FISHERIES RESEARCH & DEVELOPMENT CORPORATION

FRDC Social Sciences Research and Coordination Program II Final Report

Dr Kate Brooks

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Foreword

The Social Sciences Research Coordination was first implemented in 2009 and extended for this second round in 2012, through until 2015. The renewal of the program was due to the success of placing social sciences perspectives and contributions, on the agenda of fisheries management; both for industry and government agencies.

This second iteration of the program had the explicit objective of building on the foundations of the program's first three years, which achieved introductory education of the industry as to what social sciences research entailed and what it may contribute. This second round of the Program had the task of establishing a process of embedding social science perspectives and consideration into everyday fisheries management, to improve decision-making process and outcomes for the industry and Australian community alike. As importantly however, it sought to identify key projects to assist the industry to comprehend the benefit of social sciences research. These projects provided tools to support the industry and government in achieving the cultural shift toward whole of community engagement. Industry stakeholders have identified these activities as essential elements in ensuring the long-term future of the fishing industry in Australia.

This round of the Social Sciences Research and Coordination Program has been very successful in securing an understanding of the importance of engaging with the broader community in fisheries management, and the consideration of Australian community and industry perspectives in research undertaken by and for the industry. Two of the projects undertaken during this iteration of the Program have been noteworthy in providing the industry and government agencies with these tools and a level of comfort as to 'next steps. These two projects, 2012/301 ("Let's Talk Fish") and 2010/040 (Developing and testing social objectives and Indicators for fisheries management), have provided watershed tools and perspectives in the industry, and industry and government agencies with the ability to identify their own pathways forward in a changed environment of transparency, engagement and reporting.

Many challenges remain, however. These include continuing to develop ongoing collaboration between researchers, industry and managers, to ensure the uptake and adoption in everyday practices of these social sciences based tools and the research outcomes of the past, and current 19 research projects, associated with the SSRCP. Aside from research project development and implementation support, the SSRCP has also played an integral role in ensuring this non biological perspective of our fisheries management and industry is brought to the table and robustly represented at industry forums, discussions, conferences, and policy and management development meetings. Without this profile the industry runs the risk, at this immature but extremely promising stage of integrating social sciences into standard operating practices, of losing these human factor perspectives – the social benefits - and retreating to biological perspectives only (with a necessary amount of economic input). Such a position does not honour the essential necessity identified by the industry and government legislation to continue to integrate and embed a community engagement and consultation culture that recognises and generates social, as well as economic, benefits from natural resource use activities.

The FRDC Social Sciences Research Co-ordination Program is an example of industry best practice in addressing a distinct and important management need associated with the sharing of common resources, in the context of the fishing (wild catch and aquaculture) industry. As Program Manager, I and the Steering Committee would like to thank the FRDC Board and Management for its foresight and ongoing support of this very important aspect of the industry's research agenda, and therefore the results achieved to date.

Dr Kate Brooks
Program Manager February 2015

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Acknowledgments

The Program Manager would like to thank the FRDC Board and Management for its foresight and ongoing support of this very important aspect of the industry's research agenda. The management of the Program was also made much smoother through the unending, enthusiastic and positive support of all the FRDC staff, who have been a pleasure to work with throughout the project term of the Program.

The Program would also like to thank and acknowledge the ongoing support and enthusiasm not only of the industry but also State and Commonwealth fisheries agencies in working with the program through projects and strategic workshops and meetings. The success of the program is founded upon the importance and relevance placed by these stakeholders on the projects and work undertaken.

The dedication of the members of the Steering Committee during this iteration of the program must also be acknowledged for their unwavering support and unerring objectivity in feedback and assessment of both project proposals and the activities of the program. Without this support the Program would not have been able to achieve the level of transparency and objectivity it has.

Abbreviations

AFMA – Australian Fisheries Management Authority

AFMF – Australian Fisheries Management Forum

CSIRO – Commonwealth Scientific and Industrial Research Organisation

FRAB – Fisheries Research Advisory Board

FRDC - Fisheries Research and Development Corporation

SSRCP (I & II) – Social Sciences Research and Coordination Program

RDCs – Research and Development Corporations

UTAS – University of Tasmania

Executive Summary

This report summarises the key activities of the Social Sciences and Research Coordination Program II (SSRCP II), which was implemented in 2012 and concluded in 2015. It focuses on the key objectives of the Program, achievements and recommendations for future iterations of this type of Program, or areas where the FRDC may want to focus efforts to encompass the social sciences dimension of fisheries research.

The FRDC is a leader in its cohort in supporting social sciences research, which is regarded by industry, government and researchers, both here in Australia and internationally, as a beneficial aspect of the Australian fisheries, marine and aquatic research management arrangements.

Importantly, key stakeholders in fisheries research have directly benefited from the central focus and coordination point of social research in fisheries across all sectors and groups in Australia provided by the SSRCP. The Program sought to support and coordinate the important work already being undertaken in key centres such as the CSIRO, UTAS, James Cook University, Curtin University, Flinders University and the University of Technology Sydney, amongst others. The benefit of this has been a reduction of duplication, leveraging of knowledge and, importantly, ensuring that the FRDC maximises research investments in this field, and that industry and the Australian community gain the best benefit from research dollars invested.

Dr Kate Brooks, Director of KAL Analysis Pty Ltd and fisheries researcher since 2000, has undertaken management of the Program for the last six years, since its inception in 2009. During this time industry, government and community representatives, as members of the Steering Committee, have very ably and purposefully supported the Program. The Committee have ensured the provision of regional and sector perspectives, as well as bringing additional valued research expertise to the table.

Importantly, the key objective of the Program has been to embed and increase understanding and knowledge of the role that social sciences research plays in assisting industry, government and Australian community, to understand the issues involved in the extractive use of our common fisheries resources, and how these are valued by the Australian community. The outcome sought on an ongoing basis by the Program, is the increased understanding of these issues across both industry and community, and to identify pathways to ensure sustainability both of the resource and of the industry, to the future benefit of the Australian public.

Background

The Social Sciences Research Coordination Program I & II arose from the recognised need for the social sciences aspects of industry to be taken into consideration subsequent to the largely economic drive of the 1990s. In addition, most jurisdictional fisheries legislation requires maximum or optimal community benefits to be realised from the use of fishery resources. These have continued to be poorly understood, remaining a largely vacant space around the ability to understand, measure or value social dimensions. As a result, some decisions have been made (arguably) on perceived social demands, with 'noisy' sectors of the community potentially ‘over-influencing’ outcomes, and governments’ interpreting this as representing ‘best community outcomes’. The ongoing adoption of social science methods into fisheries decision-making processes could only improve the level of information on which government has to make decisions that may have significant effects on communities. Significantly social factors are relevant across not only all elements of the fishing industry - indigenous, commercial (wild and aquaculture), recreational, fishing tourism, fish wholesalers and retailers, and consumers – but also increasingly have significance to the non-fishing or even fish eating Australian public, in terms of the social license to operate that they are willing to grant the fishing industry for its activities.

The second iteration of the Program continued to address this need and was designed to build upon the Program’s initial achievements, with a focus on identifying understandings of and solutions to

challenges around governance, resource access and allocation, growth and profitability, consumers and public opinions, the resilience of communities (industry and related) and industry skills in engaging with the broader Australian public.

To achieve these outcomes it was identified that a focus on integrating social sciences into research projects at all possible relevant levels was the most efficient way to move this cultural change forward. While the ultimate objective is to bring the industry (operators and government) to a point where the level of familiarity with social sciences research methodologies, implementation outcomes and benefits, is such that programs such as the SSRCP will not be required, it was identified at the end of the first Program that to remove this resource at that point in time would be premature, and that the work should continue.

Aims/objectives

The aim of the Program was to address the identified need to continue its work in a number of areas. These included; to build recognition of the value of social sciences perspectives in problem evaluation and solution identification; provide a point of reference and research coordination to the FRDC's Fisheries Research Advisory Boards (FRABs), researchers and industry agencies, as well as day to day support to the FRDC in Project review and management.

The five objectives identified for the Program were:

1. Continue the social sciences program in the existing framework (as established in 2009 – 2012), subject to ongoing industry and research community feedback;
2. Collaborate with the industry to identify emerging issues in wild harvest, aquaculture, post harvest, recreational and indigenous fishery sectors, that could benefit from early integration of social sciences research for the identification of potential solutions;
3. Address research needs arising from FRDC's existing programs and ensure the quality and relevance of proposed social research projects.
4. Co-ordinate and undertake the communication of key social research needs of the research community and SSRCP research outcomes to fishers and management agencies.
5. Provide FRDC relevant program management for social science projects including evaluation, commissioning of projects and milestone reviews.

Methodology

The Program's main focus was to liaise with the industry, FRABs, industry groups and government agencies in order to assist with providing guidance to the industry, government and research organisations. The services of the Program in the development of priorities, review and feedback on the annual funding applications, were implemented by the Program Manager with the guidance of a Steering Committee.

The program was run on the basis of adhering to the Strategic Plan 2012-2015 (Appendix 1) and the Terms of Reference developed at the outset of the Program and approved by the FRDC (Appendix 2). In regard to communications (Appendix 4, Extension Plan), the Program undertook to communicate the research priorities of the program and FRDC to identified researchers in the research community across Australia, and with research centres with expressed interest in the marine and aquatic 'space'. In addition to this the Program also ensured FRABS and subprograms were communicated the outcomes of SSRCP reviews and recommendations in a timely manner to assist in their deliberations, as was also the case with the FRDC overall. The Program Manager also undertook communications via FISH or other publications in regard to Program and project outcomes as appropriate, in collaboration with the FRDC Communications team.

Results/key findings

During the course of the Program, the Program Manager and Steering Committee undertook the following activities:

- **Liaison with industry, government and researchers** to identify issues;
- **Connecting** appropriate researchers/industry/government;
- **Promotion of social sciences** perspectives and initiatives;
- **Guidance of industry and management endeavours** in the social dimension of fisheries management; and
- **Review of expressions of interest and applications,** milestone and final reports from a specifically social science perspective.
- **Development of strategic direction for the FRDC in relation to research in the social dimension** of Australian fisheries.

In December 2013, the Program undertook an FRDC stakeholder survey to assess the effects and outcomes at that time, of the Program. The findings were that the majority of respondents (78.4 %) representing a full cross section of FRDC stakeholders, (compared to participants in the 2011 survey) in both industry and management, were more aware of the social dimension of fisheries management and were gaining greater benefits from social sciences research, than previously. Further, in some sectors, it was believed that noteworthy inroads had been made towards integrating the social considerations and objectives into management plans and industry activities.

Thirty-one specific comments were received in relation to how the Program might assist the industry, providing insights as to the key social issues considered still to be facing the industry. These broadly fell into three categories of; a) co-ordination and collaboration between industry, management and researchers; b) the development of research projects into the social and mental health effects of management decisions and the options for alternative employment options for fishers; and c) facilitation of industry and community liaison and relationship building, to develop trust and collaboration. In this area, it was also noted that extension activities in relation to the outputs and outcomes of research projects (SSRCP and other) were considered to be requiring further focus. The full report as presented to the FRDC Board in February 2014 is attached as Appendix 6.

This last area, of facilitation and extension, is one of a long-term ongoing role that requires dedicated focus and collaboration with the FRDC extension team to ensure that opportunities are maximised. This is an area that failed to gain traction from the SSRCP, largely due to the dedicated time and resources that are required to achieve outcomes valued by the industry and government. An opportunity exists to improve extension of research outcomes – above and beyond the efforts expected of Principal Investigators - but it requires significant focus into how it would be resourced both financially and personnel wise.

The issue of communication and engagement was also specifically identified as a key conclusion and recommendation – that the industry needs to move from communication to the community, to a position of engagement with the community – of the *Let's Talk Fish* project (FRDC 2012/301). However it is noted that the industry will need significant assistance with making this transition in operating style and culture.

Implications for relevant stakeholders

- **Industry:** The Social Sciences Research Coordination Program has provided a means to have the effects of fisheries management and community pressures and concerns, raised and explored for potential solutions.
- **Communities**: A focus on the social sciences aspects of research allows the industry and government agencies to engage with the non biological or economic issues that either, the general Australian community may have with the industry, or to highlight benefits of the industry that Australian communities may not otherwise connect with.
- **Managers or policy makers:** The profile that the Program has established for social sciences research, has provided managers and policy makers with not only some valuable tools to engage with the social dimension of fisheries management, but also a springboard for the discussion about the role of community social values and non biophysical effects of fisheries

management and policy. This is has been an important factor in the move toward increased community engagement with the objective of truly integrated oceans and resource management.

Recommendations:

The outcome of the stakeholder consultations identified the recommendation that the FRDC should continue with the focus on issues raised of communication, collaboration and connection of people (management and industry) with aquatic and marine issues. This is along with developing information and data for dissemination to the industry around how social science research has and continues to be used.

During the last six years, society has noticeably become increasingly aware and engaged with the effects of aquatic and marine resource management (Barclay 2012; Mazur, Curtis et al. 2014). As a result, further research activity is still required to address the following challenges:

- identifying the social impacts and effects of fisheries activities, and methods to ameliorate negative ones;

- tracking and engaging with community values (as against attitudes) and acceptability around the perceived sustainability of fisheries and aquaculture;

and potentially most importantly,

- to better integrate social sciences research (including economics) with biological sciences, and across industries and interests in integrated and trans disciplinary approaches, to be able to provide truly integrated advice.

More and more, jurisdictions – here in Australia and elsewhere – are being required to move from managing resources in isolation, to positions of managing issues and regions in a holistic manner, requiring research to be equally holistic.

While there is clear need for continuing the existing remit of the SSRCP, there are also imperatives to extend the suite of activities of the Program towards supporting greater research and industry integration. The facilitation of this could be assisted by the SSRCP working more closely with the 'FishEcon' project and its network. Such a partnership is well positioned to generate not only efficiencies in the delivery of project activities and administration, but most notably provide the governance opportunity to structure tighter integration between economics and the social sciences in research, extension and capability building.

Keywords

Social Sciences Research Coordination Program; Research; Community; Industry communications; fisheries management.

Introduction

Background & Need

The Social Sciences Coordination Program arose from the recognised need to counter the largely economic policy drive of the 1990s, through the inclusion of social science aspects and perspectives of fishing activities, in industry considerations. As noted earlier, most jurisdictions have a requirement in legislation to maximise or optimise community benefits derived from the use of fish resources. These benefits and how they can be optimised have continued to be poorly understood, measured or valued, let alone the social benefits of the activity to either the industry or the broader Australian public. As a result, it could be argued that some decisions have been made on perceived social demands, with select groups of the community 'over-influencing' outcomes, and governments' interpreting this as representing the best outcome for the community. The ongoing adoption of social science methods into fisheries decision-making processes was identified by the FRDC as, most significantly, improving the level of information on which government has to make decisions that may have a noteworthy or major affect on communities. Social factors are relevant across not only all elements of the fishing industry - indigenous, commercial (wild and aquaculture), recreational, fishing tourism, fish wholesalers and retailers, and consumers – but also increasingly have significance to the non fishing and fish eating Australian public, in terms of the social license to operate that they are willing to grant the fishing industry for its activities

While the first three years of the Program initiated the process of addressing the need to raise awareness of both the methods and benefits of the various social sciences, it was identified that many by 2012, the industry and aligned government services still needed to be 'brought on board' in a cultural shift to both understand and incorporate social science research, perspectives and solutions in management. In addition to advising and driving strategic and targeted research, this entailed a continuation of education around what social sciences research is and can offer to industries and government departments managing fisheries or Australian communities, both those directly associated with industry activities, and those at arms length.

The Fisheries Research and Development Corporation (FRDC) Programs 2 (Industry) and 3 (Communities), from the 2010-2015 RD&E Plan, are the relevant key areas that most clearly benefit from the use and incorporation of social science research. In both these Program areas, social science research provides the tools to assist industry and government to understand the issues of, and potential solutions to, challenges around governance, resource access and allocation, growth and profitability, consumers and public opinions, generation of resilient communities (of and related to the industry), and industry skills (leadership/workforce and innovative approaches). However this will only occur if social sciences is integrated with biological and economic research approaches, with the appropriate methodologies to achieve the research answers and outcomes that are sought. The emerging understanding, since 2009, of the depth of social factors in fishing activities at the individual, business/group and sectoral levels, and the ways in which these activities interact with the broader community, is clearly evident amongst industry and government agencies in recent years. However, increasingly, external economic effects of such things as market and competing industry influences; energy costs; distance to market; and potential new taxes, are influencing the shape of fishing and aquaculture industries. These have and continue to emerge and develop as significant issues that remain unaddressed by biological or economic approaches alone.

A need was identified for the FRDC to maintain a profile and understanding of how holistic research, being that which includes an interdisciplinary approach, including the social and biophysical sciences, can assist national research in all aspects of coastal, marine and aquatic management to achieve solutions that have broad community applicability and appeal. Although fisheries research has traditionally focused on the biological elements, ultimately it is the management of peoples' behaviour that dictates success in managing a changing environment. Without social science research insights as to what is effectively (or not) being done, to understand circumstances and ensure that appropriate potential solutions are identified, it was recognised that the FRDC would have been omitting a critical element in its commitment to the industry in all its guises.

During the first phase, the social sciences research coordination program was able to generate several tools to assist industry, government and researchers to both understand the information that already existed (through the Research Audit) and to identify what types of social science research are appropriate to generating understanding and identifying answers to particular issues (Social Science Research for our Natural Resources).

At the close of that phase of the SSRCP it was identified that further work was still needed around generating awareness and comfort with the use of these tools in all sectors, and integrating them into traditional biological and ecosystem approaches. Additionally, it was identified by a number of Associations and FRABS that the SSRCP was a valuable resource to assist in identifying the social science elements of issues challenging them, and how questions around these should be framed, researched and managed.

It was further identified that while the first phase of the SSRCP had allowed the FRDC an increased level of confidence in the social science research it funded being methodologically sound, well targeted and coordinated with other activities nationally to address the issues at hand, embedding this into normal operating behaviour was not yet achieved. It was and is envisaged that the FRDC and industry will reach a point where the level of familiarity with social science research methodologies and approaches is such that the SSRCP will not be required. However, the feedback received by the SSRCP directly and via the assessment survey at the close of the first program, identified that for the FRDC to remove this resource from the industry in 2012 would have been premature.

Through a range of different techniques, social science research can address issues faced by the fishing industry, complementing biological and economic research to support change in practice and community perceptions. The past three years of focus on social science research has encouraged and facilitated leveraging of previous research work, minimising the expense of duplication, and increasing the ability to identify solutions to resource use issues. Continuation of the program, it was believed, would continue to support the efficient use of FRDC funds, and the pursuit of research project outcomes with greater reach than if implemented in isolation of previous research and other FRDC Program activities.

Objectives

1. Continue the social sciences program in the existing framework, subject to ongoing industry and research community feedback.

2. Collaborate with the industry to identify emerging issues in wild harvest, aquaculture, post harvest, recreational and indigenous fishery sectors that could benefit from early integration of social science research for the identification of potential solutions.

3. Address research needs arising from FRDC's existing programs and ensure the quality and relevance of proposed social research projects,

4. Co-ordinate and undertake the communication of key social research needs to the research community and SSRCP research outcomes to fishers and management agencies.

5. Provide FRDC relevant program management for social projects including evaluation, commissioning of projects and milestone reviews.

Method

The program was structured around the activities of a Program Manager who undertook work for the Program on the basis of 2.5 days per week (ten hours FRDC funded and ten hours provided in kind), assisted by a Steering Committee of up to ten people, including the Program Manager, representatives from the FRDC and Australian Fisheries Management Forum (AFMF).

The Strategic Plan 2012-2015 (Appendix 1) and the Terms of Reference (Appendix 2), directed the activities of the SSRCP Program Manager and Steering Committee. These were developed at the outset of the Program and approved by the FRDC. All members of the Steering Committee, and the Program Manager, maintained a register of interests, to ensure that conflict of interests were avoided or managed. The nature of the research networks of the Steering Committee members invariably resulted at times in members of the Steering Committee being either participants in research proposals under consideration by the SSRCP or were well known to Principle or Co – investigators. In the former case the member would be required to be absent from the room or phone call, during any discussion and decisions regarding the application; and in the case of the familiarity with the proposal, the extent of any conflict was ascertained and agreed by the Committee and any appropriate action adopted to prevent conflicts of interest, in decisions reached regarding the recommendations made to the FRDC by the Program.

The members of the Steering Committee were selected on the basis of the aggregate of experience and expertise covering the industry, its governance and social and economic research. The selection of Committee members considered diversity in geographic location, gender and age, as well as expertise. The size and selection of the Steering Committee was subject to FRDC approval and it was a requirement that one of the Steering Committee members was always also a member of the Australian Fisheries Management Forum (AFMF). The meetings of the Committee comprised of a maximum two face to face meetings per year and additional teleconference meetings as required, which was generally a further two meetings. The meetings always had an FRDC representative in attendance.

The Committee was tasked with the following activities and responsibilities:

- Identify key issues to benefit from social research, considering consultation with and feedback from FRABs and subprograms;
- To work with the Program Manager on an action plan for the Program (a component of the Strategic Plan) and review it annually;
- Undertakes to disseminate information about the Program and its activities in their areas of influence;
- Provide advice, where requested, to people development and extension programs in relation to likely further social science activities required to action the research findings;
- Review research priorities for ongoing relevance to marine, freshwater and aquaculture uses; and
- Review proposed and approved projects against FRDC objectives and measurement criteria.

During the Program the Steering Committee met a total of six face to face meetings as follows:

- ✓ **Mtg 1: Sydney 5/7/2012** – Attendees: Melanie Fisher (Chair) K. Brooks (Program Manager), Rhonda Farlow; Emily Ogier; Bo Carne; Nadine Marshall, Gavin Begg, Sarah Jennings and Crispian Ashby (FRDC), Apologies: James Findlay (AFMF)
- ✓ **Mtg 2: Sydney 20/9/2012** – Attendees: Melanie Fisher (Chair), K. Brooks (Program Manager), Rhonda Farlow, Emily Ogier, Bo Carne*, Nadine Marshall, and Gavin Begg and Crispian Ashby (FRDC). Apologies: Sarah Jennings, James Findlay (AFMF)
- ✓ **Mtg 2A: Teleconference 20/10/2012** – Attendees; M Fisher**, K Brooks, R. Farlow***, N. Marshall, G. Begg, S Jennings, and C. Ashby (FRDC). Apologies: J. Findlay (AFMF)

- ✓ **Mtg 3**: **Melbourne 26/3/2013** – K. Brooks (Program Manager & Chair), Emily Ogier, Gavin Begg^, Sarah Jennings, and Jo Ruscoe (FRDC). Apologies: Nadine Marshall; Crispian Ashby (FRDC), James Findlay (AFMF)[#]
- ✓ **Mtg 4**: **Melbourne 3/7/2013 -** K. Brooks (Program Manager & Chair), Emily Ogier, Nadine Marshall, James Larcombe, Ian Curnow (AFMF), Sarah Jennings, Jo Ruscoe (FRDC) and Pele Cannon (FRDC). Apologies: Crispian Ashby (FRDC)
- ✓ **Mtg 5**: **Teleconference 24/9/2013** – K. Brooks (Program Manager & Chair), Emily Ogier, Sarah Jennings, Nadine Marshall, James Larcombe, Ian Curnow (AFMF), Crispian Ashby (FRDC).
- ✓ **Mtg 6**: **Melbourne 13/3/2014** – K. Brooks (Program Manager and Chair), Nadine Marshall (by phone), James Larcombe^^, Sarah Jennings, Ian Curnow (AFMF), Jo Ruscoe (FRDC) and Pele Canon (FRDC). Apologies: Emily Ogier, Crispian Ashby (FRDC)
- ✓ **Mtg 7**: **Teleconference 16/6/2014** – K. Brooks (Program Manager and Chair), Emily Ogier, Nadine Marshall, Ian Curnow (AFMF), Sarah Jennings, and Pele Cannon (FRDC). Apologies: Crispian Ashby
- ✓ **Mtg 8: Teleconference 15/9/2014** – K. Brooks (Program Manager and Chair), Emily Ogier, Sarah Jennings, Ian Curnow (AFMF), Nadine Marshall and Jo Ruscoe (FRDC). Apologies: Crispian Ashby (FRDC)
- ✓ **Mtg 9**: **Melbourne 19/2/2015** – K. Brooks (Program Manager and Chair), Emily Ogier, Sarah Jennings, Nadine Marshall, Ian Curnow (AFMF), Jo-anne Ruscoe (FRDC)

* **Bo Carne** resigned from the Steering Committee subsequent to joining the FRDC's Indigenous Reference Group (IRG) where he felt his contribution would be greater. It was agreed that the loss of this expertise would be compensated for by greater interaction between the Program Mangers of the IRG and SSRCP.

