



Planning, developing and coordinating national/regional research, development and extension (RD&E) for Australia's recreational fishing community

Delivering the Recfishing Research Subprogram (2014-2021)

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FRDC Project No 2014-402

**Planning, developing and coordinating national/regional research, development and extension (RD&E) for Australia's recreational fishing community
2014-402**

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Executive Summary

The purpose of the Recfishing Research steering committee was to evaluate research, development and extension EOI's and project proposals submitted to the FRDC that aim to benefit the recreational fishing sector.

This report only covers the activities of Recfishing Research over the 18 month period between November 2019 and June 2020. Owen Li's tenure as Executive Officer was a stop-gap measure since Matthew Barwick was unable to complete the full contract.

Recfishing Research held 5 meetings between 28/11/2019 and 6/07/2019: Melbourne (28/11/2018); Adelaide (03/05/2019); Teleconference (30/08/2019); Hobart (9/12/2019); Teleconference (23/04/2020)

A stakeholder consultation workshop was held in Melbourne on the 29/11/2018. The workshop was attended by representatives of the Australian Recreational Fishing Foundation, the Amateur Fishermen's Association NT, the NSW Recreational Fishing Alliance, RecfishWest, Recfish SA, TARFish, VRFish, the Victorian Fisheries Authority, Ozfish Unlimited, the Australian Fishing Trade Association, fishing media publishers and personalities, and fisheries researchers. 10 potential priorities and 6 projects were elicited during this workshop, and a selection of these were put out to tender through the FRDC.

2019 saw the first two female committee members inducted into the Recfishing Research steering committee in its history – Cassie Price and Jo Starling.

Recfishing Research ran a bursary program in December 2019 in support of the ARFF National Conference held in Hobart. The bursary program was awarded to a total of 14 people representing every state in the country. An additional Indigenous representative was invited to attend, and the VFA Women in Recreational Fishing group also attended at their own cost.

Recfishing Research tendered 4 priorities through the FRDC rounds, and between 13/02/2019 and 6/07/2019

Over the same period, Recfishing Research attracted and reviewed 23 research applications.

As part of his official role, Owen Li has given presentations and webinars, participated in steering committee meetings (National Recreational Fishing Survey), attended VFA WIRF round-table discussions, and participated in a scoping meeting for a project seeking to quantify charter fishery catch in Commonwealth waters.

The function of the Recfishing Research committee will change following the re-structure of the FRDC. The primary function of the committee will change from the evaluation of

research applications to eliciting, compiling and refining research priorities that best serve the recreational fishing sector, and contributing to extension activities to promote adoption by end-users.

Keywords: Recreational fishing; Recfishing Research, research; development, extension

Introduction

Participants at a national workshop on recreational fishing in 2005 identified a need for increased investment in RD&E addressing national priorities for the recreational sector, and maximisation of benefits flowing from that investment. Recfishing Research was established to address this need. Since then Recfishing Research has provided leadership in identifying and dealing with relevant national RD&E priorities, and communicating results to end-users. Achievements to date include: -maintaining and communicating an annual business plan articulating national priorities for the recreational sector; -delivering workshops and conferences to develop consensus on priorities for specific issues; -guiding the development and delivery of projects responding to national priorities (e.g. improvement of fisheries statistics, understanding sector value, projects under the Recreational Fishing Industry Development Strategy); - development and distribution of extension products (articles, websites, podcasts, brochures etc) to increase awareness of R&D findings. And there is still much to do.

Delegates at the National Recreational Fishing Conference in 2012 reaffirmed the need to deal with national issues including confirming social/economic benefits associated with fishing, improving sectoral leadership capacity, and greater collaboration to communicate the needs of the recreational sector to external parties. The need to enhance fishing outcomes through improved fish habitat was also recognised, as was the challenge of developing an agreed method for funding these and other national priorities for the sector.

Further, the Australian recreational fishing sector is incredibly diverse, and largely unstructured. As a result, there are few clear pathways for research, development and extension to benefit the sector as a whole i.e. the common good. The issues facing recreational fishing in Australia include environmental degradation, social license, depredation, data-poor fisheries, and sustainable growth of the sector.

The core business of the various state fisheries agencies is largely to focus on researching and protecting fish stocks for the public good. Recfishing Research and the FRDC provide an additional pathway for investment into RD&E that benefits the broader recreational fishing public that are not necessarily directly related to fish stock/catch management.

Recfishing Research also has an important role in giving more members of Australia's recreational fishing community the opportunity to engage in the active management of projects addressing regional and national priorities, and works to increase the visibility of R&D activities to a national audience. This project addressed two of the national RD&E priorities within FRDC's RD&E plan 2015-2020: - Working towards improving

recreational fishers' opportunities for better fishing experiences, and - Motivating a greater sense of stewardship among recreational fishers for their resource.

