



Recfishing
RESEARCH

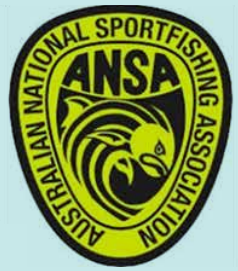


FRDC
FISHERIES RESEARCH AND
DEVELOPMENT CORPORATION

Research, Development & Extension Plan 2024-2029

July 2024





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1. Context

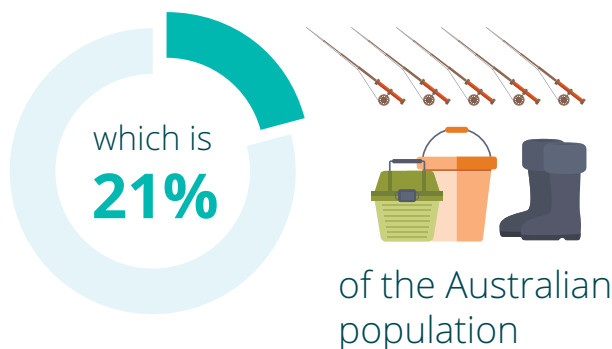
1.1 Recreational Fishing in Australia

Fishing is an important recreation for many Australians and a significant tourism drawcard for international visitors. By global standards, Australia has high-quality recreational fisheries, which is attributed to its relatively unspoiled environment, the abundance and diversity of species available and the range of infrastructure and services supporting the sector. Fishing is a strong tourism draw card and a valuable contributor to our economy. Staying attractive as a tourism destination means protecting fish stocks and environments and ensuring recreational fisheries resources are abundant and accessible.

Australia's recreational fishing sector is a diverse community of over 4 million people. Given the diversity and geographic spread, as well as differing motivators and aspirations of the community, there are numerous ecological, social, and economic challenges that in part, require targeted research, development, and extension to aid in identifying solutions and creating opportunities for the sector. While the FRDC has functioned to invest in national and regional RD&E to address these needs, the national scope and growing diversity of stakeholders creates a challenge to ensure adequate engagement to underpin the identification and prioritisation of relevant RD&E issues and opportunities for the recreational fishing sector.

4.2 Million

recreational fishers
per year **in Australia**



Source: Moore, A, Schirmer, J, Magnusson, A, Keller, K, Hinten, G, Galeano, D, Woodhams, J, Wright, D, Maloney, L, FRDC, ABARES, UC, 2023, National Social and Economic Survey of Recreational Fishers 2018-2021, February. CC BY 3.0.

1.2 Fisheries Research and Development Corporation (FRDC)

The Fisheries Research and Development Corporation (FRDC) is a co-funded partnership between the Australian Government and fishing stakeholders. Its role is to plan and invest in fisheries research, development and extension (RD&E) activities in Australia. This includes providing leadership and coordination of the monitoring, evaluating and reporting on RD&E activities, facilitating dissemination, extension and commercialisation. This is achieved through coordinating government and industry investment to establish and address RD&E priorities. FRDC investment is overseen by the following guiding principles:

- maximise efficiency and effectiveness,
- avoid duplication,
- minimise administration costs,
- provide for flexibility,
- maximise opportunities for collaboration, leverage opportunities and create value; and
- encourage the generation of novel and innovative ideas.

The FRDC Research and Development Plan 2020–25, outlines the way the FRDC will plan and invest in RD&E for fishing and aquaculture over its term. Its primary role is to articulate how the FRDC will plan, invest in and manage RD&E for fishing and aquaculture and the wider community and ensure that the resulting knowledge and innovation is adopted for impact. The 5-year RD&E Plan has been developed through a comprehensive process of assessing the operating environment for fishing and aquaculture, consultation, analysis and consideration.

FRDC Coordination Programs

The FRDC board establishes Coordination Programs to address areas of RD&E that require coordinated strategic planning and delivery in areas of market failure. Coordination Programs do not have allocated FRDC budgets, but function to highlight priority areas of R&D investment that need to be addressed through normal FRDC funding processes. **RecFishing Research** is one of these coordination programs, others include,

- Aquatic Animal Health and Biosecurity
- Human Dimensions Program
- Indigenous Reference Group
- FRDC Standards

1.3 Australian Recreational Fishing Foundation (ARFF)

The Australian Recreational Fishing Foundation is the Australian peak recreational fishing representative body. It is a partnership between State peak fishing bodies, national recreational fishing organisations, the tackle industry and special interest groups. The ARFF is a not-for-profit organisation with a voluntary Board of recreational fishing strategists.

Collectively, the membership represents a diverse and important set of recreational stakeholders including the broader recreational fishing community and those that have an interest in aquatic environments. Its key points of contact to the Australia recreational fishing community are through its membership which ensures that stakeholders are broadly represented in our planning processes.

