The South Australian 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 2017 – 2022

FRDC South Australian Research Advisory Committee Research, Development and Extension Plan 2017 – 2022

Contents

1. CONTEXT

1.1 PURPOSE

The South Australian Research Advisory Committee Research, Development and Extension Plan provides a framework to identify the key strategic research needs of the fisheries and aquaculture sectors in South Australia from 2017 – 2022.

The South Australian Research Advisory Committee Research (SARAC) recognises "industry" as comprising the following sectors: commercial, Indigenous fishing, the aquaculture sector, recreational fishing, charter sector, as well as non-food production industries such as those associated with fertiliser, fishing bait, ecotourism and pharmaceuticals.

The research, development and extension (RD&E) Plan aims to ensure that the research program meets both South Australian and, where appropriate, national strategic RD&E goals and addresses the major challenges facing the South Australian seafood industry, including the commercial, recreational and Indigenous fishing sectors and aquaculture.

The RD&E Plan will be used to predominantly guide Fisheries Research and Development Corporation (FRDC) investment recommendations made by SARAC, by enabling an objective evaluation of both strategic and tactical fisheries and aquaculture projects.

In addition, this plan will:

- Outline the key principles guiding the investment strategy and delivery of FRDC funded fisheries and aquaculture RD&E in South Australia and, where appropriate, nationally;
- Provide a transparent guide on current needs and opportunities for fisheries and aquaculture research in South Australia;
- Identify the major RD&E needs and related research priorities for South Australia's commercial, recreational and Indigenous wild catch fisheries sectors and the aquaculture sector;
- Explain the planning, prioritisation and funding process for those seeking FRDC project funding through the SARAC; and
- Contribute to addressing Primary Industries and Regions SA (PIRSA) priorities for managing the fisheries resources in the state.

This plan will link with other related strategies to enable efficiency and leverage opportunities (e.g. other RACs, FRDC Subprograms, FRDC coordination programs, sector based Industry Partnership Agreements), as well as other funding agencies and opportunities (e.g. FRDC-PIRSA Innovative Solutions II).