In collaboration with the Australian Recreational Fishing Foundation, the project team (which includes members from the Australian Recreational Fishing Foundation, Recfishing Australia, Ozfish Unlimited, VR Fish, Recfish West, NSW DPI and ABARES) have implemented a robust and inclusive annual process for the identification of regional and national R&D priorities for Australia's recreational fishers. The approach helped to identify complementarity between state/territory and national R&D planning processes.

Objectives

Objectives of the project – as agreed in the contract:

1. Pro-actively work with the recreational fishing community to facilitate identification of national and regional RD&E priorities annually, and development of projects to address those priorities.
2. Assist FRDC with management of a portfolio of projects which provide significant flow of benefit to the recreational fishing sector.
3. Continue to be a driver for the extension of R&D results to facilitate desired outcomes.
4. Facilitate co-investment in RD&E which benefits the recreational fishing community nationally.

This report covers how Recfishing Research addressed the above objectives over the 18 month period between November 2018 and June 2020.

Method

Committee structure

The Recfishing Research Subprogram was comprised of experts from around the country. The committee included members from the Australian Recreational Fishing Foundation, Recfishing Australia, Ozfish Unlimited, VR Fish, Recfish West, NSW DPI and ABARES, and their expertise extended across biology, social sciences, habitat restoration, outreach, fisheries governance, and on-the-ground knowledge.

The committee was led by an independent Chair – Peter Neville. And was ably serviced by two Executive Officers over the term of the project – Matthew Barwick (2014-2018) and Owen Li (2019-2020).

Strategic planning

The 2016-2020 RD&E Plan was designed by the committee to guide investments into research priorities for each year over that period. The 2018 stakeholder workshop was conducted as another means to elicit new research priorities and project ideas. The elicited research priorities and project ideas were widely circulated via FISH magazine, the Recfishing Research website and Facebook page, and a media communique. Those priorities and project ideas elicited in 2018 were used in concert with the Recfishing Research 2016-20 RD&E Plan to guide tendering processes and the evaluation of research applications submitted to Recfishing Research.

Committee meetings

Three committee meetings were organised each year for RecFishing Research committee members, and the locations were negotiated with the committee members and the FRDC. Additional meetings were negotiated on a needs-basis.

The core business for these meetings was to disseminate updates on on-going projects funded by the FRDC, evaluate research applications, and gather feedback and recommendations on those applications for the FRDC. Planning for subsequent meetings, committee actions, and any additional meetings was also carried out during these meetings.

Collaborating and engaging with stakeholders

One of the functions of the Subprogram was to promote collaboration through co-investment and strengthening pathways of adoption.

Every annual FRDC stakeholder planning workshop was attended, as was the AFTA trade show. The Executive Officer also worked closely with the FRDC, ARFF and other parties to organise the biennial National Recreational Fishing Conference. The Executive Officer also reached out to the various peak bodies, representative organisations, state/territory organisations, and industry and private interests to discuss opportunities for co-investment, inform them on the progress of funded projects, and to share findings with members of the recreational fishing community. 3-4 trips annually were carried out to meet important stakeholder groups.

Where appropriate, research applicants were pointed in the direction of other researchers and teams when collaboration had the potential for greater benefits for the recreational fishing sector.

Extension activities

The intention was to write one journalistic article per month intended for publication in print media about RD&E funded by Recfishing Research, the state agencies or peak bodies. However, this was not possible, since few projects were funded through Recfishing Research over the past year, and the National Survey had its own communications team ensuring its media coverage. An article about the 2018 stakeholder workshop was published in FISH, as was a media communique about the same workshop. The Executive Officer was also interviewed on multiple occasions by journalists writing articles for the FISH magazine.

The Recfishing Research website (<http://recfishing.frdc.com.au/>) was used as a repository for findings from scientific studies of benefit to the recreational fishing sector. These included Recfishing Research funded projects, and others from around the world. The page "Fish info" was used to publish summaries of the aforementioned research in digestible language, to ensure the information was as clear, and easy to use as possible for all fishers.

Recfishing Research's social media presence and correspondence with members of the public was maintained; and opportunities to promote and capitalise upon existing outreach infrastructures and outputs from state agencies, peak bodies and representative organisations were sought out; Opportunities for co-investment and collaboration with domestic and international parties on projects that seek to maximise fishers' experience, measure and positively influence the public's perception of recreational fishing, improve environmental health while motivating stewardship among recreational fishers, and build capacity within the recreational fishing community were also readily sought out.