** **Melanie Fisher** was under pressure attend the SSRCP meetings due to her commitments to her position as General Manager, Food Standards, Australia and New Zealand. In consultation with the FRDC it was decided that the position of independent Chair would be removed as no longer required, given that the SSRCP had established itself as a transparent and reputable Program and such oversight was no longer required.

*** **Rhonda Farlow** stepped down from her position on the NSW Professional Fisherman's Association due to a move to WA. In consultation with the FRDC it was decided to take this opportunity to revisit the structure of the Steering Committee to one of social sciences skills base rather than a combination of that with industry experience.

^ **Gavin Begg** resigned from DAFF and was replaced by James Larcombe as the Commonwealth Government research advisory.

[#] **James Findlay** stood down from the Steering Committee due to pressures of his position as CEO at the Australian Fisheries Management Authority (AFMA). Ian Curnow replaced him on the Committee as the AFMF representative.

^^ **James Larcombe** stood down from the Steering Committee due to international travel commitments. In consultation with FRDC and in light of only 11 months of the Program to continue in its current form, it was decided not to replace his position on the Steering Committee.

The contributions of all the members of the Steering Committee both past and at the conclusion of the Program have been greatly appreciated by both the Program Manager and also the FRDC. Their contributions provided enhanced guidance, objectivity and direction.

The Program Manager of the SSRCP undertook:

- Development of priorities for industry and management consideration;
- Unpacking of issues to identify research questions and issues;
- Knowledge brokering between industry/researchers/government agencies;
- Representation of the FRDC's interests in relation to social sciences aspects of fisheries management at jointly identified forums, workshops and conferences;
- Reviewing applications and liaison with industry and researchers in regard to EOI and application development;
- Reviewing project milestone and final reports and liaison with researchers to address any areas of concern;
- Reviewing journal articles and documents resulting from FRDC SSRCP related projects to ensure appropriate articulation and promotion of the research;
- Monitoring of project promotions and communications, and where necessary, collaboration with FRDC to correct any issues of concern.
- Liaising with the State and Territory FRABs, and the Council for Rural Research and Development Corporations to identify and explore existing research and research opportunities to derive benefit for both the public and fisheries' industry use of marine and aquatic resources;
- Provision of advice to researchers and act as a point of contact for the FRDC in relation to Social Science Research enquiries;
- Representing the FRDC in social science research at conferences, seminars, events and on committees (as negotiated with where necessary) and approved by FRDC;
- Identify synergies in research endeavours and collaborative opportunities; and
- With Steering Committee comment and direction, endeavouring to maximise FRDCs return on research investment, for both the general public and industry, through utilisation of networking and facilitation of research, ideas and opportunity development.

Review

The program was subjected to a midterm review, which was conducted in December 2013 and presented to the FRDC Board at their February 2014 meeting. The focus of this review was to identify achievements to date in relation to the overall activities of the program and any consideration and integration of social objectives in fisheries agencies and industry management. The details of that review are detailed in the 'Results' section of this report.

Contrary to original intentions and at the direction of the FRDC an evaluation at the close of the SSRC Program II was not undertaken, however the results of the Programs objectives compared to outcomes achieved, are discussed in detail here in this report. This discussion considers the success of the program in increasing awareness of, and appreciation for, the importance of incorporating social science findings in research and industry management activities aimed at the successful continuation of the industry. It also identifies where aspirations were not achieved, discussing factors relating to those outcomes and possible future considerations or alternatives.

Communications

In regard to communications, the Program undertook to communicate to all those identified in the research community across Australia the research priorities of the program, and to maintain communication as possible with research centres with an expressed interest in the marine and aquatic ‘space’.

In addition to this, the Program also informed all FRABS and subprograms of the outcomes of SSRCP reviews and recommendations either prior to or at the same time as these were communicated to the FRDC, as appropriate to the circumstance. The Program Manager also undertook communications via FISH (magazine) or other publications in regard to Program and project outcomes as appropriate, in collaboration with the FRDC Communications team.

Results & Discussion

Following on from the objectives of the research, the outcomes in the Program proposal were envisaged to be:

1) A coordinated approach to fisheries social science research;

2) Through coordinated research with other Research and Development Corporations (RDCs), a minimisation of duplication and maximisation of benefits;

3) Implementation of social objectives in fisheries management nationally; and

4) Improvement of the implementation of co-management and resource allocation strategies through social research applications;

Further to this, the benefits of the Program were also envisaged as being the increased use of networks and information between aquatic sectors, fishers and research community; and the increased understanding and collaboration of and around the social factors affecting the industry, resulting in greater uptake of research.

To align these aspirations - of objectives, outcomes and benefits - the following table seeks to summarise the Program's achievements.

Table 1: Program Objectives, Outcomes and Benefits

Objective	Outcome	Benefit
1. **Continue the social sciences program in the existing framework**, subject to ongoing industry and research community feedback.	**Achieved**	On going point of co-ordination and communication regarding issues to which social sciences research can contribute. (Outcome 1)
2. Collaborate with the industry to **identify emerging issues in wild harvest, aquaculture, post harvest, recreational and indigenous fishery** sectors that could benefit from early integration of social science research for the identification of potential solutions.	**Achieved**. Further collaboration, despite efforts on the part of the Program Manager, would be ideally achieved with the Research Providers' Network. The lack of integration of the SSRCP in this network created a 'disconnect' and potential loss of opportunities and/or duplications between the endeavours of the RPN and the SSRCP. This was despite efforts of the Program Manager to liaise with the Chair of the RPN and provide information and input to the RPN process.	Both the research community and the industry identified, through their behaviour of contact, that a **benefit was received from a contact point with social sciences expertise being available, to explore ideas and research proposals and potentiality to address industry issues**, specifically in the context of FRDC priorities and funding foci. (Outcome 1 & 2)

3. Address research needs arising from FRDC's existing programs and **ensure the quality and relevance of proposed social research projects**.	**Achieved** within the constraints of overriding decisions, and the ability to only make recommendations to the FRABs and Board.	**Greater appreciation by stakeholders as to the elements of good social research** that will illuminate the issue or problem at hand and may also provide the outcomes sought. (Outcome 1 & 2)
4. Co-ordinate and undertake the communication of key social research needs to the research community and SSRCP research outcomes to fishers and management agencies.	**Achieved in relation to needs.** Given the resources provided at the inception of the SSRCP and the time allocation of the Program Manager to Program activities, it was not possible to undertake an ideal level of communication of research outcomes. This is an extension activity that is recommended be considered in the context of the FRDC's extension program to ensure co-ordinated extension of project outcomes.	Benefit has definitely been perceived by the research and government community of having a **point of contact distributing and being available to discuss FRDC research needs and contextualise external research centre efforts**. (Outcome 1 & 2)
5. Provide FRDC relevant program management for social projects including evaluation, commissioning of projects and milestone reviews.	**Achieved.** This aspect of the SSRCP's endeavours may have been improved through greater communication regarding an agreed framework for the allocation and management of research projects to ensure appropriate follow up and follow through on finalisation of reports to allow the communications of outcomes to the industry and research community. However this relates to the previous point regarding process and responsibilities for extension of research product.	Members of the FRDC team and FRABs have expressed an **appreciation for the review and advice received from the SSRC Program** and therefore the benefit sought in this case has been achieved. (Outcome 1 & 2)
6. Additional activity: Implementation of social objectives in fisheries	**Achieved** Tools were generated to facilitate this, and have	The benefit of this activity is that **Australian Fisheries Managers are now amongst**

management nationally.	been promoted across all jurisdictions on three occasions with workshops for WA, TAS & AFMA fisheries Managers. Strong interest has been expressed in this work and the tools it generated both in Australia and internationally. In the survey conducted by the Program at the end of 2013 65.2% of respondents agreed that '*Social objectives in management plans and strategies are now considered (if not implemented) in the development of fisheries management plans, compared to three years ago'*, while only 34.9% disagreed. It is important to note that this was prior to the release of the final report of 2010/040, which provides tools to consider if not implement social objectives and indicators. 74.6% of respondents agreed that '*The consideration of social objectives is evident in SOME sectors compared to three years ago* [2010], *but is still absent from consideration in others.'*	**the first internationally to have a fundamental 'tool kit' for the identification of social objectives and indicators**, with simple methodologies for implementation and integration into management processes. These have now been utilised in two fisheries plans in South Australia – the Lakes and Coorong Pipi Fishery; Spencer Gulf Prawn Fishery and are currently being considered for inclusion in recreational and other fisheries management plans.
7. Additional activity: Improvement of the implementation of co-management and resource allocation strategies through social research applications.	**Contribution achieved:** Increased engagement with social sciences approaches to fisheries issues has increased understanding and consideration of non-biological approaches to fisheries management, which in turn has increased the platform from which and capacity of both industry and management agencies to engage in	An increased acceptance of and openness to alternative approaches to management options, both by industry and government agencies, facilitates improved management and resource allocation. **The inclusion of social sciences approaches has increased the range of language and platforms for discussion** of both industry and government to approach

	changed management approaches.	management challenges, which by turn creates benefits for co-management and resource allocation options.

Strategic Plan

At the outset of the Program the Steering Committee worked with the Program Manager to also develop the Strategic Plan (Appendix 1), which incorporated a set of outcomes sought from the project. These are detailed in the following table along with the results achieved against each outcome.

Table 2: Outcomes - Strategic Plan outcome review

Outcomes sought	Outcomes Achieved
Expansion of awareness as to the breadth of areas where social science research can contribute to the different aspect of fisheries activities.	There is undeniably not only a greater awareness of the potential role in the social sciences, but a willingness to engage with it – known or unknown. However, there is also a view that because people are aware of the need for social science – the FRDC's job is done – I would argue that is not the case but rather that the full breadth of where it can contribute and how to negotiate the blur of the line between research and marketing needs further attention, than the very part time role of the SSRCP can deliver.
Increased awareness of research outcomes and potential contributions.	This has very definitely been achieved in relation to a small number of projects, which have the benefit of raising the overall profile of the social dimension in fisheries. However, there has been the temptation by some to misinterpret these few headline projects as having 'ticked the box' and that the attention to the social science dimension of fisheries is now 'done'. Which is not the case – there is on going work that needs to be addressed in 'extending' the research on the ground in order to deliver outcomes.
Increased engagement between industry and social sciences researchers around relevant key issues. (Continued development of industry/research community social capital.)	This has definitely been achieved – particularly with the likes of the most recent attempt by Euan Harvey at Curtin University to engage with NESP grants around social sciences and fisheries research. Collaboration in South Australia has vastly increased with the social sciences dimension, as has NT and now UTAS with the move to the implementation of a socio–economic centre for research excellence. The social capital of the industry/ research sector in the social sciences has undeniably increased in

	recent years. The opportunity still remains to embed this in a cultural shift to nurturing young social scientists in collaborative industry/management projects.

Performance Indicators

In the full application approved by the FRDC Board, four performance indicators were identified to assess the effectiveness of the Program during and at the close of its term. These were:

1) ***The Program will identify priority areas for the Program focus, which will be clarified both with an action plan and implementation responsibility and time frame schedule.***

   The Program Manager, in conjunction with the Steering Committee, undertook in the initial six months of the project the development of a full Strategic Plan for the Program, of which Section 5 included a fully detailed schedule of activities, as envisaged at the outset of the Program (Appendix 1). These were broken down into the theme of activity (embedding social sciences knowledge; extension or communication) and then also the targeted stakeholder, the strategy to be employed and associated actions. The full details of these (including responsibilities and time frames) were provided to the FRDC in Milestone 4 report on the 30th of September 2012 (Appendix 3).

2) ***At the annual review of FRAB priorities, feedback will be sought from the FRABs in either an open or closed forum as appropriate regarding the level of input received from the SSRCP, its preferred form and the areas of value sought from the program.***

   The Program Manager attended each of the annual FRAB priorities workshops. At these meetings, the Program Manager not only presented the issues and the priorities that the SSRCP Steering Committee had identified at their initial annual meeting (either formally or informally as the format allowed), but most importantly took this opportunity to speak with each of the FRAB chairs individually. These discussions were focused on ascertaining the FRAB's desired level of input from the SSRCP, the benefit of the advice that had previously been provided to FRABs in relation to EOIs and full proposals. In addition to this, these discussions also sought to identify any specific issues that were of concern to them in their jurisdiction, identifying if and how social sciences approaches may be of assistance. The outcomes of these discussions was immediately fed back into the prioritisation process of research objectives to ensure maximum integration of social sciences approaches into the general annual research foci that were being developed. The offer was extended on an annual basis to all FRABs of the assistance of the Program Manager at any time and to attend FRAB meetings to assist in the development of priorities or discussion of EOIs/Proposals. The QFRAB has taken up this option on an annual basis.

   In addition to this, discussions were initiated with FRAB members at conferences, meetings and any other opportunities of face to face interaction throughout each year, to identify research activity, success, issues or concerns that the SSRCP may have been able to assist with.

3) ***At the midpoint of the project (August 2013) the program will undertake a further survey of FRDC stakeholders to consider the extent to which social objectives are perceived to be being addressed across sectors.***

   The SSRCP undertook a mid project review with a focus on the uptake of social objectives. The outcome of that review/evaluation is as follows and was reported to the FRDC Board in February 2014 (Appendix 6).

Stakeholder Evaluation of social objectives integration:

An evaluation was undertaken at the end of 2013 seeking to explore the extent to which social objectives were perceived as being addressed and integrated into strategic perspectives of management of aquatic resources.

The survey achieved a 48% response rate from 148 survey recipients (or 70 persons, achieved through 3 follow up emails). As it had to be conducted at the close of the year (November/December); this was considered an acceptable to good response rate and in fact slightly higher than the response to the SSRCPI evaluation survey of 2011. Forty per cent of respondents were industry association representatives with the next largest group (33.8%) of respondents being researchers, and government fisheries managers/officers making up the next largest group of respondents (29.2%). Respondents were asked to nominate as many roles as were appropriate, and the remainder of respondents included the groups of commercial/indigenous/ recreational fishers (41.5%) and FRAB members (15.4%).

The survey indicates that the majority of respondents (78.4 – 74.6%), representing a full cross section of FRDC stakeholders, believed that compared to three years ago, both the industry and management are more aware of the social dimension of fisheries management.

It also identified that in some sectors, noteworthy inroads towards integrating the social considerations and objectives into management plans and industry activities have been made.

- Sixty four point two per cent (64.2%) agreed that '*Social objectives in management plans and strategies are now considered (if not implemented) in the development of fisheries management plans, compared to three years ago'*.
- Generally, 92.4% of respondents agreed with the statement: "*I am aware of the social dimension of fisheries and/or aquatic issues being discussed in processes to identify potential solutions*."
- Similarly, 82.1% agreed, "*Social impacts are considered to have relevance to aquatic management issues*".
- While 81.8% disagreed that "*Social objectives are being addressed across ALL sectors of the industry",* 78.4% agreed that "*Social objectives are being addressed across SOME industry sectors*".

Seventy three per cent (73%) of respondents believed that that the SSRCP could contribute to the further uptake of social objectives in fisheries management and industry activity.

In regard to this last point, when offered the opportunity to provide comment on how the SSRCP might contribute to this further uptake, thirty-one specific comments were received. These comments provided insights as to the key issues perceived to be facing the industry, which broadly fell into three groups.

Coordination & Collaboration

- Work with Commercial industry leaders/representative groups to educate about social dimensions of fisheries
- Improve explanations of how the 'economic' differs from 'social' aspects and dimensions of fisheries
- [identify how to further] Assist governments with integrating social objectives into fisheries management activities
- [Identify how to] Assist industry to think about the desirability of having social objectives
- Assisting industry to understand how the Program benefits it by informing fisheries management decision making
- A list/case studies of where social factors have been taken into account in fisheries management decisions [and the effect].
- Improve the understandings of fisheries participants about what social objectives are and the expectations of Australia's divers multicultural community about fisheries objectives;

Research Projects

- Identify the social impacts of activities or decisions on the fishing/processing industries
- Assess the social value of access to fishery resources for "non extractive users"
- Consideration of the cultural and heritage significance of commercial and recreational fishing since colonization
- Mental health assessments, and identifying job opportunities for displaced fishers

Facilitation

- Working with fisheries managers to develop community trust in management initiatives
- Push for cross industry collaboration
- Direct contact with fishers and fisher families that are directly affected by policies and changes so that their fears and concerns can be heard by the public and policy makers.
  Educating public servants to think outside of their "bunker world" and have regard for the consequences that their actions may have on the lives of others.
- [Engender?] Stronger community awareness and stakeholder participation to inform and discuss (sic).

The first area of coordination and collaboration is the type of work that the program has been undertaking to date. The second area – research – is what the Program has been coordinating, and if the Board supports these areas identified, the Program in its continuation is well placed, if supported, to identify interested researchers and industry to collaborate on applications in future rounds.

The last area, of facilitation, is one of a longer ongoing role for a specifically skilled and active educator/facilitator, who may also work with a social scientist to provide support for theory aspects of such activities as developing community trust initiatives, as suggested by the recommendations of *Let's Talk Fish* (FRDC 2012/301).

4.) In the last three months of the Program, a full evaluation of its activities will once again be undertaken in the form of a survey to assess its effectiveness and identify any areas that stakeholders feel may required further evaluation and development.

In consultation with the FRDC it was agreed that to further survey stakeholders within a year of the previous mid term survey would be inappropriate, and would not add substantially to the knowledge about perceptions of the program at that time. Instead, the above review and analysis (Tables 1 & 2) has been undertaken of the objectives and outcomes to provide an assessment of the achievements of the program.

The review of these identifies those areas, which, over the time of the Program from 2012 to 2015, have:

- been successfully achieved;
- have not been successful, with any observations as to the potential causes; and
- opportunities for further development and improvement in this or a similar program.

In summary, while it is easy to point to how much more could be done in regard to the promotion of the social sciences in Fisheries, the Program has achieved what it was designed to do within the period. The cultural shift in the Australian seafood industry is, however, noteworthy in its acceptance and, at times, embracement of the contribution that social sciences can make to fisheries and industry management that other regions and nations aspire to emulate.

Conclusion

This project was considered a necessary continuation of the first phase of the Program in order to move the program beyond the industry and agency education phase of what social sciences might contribute to the resilience and development of the industry, and begin to embed some 'standard operating behaviour'. While it was also envisaged that the program may be able to achieve this to a point where the Program was no longer required, that task is yet to be completed despite significant inroads being made in the embedding of interdisciplinary (social and economic as well as biophysical) approaches and considerations. Despite that, the Program, in its second three years of activity, has made significant progress in FRDC's endeavours to embed and integrate social sciences approaches with ecological and economic research perspectives. Specific points of achievement include:

- Embedding the value of social sciences perspectives and research in industry and fisheries management;
- Continuing to provide a central point of contact and expertise from which to co-ordinate activities and research endeavours for researchers, industry and some agencies;
- Increasing and improving appreciation and confidence amongst stakeholders as to what good social science research entails;
- Ongoing provision of advice and guidance to FRABs and researchers in regard to issues and appropriate social science research and research proposals;
- Arising from 2010/040 - Industry and fisheries managers now have an internationally recognised and peer reviewed (see Marine Policy Journal article - http://www.sciencedirect.com/science/article/pii/S0308597X14003248) and tool kit of social objectives and indicators with promotional material (brochure - Appendix 7) and website http://www.frdc.com.au/research/final-reports/Full_report-2010-040/Appendix17/Pages/default.aspx) with guidance on implementation techniques. This has already been successfully implemented in a number of fisheries in South Australia (Lakes and Coorong Pipi Fishery and the Spencer Gulf Prawn Fishery)
- Arising from 2012/301 the industry also has been provided with clear details as to the public values that underpin the perceptions and attitudes toward wild catch fisheries. The recommendations of this project also provided a clear project plan for the industry in how to begin to address the perceived mis-match between industry and the Australian community's values (which were promoted in a FISH article in March 2014 – see link under Communication and Extension). The funding of such activity may now potentially fall into a marketing and extension activity of the FRDC on behalf of the industry and is recommended for consideration in the context of the industry's achievement and ongoing maintenance of a social license to operate.
- Improving the openness and acceptance of alternative approaches to management issues generated by social sciences research and perspectives, supports improved opportunities for resource allocation discussions and generation of options.
- There is not only a greater social awareness of the potential role of social sciences in fisheries management, but most importantly, a willingness to engage with it.
- There has been increased and continuing awareness of research outcomes in relation to a number of watershed projects.
- Increasing engagement between researchers and industry and the introduction of agencies to researchers in their own jurisdictions, which have become sound ongoing research relationships, particularly in South Australia, New South Wales, and northern territory. This builds on very strong existing researcher/ agency and industry relationships in the ACT, Queensland and Tasmania.

As with the previous program it would still be pre-emptive to say that social sciences research, and the Program, is fully appreciated and comprehensively endorsed by the industry. However the program has

achieved the overall objectives and outcomes sought as implemented in this phase. While the objective is still to achieve a point whereby programs such as this are not required because the social sciences research perspectives are so fully integrated with biological research that it is superfluous, such a point has not yet been reached.

It is important to note that the activities of the Program are being undertaken on a part time basis, removed from the day to day activities and information of the FRDC, and therefore its ability to achieve the significant cultural change required in a short space of time are not optimised.

It is not unrealistic to assert, as at the conclusion of the previous phase of the program, that the activities of the SSRCP have broadened the belief in the industry and related government sectors, that social sciences research has an important role to play in the mix of research required to facilitate the industry's ongoing resilience and development.

Implications

As an integral component of industry and fisheries management approaches, social sciences research in Australia currently sits at the fulcrum point of its development. While significant achievements have been made to date in gathering understanding and appreciation for the contribution that this arm of research can provide, to remove this support and impetus at this point of time would risk the loss of those advances made to date.

At this time, the achievements of the SSRCP have not been adequately embedded as to become 'the norm' in the cultural approach of both the industry and government management agencies to fisheries management. To remove the Program, or its focus, at this time, would risk a slide back to (purely) biological approaches that do not consider the social elements that may be required to activate and implement them.

As table one identifies, the five objectives listed for the project were achieved. In addition to this further objectives arising from the aspirations of the project generated achievements in relation to the improvement of the implementation of co-management and resource allocation approaches, and a significant contribution to the implementation of social objectives in fisheries management nationally.