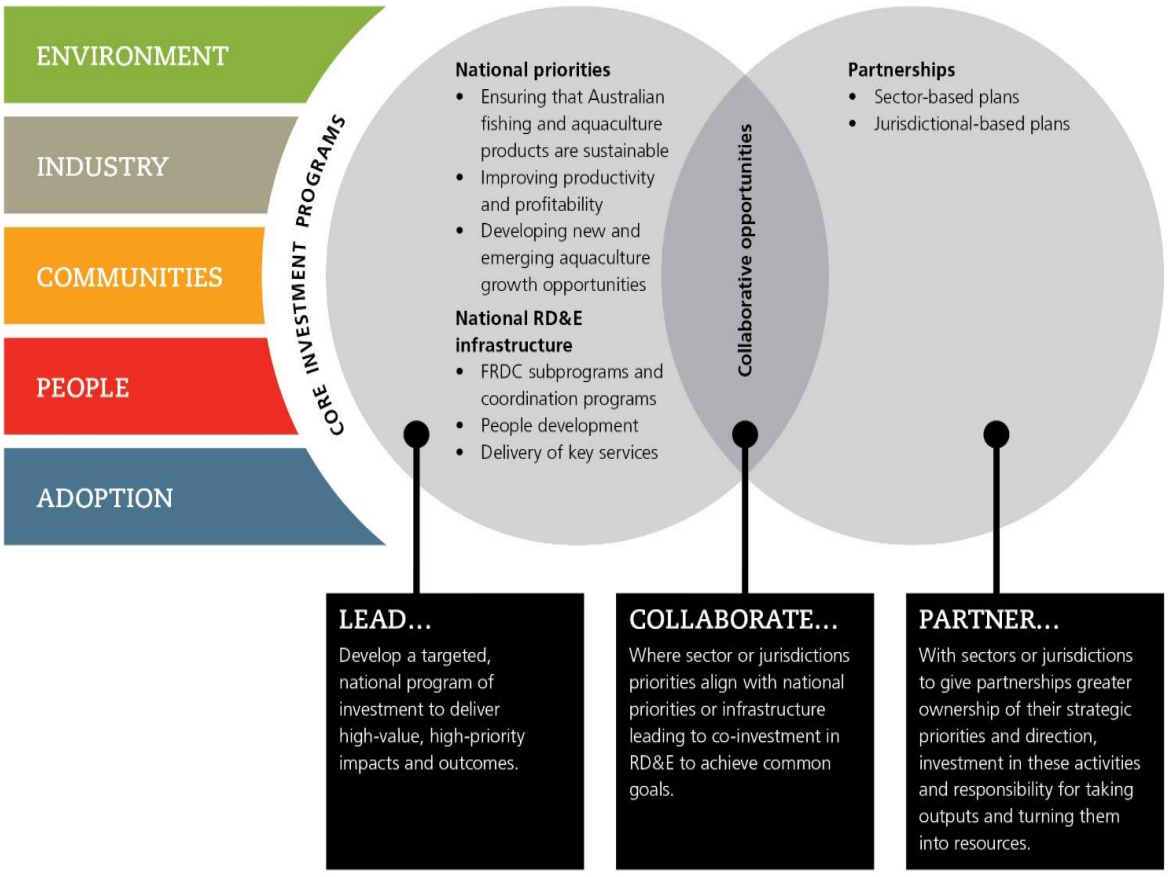
1.2 CO-MANAGEMENT INVESTMENT MODEL

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).

A key component of the co-management 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 (refer to figure below). This will assist 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);
- Focuses on short, medium and longer term RD&E outcomes;
- Is supported by a consistent RD&E planning framework across all RACs.

The framework for RD&E investment by the FRDC



1.3 SOUTH AUSTRALIAN RESEARCH ADVISORY COMMITTEE

The FRDC places considerable emphasis on the advice of the SARAC in prioritising the need for RD&E activities and assessing the quality of science and alignment with South Australia's industry and broader government (i.e. fisheries and aquaculture management) and hence community needs and opportunities and the FRDCs national RD&E Plan.

Applications submitted to the FRDC are referred to the relevant States and Territories for funding advice based on the identified flow of benefits. Applications with any identified flow of benefit to South Australia are directed to SARAC.

The SARAC is an expertise based committee with membership reflecting the various sectors/stakeholders of fishing and aquaculture in South Australia. The major responsibilities of the SARAC are to:

- Provide a forum to advise on RD&E priorities for future FRDC funded fisheries and aquaculture research;
- Commission FRDC RD&E applications that address those priorities;
- Advise FRDC on the appropriateness and priority of project and program applications and attribute benefit to related seafood industries, including the commercial, recreational and Indigenous fishing sectors and aquaculture;
- Identify, utilise and advise on appropriate funding sources for each priority and project/program application (including from FRDC, industry, government agencies and research providers); and
- Develop and periodically update the SARAC 5-year RD&E Strategic Plan.

An important activity of the committee is to commission and assess fisheries and aquaculture RD&E project applications throughout the year and to provide advice to the FRDC Executive Director and FRDC Board of Directors on investment priorities for their consideration.

The SARAC encourages close collaboration between researchers, fisheries managers, aquaculture managers, commercial operators, recreational fishers, Indigenous representatives, conservation and other NGOs, and other commercial and recreational fishing industry interests. Such collaboration focuses outcomes and impact, minimises duplication of RD&E effort, promotes the sharing of knowledge, facilitates extension and/or commercialisation of results, and is consistent with the national FRDC RD&E strategy to rationalise research services.

SARAC Consultation Process

The SARAC will facilitate an expertise based stakeholder workshop to inform and update its strategic plan, and identify research priorities. This independently workshop facilitated is open to representatives from the commercial, recreational and Indigenous fishing sectors, the aquaculture industry, seafood processors, conservationists, fisheries and aquaculture managers, and researchers.

1.4 FUNDING

SARAC receives an annual budget from the FRDC to invest in research and development activities directed at South Australia. As stipulated in the *Primary Industries Research and Development Act 1989* (PIRD Act), the FRDC's primary revenue source is based on:

- fishers and aquaculturists providing contributions via the South Australian government;
- the Australian Government matches this amount up to a maximum of 0.25 per cent of average gross value of Australian fisheries production (AGVP); and
- the Australian Government providing unmatched funds equivalent to 0.50 per cent of AGVP for the current year plus the two preceding years. The Australian Government's 'public good' contribution underpins the stewardship role it exercises in relation to fisheries resources on behalf of the Australian community.

2. OPERATING ENVIRONMENT

2.1 OVERVIEW

Agribusiness in South Australia, which includes food, wine, fisheries and forestry, is a vital part of the State's economy, generating approximately $19.7 billion in revenue annually, and accounting for 48% (or $5.4 billion) of South Australia's total merchandise exports in 2013/2014.

