

Appendix H: 2016-412: ACPF IPA: Australian wild caught prawn sector RD&E management and communication

Background

IPAs are industry partnership agreements between FRDC and another sector body that oversee a range of sector-specific projects that align with an agreed-upon industry strategic plan within a defined timeframe. The priorities and projects are identified and specific to the needs of the industry body. Currently, FRDC has 12 IPAs (FRDC, 2024).

The Australian Council of Prawn Fisheries Ltd (ACPF) was formed in 2000 to support the recognised need for improvement in the industry’s profitability and operational efficiency through future investment in market research, supply chain development and integration, bycatch reduction, and product development. ACPF is comprised of a membership of local industry bodies and companies working with wild prawns or the prawn supply chain. It aims to support its members to catch and market premium wild prawns from sustainable fisheries and healthy marine ecosystems. The ACPF IPA manages 50% of the prawn RD&E funds (ACPF, n.d.).

This project builds upon project 2010-745: Seafood CRC ACPF R&D planning, implementation, extension and utilisation that conducted consumer research, and developed an agreed marketing proposal. The following goals were developed:

- Strengthen the promotional investment
- Build upon the industry’s existing sustainability score, and
- Translate investment into social license, coordination, and extension.

The current project developed an R&D plan to co-ordinate, commission and achieve goals above.

Description of the project

Table 63 Project summary of project 2016-412

Project code	2016-412
Title	ACPF IPA: Australian wild caught prawn sector RD&E management and communication
Research organisation	Australian Council of Prawn Fisheries Ltd (ACPF)
Principal investigator	Rachel King
FRDC project manager	Chris Izzo
Period of funding	2016-2021
FRDC investment	\$599,263
FRDC program allocation	30% industry, 30% community, 18% environment, 15% people, 7% adoption

Rationale	To co-ordinate, commission, and extend its RD&E investment under the 2016-2020 IPA with FRDC.
Objectives	<ul style="list-style-type: none"> • To commission nationally significant, stakeholder-driven investments that address priorities in the 2016-2020 RD&E Plan • Partner with prawn fishery jurisdictions to commission stakeholder-driven investments that address priorities in the 2016-2020 RD&E Plan • Collaborate with other sectors and utilise alternative funding sources to address priorities in the 2016-2020 RD&E Plan • Enable industry adoption of RD&E outputs through an Industry Communication Plan • Use the Community Communications Plan to increase community understanding of the sector • Advance wild-caught prawn sector personnel through a People Development Plan • Maintain collaboration amongst ACPF jurisdictions through an agreed RD&E plan and investment mechanism post-2020
Activities and outputs	<ul style="list-style-type: none"> • An Industry Communication Plan was developed in consultation with ACPF members and using the FRDC 2011-400 Communication Guide • A Community Communication Plan was developed with background research on effective communication methods on seafood matters to the community • Using baseline and evaluation data a costed and resourced communication model was developed to be executed as part of ACPF's communication module • The People Development Plan involved a review of existing development needs of the industry such as mentoring, leadership programs, and bursaries, and available programs were evaluated to assess their fit for purpose • A mid-term review of the current and future investment portfolio was conducted as per the 2016-2020 RD&E Plan • A SWOT (Strengths, Weaknesses, Opportunities, and Threats) and priority-setting workshop with ACPF members was held to inform the draft 2020-2025 RD&E Plan, future investment strategies and funding agreements
Outcomes	<ul style="list-style-type: none"> • The ACPF Communication Plan was completed and commenced, consisting of practical R&D results to assist adoption amongst fisheries and community-relevant industry information for stakeholders • The People Development Plan was completed and commenced • A mid-term review of the 2016-2020 investment portfolio was conducted • Developed recommendations as operational actions for the 2021-2025 Strategic Plan • 2020-2025 RD&E Plan drafted with future investment mechanisms and funding agreements agreed
Potential impacts	<ul style="list-style-type: none"> • Greater collaboration of ACPF partners in cross-sector or cross-jurisdictional projects with FRDC • Enabled ACPF to achieve its strategic and progressive RD&E that further prawn fisheries, especially leveraging a national approach that benefits all fisheries through increased efficiency and shared outcomes • Detailed understanding of community interaction and the need for interactive, consultative community engagement in the sector which should be considered in any future projects

Project investment

A breakdown of FRDC investment and contribution by others by financial year is shown in Table 64.

Table 64 Total investment in project 2016-412 from FRDC (nominal dollar term)

Year ending June 30 th	FRDC (\$)
2016/17	\$187,000
2017/18	\$125,762
2018/19	\$75,000
2019/20	\$48,000
2020/21	\$155,000
2021/22	\$8,501
Total	\$599,263

Source: Documents provided by FRDC.

*Contributions to the project cost not sourced from FRDC e.g. in-kind contributions

For the BCA, the cost of managing the FRDC funding was added to the FRDC contribution for the project using a management cost multiplier of 1.157. As per impact assessments in previous years, this multiplier was estimated based on a five-year average of the ratio of total FRDC non-project cash expenditure to project expenditure as reported in FRDC's Cash Flow Statement (FRDC Annual Reports, 2019-2023). No multiplier was applied to the investment by other contributors (namely ACPF), as it was assumed that project management and administration were included in the value of funding provided.

