



Land to Sea
CONSULTING

Identifying and synthesising key messages from projects funded by the FRDC Indigenous Reference Group

Final Report

August 2020

Prepared for

Fisheries Research and Development Corporation

and the Indigenous Reference Group

Prepared by

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Abbreviations

Fisheries Research and Development Corporation	FRDC
Indigenous Reference Group	IRG
Research, Development and Extension	RD&E
Traditional Ecological Knowledge	TEK
Traditional Fisheries Knowledge	TFK

Executive Summary

What the report is about

This project identifies, synthesises and summarises the key messages of eight projects that have been funded by the Fisheries Research and Development Corporation (FRDC) and the Indigenous Reference Group (IRG) on fisheries. These key messages have been presented through a series of materials including a synthesis report, summary booklets and an infographic, all of which were developed as a way of raising awareness of the latest research findings regarding the Indigenous fisheries in Australia. They are presented in a manner that is useful and accessible to a wide-range of audiences including Indigenous communities, decision makers and other fisheries stakeholders.

The materials have specifically developed with the aim of empowering Aboriginal and Torres Strait Islander communities by providing them with resources that they can use to engage government and non-government agencies. This project also involved a two-way learning component which entailed engaging an Indigenous student as a researcher for the duration of this project.

Background

In 2011 the Fisheries Research and Development Corporation (FRDC) and the Indigenous Reference Group (IRG) on fisheries held a national forum to discuss issues around Indigenous involvement in fishing and seafood based Research, Development and Extension (RD&E). Participants at the forum included Aboriginal and Torres Strait Islander people with experience or expertise in fishing, seafood, or natural resource management across Australia as well as a small number of non-Indigenous participants (Calogeras et al. 2012). In 2012, participants from the forum reviewed and endorsed the work and confirmed that the outputs and the outcomes aligned with the desires of the group. Through this process, the IRG developed a set of five priorities to guide RD&E for and about Indigenous fishing in Australia (Calogeras et al. 2012).

The FRDC-IRG have supported a number of projects focused on Aboriginal and Torres Strait Islander fisheries that focus on elements of the RD&E priorities (Calogeras et al. 2012). These projects have information that the IRG needs to communicate with Indigenous, commercial and recreational stakeholders, researchers, policy makers, agencies and the general public. Their findings bridge certain knowledge gaps about the Indigenous fisheries and highlight key issues and priorities of Indigenous fishing communities in terms of access and use of their fisheries.

Aims/objectives

This project was undertaken in response to the need identified by the IRG to ensure that the research findings from the previous eight projects are made accessible and easy to understand. The project consisted of the following objectives:

- To gain an understanding of the materials and formats that policy makers and key fisheries organisations need in their use of research to develop policy.
- To improve general stakeholder awareness of the key research findings in of FRDC and IRG projects.
- To provide Aboriginal and Torres Strait Islander communities with material that they can use in their engagement with government and non-government agencies.
- To develop succinct fact-sheets and a report that integrate the key messages of eight previous IRG projects in a user-friendly and culturally appropriate way.

Methodology

The project team conducted a desk-top review of eight project reports, their appendices, conducted phone meetings with the principle investigators of each project and liaised with the IRG. Project materials were subsequently developed with the use of qualitative data analysis software NVIVO and designed through Canva, a graphic design program.

Aboriginal or Torres Strait Islander artwork was used for the materials produced and where appropriate the artist engaged was from the region that the original project was for or about. An Indigenous student was also recruited as an employee of Land to Sea Consulting for the purposes of two-way capacity building.

Results/key findings

The project findings echo the key messages drawn from the eight recent FRDC-IRG projects that took place on country through participatory and ethical research methodologies. The five themes identified provide an insight into Indigenous priorities for:

1. Indigenous fisheries
2. Governance and management
3. Legislation and policy
4. Economic empowerment
5. Capacity building

These five themes have been developed as a way of understanding the key messages of recent FRDC-IRG research and for providing a step forward in offering fisheries stakeholders with in-depth insights into the challenges and opportunities facing the Indigenous fisheries sector. They support and align with the IRG RD&E principles and priorities while emphasising the particular findings and core assertions of the research projects analysed.

Implications for relevant stakeholders

The significance of this project lies in the materials created to communicate with Indigenous communities, fisheries managers, policy makers and other stakeholders involved in the Australian fisheries. They are short, easy-to-read and accessible versions of eight comprehensive research projects and clearly summarise their findings and synthesise their key messages.

They also provide Indigenous communities with material that they can use to engage decision makers. For policy makers and managers, they provide a synthesised and summarised version of recent research about Indigenous fisheries from which proactive policy can be built and based upon.

Recommendations

The five key messages that have been created through the synthesis of the FRDC-IRG projects have come to shape the very core of this project. Therefore, it is ultimately inevitable that these are the same messages that must embody the recommendations of this project. They are particularly aimed at policy makers and the direction for further development in the Indigenous fisheries sector.

Keywords

Indigenous fishing, cultural fishing, customary fishing, fisheries research, governance, management, capacity building, legislation, policy, economic empowerment, Australian fisheries.

Introduction

The Fisheries Research and Development Corporation (FRDC) and the Indigenous Reference Group (IRG) have supported various Research, Development and Extension (RD&E) projects that have focused on Aboriginal and Torres Strait Islander fisheries. The projects have been based on a series of principles and priorities (see **Appendix 1**) identified and endorsed at a series of national forums with Aboriginal and Torres Strait Islander people who have expertise in fishing seafood, or natural resource management (Calogeras et al. 2012).

