

Social and Economic Evaluation of the Victorian Wild-catch and Aquaculture Industries

Stage 1

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January 2018

FRDC Project No 2016/263

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ISBN 978-0-9953662-3-7

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2018

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In submitting this report, the researcher has agreed to FRDC publishing this material in its edited form.

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Acknowledgments

The project team would like to acknowledge the participants of the industry workshop, who provided insights and guidance for the development of the full proposal to undertake a contributions study of the Victorian professional fishing and aquaculture industries.

Thanks also go to the full research team, Prof Alistair McIlgorm, Dr Patrick Gilmour, Dr Michelle Voyer, and Dr Nick McClean. Thanks to FRDC Human Dimensions Research Subprogram, Dr Emily Ogier and Dr Sarah Jennings and to the Victorian Research Advisory Committee for invaluable comments and guidance throughout this planning process.

Abbreviations

FPC - First Person Consulting

HDR – Human Dimensions Research Subprogram

SIV – Seafood industry Victoria

UOW – University of Wollongong

UTS - University Technology Sydney

VicFRAB - Victoria Fisheries Research Advisory Board

VicRAC - Victorian Research Advisory Committee

Executive Summary

There is a clear need to identify and measure the economic and social contributions that flow from Victoria's professional fisheries, both wild-catch and aquaculture, into regional and metropolitan communities. In the absence of such data, local professional fisheries have been unable to demonstrate the range and value of fisheries benefits to society's wellbeing, and thus gain visibility and support from the Victorian public, governments and other stakeholders and decision-makers. It has also meant there has been little data-led information about the likely impacts of fisheries policy and management decisions on Victorian communities, or of potential opportunities for improving sustainable growth in fisheries.

The FRDC Victorian Research Advisory Committee (VicRAC, formally VicFRAB) identified the need for a research project to measure the multiple social and economic contributions of the professional fishing and aquaculture sectors as an urgent and high priority. FRDC and the Human Dimensions Research (HDR) subprogram also have identified a strong need for a coordinated approach and framework to evaluate professional fisheries across the States and Territories in Australia.

As such, 2016-263 Social and Economic Evaluation of the Victorian Wild-catch and Aquaculture Industries – STAGE 1 was funded by the VicRAC in early 2017. The purpose of the project was to determine the appropriate approach to take for Victorian fisheries in collaboration with industry. This scoping project was undertaken in partnership by Seafood Industry Victoria (SIV) and University of Technology Sydney (UTS) in 2017.

The approach would

- (i) Be appropriate for the Victorian context,
- (ii) Be in-line with the HDR framework for a coordinated national approach,
- (iii) Build on the methodologies used to value coastal wild-catch fisheries and aquaculture in NSW: FRDC 2014-301 Social and Economic Evaluation of NSW Coastal Professional Wild-Catch Fisheries: Valuing Coastal Fisheries, FRDC 2015-302 Social and economic evaluation of NSW coastal aquaculture, and
- (iv) Identify an appropriate and experienced research team and their roles. The full project proposal was submitted on July 12, 2017 and has received approval from VicRAC, HDR and FRDC to commence in early 2018.

Keywords

social and economic contributions, workshop, methodology, collaboration, Victoria, wild-catch, aquaculture

Introduction

There has been a clear need to identify and measure the economic and social contributions that flow from Victoria's professional fisheries, both wild-catch and aquaculture, into regional and metropolitan communities, for some time. In the absence of such data, local professional fisheries have been unable to demonstrate the range and value of fisheries benefits to society's wellbeing, and thus gain visibility and support from the Victorian public, governments and other stakeholders and decision-makers. It has also meant there has been little data-led information about the likely impacts of fisheries policy and management decisions on Victorian communities, or of potential opportunities for improving sustainable growth in fisheries.