Commercial fisheries in South Australia contributed $245 million towards South Australia's economy alone in 2014/2015, and provided 3,820 full time jobs within the industry; the majority in regional South Australia. In 2014/2015, South Australia's aquaculture industry contributed $228 million to the State's economy, and provided 1,833 full time jobs (EconSearch 2017). Economic and social benefits will continue to arise from the sustainable development of fisheries and aquaculture. This may include the development of under-utilised fish species and value adding in the wild catch sector, development of new aquaculture species and the creation of new marine aquaculture zones and lease sites (and new land based sites) to facilitate growth of established sectors. These developments will greatly benefit the regional communities through growth in employment and regional economic activity. These industries, both in the short- and long-term, require effective RD&E programs to inform their sustainable management and development. The following overarching principles form the basis for planning and activities:

- Build Capacity to ensure our regions support a fishing and aquaculture industry that is contemporary, efficient, competitive and resilient.
- Secure Production by ensuring that ready, reliable and sustainable resources are available for industry growth and development.
- Expand Markets by ensuring that South Australian fishing and aquaculture industry products and services have improved access to new and existing markets.
- Grow Regions to ensure regional areas contribute to the economic strength and social fabric of South Australia.

Effective RD&E programs need to be implemented to ensure the information required to manage these important natural resources is available. With world-class aquatic research and development facilities at SARDI, the State Government in partnership with the State's Universities and research institutes, industry and other stakeholders, aims to conduct vital RD&E programs and work in close collaboration with the FRDC and other funding agencies to maximise the returns on funding investments.

Stakeholders include commercial and recreational fishers, fish farmers, fish processors and retailers, Indigenous peoples, the conservation sector, regional communities and the Australian community as a whole.

Commercial Fishing Sector

In 2014/2015, the total catch for all State commercial fisheries was 45,300 t with a GVP of $245 million. South Australian commercial fisheries generated 2,076 direct full time jobs, and approximately 1,744 flow-on jobs, a total of 3,820 jobs in the State; the majority in regional areas. When total direct and indirect output impacts were calculated, South Australia's commercial fisheries contributed $870 million to the State's economy. Much of this wealth was generated in regional South Australia (EconSearch 2017).

The Rock Lobster Fishery is the most valuable fishery in terms of GVP, generating $125 million and 592 direct fishing jobs in 2014/2015. The Spencer Gulf Prawn Fishery was the second most valuable fishery, generating a GVP of $28.7 million and 269 direct fishing jobs. The Sardine Fishery comprises the majority of the total commercial catch, with approximately 36,000 t taken annually in recent years (EconSearch 2017).

The seafood industry peak body Wildcatch Fisheries SA represents many of South Australia's commercial fishing sector bodies (including the Charter Boat Owner's Association and the South Australian Women's Industry Network).

Recreational Fishing Sector

There is a popular recreational fishing sector in South Australia with an estimated 277,000 recreational fishers taking part in fishing activities at least once per year in 2013/2014, equating to more than 18% of the State's population (Giri and Hall 2015). Key species targeted by recreational fishers include King George Whiting, Snapper, Southern Garfish, Southern Calamari and Blue Swimmer Crab. In 2013/14 recreational fishers in SA landed 6.9 million marine finfish, 4.9 million marine shellfish (crustaceans, molluscs) and almost 840,000 freshwater fish/yabbies. The recreational fishing sector also contributes significantly to State and regional economies through tourism and the purchase of items such as fishing equipment, vessels, bait supplies and fuel.

In recognition of the importance of recreational fishing to the community of South Australia, a strategic plan for recreational fishing was developed in 2015 to set a number of future directions for the management and development of recreational fishing in the State (RecFish SA 2015). The Government announced a $3.25 million package in 2014 to support recreational fishing including regional infrastructure grants, a native oyster reef enhancement project and supporting access to reservoirs for recreational fishers.

In 2016, following a State wide recreational fishing survey, PIRSA Fisheries and Aquaculture conducted a broad State-wide review of recreational bag and boat limits and size limits. The review resulted in changes to size, bag and boat limits for 26 species. A formal recreational fishery Management Plan is also being developed.

Traditional Indigenous Fishing Sector

Native Title exist along the entire coast of South Australia, representing nine Aboriginal sea nations. Other native title areas exist on our inland waters, including waters of the Murray River, Coorong Lakes, and the Lake Eyre Basin. Aboriginal Peoples have fished the waters of the state for many millennia and have a rich cultural and spiritual connection to country.