The objectives of ARFF are:

- to educate and promote the benefits of sustainable recreational fishing to the public and to ensure the maintenance and growth of fish populations throughout Australia,
- to educate the fishing community on ethical, environmental and safety aspects of sustainable recreational fishing,
- to raise awareness of and promote the health benefits of sustainable recreational fishing,
- to educate the public on how to protect, preserve and care for the environment, whilst recreationally fishing, including land care, flora and fauna and marine conservation; and,
- to promote the accessibility of sustainable recreational fishing activities to persons of all age groups, genders and ethnic origins.



2. RecFishing Research

RecFishing Research is a national level partnership between the FRDC and ARFF which aggregates information from a regional and jurisdictional level to a national forum. Its primary aim is to provide advice to the FRDC for prioritising strategic and tactical investments in RD&E that deliver positive outcomes for the Australian recreational fishing sector.

The partnership between FRDC and ARFF also extends beyond prioritisation and includes:

- establishing opportunities for effective and targeted extension and adoption of R&D outputs to effect cultural and behavioural changes within recreational sector beneficiaries; and
- identifying opportunities for co-investment with traditional and non-traditional sources, particularly those linked to the ARFF network.

RecFishing Research operates at a national level by identifying RD&E priorities which are relevant to Commonwealth fisheries where there is recreational sector participation (e.g. Southern bluefin tuna) and addressing issues of national and/or multijurisdictional significance to the recreational fishing sector (e.g. social licence). Where jurisdictions share common needs, RecFishing Research will support the identification of RD&E and facilitate collaboration in delivering RD&E projects.

2.1 Objectives of the RecFishing Research Coordination Program

1. Proactively work with the recreational fishing community and key partners to identify and coordinate national and regional RD&E priorities and assist to develop scopes to address those priorities.
2. Inform FRDC and stakeholders of the shifting landscape and capability, and emerging needs of the Australian (and international) recreational sector relevant to the FRDC's R&D Plan 2020-25.
3. Ensure quality and relevance of R&D investments undertaken by the FRDC to the recreational sector through technical and extension advice and support for FRDC management and project teams.
4. Support extension and adoption of R&D in those areas relevant to the Australian recreational sector, and aligning to FRDC's R&D Plan 2020-25, with an aspiration to enhance behaviour change, as well as capacity and capability in the sector.
5. Support management of external national and international partnerships delivering recreational R&D across FRDC.
6. Facilitate co-investment in RD&E which benefits the recreational fishing community nationally and aligns to the FRDC's R&D Plan 2020-25, to assist in its delivery.

2.2 Performance

RecFishing Research regards the following as important operational drivers against which its performance should be measured:

- responsiveness to the needs of the recreational fishing sector,
- building capacity with the sector to effectively contribute to management of our fisheries resources,
- ensuring that FRDC achieves a balanced investment portfolio,
- supporting innovation in RD&E,
- collaboration with other partner groups and research initiatives; and,
- direct adoption and implementation of research outcomes thus driving change.

The full Performance Plan is shown in Appendix 2.



2.3 Consultation Process

The ARFF member network which includes peak recreational fishing organisations from most jurisdictions and national fishing organisations, provides a critical means for engaging with a broad spectrum of recreational fishers to identify the RD&E needs of stakeholders. By utilising the connections that these organisations have with their recreational fishing communities, a range of face-to-face meetings and workshops are used to identify RD&E issues and priorities from the stakeholders.

RecFishing Research engages directly with the fisheries scientific and management community through participation in various forums to maintain a contemporary appreciation of research outputs and emerging issues. It facilitates webinars on a regular basis to remain up to date on the progression of projects and to grow the portfolio of service providers interested in delivering upon its RD&E priorities.

2.4 Investment

The primary role of RecFishing Research is to prioritise, plan and invest in fisheries research, development and extension (RD&E) activities for the recreational sector in areas of Commonwealth and multijurisdictional importance. The program will seek to achieve a balanced portfolio by investing in projects that address issues of Commonwealth and national importance for all recreational fishing stakeholders and will aim to achieve an overall balance of:

- strategic and adaptive research need,
- multijurisdictional and national projects.