Recfishing Research also funded the Australian Recreational Fishing Foundation National Recreational Fishing Conference in [2017](#) and [2019](#). Both of these conferences were designed to increase the exposure of recreational fisheries science to recreational fishers, and facilitate networking for those working in recreational fisheries in Australia.

Capacity building

Recfishing Research funded a travel bursary for 13 fishers from a range of backgrounds (including leadership roles, scientific research, and grass roots) to the 8th World Recreational Fishing Conference in Vancouver Canada, in 2017. The bursary recipients

attended and took part in the conference itself, and visited several locations to learn more about habitat restoration, and fisheries management in Canada.

Another travel bursary was provided for 15 fishers (including one Indigenous representative) to the Australian Recreational Fishing Federation's National Recreational Fishing Conference in 2020. The bursary recipients attended the conference presentations, and networking between the bursary recipients and mentors was facilitated by Recfishing Research committee members.

In both instances, bursary recipients were chosen from pools of applicants based on their willingness to learn, and drive to serve the recreational fishing sector.

Results

Recfishing Research developed an RD&E Plan for the 2016-2020 period. The plan guided investment & prioritisation and focused on four strategic drivers: Recognition; Public perception; Environmental health; and People development and capacity building.

Priorities from this RD&E Plan were advertised during FRDC funding rounds. Funded projects aligning with these priorities are presented in Table 1.

Recfishing Research held 20 meetings over the period of 2014-2020. These meetings were chiefly used to evaluate prospective research applications. Unfortunately, during most of these meetings, the committee could not agree to support a single research application. Additionally, over the period of 2017-18, Recfishing Research did not fund a single research project in full because the committee wanted to ensure there were enough funds for the National Social and Economic Survey of Recreational Fishers (2018-161).

The commissioned projects were largely successful at delivering upon their objectives. However, most also lacked in terms of their extension, and pathways to adoption. From 2018 onwards, the committee decided during their annual meetings that more stress needed to be put on ensuring the extension for each project was suitable and appropriate for maximising the research's likelihood of adoption, and therefore its benefit to the sector. This emphasis is reflected in all of the subsequent meeting minutes, and the comments forwarded to the FRDC after that point.

Table 1. Projects (co-)funded through the duration of the Recfishing Research Subprogram (RRSP)

Project No.	Project Title	(Planned) Outcome	%RRSP investment
2014-402	Planning, developing and coordinating national/regional research, development and extension (RD&E) for Australia's recreational fishing community	Innovative RD&E projects funded by the FRDC that have the greatest likelihood of benefitting the recreational fishing sector.	100
2015-022	Understanding the movement, behaviour and post-release survival rates of Swordfish to sustainably develop a new large pelagic game fishery off the coast of Tasmania – a pilot study	Management suggestions for the recreational Swordfish fishery in Tasmania based on post-release-survival and satellite tagging data.	32
2015-501	Empowering recreational fishers as champions of healthy fish habitat		100
2016-126	Determining the design, output specifications and sample size for a national social and economic survey of recreational fishers in Australia	A National Fish Habitat Strategy for recreational fishers designed to maximise the ability of recreational fishers to rehabilitate and manage aquatic habitats.	100
2016-129	Recfishing Research Subprogram: Travel bursaries for attendance at the 8th World Recreational Fisheries Conference - Vancouver Canada 2017	13 fishers comprising (variously) leaders, scientists and grass roots fishers travelled to the 8 th World Recreational Fishing Conference in Vancouver, Canada and built their capacity by attending conference talks and a study tour covering habitat restoration following natural and human impacts, the white sturgeon fishery, and the management of wilderness fiserheis for cut throat and bull trout.	100
2016-505	Australia's National Recreational Fishing Conference 2017	Brought opinion-shapers, decision makers and key representatives from Australia's recreational fishing sector together to develop a shared vision for the future of recreational fishing in Australia.	100
2017-198	Assess new technologies and techniques that could improve the cost-effectiveness and robustness of recreational fishing surveys	Recommendations for the most precise and cost-effective ways to survey the recreational fishing community.	20
2018-095	Recreational fishing and human wellbeing: insights from existing data and development of best practice approaches to future measurement	A series of best practice methods for identifying, measuring and establishing a causal relationship	60