The *Fisheries Management Act 2007* recognises and supports the rights of native title holders to exercise their non-commercial communal rights to hunt, gather, fish, and conduct cultural and spiritual ceremonies in native title areas. The Act also allows for the development and implementation of Aboriginal Traditional Fishing Management Plans under Indigenous Land Use Agreements, formed between the Minister and a native title group for the purpose of defining management agreements. A Traditional Fisheries Manager will support the development of greater participation in fishing and aquaculture industries.

Nationally it has been identified that there is very little information regarding the impact of traditional catch. A key priority is the development of culturally appropriate methods for capturing traditional catch data to better inform fisheries management decisions.

Aquaculture Sector

In 2014/2015, total aquaculture production in South Australia was 19,763 t with a GVP of $227.8 million. The South Australian aquaculture sector generated 817 direct full time jobs and approximately 1,016 flow-on jobs, a total of 1,833 jobs in the State; the majority in regional areas. When total direct and indirect output impacts were calculated, South Australia's aquaculture sector contributed $549.4 million to the State's economy; most of which was generated in regional South Australia (EconSearch 2016). Southern Bluefin Tuna is the largest single sector in the State's aquaculture

industry, accounting for 57% of the GVP, followed by Oysters (13%), Marine Finfish (8%) and Abalone (5%) (EconSearch 2016).

Fisheries and Aquaculture Management

Primary Industries and Regions South Australia (PIRSA) is the government agency responsible for managing South Australia's fish stocks on behalf of the community under the *Fisheries Management Act 2007*. PIRSA Fisheries and Aquaculture manages South Australia's shared community owned fish stocks in partnership with key stakeholder groups and the community, using formal Fishery Management Plans established under the Fisheries Management Act. Complementary to the Act and Management Plans, a number of important fisheries policies help to guide fisheries management. These include the *Policy for the co-management of fisheries in South Australia, the South Australian fisheries harvest strategy policy and guidelines,* the *Policy for the allocation of access to South Australian fisheries resources between fishing sectors,* the *Policy for the release of aquatic organisms and the PIRSA cost recovery policy*. PIRSA manage over 800 commercial fishing licences across all South Australian commercial fisheries together with fishing activities of the State's 277,000 recreational fishers.

PIRSA is also the government agency responsible for managing South Australia's aquaculture industry, consistent with the *Aquaculture Act 2001*. The Act allows for the establishment of dedicated aquaculture zones and aquaculture exclusion zones, marine aquaculture leases and licences, land based aquaculture licences and chemical use approval mechanisms. The Act effectively establishes PIRSA Fisheries and Aquaculture as a one-stop shop for aquaculture development and management, through a series of formal referral requirements. These referrals include those with the South Australian Environment Protection Authority for environmental matters, the Department of Planning, Transport and Infrastructure for planning approval and for marine harbours and navigation purposes, the Department of Environment, Water and Natural Resources for marine park purposes and prescribed bodies for referrals required under Native Title. PIRSA Fisheries and Aquaculture manages over 800 marine aquaculture leases and licences combined and around 100 land based aquaculture licences. There are currently 12 aquaculture zone policies in place that cover >11,000 hectares of State waters and prescribe both aquaculture zones and aquaculture exclusion zones.

3. SARAC RD&E PLAN 2017 – 2022

3.1 FRAMEWORK OVERVIEW

The FRDC has five RD&E investment programs that directly align with its governing legislation, the PIRD Act. RD&E investments across these program areas will be assessed to ensure the FRDC, and in turn SARAC, maintains a relatively balanced portfolio that meets the short- and long-term needs of its stakeholders, including the Australian Government and the Australian community. The programs include:

Environment

This program relates to RD&E that supports 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

This program relates to RD&E that assists the production and economic value and well-being of fisheries industries. 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.

- SARAC recognises "industry" as comprising the following sectors: commercial, Indigenous fishing, the aquaculture sector, recreational fishing, charter sector, as well as non-food production industries such as those associated with fertiliser, fishing bait, ecotourism and pharmaceuticals.

