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RR 2014/0824

Improving Torres Strait Prawn Fishery Profitability & the Flow of Benefits to Island Communities



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Improving Torres Strait Prawn Fishery Profitability & the Flow of Benefits to Island Communities. Final Report for AFMA Research Project RR2014-0824

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Table of Contents

Executive Summary	2
Background	2
Methods	2
Results	3
Profitability	3
Flow of benefits	6
Acknowledgements	9
Introduction	10
Objectives and Desired Outcomes	10
Methods	13
Literature Review	13
Community Visits	14
TSPF Licencee and Supply Chain Interviews	16
Fishery Overview	17
Discussion and Recommendations	19
Part One – TSPF Profitability Analysis	19
Theme 1 – Fishing Costs and Revenues	20
Supply Chain Considerations	25
Recommendations – Fishing Costs and Revenues	27
Theme 2 – Marketing and Product Differentiation	28
Recommendations - Marketing and Product Differentiation	31
Theme 3 – Management and Regulatory Issues	32
Improving Stakeholder Engagement	36
A Strategic Plan for the TSPF	37
Recommendations - Management and Regulatory	38
Part Two – TSPF Flow of Benefit Opportunities	40
The Nature of Possible Benefits	40
Distribution of Potential Benefits	41
Evaluating TSPF flow of benefit opportunities	42
Practical Considerations	42
Considerations for fishing related options	43
Considerations related to business skills	43
Considerations related to cultural factors	44
Considerations related to regulatory and policy factors	44
Considerations specific to the TSPF	44

Strategies and Pathways for Flow of benefit Opportunities	45
Monitoring and Evaluation for Flow of benefit Initiatives	47
Recommendations – Flow of benefit Opportunities	47
Appendices	48
References	49

Executive Summary

Background

Identifying ways to improve profitability of the TSPF has been a recurring theme for fishery managers, industry, the Australian Fisheries Management Authority's (AFMA) Torres Strait Prawn Fishery Management Advisory Committee (TSPMAC) and the Protected Zone Joint Authority (PZJA) and its Standing Committee in recent years.

Key drivers for declining profitability have been widely recognised as significantly increased operating costs, particularly fuel costs; and falling prawn prices. Labour supply difficulties, exacerbated by the recent mining boom that is now tapering off, have also affected the productivity of boats. The PZJA decision to implement a large scale (30%) effort reduction in 2005 for sustainability reasons also contributed to reduced fishing activity.

After much discussion TSPMAC has identified vessel efficiency as a key area within the influence of the fishery and its stakeholders with potential to improve profitability. A trial of larger vessels and/or less input control restrictions on fishing capacity including trawl net dimensions, has been suggested and discussed at length by TSPMAC and PZJA agencies, including the PZJA Standing Committee.

In 2013 PZJA agencies recommended further consultation with Traditional Owners to seek their views about whether such a trial should go ahead. Subsequent consultation by A de Fries and M Betzel in 2013 confirmed strongly held traditional owner concerns about prawn fishery sustainability issues, and a lack of flow of benefits from the prawn fishery back to those communities.

Traditional Owners suggested they have borne the environmental risks arising from the TSPF, but have received no benefit from the fishery to offset those risks. These traditional owner views, and PZJA consideration of them to date have so far prevented such a trial from proceeding.

These deliberations have occurred with the backdrop of developing traditional owner aspirations and expectations about the ownership of sea-country resources, including fisheries, across Torres Strait. In late 2013 Australia's High Court determined that Commonwealth and Queensland legislation that prohibits commercial fishing without a licence did not remove native title rights of certain Torres Strait communities to take resources from defined areas. In practice, this means that native title holders are still required to comply with regulations governing commercial fishing, but this does not remove their non-exclusive native title rights (ABARES, 2014).

Methods

The project used a combination of literature reviews, interviews of licensees and supply chain representatives, and facilitated community meetings with Traditional Owners from the Erub, Poruma, Masig and Ugar Islands to collect information and evidence relevant to the objectives.

This information was analysed to develop a more detailed understanding of the challenges and opportunities facing the fishery and Traditional Owners. This process also helped identify aspects of profitability either outside the scope of the project, or that have been or are being addressed elsewhere. These include:

- aspects related to the stock status of key prawn species and the fishery's harvest strategy;
- native title considerations related to the recent High Court sea-claim findings, although these have some relevance to the discussion about increasing vessel efficiency and the proposed trial of larger vessels and/or more efficient gear, and flow of benefits more broadly; including how such a trial would be treated with reference to *future act* provisions for native title consideration;
- resource allocation aspects related to the native title considerations mentioned above;

- major externalities such as the price of fuel, labour related aspects, and to a lesser degree commodity price constraints for the wholesale prawn market, although these are addressed to some extent in the section on prawn marketing and product differentiation.

Results

This report is presented in two sections. The first relates to discussion and recommendations to improve TSPF profitability. The second addresses prospective flow of benefit opportunities.

For the profitability analysis, discussion and findings are arranged under three themes. These cover profitability issues related to fishing costs and revenues, issues related to product marketing and differentiation, and issues related to management and regulatory efficiency.

Importantly, the project has helped define the current and more strategic operating environment for the fishery, identifying key threats and opportunities that will underpin future financial viability of the TSPF. It has also further defined key issues influencing the degree of support for the fishery from Traditional Owners (TO's).

Profitability

Low profitability and declining participation are significantly reducing the scale and value of the fishery. There is now a very real risk that essential support services, such as those provided by the last remaining dedicated *Sea Swift* mother ship, will be withdrawn. If this happens the fishery in its current form will no longer be viable.

Loss of mother-ship services would also impact Traditional Owners' and communities that also use these services to access substantially cheaper fuel for both traditional and commercially focussed fishing operations such as Torres Rock Lobster (TRL) and Beche de Mer (BDM).

Without improved profitability the capacity of TSPF licencees to sustain a flow of benefits to Traditional Owners' in the area of the fishery is likely to be very limited. Some flow of benefit opportunities that are cost neutral or very low cost have been identified, although these may be of marginal benefit.

The evaluation and relative value of flow of benefit opportunities to various stakeholders depends heavily on regulatory and policy objectives for the fishery.

Current economic circumstances for the fishery necessitate a very lean and efficient business and regulatory approach. TSPF licensees are doing a lot with the resources they have to address profitability drivers within their control. Despite this there are still opportunities to improve efficiency by reducing costs and improving output prices for prawns and other fishery products. Benefits from these cost and revenue related initiatives will take time to accrue and are likely to be marginal.

The most prospective area for more rapid profitability improvement is removal of existing constraints on vessel level efficiency. Running a well-designed and carefully managed trial of larger boats and more efficient gear configurations, as recommended by TSPMAC, appears consistent with current regulatory objectives and also appears to be critically important for the survival of the fishery in the current (and likely future) business environment.

Performance criteria for the trial need to be carefully considered, including environmental aspects that may alleviate Traditional Owner concerns, and actual/observed changes in vessel efficiency expressed through an appropriate range of catch, effective effort and financial indicators developed as part of the trial design.

Prawn stocks supporting the fishery are currently healthy and support relatively high catch rates. The TSPF Harvest Strategy is also well designed, effective, and appropriate for the fishery in its current state. Recent TSPMAC and PZJA decisions are well placed to safeguard both prawn stocks and bycatch species, if fishing

effort increases in pursuit of better economic performance. Current management triggers specified in the harvest strategy approach have been developed collaboratively by TSPMAC to manage these risks.

There are significant regulatory costs for TSPF licensees arising from the unique socio-political context of the fishery. These add to the already significant costs resulting from the remote nature of the fishery and primary influences on economic performance outlined above. Management costs are generated by extensive consultation with a large range of stakeholders, and discussion and resolution of issues can extend over several years.

Management cost recovery for the TSPF is similar to that used for other Commonwealth managed commercial fisheries; however the TSPF also faces costs arising from its unique and complex management and stakeholder environment¹. There are also significant management restrictions undermining its economic efficiency. The fishery faces nearly all of the costs of a contemporary cost recovered commercial fishery, without receiving all of the benefits of an economically efficient management framework.

The fishery operates in a very challenging operating environment. Apart from profitability aspects outlined above, resource allocation and native title considerations, and socio-political considerations, add significant complexity to the management and business environment for the fishery.

To prosper in this difficult environment there is a compelling need for TSPF licensees, fishery managers and PZJA agencies, and Traditional Owners' to work together to establish an agreed strategic direction and future vision for the fishery.

Developing such a strategic plan will be challenging. Clear regulatory objectives that recognise the current socio-political context for the fishery are very important. They should also recognise recent native title developments in relation to sea-country where the fishery operates.

One of the most important aspects of a more strategic industry and management approach to the fishery is effective engagement of key stakeholders, particularly Traditional Owners. A carefully considered engagement strategy should be developed, and should include the myth busting elements identified at the June 2014 Masig Island meeting. The engagement strategy should recognise that there is a strong element of 'Social Licence to Operate' at play in the fishery.

Summary of Benefits of a more profitable TSPF

- Supply of high quality TSPF prawns to Australian and export markets will be maintained with economic and social flow on benefits.
- These prawns make a very significant contribution to Torres Strait seafood production and provide an important foundation for future marketing of a range of unique and valuable TS seafood products;
- Licence and transferable effort unit asset values will be maintained, or increased;
- Supporting infrastructure and key supply chain elements such as the motherships will be retained; with flow on benefits to communities;
- The fishery will be better able to support an appropriate flow of benefits to the communities where it operates; and
- The "owners" of the fishery, whoever they may be in the future, will benefit significantly from ownership of a socially and economically valuable commercial fishery that can continue to operate to very high environmental standards.

¹ Cost recovery for the TSPF is guided by the earlier (2004) Commonwealth Fisheries Cost Recovery Impact Statement (CRIS) which provides for some flexibility in deciding the proportion of management costs recovered from TSPF licencees.

Recommendations - Fishing Costs and Revenues

1. To maintain essential support services, particularly the mothership, fishery managers and PZJA agencies should do everything possible to remove inefficient management input controls that are constraining vessel productivity and thus returns from capital invested.
2. Explore all options to reduce fuel costs, and leverage off current initiatives and innovations being explored and trialled in the NPF and other more efficient and profitable prawn trawl fisheries. Opportunities include low drag net construction and gear configuration, fuel flow meters, engine and gearbox improvements and modernisation of refrigeration equipment (where possible major cost items could be linked to gear replacement schedules to minimise capital costs)².
3. Improve local maintenance and servicing capability. Support current licensee efforts to obtain a local presence on Masig Island during the season to help with logistics. A person with electrical, mechanical, and or refrigeration skills would be most valuable. It is very expensive and time-consuming to fly these specialists in when required.
4. Explore supply and sale of product to local communities on the Islands, and options for them to act as a small distribution hub locally. This is currently limited to Erub Island as this is the only community with an approved larger capacity freezer in operation. Explore potential for value adding to soft and broken tigers into cutlets or similar.

Recommendations - Marketing and Product Differentiation

1. Assess scale of potential spin-off value from larger boats of greater on-board processing capability in order to value add at sea.
2. Evaluate potential for Point of Origin labelling and a branding strategy to improve the current return. Determine quality control and monitoring requirements to back up point of origin differentiation.
3. TSPF licencees and supply chain representatives should seriously consider contributing to the national *Love Australian Prawns* campaign to leverage off it, and demonstrate their willingness to collaborate actively for industry wide and TSPF benefit.
4. Engage closely with the Fisheries Research and Development Corporation (FRDC) to support their emerging leadership role in coordination and promotion of Australian seafood marketing; and to leverage off those opportunities.
5. Consider extending season length with a slightly earlier start to the season (e.g. fishing commencing early in February) to benefit from the summer focused cooked prawn market.

Recommendations - Management and Regulatory

1. Active TSPF industry and management engagement and collaboration with the NPF and ECOTF is required and will pay dividends. The NPF in particular shares some of the key operating challenges of the TSPF and provides valuable insights to guide improved profitability. Using information from this report, and other information as needed, AFMA should benchmark TSPF management against the NPF.
2. The vessel efficiency trial recommended by TSPMAC should proceed as soon as possible, and should include very clear performance measures against which to evaluate the success or not of the trial against equally clear trial objectives.

² Recognising that low profitability and an uncertain/insecure operating environment makes larger scale investment/modernisation difficult and high risk.

3. An engagement strategy, focussed on TO concerns, and building on myth busting elements identified at the Masig Island meeting, must precede and accompany the trial.
4. The current cost recovery approach used for the TSPF should be reviewed by AFMA in the context of the unique TSPF operating environment, and with regard to the absence of cost recovery from other Torres Strait commercial fishing sectors.
5. In due course, and once immediate risks affecting the viability of the fishery have been mitigated, a vessel efficiency study of TSPF vessels could also be done

Flow of benefits

Consultation with Traditional Owners' during the project has identified a range of expectations about possible benefits from the fishery. These include suggestions of direct financial benefits via some type of "royalties" from the fishery; or some level of transfer of ownership of the fishery to Traditional Owners with the possibility of leasing back entitlements as is now being done for the Torres Strait finfish fishery; and a range of other less direct or substantial benefits.

To some extent, these expectations reflect broader developments for Australian fisheries management in recent years. Communities around Australia (i.e. the public) expect that fisheries will be operated and managed in a manner that delivers community benefits, or at least does not cause harm to community owned resources.

This *social licence* theme also runs through traditional owner expectations for greater benefits from the TSPF. It is amplified by more recent developments in relation to native title for sea-country resources in the region.

Importantly, the profitability analysis for the fishery suggests that flow of benefit opportunities with a significant cost to licencees, at least in the short term, are likely to be very limited by current very low to negative profitability. The large range of traditional owner views and expectations about the nature of possible benefits suggest more clarity about the appropriateness and objectives of any future flow of benefits is needed.