The FRDC-IRG projects have generated a significant amount of information for sharing amongst stakeholders that are interested in Indigenous fishing including Indigenous, commercial and recreational stakeholders, researchers, policy makers, agencies and the general public. Their findings bridge certain knowledge gaps about the Indigenous fisheries and highlight key issues, challenges and opportunities for Indigenous fishing communities in terms of access and utilisation of their fisheries.

The following is a list of the eight FRDC-IRG projects and their principle investigators (see references for further information and links to the project reports).

1. Indigenous Cultural Fishing and Fisheries Governance. Stephan Schnierer (2012-216)
2. Optimising management of tropical reef fish through the development of Indigenous scientific capability. Thor Saunders (2013-017)
3. Building the Capacity and Performance of Indigenous Fisheries. Ewan Colquhoun (2013-218)
4. Improving access for Indigenous Australians to and involvement in the use and management of Australia's fisheries resources. Stephan Schnierer (2014-233)
5. Indigenous fishing subprogram: Mapping livelihood values of Indigenous customary fishing. Luke Smyth (2015-205)
6. Business Nous – Indigenous business development opportunities and impediments in the fishing and seafood industry. Jill Briggs (2016-206)
7. 'Wave to plate' establishing a market for Tasmanian cultural fisheries. Marcus Haward (2016-204)
8. Business opportunities and impediments for Aboriginal community development in supportive fishing industries in the Roper River to Robinson River area of the Northern Territory. Lorrae McArthur (2016-201)

This project was undertaken in response to the need to identify and synthesise the key messages from previous projects to ensure that their findings are accessible and easy to understand. In identifying and synthesising the key messages, the material produced during the life of this project has been targeted at empowering Aboriginal and Torres Strait Islander communities and highlighting research findings for the use of policy makers, FRDC clients as well as other stakeholders such as the broader public.

Outputs developed in this project centre around these priorities and materials developed were aimed at being accessible and easy to understand. They consist of:

Synthesis report (Appendix 2): The synthesis report puts all the key messages of the previous projects together in a report designed for use by decision makers.

Steps for developing Synthesis report (Appendix 5): This project aimed to document the project methodology as thoroughly as possible in order to provide a framework for future Principle Investigators on how to prepare their project outputs/reports to ensure consistency of approach and promote best practice/continual improvement.

Summary booklets (Appendix 3): A series of eight booklets that summarise each individual project so that stakeholders can access shortened, easy to read versions of the project aims, findings and recommendations.

Infographic (Appendix 4): The infographic provides a one-page snapshot of the key messages that came through synthesising the previous FRDC-IRG projects.

Two-way learning: A key component of this project entailed the recruitment of an Indigenous student (3rd year Bachelor of Science) who was employed by Land to Sea Consulting for the purposes of two-way learning. The student provided invaluable assistance with research and development of the materials for this project. In turn, she gained experience in research and analysis techniques, attained a deeper awareness regarding the Indigenous fisheries in Australia, tried and implemented a variety of research methods and gained an insight into the project cycle including milestones, project management, as well as a general insight into running a consulting business.

Objectives

Each of the outputs have been created as a way of addressing the broader objectives of this project.

1. *To gain an understanding of the materials and formats that policy makers and key fisheries organisations need in their utilisation of research to develop policy.*

It was agreed that the first objective would be better suited as a part of a separate project which aimed at fostering the adoption¹ of the FRDC-IRG research into policy. Therefore, the research team did not engage with policy makers. Instead, this project focussed on identifying and synthesising the eight previous FRDC-IRG research projects and making the materials succinct and accessible through outputs that aimed to empower Indigenous fishing communities.

2. *To improve general stakeholder awareness of the key research findings in of FRDC and IRG projects.*

In identifying, synthesising and summarising the key messages of the FRDC-IRG research it is anticipated that fisheries stakeholders who access the materials will have improved awareness of the key findings of the recent FRDC-IRG research and the themes that are recurring in research on Indigenous fisheries in Australia. The research has aimed to fill knowledge gaps in Indigenous fisheries research through sharing knowledge with Indigenous communities and the use of ethical research methodologies. The aim of this project is to make these findings available, accessible and easy to understand.

3. *To provide Aboriginal and Torres Strait Islander communities with material that they can use in their engagement with government and non-government agencies.*

The materials developed were all intended to be of use to Indigenous communities who have an interest in engaging with other stakeholders about research regarding Indigenous fisheries. The materials have been created in formats and language that can be presented to both government and non-government audiences.

4. *To develop succinct fact-sheets and a report that integrate the key messages of eight previous IRG projects in a user-friendly and culturally appropriate way.*

The outputs developed have been written in language that is non-academic and non-scientific so that they are easily comprehensible to Indigenous communities, policy makers and other fisheries stakeholders. They were also developed in consultation with the FRDC-IRG to ensure they are culturally appropriate and discussions with previous project principle investigators were also undertaken to ensure they stay true to their original projects and project findings.

¹ The IRG has instigated a project to address this; 2019-168 'Integrating Indigenous fishing: extending adoption pathways to policy and management.