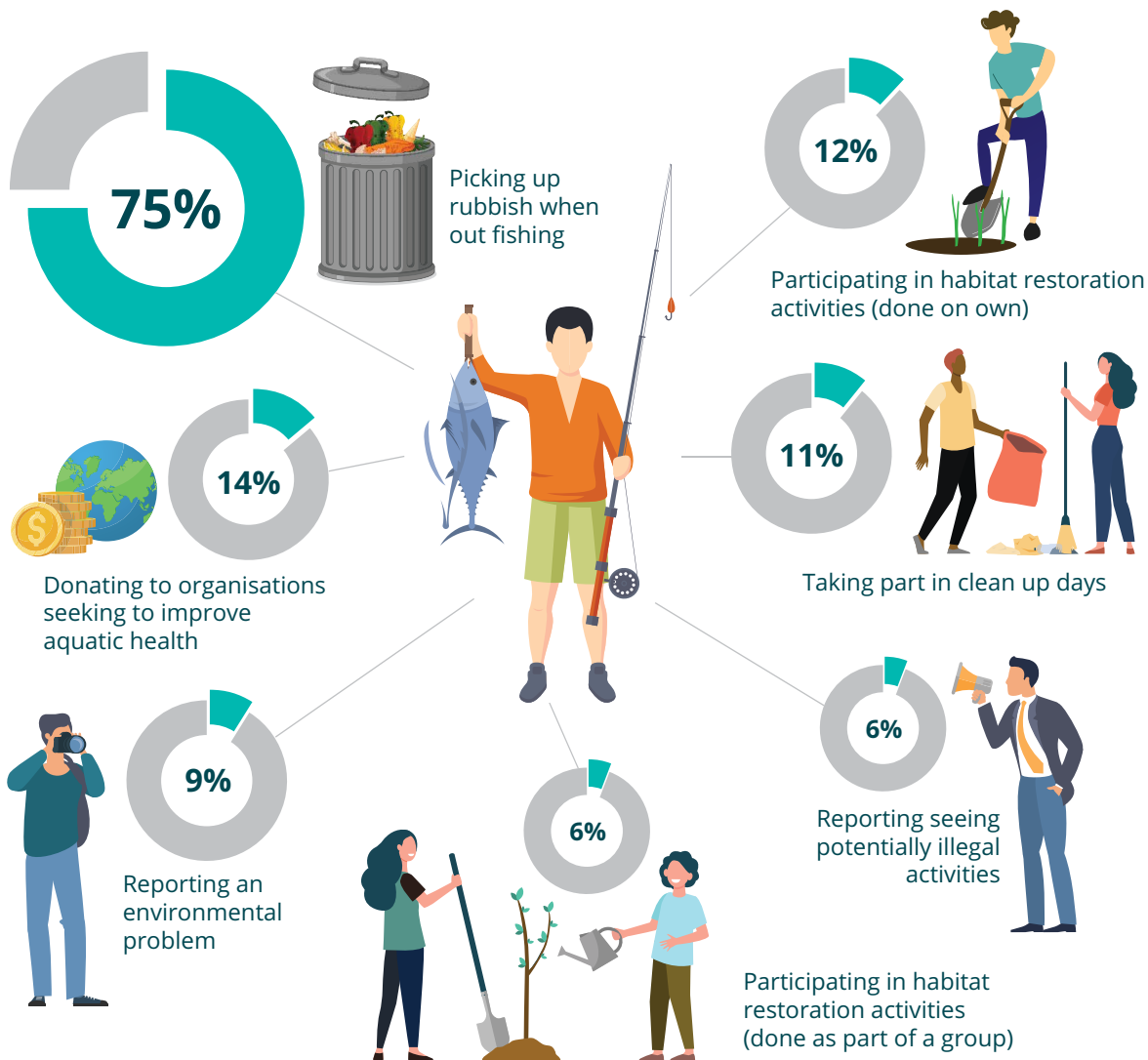
2.5 Drivers for RD&E

National Recreational Fishing Economic and Social Survey

The National Recreational Fishing Economic and Social Survey (NRFESS) plays a crucial role in understanding the dynamics, impacts, and importance of recreational fishing in Australia and is a powerful tool for driving research that informs policy and management, while also contributing to our understanding of the socio-economic and environmental aspects of recreational fishing to the national economy.

Through this, researchers can analyse spending patterns, job creation and the overall economic impact of recreational fishing as well as explore the demographic characteristics of anglers, motivations for fishing, and the cultural significance of fishing in different communities. Understanding the preferences and behaviours of recreational anglers can aid in tourism and recreation planning.

Recreational fisher identified stewardship activities



Source: Moore, A, Schirmer, J, Magnusson, A, Keller, K, Hinten, G, Galeano, D, Woodhams, J, Wright, D, Maloney, L, FRDC, ABARES, UC, 2023, National Social and Economic Survey of Recreational Fishers 2018-2021, February. CC BY 3.0.