In undertaking the impact assessment, all past costs were expressed in 2023/24-dollar terms using the Implicit Price Deflator for GDP.

Summary of impacts

Table 65 below provides a summary of the expected triple bottom line impacts (economic, environmental, and social) from the project.

Table 65 Triple bottom line impacts, including those valued as part of this evaluation (in bold)

Economic	<ul style="list-style-type: none"> • Increased efficiencies in R&D conducted by ACPF • Increased cross-sector and cross-jurisdictional collaboration and leveraging among fisheries and investment partners, potentially reducing duplication in R&D and reducing administration costs
Environmental	<ul style="list-style-type: none"> • More selective and efficient fishing practices that contribute to positive environmental outcomes from ACPF's R&D
Social	<ul style="list-style-type: none"> • Increased trust within the wild-caught prawn fishery by aligning RD&E investments with industry goals and outcomes • Greater understanding of community interaction needs and opportunities for future RD&E projects to include an element of community engagement • Increased community trust of the wild-caught prawn fishery by aligning RD&E investments with community expectations

- Increased people capacity within the wild catch prawn sector

Public versus private impacts

The impacts of this project are broad in nature, and hence the impacts are likely to accrue across the public and private sectors. This project's focus on making R&D in the wild-caught prawn fisheries more efficient, will likely translate into benefits for communities associated and the environment considering this is in part the ACPF's goals. The focus on effective community engagement will further enhance the likely public impacts as ACPF will be better equipped to demonstrate the range of environmental, economic and social outcomes from their R&D investments.

Distribution of private impacts

Private impacts realised from this project will be distributed amongst wild-caught prawn fishers in Australia through effective extension of R&D outputs that in turn lead to more efficient R&D outcomes. In addition, investment in people development will improve the capabilities of individuals employed in the sector.

Impacts on other Australian industries

No direct impacts to other Australian primary industries were identified. Though there is potential that other Australian fishing and aquaculture sectors might be able to adopt R&D outputs generated over the course of the IPA management project to inform their future community engagement and people development initiatives.

Impacts overseas

No direct impacts overseas were identified.

Quantification of impacts

For the BCA, the identified impact of greater efficiencies in the ACPF's investments is quantified. Considering that this project focusses on facilitating better outcomes over all investments, this has been reflected in this assessment.

Estimated benefits

Table 66 *Benefit assumptions*

Variable	Assumption	Source/ Explanation
a) ACPF's 2016-2020 R&D Plan budget	\$3.06M	Project report
b) Average annual spend	\$612,000	a / 5
c) Annual benefit from R&D	10%	Analyst assumption, considered to compound each year over 10 years
d) Annual benefit from R&D with project	11.5%	Analyst assumption, considered to compound each year over 10 years
e) Marginal benefit	1.5%	d – c

Adoption costs

No costs in adoption have been identified.

Counterfactual

The counterfactual is considered to be lower annual returns from the R&D budget, considering a less efficient process for ACPF prioritisation and investment.

Attribution

The attribution of benefits from the project – summarised in Table 67 – considers any past inputs and expected future development costs required to realise beneficial outcomes. Considering the nature of this project and the identified benefit, FRDC is assumed 100% attributable to the impacts.

Table 67 Attribution of benefits for project 2016-412

Variable	Assumptions
FRDC attribution	100%

Adoption

Benefits are assumed to begin in year 1 of investments (2016) and are applied compounding for 10 years, hence there is an increase in benefits over 5 years, as more of the R&D budget is invested, and a decrease over 5 years, as the benefits are expected to stop after 10 years.

Results

Table 68 below presents the modelled investment performance from the project. All past costs and benefits were expressed in 2023/24-dollar terms using the Implicit Price Deflator for GDP, while all future costs and benefits were discounted to 2023/24 using a discount rate of 5%. A reinvestment rate of 5% was used for estimating the modified internal rate of return (MIRR). The analysis used the best available estimates for each variable, notwithstanding a level of uncertainty for many of the estimates. All analyses ran for the length of the investment period plus 30 years from the last year of investment (2023/24) to the final year of benefits assumed.

The results show the total investment returning a net present value (NPV) of \$3.42 million and a favourable BCR of 4.9. Table 69 shows FRDC investment returning a NPV of \$3.42 million and a BCR of 4.9.

Table 68 Investment criteria for total investment in Project 2016-412 (\$M)

Year	0	5	10	15	20	25	30
PV Benefits	\$1.57	\$4.12	\$4.29	\$4.29	\$4.29	\$4.29	\$4.29
PV Costs	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87
NPV	\$0.70	\$3.25	\$3.42	\$3.42	\$3.42	\$3.42	\$3.42
BCR	1.8	4.7	4.9	4.9	4.9	4.9	4.9
IRR	19%	31%	32%	32%	32%	32%	32%

MIRR	8%	12%	11%	10%	10%	9%	9%
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Table 69 Investment criteria for FRDC investment in Project 2016-412 (\$M)

Year	0	5	10	15	20	25	30
PV Benefits	\$1.57	\$4.12	\$4.29	\$4.29	\$4.29	\$4.29	\$4.29
PV Costs	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87
NPV	\$0.70	\$3.25	\$3.42	\$3.42	\$3.42	\$3.42	\$3.42
BCR	1.8	4.7	4.9	4.9	4.9	4.9	4.9
IRR	19%	31%	32%	32%	32%	32%	32%
MIRR	8%	12%	11%	10%	10%	9%	9%

The flow of total undiscounted costs and benefits from the project is presented in Figure 8 below.