		between recreational fishing and health and wellbeing outcomes for the individual.	
2018-161	National Social and Economic Survey of Recreational Fishers 2019	Developing new sampling methods that maximise the likelihood of collecting representative results when surveying recreational fishers on a national scale.	41
2018-204	Australian Recreational Fishing Foundation National Recreational Fishing Conference 2019	Engaging the largest cross-section of Australia's recreational fishing community possible in discussing key issues of relevance to their sector, developing a shared vision for the future and agreeing upon strategic actions to pursue this vision.	100
2019-021	Integrating recreational fishing information into harvest strategies for multi-sector fisheries	Identifying a way to incorporate the needs of the recreational fishing sector into multi-sector fisheries.	20
2019-146	National Recreational Fishing Conference bursary 2019	13 recreational fishers representing every state, and 1 Indigenous representative were brought to the 2019 Australian Recreational Fishing Foundation's National Recreational Fishing Conference 2019 to attend the conference and network with leaders in the sector. Networking was facilitated by members of Recfishing Research.	100
2019-213	Tackle Box - Fishing at home during Covid 19	Development of an app that will collect data from recreational fishing competitions and provide data on the interactions of recreational fishers with Australia's Commonwealth Marine Parks.	100

Discussion and Conclusion

Over the two years of this contract, the Recfishing Research Sub-program concluded the Recfishing Research 2016-2020 RD&E Plan, held a stakeholder workshop in Melbourne, conducted 5 steering committee meetings, submitted 4 priorities to the FRDC for the 2018-2020 funding rounds, reviewed 23 applications, and recommended 6 projects progress to the next stage.

The last few months of this contract, saw the COVID-19 pandemic force the world to change the way that businesses, government, and communication functioned. In line with the modern world's shift towards digital platforms for communication and holding meetings, the last meeting for Recfishing Research in 2020 was held via Zoom. The majority of the Recfishing Research committee's meetings could be shifted to the digital realm, with intermittent face-to-face meetings for key events (i.e. introduction of new committee members, stakeholder workshops, development of strategic documents etc.). A shift towards using digital means to conduct the majority of meetings would not only reduce costs to the FRDC, but also make the committee's functions more resilient in the face of pandemic related travel restrictions.

FRDC is refining its consultative structures to optimise service delivery to stakeholders. As part of that, Subprograms, Research Advisory Committees and Industry Partnership Agreements will no longer be involved in the technical review of proposals, noting this will be delivered via external review. The primary role of these consultative structures will be to:

- Act as the lead mechanism to identify, synthesise and aggregate priorities articulated by stakeholders (see response to 3 below) as well as provide advice on priorities that may not yet be articulated
- Consider avenues for delivery of R&D outputs to end users through identification of suitable extension activities. This will be aided by ensuring priorities clearly explain the path to adoption and identify end users and beneficiaries
- Assist in monitoring invested activities to aid in the delivery of outputs to end users during the project – be accountable for performance of the investment

In delivering these functions there is potential for Recfishing Research to leverage off the significant transition to online engagement and consultation that has occurred in response to COVID, running open digital events to consider emerging landscape dynamics and agree upon priorities. There is also potential to develop targeted digital collateral to communicate research outputs in engaging ways, and disseminate through social media, making use of granular metrics to understand the relative success of campaigns, and inform future strategies.

Proposed digital operation of Recfishing Research would potentially reduce cost, improve national consultation and engagement, and enhance the degree to which performance is measurable. There would also be benefits to steering committee participants, through reduced travel, and improved support offered via use of digital applications designed to support workflow among teams of people regardless of geography and time zone. Many of these workflow applications are securely encrypted, and prompted by the COVID-19 pandemic, many large corporations worldwide have already transitioned their workflow so successfully, that their physical office spaces are now largely redundant. Providing a way for committee members to contribute to the work of Recfishing Research at their own convenience could have several benefits:

- 1) Committee members can offer more nuanced, detailed input when they have had time to digest the necessary information;
- 2) A position on the committee might become more appealing to those leaders who cannot easily meet at set times (e.g. working parents, young professionals etc.);
- 3) Committee members will be able to respond to the needs of stakeholders and voice those needs more quickly.

Having more carefully articulated research priorities derived through broader consultation would benefit the sector, the FRDC, and prospective applicants. It has become clear that advertising multi-sector research priorities that seek to meet the needs of too broad a range of stakeholders has resulted in too few applications being deemed fit for purpose, and too few projects being funded as a result.

Further, conflicts of interest began to compromise the function of Recfishing Research when evaluating research applications. Quite often, the appropriate expert(s) in the room needed to exclude themselves in discussions on proposals as a result of conflicts of interest, leaving the rest of the committee to make a decision without potentially helpful input. There were also multiple instances where more than half of the committee needed to leave the room, making it difficult to defend the 'majority decision' that would later be passed on to the FRDC.