Communities

This program relates to RD&E that maintains the long-term sustainability of the fishing and aquaculture sectors 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

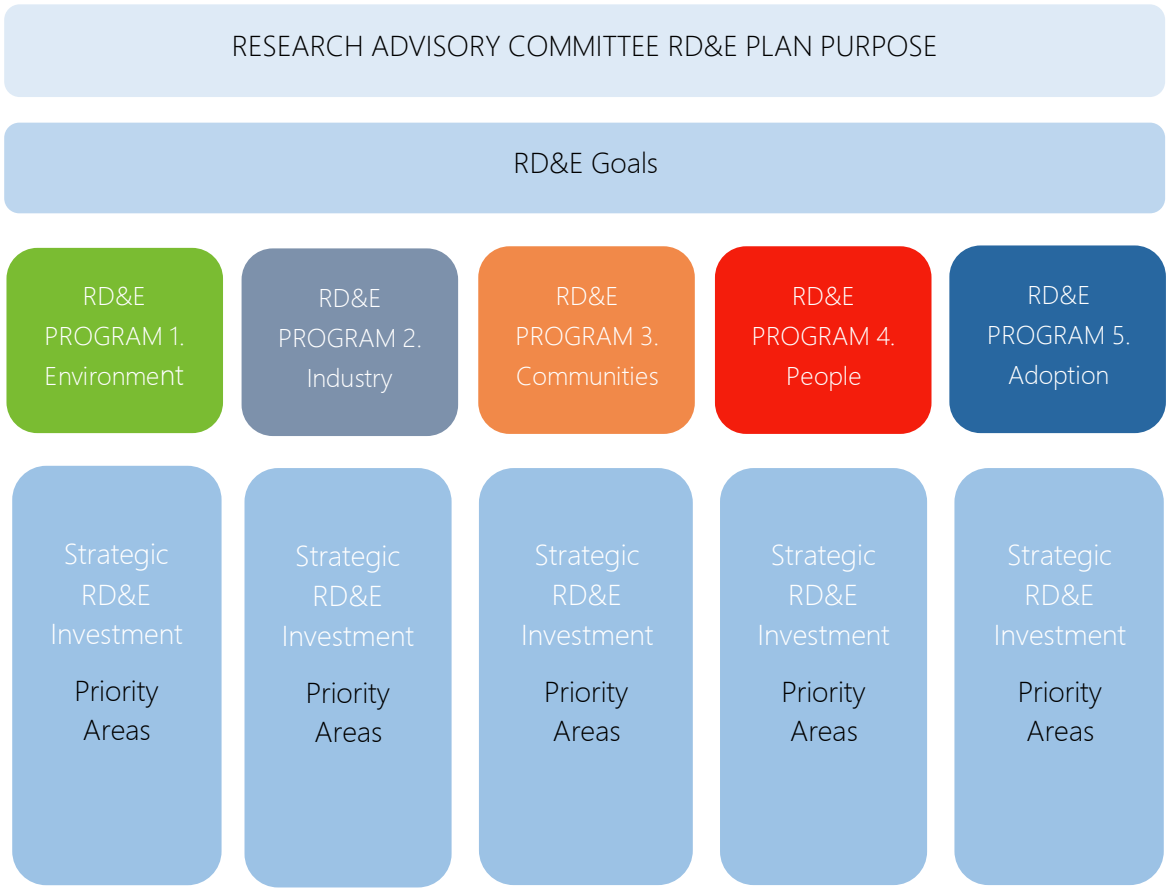
This program relates to RD&E that is needed to attract and advance people who will lead fishing and aquaculture towards a sustainable and profitable future. The FRDC has taken a strong role in this area, from employing and developing young researchers, and supporting visiting experts, as well as facilitating access to leadership development for all sectors of fishing and aquaculture.

Adoption

This program relates to how 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 and adopting research results. In addition, the FRDC is continuing to develop its systems to ensure its 'knowledge bank' is widely accessible.

In the following tables, South Australian strategic issues are further developed in relation to specific industry challenges – as defined in the FRDC RD&E Plan 2015 – 2020. It is important to recognise that many RD&E activities have the capacity to contribute to meeting more than one thematic program and this is particularly true for research that addresses changes in management arrangements (e.g. harvest strategies, resource access, marine parks, co-management), climate change and/or biosecurity.

3.2 FRDC RD&E INVESTMENT PROGRAMS



3.3 SOUTH AUSTRALIAN RD&E GOALS

An important function of the SARAC RD&E Plan is to identify the research goals and priorities that address key challenges and opportunities faced by the South Australian fisheries and aquaculture sectors and the aquatic natural resources they depend on, at both the State and national level. The following RD&E goals are designed to facilitate strategic RD&E investment to address challenges and opportunities; thus, ensuring that the fisheries and aquaculture sectors prosper in a sustainable manner.

Goal 1: Natural Resource Sustainability

a. Maintain and improve the management and use of aquatic natural resources to ensure their sustainability.
b. Minimise the impact of fishing and aquaculture activities on the environment.
c. Understand the status, structure and function of aquatic ecosystems, particularly with respect to target and non-target species and the habitats they depend on.
d. Inform management strategies to recover fish stocks in decline.