Method

The methodology section is divided into two sections. The first documents the cultural awareness that is needed as a foundation for working on a project for and about Indigenous issues in Australia. The second describes the four stages of development that were involved in undertaking this project.

Ethical research

This research has been based on the IRG's RD&E framework and considers the five priority areas as well as the eleven IRG guiding principles. The research team has also taken care to integrate ethical research methodologies and recruited an Indigenous student as a researcher for the duration of the project.

The project team has been conscious of the history and politics of Indigenous-settler relations particularly when it comes to research for and about Indigenous livelihoods. The ongoing appropriation of natural resources in Australia makes environmental research on Indigenous land and sea territories a political act that has historically marginalised Indigenous communities while benefiting white Australia (Tuhiwai 1999).

The project aimed to be of benefit to Indigenous communities by:

- Being accountable to the IRG committee.
- Presenting drafts, presentations and seeking advice from the IRG committee.
- Discussing outputs and contents with previous principle investigators to ensure the key messages drawn out of their research was precise.
- Supporting Indigenous artists and using their artwork for the design of all the materials.
- Engaging an Indigenous student as a researcher as a part of a commitment to enhance capacity building opportunities for Indigenous peoples.
- Writing and presenting materials in a way that is respectful, culturally appropriate and acknowledging Traditional Owners in all materials.

Four stages of research

The project has been divided into four stages; planning, consultation, product development and product finalisation.

Planning

The planning phase was initiated by reviewing the history of the IRG to understand the background of the projects and how they were developed. This step allowed for a firm understanding of the history of the previous FRDC-IRG projects, how and why they were developed and how they relate to the IRG priorities and to Indigenous fishing in Australia more broadly. This was important in order to have a firm foundation from which to move forward with the project.

The planning phase also included discussions with IRG members about the aims, background and priorities for this project, what is expected and who the key stakeholders are in regards to the outputs of this project. These discussions ensured that the correct cultural protocols were followed and ensured that the project team understood the specific objectives and needs of the IRG. It was agreed that a synthesis report would be developed as well as summary booklets, one for each previous FRDC-IRG project.

Each project report was read and notes were taken at various key points. The reports were then analysed using a qualitative data analysis program called NVIVO. NVIVO assists researchers to code and organise large volumes of qualitative data and then identify links and cross-examine the information. The project team was able to organise the research in order to find common subject matters in each project and cross-reference these with the other projects, highlighting their key themes. This allowed for common patterns in the text to be found and evidence-based insights to surface between and across the projects. The common themes from across the projects were identified and these were connected back to the IRG principles and priorities for RD&E.

Engagement

The next step entailed engaging with the individuals who would be integral to this project.

By consulting with each of the previous principal investigators about the details of their projects their key messages could be matched with the analysis undertaken through the research phase of this project. Engaging the previous principle investigators assisted in highlighting the underlying and central messages and findings of their projects.

Through this engagement phase, various Indigenous artists from across Australia were also contacted for the artwork design of the synthesis report and summary booklets.

The engagement phase also consisted of taking steps to recruit an Indigenous research assistant with a background in marine science and/or policy. Before beginning the process of recruiting an Indigenous research assistant the principle investigator read widely on the considerations needed when employing Indigenous peoples in Australia. Indigenous centres across Victorian universities were contacted with a description of the position. The temporary nature of the role was discussed with representatives from the Indigenous centres and they contacted the students that they had on their records, databases and who they thought would be interested in the position. The student that was recruited for the project was in the third year of a bachelor of science degree, majoring in zoology.

Product development

The project team then began the drafting process using a graphic design program called Canva. This program is easily accessible and allows future projects to replicate the designs of outputs for consistency. Artwork was also integrated within the synthesis report and summary booklets during this phase.

The synthesis report aimed to identify and synthesise the key messages of previous projects in the most succinct way possible. It was written by drawing out the themes that ran across all of the FRDC-IRG projects. These were drawn out through a combination of analysing the reports and manually coding them as well as through the use of qualitative data analysis program NVIVO. The synthesis report is aimed at decision makers and its purpose was to be relevant to empowering ATSI communities through knowledge and in effectively communicating findings and results to other stakeholders including government, industry and researchers for the broader purpose of supporting adoption into policy.

A concise summary booklet was created for each FRDC-IRG project (eight in total). These booklets were created as a series through Canva using the same template design for each. Where possible, each booklet included artwork from the region that the project took place in. The project team drafted the summaries combining final project reports, appendices as well as details from conversations with the principle investigators of the eight FRDC-IRG projects. These summaries were

developed to be succinct versions of each project and to allow stakeholders to access the key messages of individual projects.

The infographic is based on the five key messages that came out of the synthesis report. They were turned them into action phrases and the graphic design team at FRDC worked on the design.

Product finalisation

The product finalisation phase was undertaken so that drafts of the outputs could be reviewed by the FRDC, the IRG and the principle investigators from previous projects. The project team incorporated feedback from various stakeholders to finalise the synthesis report and each of the summary booklets.

Results and Discussion

This section presents the results and discussion of the outputs developed through undertaking a synthesis of the previous FRDC-IRG research and the key messages that were identified through this process.

Outputs

The outputs of this project consist of:

- Synthesis report
- A series of eight summary booklets
- Infographic of five key messages
- Two-way learning

Materials were created as a foundation for communicating with policy makers, Indigenous communities, researchers and other stakeholders in the fisheries about the FRDC-IRG research that has been undertaken.