Literature reviewed and community consultations have identified a range of practical considerations that will influence the relevance and potential value of future flow of benefit opportunities. These include the nature and quantum of those benefits, and how they might be distributed appropriately within the region and across individual communities.

Recognising that flow of benefit opportunities identified during the project should deliver value against a range of different objectives, a multi-criteria evaluation matrix was developed. The evaluation criteria (or filters) help to assess the likely performance of different options against agreed objectives.

The evaluation criteria used to broadly evaluate flow of benefit options reflect current regulatory and policy objectives for the fishery, broader economic development related objectives for Torres Strait communities, and design principles discussed at the Masig Island meeting and further developed during the project.

If there is further policy guidance about objectives for any future flow of benefits from the prawn fishery back to Traditional Owners these evaluation criteria will need to change accordingly. For each evaluation criteria there are several lower-level attributes that help quantify the likely performance of each flow of benefit option against the agreed objectives (see below).

Success Factor (or filter)	Attributes to consider for each Success Factor
Level of Impact (contribution)	labour (increase supply), increase catch, increase catch value, increase beach price
Practicality (implementation)	set up costs, timeframe for benefits, likely rate and extent of adoption, champions interested, realistic level of cooperation available, extent of external involvement or funding
Fits community capabilities	does it fit with existing skills, community knowledge - will it require training, does it require additional facilities/investment, alignment with aspirations
Value to Traditional Owners, and TSPF	extent of benefits accruing to fishers and communities, strategic alignment for TO's, and for TSPF Industry
supports strategic objectives	builds relationships, supply chain resilience incl mothership, R&D leverage, extends flow of benefits, etc
Economic Efficiency	scale of outcomes, financial viability, economically efficient (benefits exceed costs), low cost to TSPF operators

It is important to note that the evaluation criteria outline above are somewhat subjective, that is they depend on the opinions or objectives the people that are evaluating various flow of benefit options. Despite this the evaluation framework can provide a relatively consistent process to evaluate a range of flow of benefit opportunities against a range of objectives.

The evaluation matrix was used to examine the relative value of a selection of flow of benefit opportunities identified during the project. Because of the subjectivity of the approach as outlined above, and recognising that Traditional Owners, fishery licensees, and managers may have a range of different objectives, the evaluation results of the project should be considered as examples.

The approach outlined above to evaluate flow of benefit options is well suited to further development on the basis of stakeholder discussion. For example when the project results are presented, there could be a facilitated discussion to agree the most important objectives for future flow of benefit opportunities, and the most suitable evaluation attributes to assess performance against those objectives.

Recommendations – Flow of benefit Opportunities

1. The objectives of any future flow of benefits program involving the TSPF and Traditional Owners in the area of the fishery should be clearly described. This will help to determine the relevance and value of flow of benefit opportunities, assisting a more structured evaluation approach.
2. Further development of more significant flow of benefit opportunities should be based on agreed strategic objectives for the fishery, which should also reflect traditional owner perspectives. Development of these strategic objectives will also reflect current regulatory and policy objectives for the fishery.
3. Flow of benefit options identified and evaluated during the project via the evaluation matrix will be presented by the principal investigator for the project at the next TSPMAC in Cairns 23 June 2015. These examples should be discussed by the group to illustrate how the evaluation process can work, or might be improved.
4. If possible an agreed group of flow of benefit opportunities should be developed during the June TSPMAC discussion.

5. The Australian Government's My Pathways program appears to offer one of the best avenues for funding support, including shared funding with other stakeholders, to underpin implementation of more significant flow of benefit opportunities. Close liaison between My Pathways coordinators and appropriate TSPF, community and PZJA agency representatives is encouraged.
6. Agreed flow of benefit arrangements that can be implemented directly between TSPF licencees and Traditional Owners in their communities should be initiated as soon as possible.
7. A structured monitoring and evaluation approach should be developed for any larger scale future FoB initiatives (for example training Traditional Owners' as fishery observers). For smaller scale opportunities, particularly those involving TSPF licencees, a simple qualitative evaluation exercise during TSPMAC meetings would be sufficient and cost effective.

Acknowledgements

The authors wish to thank AFMA's Torres Strait fisheries management team, as well as TSSAC members, and staff from other PZJA agencies for their help in refining the project proposal, arranging the Masig Island meeting in June 2014, and freely providing access to information and resources to support the project. Staff from ABARES also facilitated access to information and documents they have prepared to support improved TSPF profitability.

Clive Turnbull has also been generous with his wealth of knowledge about prawn stock dynamics and the TSPF harvest strategy and supporting scientific processes.

TSPF licence holders have been generous with their time during a busy period, particularly during interviews in the lead-up to the season start in March 2015. Particular thanks to:

- Ed Morrison for making detailed operational information about his fleet of TSPF vessels freely available for analysis, and for his active efforts to facilitate community benefits to Masig Island even before the project started;
- Marshall Betzel who has helped us develop a better understanding of the TSPF supply chain and related issues; as well as facilitating liaison with TSPF licencees; and
- Mike O'Brien who facilitated access to a Tropic Ocean Prawns company vessel in Cairns (*Gulf Bounty*) for familiarisation, enabling us to see and discuss firsthand the FRDC funded initiative to replace the refrigeration system.

We would also like to thank the Traditional Owners, elders, and community members of Erub, Poruma, Masig, and Ugar Islands for their support and hospitality in making community visits possible. Traditional Owners' have willingly and openly shared their traditional knowledge about sea-country resources and their community and cultural practices. This is unique and valuable information and we thank them for sharing it with us and for their support of the project.

Finally we would like to acknowledge funding from AFMA via their TSSAC processes that made the project possible; and we hope it contributes to improved and sustained profitability for the TSPF and appropriate benefits for Torres Strait Traditional Owners' of the sea-country where the fishery operates.

Introduction

The project proposal was initially developed to address AFMA's 2013 Torres Strait (TS) fisheries research priorities, specifically Torres Strait Prawn priority 3a (assess the overall economic environment of the fishery to inform marketing strategies). It also addresses TSSAC research priorities aimed at capacity building for Torres Strait Islanders in Torres Strait fisheries. PZJA agency staff also identified the need to consider opportunities for a flow of benefits from the Torres Strait Prawn Fishery (TSPF) to relevant TS communities.

It is recognised that declining participation and profitability for the TSPF in recent years and flow on effects threaten the viability of the fishery, and its future benefits. If the fishery declines below a certain point, critical infrastructure, business assets, and knowledge and capabilities may be lost, also damaging prospects for fishery related business development and capacity building adjacent TS communities.

Strategies to improve the flow of benefits to relevant TS communities, including capacity development and employment opportunities, are also aligned with TS Islander development priorities such as the Council of Australian Government's (COAG) Closing the Gap initiatives, the Torres Strait and Northern Peninsular Area Regional Plan 2009–29, and the Torres Strait Regional Authority (TSRA) TS Development Plan 2009–13.

To assess likely support for the project from Traditional Owners in communities adjacent to the prawn fishery, AFMA arranged a 2014 TSPMAC and related community meeting at Masig Island. The meeting was chaired by TSPMAC Chair, Mr Stuart Richey, and had good representation from Traditional Owners and community fisheries leaders. There were also several TSRA Board Members present. Overall, general support was shown for the project and none of the participants suggested that it should not go ahead, or that they would not cooperate. Participants emphasised that the project should proceed carefully, and that proper consultation was very important. A record of the Masig Island meeting is provided at Appendix C.

Need, Objectives and Desired Outcomes

In recognition of the substantial declines in catch, effort and profitability of the TSPF in recent years, PZJA agencies – particularly the Australian Fisheries Management Authority (AFMA) and its Torres Strait Prawn Fishery Management Advisory Committee (TSPMAC) – have been exploring options to improve profitability.

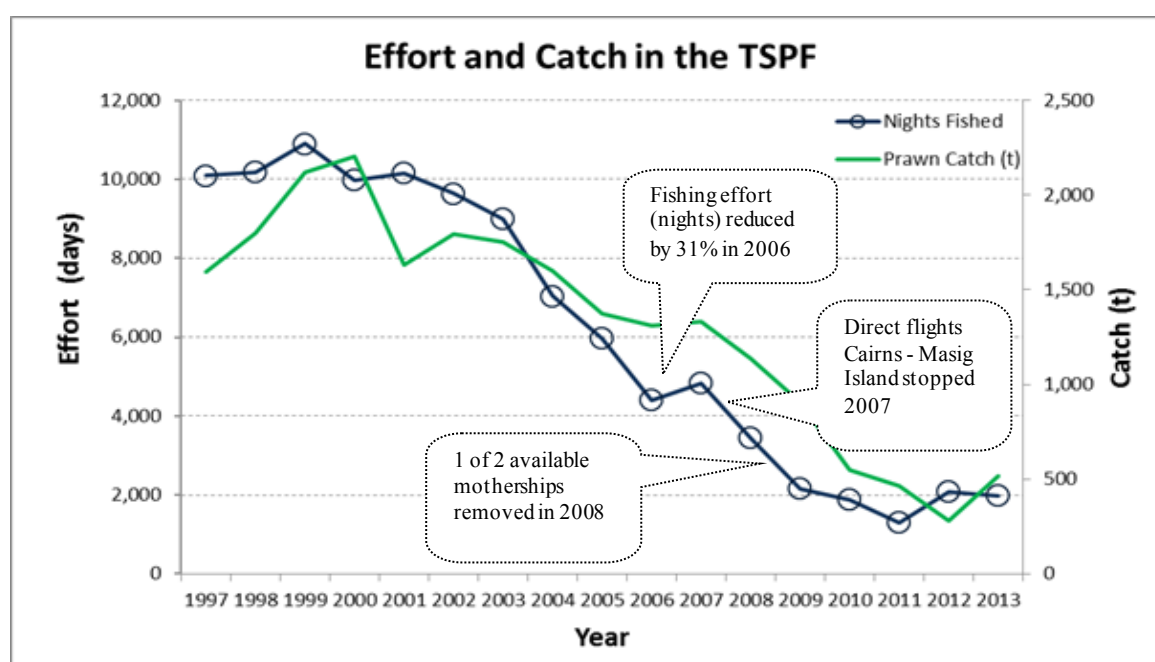


Figure 1: TSPF fishing effort and catch 1997-2013.

There is growing recognition and concern that if the fishery declines below a certain point, critical infrastructure (e.g. dedicated mothership services), business assets, knowledge and capabilities may decline to the point where longer term viability is compromised. AFMA and TSPMAC have also noted that this decline may result in increased surrender of fishing concessions, leading to a significantly greater financial burden on remaining licencees.

One of the initiatives proposed by the TSPMAC was to trial larger boats and more efficient fishing gear in the fishery, enabling more efficient utilisation of existing assets, including dual endorsed vessels operating nearby. After much deliberation TSPMAC concluded this was one of the only avenues available to increase profitability.

The PZJA Standing Committee recommended that the trial could only go ahead after further consultation with Traditional Owners, and if PZJA agencies agreed the consultation had achieved a suitable outcome. AFMA engaged external consultants (A. de Fries and M. Betzel) to conduct this consultation. They found that absence of a formal flow of benefit from the TSPF to traditional inhabitants in/around these key communities was the fundamental issue emerging from consultation.

After consideration of the consultant's report TSPMAC again discussed feasible options to improve profitability in the fishery noting:

The MAC... has been investigating ways to improve profitability in the TSPF for several years with little progress. The community consultation identified that a lack of benefits flowing from the TSPF to the communities was a major obstacle to progress... The committee members agreed that if flow of benefits from the TSPF to communities was increased, there may be more engagement from the traditional sector in developing options to improve profitability.

Objectives for the project were:

1. Develop practical strategies to improve TSPF profitability using existing TSPF and related tropical prawn fishery research; and new economic research and analysis.
2. Work with TS communities, PZJA agencies and TSPF fishers to assess the aspirations and current capability of relevant Torres Strait Islander communities (and existing fisheries-related infrastructure) to support appropriate flow of benefits back to those communities.
3. Based on 1 and 2 above, work with TSPF licence holders, TS community representatives, and PZJA agencies to:
 - develop practical, economically efficient and culturally appropriate pathways to enable an appropriate and sustained FoB from the TSPF to relevant island communities; and
 - Develop strategies to grow TS Islander expertise and capacity to participate in the TSPF and other TS fisheries, and/or participate in/manage suitable fishing and infrastructure-related businesses.

Participants at the Masig Island meeting also agreed on a set of Guiding Principles for the project, outlined below:

1. **Transparency and no hidden agendas:** Traditional Owners agreed that transparency and trust were essential to good outcomes and sustainable future benefits from the project.
2. **Consultation protocols and process:** people at the meeting agreed that consultation with communities was very important and should be done in a way that makes information about the project easy to understand, access and share.
3. **Myth busting for the prawn fishery:** people agreed some of the Traditional Owners' views and feelings about the Prawn Fishery may be based on old information, or ways the fishery used to operate in the past. The project and the PZJA agencies must try to show how the fishery now operates, and how environmental performance has improved.

4. **Enable benefits as soon as possible:** as well as longer term strategies, people at the meeting agreed the project should also try to identify more immediate shared benefits that don't disrupt prawn fishing operations, and can be done with the least cost to the fishery.

It is also worth noting the likely outcomes if TSPF profitability can be improved. These include:

- Supply of high quality TSPF prawns to Australian and export markets will be maintained with economic and social flow on benefits.
- These prawns make a very significant contribution to Torres Strait seafood production and provide an important foundation for future marketing of a range of unique and valuable TS seafood products;
- Licence and transferable effort unit asset values will be maintained, or increased;
- Supporting infrastructure and key supply chain elements such as the motherships will be retained; with flow on benefits to communities;
- The fishery will be better able to support an appropriate flow of benefits to the communities where it operates; and
- The "owners" of the fishery, whoever they may be in the future, will benefit significantly from ownership of a socially and economically valuable commercial fishery that can continue to operate to very high environmental standards.