The VicRAC (formally VicFRAB) identified that a project to determine the contribution of Victorian wild-catch fisheries and aquaculture as an urgent and high priority since 2015, and had set aside funding to undertake such a project. In 2015, the VicFRAB extended a call for Expressions of Interest, however the applications were not recommended for full application as the Committee considered that they did not meet the needs of industry appropriately. Then in 2016, the final report was released from the FRDC project: 2014-301 Social and Economic Evaluation of NSW Coastal Professional Wild-Catch Fisheries: Valuing Coastal Fisheries. The well-received NSW study, alongside greater research capacity within the Victorian fishing industry and the Victorian peak body Seafood Industry Victoria (SIV), opened up the opportunity to co-design a contribution study in Victoria, adapting an existing and tested methodology with a highly experienced team and with the connections required for a high level of industry engagement in Victoria. Associate Professor Kate Barclay (UTS) who led the NSW work, and Dr Kirsten Abernethy (SIV) established a UTS-SIV collaboration which led to the development of this project (2016-263) and the subsequent proposal (2017-092) including researchers from University of Wollongong (UOW) and First Person Consulting (FPC).

Recognising the need for the project approach to be appropriate for the Victorian context, and to ensure industry engagement and support, a proposal for this small scoping project was developed. The purpose was to ensure that the full project proposal for a 'Victorian contributions study' ('Stage 2' submitted in 2017) would meet the needs of the Victorian industry, and use appropriate methods on the advice of industry that would ensure participation and engagement. This staged approach to project design was considered to be a suitable and necessary method to develop a contributions study which would have the highest impact for industry by the VicRAC.

In parallel, the FRDC and the Human Dimensions Research (HDR) subprogram had identified a strong need for a coordinated approach and framework to evaluate professional fisheries across the States and Territories. In February 2017, the HDR held a two-day 'National Contributions in Fisheries and Aquaculture Workshop' split into dedicated technical and stakeholder components to develop a common framework. This scoping project has therefore also been undertaken in collaboration with Dr Emily Ogier and Dr Sarah Jennings from the HDR Subprogram, with Victoria providing a case study for the national framework.

This project has brought together expertise from the Victorian wild-catch and aquaculture industries, Seafood Industry Victoria, the University Technology Sydney/University of Wollongong research team who designed and completed the highly successful NSW studies, and the FRDC HDR subprogram, to scope and co-design a project to determine the social and economic value of wild-catch and aquaculture fisheries to Victorian communities.

Objectives

The objective of the project were:

- 1. To develop a proposed methodology as a set of work packages to evaluate the social and economic contribution of the Victorian seafood industry
- 2. To prioritise work packages in terms of cost, available data, feasibility, time, and what would be lost if not included in a Victorian evaluation of the seafood industry
- 3. To collaborate with the seafood industry to develop priorities, methods, and good engagement for a Victorian evaluation of the seafood industry
- 4. To collaborate with national stakeholders to ensure a Victorian study will be appropriate for scaling up to a national evaluation of the seafood industry
- 5. To use the industry workshop to develop a proposal for 'Stage 2', the social and economic evaluation project itself

Methods and Results

This scoping project consisted of two parallel and interlinking parts. *Part A* consisted of the technical research proposal development for full application with the research team, and *Part B* was engagement and co-design with the Victorian wild-catch and aquaculture industries.

PART A: Technical research proposal development

(i) Establishing the research team and roles

The research team for the full proposal (Stage 2) was established, and included experienced members of the research team from the NSW work (UTS and UOW), with Seafood Industry Victoria and First Person Consulting coordinating and undertaking the work in Victoria.

- University Technology Sydney (UTS) will be the lead organisation with Associate Professor Kate Barclay as Principle Investigator. Barclay was principle investigator on FRDC projects 2014-301 Social and Economic Evaluation of NSW Coastal Professional Wild-Catch Fisheries: Valuing Coastal Fisheries and 2015-302 Social and economic evaluation of NSW coastal aquaculture. Dr Nick McClean (UTS) will be a co-investigator and his role includes fieldwork, method development, analysis and write up.
- Professor Alistair McIlgorm (CI) from University of Wollongong (UOW) will lead and be responsible for delivering the economics work packages. Dr Michelle Voyer (UOW, previously UTS) was extensively involved in the NSW work and will provide methodological advice.
- Seafood Industry Victoria (SIV) and Dr Kirsten Abernethy will coordinate Victorian industry engagement and fieldwork. Kirsten's role will also include method development, analysis and dissemination.
- Dr Patrick Gilmour from First Person Consulting will engage in Victorian fieldwork, method development, analysis and write up.