Synthesis report

This report entails a synthesis of the five key messages from the eight FRDC-IRG research projects. The findings of the synthesis process have been presented through a set of themes that were echoed across the research analysed. The themes provide a framework for integrating the findings from previous projects and for linking the findings to the IRG principles for RD&E. The five themes identified are: cultural fisheries, governance and management, legislation and policy, economic empowerment and capacity building. These five themes have been developed as a way of understanding the key messages of recent FRDC-IRG research and for providing a step forward in offering fisheries stakeholders with in-depth insights into the challenges and opportunities facing the Indigenous fisheries sector.

The report is designed to reflect the research conducted across the projects regarding Indigenous fisheries and to be useful to a wide range of stakeholders including policy makers and other stakeholders who are not knowledgeable in the background of the studies. The report had the aim of being a comprehensive review that covers the current state of knowledge in context of the eight previous projects.

The findings from the synthesis report have highlighted the need to undertake a variety of activities and to produce a variety of materials for the different audiences when it comes to reaching stakeholders with an interest in the Indigenous fisheries.

Summary booklets

A series of eight booklets that summarise each project report in a way that makes the project easy to understand, easy to read and short. These have been developed with the input and feedback from principle investigators of projects and the IRG. Booklet contents include an introduction to the project, its findings and recommendations and conclusions. The language used is simple rather than scientific or academic language, this makes each previous project accessible for policy makers and for the Indigenous communities that the projects were for and about.

Infographic

In partnership with the FRDC communications team an infographic was created comprising of the five key messages that came through identifying and synthesising the previous FRDC-IRG projects. The infographic provides a one-page snapshot of these key messages.

Two-way learning

The principle investigator engaged an Indigenous student as a co-investigator, researcher and an employee of Land to Sea Consulting as requested by the FRDC-IRG committee.

Engaging an Indigenous student enabled both the principle investigator and the student to open dialogue on matters of the Australian fisheries and Indigenous-settler relations and work together to produce strong outputs that draw out the key messages of the eight FRDC-IRG research projects.

It was also a priority for the principle investigator to employ a woman. Women are underrepresented in the Australian workforce, especially in science and technology in terms of education and careers, and women from minority groups are particularly underrepresented (Commonwealth of Australia 2019). Two-way learning and sharing knowledge between the principle investigator and the student proved to be a major strength of this project. There were positive benefits for both parties:

For the student:

- Experience in the project management cycle.
- Experience in in-depth research and desk-top analysis.
- Experience in generating short, succinct materials from dense research.
- An insight into the opportunities and challenges in Australia's Indigenous fisheries.

For the project:

- An additional researcher and editor on the project team.
- An Indigenous woman's perspective on matters concerning Indigenous fisheries.
- A researcher who is knowledgeable in the biological sciences.
- Assistance in the development and design of project materials.

The recruitment of an Indigenous researcher has been part of the company's (Land to Sea Consulting) commitment to positive social change in Australian Indigenous-settler relations. Integrating an inclusive research methodology that includes a capacity building component has been an important part of this project and should be a priority for research on matters to do with Indigenous peoples in Australia.

Five key messages

Five key messages were identified and synthesised for the development of the synthesis report. These arose through the drawing out of common themes across the projects. Each project report (and its appendices) was read and common subject matters highlighted. Once the main themes of each project were identified they were cross-referenced with each of the other projects and five key messages were developed. These were also discussed with principle investigators. While not every project emphasised the same themes, most of the project reports reveal that each of the topics important to the development of the Indigenous fisheries in Australia.

Coding the research in this way led to the development of themes that ran through all of the projects. Through the use of qualitative analysis software, NVIVO, a word frequency map validates the relevance of these themes, which were most frequently referred to across the FRDC-IRG projects analysed (**Figure 1**).

The five key messages also support and align with the principles and priorities for RD&E collated by the IRG through the national Indigenous forums. This is likely due to the way that the FRDC-IRG projects were developed to address a need based on elements within the principles and priorities. While the five key messages link in with the RD&E principles and priorities they also differ in that they reflect the findings and core assertions of the particular research projects analysed.

The five key messages are a strength of this project in terms of getting a synthesised version of the key findings across to the target audiences in a concise manner. Their contents aim to empower Indigenous communities and are relevant for decision makers enacting fisheries policy.

Figure 1: Word frequency map across FRDC-IRG projects.



In this section I state the central point of each of the five key messages. A selected few key quotes are also referenced from the findings of the previous FRDC-IRG projects as an example of how these themes were identified as significant for the development of the materials for this project. A more detailed exploration into these themes and further references can be found within the synthesis report (**Appendix 2**).

Indigenous fisheries

The IRG has highlighted the need for Indigenous fisheries to be implicitly recognised as a definitive sector within each level of the fishing and seafood industry. In turn, the IRG specify the need for RD&E that seeks to enhance Aboriginal and Torres Strait Islander recognition (Principle 1).

The research findings highlight the need for the definition of Indigenous fisheries to be clarified by Commonwealth, State and Territory governments. Recognising and respecting Indigenous values, worldviews and traditional knowledge will be an essential part of the development of Indigenous fisheries in Australia as a distinct sector. This process will entail identifying barriers to Indigenous fishing, the impacts of non-Indigenous fishing on Indigenous fisheries and engaging with diverse views within Indigenous communities about the inclusion of commercial activities within the definition of Indigenous fisheries.