Methods

The methods and key activities for the project are summarised below.

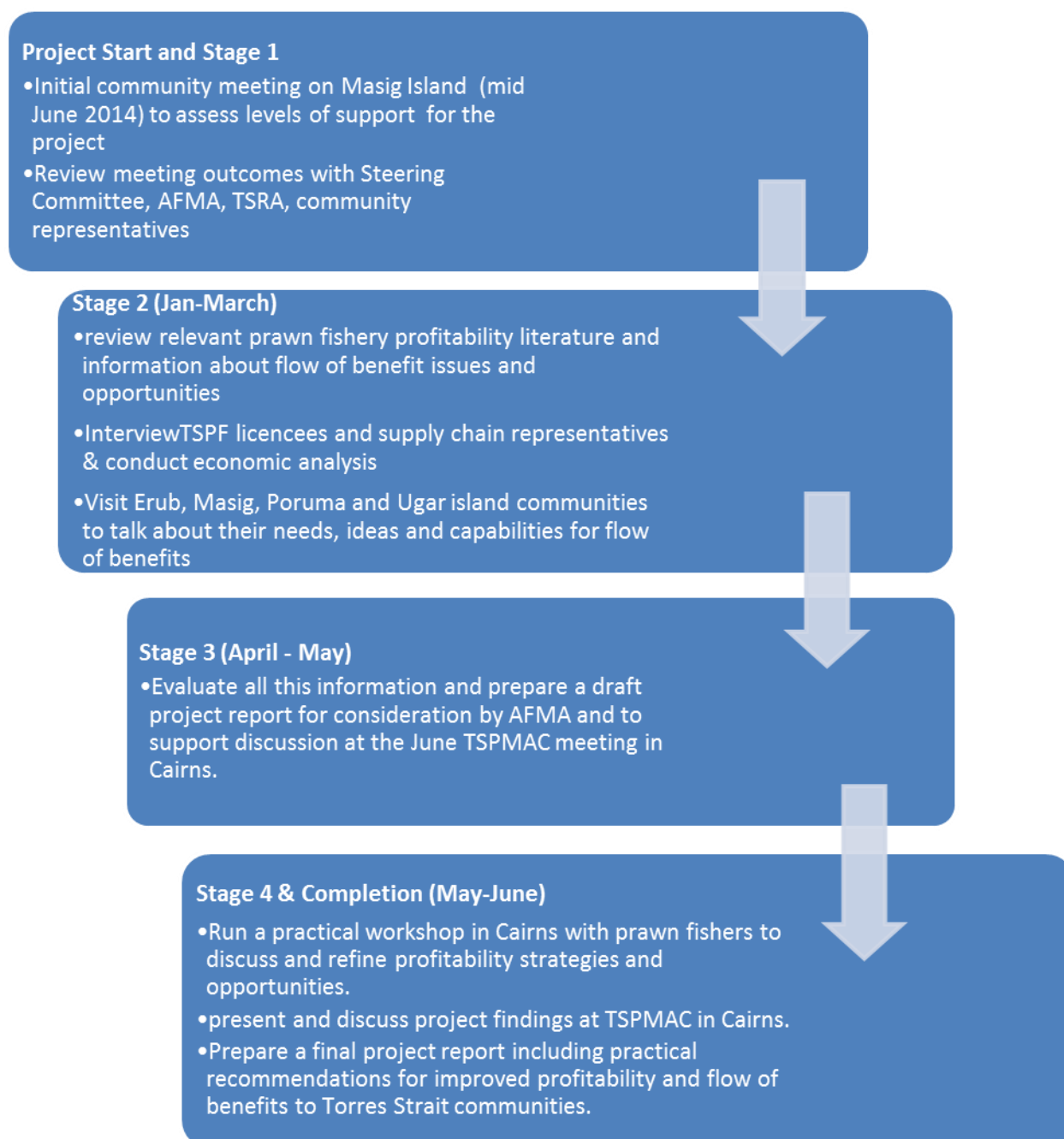


Figure 2: project methods and key activities.

Literature Review

Recent literature relevant to the TSPF operating and business environment, and the development of sustainable and practical flow of benefit options, was reviewed early in the project. This also informed subsequent research and evaluation of Flow of benefit (FoB) options. The literature review also supported

development of a series of questions (survey instruments) used to guide TSPF licensee and supply chain interviews, and community consultations.

Key research questions addressed in the review encompassed:

- Scale, seasonality and profitability of the TSPF, including relative performance against the Northern Prawn Fishery;
- Unique Torres Strait cultural, economic and governance factors relevant to Traditional Owner engagement with, or participation in, the TSPF and/or other fishing related businesses both now and in the future;
- Lessons and insights from recent projects related to capacity building and strategic development of other important Torres Strait Fisheries, including the Torres Strait Rock Lobster (TRL) and Finfish fisheries.

Findings from the literature review have been integrated with other data collected during the project (e.g. licensee and supply chain surveys, reports of community consultations) to underpin the project findings and recommendations about profitability and flow of benefits.

Community Visits

The project proposal specified visits to Ugar, Erub, Masig and Poruma Islands, as they are communities closest and most relevant to the fishery. Some stakeholders also suggested visits to communities outside these key prawn fishery locations (e.g. Iama Island due to its proximity to the Warrior Reef area where juvenile prawns congregate).

The need to expand community consultations beyond the immediate prawn fishery communities was discussed at the Masig Island meeting in late June 2014 and it was agreed that visits would be limited to the four Islands mentioned above.

Community and one-on-one meetings conducted during these visits were guided by the survey instruments developed for Traditional Owner consultations. Flyers providing summary information about the project, purpose of visits and details of visitors were distributed prior to each of the visits and posted on community noticeboards by council officers. The survey instruments used for all stakeholder groups were made available on the project website (See cobaltmrm.com.au/torres-strait-prawn-fishery-profitability-and-flow-of-benefits), and are provided as an appendix to this report.

Community visits provided the opportunity to present TSPF Myth Busting material prepared by AFMA with the support of PZJA Agencies. The decision to prepare this material was an outcome of the Masig Island meeting of June 2014. Visits were conducted on two separate trips by Andy Bodsworth (Project Principal Investigator & Director Cobalt MRM) as follows:

- | | |
|------------------|-----------------------|
| 1. Erub Island | 24 - 25 February 2015 |
| 2. Poruma Island | 26 - 27 February 2015 |
| 3. Ugar Island | 26 May 2015 |
| 4. Masig Island | 27 May 2015 |

Meetings focused on collecting information about the skills, capabilities and infrastructure that might best support flow of benefits from the TSPF back to the communities. They comprised one on one discussions with key community fisheries representatives, as well as a group community meeting with fisheries representatives and other key community members.

Part of the community visit discussion centered on understanding skills, capabilities, assets and infrastructure relevant to the TSPF and broader fisheries related flow of benefit opportunities (capability and skills audit). This information is being compiled into a community-specific table for future reference, and to assist

evaluation of flow of benefit opportunities raised at each community discussion and over the course of the project. A summary of the community visits is provided at Appendix B.

Considerable liaison to arrange mutually acceptable times for community visits to Masig and Ugar Islands was required. For Masig, a heavy visit schedule for various fisheries and other portfolio issues, combined with restructuring of the Masig Community Fishers Association, delayed visit arrangements.

Arranging a visit to Ugar was also challenging due to the heavy schedule of visits and ongoing fisheries management processes in Torres Strait. Consultation with Ugar leaders was arranged in conjunction with other TSRA led fisheries consultations whilst Ugar fisheries representatives were available in Cairns 25–26 May 2015.

The combination of one on one discussions with key fisheries representatives and an open community meeting provided a good opportunity to cover issues in detail and get an overall community perspective on the TSPF, and to discuss potential flow of benefit opportunities, and people's expectations about such benefits.

Several participants at community meetings noted their appreciation and support for TSPF industry efforts, both via the project and more broadly, to integrate more closely with communities in the area of the fishery; and to actively consider how these closer relationships might be enabled.

Presentation of TSPF Myth Busting Materials

The June 2014 Masig Island TSPMAC and project meeting agreed that some traditional owner views about the environmental impacts of the fishery may be based on older information, or fishing experiences that do not reflect the current practices in the fishery. Participants agreed that a package of information describing how the fishery currently operates, and illustrating improvements in fishing practices that are reducing environmental impacts, would be valuable.

AFMA with support from PZJA agencies developed and printed a colour brochure summarising decision-making processes, current fishery operations, and environmental sustainability, catch monitoring and fishing gear/techniques. They also developed a brief (5 minute) video covering recent initiatives to improve environmental performance of the fishery, including narrative by TSPF industry representatives about their commitment to an environmentally sustainable and profitable fishery. The video included underwater footage of Turtle Excluder Devices (TEDs) and Bycatch Reduction Devices (BRDs) including square mesh and escape panels.

At each meeting the brochure was handed out to meeting participants and additional copies left with community fishers associations. The video was also shown and there was a facilitated discussion about the issues it covered. Participants were advised that the video is available online at the PZJA website and via the Cobalt MRM TSPF project website.

These myth busting materials were generally well received. Several participants commented favourably on footage showing a turtle escaping via the TED, and smaller finfish bycatch escaping via the BRD sewn into the trawl net. Other comments suggested participants appreciated the opportunity to see how the fishery currently operates compared to some of the more dated views about the fishery and its environmental impacts.

One participant who had worked previously on prawn trawlers suggested this was the first time in his experience that the TSPF operators had openly recognised the need to work more closely with people in the communities to identify and develop benefits for the communities from the fishery - and he welcomed this.

TSPF Licencee and Supply Chain Interviews

Licencee and supply chain interviews were completed in late March 2015. Ten active TSPF fishers were interviewed, some of whom operate more than one vessel. These active licencees provided a high level of support with the interview process. Initial delays to the project start meant that many of the interviews were done in the lead-up to the start of the fishing season, or soon after opening.

Interviews focused on getting a good understanding of the TSPF operating environment, including finer scale business aspects, current business challenges and opportunities; as well as licencee views about skills, capabilities and infrastructure that might support sustainable flow of benefits from the fishery back to communities. Some interviewees generously provided (confidential) detailed financial information in addition to that sought in the survey instruments; this provided valuable insights about their business operating environment.

Key TSPF supply chain representatives were also interviewed using the survey instrument. These encompassed wholesale local and regional seafood buyers that handle the majority of TSPF product, local retail and restaurant buyers, and chandlery and logistic support services (.g. Seaswift Cairns). Supply chain interviews covered the full range of related activities including current and potential TSPF marketing and branding aspects.

Records of interviews were prepared and this information analysed to inform findings related to licencee business profitability, marketing and branding considerations, and supporting capabilities and infrastructure aspects that relate to potential flow of benefit opportunities.

Fishery Overview

The Torres Strait Prawn Fishery uses demersal (sea-bed) trawl gear to fish at night for tropical prawn species and targeting valuable Brown Tiger Prawns (*Penaeus esculentus*). Less valuable Endeavour Prawns (*Metapenaeus endeavouri*) are also taken and occasionally targeted when catch rates or sizes are deemed suitable. Red spot king prawns (*Melicertus longistylus*) are also caught as a by-product species. Other valuable by-product species taken include Moreton Bay bugs, scallops and squid.

The fishery is managed by the Torres Strait Protected Zone Joint Authority (PZJA) in accordance with the Torres Strait Treaty. The Treaty provides Australia with access to a 25% share of fisheries resources in Papua New Guinea's jurisdiction, and Papua New Guinea has reciprocal access to the Australian fisheries. The PZJA comprises the Australian Government and Queensland ministers responsible for fisheries and the Chair of the Torres Strait Regional Authority (TSRA) (Flood and Mazur, 2014).

The TSPF is adjacent to the Commonwealth Northern Prawn Fishery (NPF) and the Queensland East Coast Otter Trawl Fishery (ECOTF). Several TSPF licences also hold licences and catch entitlements to fish in either the NPF or ECOTF, or both. TSPF input controls on boat length and net size are the same as those in the Queensland ECOTF. The NPF does not share these boat and gear size restrictions (de Fries and Betzel, 2013).