(ii) Workshop A1: Developing the methodology and set of work packages

A one-day technical workshop with the research team (listed above) was held at UTS in Sydney in early 2017. The workshop achieved its purpose to:

- Discuss the Victorian context and the potential differences between Victoria and NSW. All team members were provided with a summary of the literature and statistics available for Victorian wild-catch and aquaculture fisheries.
- Familiarise the team with the Wellbeing Approach used as a framework to measure the social and economic contributions of wild-catch and aquaculture fisheries to communities.
- Discuss limitations of the NSW projects, and potential methodological improvements and opportunities uncovered by NSW work for a Victorian project.
- At this stage it was taken into account that the Victorian study would differ in that wild-catch
 and aquaculture would be assessed in one project, and would include coastal and inland
 fisheries.
- Develop a set of 'work packages' with indicative costs attached for a Victorian contributions study. The work packages were used to form the basis of the discussions in Workshop B1 with industry.
- The work packages were derived from the methodology used in FRDC NSW Projects 2014-301 and 2015-302 which evaluated the social and economic contributions of NSW coastal professional wild-catch and aquaculture fisheries.
- See Table 1 for work packages

Table 1 - Suggested work packages for Victorian Study with a description and level of importance (whether essential for the project to take place, or optional)

Work package	Description	Importance
1. Interviews with fishing industry stakeholders	 Interviews with wild-catch fishers and licence holders, coastal and inland aquaculture operators, as well as key community members Verify what are the dimensions of wellbeing to coastal communities and the contribution of the industry to local communities wellbeing 	Essential
2. Economic survey	 Economic survey of wild-catch fishers and licence holders, coastal and inland aquaculture operators to collect economic data for modelling (input-output model) Value-chain case studies - a series of case studies to show how different fisheries might contribute to varying extents (e.g. 'typical to-market contribution' vs. 'direct sale to restaurant of premium product') 	Essential
3. Survey of community	 Representative phone survey of community members to understand their attitudes towards fisheries and the value of fisheries in the local community 	Essential
4. Survey of tourism and hospitality industry	 Survey of tourism and hospitality industry to source perceptions of fisheries and to understand seafood sourcing and sales. May be supplemented with surveys of actual tourists in collaboration with tourism industry 	Optional
5. Survey of fish merchants	 Survey of fish merchants, wholesalers, retailers and cooperatives to collect data on their supply sources, the importance of local product and general attitudes to the professional fisheries 	Optional
6. Regional follow-up workshops	 Workshops with stakeholders across key regions to report back the initial findings of the research and to gather feedback on whether the initial findings 'make sense' and the extent to which different values/contributions are more/less important. These trips will also provide an opportunity to 'top up' data from each region 	Essential
7. Design, analysis and reporting	 Review of relevant literature and compilation of pre-existing data Co-design, engagement, and recruitment with wild-harvest and aquaculture sectors Design of questions, analysis of data and writing of report 	Essential
8. Dissemination and communication activities	 Brochures/information sheets on regions/case studies/sectors Other suggested dissemination activities included videos, website, art competition 	Optional

(iii) Workshop A2: Developing the full research proposal

After the industry Workshop B1 and comments were received on the workshop summary, a second one-day technical workshop with the research team was held at UTS in Sydney 15 June 2017. The workshop achieved its purpose to:

- Discuss and develop the full application proposal in light of industry advice and suggestions: FRDC 2017-092 Valuing Victoria's wild-catch and aquaculture fisheries
- Discuss methodological approaches, improvements and opportunities uncovered by work in NSW and Victorian industry engagement. These included: (i) improvements to assessing the contributions of fisheries to the tourism industry, (ii) further uncovering connections between fisheries and the food and hospitality sector, (iii) alternative economic survey approaches for industry sectors and quota/non-quota fisheries, (iv) how to build identifying opportunities and latent potential in the industry into the methodology, (v) how to consider export, (vi) inclusion of Victorian-based Commonwealth-managed wild-catch fisheries, (vii) in-depth value chain case studies, (viii) inclusion of women, and (ix) options for study regions.
- Determine the plan for writing the full application for *FRDC 2017-092* for submission in July 2017

(iv) Collaboration with FRDC HDR

Engagement and collaboration with the HDR Subprogram was consistent throughout the scoping project to gain advice on the direction of the project and it's alignment with HDR needs. In addition to informal discussions, Dr Ogier and Dr Jennings were consulted at key stages including on circulation of the Workshop B1 Summary document and the draft proposal *FRDC 2017-092*.