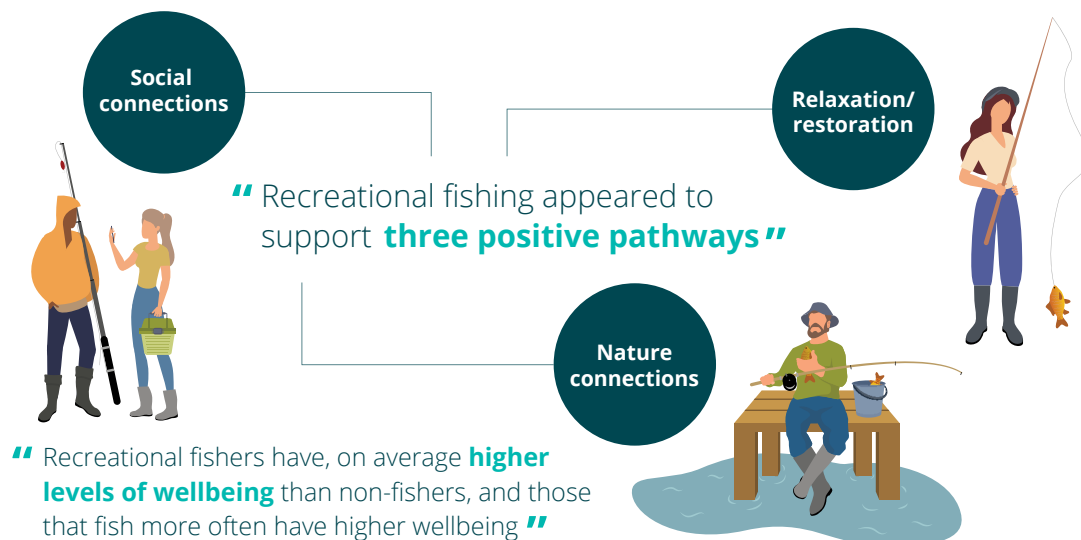
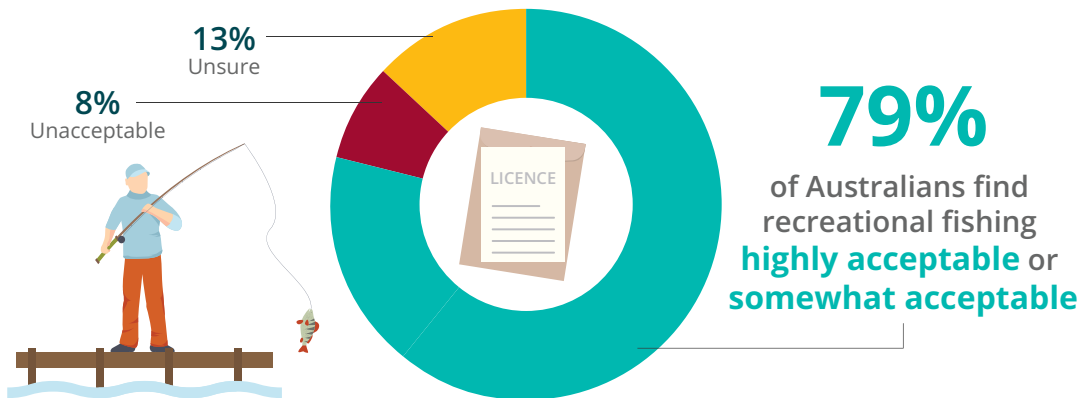
Environmental Drivers

Sustainable resource use is the primary driver for all fishing and is a priority area for RD&E. Understanding sustainability of our recreational fisheries requires RD&E which delivers more and better information on the status of our fish stocks, the impacts of fishing on the environment and how recreational fishing is fostering greater environmental responsibility.

Societal Drivers

How fisheries resources are utilised is driven by growing community expectations for fair and equitable access and allocations for all users. The size and diversity of the recreational fishing sector means that opinions on resource use are complex and can vary between states and regions and it is necessary to gain a clear understanding of these needs to inform how the optimal and equitable use of our resources is defined.

Level of acceptability

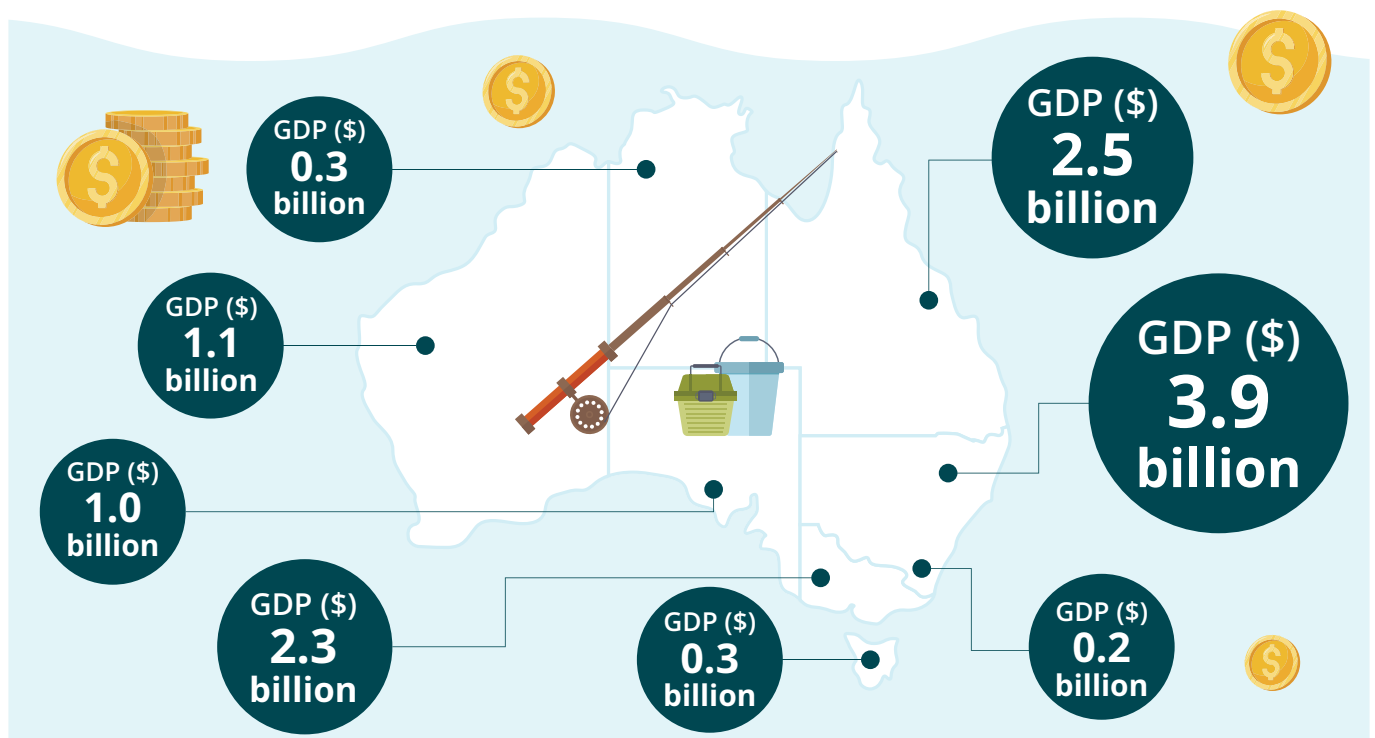
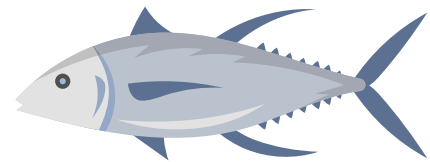