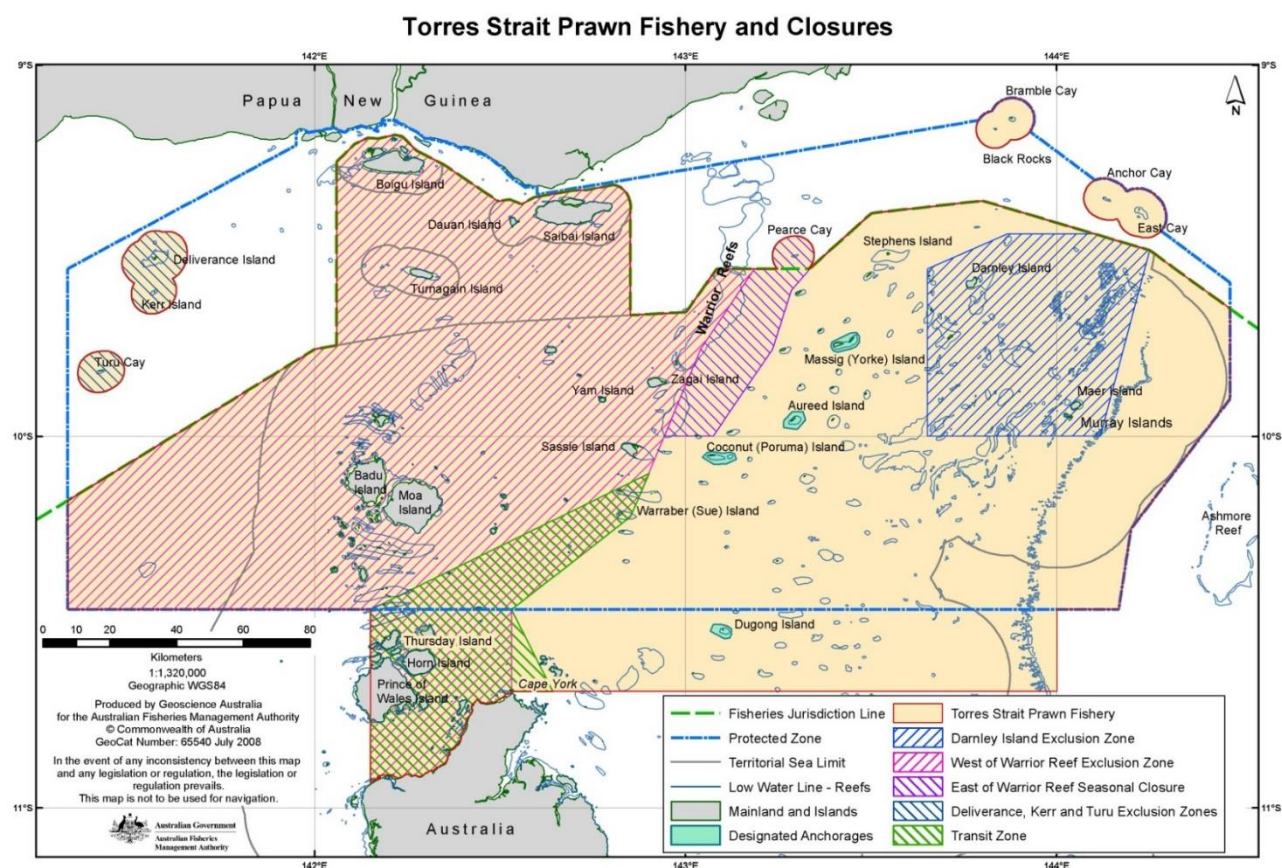


Figure 3: area of the TSPF including fishery closures.

The TSPF is managed primarily via transferable fishing effort units (fishing nights) and a suite of other input controls including vessel size and horsepower restrictions, controls on trawl net dimensions (net head-rope and foot-rope length, mesh size) and spatial management via series of closures.

In 2005 total allowable effort was reduced by just over 30% for sustainability reasons. Since then effort and catch in the fishery have been declining from the high-activity years 1997–2001. The fishery has now stabilised at lower levels of catch and is characterised by significant amounts of unused (latent) fishing effort.

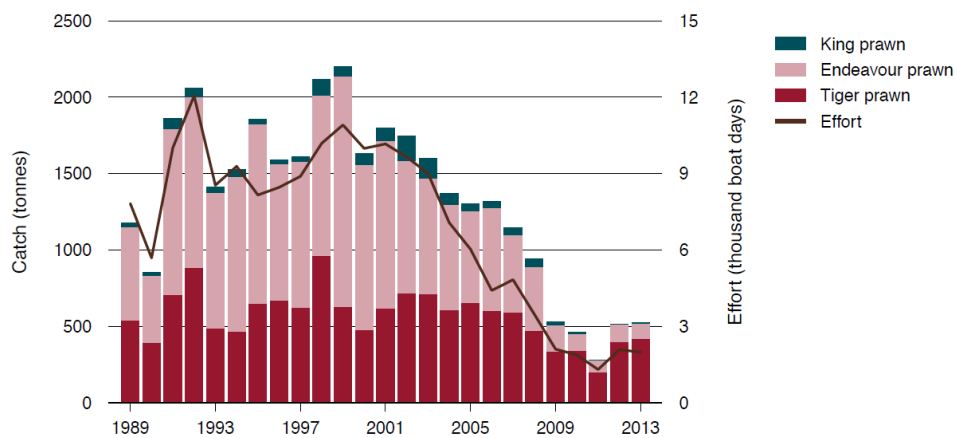


Figure 4: catch volume and effort in the TSPF 1989-2013, including catch by species (source Flood and Mazur, 2014).

There are currently some 20–30 boats working the TSPF at varying levels of intensity. Some boats are dedicated to fishing the TSPF all season, others split their fishing effort across adjacent prawn fisheries (e.g. NPF and Queensland ECOTF). Total catch is currently in the order of 500 tonnes, and in 2012–2013 the gross value of production (GVP) for the fishery was \$5.92 million.¹⁰ Tiger prawns accounted for 80% of this GVP. The main issue confronting the profitability of the TSPF as widely reported in the literature, and by licencees, is falling prawn prices and substantial rises in operating costs, particularly fuel. For example during the peak years of activity, prawn prices were substantially higher (peaking at around \$26/kg in 1999–2000 compared with around \$12 in 2010, and fuel prices were lower – in 1999 around half the \$1.76/litre in 2015). (Source: Skirtun 2014, Vieira & Perks 2009, interviews).

Discussion and Recommendations

This section of the report has been structured in two parts. Part one covers analysis and discussion of key elements of profitability and opportunities to improve the performance of those. Part two covers flow of benefit aspects of the project. It covers the need for these flow of benefits, their relationship to fishery and broader regulatory and policy objectives, flow of benefit opportunities identified during the project, and options to evaluate these within the fishery's current operating context.

Part One – TSPF Profitability Analysis

Analysis of the information collected via the literature review, licensee and supply chain interviews, and community meetings with Traditional Owners has helped narrow down key elements of profitability that the TSPF management community can hope to influence. Within these the project has focused on:

- more practical business aspects of profitability with emphasis on costs and revenues;
- opportunities to add value to catch through improved marketing and/or product differentiation;
- opportunities to improve management and/or regulatory efficiency;
- opportunities to improve fishery performance through improved strategic planning and stakeholder engagement.

There are some important aspects of TSPF profitability outside the scope of the project, or being addressed effectively through other initiatives. In summary these are:

- The inter-relationships between current prawn stock status and harvest strategy design. Noting prawn stocks are estimated to be above Maximum Sustainable Yield (MSY) levels, and may be at a level approximating Maximum Economic Yield (MEY); and neither are limiting the fishery;
- The project recognises and assimilates the extensive and valuable work completed by ABARES in recent years analysing and reporting on Economic efficiency and profitability considerations for the TSPF and NPF;
- The project recognises and assimilates the successful national level *Love Australian Prawns* marketing campaign; and
- Native title considerations and the ongoing shift in ownership of most Torres Strait fisheries from commercial fishers (TVH) to Traditional Owners (TIB) and related policy issues; although these issues are part of the project discussion about regulatory efficiency and the importance of a more cohesive strategic planning framework and foundation for the TSPF.

Key profitability drivers discussed are presented as a series of inter-related themes; with recommendations provided for each.



Figure 5: key profitability themes for the TSPF.

Theme 1 – Fishing Costs and Revenues

Comprehensive ABARES research (e.g. Skirtun and Vieira, 2012) over the period from 1998–99 and 2007–08 identified the following major factors affecting TSPF profitability:

- **Productivity:** Productivity is a measure of the catching efficiency of the vessel comprised of attributes like fishing knowledge, and vessel and gear efficiency. It fell in the first three years of the ABARES analysis period. Although stocks of prawn species increased around 2000-2001, productivity did not rise.
- **Output prices:** Prices peaked in 2000-2001, and seem to have a strong effect not only directly but also through effort and number of fishing days used in the TSPF. The contribution of output prices to profitability declined significantly from 2000-2006, before becoming relatively stable.
- **Fuel prices:** The index of fuel price fell significantly throughout the period (this index illustrates the influence of fuel prices on profitability). Industry views in 2013 also emphasised the effects of rising diesel prices on the profitability of operations in the TSPF (de Fries & Betzel, 2013).
- **Labour costs:** Labour costs were relatively stable over the analysis period so have not contributed to declines in profitability. However, assuming a standard wage for each crew member (rather than a common payment of a cut of production), labour accounts for more than a quarter of average vessel costs (Skirtun & Vieira 2012).

Other ABARES research has identified the relationship between profitability, vessel productivity and fuel prices:

Since 2002–03, the contribution to profit from fuel price in the TSPF became increasingly negative. Without sufficient improvement in productivity, falling output prices and rising fuel costs undermined profitability in the TSPF over the period of analysis. (Skirtun 2013, p3).

This contrasts with NPF where drivers of profitability have also changed but with a more positive net impact:

For instance, in the early 2000s output prices contributed favourably to profitability, relative to the respective reference vessel in each fishery. This relative contribution declined considerably from 2001–02 onwards. For the NPF, the contribution to profit from productivity increased substantially after 2005–06, offsetting the decline in contribution from output prices. Overall, there was improved profitability in the fishery. (Skirtun 2013, p3)

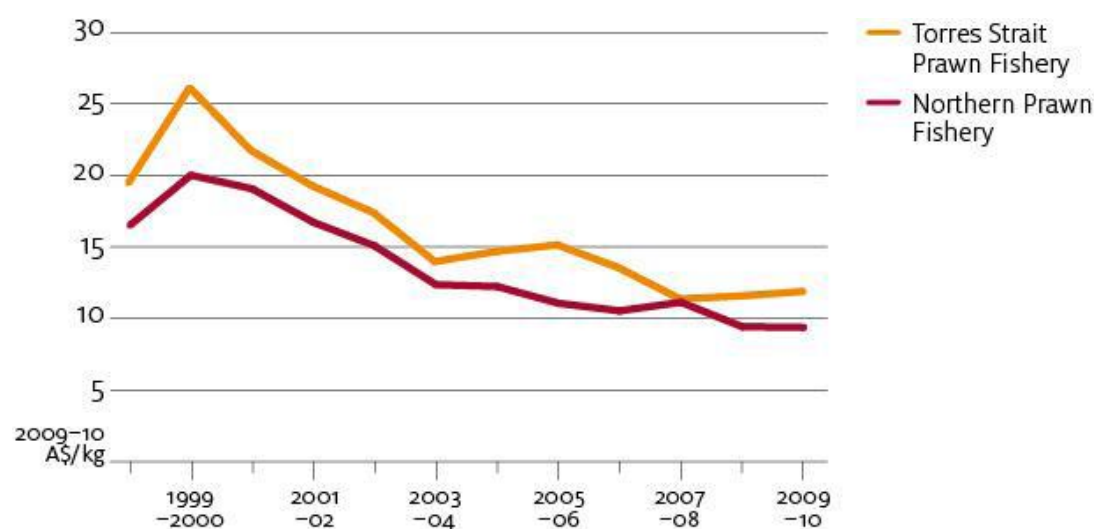


Figure 6: real average output prices in the NPF and TSPF 1999-2010 (source Skirtun, 2014)

Structure of Fishing Effort

All licensees currently working the TSPF are based outside the Torres Strait, and the fishery is characterised by a high percentage of unused fishing days – 68% in 2014 (Cocking and Turnbull, 2015). This and the fall-off in effort are clear indications that profitability has fallen and the fishery is now less attractive to many licence holders.

The current fleet contains a mix of low catch weight and high catch weight vessels. This fishing pattern seems to reflect a combination of dedicated TSPF operations, mixed with a range of dual endorsed vessels that also fish in the NPF and/or ECOTF to optimise their return to capital depending on licence and effort unit allocations.

In 2013 just 10 of the 25 boats caught over 20,000kg over the season, and another 10 boats finished the season with less than 10,000kg of catch.

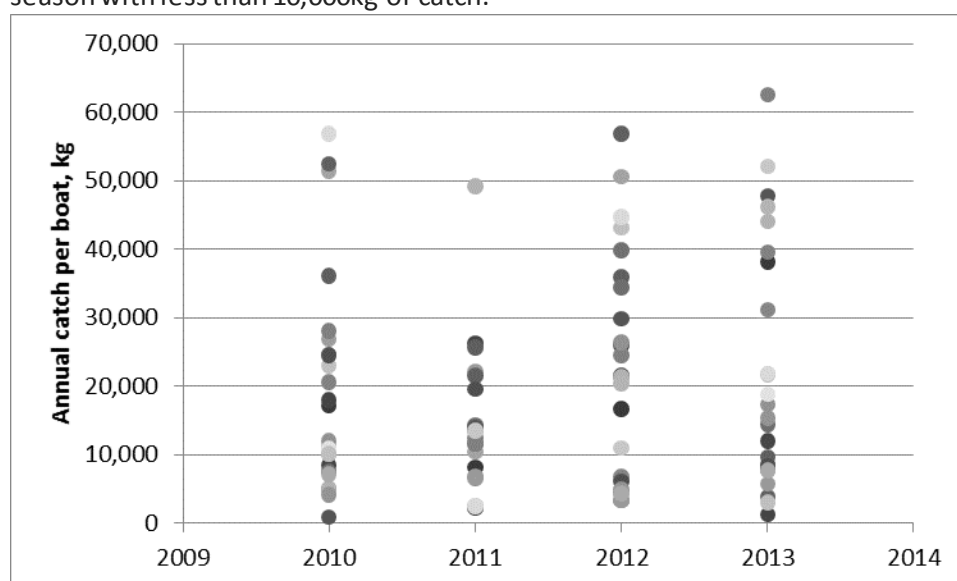


Figure 7: distribution of annual catch per boat TSPF (Source: AFMA Logbooks).

Costs Outgoing

Researchers have shown that at the individual boat level input costs have a strong influence on profitability, with the costs of labour, fuel, and additionally repair and maintenance costs, accounting for 78 per cent of cash costs in 2007-08. For 2006 -07 and 2007- 08, fuel costs were the highest expenses for boats that operated at least part of their operation in the TSPF (Vieira & Perks 2009).

Average per boat fuel costs accounted for 43 per cent of total cash costs in 2006-07, which was the highest proportion of costs ever recorded. However, at the level of individual boat financials, cash income, unlike fishery net economic return, returned to a positive level for the year 2007- 08 (Vieira & Perks 2009).

“I pay \$6000 per year for my licence for 92 nights. If you don’t pay the licence fee it reverts back to the government.”