(v) Submission of full application for FRDC 2017-092

The full application FRDC 2017-092 Valuing Victoria's wild-catch and aquaculture fisheries was submitted on 12 July 2017

(vi) Collaboration with VicRAC

Feedback from the VicRAC on the full application resulted in another round of industry consultation with VicRAC committee members in August/September 2017. This further refined the proposal methodology, outputs, and timeline.

PART B: Industry engagement and co-design

(i) Workshop B1: Engage and co-design work packages

A one day industry workshop led by Dr Abernethy (SIV), A/Prof Barclay (UTS) and Dr Gilmour (FPC) was held at the SIV office in Melbourne on May 11, 2017. The workshop report which summarised the discussions was circulated among the invited participants. The workshop achieved its purpose to:

- Engage with the full range of representatives from wild-catch and aquaculture industries. Fourteen representatives attended with a further 12 representatives engaged via email:
 - Representatives included Johnathon Davey (Seafood Industry Victoria), Malcolm Petrie (Abalone Central Zone), Brad Duncan (Lakes Entrance Fisherman's Coop), Alan Nicholls (Apollo Bay Fish Coop), Russell Frost (Apollo Bay Fish Coop), Paul Mannix (San Remo Fisherman's Coop), Tim Rudge (Yumbah Abalone Aquaculture), Barbara Konstas (Melbourne Seafood Centre, Women's Industry Network Seafood Community), Andrew Clarke (Victorian Fisheries Authority Aquaculture), Ed Meggitt (Gouburn River Trout), Harry Peeters (Abalone Western Zone), Michael Hobson (Port Albert Wharf), Kaz Bartaska (Kansom Abalone processor), Markus Nolle (SIV Chair, Victorian Southern Rock Lobster)

- Present the NSW research and impacts.
 - A/Prof Barclay presented the approach, methods and findings of the projects 2014-301 and 2015-302. Patricia Beatty from the Professional Fisherman's Association of NSW (CI on 2014-301) presented on what the NSW industry has gained from the NSW projects. This perspective was valuable to gaining industry support and to demonstrate how analogous findings could be used by the Victorian wild-catch fishing and aquaculture industries.
- Discuss who the audience for the project should be, why and how it could be used. The participants engaged in lively discussion, and multiple audiences were identified See Table 2.

Table 2 - Audience for the Victorian project and justification

Audience	Justification
Politicians and policy makers	 A clear need for the project is to secure the access of Victorian wild-catch and aquaculture fisheries. This is particularly important for the wild-catch industry, and to help prevent any fishery closures by providing rigorous evidence of their importance to communities. It was also identified that politicians and policy makers needed to understand potential opportunities in wild-catch and aquaculture fisheries and support the industries to thrive and grow
The 'general public'	 To demonstrate the importance of fisheries in Victoria and use data to support actions to build greater social licence to operate and political influence There needs to be a focus on the value to metropolitan areas and areas with marginal electorates
Consumers of seafood	 This was debated within the participant group about the importance of consumers as an audience There is a need to understand consumer views and the market and opportunities for local seafood Some consumers are interested in provenance and this study may provide information to them. However, others argued that the majority of consumers are price-driven and therefore not as important as an audience
Tourists	• It is important to provide information to tourists, particularly the increasing Asian tourists, inland residents, holiday home owners

- Discuss the contributions Victorian wild-catch and aquaculture fisheries make to Victorian communities and which areas were important to focus on.
 - o It was agreed that both social and economic contributions were important to measure
 - The four work packages were discussed (economics, community values, tourism and hospitality, and fish merchant/retail)
 - All were considered to be important areas to focus on. Table 3 shows key comments attributed to each work package
- Discuss the proposed methods and how to build support and collaborations with industry in order to get the highest participation rate possible (acknowledging low response rates from industry in NSW surveys)
 - o Two key points were made by participants on the proposed methods. See Table 3.
- Discuss dissemination/communication methods that will be most useful for industry
 - Oue to a shortage of time, dissemination methods were not covered in detail in the workshop. However, participants and those on the email list were encouraged to provide comments when the workshop summary was circulated. Face-to-face community meeting were suggested as a means to feed back to the industry and communities. In

discussions with VicRAC, it was decided to leave the dissemination/communication methods open for discussion at regional meetings (e.g. brochures).