Achievement of objectives is correctly regarded as an 'output' related process; it is the benefit received from the achievement of the objective – or the outcome, realised or pending – that is of most importance. In relation to the benefits generated by the Social Sciences Research Co-ordination Program in this, its second iteration, these can be summarised in the following points:

- ✓ An ongoing **nationally focussed point of co-ordination** for issues to which social sciences research can constructively contribute;
- ✓ **Research and industry community point of contact and communication with social science expertise** to explore ideas and research proposals to address real and potential industry issues, as well as to have a central point of contact for both researchers and government for the distribution of funding calls and submissions that is specifically able to discuss social sciences based proposals;
- ✓ An **increased appreciation by the industry of the contribution of well constructed and conducted research** to illuminating elements of issues or problems at hand, and potential methods to address these;
- ✓ The FRDC, and the FRABs assisting in the selection and management of research proposals, have expressed their **appreciation for the contribution of the combined expertise of the members of the SSRCP**, for the discussion of research calls and the merits of received proposals, as well as ongoing reviews of milestone, draft and final report. The Steering Committee members and Program Manager relationship networks have also provided support to FRDC where necessary or beneficial, through participation in Project Steering Committees to ensure projects remain true to the funding objectives.
- ✓ The work of the SSRCP with the *Developing and Testing Social Objectives for Fisheries Management* project (FRDC 2010/040) has **placed Australian Fisheries Managers amongst the first internationally to have a 'tool kit' for the identification and implementation of social objectives and indicators of achievement for fisheries management plans**. This tool kit allows these managers to develop plans that meet the regulatory requirements of their State and Federal Act under which they operate. This work was also designed with a larger picture in mind, being that it should be able to be **integrated with a whole of fishery status reporting framework**, which is still being developed. It is the integration of this work into broader fisheries and aquatic management frameworks that this base work facilitates, that makes an exciting advancement in the ability of Australian natural resource

management to achieve integrated and holistic beneficial outcomes for the environment and Australian community.

- ✓ The last, and perhaps esoteric, benefit that has arisen from this and the previous iteration of the SSRCP has been the **increased acceptance of and openness to alternative approaches (aside from bio/ecological and/or economic) to the management of the industry**; both by government and industry stakeholders. The inclusion of social sciences approaches has increased the range of language and platforms for discussion that management and industry has with which to approach the challenge of co-management and resource allocation.

As stated at the outset, most jurisdictional fisheries legislation requires maximum or optimal community benefits to be realised from the use of fishery resources, and while this continues to be the case it is incumbent upon the fisheries research community to endeavour to facilitate this. While significant gains have been made in regard to understanding, measuring and attributing value to the social benefits derived from our fisheries resource, the process of embedding this knowledge in either industry or management operating procedures continues to require focus. While 'noisy' sectors of the community seek to influence outcomes, governments and industry require methods to ensure that ‘best (whole of) community outcomes’ are actually achieved. This is will be done through improving the level of information on which government has to make decisions that may have a significant impact on communities – industry and the broader Australian alike.

Recommendations

This phase of the SSRCP, combined with the baseline established by SSRCP I, have successfully raised and increased, awareness of the need for, and the use of, social sciences research to improve fisheries and aquaculture sector outcomes. SSRCP I & II also highlighted the benefits of a social sciences reference group for FRABs, researchers, industry and managing agencies, and the coordination of social science fisheries conceptual development and research.

During the last six years, Australian and international society has even more noticeably become increasingly aware and engaged with the effects of aquatic and marine resource management (Barclay 2012; Mazur, Curtis et al. 2014). As a result:

- research activity continues to be required to address challenges of identifying;
    - the social impacts, effects, benefits and value of fisheries activities, and methods to ameliorate any negative ones;
    - identify and engage with values and acceptability around the perceived sustainability of wild capture and aquaculture fisheries;

and potentially most importantly,

- to better integrate social sciences research (including economics) both with biological sciences, and across industries and interests, in integrated and trans disciplinary approaches.

More and more, jurisdictions, here in Australia and elsewhere, are being required to move from managing resources in isolation, to positions of managing issues and regions in a holistic manner; requiring research to be equally holistic.

The 2014 FRDC Social Sciences Survey indicated broad support for continuation of the activities of the SSRCP and highlighted the need for a role in linking social science research outputs with decision- making and representations of the industry, brokering collaborations and in facilitating the uptake of FRDCs key national interest projects.

There is clear need for continuing the existing remit of the SSRCP, however there are also imperatives to extend the suite of activities of the Program towards supporting greater research and industry integration, focussed around social benefits and values to both the industry and the broader Australian public. The SSRCP could facilitate this in working more closely with the 'FishEcon' project and its' network. Such a partnership is well positioned to generate not only efficiencies in the delivery of project activities and administration, but most notably provide the governance structural opportunity to develop tighter integration between economics and the social sciences in research, extension and capability building.

Extension and Adoption

The program had an extension plan (Appendix 4), which outlined the activities that the SSRCP would undertake to increase awareness of the benefits that the SSRCP could provide to industry, researcher groups, government agencies and researchers. This was included in the FRDC approved Strategic Plan for the Program. The key messages that the Program sought to extend were that the SSRCP could assist with:

- Identifying existing research about or related to a problem or issue at hand;
- The most appropriate methods and tools to investigate the social aspect of industry issues;
- The national context for a particular area or sector's issues, to enable where possible, the drawing together of greater resources to research the issue;
- Guidance to researchers and industry in the review of applications to ensure that research elements were correctly targeted to industry and the issue needs; and
- Providing an overview of the status of social science research into fisheries issues in Australia and where possible an international context, to the benefit of the industry, government agencies and researchers.

Progress on these activities by both the Program Manager and the Steering Committee members were reported on verbally at the Steering Committee Meetings. Copies of Steering Committee meeting minutes were provided to the FRDC for reporting to the Board in milestone reports.

A final review of the activities of the SSRCP II program and the status of fisheries social research in Australia will be undertaken in the form of a media article proposed for FISH as a final report extension of the Program. This will be undertaken by the 30th of June 2015.

Project coverage

The Program received coverage in FISH: See appendix 8

"***Recreational Fishing offers more than stress release***" (2011/217) – June 2012

"***Extension for People Focussed research Program"*** (2012/300) **-** Sept 2012

"***Guide to the social importance of Fisheries***" (2010/040) – September 2013

"***Conversations to build relations***" (2012/301) – March 2014

"***A People Focused Approach***" (2013/210) – September 2014

The SSRCP also took responsibility for organising and running the '***Social License to Operate: Create Nurture and Grow***' session at the **World Aquaculture Conference** held in Adelaide in 2014 (Session Program - Appendix 5), which also provided an opportunity to present a some significant FRDC funded work (https://www.was.org/meetingabstracts/SessionAbstracts.aspx?Code=WA2014&Session=56)

Appendices

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- Ms Melanie Fisher – Chair (2012 – 2013)
- Ms Rhonda Farlow – Member (2012 – 2013)
- Dr Emily Ogier – Member (2012 – 2015)
- Mr Robert Carne – Member (2012 – 2013)
- Dr Nadine Marshall – Member (2012 – 2015)
- Prof Gavin Begg – Member (2012 – 2013)
- Dr James Larcombe – Member (2013 – 2014)
- Dr James Findlay – Member (2012 – 2013)
- Dr Ian Curnow – Member (2013 – 2015)
- Dr Sarah Jenkins – Member (2012 – 2015)
- FRDC Representatives:
    - Dr Crispian Ashby
    - Ms Jo-anne Ruscoe
    - Ms Pele Cannon

Intellectual Property

No intellectual property was generated directly by the activities of the SSRCP during this phase of its operation.

Appendix 1: Strategic Plan

Australian Government

Fisheries Research and Development Corporation

Social Sciences Research Coordination Program II (SSRCP)

Strategic Plan 2012 - 2015

Abbreviations

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AFMA	Australian Fisheries Management Authority
AFMF	Australian Fisheries Management Forum
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry, Australia.
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
FRDC	Fisheries Research and Development Corporation
IMAS	Institute for Marine and Antarctic Studies
NRM	Natural Resource Management
R&D	Research and Development
RIRDC	Rural Industries Research and Development Corporation
SARDI	South Australian Research and Development Institute
SC	Steering Committee
SSRCP	Social Sciences Research Coordination Program
ToR	Terms of Reference

Contents

Mission Statement

"The SSRCP aims to improve the decision making processes affecting all fisheries sectors (including their management and sustainability), through facilitating the incorporation of relevant and high quality social science research."

Understanding the implications of factors such as public perceptions; an ageing workforce, labour shortages; economic variability; and other environmental and economic pressures, on human behaviour and decision making criteria is essential to the effective management of Australia's fisheries. Social sciences research assists by providing information and insights in the following areas:

- The nature of both the industry and their dependent communities and the potential strengths and weaknesses of these communities;
- Unpacking the social dimension and influencing factors in issues faced by the industry;
- Decision making processes and tools by management agencies, communities, and industry sectors;
- Industry target audiences and effective research and extension strategies;
- Effective adoption strategies of new technologies and management approaches;
- Means to increase industry adaptability to uncertainty by identifying: barriers to change; drivers of public opinion and factors influencing the social licence to operate; and effective approaches to integrating the social and economic dimensions of fisheries and resource management into traditional biological frameworks.

Outcomes identified as a result of targeted and soundly based social sciences research benefit both industry (by providing empirical evidence and advice relevant to particular circumstances) and management agencies (by providing alternative ways to achieve industry sustainability, or improving understanding about the circumstances or contexts that create greater engagement of people with industry and issues).

1.0 Overview

The Social Sciences Research Co-ordination Program (SSRCP) aims to address industry development needs, through complementing and integrating (where possible) biological and ecological approaches with social and economic research. The focus is to provide evidence and strategies to support the achievement of identified outcomes for the wild catch, aquaculture, charter and recreational industries and customary fishing activities.

The Program seeks to increase and improve outcomes through; leveraging past research with expanded and new approaches to build industry resilience, sustainability and synergies across all fisheries and NRM research sectors. In collaboration with other agencies, organisations and the industry, the SSRCP seeks to assist the FRDC to effectively allocate research funds to achieve project outcomes that have the greatest contribution to the sustainability of fisheries' activities, while benefiting both the industry and wider Australian community.

Summary SSRCP II STRATEGIC PLAN 2012 - 2015

Activities	Targets	2015 Outcomes
1. Embedding social science consideration and approaches into fisheries management and industry activities.	• **Promote of the outcomes of social science research** • **Broaden the message about the benefits of social science research and embed it into regular fisheries management, industry and research considerations.** • **Encourage the development of centres of marine social sciences excellence.**	Expansion of awareness of how and where social science research can contribute to the different aspects of fisheries activities, and utilisation of it.
2. Increasing access to information about social science researc its outcomes. Increasing industry and management engagement with the Australian public.	• **Maintain and distribute access lists of social scientists researching in natural resource management and fisheries;** • **Reinforce the Fisheries Social Science Research Audit as an information source;** • **Through FRDC PR, promote finalised projects to industry and managers;** • **Encourage discussion and exploration of industry engagement with the broader Australian community**	Increased awareness of research outcomes and potential contributions. Increased interaction between industry and social science research providers. Increased industry & management awareness of its responsibility to engage on an ongoing basis with the Australian public.
3. Working with industry and researchers to increase two way communication.	• **Facilitate increased connection between researchers and industry;** • **Increase communication of relevant social research outcomes and their potential uses industry.**	Increased engagement between industry and researchers and use of social science outputs to assist industry decision-making. (Continued development of industry/research community social capital).

2.0 Strategic Direction

Since commencing in 2009 the aim of the Social Sciences Research Coordination Program has been to assist the FRDC to make sound decisions in relation to effective social research to:

- support industry development and management;
- educate the industry as to what social research entailed and how it might be used to assist the industry; and
- to assist in the management of social science research projects to ensure best possible outcomes and integration with broader FRDC research and aspirations.

In 2012, with the education phase established around the benefits provided by social science research to holistic industry solutions, the Program now moves to a focus on integrating social science advice and support to other programs and FRDC projects. This is a shift from the provision of social science research perspectives as a separate activity and stand-alone discipline in FRDCs activities. In this phase, the program will move the centre of its focus to:

- Development of tools and products that integrate the social and economic dimensions with standard biological reporting tools in ways that are meaningful to the broader Australian public;
- Collaborate with the industry to develop management and industry resource access and allocation frameworks that integrate social and economic dimensions and research;
- Engage industry and management to explore the strategic landscape of future resource management that social science research and its approaches can assist with; and
- Engagement with the research community to explore methods to develop marine social sciences centres of excellence.

In addition to these the program will continue the;

- Provision of advice in regard to Expressions of Interest, preliminary and full proposals and project management in the form of milestone reviews and general management, as required; and
- Provision of support and advice to the FRABs, sub programs, and major FRDC Projects.

Between 2012 and 2015 the Program will be seeking to consolidate social science perspectives within the day to day operations of fisheries research and management. The chief aim is to embed social science as an integral part of issue evaluation for research development. During this time and in addition to the above, the Steering Committee (with a technical and policy skill set) will work with the Program Manager to continue providing social science knowledge extension as opportunities arise.

The Strategic Plan of the SSRCP sits within and contributes to the social science research aspects of all five of the FRDC's Strategic Challenges:

1. **Natural resource sustainability:** - maintain and improve the management and use of aquatic natural resources to ensure their sustainability.

2. **Resource access and resource allocation:** - Optimise resource access, resource allocation and opportunities for each sector of the fishing industry.

3. **Response to demand; profitability**: - Respond to and take advantage of, increased demand for seafood and for recreational and customary fishing experiences. Enhance the profitability of the fishing industry.

4. **People development:** - Develop people who will help the fishing industry to meet its future needs.

5. **Community and consumer support:** - Increase community and consumer support for the benefits of the fishing industry.

The role of the Coordination Program is to:

- Assist in the strategic planning for RD&E that would benefit from social science research integration;
- Maintain a strategic direction and be responsive to changing circumstances;
- Provide advice on RD&E investment that maximises investment outcomes, through avoidance of duplication and realising greatest potential return;
- Encourage collaboration between researchers, fisheries managers and fishing industry interests;
- Explore other RD &E funding sources, and endeavour to influence the way in which other funding entities apply their investment in fields that can also benefit fisheries activities;
- Promote the best scientific methods;
- Communicate regularly with potential beneficiaries; and,
- Influence the adoption of RD&E results.

3.0 Strategic Objectives

Social science research may be based within or across a number of disciplines including, sociology, political science, human geography, psychology, anthropology, journalism and history, and is expected, where appropriate to liaise with the disciplines of ecology and economics; the latter through the FRDC Economics subprogram. A guiding principle is that a multidisciplinary approach is encouraged where necessary in order to achieve the best possible outcomes. Consequently it is expected that the research encouraged by the program may come from any of these disciplines or draw upon several simultaneously.

The strategic objectives of the program, as approved by the FRDC Board as of 2012, are to;

1. Continue the SSRCP in the existing framework, subject to ongoing industry and research community feedback
2. Collaborate with the industry to identify emerging issues in wild catch, aquaculture, post harvest, recreational and indigenous fishery sectors that could benefit from early integration of social science research for the identification of potential solutions.
3. Address research needs arising from FRDC's existing programs and ensure the quality and relevance of proposed social science research projects;
4. Co-ordinate and undertake the communication of key social science research needs to the research community and SSRCP research outcomes to fishers and management agencies.
5. Provide FRDC relevant program management for social science projects including evaluation, commissioning of projects and milestone reviews.

SSRCP's Methods of encouraging research:

Commissioning of research is ***not*** the charter of the SSRCP. The SSRCP has a responsibility to provide advice to guide industry and researchers in two areas;

- Identifying research that contributes to the development and resilience of the industry; and
- To promote in research applications the highest level of relevance to the fishing industry that also facilitates ready adoption.
- Engage with the research community to explore methods of developing marine social sciences research centres of excellence that are closely connected to industry and management.

The SSRCP, through its Steering Committee, Program Manager and the tools it has developed, provides industry, research agencies and organisations with support, guidance and resources to generate research proposals and outcomes that support issues faced by the industry, and that are in line with the broader objectives of the FRDC and the Australian public.

4.0 Key issues and Themes

Key Issues

The following key issues have been identified in the current landscape of Australian wildcatch and aquaculture fisheries where social science research may assist in challenges currently faced and envisaged for the industry.

1. A need exists to build collaboration and trust between industry and community (using experiences of other industries as a reference point).
2. Identification and communication of the net benefit to society of well managed fisheries to communities.
3. Identification of the most effective mechanisms of communicating social science research outcomes (with the aim of improving the understanding and use of them by industry and management).
4. Engagement with co-management processes and how this supports/hinders issue of broader community concern (e.g. environmental debates/over fishing, etc.).
5. Positioning of the social and economic elements alongside the biological component in fisheries management through the appropriate, value-adding integration of social research into natural resource management processes.
6. Informing the access versus (and/or) conservation debate (e.g. as highlighted by issues such as MPAs and recreational fishing) through projects such as understanding community values and beliefs, consultation and negotiation processes.
7. Clarification of indigenous customary as compared to commercial fishing activities to clarify the continued confusion in this domain (relevant to MPAs and industry management tools).
8. Exploration of the avenues to support fishers and fisheries managers in their adaptation to changing environments, drawing on lessons learnt in other industries.
9. There is a need to invest in fisheries managers to provide them with the tools and knowledge that will enable them to better incorporate the human dimension of fisheries and aquatic resource management
10. There is a need to invest in the Australian community to increase their understanding of fisheries management, its level of transparency and trust in the industry and its management.
11. Encourage and facilitate social performance reporting (which ties in with 1, 2, 3 & 4) by fisheries managers and in regular stock status reports and public communications.
12. Facilitate the development of effective integration tools to support multidisciplinary analysis.

Themes

The key theme identified from these key issues and in line with the direction of the SSRCP was identified to be:

1. Embedding the use of social science research in processes and decision-making

Opportunities exist for the members of the SSRCP to integrate a focus on social science research with everyday issues and to encourage others to engage with these concepts and perspectives. A set of questions and prompts are one means for members, of not only the SSRCP, but any industry or community group to further explore the potential social dimensions of an issue or research question.

It was proposed that this be addressed in the following manner:

i. From the issue priorities identified by the FRABs and sub programs, the SSRCP will review these and identify any social science elements either missing from the detail of the issue, or inappropriately included; and will make recommendations on any allied social science research that will contribute to realising the outcomes sought from research into the identified issue;

ii. The Program Manager will work with other FRDC Project Managers/Steering Committees, on the direction of the FRDC, on aspects of projects that could benefit from greater awareness or integration of social science research perspectives.

iii. A set of such questions/prompts has been developed (Appendix 1) for use by Steering Committee members and other interactions with industry and government groups to further the embedding process of social science perspectives in everyday management of fisheries issues.

iv. Engage with the research community to explore opportunities to develop centres of marine social sciences excellence that are integrated with the industry and traditional marine research agencies.

Further to this, two further themes were identified as being embraced by the issues highlighted in the Programs strategic planning; these were:

2. Communication - Identifying key users/information sources

The key information sources that the SSRCP identified as needed, were those that: keep industry informed of potential researchers; communicate key research outcomes to industry; and update both researchers and industry as to the detail of research outcomes from projects undertaken and uptake of research findings.

To this end, in this phase of the SSRCP it will generate:

- Updated contact details of natural resource management social science specialists.
- A brief summary distributed to industry and researchers with details of finalised projects and associated outputs/outcomes, utilising FRDC networks and those of the Program Manager and Steering Committee.

3. Extension – Working with key industry groups

Three key groups were identified in relation to supporting the industry in increasing understanding and use of social science research in engendering resilience in the fishing industry, by increasing their connection with researchers and research outcomes. These were:

i. Fisheries Research Advisory Boards (FRABs);

ii. Industry representative groups; and

iii. Fisheries government agencies.

In relation to these, the specific activities focused upon will be those which aim to increase the depth and breadth of connections between:

a. **FRAB's** and social science researchers.

b. **Industry representative groups** with social science researchers and where beneficial social

scientists in government research agencies (e.g. ABAREs, SARDI, CSIRO, IMAS, etc.).

c. **Fisheries government agencies** and non-government social science researchers.

5.0 Activities

The research tactics identified to address the themes arising from the key issues have been broken down into themes/ stakeholders/strategies and actions in the following table. The result is development of activities to address the key issues, which have also been allocated responsibilities and reporting timetables amongst the SSRCP Steering Committee members. This is the basis of the work plan for the Program for the period 2012 - 2015.

Theme	***Stakeholder***	***Strategy***	***Action***
Embedding	Industry	Increase FRAB and industry representative groups' engagement with social science research and its uses. Explore opportunities to develop centers of marine social sciences excellence that are integrated with traditional marine research agencies.	• Encourage the integration of social science research components into issue and proposal development and interrogate research proposals for the robustness of social science research components; • Work with FRDC Projects and Programs to assist in highlighting the social science dimension of these and where social science research may help, or of alternative approaches; • Encourage researchers to present relevant research to FRABs and other FRDC stakeholders; and explore with education and research bodies opportunities to develop collaborative relationships between social science researchers, industry and traditional biological research agencies. • Engage with AFMF in relation to embedding social science research outcomes and uses into issue consideration alongside biological and economic concerns; • Create a set of such questions/prompts for use by the Steering Committee members and industry/government groups to assist in clarifying if social science perspectives and research can assist in issue resolution. The objective is to ensure social science skills and expertise is considered and where appropriate built into projects.
Embedding	Industry & Government Management Agencies	Integrate social objectives project outcomes into other national frameworks	• Create a project or action plan around the integration of the social objectives project into reporting frameworks such as the National Harvest Strategy and Fisheries (Stock) Status Reports
Embedding	Government Management/	Increase consideration of social science issues in fisheries	• Work with ABAREs, AMFA and State agencies (as is possible) to increase awareness of the social dimension and its impact on fisheries management,

	Research Agencies	management	and methods to address these in management approaches.
Communication	Industry	Increase FRAB and industry representative groups' engagement with social science research and its uses	• Provide a summary of all social science research projects and the outputs and where evident outcomes associated with them. • Identify key international social scientists researching areas of relevance to the fishing industry
Communication	Industry & Researchers	Link in with RPN (within the RD&E Framework)	• Connect relevant information across the program's activities.
Communication	Researchers	Link in with similar projects	• Provide updates between the CSIRO led Social and Economic Long Term Monitoring Program (SELTMP) and SSRCP
Communication	NRM industry	Cross sectoral linkages	• Engage with RIRDC to identify cross social science research opportunities and uses of outcomes, and communicate to FRDC/FRABs.
Communication	Government and aligned agencies	Increase awareness of fisheries social science issues, research findings and uses	• Work with FRDC as appropriate to support any briefings on social science research uses in relation to specific issues.
Extension	Industry	Increase fisher awareness and use of social science research outcomes	• Initiate and encourage conversations with fishers using the social science research prompts and FRDC Social Science research summary. • Include information on social science research outputs and uses in emails and newsletters • Update and revise use of FRDC website for social science research outputs and uses.
Extension	Industry	Increase general industry awareness of social science research outputs and uses	• Presentations at industry conferences
Extension	Researchers	Connect SSRCP with other FRDC programs	• Increase cross flow of communication about activities and project outcomes of relevance

6.0 Communication and Extension Strategy

The following communication and extension activities rely on the Program Manager and Member networks and FRDC resources, given that the Program has no allocated advertising or communications budget. There are however, a number of activities identified as open to the program and will be utilised as they are available. The following table presents the sector targeted, the activity, responsibility, and how often the activity will occur.