“I spend more on good quality cartons and I like to present my product as the best possible. Good cartons hold up to handling better and don’t break in transit. Other fishers don’t bother and buyers notice.”

My main costs are roughly 28% wages and 35% fuel, and we use 800 litres per night

Additional detailed information about boat costs and revenue for boats operating in the TSPF in the years 2006-2007 and 2007-2008 is outlined by Vieira and Perks (2009). The figure below from Flood and Mazur (2014) shows the inter-relationship between hours trawled, gross value of production and net economic return per vessel, with effort (hours) generally falling when Net Economic Returns have been negative.

Labour costs have been relatively stable over the last decade and rising fuel costs continue to dominate the cost side of the TSPF profitability equation.

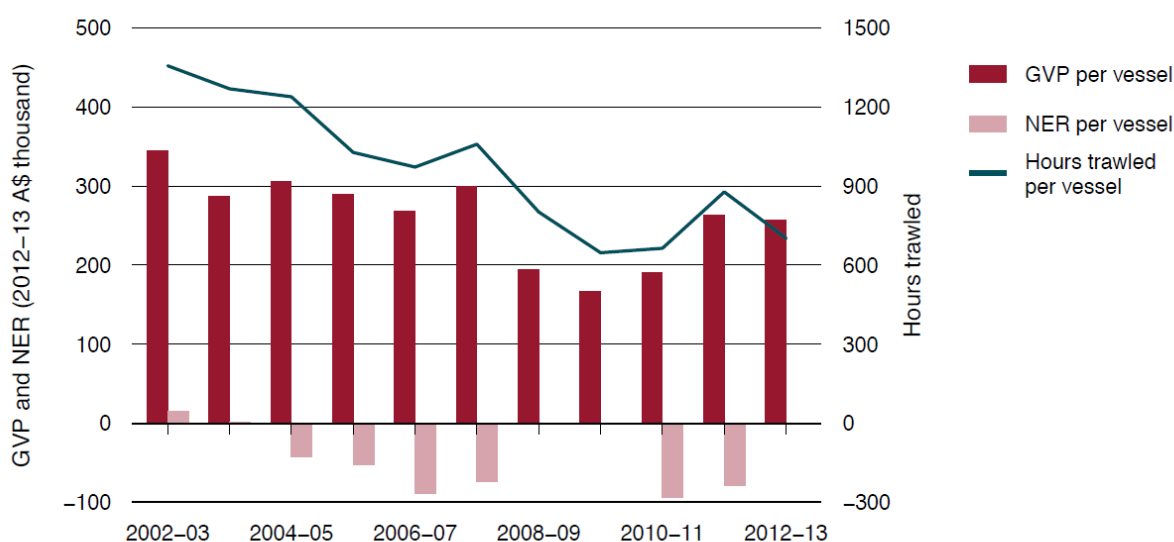


Figure 8: TSPF production, annual returns and effort 2002-2012 (Source: Flood and Mazur, 2014)

Table 1: indicative vessel level costs for the TSPF

Indicative vessel level cash costs
Fuel – interviewees with a long history in the TSPF reported that in the 1990's fuel was 3%–5% of total costs, now fuel comprises 30%–40% of total costs. Current cost for fuel is approximately \$1.76 per litre and fishers receive \$0.38 rebate from the Australian Government. Fishers reported using around 800 litres per night although this varies significantly with vessel size and gear configuration. Some fishers advised they use around 12,000 litres of fuel per fishing cycle (ie 2 weeks out between unloading). Because Torres Strait is so remote 20,000 litres of fuel is needed to get there from Cairns.
Wages 25-30% of costs
Mothership fees
TSPF licence fees at \$7,500 annually for 150 nights compared to East Coast Licence fees at \$3,000 - \$4,000 p/a.
Unloading fees 41c/kg
Insurance - \$30,000 per \$1 million
Repairs and maintenance
Packaging/cartons for prawns

Source: interviews

Return for Catch

In 2012–13 the gross value of production (GVP) for the fishery was \$5.92 million (Flood and Mazur). Tiger prawns accounted for 80% of this GVP. The 2012 catch was a significant decline from the fishery's earlier status as the commercial fishery with the highest monetary value in the Torres Strait, at \$11 million (2009–

10 AUD) in 2007– 08 (Skirtun & Vieira 2009). In that year, total prawn catch for the fishery included 469 tonnes of tiger prawns, 418 tonnes of endeavour prawns, 44 tonnes of king prawns, 32 tonnes of other prawns, and non-prawn by-products including Moreton Bay bugs, scallops and squid (Vieira & Perks 2009). Prices received by fishers peaked at around \$25/kg in late 1990s peak, and now they are closer to \$12/kg (interviews).

Most fishers agree that Torres Strait is a good area to fish even though it is remote, as the prawns are very good quality; bigger, firmer, and they present well. Average catch rates are good compared to other fisheries and good catches can generally be maintained through the season, and to some extent through moon phases.

Prices for uncooked (green) tigers are \$3–\$4/kg less and endeavours \$2.50 less/kg.

Table 2: typical current cooked prawn prices (source: interviews)

	Grade 10–20 per pound	Grade 21–30 per pound
Endeavours	\$12.50/kg	\$10.50/kg
Tigers	\$16.50/kg	\$13.50/kg

Fishers are Price Takers, not Price Setters

Generally wholesalers are the price setters and there is a significant mark-up through the distribution chain to the consumer. Processors, major buyers, and exporters also have influence on prices.

Fishers reported a range of factors that affected the price received for their prawns. Shell quality of prawns varies according to the moon phase, around a full moon shells are softer and the prawns less valuable. Prawn sizes vary from season to season and spatially. Given similar quality, larger prawns are more valuable.

One observation was that a lack of industry cohesion affects prices, for example “5-6 times a year a local fisher will sell prawns direct from their boat at say \$11 kg when the standard price from buyers is \$12 kg. Those operators may think they are winning from that but overall there’s a negative effect on value/prices”. One buyer considered that current prices for TSPF and other prawn fisheries are around the level of “fair market return” for the effort and costs associated with fishing.

Vessel Characteristics

There is some disagreement amongst TSPF fishers about vessel size and the implications for profitability. Some suggest larger and more modern boats would enable less reliance on motherships via their capacity to carry more fuel and product, and ability to add value through more efficient on board processing.

“I need to make \$3,500 per night to cover costs.”

“I need to catch at least 300 kilos per night to survive.”

“Most of the season we can work effectively through the moon phases and still get good catches.”

“Bottom line is that in the NPF they are able to catch more prawns/better quality/size prawns per litre of fuel used”

“Last year (2014) was a bad year averaging 200kg per night of mainly tigers, not many endeavours. This season going well so far with average 300-350kg per night of good tigers, and more endeavours mixed in as well. This year we are paying least 25 cents per litre more for fuel. But prawn prices have been static with changes in the Australian dollar and the loss of the valuable export market to Japan where most of the tigers used to go.”

“Where possible prawns are cooked; this increases the price per kilogram by between two and four dollars.”

Others suggest smaller boats are a better fit with the TSPF although recognised the critical importance of continued mothership availability. They suggest that if the mothership goes there will be a stronger case for bigger boats, but even then not many boats can carry enough fuel to operate for more than 6 weeks or so.

In general the TSPF fleet is characterised by older vessels (20 to 40 years). The nature of the fishery means that boats are fished hard and reliability is critically important. More modern vessels offer safety advantages, have more efficient engines, including gear-box ratios, and may tow nets more efficiently.

Potential loss of the mothership will introduce more risks and inefficiencies in the supply chain under current arrangements. This may induce some demand for on-Island freezer facilities to manage that risk.

Information from the literature reviewed, and interviews with licencees illustrates the importance of all vessels being able to optimise their individual productivity. The ability to catch the most valuable prawns at least cost is fundamentally important.

“They need to allow bigger boats so we can carry more fuel, crew and can value add on board.”

“Bigger boats aren’t needed to be profitable, they may be over-capitalised. 18-20m boats are the best for the Straits. Our crew of 3 can handle quite a few more prawns per night than they usually get in TS – ie up to 550 kg per night. If the mothership goes there will be a much stronger case for bigger boats.”

Gear Innovation

Temperate and tropical prawn trawl fisheries around Australia share some of the profitability challenges facing the TSPF. The NPF, in partnership with FRDC and other funding agencies, is at the forefront of carefully targeted R&D effort to address some of these. With fuel playing such a significant role in vessel profitability, there is considerable work underway to develop low drag nets and trawl boards that can also ensure high catching efficiency.

Recent examples include:

- Constructing nets from high strength low drag twines such as spectra braid and dyneema;
- Using low drag otter boards such as batwing boards;
- Fitting modern fuel flow meters to optimise fuel use and vessel power;
- Steering gear innovations reducing the need for constant and drag inducing rudder corrections.

When carefully combined and optimised for each vessel, these sort of gear and fishing practice innovations have potential to significantly improve fuel efficiency while fishing. Some of the more recent net designs have been shown to reduce drag by 20-40%, and use of quad gear rather than twin gear offers prospects to maintain catch rates and substantially reduce fuel use. For example the NPF’s *Austral Fisheries* “reduced the net drag by 27% by going from 2.1mm material down to a 1.7mm low drag net sourced from India”³.

Upgrading refrigeration and freezer systems to make use of more efficient and environmentally friendly refrigerant gases is another prospective area. FRDC is currently working with Tropic Ocean Prawns, another NPF company (also with TSPF and ECOTF licences) to trial a new refrigeration system with potential to save up to \$20,000 per year in refrigerant gassing costs. The capital cost of this is also very high however⁴.

³ See http://frdc.com.au/knowledge/publications/fish/Pages/23-1_articles/34_Twine-designs.aspx

⁴ See <http://www.abc.net.au/news/2014-12-04/northern-prawn-trawler-trades-bad-gases-for-good/5939692>

Willingness to Fish

Many of the licensees interviewed indicated that it is increasingly difficult to secure workers to travel to such a remote area. They suggest younger people have little interest in taking up the job and enduring isolation, and being away from home for long periods of time. It is difficult work that involves long hours, often for little return.

Interviews confirmed that while there are economies of scale with larger boats, smaller boats can also be profitable when used efficiently. Licensees are clearly trying to balance their main cost (fuel use) against expected catch volumes and returns. Different licensees will have different preference points along that balance line, leading to some fishing longer and others cutting their season short. Some licensees also fish the TSPF in a more opportunistic way, taking advantage of high early catch rates and/or using time in the fishery as a shakedown for the NPF Banana prawn season.

“It’s hard finding crew, the boats are out for 3 – 4 months and nobody is interested anymore. Many workers have left and gone to the mines.”

“I have massive fuel costs so I work close to home. I don’t go too remote anymore and TS is very remote from Townsville - it’s 4 nights and 3 full days to get there.”

Supply Chain Considerations

The TSPF supply chain is dominated by external (non-Torres Strait) capability; principally the fishing fleet, mothership and buyers. There is a low level of connection between the fishing fleet and Torres Strait communities with all processing done on vessels. A small volume of supplies like fuel and food are occasionally sourced from communities, or via the weekly community barge services.

There is some maintenance capability on the Islands, though many of the licensees interviewed noted that the extent of this could be improved and there are some efforts underway to establish small scale logistics support on Masig Island. With no onshore processing and the caught product taken out of the TS for sale to wholesalers and distributors, there is no processing or freighting taking place on the Islands themselves.

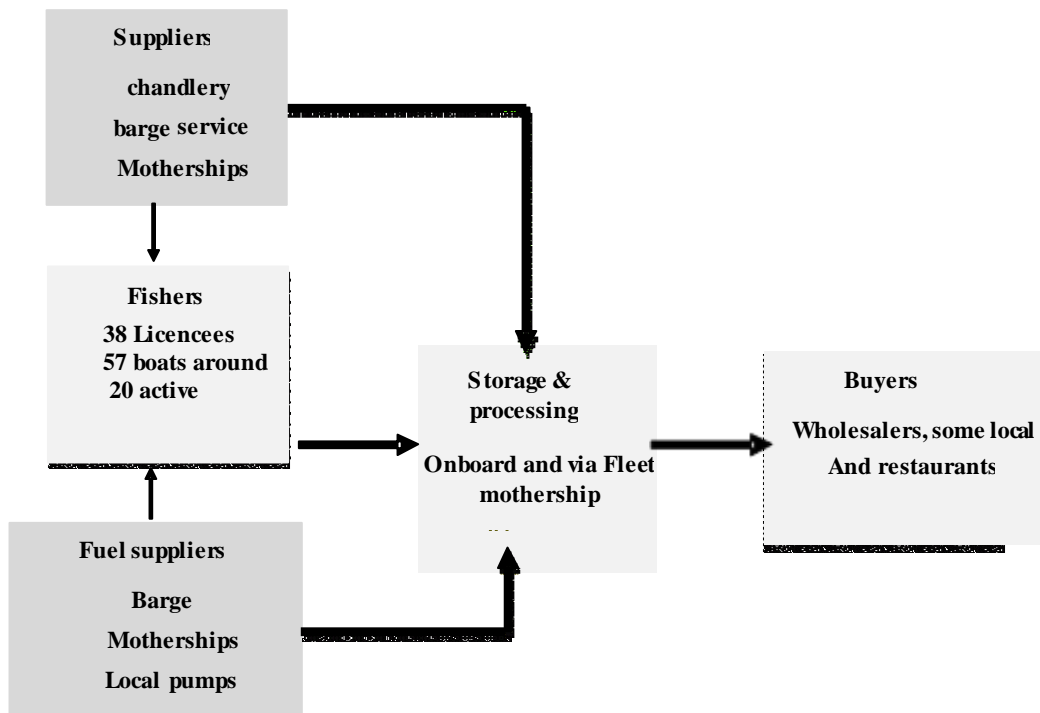
Interviews with businesses in the supply chain indicate that larger boats may have better potential for improved on-board processing, including greater freezer capacity and efficiency, and bycatch management advantages through use of re-circulating seawater hoppers.