The team also recommends the inclusion in all fisheries acts, across all jurisdictions, of an objective that specifically addresses Indigenous cultural fishing... (Schnierer et al. 2018, p.5)

Cultural fisheries requires greater characterisation that centres Indigenous worldviews, practices and rights as distinct from other forms of knowledge....An Australian Government intent for Indigenous peoples, knowledges and governance to have greater inclusion in marine planning has been uneven and patchy, thus contributing to the lack of characterisation for Indigenous cultural fisheries. (Lee 2019, p.17)

Clarifying the definition of cultural fisheries will aid in clearer policy, regulation, roles and responsibilities, and provide governance foundations. (Lee, 2019, p.35)

Governance and management

The IRG has identified the need to develop processes that best align with Aboriginal and Torres Strait Islander peoples' needs, including self management or co-management which incorporates TFK arrangements and techniques. In doing so, they have underscored the need for RD&E that seeks to improve governance and provides pathways to better representation and management models (Principle 3).

The research analysed suggests that space must be made in fisheries governance and management for Indigenous aspirations and priorities to be addressed. Increased employment opportunities, joint management, the creation of Indigenous advisory committees and Indigenous representation on fisheries departments, boards and organisations would be a proactive step towards these objectives.

To enable Yanyuwa led governance and decision making, Yanyuwa need an independent governance framework to work alongside industry, government and other stakeholder interests. This is the primary key element found missing through this research and the primary key element to enable any forward process toward economic development. (Sinclair 2020, p.159)

Even in states and territories where Aboriginal and Torres Strait Islander peoples have had comparatively unregulated access, until recently they have been largely excluded from fisheries management decisions. (Smyth et al. 2018, p.8)

...savings could be further optimised if the current model of government agencies running all aspects of aquatic resource management moves to a co-management model whereby both research and management capability resides within Indigenous communities and the management agency takes on a more administrative role with fewer staff based in larger population centres. (Saunders et al. 2017 p.61)

Legislation and policy

The IRG have recognised the importance for RD&E that leads to recognition of customary rights and knowledge, including processes to incorporate Aboriginal and Torres Strait Islander Traditional Fishing Knowledge (TFK) and Traditional Fisheries Management (TFM) (Principle 7). Principle 9 also highlights the need for RD&E that seeks to provide management arrangements that lead to improved

access, protection and incorporation of Traditional Fishing Knowledge and Traditional Fisheries Management input to processes.

Indigenous fishing has been defined and recognised through different legislation, processes, policies and practices across the Commonwealth, State and Territory governments. This disjointed context could be addressed through the development of a comprehensive set of national Indigenous fishing principles to guide Indigenous fisheries policy across all jurisdictions.

...the research team recommends the development of a more comprehensive set of national Indigenous fishing principles to further guide the development, implementation and monitoring of Indigenous fisheries policy across all jurisdictions. (Schnierer et al. 2018, p.5)

...the Tasmanian Government legislative, regulation and policy landscape is slim in regards to engagement with Indigenous rights, particularly in the fisheries space (Lee 2016). This neglect highlights the poor condition of understanding Indigenous interests in fisheries. (Lee 2019, p.17)

Economic empowerment

The IRG has identified the need for RD&E that leads to an increased value for Aboriginal and Torres Strait Islander people (economic, social, cultural, trade, health and environmental). They cite the need to improve the overall wellbeing of Aboriginal and Torres Strait Islanders through the involvement in the fishing and seafood industry (Principle 10). RD&E that leads to benefit sharing will be a crucial part of Aboriginal and Torres Strait Islanders deriving benefits from the use of fish stocks and fishing rights (Principle 11).

There are great disparities in the characterisation of Indigenous fisheries across jurisdictions in Australia and the definition generally excludes fishing for commercial purposes. Trade and barter have always been part of Aboriginal and Torres Strait Islander livelihoods and the social, cultural and economic aspects of fishing are interconnected. Indigenous fishing that is aimed at meeting the economic needs of Indigenous communities includes processes of kinship, reciprocity and Indigenous worldviews within economic exchanges. It therefore does not fit in to the limited boundaries of the commercial sector.

A trade is not just a trade when processes of kinship, reciprocity and Indigenous worldviews are incorporated into the exchange (tebrakunna country, Lee & Tran 2016b). This Indigenous worldview accommodates more than just a product for money, but the basis for a relationship. These actions are a core part of Indigenous identity and are brought to negotiations and agreement-making in a range of settings including fisheries. (Lee 2019, p.20)

The audit revealed little in the way of legislative support for Indigenous access to commercial opportunities. Similarly, policy support is minimal. (Schnierer et al. 2018, p.45)

Many of the interviewees had entered into business without fully understanding the regulatory framework. They spoke about the fact that regulations are complex and then to layer on top of that Indigenous rights issues and business owners can be very complex. One interviewee, who had closed their business, spoke about how the continually changing state regulations were a contributing factor to the business closure. (Briggs 2020, p.25)

As Indigenous communities pursue economic development and seek to acquire the capacity to determine and control their own economic outcomes, they need to integrate and balance cultural governance with corporate governance. (Colquhoun 2017, p.46)

Capacity building

The IRG has highlighted that Indigenous people have the right to access capacity building activities to further their aspirations in the use and management of aquatic biological resources. It is therefore essential that capacity building opportunities for Indigenous people are enhanced and RD&E leads to improved capacity that empowers Aboriginal and Torres Strait Islanders (Principle 5). This requires commitment on the part of researchers and governing agencies rather than being the sole responsibility of Indigenous communities.