PM = Program Manager
SC = Steering Committee Members

Sector	Activity	Responsibility	Frequency
Commercial and Customary	• FRABs	PM & SC Members	Bi Annually
	• Seafood Industry Conferences	PM & SC Members	Annually or Bi annually
	• FRDC Website	PM	Review annually
Recreational Fishers	• State Fisheries Agencies	PM & SC Members	Annually
	• Rec Fish Australia	PM/Recfish Program	Annually
	• FRDC Website	Program Manager	Annually
Research Community	• R&D Meetings with FRDC Programs; R& D Corporations; CRC's and research agencies (CSIRO/BRS/IMAS/SARDI etc)	PM & SC Members	Bi Annually
	• Research networks & University Programs; including AON & Agrifood Networks;	PM & SC Members	E-Mailing Lists to inform annually
	• Explore opportunities to connect centres of Social Sciences education and research with industry and traditional marine research agencies.	PM and SC Members	Explore and identify potential linkages; collaboration with the RPN
Government Agencies	• Discussions and meetings around Social Science dimension of fisheries issues	PM and SC Members as appropriate	Annually and as required.
FRDC Programs	• Input to projects and activities as required	PM	As required

7.0 Program Reporting and Communication

The FRDC recognises that disclosure, transparency and collaboration are essential to the successful achievement of the SSRCP's objectives. The following communication and transfer activities are the responsibility of the following individuals or groups within the Program.

Meetings

The Steering Committee meet up to three times a year, of which one meeting will be face to face, and it will consider issues out of session where necessary.

Communication with the FRDC Board

Program activities will be reported to the Board through a project milestone reports to the FRDC Programs Manager. Additionally, the following items and activities will be communicated through the FRDC Programs Manager, as required or as they arise.

- Terms of Reference
- Strategic Plan
- All Committee and Group meeting discussions, decisions and recommendations.
- Provide and receive communication with allied research bodies and agencies, of relevance to the objectives and activities of the Program.

The Program Manager:

The Program Manager will liaise with Program members, the FRDC and its Board and other research stakeholders in the following areas:

- Initiating and organising meetings of the Steering Committee;
- Communication of and receipt of feedback on, research project proposals, to inform the FRDC Board;
- Participation in industry activities relevant to the Program at the discretion of the Program Manager;
- Participation in research agency and organisation activities relevant to the Program as agreed by the FRDC Programs Manager and the SSRCP Program Manager;
- Input to, and support of, Steering Committee member communications to industry and research organisations;
- Updates for the FRDC SSRCP Webpage;
- Liaison with other FRDC (Sub) Programs to support their activities with input from the SSRCP.

The Steering Committee:

Steering Committee Members undertake to:

- Provide input to the annual review of the Strategic Plan in regard to Key Issues, Priorities and potential activities to address these issues;
- Review research proposals received in the context of their alignment with the Programs agreed Strategic Plan (that is the proposals ability to address the prioritised Key Issues) and provide timely feedback to the Program Manager;
- Communicate the Program's objectives and Strategic Plan to the fisheries communities that they are engaged with, and receive comment and feedback, which they will communicate to the Program.
- Be actively engaged with ensuring that the methods chosen by researchers for the communication of research results are realistic, achievable and likely to provide the desired outcomes.

Communication with Stakeholders

Aside from the activities included above in the agreed tasks of the Program Manager and Steering Committee Members, the three year Strategic Plan and any associated opportunities will be promoted to stakeholders via:

- FRDC Social Science Research webpage
- FRDC annual FRABs workshop
- Emails to a database of Industry and research peak bodies.

APPENDIX 1 - Embedding questions/prompts

- Do we, or in what way do we, need to engage people (fishers/managers/public) to ensure this particular research project discipline achieves its desired outcome?
- Have other technological/biological approaches been utilised to address this in the past? If they failed do we know why?
- Have approaches for addressing this particular issue been used successfully in the seafood or other industries in the past? If so, how was it done and was there any element that could have worked better through the engagement with or consideration of particular interest groups, and when in the process?
- What are the key factors influencing the uptake of this new type of approach/technology by fishers/managers?
- Can we do anything earlier in the research process by engaging with interest groups to assist in gaining support for adoption of successful research outcomes?
- What does the general community (regional/State/Australian) think about this approach/research – are they supportive? If not why not – what mitigating factors need to be built into the project?
- Could the broader community be engaged with the project which would improve industry profile and acceptability?
- Do managers need to integrate this new knowledge into their systems and processes in any way? If so, how might this project be developed to maximize the uptake by managers?
- How can the community be informed of this particular new technology and why should they think it is a good thing for the environment?

Appendix 2: Terms of Reference:

Australian Government

Fisheries Research and Development Corporation

Social Sciences Research Coordination Program (SSRCP) II

Terms of Reference
2012- 2015

Abbreviations

AFMA	Australian Fisheries Management Authority
AFMF	Australian Fisheries Management Forum
BRS	Bureau of Rural Sciences
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry, Australia.
DEWHA	Department of Environment, Water, Heritage and the Arts
FRDC	Fisheries Research and Development Corporation
LWA	Land and Water Australia
NRM	Natural Resource Management
R&D	Research and Development
RIRDC	Rural Industries Research and Development Corporation
SC	Steering Committee
SSRCP	Social Sciences Research Coordination Program
TAFI	Tasmanian Aquaculture and Fisheries Institute

Contents

1.0 Introduction

The Social Sciences Research Co-ordination Program aims to increase understandings of the social aspects of the seafood and aquaculture industry. The management of seafood and aquaculture activities - commercial, recreational and indigenous customary - has profound implications for fishers, their families, and their associated communities. The charter of this program is to continue to assist the industry in increasing the quality, amount and coordination of research in this area. The benefit is seen to be in achieving optimal management of issues affecting fishers and seafood and aquaculture through commonly integrating the social dimension with biological and economic approaches. The further objective of this phase of the Social Sciences Research Coordination Program is the facilitation and development of leadership, communication and knowledge of the social sciences to increase capacity within and across the different sectors of the seafood and aquaculture industry, to commonly and appropriately utilise this research dimension to the benefit of the industry.

Understanding the implications of factors such as an ageing workforce, labour shortages, economic variability, climate change and other environmental and economic pressures, on decision making criteria made outside rational economic models, is essential to the effective management of Australia's fisheries. Social sciences research assists in defining:

- The nature and shape of both industry sectors and their dependent communities and therefore any potential strengths and weaknesses in the face of change;
- Decision making criteria of various individuals and industries;
- Target audiences and effective means for research and extension strategies;
- Adoption strategies of new technologies and management approaches;
- The means to increase industry adaptability to uncertainty by identifying; barriers to change; skills auditing; identifying effective 'up' and/or 're' skilling techniques.

For the purposes of this program, the industry encompasses the commercial, recreational and customary sectors, taking into account of the views of fishers, fisheries managers, the public, researchers, and special interest groups in all three wild catch and aquaculture activity areas.

The wild catch and aquaculture seafood industry is defined broadly as including any industry or activity conducted in, or from, Australia including; taking; culturing; aquaculture; processing; preserving; storing; transporting; marketing; and the selling of fish or fish products. The program acknowledges that its activities will be conducted in the context of external factors, beyond the control or influence of the industry or the FRDC, which may provide barriers to the successful fishery outcomes.

In summary, the program will focus on directing and coordinating social science research funded by FRDC, and embedding social science research consideration into industry research perspectives, in a manner that is synergistic and, where possible, collaborative with other agencies and organisations. This will encompass the following seafood and aquaculture sectors and activities:

1. Commercial sector
    - commercial wild-catch (including indigenous)
    - aquaculture (including indigenous)
    - post-harvest (up to and including retailing)
2. Recreational sector
3. Customary sector

2.0 Program Objectives

This program is designed to address social science research and development needs, through complementing and integrating (where possible) with biological and economic research, to provide evidence and strategies to support wildcatch and aquaculture and recreational industry and customary fishing identified outcomes.

Specifically the program seeks to increase and improve outcomes through; leverage off past research, and building synergies across all fisheries and NRM research sectors. In collaboration with other agencies, organisations and industry, the aim is to efficiently allocate FRDC social science research funds to achieve project outcomes with greater reach in their contribution to fisheries' sustainability.

The objectives of the program as stated in the Project Agreement are to:

6. Continue the social sciences program in the existing framework, subject to ongoing industry and research community feedback

7. Collaborate with the industry to identify emerging issues in wild harvest, aquaculture, post harvest, recreational and indigenous fishery sectors, that could benefit from early integration of social science research for the identification of potential solutions.

8. Address research needs arising from FRDC's existing programs and ensure the quality and relevance of proposed social research projects;

9. Co-ordinate and undertake the communication of key social research needs to the research community and SSRCP research outcomes to fishers and management agencies.

10. Provide FRDC relevant program management for social projects including evaluation, commissioning of projects and milestone reviews.

3.0 Program Terms of Reference

The program is tasked with:

1. Based on the priorities and objectives of the program, develop a strategic plan for the activities of the Program. The plan will incorporate objectives, scope, and strategies to achieve planned outcomes, with reference to past and current activities of the FRDC and other relevant agencies or departments, for approval by the Board;
2. Assessing, in collaboration with the FRABs, industry, and allied interests, current socially effected or constructed issues impacting the sustainability and future of the wild catch, aquaculture seafood industry (commercial, recreational and customary) in Australia;
3. Prioritisation of those issues in relation to the broadest benefit across wild catch and aquaculture commercial, recreational and customary fisheries;
4. Provide advice to the Board on research applications and their relevance to the FRDC's previous and current funding activities and industry benefit. Recommend any necessary actions that may assist in the provision of social research for the customary fishing activities; wild catch, aquaculture and recreational industry; and the general public's enjoyment of the marine environment.
5. The Steering Committee will be responsible for ensuring that the strategic plan and high priority research projects are communicated to the industry, allied research agencies and industry departments, and the research community, utilising a communications strategy;
6. The Program Manager (Dr. Kate Brooks) will liaise with other FRDC (including People Development Committee, Economics Working Group, and Recfishing Working Group), industry and allied research programs (such as, but not limited to, SCRC, RIRDC, TAFI, SARDI & CSIRO), and State and Federal Fisheries agencies, to identify potential duplications, synergies and collaborative opportunities.
7. The program will assist in the management of and provide guidance to social science research projects, review of draft and final reports, and provide advice in relation to the dissemination of outputs.

4.0 Steering Committee

The Steering Committee will be comprised of a maximum of ten members, including the Chairperson and Program Manager.

- The remaining members of the Steering Committee will be selected on the basis of their combined experience across the scope of customary, wild catch, aquaculture and research activities;

- Due to the level of importance represented by the Commercial seafood and aquaculture sector, AFMF will have member on the Committee, being responsible for disseminating information from the SSRCP to members of AFMF.

- The Program Manager is responsible for making recommendations in regard to potential Steering Committee members to the FRDC for review and approval. The final selection and appointment of the Steering Committee rests with the FRDC

- The Steering Committee will meet a minimum of twice a year (at least one meeting of which will be face to face at a location most convenient to all participating members), with the task of meeting the Terms of Reference of the Steering Committee and the Program. .

- Members of the Steering Committee will be appointed for a minimum period of one year and a maximum of three years, subject to FRDC Board approval.

4.1 Steering Committee Terms of Reference

The terms of reference for the Steering Committee are derived from the Program Terms of Reference and are:

1. Identify and prioritise the current social* issues that are currently not, or only minimally, understood and which are impacting the sustainability and future of the seafood and aquaculture industry (commercial, recreational and indigenous) in Australia; (*created by or resulting from internal or external industry factors)
2. Based on the objectives of the Program develop a strategic plan for the development of social sciences research and FRDC's funding expectations. The plan will incorporate research objectives, scope, and strategies to achieve planned outcomes.
3. Assist the Program Manager where identified in the Strategic Plan, with the dissemination of knowledge about the Program, social sciences research and researchers, where necessary to assist FRABS and industry to embed social science research considerations and approaches into fisheries research and development activities.
4. Provide advice to the FRDC Board on research applications and make recommendations in regard to any actions that may assist in the provision of social research for the Australian customary and recreational fishing, and wild catch and aquaculture industry.
5. The Steering Committee will be responsible for ensuring that the strategic plan and high priority research projects and other activities are communicated to the industry, allied research agencies and industry departments, and the research community.
6. The Program evaluation will be through;
    i) The effective implementation of the Board approved Strategic Plan and its identified activities to address the objectives of the social science research coordination program.

ii) Improved results achieved from a mid term review of the project's perceived benefits amongst stakeholders as compared to the results derived from the November 2011 review.
iii) A demonstrated increase in knowledge and adoption of social science research in the management of fisheries over the life of the program (three years), and in the use of social standards and/or indicators that may be used to improve policy development and implementation.

5.0 Code of Conduct for the Steering Committee

Members of the SSRCP Steering Committee are expected to adhere to the highest ethical standards and to ensure that these standards permeate the Program. Committee members have the responsibility to ensure that the Program's activities are achievable and contribute to positive and tangible outcomes for sustainable fisheries. To do this, they must strike a balance between short and long term goals, as well as between the social focus of this program and economic and environmental outcomes for fisheries.

Committee of the SSRCP undertake:

1. To act honestly, in good faith and in the best interests of the Program.
2. To use care and diligence in fulfilling the duties required of them as members of the Program.
3. Not to take improper advantage of their position in the Program or attempt to improperly influence other members.
4. To make decisions in the best interest of the Program, ahead of their own personal or professional/business interest, or in the interests of their employer. Please refer to "Conflict of Interest" (7.0 in this document)
5. The obligation to be independent in judgement and actions and take all reasonable steps to be satisfied as to the soundness of all decisions of the Program.
6. Not to disclose confidential information received in the course of the Program activities, or make public statements, unless otherwise authorised by the FRDC or the Program Manager (this includes former Program members).
7. To attend all meetings of the Program unless there is a reasonable excuse for failure to attend a particular meeting or meetings. Where attendance is not possible, members will notify the Chairperson in advance. With the exemption of AFMF and FRDC members, no substitutes or proxies will be accepted. A leave of absence may be requested of the Program in advance if the member reasonably believes they will miss two consecutive meetings.
8. The continuing obligation to keep informed about the activities of industry research.
9. To treat all other program members with professionalism, courtesy and respect, and work cooperatively with fellow members towards agreed goals and to achieve consensus within the Program through open, frank and friendly discussion.
10. All meeting discussions will be undertaken under 'Chatham House' rules.
11. If the final position is a ***majority*** decision - that will be the decision of the Program; all members (including dissenting members) are then obligated to support the majority decision. A dissenting member may have his/her vote recorded in the minutes upon request.
12. (Not withstanding Point 9) The Steering Committee Chairperson will retain the right to vote and make a casting vote.
13. To disclose any conflict of interest with the activities or subject of discussions of the Program on joining (see attached Register of Conflict of Interest), and as appropriate during the work of the Program. If a situation or potential "conflict of Interest" should arise, the member concerned will discuss the matter with the Chairperson (or Program Manager) and will withdraw if requested while the Committee discusses the potential conflict. If it is decided that a conflict does exist, then depending on the assessed significance, the member involved will be requested to take one of the following actions (in order of increasing significance)
    a. Refrain from voting on a relevant matter during a Committee meeting;
    b. Withdraw from discussion of relevant matter(s) during a meeting;
    c. Take a leave of absence from the program for a period; or

d. Resign from the Program.

7.0 Conflict of Interest

The purpose of this section is to provide guidance to Steering Committee (Committee) as to what would constitute a conflict of interest in their participation on the FRDC's Social Sciences Research Coordination Program (SSRCP).

It is required that Program Committee must, subject to some limited exceptions*, give the other Members notice of a "material personal interest" in a matter that relates to the affairs of the FRDC's SSRCP.

Importantly, where a Member has a "material personal interest" in a matter that relates to projects or issues considered by the Program, in addition to the duty to disclose that interest, the Member must not be present while the Committee or Group is discussing that matter and, importantly, must not vote on the matter unless one of a number of specific exceptions applies.

Members are appointed on the basis of their expertise and for the purpose of obtaining an appropriate balance of expertise in as many as possible of the fields of the customary and recreational fishing and wildcatch and aquaculture industries.
A Member's connection with any particular organisation or interest group will not necessarily be a material personal interest in the affairs of the FRDC.

The FRDC encourages FRABs, subprograms and other committees that provide the FRDC with advice, to adopt this policy.

Definitions
Material personal interest is not defined in the CAC Act 1997 or the Corporations Act 2001 (Cth)

Case law suggests that an interest that does not give rise to a "real sensible possibility of conflict" would not be a material personal interest. The interest would need to be materially affected by the outcome of the board's deliberations, and the duties to disclose and not participate in deliberations would be limited to a matter that is, or might reasonably be expected to be, brought before the board for its consideration.

The types of interests that a Member of the program would generally (other than some specific exceptions) have a duty to disclose, and in relation to which a Member should not participate in Program deliberations, include:

(a) any contract or proposed contract in relation to which the Member either directly or indirectly might receive a benefit;
(b) any office held by a Member in any entity that would be reasonably expected to have dealings, directly or indirectly, with the FRDC;
(c) any pecuniary interests (such as holding shares) in entities that have dealings, directly or indirectly, with the FRDC; and
(d) an interest in property that might be affected by any decision of the Program.

Depending on the circumstances, a Member is also required to disclose non-financial interests (such as having assisted in preparing an application that the directors are to consider for FRDC funding).

The following are examples that provide a guide to the application of this policy, but in practice will depend on the particular circumstances:

- A Member would usually be expected to disclose if he/she, or a member of that member's immediate family is an employee of a company or research agency and an R&D application from the organisation was being evaluated by the board.
- A Member would usually be expected to disclose that he/she, or any organisation to which the Member is associated, is a shareholder of an organisation that holds a licence to fish in a fishery in which management changes (to either the organisation's benefit or detriment) could result from FRDC funded R&D.
- A Member would usually be expected to disclose that he/she, or his/her immediate family, or any organisation to which the Member is associated is a member of an organisation such as an industry association or research agency that has had a strong involvement in the development of an application that, if approved, could benefit the organisation or a member of the organisation.
- A Member would usually be expected to disclose that his/her immediate family, or any organisation to which the director is associated is directly associated with a fishery's research, policy, management and/or other related agency, the operation of which could be affected by the board's decision on an application; or may have close personal ties with an applicant.

Policy

A Member who considers that he/she may have a material personal interest in a matter to be discussed by the Program ("conflicted Member") will:

(1) as soon as practicable after the Member becomes aware of his/her interest in the matter give details of the nature and extent of that interest, and the relationship of the interest to the FRDC, either in a "standing notice" or at a meeting of the Program; and

(2) before any discussion takes place on that matter, leave the meeting while that matter is discussed

The Chair may raise with any of the remaining Members any issue that has come to the Chair's attention, and may request the Program Manager to raise any issue that has come to the Manager's attention, that might suggest that a remaining Member ("affected member") has an actual or perceived material personal interest in a matter to be discussed by the Program, and the Chair will invite the affected Member to respond;

If the affected Member confirms that he/she has a material personal interest, they will leave the meeting while that matter is discussed. If the affected Member maintains the he/she does not have a material personal interest, they may choose to leave or remain in the meeting while that matter is discussed, and the remaining Members (including the affected Member if he chooses to remain) may vote on whether discussion on that matter should be postponed;

In the absence of the conflicted Member(s), the remaining Members will discuss the nature of each of the declared interests and whether to:

- pass a resolution inviting a conflicted Member back to the meeting on the basis that those Members are satisfied that the interest should not disqualify the conflicted Member from voting or being present
- invite a conflicted Member back to the meeting to answer Committee/Group queries
- not invite a conflicted Member back to the meeting while that matter is discussed.

The Chair may seek legal advice at any time in relation to any issue arising from a Member's perceived or actual material personal interest in a matter.

In deciding whether to invite a conflicted Member back to the meeting to answer Committee/Group queries, the remaining Member's will take into account the unique expertise the Member would be able to provide. The remaining Members, in querying a conflicted Member, will ensure that the Member is not able to influence the Committee/Group in making its decision. If the remaining Members choose to invite a conflicted Member back to answer queries, the conflicted Member will leave the meeting immediately after answering those queries.
The remaining Members will discuss the matter, and make its decision in the absence of the conflicted director(s).

All Members are subject to the same conflict-of-interests requirements.

Any Member, in relation to any matter, may:

- request that her/his concerns are recorded in the minutes of the meeting
- request that the Committee/Group pass a resolution allowing the Member to participate
- inform the Chair that she/he intends to inform the FRDC CEO of the Committee/Group's decision

A standing notice about Member's interests will updated at each board meeting. All declarations of interests, and their consideration by the Steering Committee, will be recorded in the minutes.

Exceptions from disclosure requirement

A Member does not have to disclose a material personal interests where:

1. The interest is in a contract, or proposed contract, with, or for the benefit of, or on behalf of, a subsidiary of the FRDC and the Member's interest arises merely because the Member is a director/employee of the subsidiary;
2. All the following conditions are satisfied:
    a. the Member has already given notice of the nature and extent of the interest and its relation to the affairs of the Program;
    b. if a person who was not a Member of the Program at the time when the notice was given is appointed as a SSRCP Program Member—the notice is given to that person; and
    c. the nature or extent of the interest has not materially increased above that disclosed in the notice; or
- The Member has given a standing notice of the nature and extent of the interest and the notice is still effective in relation to the interest.

8.0 Matters reserved for the FRDC Board

The following matters are reserved for FRDC Board approval and sign off.

1. Approval of strategy, program plans and objectives and monitoring of performance against them.
2. Program Appointments of all positions
3. Monitoring of performance of program management staff
4. Appointment of the Terms of Reference of the Program
5. Delegation of Authority to the Program Manager when appropriate
6. Remuneration of the Program Manager
7. Code of conduct for the Program

Appendix 3: FRDC Milestone 4 Report

MILESTONE PROGRESS REPORT

Australian Government
Fisheries Research and Development Corporation

FRDC PROJECT NUMBER: 2012/300

Social Science Research Coordination Program (SSRCP) II

MILESTONE NUMBER: 4 Progress Report

DATE DUE: 30/09/12

PRINCIPAL INVESTIGATOR: Dr Kate Brooks

OVERALL PROJECT PROGRESS:

Milestone Status

Has this milestone been achieved (Yes/No)	**Yes**
Will the project be completed according to the current milestone schedule (Yes/No)	**Yes**

PROJECT PROGRESS AGAINST PROJECT OBJECTIVES

A strategic planning session has been undertaken with a quorum of the Steering Committee, that undertook to:

- Review the progress and outcomes of the first phase of the SSRCP and the objectives and promised outcomes of this phase of the SSRCP
- Revist and refine the vision
- Identify the strategic focus
- Clarify methods to address the strategy and attendant actions
- Identify specific activities to be undertaken and by whom and when that will contribute to the achievement of the objectives and strategy of the program

Repeat the following three sections for each milestone in the period being reported on:

1. ORIGINAL MILESTONE DATE AND TITLE:

September 30th, 2012 - Strategic Development ,planning, outcomes and Action Plan for FRDC Approval.

2. REVISED MILESTONE DATE AND TITLE:

N/A

3. PROGRESS AGAINST MILESTONE (Achieved):

The milestone of undertaking a Steering Committee meeting to identify the actions noted above for this milestone, has been achieved in full, with a full Strategic plan expected to be available for posting on the FRDC website by October 30th.
As identified in the minutes of the meeting that are appended to this milestone, the Steering Committee identified:

- Strengths and opportunities learnt from the first phase of the program
- Revised vision statement
- Focus areas required in the second phase

- Key strategic opportunities for the second phase
- Primary stakeholders and key audiences
- Interaction with other national research and co-ordination programs (NPF/RPN)
- Communication methods
- Themes of the strategic plan in terms of embedding information with industry; information sources;and engaging the research community
- Action plan with timelines and reporting points.

SPECIAL CONDITIONS
None

INTELLECTUAL PROPERTY ISSUES ARISING:

None

CONTACT WITH BENEFICIARIES:

Liaison is in the process of being undertaken with appropriate staff at FRDC in relation to communication activities and will be in the next three weeks in relation to liaison with FRABs, industry groups and researchers in the form of the finalised strategic plan.