Interviews also suggest that boats within the current 20 metre size limit also have excess processing and storage capacity at typical catch rates and volumes, and over a typical fishing cycle between mothership visits. There was no indication from any meetings or interviews of any potential for onshore processing. In terms of the supply chain the only opportunities seem to be in maintenance skills including vessel maintenance and fridge/freezer maintenance; or possibly small volumes of product being stored for local sale in community freezers.

The mothership provides fuel, potable water, fresh stores-food, cartons for prawns, and spare parts like oil filters, ropes gear, and nets if needed. They also take waste oil vessels are not allowed to discharge, plastic and other waste. Fishers also rely on the mothership for some spare parts and equipment.

In January 2012 Sea Swift sent an open letter to TSPF operators noting the operating pressures they were facing as a result of declining TSPF participation and their increasing operating costs. They sought the ongoing support of licencees, noting that the future viability of the mothership service would depend on maintaining adequate numbers of fishing vessels across the season.

Sea Swift have more recently sought advice from licencees about their intentions to fish in coming seasons, presumably as part of their analysis about the viability of the mothership operations at current low levels of fishing effort. With virtually no onshore support capability in local communities, and very limited wharfage or other suitable landing areas, the fleet motherships are critically important. All licensees interviewed mentioned their concern about the possibility of the mothership pulling out. An indicative TSPF supply chain is shown below:



Examples of TSPF Supply Chain Businesses

Suppliers

- The Deckstore
- Sea Swift Barge Service
- Sea Swift mothership service

Fuel suppliers

- Island depots
- Sea Swift Weekly Island Barge Service
- Sea Swift mothership service

Fishers

- Approximately 39 licensees and 60 boats
- Smaller actual number of boats in service (25-30) at varying effort levels

Storage & processing

- Fleet mothership
- 1 freezer at Erub - not used for Prawns.

Buyers

- North Queensland Trawlers
- Moreton Bay Seafoods
- Independent Seafood Producers
- Tropic Ocean Prawns
- Raptis
- Cairns restaurants (e.g. Barnacle Bills Seafood Inn, Splash Seafood restaurant, The Raw Prawn).

Recommendations – Fishing Costs and Revenues

1. To maintain essential support services, particularly the mothership, fishery managers and PZJA agencies should do everything possible to remove inefficient management input controls that are constraining vessel productivity and thus returns from capital invested.
2. Explore all options to reduce fuel costs, and leverage off current initiatives and innovations being explored and trialled in the NPF and other more efficient and profitable fisheries. Opportunities include low drag net construction and gear configuration (link these to gear replacement schedules to minimise capital costs).
3. Improve local maintenance and servicing capability. Support current licensee efforts to obtain a local presence on Masig Island during the season to help with logistics. A person with electrical, mechanical, and or refrigeration skills would be most valuable. It is very expensive and time-consuming to fly these specialists in an out when required.

Explore supply and sale of product to local communities on the Islands, and for them to act as a small distribution hub locally. Currently limited to Erub Island as this is the only community with an approved larger capacity freezer in operation. Explore potential for value adding to soft and broken tigers into cutlets or similar.

Theme 2 – Marketing and Product Differentiation

Profitability in the TSPF is currently low due to a combination of high operating costs and low prices for landed prawns. Australian seafood is very much part of an open global market, and TSPF catch must compete on this level.

National Marketing, Local Flavour

Industry wide marketing is driven by the Love Australian Prawns (LAP) Campaign. This campaign was developed by the Australian Council of Prawn Fishers (ACPF) and Australian Prawn Farmers Association (APFA). The campaign objective is to build demand for Australian prawns, primarily in the domestic market.

This recognises that imported prawns dominate the Australian market, accounting for around 40,000 tons per year amounting to more than double Australia's combined farm and wild catch production.⁵

Some Australian agricultural products like King Island Beef have built a modest market premium based on high levels of quality control, product integrity and consequent brand recognition. This type of differentiation can be difficult to achieve as it relies on provenance being certain, consistency of product volumes and quality, and active involvement from all parties along a supply chain.

In practice it seems these efforts are more successful when producers cooperate to ensure compliance with provenance and quality standards, and when ownership of the branded product is through a single entity. The challenge for producers is that these conditions are often difficult to achieve in a fragmented supply chain.

An individual approach, while small in scale, may be the most likely course of action as there is a high investment cost in quality monitoring, compliance and effectively marketing the differentiated product, and it is easier to recoup this cost through a single operation than through a collaborative structure. But the risk to an individual is that others in the fishery will also seek to capitalise on any premium pricing achieved while not providing any returns to the individual who made the investment.

Love Australian Prawns

After substantial consumer research, the 'Love Australian Prawns' strategy and logo was launched in late 2012. It encourages consumers to eat prawns more often and at times other than Christmas and Easter. The Love Australian Prawns (LAP) logo is described as "having all the hallmarks of an iconic brand" because it works at many different levels (H. Jenkins pers comm.).

While building awareness and market demand for Australian prawns as a seafood category, the LAP campaign provides scope for individual producers, or fisheries, to build their brands. It is funded through voluntary contributions from both wild catch and farmed prawn groups as well as government. The recent focus has been on recipe booklets, media exposure and merchandising kits. One wholesaler commented:

"The national Love Australian Prawns campaign has been generally successful. Includes funding/support from both aquaculture and wild caught, NPF has put a lot of money into it, TSPF and ECOTF virtually nothing, aquaculture has made solid investment to the campaign too. TSPF and QLD ECOTF have benefitted from it."

⁵ See http://frdc.com.au/knowledge/publications/fish/Pages/21-2_articles/16_united-for-love-of-prawns.aspx

A collaborative approach can avoid these ‘free rider’ problems and share the cost of setting up a differentiated product, but licensees in the prawn fishery are acting as quite independent fishers with little recent history of collaboration.

For marketing to be successful, product quality needs to consistently meet marketing claims and consumer expectations. Interviews with wholesalers showed some disagreement about the consistency of the quality of TSPF product. While most wholesalers reported quality as generally adequate, one commented that they are not of consistent quality and he would generally not buy them for this reason. Other quality issues raised were:

- TSPF tend to grade smaller so the prawns are not consistently graded according to carton descriptions;
- Endeavour prawns from the fishery tend to have darker heads and are not treated as well as the typically more valuable tigers – this makes a less valuable product even less valuable;
- There is a perception that there is less attention to detail/quality, and more variability across boats, suggesting an opportunity to make sure products are consistently handled well with careful sorting, grading and packing practices.

Wholesalers tend to buy what they need when it’s available, and reported that the supply chain is fragmented and supply can be lumpy rather than continuous. The product is generally packed frozen and packaged on the boats and then sold to wholesalers, then distributed overseas and across Australia.

One of the major issues in improving prices received for TSPF product is getting the level of continuous supply and maintaining quality. The TSPF fishing season runs from March through to November, and the fishery is closed over summer and at Christmas time when demand in the local market is higher. One wholesaler reported that he can hold banana prawns for up to 5 months, and others up to 11 months, waiting for the best time to sell. Wholesalers generally have large holding capacity.

“A slightly earlier start to the season with fishing commencing early in February would help use the assets better and may increase profits through extending the summer focused cooked prawn market”

Contributing to the matter of inconsistent supply is the diminishing numbers of boats which started to decline in the mid to late 1990’s. Fishers are ageing and many are getting out of the industry. The TSPF has lost many boats in recent years through natural attrition, lack of profitability, and lack of young people wanting to fish, or having the experience to fish successfully.

The prawn market swings and prices depend on demand as well as quality. This year one wholesaler stated he is dependent on the price he can get in Japan. He indicated there are six potential markets in Asia including Hong Kong, China, and Japan. Only Japan will consistently support the Australian market and the others buy intermittently. He commented that “Last year was the worst season ever”. One of Australia’s largest competitors is Argentina. Their red shrimp is larger than the TSPF’s endeavour and tiger prawns and also very prolific. Red shrimp are commonly used for the sashimi and barbecue markets in Japan.

One fisher described how he had changed his marketing approach in order to survive in the business. He found he couldn’t just pass on all his catch to one buyer as that was not covering his overheads. He had to try to on-sell to the end user. He realised he was the one who needed to take the financial risk in order to increase his income and could quite easily lose his investment. These changes mean his risk has grown as he needs to hold approximately \$300,000 to \$400,000 of product at any given time using large regional cold stores. This individual response is practical, however a more collaborative approach across the fishery to improve supply consistency and quality, and thus underpin a better price is likely to pay dividends.

Differentiation and Market Opportunities

One potential area for increasing wild catch seafood value is to claim a market premium for a differentiated product, such as prawns from the Torres Strait. For TSPF product one wholesaler estimated the potential market premium at \$0.5 to \$1 per kilogram.

Stakeholders interviewed identified a variety of differentiation and market opportunities however their confidence in the likely success of these initiatives was low.

A key impediment is the fragmented nature of the fishery and lack of control of the supply chain. One restaurant owner suggested that place of origin differentiation is most suitable where there is a centralised distribution process.

The TSPF supply chain is fragmented, and TS prawns make up only a small part (3–10%) of most wholesaler volumes so there is little interest in creating and monitoring the supply chain controls required for effective differentiation.

Without suitable control mechanisms it would be difficult for a wholesaler (or fisher) to maintain quality of the differentiated product and capture the price premium desired. Securing the necessary controls requires not only major market share and trust through the supply chain, but capital investment to set up and monitor quality and provenance. It seems there is currently little incentive to make this investment. One wholesaler commented:

“TSPF is a lifestyle fishery in part because of the attitude of operators and in part because of the vessel and gear restrictions – which also has basis in the traditional owner’s reluctance to accept trial or introduction of more efficient vessels and gear.”

Some wholesalers were very interested in exploring potential for a unique Torres Strait seafood brand, suggesting the region had some strong advantages such as a clean green image, and the opportunity to showcase the provenance of seafood from this unique and pristine environment.

More Love for Australian Prawns...

“We are changing the paradigm doing things that have not been done previously, this is ground breaking stuff, important that we recognise seafood industry has had bad press – there has been marine parks, flood events, super trawler, this project will be talking about the pride we have in the fantastic product we make, the potential to retailers to take pride in what they do. We are giving people in the industry pride in what they are doing, marketing is being proud of what you make, we have a fantastic story to tell about enjoyment, ease of preparation, integrity, very few other food industries have this suite of properties”

David Thomason – extract from minutes of Love Australian Prawn management meeting Sydney, March 5, 2013.



© Image courtesy of the Love Australian Prawns Management Committee.

However supply chain interviews highlighting relatively low catch volumes and uneven supply suggest limited opportunity for differentiation of TSPF product.

The most appropriate approach would be to work with the wholesaler with the largest interest in TSPF product to explore cost and risk sharing approaches to address supply chain monitoring and quality issues that would otherwise compromise a product differentiation strategy.

As an alternative, or to complement point of origin, one wholesaler suggested fishers would do better to tailor products to match consumer needs. This suggests smaller more practical cartons rather than 10 kilogram blocks of frozen prawns.

Some interviewees suggested that larger more modern boats are more capable of packing product in ways that will match consumer needs more closely. Some boats are currently supplying 5kg packs, and one wholesaler trialed 3kg packs but the work involved and the approach was not cost effective.

Another wholesaler stated that those in the industry who are serious already have their own packing cartons declaring point of origin; however some bigger buyers also prefer their own labelling. Wholesalers noted that product authenticity in relation to point of origin labelling is crucial for building trust and market acceptance.

Recommendations - Marketing and Product Differentiation

1. Assess the scale of potential benefit from larger boats with greater on-board processing capability that can add value at sea.
2. Evaluate potential for Point of Origin labelling and a branding strategy to improve the current return. Determine quality control and monitoring requirements to back up point of origin differentiation.
3. TSPF licencees and supply chain representatives should seriously consider contributing to the national *Love Australian Prawns* campaign to leverage off it, and demonstrate willingness to collaborate actively for industry wide and TSPF benefit.
4. Engage closely with FRDC to support their emerging leadership role in coordination and promotion of Australian seafood marketing; and to leverage off those opportunities.

Consider extending season length with a slightly earlier start to the season (e.g. fishing commencing early in February) to benefit from the summer focused cooked prawn market.

“Torres Strait is a great story, remote, pristine, clean, lends itself to branding.”

“Not sure it would make a difference but still important. If product is good enough you can get a better price”.

“Wild caught competitive advantage centres on health aspects like no antibiotics in production and taste aspects, because the prawns come from more pristine environments where water quality is high. Torres Strait is as good as it gets on water quality and pristine environment. This is the primary differentiator between Australian wild caught and aquaculture prawns. “

“There is scope for telling a story of the product and personal aspects like traceability, some of which MSC offers up to a point. A good example is a fisher, John Thomas, who is telling the story of his fishing business/family on the cartons his prawns are packed in.”

Theme 3 – Management and Regulatory Issues

This section of the report discusses key fisheries management and regulatory issues impacting profitability and overall management efficiency for the TSPF. The most significant of these are:

- input based management controls compromising productivity for some vessels;
- shared governance and management of the fishery, and the challenges this introduces;
- the stakeholder environment for the fishery, and the need for best practice stakeholder engagement;
- management costs for the fishery, including cost recovery approaches;
- absence of strategic direction for the fishery, particularly a strategic plan that reconciles the operating environment with current industry, stakeholder and government regulatory and policy objectives.

The current regulatory and stakeholder environment for the fishery is complex and challenging. The fishery is influenced by two different management jurisdictions, each with differing fisheries management frameworks and structures. Some TSPF licencees are endorsed to fish in the NPF and/or Queensland's East Coast Otter Trawl Fishery (ECOTF). Both the TSPF and ECOTF share vessel length and gear restrictions and both are constrained in their ability to fish more efficiently as a result.