The research findings also suggest that the inclusion of Indigenous communities in fisheries management would involve a substantial investment in capacity building initiatives driven by Indigenous peoples. Support for upskilling Indigenous fishers, creation of opportunities within fisheries management and sharing knowledge are all vital components for proactive engagement with Indigenous fishing communities. Capacity building, including cultural awareness training for non-Indigenous stakeholders, is going to play an important role in successful outcomes and positive changes moving forward for the Australian fishing industry.

Approaches such as including an Indigenous person on a fisheries advisory committee goes part way towards addressing participation but without support in the form of capacity building for those individuals, diminishes their ability to fully participate. (Schnierer et al. 2018, p.46)

ranger programs are viewed as a solid starting point in developing the skills of Indigenous communities in co-managing natural resources. However, they also need to be paired with new capital investment and an increase in commercial skills for greater economic development (Colquhoun 2017, p.14).

The skills that were missing were made clear during the interviews with individuals having a lack of knowledge about specific areas of business knowledge. (Briggs 2020, p.31)

Further trust and stronger relationships between Aboriginal fishers, researchers, managers and other stakeholder's needs to be developed throughout the whole of NSW. This will increase the chances for greater engagement and participation in future research and management. (Schnierer & Egan 2015, p.34)

The five key messages overlap and are interrelated. For example, characterising Indigenous fisheries incorporates issues around the gaps in the current legislative and policy context as well as diverse views about the inclusion of commercial activities and Indigenous economic empowerment. The theme of economic empowerment also cuts across challenges to do with capacity building (for organisations and individuals) as well as opportunities for involvement in fisheries governance and management arrangements.

Conclusion

Indigenous values and worldviews have sustainably managed the natural environment and supported their livelihoods for thousands of years across all regions of Australia. These values and worldviews continue today and are the avenue through which Indigenous communities maintain, access and utilise their natural resources. While there have been improvements in recognising Indigenous rights to access and utilise their natural resources, the recent FRDC-IRG research shows that there are still gaps between current fisheries policy and Indigenous aspirations in the fisheries sector.

The FRDC-IRG sponsored research on Indigenous fisheries is making positive strides in helping to bridge knowledge gaps regarding Indigenous fisheries. Under the guidance of the IRG, research methodologies across these projects have been participatory, with researchers working on Country and providing shared learnings with the communities that they took place in. These projects have generated important research findings about Indigenous fisheries in Australia.

This project has demonstrated that there are common concerns and aspirations coming out of the Indigenous fishing sector in Australia. The process of identifying and synthesising the key messages of the eight recent FRDC-IRG projects has brought to the fore five key themes that are significant for future decision-making in the fisheries in Australia. These themes are all interrelated and a thorough understanding of them is important for anyone interested in Indigenous priorities, opportunities and challenges in context of the fisheries. The key messages concern the following themes:

1. Indigenous fisheries
2. Governance and management
3. Legislation and policy
4. Economic empowerment
5. Capacity building

The research findings and materials developed provide an avenue for informing decision makers on the most recent developments in the Indigenous fisheries. Importantly, they emphasise Indigenous fishing priorities when it comes to accessing and utilising aquatic resources.

Fisheries agencies now have an opportunity to proactively lead the process for positive change towards equality in the fisheries. The next step in fisheries management arrangements and policy making could have the potential to unlock unrealised benefits for both the state and Indigenous communities in the future of the Australian fisheries. Proactive action would entail supporting a processes of self-determination where all of the themes in this report are incorporated into the culture of Australian fisheries agencies in order to arrive at a place where Indigenous communities drive the policy processes that affect their livelihoods, health, culture and economies. An overall openness to engage with Indigenous worldviews, values and aspirations for their fisheries must underpin fisheries governance, management, legislation and policy in Australia so that access, management and ownership of Indigenous fisheries enhances rather than further marginalises Indigenous communities.

Implications

This project aimed to raise awareness of the FRDC-IRG research findings by developing concise materials in a user-friendly format for the following audiences:

- Indigenous fishing communities have a succinct synthesis report and summary booklets that they can use to easily access the findings of the FRDC-IRG research and use it in their engagement with governing agencies.
- Policy makers and fisheries managers have summarised versions of eight recent research projects (and their key messages and recommendations) to assist them in their direction of enacting policy.
- Other stakeholders (researchers, commercial fishers, recreational fishers) that are interested in raising their awareness of the Indigenous fishing sector have access to the key messages and user-friendly summaries of eight recent projects relating to Indigenous fishing.

The potential future research, policy and social changes that could come out of undertaking this project are promising. The findings and recommendations coming out of the recent FRDC-IRG research are clear in their conclusions and they have been reiterated by Indigenous fishing communities for decades. It is now a matter for policy makers and managers to begin to see the positive benefits that could come with the uptake of these recommendations and to deliver progressive policy outcomes based on these findings.