PROGRESS AGAINST COMMUNICATION & EXTENSION PLAN:

It has been arranged through FRDC to place all minutes on the FRDC website as will be the Terms of Reference and the Strategic Plan for the Program, but the end of Ocotber 2012.

An article was published in the September edition of FISH detailing the continuation of the program and its outcomes from the first phase

VARIATIONS TO PROJECT:

None at this time.

Australian Government
Fisheries Research and Development Corporation

SSRCP STEERING COMMITTEE – Strategic Planning Meeting,

Wednesday September 20th, 2012

9.30am – 4.30pm

Meeting Room, Sydney Fish Markets, Pyrmont

Minutes

Attendance: Melanie Fisher, Kate Brooks, Rhonda Farlow, Emily Ogier, Bo Carne, Crispian Ashby, Nadine Marshall, Gavin Begg and Kate Brooks

Apologies: Sarah Jennings, James Findlay

1. Welcome

Welcome to all and apologies are noted from James and Sarah.

2. SSRCP Phase II Strategic Plan development: 2012 - 2015

2.2 Overview 2009 to 2012

It was noted that the previous program had achieved the following outcomes noted in the final report to FRDC. These were that the SSRCP I had:

- Made noteworthy inroads on developing an industry understanding of social science research;
- To a growing degree, has assisted industry in developing an appreciation for the benefit that an integration of social research into other management and research approaches can provide;
- Increased understanding of the use of social science in gaining greater understanding about the reasons for barriers to change; methods to effect change in a range of stakeholder behaviours more effectively; elucidation of issues and parameters around triple bottom line reporting and ESD that have previously been lacking; and has
- Identified social science research as a key factor in clarifying the ways forward in areas such as resource sharing and co-management which continue to challenge the industry.

Comments noted from the Steering Committee in relation to the first phase of the program also included that:

- Communication was a key factor in gaining acceptance and traction of the program
- It was acknowledged that the SSRCP was not a silver bullet for the industry
- It had become much more acceptable to push Social science research forward more in general fisheries research forums
- There has been a move to broader acceptance of the need for social research to complement other research activities.
- The Social Sciences Research Coordination Program has been able to give all of these activities significant support.

2.3 Key Learnings from Phase I

The features pointed out by the members of the committee in regard to what was important to both the successes in the past and the needs as we move into the second phase of the Program were:

- Communications continue to be a challenge
- The social research and political perspectives are regularly confused.
- Awareness of social research and how to undertake it has made inroads, however the problem now is to identify for industry and agencies how they might use the outcomes of it. The opportunities from this are:
    - How social science research can be used – parameters
    - How social research can be integrated into management and policy
    - Metrics of social research – benchmarks and assessment interpretations
    - Creating an 'Authorising environment' is a key contributor of social science research in the fisheries environment. Comprised of both formal and informal sources of authority, "[t]he Informal sources of authority are the wider set of influences which shape the regulator's capacity to exercise power. These are factors such as interest groups in business or civil society, the media, and the political leaders with responsibility for the space and so on." (Prof Alan Fels, "The Role of The Privacy Regulator in an Era of Transparency" http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCMQFjAA&url=http%3A%2F%2Fwww.privacyconference2003.org%2Fpresentations%2Ftumbalong%2520auditorium%2FAud-Day1%2Fplenary%2520session%2520a%2Fprof%2520allen%2520fels%2Fprof_allan_fels_presentation.doc&ei=QkxhUKrIKqaViAfUxYCYBA&usg=AFQjCNGm_mupBmQju_HD87lZH04aemxkYQ&sig2=zX2dJs4CWa_htyJIkxNe9A
    - There is a need to develop trust amongst the public, industry and politicians in social science research (this is all scientific research to various extents)
    - Need to improve community perception of research acceptability which is based around risk perceptions, trust and evidence based policy interactions.
    - The need for demonstration projects was discussed with suggestions including:
        - Trialing of tools already in development or the integration of these into national/other projects.
            - Social Objectives project (FRDC 2010/040)
            - Atlantis (CSIRO)
            - National Harvest Strategy (Sean Sloan – FRDC 2010/061)
            - Commonwealth Fisheries Status Reports (ABARES)
        - Might be necessary to work with managers and researchers to find fisheries to use as demonstrator projects.
    - There is a need to get managers and decision makers together to obtain feedback and comment on:
        - How far the existing tools get them in terms of meeting their needs
        - Specifically identifying the gaps that social science research could assist with
        - Identify what might be needed in terms of changing decision making processes, to assist them in being more socially transparent and acceptable.

Summary focus required in the continuation of the program:

- Continue to build awareness of social science research and its contribution to industry management and community engagement;
    - SSCRP Steering Committee members to each adopt roles of 'boundary riders' in their

specific spheres of influence. Being to bring focus to and maintain it on the benefit of considering and where appropriate acting upon the inclusion of social science elements in issues analysis and research proposal development or commission.
- Providing social science outcomes in metrics or other forms that are readily useful to decision makers and integration into other decision parameter platforms;
- Creating tools that assist in developing a positive 'authorising environment'.

2.4 Key outcomes promised in this phase of the Program

As a result of the previous discussion it was agreed that the main focus of the Program in this second phase and from a strategic perspective, will be on outcomes three and five;

1) A coordinated approach to fisheries social science research;

2) Minimised duplication and maximised research benefits through coordination with other RDCs;

3) Extension, and facilitation of the adoption, of social objectives and indicators in fisheries management nationally;

4) Responsible implementation of co-management and resource allocation strategies through social science research support of these activities; and

5) Increased researcher engagement with State and Territory issues.

2.5 Primary audiences/stakeholders

Stakeholders:

- Industry – Commercial/Recreational and Indigenous communities
- Government

Audiences: With a view to culture change around two way communication and collaboration rather than competition;

- Government
- Australian Community: and within this;
    - General public
    - Conservation groups
    - Competing resource users – Charter/Tourism; coastal development; mining; agriculture.

2.6 Is the vision still right?

The previous Vision as identified in the second half of the first phase of the program was:

'*The SSRCP aims to improve the decision making processes affecting all fisheries sectors (including their management and sustainability), through facilitating the incorporation of relevant and high quality social science research.*'

It was identified that the Vision was still largely the same, but with some specific refocussing.

- It should focus on continuing to evolve and develop the program as we move from awareness raising to implementation of tools and guidance in the use of them.
- It is also essential to ensure the program and its activities become associated with the industry culture, not any one individual.

It was agreed that the Vision could still be simplified to assist with communication of the concepts and in line with the above foci. The following was agreed:

"***The Social Science Research Coordination Program aims to facilitate the integration of social science research into the decision making processes of fisheries activities and management***."

2.7 Overall Objectives

The Objectives of the Program in the years 2012- 2013 were agreed to be:

1. **Continue to build awareness of social science research and specifically how it can benefit** industry management through integration into communications and decision making.
2. **Supporting the development of tools to integrate social science research** into management processes, **and increasing awareness** of industry and management of these and the uses of them.
3. **Facilitate better understanding of the external environment** (e.g. values underpinning community perceptions and Social License to Operate (SLO)) and how this can be harnessed to improve communication and decision making transparency.
4. For all members of the SSRCP **Steering Committee to make themselves available/known to fisheries related agencies/organisations** for referral regarding social science issues and available tools.

2.8 Links with the RD& E Framework – Crispian & Gavin

The RD&E Framework is a PISC agenda with DAFF involvement and to that end, FRDC and its programs are not to be seen as 'drivers' of the framework.

At this stage, the Research Providers Network (RPN) has identified a gap in the capacity of social science research in regards to the main research providers. This is an area where the universities and other research providers (e.g. consultants) could assist.

The Extension and Adoption Plan has been drafted but it is still being determined as to how best extension can be undertaken within existing funding frameworks.

It was noted that in regard to Extension the FRDC has appointed two dedicated staff to this activity with one (Allaria) focusing on

- Developing fact sheets on topical issues
- Harvest Strategy
- Species of interest, such as; Orange Roughy/Sharks/Bycatch etc.

The other (Rachel) focusing on:

- Facebook and Twitter

ACTION ON Kate: Talk with these staff to identify how they want information from projects to assist them.

The FRDC is represented on all three aspects of the Framework and to that end the SSRCP should take a watching brief in regard to when and how it can best contribute to the process.

Key communications points in regard to this are; Crispian Ashby and Gavin Begg.

Additionally, Nadine Marshall to touch base with Dave Smith (CSIRO) who is heading up the RPN as another point of contact.

ACTION ON: Crispian/Gavin/Nadine: Report to the Steering Committee regarding any NPF/RPN activities of note or relevance to the objectives of the SSRCP.

It was also noted that the Social and Economic Long Term Monitoring Program (SELTMP) had relevance to the integration of tools and activities. ACTION ON Nadine: Updates on the progress and implications of this project.

2.9 Specific Program Objectives 2 & 4 Possible Themes

The following areas were covered off together under a plan as attached (Appendix 2 as developed under 2.9 through 2.11), however the specific points under each that were captured were as follows:

1. Embedding processes

The focus here was on the opportunities that the members of the Steering committee have already in their day to day activities to bring further focus to the consideration of social science research and the integration of the outcomes into decision making and communications.

It was identified that they would need communication tools in the form of a 'song sheet' of opening phases and questions. **ACTION ON Kate** to generate (See Appendix 1).

2. Key information sources

The key information sources that the Steering Committee can use were identified to be two fold;

- **List of natural resource management social science specialists**. **ACTION ON Kate** to update (in collaboration with Nadine, Sarah and Emily), and distribute a list of researchers by State, to all Steering Committee members.
- With all finalized Social Science projects generate a **140 character 'grab' (or similar) of the project, along with up to three key outcomes**, described in one to two 20 word sentences**. ACTION on Kate**: Generate grabs and key outcomes in collaboration with Principle Investigators.

3. Working with industry

The following key groups were identified for working with the industry using the song sheet referred to in 2.8.1:

- FRABs to be connected with researchers
- Representative industry groups to be connected with Researchers and Government research agencies (SARDI/CSIRO/IMAS etc.)
- Fisheries government agencies.

4. Working with research community

The following key groups were identified as focus point for engaging the research community and assisting with modifying the culture of communication to improve acceptance and adoption of research outcomes.

- Social Science researchers to be connected to fishers, FRABs and industry groups
- Increasing communication and collaboration between biological and social scientists.

2.10 Key Issues identified and potential Strategies

1. Collaboration and trust building between industry and community (using experiences of other industries as a reference point.)
2. Identify and communicate the net benefit of well managed fisheries to communities
3. Identify the most effective mechanisms of communicating social science research outcomes (for improving community acceptance of fisheries.)
4. Re focus the co-management engagement process (with reference to the handling of the Super trawler debate as an example.)
5. Position the social (and economic) elements alongside the biological component in fisheries management (by integrating social research into resource management).
6. Engage with the issue of access versus (and/or) conservation (e.g. as highlighted by issues such as MPAs/Super Trawler/Recreational fishing) through projects such as community perceptions and compensation consultation and negotiation processes.

7. Confusion continues over indigenous customary as compared to commercial fishing activities – this is in relation to MPA access and other closures
8. There is a need to invest in Fishers in terms of supporting them to adapt – there is an opportunity to transfer lessons from other industries here.
9. There is a need to invest in Managers to consider the human dimension of fisheries and aquatic resource management
10. There is a need to invest in community to increase their understanding and support of aquatic management.
11. Encourage and facilitate social performance reporting (which ties in with 1, 2, 3 & 4) by fisheries managers in regular stock status reports and public communications.
12. Facilitate the development of effective integration tools
13. Facilitate engagement with the Australian community to understand why the community doesn't understand/trust fisheries science/ develop common language etc.

2.11 Action items

Please see attachment (Appendix 3) for full details in Strategic plan format.

Kate Brooks – Program Manager

- Undertake regular updates on SSR outputs and uses to be used as a basis for newsletter to industry/researchers/FISH / Ministerials etc.
- Update list of NRM social scientists for distribution to SC members, FRABs, industry representative groups and others as appropriate.
- Develop list of social science research prompts to be used in FRAB/Fisher/Manager conversations to increase consideration of SSR as a component of research and fisheries activities
- Undertake regular (3 x per annum) engagement with non-fisheries social science researchers to increase engagement with industry issues and identify other industry outcomes that may be useful. This may be in the form of email newsletter/ invitation to engage in discussions/ etc. Kate to liaise with Sarah, Nadine and Emily on this.
- Identify international work that is of relevance to Australian fisheries and aquatic management social science issues and include in newsletters and extension material.
- Increase focus of SSRCP page on FRDC website to focus on outcomes and uses of social science research.
- Engage with RIRDC to increase cross sectoral use of research and research funding to address current and envisaged issues.

Emily Ogier – TAS

- Present to industry conferences
- Present to TASFRAB on the second phase of the SSRCP and to TSIC Board
- Compile a list of Tasmanian based researchers in the social sciences to form an email group she can update.
- Requesting local researcher (initially Tom Lewis on Social License to Operate Project) to present to IMAS fisheries discussion group.
- Will use newsletter for extension to fisher groups.

Bo Carne – NT

- Currently chairs three regional fisheries committees and will use these to examine social needs/opportunities to raise awareness
- Is challenging his team to say "social science" once a day.
- Plans to build a relationship with NAILSMA to promote social sciences awareness into that alliance (which has been formed to seek research funding to meet land council needs).
- Will discuss with FRAB
- Will use newsletters to extend to commercial and customary fishers.

Rhonda Farlow – NSW

- Will continue to discuss in NSW FRAB and ensure FRAB members has the SSRCP assessments of EOIs and full applications.
- Has a standing social science issues agenda item with the Professional Fishermen's Association (PFA) (quarterly meetings).
- Will include information on social science research outputs and uses in emails and newsletters.

Nadine Marshall – CSIRO Social Scientist

- Will brief Renee Tobin (member of QFRAB) and ask her to use the newsletter updates at QFRAB meetings
- Will liaise with Dave Smith (CSIRO and head of RPN) re the Research Providers Network (RPN) and how the SSRCP may assist with integrating SSR into research approaches and issues considerations.
- Will encourage CSIRO social scientist and economists to think about fisheries and marine ecosystem opportunities
- Will continue to discuss with GBRMPA social science issues and methods to address these that are of concern to them and fisheries.
- Liaison with fishers on her lists with SSRCP newsletters and updates.

Crispian Ashby – FRDC

- Will ensure connection between SSRCP and other FRDC (sub) programs and FRABs
- Operate as one contact point and provide updates with the RPN and National Priorities Forum (NPF) of the RD&E Framework.
- Facilitate project for the coordination of integration of social objectives into the National Harvest Strategy/Fisheries Status Reports and other appropriate reporting activities
- Brief AFMF and Ministers regarding social science research outputs and uses as part of their regular updating process.

Gavin Begg – SARDI

- Will share SSRCP information across national programs to assist in raising awareness about project outputs and uses.
- Will ensure research directors and industry groups are aware of SSRCP project outputs and uses and to assist them in identifying the social science component of issues.
- Will endeavor to ensure social scientists are built into projects when and where appropriate.

James Findlay – AFMA/AFMF

-

Sarah Jennings – UTAS Economist

-

2.12 Stakeholder engagement processes 2012 forward

This has been included in Action items (Appendix 3)

3. General Business

➢ **Timetable of forward meetings: time to be confirmed**

- **Tuesday October 9th** – Teleconference 11.30 to 1.30 AESDT (i.e. one hour earlier for Queensland and an hour and a half earlier for NT)
- **Thursday 14th of March** – Face to Face in either Sydney or Melbourne to review of full applications and issues to take forward to the March (or April) FRABs/Programs Meeting.

4.15 pm Meeting close

APPENDIX 1: Social Science Research Prompts

- Do we, or in what way do we, need to engage people (fishers/managers/public) to ensure this particular research achieves is desired outcome?
- Have other technological/biological approaches trialed to address this in the past, failed? If so do we know why? If they worked was there any element that could have worked better if we had engaged with particular interest groups earlier?
- What are the key factors influencing the uptake of this new type of approach/technology by fishers/managers?
- Can we do anything earlier in the research process by engaging with interest groups to assist in gaining support for adoption of successful research outcomes?
- What does the general community (regional/State/Australian) think about this approach/research – are they supportive? If not why not – what mitigating factors need to be built into the project?
- Could the broader community be engaged with the project which would improve industry profile and acceptability?
- Do managers need to integrate this new knowledge into their systems and processes in any way? If so, how might this project be developed to maximize the uptake by managers?
- How can the community be informed of this particular new technology and why should they think it is a good thing for the environment?

APPENDIX 2 – Strategic Plan and Action Items

Note: SSRCP – Social Science Research Coordination Program

SSR – Social Science Research

FRAB – Fisheries Research Advisory Board (also includes South Australia Fisheries Research Advisory Committee (SAFRAC) and WAFIC – Western Australia Fisheries Industry Council which undertakes the role of a FRAB)

TSIC – Tasmanian Seafood Industry Council

PFA – Professional Fisherman's Association

NAILSMA - North Australia Indigenous Land and Sea Management Alliance

RD&E Framework – Primary Industries Standing Committee Research, Development and Extension Framework

RPN – Research Providers Network (within the RD&E Framework)

Stakeholder	***Theme***	***Strategy***	***Action***	***Responsibility***	***Frequency***
Industry	Embedding	Increase FRAB and industry representative groups' engagement with social science research and its uses	• Query research proposals and issue development for social science research components • Present newsletters and findings of social science projects at FRAB meetings • Connect with researchers to have them present local research to FRABs • Create standing item on AFMF Agenda in relation to social science research outcomes and uses.	**Emily** – TAS FRAB and TSIC **Rhonda** – NSW FRAB & PFA **Bo** – NT FRAB & regional fisheries	FRAB - ?? TSIC - ?? FRAB - ?? PFA – ¼ly

			• Ensure social science skills and expertise are built into project where appropriate	committees (3) and NAILSMA **Nadine –** liaise with Renee at QFRAB **Gavin –** Liaise with SAFRAC/ Industry groups & research directors **Kate** - Other FRABS **Crispian** – FRABs and FRDC (Sub) Programs **Crispian/James?** – AFMF Agenda	NT FRAB - ?? Regional Fisheries Committees - ?? NAILSMA - ?? QFRAB – 2 X pa? SAFRAC – 2 X pa? FRABS – 2 X pa WA & VIC Monthly ??? ???

Industry	Embedding	Integrate social objectives project outcomes into other national frameworks	• Create a project or action plan around the integration of the social objectives project into reporting frameworks such as the National Harvest Strategy and Fisheries Status Reports	**Crispian –** secure funds for workshop **Kate –** to liaise with interested parties	October 9th report November 15th report on progress; Initial meeting by February 2013.
Industry	Communication	Increase FRAB and industry representative groups' engagement with social science research and its uses	• Develop a 'newsletter' with grabs on released social research projects and three key outcomes from them • Develop newsletter content into suitable content for FISH as space available • Liaise with FRDC extension personal in relation to twitter/facebook/information sheets information from finalized projects • Identify key international social scientists researching areas of relevance for data and results relevant to the industry	**Kate** – liaise with PI's to develop **Kate** – liaise with Julie Haldane FRDC **Kate** – liaise with FRDC staff **Kate**	As projects finalise 1/4ly As projects finalise. On going.
	Education/ Extension	Engage commercial fishers with uses of social science research.	• Engage in conversations with fishermen utilizing the SSR Prompts (Appendix 1) and newsletter outputs. • Include information on SSR outputs and uses in emails and newsletters	**Bo** – with commercial and customary fishers **Emily** – with commercial fishers **Rhonda** – with	As appropriate? As appropriate?

			• Update and revise use of FRDC website for SSR outputs and uses.	commercial fishers **Nadine** – with fishers on her lists **Kate** to undertake website revision	As appropriate? As appropriate? Review annually.
	Education/ Extension	Increase general industry awareness of SSR outputs and uses.	• Presentations at industry conferences	**Emily** **Kate** **Nadine?**	As opportunities arise Seafood Directions + other as opportunities arise
Government and aligned agencies	Communication /Education	Increase awareness of fisheries social science issues, research findings and uses.	• Brief Minister on social science research outcomes and uses • Discuss with and influence GBRMPA re social research inputs/opportunities around their needs • Engage with SEWPaC as appropriate	**Crispian/James?**– Ministerial briefings. **Nadine** **Crispian/James?**	Report as Appropriate Update at meetings
Researchers	Extension	Connect SSRCP with other FRDC programs	• Increase cross flow of communication about activities and project outcomes of relevance	**Crispian**	At all (sub) Program meetings
	Communication	Link in with RPN (within the RD&E Framework)	• Connect relevant information across programs and activities	**Gavin** **Nadine**	As part of RPN membership As part of CSIRO (Dave Smith leader of RPN)

	Communication	Link in with similar projects	• Provide updates both ways on SELTMP and SSRCP	**Nadine**	At meetings
	Communication	Cross sectoral linkages	• Engage with RIRDC to identify cross research opportunities and outcomes uses.	**Kate**	For inclusion in newsletter and sharing with FRABs/researchers/fishers
	Education	Increase researcher awareness of industry needs	• Raise awareness amongst non-fisheries social scientists as to the industries needs • Regular newsletter to NRM social scientists to engage them with fisheries SSR issues	**Nadine** **Kate**	Report as appropriate 3 monthly

Appendix 4: Extension Plan

SSRCP II - Dissemination, Extension & Commercialisation Plan

Objectives

The objective of this plan is to develop a pathway to increasing awareness of the benefits that the Social Sciences Research Co-ordination Program can provide to industry groups, research advisory boards, and researchers in regard to;

- Existing research that can provide information about or related to the problem/issue at hand;
- The most appropriate methods and tools to investigate the social aspects of industry issues;
- Review of a particular area/sector's issues in the national context (and with reference to the Seafood CRC's research activities and outputs), to be able to draw together if possible greater resources to more comprehensively investigate the issue;
- In collaboration with appropriate industry representatives, provide guidance to researchers and review of applications to ensure that research elements are correctly targeted to industry needs; and
- Provide an industry overview of the status of social science research into fisheries issues in Australia, and where possible an international context, to the benefit of industry, government agencies and researchers.

Target Audience/s

There are four primary target audiences of the Social Sciences Research Coordination Program;

1. Industry members
    a. Industry associations
    b. Large industry enterprises
    c. Individual commercial fishers
    d. Recreational fishing/research associations
2. Government agencies
    a. State & Territory
    b. Federal (AFMA/DAFF/AFMF)
3. Researchers
    a. Academic
    b. Government (DAFF and State agencies where applicable)
4. Indigenous fisheries users and associated communities, through the FRDC Indigenous Reference Group and associated activities.

Key Message/s

That the social sciences research Coordination Program can assist with:

- identifying existing research about or related to a problem/issue at hand;
- identifying the most appropriate methods and tools to investigate the social aspects of industry issues;
- identifying the national context for a particular area/sector's issues, to enable the drawing together greater resources, where possible, to more investigate the issue;
- guidance to researchers and industry review of applications to ensure that research elements are correctly targeted to industry needs; and
- providing an overview of the status of social science research into fisheries issues in Australia, and where possible an international context, to the benefit of industry, government agencies and researchers.

Methods

The SSRCP will undertake liaison and engagement to achieve the dissemination of activities, outputs and undertake engagement with its target audiences through a variety of means, which include:

Communication with the FRDC Board

Program activities will be reported to the Board through a project milestone reports to the FRDC Programs Manager. Additionally, the following items and activities will be communicated through the FRDC Programs Manager, as required or as they arise.

- Terms of Reference
- Strategic Plan
- All Committee and Group meeting discussions, decisions and recommendations, via milestone reporting
- Provide and receive communication with allied research bodies and agencies, of relevance to the objectives and activities of the Program, via milestone reporting.