Further development

Considering the long-term future of Recfishing Research, it could be argued that it is an unreasonable expectation for any six individuals to represent the needs of a sector as large and diverse as the recreational fishing sector. In 2000-01, it was estimated that approximately 3.36 million Australians participated in recreational fishing between May 2000 and April 2001 (Campbell & Murphy, 2005; Henry & Lyle 2003). Whether that number is significantly greater or smaller remains to be seen. However, it is safe to assume that there are millions of Australians who practice recreational fishing in some way each year. How can one small committee comprising of volunteers reasonably represent the needs of so many?

To add to the issue of complexity, we now have real evidence that the motivations for people to fish recreationally vary hugely. There are upwards of six distinct motivations for people to participate in recreational fishing in Australia, none of which are mutually exclusive, and many which often act in concert (Magee et al., 2018). Prior to the COVID-19 pandemic, Australia's demographic and ethnographic make-up was also changing rapidly – migrants from non-English speaking countries, especially Asia, comprise a far larger proportion of new entrants into this country than they did in the past (Li et al., 2019). While many of these migrants will speak English fluently, they will bring with them their own value-sets, and are likely to value Australian fish in a very different way than the majority of Australians, who are English speaking and of Anglo-celtic descent (Fabinyi, 2011; Sechena et al., 2003; Sussman, 2000). Asian Americans and Pacific Islander immigrants to the USA are so much more likely to gather their own seafood that an epidemiological study was conducted to establish the level of risk to people of Asian and Pacific Islander descent in Washington should the local seafood be contaminated (Sechena et al., 2003). As an example, rockfishing holds a great appeal for Asian migrants and visitors to Australia and New Zealand, and in many locations, people of Asian descent are completely over-represented among rock fishers. While no such survey has been conducted in Australia, a report conducted by Drowning Prevention Auckland found that people of Asian ethnicity comprised 58% of all the people surveyed while fishing on rock platforms during 2020 (Moran, 2020). This is an issue that the Royal Lifesaving Organisation, NSW Centre for Maritime Safety consider very real.

We are also living in a world where information, and opportunities to act come and go with extreme speed. Several times over the past year, a burning issue has been raised by a committee member, and the opportunity to invest in action has passed by time the FRDC application process is completed. If we are to remain relevant to the recreational fishing sector, and those researchers who we hope will apply themselves to fulfilling our

priorities, we need to be more agile and responsive. The fishing and research community need a better feedback mechanism.

It is suggested that Recfishing Research transitions to oversee a digital platform that democratises the identification of priority areas for RD&E investment to some degree. The platform would be open-access, and allow recreational fishers to input issues or priorities that they felt required RD&E investment – rec fishers' selections could be limited further via the online form (e.g. please select an area you wish to see RD&E in etc.). Keyword grouping software could be used to identify those areas that most stakeholders felt were important, and the committee could carefully construct priorities/projects based on that data. In essence, this would enable Recfishing Research to be more responsive to the sector's and articulate priorities that more closely meet those needs. In turn, a key role for the committee would be to oversee the an interface where priorities/topical areas would be ranked next to each other, and those priorities/projects that are advertised, being applied for, and are underway would be displayed alongside.

Extension and Adoption

The in-house FISH magazine published an article about the Melbourne workshop in 2018. The bursary program run alongside the ARFF National Recreational Fishing Conference, and the talks given at the same conference were also pushed out through social media.

The Executive Officer was also invited to give a one hour seminar about the state of recreational fishing in Australia in the 21st Century, and this was uploaded to Youtube. The Executive officer has also had significant correspondence with Principal Investigators, hopeful applicants, representatives of various peak bodies, and potential collaborators (e.g. members of the recreational fishing industry).

It is suggested that Recfishing Research needs to adjust the way outreach/extension is performed. Australian society has also become increasingly urbanised and digitalised, and almost every person (including children) now carries a super-computer in their pockets with immediate access to far more information and other people than we could have dreamed of even 10 years ago. Public discourse is no longer driven by print media, and the profusion of information sources available to any one person now makes it difficult to gauge the accuracy or value of any one source. Magazine articles, links to a report on a text-heavy website, or slots on commercial television are no longer sufficient in and of themselves for anyone other than those with very specific interests and questions. If the FRDC wishes to engage with, and stay relevant in the eyes of a

community as diverse (and in most cases un-invested) as recreational fishers, adopting a multimedia approach would be its best chance of doing so.

Appendix A: Committee members (as of 2020)

Brett Cleary

Russell Conway

Anthony Moore

Cassie Price

Frank Prokop

Andrew Rowland

Jo Starling

Cameron Westaway

Chair: Peter Neville

Executive Officer: Owen Li

Appendix B: References

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