It is important to remember that the uptake and adoption of the findings of this project will be an ongoing process, one that is entrenched in the development of Indigenous-settler relations in Australia. Another FRDC-IRG supported project that intends on 'establishing effective means for Indigenous fishing R&D outputs to deliver policy and management outcomes' (FRDC project 2019-168) will potentially provide stakeholders with a deeper understanding of the research to policy blockages in this sector.

Recommendations

The five key messages that have been drawn through the synthesis of the eight FRDC-IRG projects have come to shape the very core of this project. They have also featured in two of the outputs that have been created for this project; the synthesis report and the infographic. Therefore, it is ultimately inevitable that these are the same messages that must embody the recommendations of this project. They are particularly aimed at policy makers and focus on Indigenous priorities regarding the direction for further development in the Indigenous fisheries sector. They include:

1. Cultural fisheries

RECOGNISE cultural fisheries as a distinct sector by all States, Territories and Commonwealth.

RESPECT Indigenous rights, values, worldviews and knowledges that are essential to cultural fishing.

ACKNOWLEDGE that cultural fisheries encompass complex systems of ecological knowledge, ownership, management, preservation and trade of aquatic resources (in addition to ceremonial and subsistence practices).

ADDRESS (1) the barriers to cultural fishing, (2) the impacts of non-Indigenous sectors on cultural fisheries, and (3) the diverse views within Indigenous communities about including commercial activities within the definition of 'cultural fisheries'.

2. Governance and management

INCLUDE Indigenous aspirations and priorities in fisheries governance and management for greater Indigenous decision making.

REPRESENTATION of Aboriginal and Torres Strait Islander people on fisheries departments, committees, boards and organisations as a path to joint management.

3. Legislation and policy

ADDRESS the disjointed policy context regarding Indigenous fisheries across States, Territories and Commonwealth, potentially through a national Indigenous fisheries framework.

4. Economic empowerment

ACKNOWLEDGE that trade and barter have always been and continue to be a part of cultural fishing.

RECOGNISE that the economic values of fishing do not take priority over the social and cultural values of fishing therefore maximum utilisation may not be a priority for Indigenous fishers.

CREATE space for a sector that supports the interconnected values of Indigenous fishers and reflects the cultural economies of Indigenous peoples in Australia.

5. Capacity building

INVEST in capacity building initiatives that are identified by Indigenous peoples.

SUPPORT (1) upskilling Indigenous fishers, (2) opportunities for decision making (3) knowledge-sharing to facilitate proactive engagement with Indigenous fishing communities.

EDUCATE non-Indigenous fisheries stakeholders through cultural awareness training programs.

Further development

The outputs developed for this project have identified, synthesised and summarised recent FRDC-IRG research. They provide a strong foundation from which to take the next step and build education and extension materials to target specific audiences i.e. a policy brief for policy makers, specific materials tailored to the needs of each State and Territory, presentations or videos for Indigenous communities that could be added into an Indigenous Fisheries website.

Therefore, the further development recommended in this section relates to promoting the key messages that have come out of this project.

Indigenous fisheries website

All stakeholders interested in news and developments within the Indigenous fisheries in Australia (living in urban or rural contexts) would benefit from an Indigenous fisheries website where they could access developments in the Indigenous fishing sector through research, reports and newsletters at one central online point. A website could also be a way for Indigenous-settler partnerships to be formed for collaboration on future research projects, for example for Indigenous capacity building or non-Indigenous cultural awareness training.

Commonwealth level: Policy brief

Recent legislation changes in 2017 mean that AFMA must consider Indigenous interests in fisheries decision-making processes. There is an opportunity to utilise this time of change to inform AFMA and other fisheries agencies on the key messages coming out of the FRDC-IRG research by creating a short policy brief in line with the key messages of the FRDC-IRG research that has been identified and synthesised through this project.

State and Territory level: Relating key messages to each State and Territory

There would be value in relating the key messages of the FRDC-IRG research to the specific needs/issues of each jurisdiction. This kind of focused material would first entail an analysis of the way that each jurisdiction recognises and manages Indigenous fisheries, to gain an understanding of the specific issues and challenges (for all parties involved) in each jurisdiction and then to engage with relevant policy makers and tailor materials from that process that would be relevant to each State and Territory.

Managers and agencies: Cultural awareness training

A program tailored to fisheries agencies and managers to inform them on the specific needs and priorities Indigenous fisheries. This may prove to be a way to bridge Indigenous-settler interpretations of Indigenous fisheries, cultural practices, current laws/policies and Indigenous rights. An understanding of the degree to which cultural awareness training is occurring for managers across fisheries agencies was beyond the scope of this project.

Extension and Adoption

Extension and adoption of the research will be an ongoing process that requires building relationships between stakeholders and an understanding and respect of the worldviews, priorities and values of each group. According to Coutts and Roberts (2005) extension is essentially the process of capacity building. As this project has highlighted, capacity building for all stakeholders is going to play an important role in successful adoption of FRDC-IRG research and overall positive social change in recognising the priorities and aspirations of Indigenous fishers and the development of the Indigenous fisheries in Australia.

This project makes a direct contribution to the role of extension and adoption by synthesising the key findings of eight previous IRG-FRDC projects and presenting them in a format that is easy to understand, concise and useful to Indigenous communities and policy makers alike. By consulting with the IRG, previous project principle investigators and other key stakeholders, materials developed are designed to be useful for Aboriginal and Torres Strait Island fishing communities who now have a synthesis and summaries of recent research to engage with government and fisheries agencies in enacting policy.