The Program Manager:
The Program Manager will liaise with Program members, the FRDC and its Board and other research stakeholders in the following areas:

- Initiating and organising meetings of the Steering Committee;
- Communication of and receipt of feedback on, research project proposals, to inform the FRDC Board;
- Participation in industry activities relevant to the Program at the discretion of the Program Manager;
- Participation in research agency and organisation activities relevant to the Program as agreed by the FRDC Programs Manager and the SSRCP Program Manager;
- Input to, and support of, Steering Committee member communications to industry and research organisations;
- Updates for the FRDC SSRCP Webpage;
- Liaison with other FRDC (Sub) Programs to support their activities with input from the SSRCP.

The Steering Committee:
Steering Committee Members undertake to:

- Provide input to the annual review of the Strategic Plan in regard to Key Issues, Priorities and potential activities to address these issues;
- Review research proposals received in the context of their alignment with the Programs agreed Strategic Plan (that is the proposals ability to address the prioritised Key Issues) and provide timely feedback to the Program Manager;
- Communicate the Program's objectives and Strategic Plan to the fisheries communities that they are engaged with, and receive comment and feedback, which they will communicate to the Program.
- Be actively engaged with ensuring that the methods chosen by researchers for the communication of research results are realistic, achievable and likely to provide the desired outcomes.

Communication with Stakeholders
Aside from the activities included above in the agreed tasks of the Program Manager and Steering Committee Members, the three year Strategic Plan and any associated opportunities will be promoted to stakeholders via:

- FRDC Social Science Research webpage
- FRDC annual FRABs workshop
- Emails to a database of Industry, research peak bodies, and researchers.

Reporting

During Project

Method	Responsibility	Completion date
Reporting to steering committee every 6 months FRDC via Milestone reports	Principal Investigator (PI)	19/2/2015 to Steering Committee 30/3/2015 to FRDC

After Project

Method	Responsibility	Completion date
Article for FISH	PI and editor	Within 3 months of project completion

Appendix 5: World Aquaculture Conference – SLO Session

World Aquaculture Conference, 2014

SOCIAL LICENSE TO OPERATE

Sunday, June 8, 2014 11:20 - 17:10 Room 11

Chair: Kate Brooks – FRDC SSRCP

11:20 Emily Ogier, Peat Leith, Marcus Haward - SCIENCE AND SOCIAL LICENSE: WHO DEFINES ENVIRONMENTAL SUSTAINABILITY OF ATLANTIC SALMON AQUACULTURE IN SOUTH-EASTERN TASMANIA, AUSTRALIA?

11:40 Nina White, Ian Clark - ACQUIRING A SOCIAL LICENSE TO OPERATE IN THE AQUACULTURE CONTEXT: A REVIEW OF NATIONAL AND INTERNATIONAL STUDIES

12:00 Nicki Mazur, Allan Curtis, Andy Bodsworth - LET'S TALK FISH: THE IMPLICATIONS OF SOCIAL ACCEPTABILITY FOR THE COMMERCIAL FISHING INDUSTRY

12:20 Kate Brooks - NOT ALL BIG BUCKS AND FLASHY ADS: HOW YOUR COMMUNITY RELATIONSHIPS AFFECT AND BUILD YOUR SOCIAL LICENSE TO OPERATE

12:40 LUNCH

14:10 Roy Palmer - LICENCE TO GILL

14:30 Gary Hooper - HEARTS AND MINDS

14:50 Claire Webber, David Ellis WORKING WITH THE COMMUNITY: THE LOWER EYRE PENINSULA ADOPT-A-BEACH PROGRAM

15:10 Hamish Wilson, Anna Crosbie SUPPORTING SUSTAINABLE AQUACULTURE IN NEW ZEALAND: EARNING TRUST AND SUPPORT FROM THE COMMUNITIES IN WHICH YOU OPERATE

15:30 Louise Shaw - EARNING THE TRUST OF THE CONSUMER

15:50 Jennifer M. Cobcroft, Adam Main, Maree Fudge, Catriona MacLeod ENGAGING WITHIN THE COMMUNITY – KEY LESSONS FROM A MULTI-STAKEHOLDER AUSTRALIAN/ NEW ZEALAND SALMON INDUSTRY WORKSHOP

16:10 PANEL SESSION - Charlie Arnott, Kate Brooks, Jose Villalon

17:00 WRAP UP

Appendix 6: Summary of Board Presentation Feb. 2014

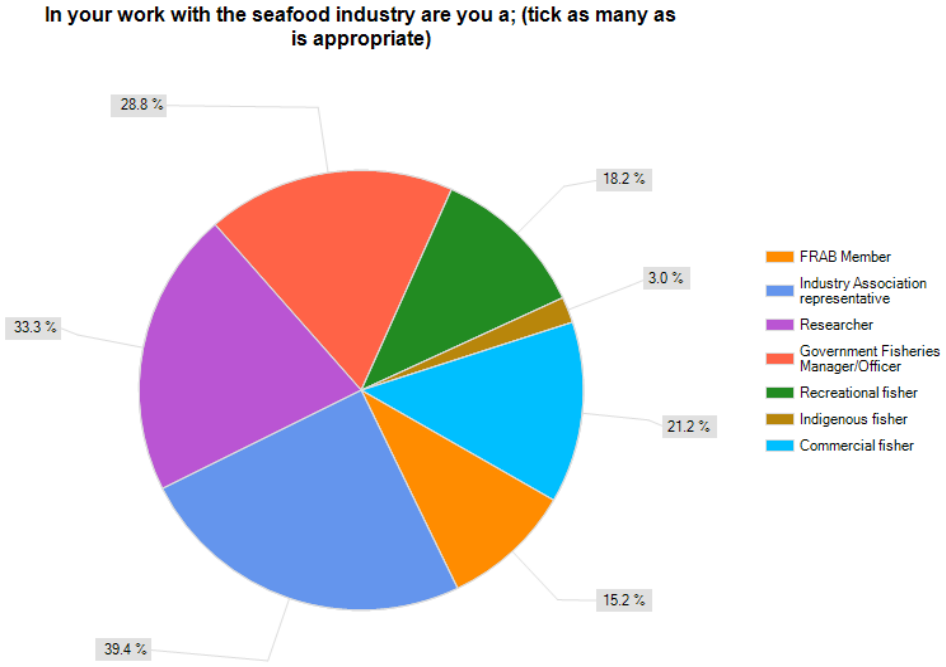
Summary of Social Sciences Research Coordination Program Board Presentation: February 2014

Dr Kate Brooks (kate@kalanalysis.com.au or 0412 091143)

Results of the Mid Term SSRCP Survey

As per item 3 of the performance indicators for the Program in the Contract, the mid-term review was to entail a further survey of FRDC stakeholders to consider the extent to which social objectives are perceived to be being address across all sectors. This was undertaken between mid December 2013 to January 20th, 2014, being sent to 148 identified industry and management stakeholders of the FRDC, including some industry members who self-identified or who were recommended by other recipients of the survey. 43.9% of recipients responded and completed the survey; a good response rate particularly given the time of year. Responses also represented a good cross section of stakeholders, as demonstrated by the following figure:

Figure 1: Respondents to Survey by interest



For those that designated that they had other roles, these included: Aquaculture producer; other government; (sub) program leader/manager/co-ordinator; Seafood CRC; WINSC Director at Large WA; Wholesale/retail; Consultant; Science Program Manager; and University Board Director. 87.5% of respondents were aware to some degree of the Social Sciences Research Co-ordination Program. The 28.8% of fisheries managers/officers represented all States and Territories of Australia and the Commonwealth with the largest representations being from WA and NT.

In summary the survey found that:

- 92.4% were currently aware of social dimensions of fisheries and/or aquatic issues are being discussed;
- 82.1% believed that social impacts are now considered to have relevance to aquatic management issues;

- While 81.8% disagreed that social objectives are being addressed in ALL industry sectors; 78.4% believe that social objectives are now being addressed in some industry sectors. The sectors identified where this is occurring included; Recreational/ Commercial – SA; rock lobster; prawn farming and fishing; oysters; wildcatch; the Abrolhos Islands; inshore with close contact with metropolitan centres; SPF GHaT; SESSF and traditional to a lesser extent;
- 65.2% believed that, ***compared to three years ago***, social objectives are now considered in the development of fisheries management plans;
- 76% of respondents disagreed that, ***compared to three years ago***, consideration of social objectives is ***EVIDENT in ALL*** industry sectors; however 74.6% did agree that, ***also compared to three years ago***, social objectives was now EVIDENT as being considered in some sectors;
- 56.3% of respondents believed that the SSRCP could be undertaking additional activities to assist industry to integrate social objectives across all sectors, while 15.7% did not agree that the SSRCP could contribute in this regard.

SUMMARY: The survey indicates that the majority of respondents (78.4 – 74.6%), representing a full cross section of FRDC stakeholders, believe that compared to three years ago, the industry and management are both more aware of the social dimension of fisheries management. Further, in some sectors, noteworthy inroads towards integrating the social considerations and objectives into management plans and industry activities have been made. While the question was not asked if the SSRCP was considered to be solely responsible for that shift in consideration and activity, it was indicated by the majority (accounting for those that 'did not know') – 73% - that they believed the SSRCP could contribute to the further uptake of social objectives in fisheries management and industry activity. 31 specific comments were received when asked to provide details for this question, providing insights as to the key issues considered to be facing the industry from a social perspective, which broadly fell into three groups.

KEY ISSUES FACING THE INDUSTRY

Coordination & Collaboration

- Work with Commercial industry leaders/representative groups to educate about social dimensions of fisheries
- Improve explanations of how the 'economic' differs from 'social' aspects and dimensions of fisheries
- [identify how to further] Assist governments with integrating social objectives into fisheries management activities
- [Identify how to] Assist industry to think about the desirability of having social objectives
- Assisting industry to understand how the Program benefits it by informing fisheries management decision making
- A list/case studies of where social factors have been taken into account in fisheries management decisions [and the effect].
- Improve the understandings of fisheries participants about what social objectives are and the expectations of Australia's divers multicultural community about fisheries objectives;

Research Projects

- Identify the social impacts of activities or decisions on the fishing/processing industries
- Assess the social value of access to fishery resources for "non extractive users"
- Consideration of the cultural and heritage significance of commercial and recreational fishing since colonization
- Mental health assessments, and identifying job opportunities for displaced fishers

Facilitation

- Working with fisheries managers to develop community trust in management initiatives
- Push for cross industry collaboration
- Direct contact with fishers and fisher families that are directly affected by policies and changes so that their fears and concerns can be heard by the public and policy makers.
- Educating public servants to think outside of their "bunker world" and have regard for the consequences that their actions may have on the lives of others.
- [Engender?] Stronger community awareness and stakeholder participation to inform and discuss.

The first area of coordination and collaboration, is the type of work that the program has been undertaking to date. The second area – research – is what the Program has been coordinating, and if these areas identified are supported by the Board, the Program can work to identify interested researchers and industry to collaborate on applications in the forthcoming round.

The last area, of facilitation, is one of a longer ongoing role of a one who is specifically skilled and active in the area of educator/facilitator – such as Jill Briggs, but who may also work with a social scientist to provide support for theory aspects of such activities as developing community trust initiatives.

Social License to Operate (SLO or SLtO)– the current bugbear of the industry

What is it?

- Privilege of operating with minimal formalized restrictions, based on maintaining public **trust** by doing what's right.

What informs it?

- Ethics, Values, Expectations, Self-regulation

Who has done what?

- **Tassal -** Extensive program of community engagement
- **Huon Aquaculture** – Just launched Sustainability Dashboard
- **Austral** – have a sustainability statement on their website, but mostly rely on MSC.
- **SFM** – Cooking School; Public Tours.
- **SA Marathon Uranium Mining Co** – see attached paper " Social License to Operate: How to Get It, and How to Keep It."

What can the FRDC do?

SLtO is largely not a research issue; it's a cultural/operational issue. The research comes in only in areas such as understanding the motivation for trust or not – such as in the 'Let's Talk Fish' project where we looked at what values the community holds, as it is in matching and/or addressing these that an industry can gain the trust of a community; or in profiling communities and stakeholders to facilitate engagement activities.

It is a cultural and engagement issue, not just a marketing activity. 'Engagement' is variously defined; for example for some it can refer to activities from information dissemination (one way flow of information) thorough consultation (two way flow of information, but no participation by the stakeholder in decisions)to active participation (where stakeholders are actively involved in the decision making process, but the agency in control retains responsibility for final decisions). While this is generally where the engagement concept stops for most government agencies, there are a further two levels of both collaborate – shared responsibility for decisions – and 'empower' – where the final decision making is left to the participants/stakeholders. However, in this instance for the industry to achieve a level of understanding and activity centred on the 2nd and 3rd levels of engagement would be ideal.

In the case of engagement to achieve SLO we are referring to at least the second level of engagement – being consultation – and preferably the third level of engagement - active participation; where in both there is two way communication and feedback on responses received to stakeholders.

Consequently, in terms of continuing activities to assist industry SLO:

- Continue to address research issues as they arise around lack of trust, values, and community norms that are not perceived to being acknowledged or upheld by the industry:

In terms of FRDC operations generally;

- Set/maintain a cultural tone of proactive collaboration and common value identification with influential stakeholders (and only by extension the public) for future communications between industry/government and key (public influencing) stakeholders;
- Provide a point of common communication and reference for the industry;
- Work with the industry for them to develop positive visions for the future that can be communicated and are developed around community values, engagement and dialogue; which incorporate their environmental responsibilities and codes of practice; the opportunities they are building for associated communities; the industry's fair treatment of staff and contractors; and how they will respond to a crisis;
- Support the industry with marketing expertise and coordination, that supports the relationship that they have established with key stakeholders and may be independently endorsed by them (e.g. WWF; MSC; Greenpeace etc.)

Additionally – as recommended by LTF:

- Engage internally to help people move on
- Continue to build capacity for engagement – workshops on how to 'engage' not just 'sell a story'
- Assist the industry in identifying roles and responsibilities for industry engagement.

Relevance to the continuation of the Program:

The notoriety of the issue of 'social licence to operate' is symptomatic of our currently well connected environment; industry problems will never again be solved with purely scientific or mechanical solutions.

The world view is no longer anthropocentric, but rather anthropomorphic where the public increasingly gives human motivation, characteristics, or behaviour to inanimate objects, animals, or natural phenomena – **making the management of our environment laden with emotional values potentially disconnected to scientific realities** as we know them at any one time.

Consequently, while currently the overarching problem is one of gaining and maintaining a SLO for industries utilising aquatic and marine resources, **the social dimension to resource management is highly unlikely to diminish in focus or importance**.

It was **hoped that social science perspectives could be integrated into research project proposals as a matter of course**, after the last five years I believe this is unlikely in the majority of cases. Although we talk and strive for interdisciplinary approaches, the achievement of these is in the minority because of the amount of time researchers have spent learning their own craft, rather than becoming familiar with all. The different elements of the **social sciences** – geography, demography, sociology, psychology, history or economics **- are equally dedicated and specific in their skills and techniques of application and years of learning, as are marine and environmental biologists or marine economists. Consequently, such intense focus can blinker well trained and focused individuals to only consider the role or benefit of their own or immediately allied disciplines**.

While the role of the SSRCP has been invaluable in putting the benefit of including social sciences approaches to aquatic resource management issues, not any number of years of the program will change the **basic fact that you can't make social scientists out of marine biologists or visa versa.**

Consequently, while **the program does not necessarily need to be continued at the same level it has to date**, given that the profile has been established, the **FRDC needs to consider how it will ensure this aspect of fisheries and aquatic research and management will be addressed into the future.**

Issues that will cease to happen with the ending of the SSRCP:

a) **Liaison with industry, government and researchers** to identify issues;

b) **Connecting** appropriate researchers/industry/government;

c) **Promotion of social sciences** perspectives and initiatives;

d) **Guidance of industry and management endeavours** in the social dimension of fisheries management;

e) **Review of applications** form a specifically social science perspective;

f) **Review of milestone reports**; and

g) **Review of final reports**.

Suggestions of where to from here with the SSRCP:

1. **Continue with an ongoing focus on the issues raised by the survey** which identify communication, collaboration and connection of people (management and industry) with the issues) along with developing information and data for dissemination to the industry around how social science research has and continues to be used (per Brian Jeffries comment)
2. **A paired down version of the Program which addresses items e - g** in the activities listed above; OR
3. **Regard the work of the program done;** relying on the current activities to be handled internally by FRDC staff and/or volunteer social scientists on a peer review basis.

Appendix 7: Applying Social Objectives to Fisheries Management

MANAGING FISHERIES FOR EVERYONE

Fisheries management is about more than maintaining fish stocks and economic returns, as it has often been in the past. Fisheries management should take a holistic approach, considering the environmental and social implications of management decisions.

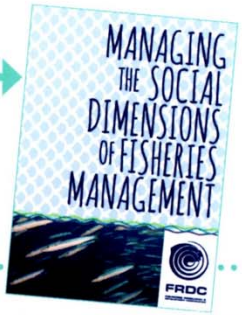
The oceans are a global resource and as such need to be managed to benefit the entire community, not just those directly involved in the fishing industry.

This document introduces the steps to include social objectives into fisheries management.

WHY ARE SOCIAL OBJECTIVES IMPORTANT?

Recognising the needs of fishers, as well as the interests of consumers and the broader community is a vital part of ensuring responsible fishery management and a viable future for Australian fisheries.

Decisions made by management agencies and Government can impact on the social benefits people derive from fisheries. The social implications of fishing activities include creating jobs and income, the nutrition derived from eating the catch, and the cultural, spiritual, physical and mental health aspects of going fishing. There is also value in knowing that marine and aquatic environments are healthy and well managed.



www.frdc.com.au/socialobjectives/guide

INCLUDING SOCIAL OBJECTIVES IN FISHERIES MANAGEMENT

What are Social Objectives? In fisheries management, a social objective is a statement that describes desired outcomes related to the interaction of people involved in the fishery, either directly, such as the fishers and their families, or indirectly like the broader community purchasing the seafood. Often social objectives are related to improving human wellbeing, such as improving working conditions, infrastructure and support networks for fishers. The result of this is a happier, healthier industry and community.

Management of the social dimension of fisheries requires consideration of the needs and wellbeing of all connected to the fishing industry. These include fishers and fishing communities (commercial, charter and recreational fishers), Indigenous communities, and local and regional Australian communities.

Including social objectives in management decisions is not necessarily competing or conflicting with managing for healthy environments and economically viable industries. At times, managers may need to make choices as to which objectives will have priority, but often it is possible to balance social, environmental and economic goals. To date, however, the social performance of fisheries has been measured mainly through the use of income and employment figures. While useful, these figures tell an economic story, and neglect other important social aspects of fishing communities, such as community wellbeing and trust of the industry that contribute to a fishery's social license to operate.

With the support of the FRDC, a two-part Guide, **Managing the social dimensions of fisheries management**, has been produced to help fisheries managers incorporate the social aspect into their planning.

The Guide provides the tools to select social objectives for each specific fishery and to choose measurable indicators to evaluate how well the objectives are being met. This allows social performance to be assessed alongside ecological and economic objectives and complements existing efforts towards Ecologically Sustainable Development (ESD) of Australian fisheries.

Social wellbeing involves a person's relationships with others and how that person communicates, interacts and socialises with other people.

Ecologically Sustainable Development is a "three-legged stool", and as such requires equal attention be paid to social, environmental, and economic concerns.

WHAT ARE THE BENEFITS OF APPLYING SOCIAL OBJECTIVES?

Including social objectives in the management of a fishery provides the fishery with tools to engage with the broader community, ultimately improving the profitability of the fishery. In addition, developing a universal set of social objectives that can be applied to all Australian fisheries improves transparency and allows consistent and accurate reporting of social effects of management activities, alongside ecological and economic ones.

PEOPLE

Understanding of community attitudes and needs allows managers to identify common interests and foster relationships among stakeholders. This in turn creates positive perceptions that result in social, economic and political support for the industry. Improving these perceptions involves sincere and ongoing outreach and consideration of community needs and opinions. Using social objectives and indicators can both set and measure the results of these efforts and assist in improving them, resulting in greater trust and support within the community.

Researchers have been working with fisheries managers and members of the seafood industry to develop a range of social objectives and indicators that can be used for future decision making.

It is important to collaborate with fishers when selecting social objectives and indicators. These efforts are not just about identifying and measuring existing conditions, but also about ensuring continual improvement.

PROFIT

There are a number of factors that impact on the profitability of the fishing industry outside the basics of catch volume and price – supply and demand.

Communities that rely entirely on fishing may be vulnerable to shifting markets, which can threaten both economic stability and people's 'way-of-life'. Securing community support and the wellbeing of fishers involves balancing everyone's needs to achieve environmentally sound, profitable, and socially equitable fisheries management.

Effective communication with community stakeholders can also increase perception of the industry, resulting in greater economic support and ultimately increased profits.

PERFORMANCE

The Australian community has in place a set of standards and expectations for how its members should behave and act - these extend to the fishing industry. The expectation is that the seafood industry will produce safe, top quality product, while ensuring the long term responsible management of the stocks and their environment, for people to enjoy well into the future.

Australia holds an important international role in its stewardship of one of the largest areas of ocean ecosystem in the world. It is imperative that as a nation we adopt systems that align our activities with world's best practice. The Food and Agriculture Organization of the United Nations, the National Oceanic and Atmospheric Administration, United Nations Educational, Scientific and Cultural Organization, and Canada are all currently developing approaches and methods for integrating the social dimension into fisheries and ecosystem management. The application of social objectives and indicators helps to affirm Australia's standing as a global leader in fisheries management. Australian fisheries are not just adopting, but helping to define, global best practice.

The development of the Guide, together with other projects such as the **National Guidelines to Develop Fisheries Harvest Strategy**, allows social objectives and indicators to be incorporated into existing national reporting structures, such as the National Harvest Strategy Framework, and **Status of Key Australian Fish Stock Reports**.

HOW DOES THE GUIDE HELP?

The Guide takes fisheries managers through the steps of implementing social objectives, in an ESD context. It helps them identify, document, and manage social objectives, indicators and performance measures relevant to their fishery.

The Guide has been designed to be easy to use and initial users report being able to follow the steps described in The Guide without any further assistance. The Guide is divided into two parts; the first explains how social objectives fit into ESD, while the second part helps with the selection of appropriate objectives, indicators and performance measures for a fishery.

Not all objectives and indicators are appropriate to all fisheries. Because of this, the guidelines are designed to point fishery managers towards objectives and indicators that are most relevant to them, and those over which they can exercise control. The objectives have been selected so that they can be adopted without having to consult a social scientist. In addition, 'essential objectives' that are applicable and desirable in all circumstances have been identified. These should be considered and incorporated into fisheries management frameworks

Once the relevant social objectives have been selected, The Guide presents a list of indicators and related performance measures, which can be used to assess if each objective has been reached. These indicators are presented along with a rating of their independence, complexity and cost. This is done by ranking them from 1 to 10 with 1 having the highest independence and a combination of the lowest cost measurement complexity. In some circumstances, indicators ranked as being more complex or expensive may be the most appropriate due to the level of independence required to achieve the objective. It is important to carefully examine each indicator and find a balance between what would be best for the fishery and what is achievable.

FLOWCHART OF THE SOCIAL OBJECTIVES IMPLEMENTATION PROCESS

The following dot points and flow chart provide a step-by-step guide of how to select social objectives and indicators for a specific fishery.

1 Balancing ESD – risk and prioritisation

The first step situates social objectives in the context of ESD. This is done by:

1A Determining the scope of the fishery – What is the fishery about

Review all available information on the fishery, including all stakeholders, existing management arrangements, ESD status of the fishery, biological status of the fishery, relevant legislation and overarching policy objectives. For all stakeholder groups identify the mechanisms for engagement.

