimise fishery risk, fishery catch, and fishery costs
- Access data to quantify catches and cumulative harvest strategy outputs for all fishery sectors
- Build decision tools and data to identify optimal utilisation target points for each fishery sector
- Ensure Commonwealth fishery management and governance includes the costs and benefits of any co-managed arrangement
- Identify and integrate novel approaches to collect recreational and Indigenous fishing data into decision making tools and processes
- Identify and integrate novel and efficient approaches to compliance activities

Priority Area. New and Emerging Opportunities Identified and Benefits Developed

Actions:

- Determine limits to access (boundaries) responsive to climate change and other influences
- Facilitate the development and growth of the Indigenous fishing and aquaculture sectors in Commonwealth waters

RD&E Program 3. Communities

Priority Area. Community Values Identified, Measured and Equate to Economic Values

Actions:

- Enable fisheries management to consider non-economic values in management plans
- Collate data that documents the social acceptability of fisheries and management structures
- Enhance social acceptability of fisheries and management structures
- Identify community values and where they come from

Priority Area. Indigenous Fishery Values Incorporate Into Decision Making

Actions:

- Enable fisheries management to consider Indigenous values in management plans

Priority Area. More Inclusive and Effective Community Consultation

Actions:

- Enable communication and stakeholder engagement systems and approaches that are more inclusive of relevant fishery stakeholders, and undertake more comprehensive engagement processes
- Enable better informed decision making in Commonwealth fisheries
- Ensure balanced and more equitable participation by stakeholders in the management of Commonwealth fisheries

Priority Area. Increased Stakeholder Capacity to Engage in Fishery Management and Decision Making

Actions:

- Increase the capacity of all stakeholder groups to effectively engage in and participate in Commonwealth fisheries management and decision making

RD&E Program 4. People

Priority Area. Broader Training and Awareness Programs Across More Stakeholders

Actions:

- Establish a training plan to ensure appropriate candidates are identified and trained to support fishery needs
- Establish a public awareness plan to ensure stakeholders are adequately informed of fishery strategies, activities, and views as well as the issues to be managed for the benefits of the Australian community
- Identify barriers to the adoption of best practices and policies to maintain fisher health and safety practices

Priority Area. Future Leaders and Innovators Identified and Trained Across All Sectors

Actions:

- Ensure the Training Plan (noted above) specifically identifies the human capacity required to lead Commonwealth fisheries, and identifies succession plans, leadership candidates, and development programs to achieve this outcome

Priority Area. Increased Engagement Across Sectors and Industry

Actions:

- Ensure Commonwealth fishery stakeholders have the capacity and capability to contribute to professional and informed debates on fishery issues, including management planning
- Ensure Commonwealth fishery stakeholders, managers, investors and collaborators benefit from broader transfer of knowledge about these fisheries
- Document the link between improved capacity and awareness among Commonwealth fishery stakeholders, and reductions in the level of conflict in fishery issues

RD&E Program 5. Adoption

Priority Area. Barriers to Adoption Identified

Actions:

- Promote engagement with stakeholders, innovators and investors
- Map adoption issues, drivers and barriers
- Synthesise and conduct literature review studies that collate existing information to aid in updating what is (un)known, as a guide to adoption gaps
- Document consequences of poor adoption

Priority Area. Global Best Practice Documented

Actions:

- Identify and engage with Australian and international innovators and best practice leaders
- Assess commercial, social and environmental impacts of relevant best practices
- Document best practices relevant to Commonwealth fisheries, and quantification of related impacts
- Create monitoring and review links to enable future and ongoing updates on best practice developments
- Communicate global best practices to leaders of Commonwealth fisheries
- Document relevant international obligations that Australia is signatory to identify opportunities to address gaps

RD&E Program 5. Adoption (continued)

Priority Area. Adoption Strategies Implemented

Actions:

- Identify gaps
- Increase awareness of best practices
- Increase adoption of best practices
- Enhance the efficiency and value of investment returns
- Improve competitiveness of Commonwealth fisheries

Priority Area. Adoption Targets and Delivery Pathways Defined

Actions:

- Engage with opinion leaders and likely early adopters and users of best practices across Commonwealth fisheries
- Establish adoption goals and related implementation timelines
- Identify best communication channels for each adopter cohort
- Translate relevant best practices and innovation learnings into practical RD&E projects
- Custom designed tools leading to innovation

Commonwealth Research Advisory Committee RD&E Plan

3.5 FORECAST INVESTMENT ACROSS STRATEGIC RD&E PRIORITIES

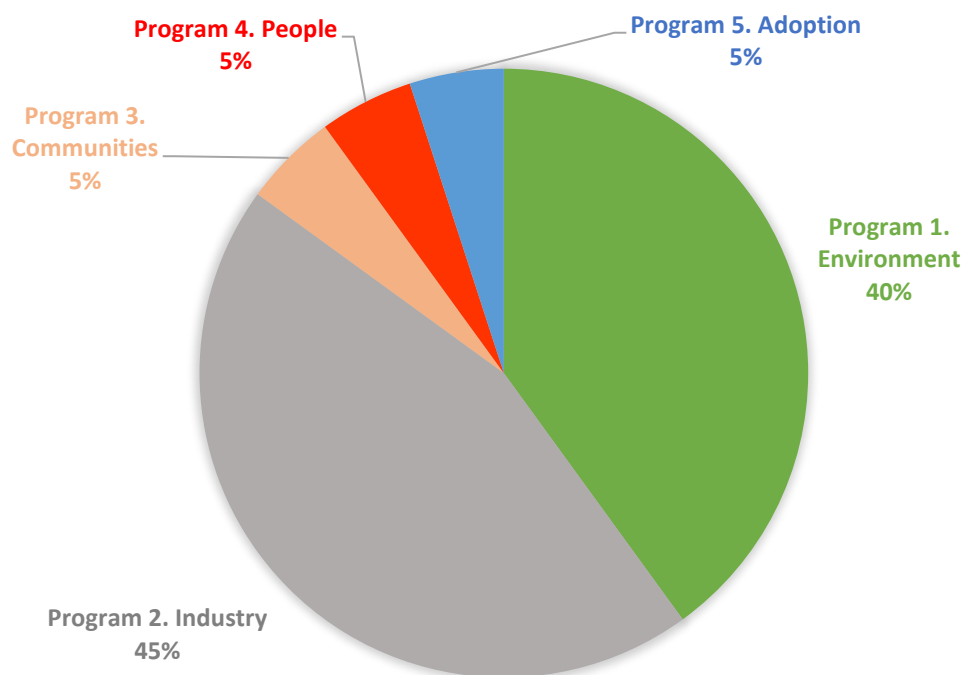
The primary role of COMRAC is to prioritise, plan and invest in fisheries research, development and extension (RD&E) activities in Commonwealth. COMRAC will adhere to the [FRDC's investment policy](#). The primary area of balance for the RACs will be across FRDCs five Program areas. Refer to figure below of indicative allocation against the FRDC Programs of investment during the life of the COMRAC RD&E Plan. COMRAC have established variance tolerances of 10% around the estimated allocation of funds against the FRDC Programs.

In addition, COMRAC will seek to achieve a balanced portfolio by investing in projects that address issues of Commonwealth and national importance for all stakeholders. COMRAC will aim to achieve an overall balance of:

- Short- and long-term projects
- Low- and high-risk projects
- Strategic and adaptive research needs
- Regional variations and needs
- Jurisdictional, national, and sector-focused projects

This investment strategy will also take into consideration the level of industry contribution and public good funds available.

ESTIMATED ALLOCATION OF FUNDING ACROSS PROGRAM AREAS 2018 - 2023



Commonwealth Research Advisory Committee RD&E Plan

4. COMRAC RD&E PLAN DELIVERY

4.1 Project Extension

The extension of research and development outputs is embedded in all FRDC-funded activities, and should be considered in the project design and proposal phase, such that expected outputs meet the needs of end users. It is a FRDC requirement that an [Extension and Adoption](#) Plan is developed and submitted for each project. It is important to highlight that extension of project outputs is an ongoing activity, and should take place throughout a project's execution through to the final published report (and often beyond).