Goal 2: Resource Access and Allocation

a. Optimise resource access and allocation for all fishing and aquaculture sectors.
b. Understand economic and social parameters to inform management decision-making and resource allocation across all sectors.
c. Secure and grow seafood production.
d. Fostering recreational and traditional fishing.

Goal 3: Increased Profitability and Well-Being

a. Respond to, and take advantage of, increased demand for seafood and for recreational and Indigenous fishing experiences.
b. Support diversification and advancements in product development.
c. Enhance the profitability of the fishing and aquaculture industry for the benefit of the community.
d. Enhance the social and economic opportunities from fisheries and aquaculture.
e. Develop a positive culture of physical and metal health and well-being.

Goal 4: Community and Consumer Support

a. Increase community and consumer support for the benefits of commercial, recreational and Indigenous fishing, and the aquaculture sector.
b. Enhance community understanding of the role fishing and seafood plays in supporting a healthy lifestyle, both in terms of recreational and cultural activities and human nutrition.

Goal 5: People Development

a. Develop people who will help the fishing and aquaculture sectors to meet their future needs, with a focus on leadership, accountability, extension and adoption.
b. Support the involvement of women in all industry sectors.

3.4 STRATEGIC RD&E INVESTMENT PRIORITY AREAS

The following RD&E priorities address the strategic Goals listed in Section 3.3. The strategic priorities are designed to be high level and will guide flexible annual decision making on key RD&E priorities in South Australia.

RD&E Program 1. Environment

Priority Area (Goal 1).

Addressing Fish Stocks that are in Decline and/or Data Deficient

Outcomes:

- Declining fish stocks rebuilt to sustainable levels
- Uncertainty in the biological status of target and non-target species reduced
- Important fisheries habitat restored
- Innovative fishery harvest strategy techniques introduced and effective

Priority Area (Goals 1 & 2).

Environmental Impacts of Commercial, Recreational and Indigenous Fishing and Aquaculture

Outcomes:

- Ecological impacts of fishing and aquaculture understood and managed for sustainability / acceptable impacts
- The cumulative impacts of all user groups on fish stocks and the environment understood
- The impacts of non-fishing industries on the aquatic environment (e.g. mining, shipping, desalination) understood
- An ecosystem-level view of the impacts of fishing, applicable to all sectors, widely adopted (e.g. through ecosystem based fisheries management)

Priority Area (Goal 1).

Impacts of Environment Change on Fisheries and Aquaculture

Outcomes:

- Adaptive management applied to mitigate impacts of environmental change
- Species / ecosystem vulnerability in a changing aquatic environment understood
- The impacts of climate change on marine resources predicted and extended to incorporate social and economic dimensions

RD&E Program 1. Environment (continued)

Priority Area (Goal 1). Interactions with Non-Target Species	Outcomes: • Environmentally and socially responsible mitigation strategies applied to interactions with non-target species • Impacts of fishery and aquaculture interactions with non-target species quantified • Cost effective data collection techniques for non-target species routinely applied
Priority Area (Goal 1). Biosecurity and Aquatic Animal Health Threats on Fish Stocks, Aquaculture Stocks and Ecosystem Functioning	Outcomes: • Risks to aquatic health / biosecurity of our aquatic resources quantified and safeguards developed • Ethically and economically appropriate fish handling / rearing techniques routinely applied • Welfare and survival of post-release / post-capture fish species improved

RD&E Program 2. Industry

Priority Area (Goal 2).

Managing and Securing Resource Access

Outcomes:

- Resource allocation improved through understanding of interaction among existing and proposed aquatic industries
- Management decision making across all sectors informed by understanding and quantification of economic and social parameters
- Systems and information available to support equitable shifts in resource allocation to take place over time maximising overall return to the community, based on equitable management frameworks and systems
- Optimise resource access by all stakeholders in the industry to maximise community benefit

Priority Area (Goals 2 & 3).

Increased Profitability and Value

Outcomes:

- Value of fisheries production increased to the benefit of the broader community
- Optimal harvest strategies for different fish stocks and fishing sectors
- The potential of underutilised species starts to be realised
- Improved production efficiency in all applicable industry sectors
- Opportunities for improved market access identified
- Post-harvest capabilities improved through new technologies / methods

Priority Area (Goals 2 & 3).