In relation to TSPMAC efficiency and stakeholder consultation more broadly, opinions of licensees and supply chain business representatives were varied and there was no sign of agreement about a particular way forward.

Some of those interviewed felt TSPMAC needs less participants to make it workable. Others indicated that while there used to be a great deal of disagreement, in the last 3–4 years industry and managers have worked together more and made progress.

“There is nothing wrong with the fishery except the committee has too many stakeholders with no financial stake. Lots of those people don't need to be there. The majority should be fishers. Don't need so many Government representatives and Islanders. All of the islands have their own representative.”

“The TSPF is individual owned there is too much internal bickering and disagreement.”

The majority of licensees interviewed suggested management changes to enable greater profitability were needed.

The control of boat size and net size in the Torres Strait Prawn Fishery is given effect by Fisheries Management Notices under the Torres Strait Fisheries Act 1984, and the boat size restriction applies to all commercial fisheries in the Torres Strait. The restriction on net size is specific to the Torres Strait Prawn Fishery (de Fries and Betzel, 2013).

It is highly likely that current management restrictions for TSPF vessels continue to constrain productivity on several fronts. Skirtun (2013) notes that the productivity index for TSPF vessels has remained relatively stable from 2002 where by contrast the productivity index for the NPF has increased substantially since this period. For the NPF this rising vessel productivity has helped to counter the effects of rising fuel costs and falling product prices.

Without productivity increases over this period, the combined impacts of rising fuel and freight costs, and declining prawn prices have continued to reduce TSPF profitability.

“It is possible that inflexible input controls may have constrained productivity in the TSPF. Before the restriction on trade in effort entitlements was lifted in 2009, the only autonomous adjustment available to fishers was to exit the fishery (DAFF 2009). More productive vessels in the fishery may have been hampered from optimising their operations at minimum cost because they could not purchase effort from less competitive vessels. Nevertheless, it is also likely that incentives for trading in the TSPF were low. This is reflected in the high number of total fishing nights available for most of the period, meaning that fishers were not likely to have been constrained by effort to seek trading. Before the reduction in fishing rights, the total allowable effort set (in the form of nights) well exceeded actual efforts exercised.” (Skirtun and Vieira, 2013).

The current process to reform management of Queensland’s commercial fisheries⁶ also provides a timely opportunity to develop more economically efficient management arrangements for the ECOTF that can complement similar approaches for the TSPF. Managing stock and broader environmental impacts via contemporary harvest strategy approaches that do not unduly constrain vessel efficiency is an important opportunity.

Under a harvest strategy approach, fisheries management target reference points, such as MSY and MEY, set catch or harvest levels, but say nothing about fleet size or fleet structure. However with sufficient data – a panel data set of boats in the fishery over time – an efficiency study of TSPF vessels could be done. This would help determine:

1. The distribution of technical efficiency across the fleet, defined as the ratio of actual harvest to total potential harvest for each boat, given all of the inputs that go into fishing.
2. Optimal fleet size to maximize returns in the fishery.
3. The most cost-effective combination of inputs – the amount of boat capital relative to gear and other inputs – to minimise the cost of obtaining a given (sustainable) harvest.

Such measures of technical efficiency cannot be obtained for a single boat alone, but only by comparing other boats in the fishery. The data set required to do this exercise for the TSPF simply requires measures of inputs and harvest over time for boats in the fleet, and a series of specific boat-level characteristics (Kompas *et al*, 2004).

Fishing at Maximum Economic Yield

Economic efficiency occurs when the sustainable catch or effort level for the fishery as a whole maximizes profits, or creates the largest difference between discounted total revenues and the total costs of fishing.

This point is referred to as MEY. For profits to be maximized vessels must use the right combinations of inputs such as fishing gear, engine power, fuel, hull size, and crew to minimise the cost of a given harvest.

Maintaining stock levels at MEY is a dynamic process. Catch and effort levels associated with MEY vary, as do profits as the price of fish or the cost of fishing change.

If the price received for catch increases it pays to exploit the fishery more intensively, albeit at yields still less than MSY. If the cost of fishing rises, it is preferable to have larger stocks of fish and thus less catch but also less fishing cost (Grafton *et al*, 2006, 2010).

⁶ See MRAG Asia Pacific report *Taking Stock*, available at <https://publications.qld.gov.au/dataset/fisheries-management-review>.

Proposed Vessel and Gear Efficiency Trial

In 2011 TSPMAC recommended a carefully managed trial to enable the use of larger boats and/or increased net size to improve vessel level efficiency; and allow more efficient use of existing/readily available fishery assets including some of the more modern vessels used in the more profitable Northern Prawn Fishery (NPF).

The trial was endorsed by the PZJA Standing Committee subject to and considered by the PZJA at their Torres Strait Prawn Management Advisory Committee (TSPMAC) proposed such a trial in June 2011 and the PZJA Standing Committee recommended that such a trial should only proceed if there had been further consultation with Traditional Owners and the consultation outcomes were satisfactory from the point of view of PZJA agency heads.

Attachment B to this TSPMAC paper refers to stakeholder objections to the proposed trial (including setting a precedent for larger vessels in other fisheries e.g. matters related to structural adjustment of the TRL fishery, surrender of 3 TSPF licences for use by the TIB sector and reasons for this surrender, encouraging effort increases now versus earlier actions to reduce effort via the 2005 effort reduction process, broader environmental impacts from the TSPF, and widely held concerns about TSPF impacts, including catch, of migrating rock lobster).

These objections warrant careful analysis if they are to be used as reasons not to pursue more economically efficient management arrangements for the fishery. For example stakeholders could be made more aware of the positive environmental performance assessment contained in CSIRO's TSPF sustainability assessment for habitats, assemblages and bycatch species⁷.

A relatively simple highly participative and qualitative risk assessment process such as the National ESD Risk Assessment Framework⁸ could also be used to help stakeholders understand and perhaps accept the actual risks that these and other issues pose to current management objectives for the fishery.

De Fries and Betzel (2013) also suggest extension work to provide a 'grass roots' explanation of how a fishery that discards a proportion of its catch can be as sustainable as a more highly targeted fishery.

Attachment D to TSPMAC#14 Item 4.2 records key points from discussion to improve TSPF profitability. In addition to a range of measures aimed at increasing the fishing efficiency of vessels within sustainability constraints, the paper also suggests a range of other initiatives including:

- closures – seasonal and spatial
- fishing to meet optimum market conditions
- management costs
- lack of formal external leasing arrangements
- improve marketing to increase prawn prices
- regulated waste/permitted species/ utilisation of bycatch species
- Fishing in PNG
- infrastructure (mother ships, flights for parts and servicing)
- public image of the fishery – industry image of the TSPF

Sustainability Concerns about Increased Fishing Effort

To ensure shorter-term viability of the fishery (e.g. retain the mothership) and for profitability there are compelling reasons to stimulate activity in the fishery as soon as possible. These have existed for some years however they are now critically important.

⁷ See [Pitcher et al. 2013](#).

⁸ See http://www.fisheries-esd.com/a/pdf/WildCaptureFisheries_VI_01.pdf

Nonetheless, concerns expressed by Traditional Owners' and their representatives about environmental risks arising from increased prawn fishing, and a lack of benefits to offset those risks appear to be deeply entrenched across communities. The nature of these community views are clearly described by de Fries and Betzel (2013). They note:

“The message from the community consultation was clear and consistent. The communities of Erub, Masig, Poruma and Ugar do not support relaxation of either the boat size limit (20 metres) or the trawl gear size restriction (88 metres combined head-rope and foot-rope) which currently apply in the Torres Strait Prawn Fishery”.

TSPMAC has considered the outcomes of their report, and other profitability related research, in considerable detail over recent years. The records of various meetings capture this information well and suggest MAC members have a strong understanding of key factors influencing profitability; and many of the initiatives necessary to improve it within the scope of their involvement (i.e. harvest strategy, management frameworks, regulatory efficiency and vessel level efficiency).

This project reaffirms that situation. Perhaps the single most important action that can be taken within the control of stakeholders and the PZJA agencies is to allow the fishery to operate in an economically efficient manner within broadly recognised sustainability standards⁹.

The most appropriate way to do this is to proceed as soon as possible with the trial of larger/more efficient boats and net configurations developed by TSPMAC and recommended by the PZJA Standing Committee. The trial, and the way it is implemented must also recognise and respect strongly held TO views about the broader environmental risks and other risks arising from such a trial.

In considering the actual risks likely to be imposed by the trial of a small number of slightly larger vessels, operating under carefully considered and managed trial requirements it is worth noting that the most common boat size in the NPF is 23 metres, with 84% of the fleet being between 20 and 25 metres (de Fries and Betzel, 2013).

We suggest the actual (residual) risks from *taking the management brakes off the fishery* are likely to be low relative to the benefits gained. The current harvest strategy approach, using triggers to constrain effort if fishing activity increases substantially, is designed to protect prawn stocks, by-product and bycatch species from unacceptable fishery impacts¹⁰.

Cost Recovery Aspects

For some years now the TSPF has been the only Torres Strait commercial fishery operating in a fully cost recovered management environment; whilst also facing stakeholder expectations, and influence, over and above those normally faced by a domestic commercial fishery. This tension between the fishery's regulatory objectives, and increasing TO flow of benefit expectations adds another layer of cost and complexity.

It appears that profitability in the fishery has been constrained for some years by the current suite of vessel length and gear configuration restrictions. Licencees also continue to pay substantial amounts each year for management processes that appear to perpetuate these economically inefficient arrangements.

⁹ The TSPF is regularly assessed against Australian Government Sustainable Fisheries Guidelines for export fisheries, and is recognised as sustainable under this best practice benchmark.

¹⁰ Recognising that Turtle Excluder Devices and Bycatch Reduction Devices are mandatory in the TSPF, and that broader environmental impacts of the fishery are largely correlated with actual TSPF fishing effort.

In relation to the proposed trial of more efficient vessels and gear, the agenda paper for TSPMAC#14 Item 4.2 (held 17-18 July 2013) notes that costs associated with amending fisheries management arrangements and regulations to enable such a trial would be recovered through the fishery's levy base.

For the proposed vessel and gear efficiency trial, and for future TSPF management costs, we suggest the proportion of costs paid by licencees via the levy base should be carefully considered. For example the rationale for not recovering management costs from the profitable TRLTVH sector and recovering costs from the less profitable TSPF could also be considered. If there is a strong regulatory case for these differential arrangements this should be communicated clearly to licencees and other stakeholders'.

Improving Stakeholder Engagement

Stakeholder 'Engagement' is one of many terms¹¹ referring to the involvement of stakeholders in decision-making. Those decision making processes may be formal or informal and apply to diverse issues - from development of longer term fisheries governance arrangements to crisis management of a contentious fisheries issue.

A variety of approaches, such as the TSPMAC process, may be used to bring stakeholders together, share information, collect input and provide feedback, and then make decisions on policy, program or project design and implementation. These include awareness campaigns, information/education campaigns, education or extension programs, open public forums, ongoing advisory groups, authorised panels, stakeholder sessions/processes, individual inquiries, secondary research etc.

The approaches typically vary according to how much power is transferred from decision makers to other stakeholders. Not only are there different levels of involvement, but also different *purposes* for involving people at those levels; and also different expectations between authorities and participants on the basis of that involvement. Irrespective of the level of participation that is selected (for whichever part of a decision process) it is critically important to clarify with participants what level of involvement they can expect to have, why, and what that involvement entails¹².

TABLE 3 BEST PRACTICE ENGAGEMENT PRINCIPLES AND PRACTICE

Effective engagement processes are ...	What does that look like in practice?
... clearly scoped	<ul style="list-style-type: none"> Internal and external stakeholders know what the engagement process is and what it is not. The issues are framed so that solutions are more readily found. Internal stakeholders carefully plan what input is sought from others and how it will inform decision making, and how that input will be gathered & analysed.
... transparent	<ul style="list-style-type: none"> Internal stakeholders ensure that others know what is happening and how their input is being used.
... connected to decision-making	<ul style="list-style-type: none"> Input sought is gathered, analysed effectively, and used to inform decisions about processes and issues under consideration.
... inclusive	<ul style="list-style-type: none"> All those with an interest or who might be affected have a genuine opportunity to participate.
... informative	<ul style="list-style-type: none"> People have access to the information they need to participate meaningfully
... timely	<ul style="list-style-type: none"> Opportunities are provided early in the decision making process for people to generate ideas and express their interests – not simply invite their feedback on predetermined solutions.
... involve deliberation	<ul style="list-style-type: none"> There is time for internal and external stakeholders to think things through and weigh up alternatives.

¹¹ Other similar terms that are commonly used in NRM include 'public participation', 'community engagement', 'community consultation', 'stakeholder engagement', or 'stakeholder consultation'.

¹² Ideally, where circumstances (time, resources) allow – decision makers would negotiate with participants to identify appropriate levels of involvement, based on agency and community capacities.

... influential	<ul style="list-style-type: none"> • People feel it is worth the effort to participate because there is evidence that the process influences the outcomes.
... provides feedback	<ul style="list-style-type: none"> • People are told how their contribution has made a difference.
... builds trust	<ul style="list-style-type: none"> • Building trust is a goal in all interactions, which builds confidence in the way decisions are made.