4.2 Collaboration

COMRAC is mindful of collaborative opportunities with external funding sources (other than the FRDC) as well as between jurisdictional RACs, sector based IPAs, FRDC Subprograms and key RD&E providers in alignment with the [National Fishing and Aquaculture Research, Development and Extension Strategy 2016](#). This collaboration is designed to increase efficiency and make best use of limited funds for research. This collaboration occurs through the sharing of RD&E Plans, development of projects and funding opportunities. The annual FRDC [Stakeholder Planning Workshop](#) provides a forum for the sharing of these priorities to promote collaboration and further develop priorities and RD&E concepts.

Among the Commonwealth fishing sectors, the Northern Prawn Trawl Fishery and the Southern Ocean Fisheries have entered into Industry Partnership Agreements (IPAs) with the FRDC – Australian Council of Prawn Fishers IPA and Sub-Antarctic Fishery IPA – and as such contribute half and none (respectively) of their matched industry fund to the COMRAC operational budget. In addition, a number of [FRDC Subprograms and Advisory Groups](#) are provided annual budgets by the FRDC:

- Indigenous Reference Group
- Recfishing Research
- Human Dimensions Research
- Aquatic Animal Health and Biosecurity
- New and Emerging Aquaculture
- People Development

As such, COMRAC decision making on RD&E investment will be mindful of:

- Applications for RD&E funds that are relevant to sector-based IPAs and not the broader public good;
- Opportunities for co-investment with relevant IPAs (as well as FRDC Subprograms and external funding sources); and
- When engaging in RD&E co-investment with IPAs, investment is in proportion to the relative (perceived) industry versus public good benefits.

The FRDC has made funds available to incentivise collaboration. The following rules outline how the FRDC will manage the collaboration fund:

- Collaboration must be two or more partners (RACs, IPAs, Subprograms);
- To obtain funds the priority must align with identified national priorities or the collaborative priorities identified at the FRDC Annual Planning Workshop; and
- For every two dollars brought by the collaboration, the FRDC will provide one dollar. Therefore, if there are two partners they put a dollar in each and the FRDC will provide a dollar.

Commonwealth Research Advisory Committee RD&E Plan

4.3 Evaluation of Projects

The FRDC has adopted the Commonwealth input, output, outcome reporting framework policy. The Department of Finance and Deregulation has determined that the FRDC's planned outcome is increased knowledge that fosters sustainable economic, environmental and social benefits for the Australian fishing industry; including indigenous, recreational, commercial and aquaculture sectors, and the community; through investing in research, development and adoption. The FRDC's performance is measured against its ability to deliver this outcome.

The success of COMRAC's planning, investment, management and adoption is measured by an evaluation framework that is based on adaptive management. The structure of the evaluation framework is as follows:

- A planning process that ensures investment is made against priorities where research can contribute to a significant improvement; and
- An annual report evaluating the performance of individual projects against the targets in the RD&E Plan.

The FRDC has implemented the Rural RD&E Corporation Evaluation Framework methodology to achieve the total portfolio evaluation assessment. This is based on a rolling series of cost benefit analysis of project clusters (based on previous 5-years investment). The results of the project cluster assessments links to the agreed Key Performance Indicators (KPIs) that are relevant to that cluster. This process ensures that the investment decisions are continually adjusted to ensure optimal investment performance. In this ongoing evaluation, the FRDC will measure the performance of COMRAC investments after the life of its RD&E Plan.

During the life of the RD&E Plan, COMRAC will self-evaluate its performance against its identified program-specific Outcomes as well as monitoring investment to ensure balance in investment across the FRDC's five programs. This is to be aligned with the prioritisation and RD&E Plan review processes undertaken in the September/October RAC meeting.

4.4 Review of the COMRAC RD&E Plan

Annually, COMRAC will review their RD&E Plan. This will occur at the September/October RAC meeting. The Plan will be reviewed to:

- Assess performance against the identified Priority Areas of the Plan;
- Identify gaps against the Priority Areas of the Plan; and
- Determine priority areas for investment against these gaps.

These annual plans will be circulated to all FRDC subprograms and partnership agreements unless it is deemed that there are areas of sensitivity, Intellectual Property protection or commercial advantage that require protection. In August each year, the FRDC will hold an annual workshop for all Research Advisory Committees, Industry Partnership Agreements and National Initiatives to provide updates on priority areas for investment and any potential overlap and collaborative opportunities for the coming financial year.