Increase the Returns to Industry Sectors through Adoption of a Value Chain Approach

Outcomes:

- Enhanced understanding of consumer preferences for seafood
- Ensuring consumer preferences are communicated to participants in the seafood value chain

RD&E Program 2. Industry (continued)

Priority Area (Goals 2 & 3). A Vibrant and Sustainable Recreational Fishing Sector	Outcomes: • Fostering improved recreational fishing experiences • Improved understanding of the cumulative biological, economic and social impact of recreational fishing • More profitable and valuable recreational charter fishing industry operators
Priority Area (Goals 2 & 3). A Vibrant and Sustainable Indigenous Fishing Sector	Outcomes: • New commercial fisheries and aquaculture initiatives that maintain ongoing Indigenous interests • Indigenous fishing more effectively integrated into aquatic resource management processes • Improved understanding of the cumulative biological, economic and social impact of Indigenous fishing
Priority Area (Goals 1, 2 & 3). Co-Management	Outcomes: • The participation of key stakeholder groups in research and co-management activities enhanced through innovation in co-management
Priority Area (Goal 2). Seafood Safety	Outcomes: • Robust seafood safety protocols in place to reduce adverse events

RD&E Program 3. Communities

Priority Area (Goal 4). Community Support and Social Acceptance for Fisheries and Aquaculture	Outcomes: • Improved community understanding of the roles of the aquaculture, commercial, Indigenous and recreational fishing (including charter) industry in the local economy and their managed impacts on the marine ecosystem • A broader community understanding of fishing rights • More effective industry representation at community forums
Priority Area (Goal 4). Build Confidence in the Management and Harvesting of Aquatic Resources	Outcomes: • Build confidence in aquatic resource management in South Australia • Enhanced community understanding of the status of fisheries resources • Broader understanding of the health values of seafood consumption
Priority Area (Goals 3 & 4). Recognition of the Significance of Indigenous and Recreational Fisheries	Outcomes: • Culturally appropriate methods to data capture implemented • Tailored industry training package(s) fostering greater Indigenous participation in fishing and aquaculture industries • A broader community recognition of recreational fishing

RD&E Program 4. People

Priority Area (Goal 5). Building Leadership and Capacity	Outcomes: • A network of industry leaders across all sectors of the fishing industry; with a focus on leadership, accountability, extension and adoption • Programs supporting the transition of people across industry sectors
Priority Area (Goal 5). Workforce Development	Outcomes: • Programs promoting careers in the fisheries and aquaculture industry • Improved communication between industry and education / training providers ensuring that industry needs are more effectively met including work integrated learning
Priority Area (Goal 3). Health and Well-Being	Outcomes: • Identify barriers and pathways to improve workplace mental and physical health, well-being and safety

RD&E Program 5. Adoption

Priority Area (Goal 1). Delivering RD&E that Addresses Management and Industry Needs	Outcomes: • Mechanisms adopted to ensure research is targeted and collaborative with industry and management
Priority Area (Goals 2 & 5). Stakeholder Collaboration and Engagement	Outcomes: • Mechanisms identified, developed and implemented to involve active engagement with relevant stakeholders, using project steering committees where suitable
Priority Area (Goals 2 & 5). Transferring Knowledge	Outcomes: • Mechanisms identified, developed and implemented for improved transfer of knowledge within and among sectors; in particular identifying best-practice for the industry both locally and internationally

3.5 FORECAST INVESTMENT ACROSS STRATEGIC RD&E PRIORITIES

The primary role of the SARAC is to prioritise, plan and invest in fisheries RD&E activities in South Australia. Over the next 5-years, the SARAC will likely make new investments of $5 to $7 million in RD&E activities in South Australia. SARAC will adhere to the FRDC's investment policy.

This will be achieved by investing in a balanced portfolio of projects that address issues of South Australian importance for all stakeholders; these may also have national significance. SARAC will aim to achieve an overall balance of:

- Short- and long-term projects;
- Low- and high-risk projects;
- Strategic and adaptive research needs;
- South Australian specific SARAC funded projects and broader scale co-invested projects;
- Investment across the fishing and aquaculture sectors and stakeholders.

This investment strategy will also take into consideration the level of industry contribution and public good funds available, as well as identifying opportunities for collaboration (refer to Section 4.1).

4. RD&E PLAN Guidelines

4.1 INVESTMENT COLLABORATION

SARAC will consider, and where possible promote, collaborative opportunities with external funding sources (other than the FRDC), as well as between the jurisdictional RACs, Industry Partnership Agreements (IPAs), key RD&E providers and FRDC Subprograms. Collaboration occurs through the sharing of RD&E Plans, development of projects and funding opportunities, as well as the results of priority planning processes. The annual FRDC planning workshop provides a forum for the sharing of these priorities to promote collaboration and further develop priorities and RD&E concepts.