SEE PAGE 11 OF THE GUIDE PART 1 www.frdc.com.au/socialobjectives/guide

1B Risk and prioritisation

Use this step to identify ecological, social and economic issues facing the industry and other stakeholders. Consider how managing for one issue may affect other issues. Carry out a risk analysis of these interactions then prioritise the issues and identify the strategic priorities for managing social objectives. Use these priorities to identify the high-level social,economic and ecological objectives to include in the fishery's management

SEE PAGE 11 OF THE GUIDE PART 1.

2 Identify social objectives

Determine high-level social objectives relevant to the three communities – industry, indigenous and regional. Translate high-level objectives into operational objectives relevant to the fishery. Make operational objectives clear, measurable and directly linked to the high-level objectives. For example, while a high-level objective may be 'Maintain or improve community perceptions and social license to operate', more specific and measurable operational objectives would include:

- Facilitate and support the cohesion and connectedness of fishers with their regional communities through fisheries management (Objective 3.2)
- Maximise community trust in fisheries (Objective 3.3), and
- Ensure fisheries information is available in a timely manner (Objective 3.6)

SEE PAGE 14 OF THE GUIDE PART 1.

3 Requirements, people and resources

Assess the practical requirements, specifically the human and financial resources required and the time involved. Also identify existing processes that could be used.

SEE PAGE 21 OF THE GUIDE PART 1.

4 Selecting Social Indicators

Choose appropriate performance indicators for each objective. An overview of all the different indicators that can be used is provided to help with this, with descriptions of the method, cost, complexity and independence of these indicators for all three communities (industry, Indigenous and local/regional).

SEE PAGE 23 OF THE GUIDE PART 1, AS WELL AS ADDITIONAL INFORMATION ON SPECIFIC INDICATORS IN PART 2 OF THE GUIDE.

5 Data Collection Methods

This step is used to map out and resource the data collection processes required for the indicators chosen. This will include the adoption and adjustment of existing processes as well as the generation of new ones.

Baseline data for each indicator is collected and then built upon through further studies.

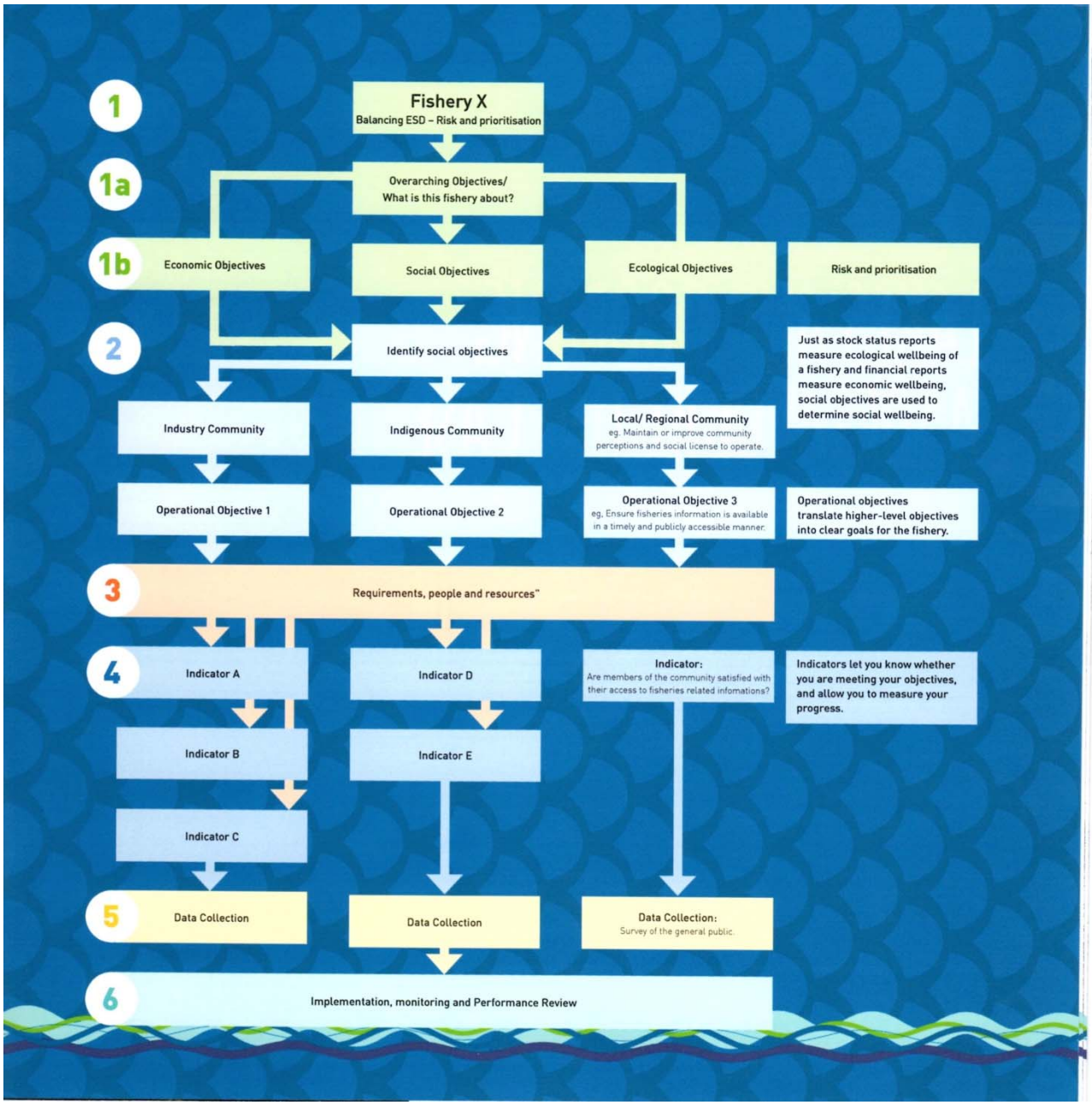
FOR DETAILS ON DATA COLLECTION METHODS, REFER TO PAGE 46 OF THE GUIDE PART 1. INFORMATION RELATED TO THE DATA REQUIRED FOR SPECIFIC INDICATORS CAN BE FOUND IN PART 2 OF THE GUIDE.

6 Using social data in fisheries mangement

IMPLEMENTATION, MONITORING AND PERFORMANCE REVIEW

Use this step to plan how the information will be used, monitored and acted upon in fisheries management processes. Consider how the fishery will respond if, and when, they identify that they are not achieving their social objectives.

FOR DETAILS ON IMPLEMENTATION AND PERFORMANCE REVIEW, REFER TO PAGE 39 OF THE GUIDE PART 1, AS WELL AS FURTHER DETAIL IN THE GUIDE PART 2.


1
Fishery X
Balancing ESD – Risk and prioritisation
1a
Overarching Objectives/
What is this fishery about?
1b
Economic Objectives
Social Objectives
Ecological Objectives
Risk and prioritisation
2
Identify social objectives
Just as stock status reports measure ecological wellbeing of a fishery and financial reports measure economic wellbeing, social objectives are used to determine social wellbeing.
Industry Community
Indigenous Community
Local/ Regional Community
eg. Maintain or improve community perceptions and social license to operate.
Operational Objective 1
Operational Objective 2
Operational Objective 3
eg. Ensure fisheries information is available in a timely and publicly accessible manner.
Operational objectives translate higher-level objectives into clear goals for the fishery.
3
Requirements, people and resources"
4
Indicator A
Indicator D
Indicator:
Are members of the community satisfied with their access to fisheries related infomations?
Indicators let you know whether you are meeting your objectives, and allow you to measure your progress.
Indicator B
Indicator E
Indicator C
5
Data Collection
Data Collection
Data Collection:
Survey of the general public.
6
Implementation, monitoring and Performance Review


LAKES AND COORONG
A SOCIAL OBJECTIVE CASE STUDY

South Australia's commercial Lakes and Coorong Fishery is a small scale community-based fishery that has long recognised the importance of addressing the social dimensions in fishery management.

Through the FRDC's Social Objectives project, they now have the tools to further assist and inform them when determining social objectives.

PIRSA's Lakes and Coorong Fishery Manager, Jonathan McPhail said The Guide developed by the FRDC project helped to provide a simple and smooth process to incorporate social objectives and performance indicators into the management framework for the fishery.

"Until this came along we had limited information on how to incorporate explicit social objectives in the operation of the fishery," he said. "The Guide now makes it a more straight forward process."

A recent revision of the Lakes and Coorong Fishery Management Plan has provided the fishery with an opportunity to implement more explicit social objectives.

As part of this revision process, the Lakes and Coorong Fishery Management Plan Steering Committee (who lead the development of the new draft Management Plan, on behalf of the Fisheries Council of South Australia) organised a half-day industry workshop. They considered which social objectives were relevant and how to incorporate them into the fishery.

"Having the FRDC social objectives guide and an ongoing discussion with key stakeholders while developing the draft Management Plan has ensured that the industry is supportive of the proposed social objectives that have been included in the draft Management Plan," says Jonathan McPhail.

Many of the proposed social objectives included in the draft Management Plan revolve around valuing community input and generating trust in management decisions, with a total of 10 social objectives for the fishery.

After selecting the relevant social objectives, PIRSA and the industry then worked together to include social indicators and reference points.

The draft Management Plan was recently endorsed by the Fisheries Council of South Australia and has been released for a two month public consultation period.

Jonathan McPhail said another benefit of The Guide was the information provided on how to measure the proposed social objectives.

"The indicators that were chosen for the Lakes and Coorong Fishery are appropriate for the scale of the fishery, and are easily achievable," he said.

Proposed performance indicators, reference points ('triggers') and strategies for addressing the objectives are all clearly outlined in the FRDC Guide and in the process of being adopted. The measurement of many of the indicators can be done using a simple survey, or knowledge already held by fisheries managers. The methods that can be used are, in the main, low in cost and have the ability to use existing information sources and data-collection processes, something that those working on the draft Lakes and Coorong Fishery Management Plan found useful.

"We have excellent processes such as the periodic economic surveys already set up in South Australia to collect this information," said Mr McPhail. "Implementing and measuring these objectives is unlikely to create any significant extra work and the industry has given their support in collecting the data."

Some of the social issues that are on the agenda include determining the perceptions of fishery management held by fishers. Indigenous groups and local/regional communities can help identify critical social issues that need to be addressed. Though still in draft form, for the Lakes and Coorong Fishery, this work will help build and measure trust, ensuring the fishery maintains its social license to operate.

The experience of the Lakes and Coorong Fishery shows that adding the proposed social objectives to management plans is not a daunting task.

"The Guide supported us to determine the most appropriate social objectives for the scale of this fishery," Jonathan McPhail said. "It's good to know that we may have social objectives alongside existing environmental and economic objectives in our planning and management of the fishery."

"Until recently, we didn't know how to incorporate social objectives into the operation of the fishery. But with the Guide developed by the FRDC it was a really smooth process".

- JONATHAN McPHAIL, FISHERY MANAGER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APPENDIX 8 - Project coverage in FISH magazine

By Nicole Baxter

FRDC Research Code: 2011/217

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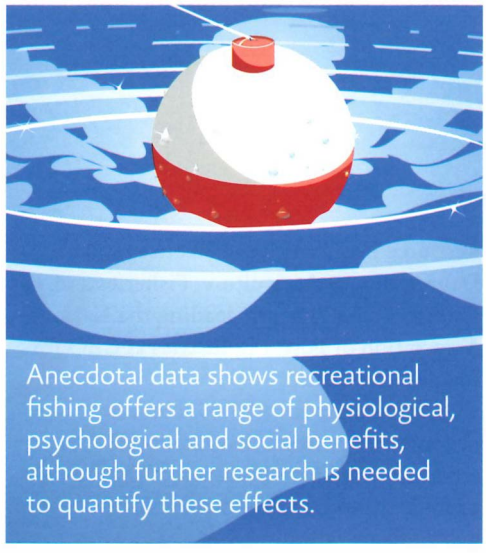
Recreational fishing offers more than stress release



Anecdotal data shows recreational fishing offers a range of physiological, psychological and social benefits, although further research is needed to quantify these effects.

A study investigating the effects of recreational fishing on health and well-being has uncovered a range of benefits that extend beyond the ability to relax and unwind.

Alexandra McManus, director of the Centre of Excellence for Science, Seafood and Health at Curtin University, says this popular outdoor pursuit has helped young people develop new skills and provided a physical and social activity for assisting breast cancer recovery, therapy for disabled people and opportunities to improve physical fitness at all stages of life.

These benefits were among those highlighted in a worldwide literature review, as well as information gathered from the recreational fishing industry and in response to a pilot questionnaire. The FRDC-supported study has uncovered a wealth of anecdotal evidence, but researchers found little published data quantifying the effects of recreational fishing on health and well-being.

However, after exploring the literature on outdoor and nature-based recreation, Alexandra McManus and her team discovered a clear link between exercise, mental well-being and the maintenance of a healthy bodyweight in conjunction with healthy eating. She says exercise is often viewed as a chore, but the literature showed that recreational fishing was an enjoyable and social form of exercise.

It also helps maintain vitamin D levels. "We know Australians have really poor levels of vitamin D," Alexandra McManus explained. "People need to get outside to recruit vitamin D and fishing provides an opportunity to do this."

To gather anecdotal evidence for the study, the researchers sought input from recreational fishing associations, governments, peak bodies, consultancies and volunteer groups. When it came to youth development, the researchers noted the value of recreational fishing as a learning and behaviour-management tool.

One example highlighted in the final report is 'Fishing 4 Friends', a mentoring program developed to deter antisocial behaviour in schools. The program places 10 boys with behaviour issues with 10 boys considered excellent role models. The boys with behaviour issues need to show improvements in the classroom and playground to attend fishing trips. The mentors help keep the boys on track with encouragement and support.

Another program noted is 'Runts of the Litter', a course designed to allow children struggling at school to develop non-academic skills through fishing. "Children who may not excel in the classroom can excel at fishing," Alexandra McManus says. "It allows them to shine among their peers."

For seniors, the researchers found fishing not only provides an opportunity to increase their physical activity while boosting vitamin D production, but it also enables them to share their fishing knowledge with younger anglers and, while doing so, offer mentoring.

Another initiative identified during the study is 'Pink Fly Fishers', a program developed to assist women recovering from breast cancer. Alexandra McManus says fly fishing is an excellent form of rehabilitation: "It's fun – the women gather with others who understand what they have been through, they may catch a fish or two and it provides a gentle form of exercise to improve muscle and other soft-tissue mobility."

In the area of mental health, the researchers found the biggest benefit related to the ability to relax and unwind. But anecdotal evidence gathered during the study suggests recreational fishing may offer other benefits. For instance, one father observed that angling (beach and estuary fishing) was one of the few activities that gave his schizophrenic son happiness and peace.

For people with disabilities, there is a Sydney-based program that uses fishing to build confidence and skills among people with hyperactive tendencies, brain injuries, cerebral palsy, Down syndrome and those who are visually impaired.

"Volunteers went to an enormous amount of trouble to develop a rod for those with a limited capacity to cast," Alexandra McManus explained. "The program gave people the chance to develop skills they didn't have before."

As a means of building physical fitness, the study provided two examples of note: long walks along a stretch of coast or over rocks required to reach an optimal fishing location; and the physical stamina required to land a large fish when game fishing.

As a first step to quantifying these anecdotes, the researchers developed a questionnaire and piloted it in Exmouth, Western Australia. The 29 people recruited for the pilot said there were several social, physical, mental health and well-being benefits to be gained from recreational fishing.

These benefits included: being outdoors (91 per cent), being with friends (74 per cent), catching fish (74 per cent), relaxing and unwinding (65 per cent), being with family (65 per cent) and for health (52 per cent).

Alexandra McManus says while the pilot study was useful for validating the questionnaire, further evidence is now needed. With additional funding, she hopes to roll out the questionnaire nationally to measure the benefits for a larger number of people according to clear physiological, psychological, social and economic indicators.

"I'd like to develop programs that encourage more people to go fishing," she says. "It's a good way for people to get outdoors, improve their fitness, interact socially and enjoy themselves." F

By Kate Brooks

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FRDC Project Code: 2010/010, 2012/301, 2011/217, 2008/038, 2010/040

Extension for 'PEOPLE-FOCUSED' research program

It is not just fish stocks that need to be considered in the development of fisheries research and management strategies.

People are at the centre of all research, business and society; they are the critical factor in industry adoption of research outcomes.

David Ellis, research manager for the Australian Southern Bluefin Tuna Industry Association (ASBTIA), says how people react and interact can be the difference between a successful research project and, more importantly, successful and viable businesses and industries.

The FRDC Board realised that industry research could achieve better results if the social dimension of industry issues could be integrated into the development of research projects and their outcomes. In 2009, the FRDC initiated the Social Sciences Research Co-ordination Program (SSRCP), which has now been extended for a further three years.

The program has increased awareness in the industry about how social science can improve outcomes. It has developed several tools to help researchers and industry groups incorporate people considerations into their projects (see page 33).

Rhonda Farlow, from the Professional Fishermen's Association, is a member of the NSW Fisheries Research Advisory Board and the FRDC's Social Sciences Research Program Steering Committee.

In the past few years, she has noted more researchers actively proposing projects that examine the social impact of decision-making on the fishing industry. "The social sciences program has provided and strengthened the opportunity to pursue this research," she says.

Among the program's projects is one that has attempted to identify and quantify the health and wellbeing benefits of recreational fishing, looking beyond the economic and environmental impacts of the industry. Another study has evaluated the social and economic contributions of the fishing industry to communities on the mid and north coast of NSW. The findings have helped to inform negotiations on the development of marine reserves in the region.

Another project has evaluated the effectiveness of the financial adjustment program that followed changes to zoning within the Great Barrier Reef Marine Park. This evaluation is being used to develop compensation options for those affected by the expansion of marine reserves in other areas.

In South Australia, the Department of Primary Industries and Resources (PIRSA) is leading an FRDC-funded project to develop social objectives for fisheries management across Australia, which should be completed this year. Mehdi Doroudi, director of fisheries for PIRSA, says there is still a long way to go to better integrate social challenges and opportunities into fisheries decision-making processes. He believes there is a need for a continuing, dedicated social sciences program beyond the scope of the current project.

The explicit task for the FRDC's program for the next three years is to work with industry and government agencies to improve their ability to re-orient daily approaches and incorporate social dimension in research issues.

The Social Sciences Research Co-ordination Program aims to see industry and fishery managers confident with the concepts of social research and able to engage with researchers to improve outcomes. The steering committee's objective is to elevate the industry's capacity to a point where the appropriate inclusion of social science research is routinely applied to fisheries issues.

While it might be easier to think that it is the fish that are managed, in reality it is people's behaviour, including how they interact with and think about fish stocks and the marine environment.

One example of where this is happening already is in the Northern Territory. Ann

ILLUSTRATION: JUSTIN GARNSWORTHY

Fleming is the aquaculture manager with NT Fisheries and works with remote Indigenous communities to establish aquaculture operations.

"I have become acutely aware of how important it is to marry technical research with social research to inform our approach," Ann Fleming says. "My contact with the FRDC's social sciences program has given me access to a wealth of knowledge and expertise in this field, and support and guidance for the research programs currently underway."

The program has been funded through to 2015, by which time the FRDC envisages that social science research concepts will be integrated into fisheries management approaches.

In the meantime, as Rhonda Farlow says: "The continuation of the program will embed social and economic elements in research and provide the opportunity for industry and management to make decisions that are based on the 'full picture'. Good decision-making can only be achieved when all aspects of the issues are considered." F

SOCIAL RESEARCH TOOLS FOR FISHERIES MANAGEMENT

The success of the Social Sciences Research Co-ordination Program during the past three years has resulted in a range of tools to make it easier for researchers, industry and fisheries managers to incorporate the social dimensions of an issue or research project.

These tools include the Research Audit of Social Sciences Fisheries Research, which collated and summarised all social science research undertaken from 1995 for the Australian fishing industry. This is available from the FRDC website (under final reports 2009/317). It has proven useful to many researchers and managers to identify what has already been investigated in relation to a particular issue.

In collaboration with the Rural Industries Research and Development Corporation (RIRDC), the program generated a handbook on social science methods. This details when and how particular methods are useful in investigating issues specifically in the context of managing fisheries and other natural resources. 'Social Science Research for our Natural Resources' can be downloaded or purchased from the RIRDC website (https://rirdc.infoservices.com.au/items/11-087).

The program has helped develop and implement several keystone projects, which include developing social objectives for fisheries management across Australia and identifying the values and beliefs that underpin Australian public attitudes and perceptions towards fishing.

The social objectives project is led by the Department of Primary Industries and Resources of South Australia (PIRSA) and supported by Australian National University, KAL Analysis and CSIRO. It is focusing on providing fisheries management agencies across Australia with the tools they need to identify and assess the social dimension of management plans. This work is expected to be completed by the end of 2012 and will be integrated with the National Harvest Strategy Framework that is concurrently being developed.

The 'Let's Talk Fish' project 2012/301 on public perceptions is led by Charles Sturt University and supported by Cobalt Marine Research Consultants and Envision Environmental Consulting. Its aim is to identify how to improve the dialogue between the fishing industry and the general Australian public, in pursuit of greater understanding and support by Australians for the industry, its achievements and endeavours.

By Susan Paterson

FRDC Research Code: 2010/040

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GUIDE TO THE SOCIAL IMPORTANCE OF FISHERIES

Placing value on a life spent at sea is among the objectives social researchers are working to incorporate into fisheries management and policy decisions.

While much is known about the ecological and economic effects of the fishing industry, the value of fishing to the community and the social impact of fisheries management decisions and policies are, for the most part, still poorly understood.

It is a gap in the existing fisheries knowledge that Lianos Triantafillos is working to address through a three-year project to develop and test social objectives for Australian fisheries.

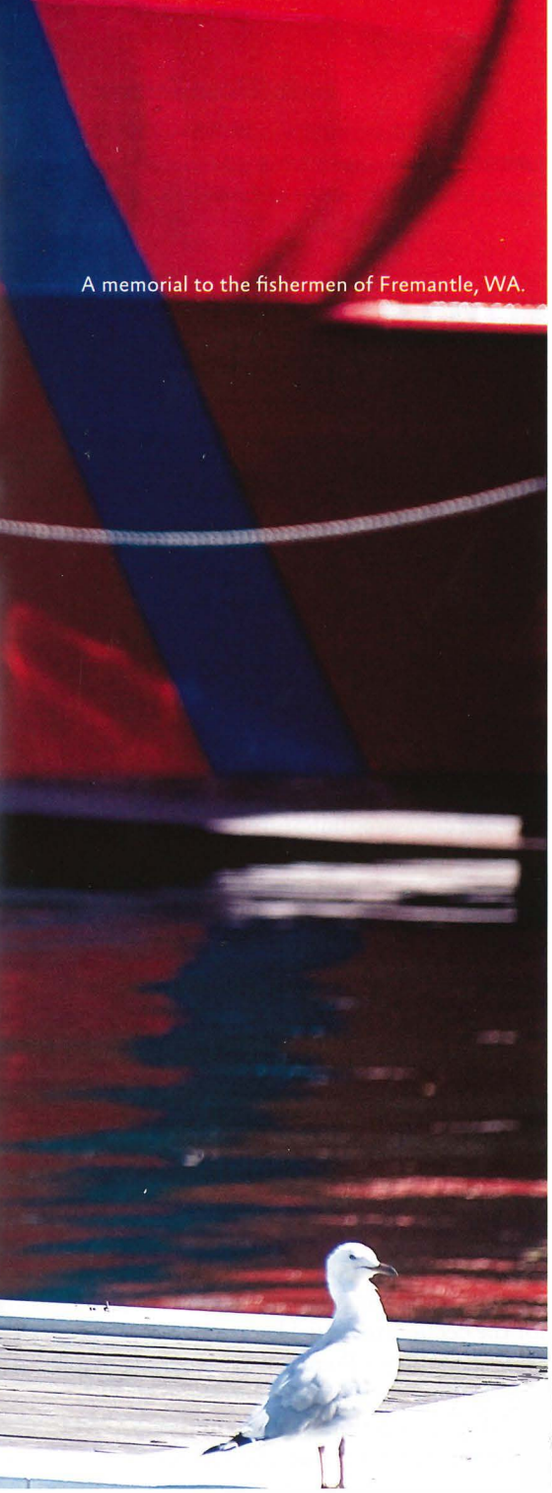
As fisheries manager at the Department of Primary Industries and Regions South Australia (PIRSA), he says the lack of social data is an important issue that needs urgent attention. "In SA we're very lucky because we have one of the best sets of fisheries biological and economic data in Australia. But we have very little data on the social aspects of fishing."