Source: Moore, A, Schirmer, J, Magnusson, A, Keller, K, Hinten, G, Galeano, D, Woodhams, J, Wright, D, Maloney, L, FRDC, ABARES, UC, 2023, National Social and Economic Survey of Recreational Fishers 2018-2021, February. CC BY 3.0.

Economic Drivers:

The economic contributions of the recreational fishing to Australia are important, contributing over \$11 billion to Australia's economy annually, and recreational fishing is a primary driver for many interstate tourism experiences to Australia. The positive impacts integrate with societal drivers because of the influence that fishing has on community and personal wellbeing. Understanding and recognising the contribution of recreational fishing, including tourism (including low impact eco-tourism and wellbeing tourism), to the Australian and regional economies are important components of the RD&E plan.

“ Recreational fishing contributes over **100,000 jobs** and over **\$11 billion per year** to the Australian economy ”



Source: Moore, A, Schirmer, J, Magnusson, A, Keller, K, Hinten, G, Galeano, D, Woodhams, J, Wright, D, Maloney, L, FRDC, ABARES, UC, 2023, National Social and Economic Survey of Recreational Fishers 2018-2021, February. CC BY 3.0.

3. RecFishing Research RD&E Strategy 2024 – 2029

The RecFishing Research RD&E Strategy provides a framework for identifying the strategic research needs of the Australian recreational fishing sector for the next 5-10 years.

It aims to ensure that the research program aligns with FRDC’s national strategic RD&E goals (figures 1 and 2) and addresses the major challenges facing the Australian recreational fishing sector. Where possible, this plan will link with other related plans and priorities to deliver efficiency and leverage opportunities e.g. RACs and FRDC coordination programs (Appendix 1). The plan will remain a “living” document for its term and will be regularly updated to address the dynamic RD&E needs for the sector.

3.1 Strategic Approach

RecFishing Research has responsibility to the FRDC and its partner groups and the wider recreational fishing community, to shape the Areas of Impact that RecFishing Research will invest in. Planning processes need to integrate with FRDC strategies whilst pursuing priority issues on behalf of member organisations and the broader recreational fishing community. To ensure this is achieved, RecFishing Research adopted a strategic systems approach to shape the Areas of Impact which RecFishing Research will invest in.

Areas of Impact

- 1 Resilient fish stocks
- 2 Effective representation
- 3 Secure fisheries access and allocations
- 4 Social licence
- 5 Consistent funding and investment, as well as human capacity
- 6 Great fishing experiences

From these a **Long-term Goal** was developed:

“Thriving fish stocks, governed collaboratively to provide secure access for recreational fishing, which is valued by society and resourced to provide great fishing experiences”

This is expressed more engagingly as a **Vision**, of:

“Kids able to fish safely, accessibly, close to home and successfully!”

The Vision for the Strategy drove the identification of 12 areas of challenge and opportunity, and hence what longer-term outcomes need to be achieved to meet the goal(s). Ten main longer-term outcomes emerged, grouped into 6 general pathways that are outlined in section 3.2.