Table 3 - Key comments and advice on methods for work packages and the project overall

Work package	Key comments	Methods advice
Economic survey	 The export value should be captured Commonwealth shark and trawl fisheries are important in Victoria and to Victorian communities 	• Expect a similar low response rate to questionnaires in Victoria. The project team need to rethink the approach and consider using 'profiles' of industry sectors gained from small workshops with sectors
Survey of community	 The vast majority of the community don't value local product, they value price Capturing consumers as subjects is important Overseas consumption may be important to consider Capturing the metropolitan areas (second home owners) Capturing marginal electorates Capturing cultural values are important (e.g. seafood for Christmas) Capturing health benefits is important 	
Survey of tourism and hospitality industry	 The tourism industry is extremely important to capture, particularly international tourists as the increase in Asian tourist market is high in both the east and west of Victoria. Inland residents, and holiday home owners are also important visitors to include Understand better the linkages between fisheries and tourism If possible, identify opportunities in tourism 	
Survey of fish merchants	 Capturing the export market is important There should be a focus on retailers 	
Overall project	 Industry is interested in findings to be reported by fishery as well as region 	 Identify opportunities and latent potential in the industry as part of the project

(ii) Further industry engagement activities

In addition to the industry workshop and consultation with invited participants, SIV has engaged with industry in several meetings, informing them of the project, its importance, and how to engage. Additional meetings included: Industry Association meetings (Abalone Industry Council, Victorian Bays and Inlets Fisheries Association, Victorian Eel Association), Victorian Aquaculture Forum, SIV AGM, and engagement with VicRAC members.

Discussion and Conclusion

The project met all objectives and the co-design approach has resulted in high engagement with the Victorian wild-catch and aquaculture industries, and a successful full application to the FRDC for a two-year project to begin in early 2018. Extensive consultation and collaboration has been key to the success of meeting the objectives of the project, and to improve the likelihood of success (in terms of participation and adoption) of the subsequent full 'contributions' study.

The methodology and outputs for the full project to evaluate the social and economic contribution of the Victorian seafood industry, has been designed as a set of work packages that are context specific to Victoria, but that will also be a useful model for other state and territories seeking to do similar studies. This has been achieved through collaboration and co-design with the wild-catch and aquaculture industries, the HDR Subprogram and the VicRAC.

Broad engagement with industry has resulted in building support, collaboration and participation from industry associations, and has identified appropriate pathways to ensure participation in surveys and dissemination materials.

The opportunity to undertake a scoping project has been important for establishing good working relationships within the research team and a clear understanding of the roles and responsibilities, as well as the Victorian context, for the upcoming two-year project. The research team collaborated on the drafting of the full proposal and on addressing comments from industry, the HDR Subprogram and the VicRAC. The full proposal for project *FRDC 2017-092 Valuing Victoria's wild-catch and aquaculture fisheries* has now been approved for funding to commence in early 2018.

The study (2017-092) will measures the contribution of Victorian wild-catch and aquaculture fisheries and will meet multiple needs, including:

- Generate detailed, spatially-defined knowledge on the economic and social contributions of wild-catch and aquaculture fisheries, and elicit where contributions could be enhanced
- Inform government (local, state) of the importance of fisheries and likely impacts of policy or management decisions on regional and metropolitan communities
- Enhance community engagement and support for fisheries through demonstrating the benefits that flow from professional fishing and aquaculture sectors into communities
- Contribute to the FRDC national framework for contributions studies

The study (2017-092) will aim to meet the following objectives:

- 1. Evaluate the economic contribution of commercial wild-catch fisheries and aquaculture for seven regions of Victoria, including the regional economic impacts such as multiplier effects and employment and contributions to related sectors within regions, building on previous Australian studies.
- Evaluate the social contributions of commercial wild-catch fisheries and aquaculture for the same
 regions, including the social aspects of economic contributions, food provision, health and nutrition,
 services and infrastructure, interactions with tourism, consumers, and recreational fishers, contributions
 to community identity and heritage, and knowledge networks, building on previous Australian studies.
- 3. Build on and refine a methodology to be used for ongoing social and economic evaluations of industry as part of FRDC national framework.
- 4. Disseminate findings, identifying the social and economic contributions of seafood production for each study region, highlighting threats to sustainability and viability, as well as opportunities, in a form suitable for engaging: (1) local and state government agencies; and (2) the general public, to raise awareness of the role of professional wild-catch fisheries and aquaculture in Victorian communities.