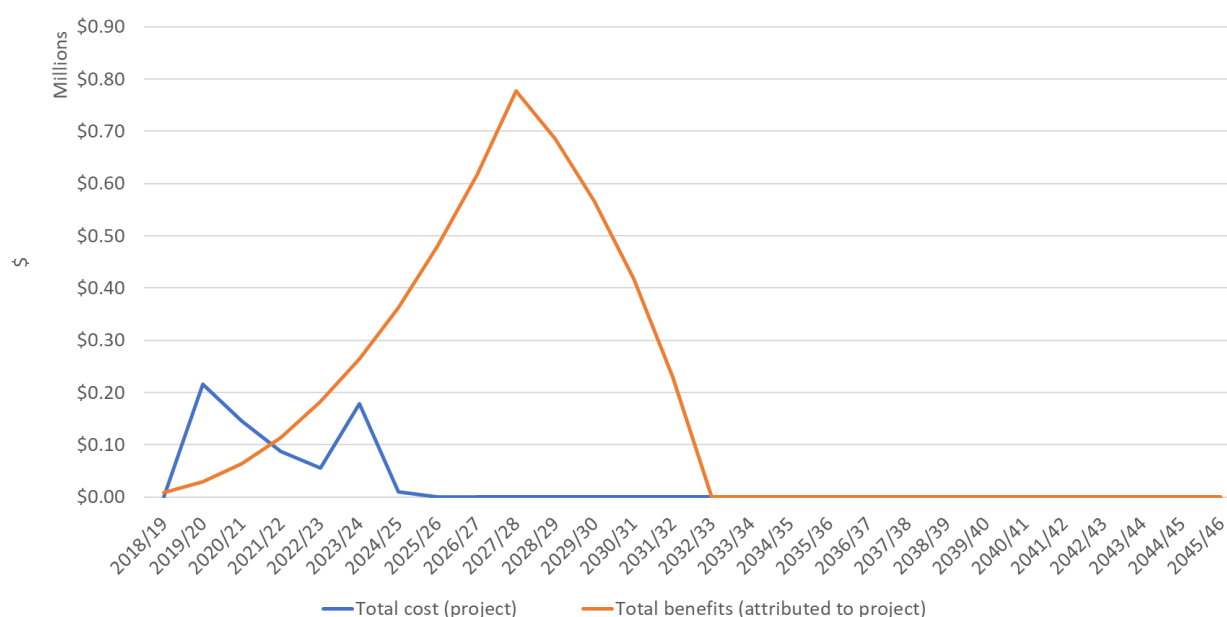


Figure 8 Flow of undiscounted costs and benefits from the project.

Sensitivity Analysis

A sensitivity analysis was carried out to determine how the investment performance (NPV, BCR and MIRR after 30 years) would change based on changes to the discount rate and other key variables. The results are presented in Table 70 below. The results show that the project will deliver a positive NPV (\$M) across all modelled scenarios.

Table 70 Sensitivity analysis

Changes to key variables	NPV (\$M)	BCR	MIRR
Standard assumption	3.42	4.9	9%
Discount rate			
4%	3.53	5.1	8%
6%	3.31	4.8	10%
Efficiency gain			
0.5%	0.52	1.6	6%
2.5%	6.48	8.5	10%

Confidence ratings

The accuracy of the assessment is highly dependent on:

- The extent to which the analysis captures and quantifies the various benefits from the project, including non-market benefits (i.e. coverage of benefits), and
- The level of confidence in the accuracy of assumptions used (i.e. confidence in assumptions).

An assessment of coverage and confidence ratings for this project is presented below in Table 71.

Table 71 Coverage and confidence ratings

Factor	Rating	Comment
Coverage of benefits	High	The approach to modelling is intended to capture all benefits associated with this project.
Confidence in assumptions	Low	Although there are clear benefits, the degree of difference to the counterfactual is difficult to measure.

Conclusions

Project 2016-412: ACPF IPA: Australian Wild-Caught Prawn Sector RD&E Management and Communication enabled the Australian Council of Prawn Fisheries (ACPF) to co-ordinate, commission and extend R&D investments under the 2016-2020 IPA with FRDC. A key output of this project was the development of the 2020-2025 ACPF RD&E Draft Plan and agreements on future investments and funding agreements.

The efficiencies gained from eliminating overlapping responsibilities between FRDC and ACPF along with the improved industry outcomes from R&D investment aligned with industry needs as a result of the IPA, were modeled. Based on the adopted assumptions total FRDC investment will return a positive economic benefit (BCR of 4.9), which remained positive under all modelled scenarios.

References

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