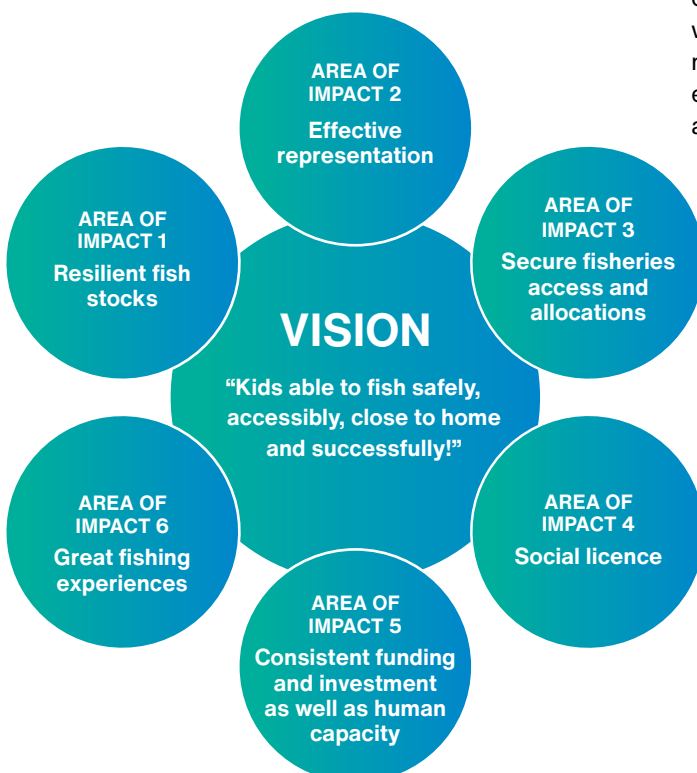


Figure 1: FRDC outcomes and enabling strategies.

Outcomes		Enabling Strategies	
Growth for enduring prosperity	Outcome 1	Strategy I	Drive digitisation and advanced analytics
Best practices and production systems	Outcome 2	Strategy II	Drive digitisation and advanced analytics
A culture that is inclusive and forward thinking	Outcome 3	Strategy III	Promote innovation and entrepreneurship
Fair and secure access to aquatic resources	Outcome 4	Strategy IV	Build capability and capacity
Community trust, respect and value	Outcome 5	Strategy V	Provide foundational information and support services

Source: The Fisheries Research And Development Corporation R&D Plan 2020-2025

Figure 2: Alignment of RecFishing Research Areas of Impact to FRDC outcomes and enabling strategies (Refer to Appendix 1 for further information on FRDC investment opportunities.)

Areas of Impact	FRDC Outcome	FRDC Strategy
Resilient Fish Stocks	→ 1, 2	→ I, II, V
Effective Representation	→ 4, 5	→ IV
Secure Fisheries Access and Allocations	→ 4	→ IV, V
Social Licence	→ 1, 3, 5	→ III, IV
Consistent Funding and Investment as well as Human Capacity	→ 1, 3, 5	→ III, IV, V
Great Fishing Experiences	→ 1, 2, 4	→ III, IV

Figure 3: Areas of Impact for RD&E are linked to 6 pathways towards achieving long term outcomes.

Areas of Impact	Pathways
Resilient Fish Stocks	→ Pathway 1: Thriving Fisheries
Effective Representation	→ Pathway 2: Governance
Secure Fisheries Access and Allocations	→ Pathway 3: Fisheries Management
Social Licence	→ Pathway 4: Stewardship
Consistent Funding and Investment as well as Human Capacity	→ Pathway 5: Capacity Building
Great Fishing Experiences	→ Pathway 6: Inclusive Access

3.2 Pathways to impact

Pathway 1: Thriving Fisheries

Long Term Outcome:

- 1. Critical fish habitat is restored and protected**
- 2. Stock assessments are more robust leading to better decision making**
- 3. Best practice normalised throughout sector**

Addressing the challenges of environmental change and the impact of new technologies, the recreational sector is incentivised to identify, adopt and normalise best practice to generate knowledge and promote adaptive mindsets among all fishers. This will build resilience in fisheries through understanding the needs of fish, restored fish habitats and sustainable fishing practices that ensure thriving fish populations.

Pathway 2: Governance

Long Term Outcome:

- 4. Representative organisations are respected, effective and secure**

Recreational fishing peak bodies need to be better able to represent the values of their constituents, partly by having a better, structured understanding of the diverse values and expectation of fishers. The recreational sector is recognised by government and supported politically and achieves informed representation through strong governance, as well as the leadership and organisational capacity of recreational fishing bodies to represent the diversity of fisher constituencies.

Pathway 3: Fisheries Management

Long Term Outcome:

- 5. Fish stocks are managed for abundance and optimal use**
- 6. Changed culture of regulators to look forward for best overall outcome**

Addressing challenges in fisheries management, this pathway emphasises the adoption of new management frameworks and performance indicators at an operational level, as well as changes in governance towards more co-management in high-level partnerships across the wider fishing sector and governments. This will help provide the credibility to partner in safe spaces with other fishing sectors, where information on better models and progress against existing commitments can inform action to convince governments to change their approaches to management.

Better information is also needed on the wider social benefits from recreational fishing to help persuade regulators more operationally to move to managing for abundance and optimal use against inclusive metrics, to better accommodate all sectors equitably.