He says this data is important because it helps to understand how fisheries management decisions affect the social well-being of fishers and their communities. It could also reveal why fishing was important to an individual and a community, and what motivated fishers. Up until now, he says, "no one has really asked what's important to them from a social perspective. There's this whole complexity behind fisheries that we know nothing about."

Lianos Triantafillos talks of his own family, who emigrated from Greece to Australia, and others like them, who have spent their whole life on the sea. They made a new life while maintaining their roots with fishing. "For them, it's not about money. What's important to them is that they have access to the sea and a livelihood."

The triple bottom line

The lack of social data and objectives becomes a problem when trying to manage fisheries in accordance with the principles



A memorial to the fishermen of Fremantle, WA.

PHOTO: BRAD COLLIS

of ecologically sustainable development (ESD), which underpins Australian fisheries management and is commonly agreed to be the way forward in fisheries and marine ecosystem management.

To achieve ESD, there needs to be not only biological and economic objectives but also social objectives. To date, fisheries management has mostly been directed by ecological and economic objectives. With the call for triple-bottom-line assessments of industry performance, social objectives need to be integrated into decision-making.

To assist with this, Lianos Triantafillos and his team have set about developing appropriate social objectives and associated measurement indicators that could be used to monitor social performance and support management decision-making.

Their three-step process first involved conducting a literature review of social objectives, followed by workshops with fisheries management agencies from across the country to come up with a draft set of national objectives. These objectives and indicators were then tested using case studies.

Testing objectives

One study focused on the Queensland East Coast Trawl Fishery, a commercial fishery that operates in different regions and communities in Queensland. A second study looked at the SA communities of Ceduna, Port Lincoln and Wallaroo, in which fisheries operate across recreational, commercial and traditional sectors, and the indigenous community of Narungga. The case studies were chosen because they offer information from both fishery-based and regionally based perspectives. This provided two approaches to testing the practicality of the objectives and indicators.

The results of the research showed that the relative importance of most objectives varied depending on the location and type of fishery involved. For instance, in the southern states, ensuring equitable treatment and access for fishers was more highly ranked by commercial, recreational and charter fisheries than in the northern states, which prioritised access to adequate infrastructure needed for successful operation of fishing activities. Each objective comes with a set of recommended indicators to ascertain whether the objective is being met.

To establish which indicators best inform each social objective, a mix of mathematical analysis and face-to-face research was used. Methods employed to gather information about objectives and indicators included online, hard-copy and in-person surveys, community interaction and meetings with fisheries managers. Cost-effectiveness of collecting information and the level of difficulty in analysing the indicators were important considerations.

Data challenges

Challenges for gathering social data included reluctance within the community to comment. The research team discovered that fishers were often happy to talk about their personal situation, but less willing to provide a broader opinion. Surveying fishers who had lower levels of literacy also required a different approach, where data gathering was best done face-to-face.

Gathering quality data in traditional fisheries was also a major challenge. Social scientists working with the indigenous community were able to identify important social objectives, which included issues such as continued access to iconic species. However, the study was unable to test the reliability of objectives and indicators.

Lianos Triantafillos says there is still some way to go in developing social indicators for indigenous fisheries. But the research team has come away with a better understanding of how to approach working with indigenous communities in the future and the objectives they consider important.

The outcomes from the research include a two-part guide to managing the social dimension of fishing, due to be finalised later this year. The guide takes fisheries managers and other stakeholders through the steps of implementing social objectives in an ecologically sustainable development context by helping them identify, document and manage social objectives relevant to their fishery.

The guide also helps fisheries managers identify what they can influence and what factors remain outside their direct influence, creating more targeted identification and management of social objectives.

The research and guide are a significant step towards achieving triple-bottom-line assessments for government management in Australia's fisheries. Lianos Triantafillos says the research team found that, with the right questions, a survey of fisheries managers provided a simple and cost-effective way to determine whether many of the identified social objectives were being met.

He is confident that the consultation with and involvement of management agencies around the country as part of the project will result in a good uptake of this research. This would also lead to a consistent, national approach that should increase certainty for stakeholders and improve management outcomes. F

By Emily Weekes

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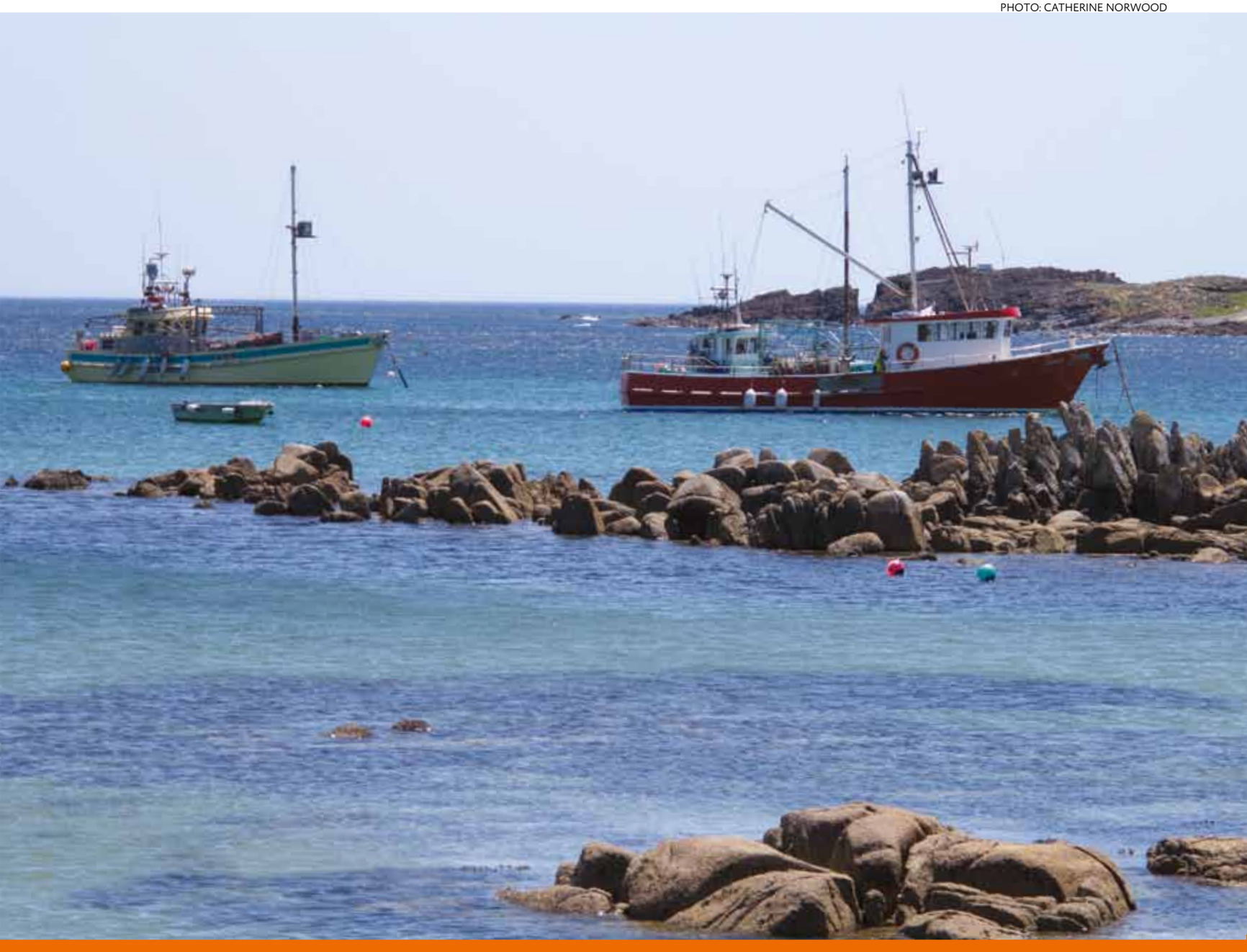
PHOTO: CATHERINE NORWOOD



Conversations to build relations

Researchers investigate public perceptions of wild-catch fishers and suggest new approaches to improve trust in the industry

When controversies arise in any industry, so too, can a compelling urge to flood the media with information that will "correct the public's attitude". Yet 'public opinion' represents a vast convoy of competing interests and influences, ever shifting and difficult to define, social researcher Nicki Mazur says.

In the wild-catch commercial fishing sector, both specific controversies and the ongoing issue of fishery sustainability have sparked this informational overload response from industry. However, Nicki Mazur's research suggests a long-term approach based on building relationships, could be more effective in building a positive platform from which to operate and influence decision-makers in the future.

She has led the FRDC-funded project 'Let's Talk Fish' along with her Charles Sturt University colleague Allan Curtis and Andy Bodsworth from Cobalt Marine Resource Management. They have tackled the challenge of identifying how public perceptions about the sustainability of the wild-catch sector are formed, and how 'potent' or strongly held those perceptions are.

"These perceptions underpin the social acceptability of the sector, or the social licence to operate. 'Social acceptability' is a valuable currency across many sectors. Public debate can influence community support and decision-makers alike, presenting the potential to alter the viability of the industry," Nicki Mazur says.

She says if the wild-catch industry is to prosper, regulations governing access to fish and marine resources must in part reflect a sense that the sector is operating with the widespread approval of society.

Approval rating

To investigate current levels of social acceptability felt towards the sector and the motivations driving these judgements, researchers developed a mail survey and distributed it to a random sample of residents across Brisbane, Sydney and Melbourne.

The survey results revealed widespread public approval for a wild-catch fishing sector in Australia, but it was conditional on the belief that the sector was being effectively regulated and acting in an environmentally sustainable manner.

While the largest number of respondents elected to 'disagree' with positive statements about being able to rely on the wild-catch commercial fishing industry to act sustainably and in the interests of the environment, almost as many declared themselves to be 'unsure'.

"Public trust is critical to social acceptability for primary industries and for governments alike," Nicki Mazur says. "We wanted to find out to what degree respondents thought this industry is prepared to act in the public's interest, not just its own interests, and how able it is to fish sustainably."

In designing the survey, the research team consulted with the project steering committee and representatives from fisheries management, the fishing industry, the research community and the environmental non-government organisation (NGO) sector.

Questions were refined to ensure the tone and nature of the survey would elicit a distinct response as well as measure a respondent's values, beliefs and norms, perception of risk, and trust in and attitude towards the industry, as well as government.

To address the possibility that the respondents might not be representative of the wider public, researchers tested the selection against Australian Bureau of Statistics household and population data for age and education.

"The sample did appear to be composed of slightly older Australians with slightly higher levels of education," Nicki Mazur explains, "but there weren't any significant differences when tested against social acceptability judgements."

A question of trust

To gauge how trustworthy respondents felt the industry was in terms of fishing sustainably, researchers included questions about the sector's benevolence, integrity and ability to adopt best-practice methods and work towards a sustainable future.

Most respondents identified themselves as having strong environmental values and demonstrated a belief that the sector can and does have a negative impact on marine habitat, animals and birdlife, recreational fishing and the availability of fish species for seafood in the future.

While respondents consistently favoured Australian seafood over imported products, they also wanted more funds invested in preventing harm to marine animals and birds, and in better understanding the impact of recreational and commercial fishing on the environment.

Nicki Mazur acknowledges that the survey did not measure the importance of the environment relative to other issues, but says that the findings nonetheless suggest that strong environmental values exist in the public sphere.

"Overall, the low level of trust in the sector is an area of concern," Nicki Mazur says. "One of our key recommendations is for the industry to improve its engagement with the public but, to an even greater degree, with stakeholders."

In the wild-catch commercial fishing industry, stakeholders can represent a range of interests and experiences, from decision-makers to environmental NGOs, industry groups to recreational fishers and fisheries.

Influence over access

Researchers were keen to investigate the influence of social acceptability factors on key access decisions in the industry. They conducted more detailed interviews with a range of stakeholders to examine the factors those stakeholders thought influenced decisions about and perceptions of the industry, from different standpoints.

Four different fisheries-access decisions were used as case studies for the interviews. Decision-makers and fisheries and interest group representatives were asked to identify factors of influence as well as the extent to which these factors impacted access decisions in Australia. The case studies included:

- establishment of the South-west Commonwealth Marine Reserves Network;
- New South Wales Government buyback of commercial fishing licences and establishment of recreational havens;
- changes to the *Environmental Protection and Biodiversity Conservation Act 1999* to reinstate recreational fishing for migratory Mako sharks; and
- development and implementation of the Commonwealth Fisheries Harvest Strategy Policy.

Interviewees suggested a broad range of factors influenced access decisions, including policy commitments, scientific frameworks, consultation processes, policy issues and controversies, and separation of fisheries management and conservation agencies.

The values and beliefs of influential people within the fishing industry, interest groups and government decision-makers also influenced decisions.

When asked to identify to what extent they thought each decision was influenced by interest groups, public opinion and the media, interviewees spoke of the role of environmental NGOs and public campaigns in raising awareness and encouraging the public to take action.

The interview data pointed to the ability of interest groups to rally parts of the public with similar values and beliefs to their own. In turn, decision-makers have to decide how representative those responses are of the wider public and to what extent and in what way policy should be changed to reflect those interests.

Interests align

Nicki Mazur says that in all four case studies interest groups, decision-makers and the fishing industry had all tried to understand how and to what extent public opinion aligned with their respective interests.

While this might seem an obvious goal for stakeholders to pursue, it confirms the complex nature of the challenges facing the industry. However, there is hope. "We believe that our research confirms the importance of these issues and that some of our findings shed new light on the subject," Nicki Mazur says. "But these results are only a snapshot. Social acceptability is dynamic and always changing."

The researchers presented the findings in a workshop at Seafood Directions, the Australian seafood industry national conference held in South Australia in October 2013. It was a delicate task but one that was met with interest and energy from participants.

"We really wanted to consult as widely as possible," Nicki Mazur says. "Our workshop was about focusing on the problem and what the implications might be when it comes to creating an engagement strategy for the future. It was a diverse audience and that was important. We worked with an insightful group of fisheries government managers and industry association leaders, as well as representatives from conservation interest groups."

Nick Rayns, executive manager of the Australian Fisheries Management Authority and a member of the project steering committee, attended the workshop and found the discussion valuable in capturing different perspectives.

"It was good to talk through the perspectives the industry has and other jurisdictions too, in terms of what they thought of the research," he says. "There was discussion about having a peak body for the industry where this dialogue could take place and deal with some of these issues."

While agreeing on issues might sound simple, it is a complex and integral step needed before tackling how the industry can engage differently with key stakeholders and the public and build a sense of trust. Some of the participants suggested revising the language used to describe the industry, using 'wild harvest' and 'professional' instead of 'wild catch' and 'commercial' to better reflect the setting and skills required to fish sustainably.

Nick Rayns admits that phrases such as 'exploiting fish stock' tend to conjure up confronting images, but cautions against changing language to disguise actions. "In the end, industry and in many cases the government have to be honest about the fact that when you harvest fish you often accidentally kill other marine wildlife, seals, dolphins," he says. "In the minds of many members of the public, they think, 'Why is that happening and what are you doing about it?' I think those are fair questions that deserve an honest answer."

Since facilitating workshops at Seafood Directions and with the Women's Industry Network for Seafood Community, the researchers have arrived at a set of guidelines on which to build an engagement strategy for the sector.

"The general public is a broad, diffuse target," Nicki Mazur says. "Likewise, the fishing industry is not one homogenous group; it is made up of many distinct sectors and groups that are spread across Australia so it makes targeting 'the public' very difficult.

"We know from previous work that in times of low trust it is better to start to build genuine engagement and dialogue with government decision-makers, members of interest groups and their local communities, than engaging in expensive information war in the media after a controversial issue has erupted," she says.

The report notes it takes time to build relationships and that sectors should focus on identifying and engaging with those who have significant influence in decision-making contexts and the ability to galvanise parts of society with similar interests. "If you don't understand the values and beliefs of your audience," Nicki Mazur says, "just telling them that you can be trusted isn't sufficient."

Nick Rayns agrees: "The public won't trust you unless you're honest with them. That's why part of the debate needs to be around what sort of approach could be used to gain the public's trust.

"It's a tough debate but it has to be had if the wild-catch industry is going to thrive in the future."

The *Let's Talk Fish* final report also recommends that the industry establishes a strategic vision or aspirational goals consistent with predominant social values and demonstrating a commitment to environmental sustainability.

"We by no means suggest that you just turn around and make friends with people," Nicki Mazur says. "It's just not that straightforward. But we do feel that the industry would benefit from repositioning its strategies to focus on relationship building, and that's not a simple thing to do." F

GUIDELINES FOR MORE EFFECTIVE ENGAGEMENT

- Focus on engaging rather than communicating with stakeholders.
- Build a positive vision for the industry's future.
- Avoid information wars and build stakeholder relationships.
- Selectively communicate with the public.
- Improve understanding of the policy process and manage expectations.
- Engage internally to help people move forward.
- Seek professional assistance and continue to build engagement capacity.
- Identify the roles and responsibilities of every person in the industry.

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FRDC RESEARCH CODE: 2013/210

A PEOPLE-FOCUSED APPROACH

PROFILE The desire to make an impact led scientist Renae Tobin to chart a new course that could better influence fisheries policy making and public perceptions

By Lynda Delacey

Initially an impassioned environmentalist, Renae Tobin has become a committed social scientiest during the course of her career, recognising that the health of a community direcly relates to the health of the environment in which it lives.

"The relationship between society and the environment is clearest in developing countries," she says. "Generally, when people are struggling the ecosystem also starts to struggle because people must exploit it to survive. Likewise, when people feel secure about their resources they are more likely to look after them."

Now based in Townsville, at the James Cook University Centre for Sustainable Tropical Fisheries and Aquaculture and the School of Earth and Environmental Science, Renae Tobin's interest in social science developed through her undergraduate years.

"I started in marine ecology, wanting to 'save the environment' – I was young and idealistic. Marine ecology was interesting but I didn't feel like I was having any community impact. So I spent a few years doing a fisheries course with the Australian Maritime College and working with the CRC Reef Research Centre. I developed a real understanding and appreciation for fisheries research and quickly found that fishers know a lot more than researchers because they've been immersed in the marine environment for much longer."

Challenging perceptions

Working with fishers led Renae Tobin to undertake PhD research on the competition for fish that recreational fishers perceive exists with the commercial fishers in the Great Barrier Reef.

"The assumption was that recreational fishers caught more fish in areas closed to commercial fishing. But I found zero evidence to support this assumption – no matter how much data I gathered, or which angle I came at it from. And many of the recreational fishers I surveyed weren't even clear where the recreational-only fishing areas actually were."

Her study revealed that when it comes to fishing, perception shaped reality. "The public, the media, the industry and the government bodies supporting the industry are making decisions based on perception and psychology rather than hard data," she says. "It's human nature – if you're a recreational fisher, it's easier to blame someone else for why you can't catch a fish rather than the complexity of the tides, the weather, the location, the time of year or your own skill levels."

After completing her PhD, Renae Tobin converted completely to social science.

She says her "pie in the sky hope" is to see the Australian community understand the value of supporting the fishing industry. "I'd love to see the public and fishing industries stand together against the actual – and not perceived – threats to the Great Barrier Reef."

She would like to see more information available to counter the widely held perception that commercial fishers only want to exploit marine environments.

"This misperception is usually based on outdated data or things happening overseas – or just whatever makes a controversial news headline. It's frustrating because it means everything we recommend ends up in the political arena. Meanwhile, Australia has a very sustainable fishing industry that is much kinder to the environment than most forms of food production."

The good news is that social science can, and does, make a difference to policy.

Influence on policy

For example, in 2011-12 Renae Tobin worked on a regional co-management project that involved setting up local stakeholder committees in coastal regions. The newly formed Burdekin Sustainable Fisheries Alliance raised concerns about dugongs becoming entangled in fishing

1. Renae Tobin sampling Barramundi for her PhD studies.
2. Renae Tobin (right) with her mother, Vicki Partridge, happy with their catch from the reef off Townsville, 2012.
3. Renae Tobin, fishing near Townsville, 2007.

PHOTO: JAMES COOK UNIVERSITY

nets in their area. The local commercial fishers knew how to set up their nets to avoid this issue, so they worked with the Great Barrier Reef Marine Park Authority to set up a code of conduct requiring everyone fishing in the area to set up their nets in the same way.

In 2009, she was part of a multidisciplinary review funded by the Australian Department of Agriculture, Fisheries and Forestry to look at the ecological, social and economic aspects of fish spawning closures in the Coral Reef Fin Fish Fishery.

"There were nine-day closures in the months of October, November and December. Our social surveys revealed that these closures affected the way fishers normally operated. For example, in between closures, they were driven to go fishing even if weather conditions were bad. They reported that they were happy to keep some closures, but the December closure was so close to Christmas and New Year they basically had to stop fishing for three to four weeks. This obviously had a big economic impact."

Meanwhile, the ecological component of the project found the December closure was not actually providing much ecological benefit. As a result of this and other information in the review, the December closure was removed and the number of days for the remaining closures in October and November were reduced.

"To me, this was an excellent example of how combining ecological and social and economic information can influence policy," Renae Tobin says. "It shows how fisher surveys can make a real difference."

Renae Tobin also brings her focus on commercial and recreational fishing to the landmark Social and Economic Long Term Monitoring Program (SELTMP) for the Great Barrier Reef. This project is designed to help reef managers make decisions that incorporate an ongoing understanding of social and economic conditions and effects.

The SELTMP surveys reveal a truth about commercial fishing that goes against the common perception. "We asked commercial fishers what word comes to mind when they think of the Great Barrier Reef. Overwhelmingly the word was 'beautiful'. For them, it's not all about what they can harvest from these resources. It's about seeing birds and dolphins, sunrise on the water, being linked to the natural environment. Commercial fishers feel a very strong desire to conserve these things."

Her latest research project aims to help protect the Great Barrier Reef by supporting the reef's fishing communities.

Renae Tobin is looking at the factors that make some commercial fishing businesses more secure or resilient than others in the face of change. The FRDC-funded 'Adapt or Fail' study was launched in July 2013.

She says commercial fishers in the region are under increasing pressure from a range of changes – in the environment, in the economics of their businesses, and in fisheries management.

"Meanwhile, government assistance is decreasing. So the only way fishers are going to survive is if they can adapt and organise themselves. We're hoping this study can help fishers do better in the face of these changes."

Scientists noticed that different business models adapted differently to recent changes such as re-zoning cyclones Yasi and Hamish and the Queensland floods.

"Everyone assumed bigger businesses would adapt better, because that's generally the case in other industries," Renae Tobin says. "But we found the complete opposite – the bigger businesses tend to be more specialised, which means less flexibility. It was actually the more diversified businesses that adapted best. This is a fundamental challenge to the current industry philosophy." F

FISHER SURVEY

As part of the FRDC-funded 'Adapt or Fail' project, Renae Tobin is surveying commercial fishers who operate along the Queensland east coast. Fishers interested in taking part can contact her on 07 4781 5196.