Collaboration provides the opportunity to share and leverage investment across common areas of interest and promote RD&E delivery efficiency in line with the National Fishing and Aquaculture Research, Development and Extension Strategy 2015 (Commonwealth of Australia 2016).

It is worth noting that a number of South Australian fishing and aquaculture sectors comprise IPAs with the FRDC and as such may contribute some or none of their funds to the SARAC budget (values shown in the parentheses indicate percentage of FRDC-matching industry funds retained within the IPA):

- Abalone Council of Australia IPA (50%)
- Australian Abalone Growers Association IPA (100%)
- Australian Council of Prawn Fisheries IPA (50%)
- Australian Southern Bluefin Tuna Industry Association IPA (100%)
- Oysters Australia IPA (100%)
- Southern Rock Lobster IPA (100%)

In addition, there are a number of FRDC Subprograms and Advisory Groups that are provided annual budgets by the FRDC; these include:

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

As such, SARAC 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);
- When engaging in RD&E co-investment with IPAs, investment is in proportion to the relative (perceived) industry versus public good benefits.

The FRDC encourages collaboration to promote alignment of priorities and investment efficiency by leveraging incentives for cooperation and collaboration. Hence, 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 annual FRDC planning workshop;

- For every two existing FRDC 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 – e.g. RAC puts in $1; IPA puts in $1; then FRDC puts in another $1 (including their co-contributions from RAC and IPA).

The FRDC collaboration incentive fund will be managed over multiple years and accumulates if unallocated, the same as RAC, IPA and Subprogram budgets.

4.2 EXTENSION

Extension processes are entrenched in all FRDC-funded RD&E. How results can be extended, are considered in the design and proposal phase where priorities for end users are determined, continue during the project's execution through to the final published report and dissemination and uptake of results.

In 2015, the Primary Industries Ministerial Council (PIMC) approved a National Strategy for Fishing and Aquaculture RD&E (Commonwealth of Australia 2016) that establishes the future direction to improve the focus, efficiency and effectiveness of RD&E to support Australia's fishing and aquaculture industry.

The FRDC have adopted these as key principles with regards to encouraging and promoting Extension and Adoption. They are:

Principle 1: All stakeholders to value extension and adoption activities in the same way as research activities.
Principle 2: Extension will be a key focus in research project development.
Principle 3: Project knowledge and outputs are actively managed.
Principle 4: Effectiveness and impact of project extension activities are evaluated.
Principle 5: Extension and adoption capacity is maximised and built upon.

It is best practice for project managers/principal investigators to have discussed with the end-users how the project outputs will be extended, used and adopted when developing applications. It is a FRDC requirement that an Extension and Adoption Plan is developed and submitted for each project, and appropriate funding from the project budget is allocated for this component. Wherever relevant, SARAC will encourage research projects to involve end users through project steering committees or, where suitable, as co-investigators to maximise the scope for extension and adoption.

4.3 EVALUATION OF PROJECTS

The FRDC has adopted the Commonwealth input, output, outcome reporting framework policy (Department of Finance & Deregulation 2013). 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 SARAC's planning, investment, management and adoption will be 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;
- 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 (CRRDC 2014) 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) that is coordinated and funded by the FRDC (i.e. external of the SARAC funds). 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 being adjusted to ensure optimal investment performance. In this ongoing evaluation, the FRDC will measure the performance of SARAC investments after the life of its RD&E Plan.

During the life of the RD&E Plan, the SARAC should self-evaluate its performance against its identified Priority Areas, as well as monitoring investment ensure a relative balance in investment across the FRDC's five programs (Environment, Industry, Communities, People, Adoption). This is to align with the prioritisation and RD&E Plan review processes undertaken at the annual September/October SARAC meeting.

4.4 REVIEW OF THE RD&E PLAN

Annually, SARAC 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;
- Determine Priority Areas for investment against these gaps.

These annual plans will be circulated to all FRDC Subprograms and IPAs unless it is deemed that there are areas of sensitivity, IP protection or commercial advantage that require protection.

In August each year, the FRDC will hold an annual FRDC planning workshop for all RACs, 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.

SARAC, at each meeting, should also undertake a situational scan of the jurisdiction to identify any tactical or immediate areas of RD&E need that require short-term or immediate remediation.