Pathway 4: Stewardship

Long Term Outcome:

- 7. Recreational fishers are recognised as trusted custodians of our fisheries resources and their environments**

Recognising that the values of society are shifting, the recreational sector develops opportunities to collaborate with conservation programs to preserve and restore habitat and enhance fisheries thereby, demonstrating its custodianship of fisheries resources and their environments. These commitments not only help fishing but are also recognised in society widely, helping to deliver social licence.

Pathway 5: Capacity Building

Long Term Outcome:

- 8. The recreational sector has strong capacity, capability and governance to implement its goals, including bringing up the next generation**

Addressing challenges of leadership development and succession in the recreational fishing sector, as well as a lack of understanding of the diverse and shifting values, demands and capacities of fisher communities and their youth, the recreational sector needs to support leadership among today's fishers as well as develop future leaders.

Pathway 6: Inclusive Access

Long Term Outcome:

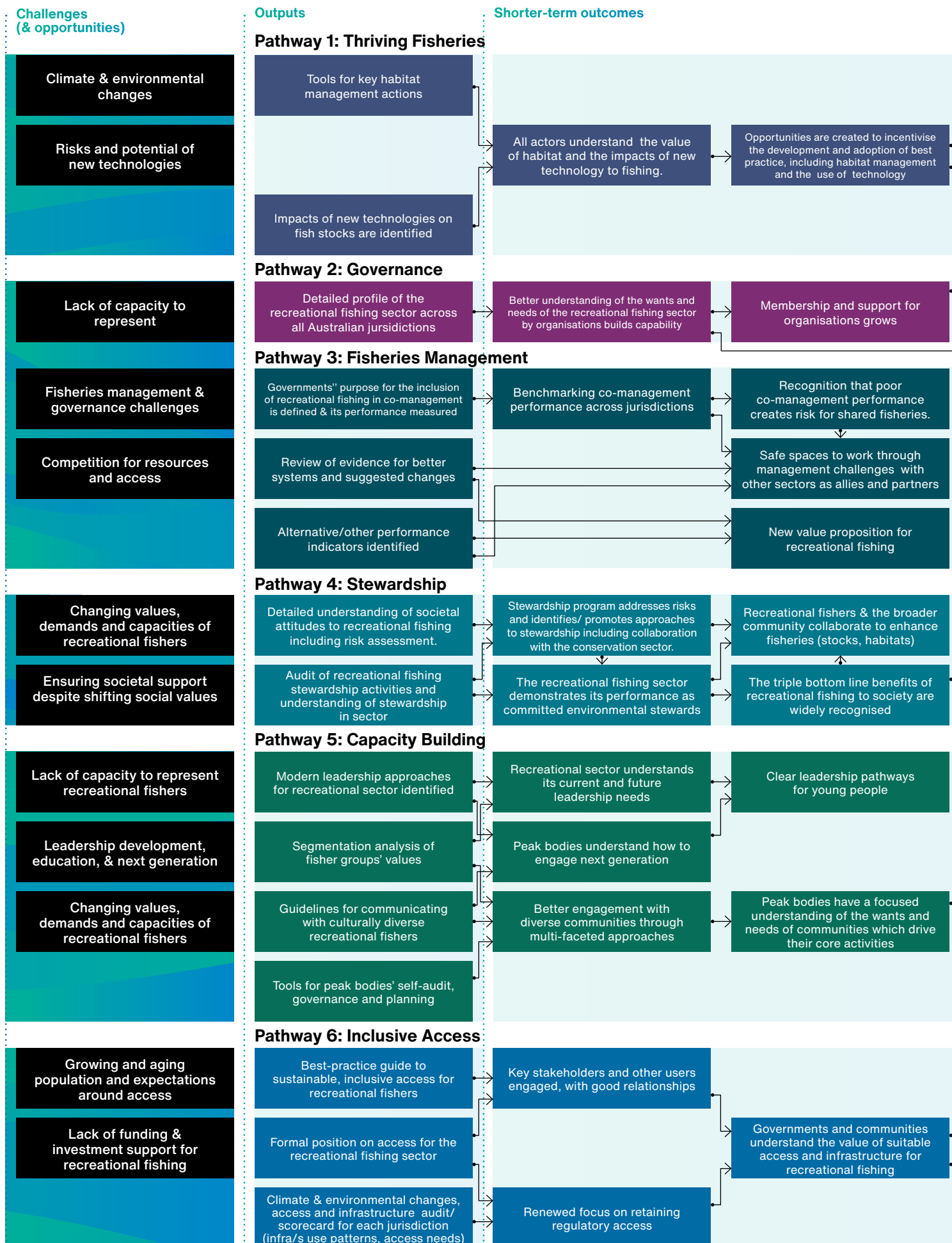
- 9. The recreational sector has secure access to the land and sea resources necessary to support high quality fishing opportunities.**
- 10. Investment in new and existing physical access and facilities meets the needs of the sector**

Recognising the challenges from underinvestment in critical infrastructure, loss of access an aging population and the needs of those with disabilities, the recreational sector partners with government and other organisations to invest in building and maintaining facilities and access for diverse fishing experiences.