The project findings and materials will also be extended in association with the results of a separate FRDC-IRG project which aims to understand what the challenges and blockages are for adoption pathways.

Project coverage

This project has been covered in an article in the FRDC Fish magazine. It can be accessed at: <https://www.frdc.com.au/media-publications/fish/FISH-Vol-28-1/Deepening-Australias-connection-to-fishers>

Project materials developed

- Synthesis Report
- Eight summary booklets (one for each FRDC-IRG project)
- Five key messages infographic

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Appendices

Appendix 1: IRG Principles and Priorities for RD&E

IRG Eleven RD&E Principles

1. Seeks to enhance Aboriginal and Torres Strait Islander recognition
2. Resolves issues around access
3. Improves governance and provide pathways to better representation and management models
4. Provides resourcing options in a user friendly and culturally appropriate manner
5. Leads to improved capacity that empowers Aboriginal and Torres Strait Islanders
6. Leads to Agencies developing capacity to recognise and utilise Aboriginal and Torres Strait Islander expertise, processes and knowledge
7. Leads to recognition of customary rights and knowledge, including processes to incorporate Traditional Fishing Knowledge and Traditional Fisheries Management
8. Improves knowledge and awareness of impacts on the environment and traditional harvest
9. Provides management arrangements that lead to improved access, protection and incorporation of Traditional Fishing Knowledge and Traditional Fisheries Management input into processes
10. Leads to an increased value for Aboriginal and Torres Strait Islander (economic, social, cultural, trade, health, environmental)
11. Leads to benefit sharing

IRG Five RD&E Priorities

1. Primacy for Indigenous people.
Indigenous people have certain recognised rights associated with and based on the prior and continuing occupation of country and water and activities (e.g. fishing, gathering) associated with the use and management of these.
2. Acknowledgement of Indigenous cultural practices.
Indigenous people have the right to maintain and develop cultural practices to address spiritual, cultural, social and economic needs associated with aquatic resources and landscapes.
3. Self determination of Indigenous rights to use and manage cultural assets and resources.
Indigenous people have the right to determine courses of action in relation to use and management of aquatic biological resources.
4. Economic development opportunities arising from Indigenous peoples cultural assets and associated rights.
Indigenous people have the right to engage in economic activity based on the use of traditional aquatic biological resources and/or the right to share in the benefits derived from the exploitation of aquatic biological resources.
5. Capacity building opportunities for Indigenous people are enhanced.
Indigenous people have the right to access capacity building activities to further their aspirations in the use and management of aquatic biological resources.

Appendix 2: Synthesis report

Appendix 3: Summary booklets

Appendix 5: Steps for developing synthesis report

1. *Read each project report and its appendices*

- Read each project report carefully and manually highlight sentences of relevance, repeated statements and key findings in each report. Do not forego a thorough analysis of the project appendices as these will often include important elements of the project (for example participant quotes, education materials) that can strengthen the details of synthesis report.

2. *Organise the project reports in NVIVO*

- If the project team does not have access to qualitative data analysis software NVIVO skip to point number 3.
- Import each project report.
- Code the reports using nodes in order to arrange and identify themes.
- Use 'word frequency' and 'text analysis' features to quickly find patterns across the project reports.
- Use the 'text search' query to analyse the use of particular words and the context they are being used in across the projects.
- Key themes will begin to emerge through this process.
- Create nodes for each emerging theme. For example, statements about capacity building across all of the project reports will appear in the node titled 'capacity building.'

3. *Cross reference the information*

- At this point (particularly if NVIVO is not being used) it is a good idea to ensure that all projects that need to be included in the synthesis report are complete and the Principle Investigator has access to all of the project reports.
- Identify common themes that arise across all of the project reports and colour code these themes, e.g. yellow = statements about capacity building.

4. *Engagement*

- Communicate the key themes and findings to date to the IRG.
- Arrange unstructured meetings (in person or phone) with each Principle Investigator. It is a good idea to send an email outlining your project, how you intend on using their reports and an outline of the questions you will be asking. Ask if they will provide feedback for the report once a draft has been developed.

5. *Create a draft of the synthesis report*

- Subscribe to graphic design program Canva and choose a template for the synthesis report.
- Source a digital reproduction of Indigenous artwork for the synthesis report and import into the Canva document. Ensure that permission is gained from the artist to crop the artwork.
- Draft the report using the key themes that have been identified as the major headings in the report.

6. *Re-read and re-organise*

- Once the key themes are identified and a rough draft of the synthesis report has been created you will need to re-read the project reports. This will allow sub-themes or sub-headings to emerge. It will also allow you to pick up on any key statements that were missed in the initial analysis of the project reports and their appendices.

- It is a good idea to colour-code new information and emerging sub-themes that are relevant for the synthesis report.

7. *Incorporate feedback*

- Send a copy of the draft synthesis report to the IRG and to each Principle Investigator so that they can provide feedback and comment on the way their projects have been synthesised and structured.
- Send the artist a copy of the draft synthesis report to ensure that they are happy with the context in which their art is being used and to ensure that their artwork is represented in a way that is culturally appropriate.

8. *Edit*

- Incorporate all feedback within the synthesis report.
- Edit the report and ensure consistency across the pages.