By articulating a Long-Term Goal and Vision, the key challenges to achieving this and the major long-term outcomes needed to overcome these challenges, possible outputs from RD&E and short-term outcomes that would deliver the long-term outcomes are identified in a Strategic Frame.

3.3 Strategic Frame

By articulating a Long-Term Goal and Vision, the key challenges to achieving this and the major long-term outcomes needed to overcome these challenges, possible outputs from RD&E and short-term outcomes are identified in 6 Pathways within a Strategic Frame.





3.4 Review and Evaluation

Annually, RecFishing Research will review their RD&E Plan. The Plan will be reviewed to:

- evaluate its performance against its identified Aims and Objectives as defined in the RecFishing Research RD&E Performance Plan (Appendix 2), as well as monitoring investment to ensure a balance in investment across FRDC's key strategies,
- identify gaps against the objectives of the program, and
- determine priority areas for investment against these gaps.

RecFishing Research, at each meeting, will undertake a situational scan to identify any tactical or immediate areas of RD&E need that require short term or immediate remediation.



Appendix 1:

Investment opportunities to support strategic outcomes (FRDC)

Outcome	Investment Opportunities
Growth for enduring prosperity	<ul style="list-style-type: none">■ support a sustainable, efficient and effective increase in production, value and price■ guide evidence-based strategy for growth■ cost-efficient solutions for biosecurity■ designing out waste and extending lifespan of products■ economic opportunities for Indigenous communities■ understand impacts to aquatic systems and create healthy aquatic ecosystems.■ identify ways to get the most benefits from aquatic systems
Best practice production systems	<ul style="list-style-type: none">■ minimise impacts on non-target species and ecosystems.■ understand and increase wellbeing, equity and safety of workers.■ independent validation of sustainable practices■ improve animal welfare outcomes.■ inform effective management of climate change impacts.■ explore ways to capitalise on new opportunities presented by climate change.■ improved decision-making tools to respond to biological variability and increased revenue volatility and risks
A culture that is inclusive and forward thinking	<ul style="list-style-type: none">■ understand and address factors that hold back positive cultural and behavioural change.■ promote greater inclusiveness, creative thought and solution seeking.■ encourage openness to new ideas, approaches and ways of thinking and behaving.■ strengthen collaboration across sectors
Fair and secure access to aquatic resources	<ul style="list-style-type: none">■ support increasingly integrated and effective management■ promote development and adoption of management measures that are well suited for resilience to change, including:<ul style="list-style-type: none">- harvest strategies- flexible spatial arrangements & decision-making tools- management approaches that aim for fairness- participative management
Community trust, respect and value	<ul style="list-style-type: none">■ motivate collective action towards a shared vision.■ nurture relationships between stakeholders and community■ encourage practices aligning with community expectations.■ assist fair distribution of economic and societal benefits.■ improve seafood traceability and integrity from capture through to end user

Appendix 2:

RecFishing Research RD&E Performance Plan

Aims	Objectives	Outputs & Outcomes
<ul style="list-style-type: none"> ■ RD&E Priority Development. ■ Inform FRDC, ARFF members and stakeholders of the shifting landscape, capability, and emerging needs related to recreational sector RD&E. ■ Provide technical and extension advice to FRDC. ■ Support extension and adoption. ■ Support management of external partnerships across FRDC. 	<ul style="list-style-type: none"> ■ Proactively work with the recreational fishing community and key partners to identify and coordinate national and regional RD&E priorities and assist to develop scopes to address those priorities. ■ Inform FRDC and stakeholders of the shifting landscape and capability and emerging needs of the Australian (and international) recreational sector relevant to the FRDC's R&D Plan 2020-2025. ■ Ensure quality and relevance of R&D investments undertaken by the FRDC to the recreational sector through technical and extension advice and support for FRDC management and project teams. ■ Support extension and adoption of R&D in those areas relevant to the Australian recreational sector, and aligning to FRDC's R&D Plan 2020-25, with an aspiration to enhance behaviour change, as well as capacity and capability in the sector. ■ Support management of external national and international partnerships delivering recreational R&D across FRDC. ■ Facilitate co-investment in RD&E which benefits the recreational fishing community nationally and aligns to the FRDC's RD&E Strategic Plan 2020-25, to assist in its delivery. 	<ul style="list-style-type: none"> ■ Project Steering Committee, at least one face to face meeting a year, and one video meeting per year. ■ A consolidated and comprehensive list of recreational sector RD&E priorities for RFDC investment. ■ Attendance of the Project Coordinator at the annual stakeholder workshop and other forums on behalf of the PSC where appropriate ■ Recreational sector RD&E priorities relevant, well understood and supported by recreational sector bodies and beneficiaries. ■ Recreational fishing sector and ARFF members confident that FRDC investments are relevant, well targeted, efficient, and effective. ■ Review and update of RD&E plan.

**“ Kids able to fish safely,
accessibly, close to home
and successfully! ”**

**“ Thriving fish stocks,
governed collaboratively to
provide secure access for
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