Source: Adapted from IAP2 2001¹³

Box 1. Major benefits of effective engagement

- Improve the relevance and practicability of government policies
- Increase the efficiency and effectiveness of service delivery
- Increase the quality of relationships & trust among stakeholders
- Help to identify policy or program areas in need of improved performance
- Be more proactive in identifying emerging issues
- Provide opportunities for diverse views to be heard
- Improve stakeholders' sense of ownership of/responsibility for problems as well as for identified solutions
- Build a stronger sense of empowerment and belonging among all stakeholders

Social Licence to Operate

A key outcome of effective stakeholder engagement is strengthened community support for wild catch fishing. This is referred to increasingly as gaining a 'social licence to operate'. It represents broad public and more local community trust that a fishery is in the public interest, and it generates more benefits (not just financial) than costs:

"A social licence to undertake a particular activity is granted by stakeholders, associated with the activity or the general community. It is the community approval to undertake a particular activity and is based on the beliefs, perceptions and opinions held by stakeholders in a resource or a project".
(Brooks, 2013)¹⁴

A 2014 FRDC workshop exploring the practical implementation of social and economic objectives into fisheries management frameworks (Begg *et al*, 2014) noted that for Australian fisheries community expectations and scrutiny of fisheries management is increasing and this is occurring as fisheries management and science resources become increasingly constrained.

They also suggest investigating the need for changes in governance arrangements that are required to build increased participation and transparency into decision making processes to help build trust and acceptance of the integrity and performance of contemporary fisheries management frameworks.

The "myth busting" activities recommended from the Masig Island meeting and the subsequent presentation of that information and two way conversation about what the information means and how it might be received by TO's are a relevant example of a well-founded engagement initiative – albeit with a strong direct communications element.

A Strategic Plan for the TSPF

The combination of profitability issues and additional stakeholder and operational challenges faced by the fishery suggest a carefully considered strategic plan for the fishery is a high priority. Stakeholder

¹³ See <http://www.iap2.org/>

¹⁴ See also <http://cobaltmrm.com.au/blog/cobalt-currents-social-licence-and-wild-catch-fishing/>

relationships are always important for an industry sector, and this is certainly the case for the TSPF in light of the challenges it faces.

In late 2013 Australia's High Court determined that Commonwealth and Queensland legislation that prohibits commercial fishing without a licence did not remove native title rights of certain Torres Strait communities to take resources from defined areas. In practice, this means that native title holders are still required to comply with regulations governing commercial fishing, but this does not remove their non-exclusive native title rights (ABARES, 2014).

For Torres Strait fisheries there is a transition underway to greater ownership of fisheries resources by Traditional Owners'. The finfish fishery is now 100% owned by TO's, and the last remaining commercial Beche de Mer (BDM) licence was recently bought by the Australian Government to bring that fishery under 100% Traditional Ownership. A gradual process of transferring commercial TRL rights to Traditional Owners' is also in progress along with the development of the TRL Management Plan.

All of this leads to increasing pressure on the TSPF in relation to TO aspirations and expectations about flow of benefits, and the fishery's future in the region. As noted previously there are also increasing community expectations about sustainability and social benefits arising from Australian commercial fisheries and this is occurring as fisheries management and science resources become more constrained (Begg *et al*, 2014).

The combination of all of these factors necessitate a very strategic and very collaborative approach from all key stakeholders. Industry (licencees and supply chain), fishery managers and scientists, and the Traditional Owners' of the sea-country where the fishery operates need to come together and work hard to develop an agreed understanding of the value of the fishery, and what it can and should offer now and in the future. What this future looks like and how to get there most efficiently is becoming increasingly important.

Many of the key elements of such a strategic plan have been discussed previously and at some length by TSPMAC and PZJA agencies over recent years. Many of them are also covered in this report. The most important of these include:

- As much clarity as possible about the future of the fishery and the commercial licences that underpin it (a shared vision for the future of the fishery);
- All key profitability aspects including marketing
- What sort of management environment do licencees and stakeholders want;
- Stakeholder engagement and consultation and the purpose and value of that;
- Public image of the fishery (as raised by recent TSPMAC discussions canvassing options to improve profitability), and reflecting social licence considerations.

No matter who owns or benefits from the fishery, or how these benefits are shared, there is little doubt that their interests are best served by a fishery that is both economically efficient and environmentally sustainable.

Recommendations - Management and Regulatory

1. Active TSPF industry and management engagement and collaboration with the NPF and ECOTF is required and will pay dividends. The NPF in particular, facing some of the operating challenges of the TSPF, provides valuable insights to guide improved profitability. Using information from this report, and other information as needed, AFMA should benchmark TSPF management against the NPF.
2. The vessel efficiency trial recommended by TSPMAC should proceed as soon as possible, and should include very clear performance measures against which to evaluate the success or not of the trial against equally clear trial objectives.

3. An engagement strategy, focussed on TO concerns, and including myth busting elements identified at the Masig Island meeting, must precede and accompany the trial.
4. The current cost recovery approach used for the TSPF should be reviewed by AFMA in the context of the unique TSPF operating environment, and with regard to the absence of cost recovery from other Torres Strait commercial fishing sectors.
5. In due course, and once immediate risks affecting the viability of the fishery have been mitigated, a vessel efficiency study of TSPF vessels could also be done.
6. A strategic plan for the fishery should be developed and implemented as soon as possible. Ideally this will reflect agreed strategic direction and objectives for key stakeholders (PZJA agencies, licencees and supply chain representatives and Traditional Owners'). If it is not possible for all stakeholders to agree on strategic objectives, at least the TSPF industry representatives and fishery managers should do so. Strategies to best pursue these objectives' should then be developed and implemented as soon as possible. Discussion with NPF licencees about their strategic approach is also likely to be valuable.

Part Two – TSPF Flow of Benefit Opportunities

Community consultations for this project have identified a range of expectations from Traditional Owners about the sort of benefits would like to see from the prawn fishery. These include direct financial benefits such as royalties from the fishery; some transfer of ownership of the fishery to Traditional Owners with the possibility of leasing back entitlements as is now being done for the Torres Strait finfish fishery; and a range of other suggestions of less direct benefits.

To some extent, the growing expectation from Torres Strait Traditional Owners' for a share of the benefits from the TSPF reflects broader developments for Australian fisheries management in recent years. Communities' around Australia (the public) expect that fisheries will be operated and managed in a manner that delivers public benefits, or at least does not cause harm to community owned resources.

This *social licence* theme, as described earlier, also runs through TO expectations for a greater share of benefits arising from the TSPF. And it is amplified by more recent developments around native title for sea-country resources in the region.

Broader social and economic objectives for Torres Strait communities emphasise the importance of enabling increased participation and value from fishing related employment. This is an important objective for the region and is reflected widely in regulatory, policy and planning documents including:

- *Torres Strait Fisheries Act 1984* objectives seeking to manage commercial fisheries for optimum utilisation, and seeking economic development and employment opportunities for traditional inhabitants;
- COAG's Closing the Gap program (e.g. improving economic development & employment opportunities); and efforts to reduce inefficient rules and regulation - i.e. reduce red tape;
- The TSRA Torres Strait and Northern peninsular Area Regional Plan 2009-29 (e.g. securing basic infrastructure, improved employment opportunities); and TSRA's Torres Strait Development Plan.

De Fries and Betzel (2013) also noted that some TO's consider recent transfer of ownership of TS fisheries to the TIB sector (e.g. 100% of finfish concessions, and a greater share of TRL concessions) should also apply to the prawn fishery. Their report noted: "A number of attendees indicated that a commitment to establish a more equitable arrangement with traditional inhabitants was overdue and that a move in this direction would be seen as act of good faith (compensation) for years of resources going out". They reported that a lack of a formal flow of benefit from the TSPF to traditional inhabitants was the fundamental issue that emerged from the consultation.

It is important to note that other commercial fisheries operating around Australia, whilst faced with a range of public and stakeholder expectations about their level of "public good" are not generally subject to the same level of expectation for flow of benefits as the TSPF.

The low, and in some cases negative financial returns from the fishery, are one of the most challenging aspects of increasing benefits from the fishery back to local communities. TSPMAC discussions, including the Masig Island meeting in June 2014, emphasised this challenge. Industry representatives strongly recommended that any proposed flow of benefits must recognise the fishery currently has very little capacity to service benefits that could add to operating costs, or that might further reduce profitability.

The Nature of Possible Benefits

Possible benefits raised by Traditional Owners' and others during project consultation include direct monetary benefits such as royalties or some form of licence lease fees; or direct but lower level benefits such as the supply of prawns for sale within communities, or provision of higher quality finfish bycatch. Other

examples might be less direct or tangible benefits that offer important value-based contributions to community well-being.

An example is a TSPF role in fisheries related capacity building such as sea-time or training as a fishery observer on-board a trawler. This may enable more successful fishing related opportunities for TO's on larger vessels. Like the successful TSRA ranger program it could help to provide meaningful and suitable for people close to their home communities.

In some respects these less direct benefits may be more valuable than short term and low value direct benefits. They can build capacity of communities to generate and sustain their own benefits, and develop their own businesses. This illustrates the importance of a strategic approach to the identification, evaluation and subsequent distribution of future benefits.

Some stakeholders have suggested that in light of recent native title determinations on sea-country, the sort of benefits under consideration should be much more significant, and strategically oriented toward future ownership of the TSPF by Traditional Owners'. This is an important issue that is outside the scope of this project. It warrants a carefully developed policy response.

The timeframes that apply to potential benefits are also important. The Masig meeting agreed that potential benefits should accrue as soon as possible, and be sustainable over time. Other more enduring benefits, such as the capacity building programs mentioned above require larger investments over a longer timeframe.

Distribution of Potential Benefits

Questions about how TSPF related benefits might be distributed across the region, and whether they should be distributed amongst only those communities where the prawn fishery operates are complex. In a sense they are similar to resource allocation questions, and also require some policy guidance. They include notions of distributive justice and procedural fairness.

Distribution of potential benefits within communities is also complex. Personal dynamics and hierarchies within communities will influence how benefits are distributed, and must be carefully considered. More significant flow of benefit opportunities require careful planning to ensure that benefits are equitably distributed, or in the case of direct financial benefit, applied or invested in a strategic manner for overall community benefit. Policy guidance based on specific objectives would be an important part of this process.

Feedback from community meetings and similar comments during the de Fries and Betzel consultation suggest at sea training programs for TO's that may be interested in working with the TSPF may help to strengthen relationships between communities and the fishery. Other comments by TO's suggest these type of lower level benefits are a secondary consideration until the communities secure rights to a share of income from the harvest of prawn resources in their sea-country areas.

Evaluating TSPF flow of benefit opportunities

Practical Considerations

The most significant constraint on potential FoB options at the moment is the low capacity of the fishery to generate them. This requires that FoB options under consideration are evaluated carefully with respect to their strategic alignment and impact on operating costs and/or fishery revenue.

Literature reviewed and community consultations during the project have identified a range of issues, including constraints and opportunities that may influence the type of flow of benefit opportunities under consideration.

Another fundamental consideration is the relationship between fishery objectives and other Torres Strait regulatory or policy objectives used to justify or guide the type of benefits under consideration.

To assist this evaluation process, and illustrate the challenge of evaluating options against multiple criteria (and possibly multiple stakeholder objectives) key FoB *success factors* have been developed (Table 4 below). These have been incorporated into a decision support matrix that can help evaluate the range of FoB suggestions collected during the project, in the context of multiple objectives for these FoB candidates (Appendix A).

It is important to note that this evaluation process is subjective (e.g. based on or influenced by personal feelings, tastes, or opinions). It relies on a relatively consistent or common understanding of both the success factors used, and the relative importance of objectives the FoB options are being evaluated against.

Ideally, stakeholders will work together to develop or clarify the objectives of any FoB program (which will inform further refinement of the success factors), and the relative importance of those objectives (which will inform the weightings – or multipliers – used in the FoB evaluation matrix to determine the relative value/suitability of each option).

TABLE 4 SUCCESS FACTORS AND ATTRIBUTES FOR TSPF FLOW OF BENEFIT EVALUATION

Success Factor (or filter)	Attributes to consider for each Success Factor
Level of Impact (contribution)	labour (increase supply), increase catch, increase catch value, increase beach price
Practicality (implementation)	set up costs, timeframe for benefits, likely rate and extent of adoption, champions interested, realistic level of cooperation available, extent of external involvement or funding
Fits community capabilities	does it fit with existing skills, community knowledge - will it require training, does it require additional facilities/investment, alignment with aspirations
Mutual Value (communities, TSPF)	extent of benefits accruing to fishers and communities, strategic alignment for TO's, and for TSPF Industry
supports strategic objectives	builds relationships, supply chain resilience incl mothership, R&D leverage, extends flow of benefits, etc
Economic Efficiency	scale of outcomes, financial viability, economically efficient (benefits exceed costs), low cost to TSPF operators

Considerations for fishing related options

Most Torres Strait Islanders operating in the TRL and finfish fisheries currently use traditional and smaller boats, without processing facilities, freezers or processing licenses. TO fishers must return to their home communities regularly. They use more fuel and time travelling to and from more limited number of fishing locations. Their marketing options are also more constrained due to the need to sell fresh often non-processed catch immediately to a limited number of buyers.

There are also particular challenges for running larger scale infrastructure like freezers on remote Torres Strait communities. For example, in the communities visited for the project there is only one successfully operating community-owned freezer (at Erub Island). There are privately run commercial freezers operating on Iama, Poruma and Ugar Islands. There are also some smaller scale private freezers (e.g. large chest freezers) on several other Islands supporting small private finfish and TRL businesses.

The Torres Strait Island Regional Council has also invested previously in storage and freezer facilities for live cray, frozen tails and finfish products however most of these have not been financially viable, most suffering from a lack of consistent throughput.

There are several privately owned facilities across the region, with nearly all of these heavily reliant on the TRL fishery. It appears that freezer and live processing facilities can be financially viable with throughput by a relatively small number of fishers, provided their fishing efforts are consistent. Individual ownership of smaller chest type freezers is also relatively common although these may not meet food safety requirements.

Some TO's suggest a need for larger boats capable of travelling longer distances, staying out for 2 or 3 days or more, and able to fish in a wider range of weather conditions. This style of boat was suggested some years ago by experienced Erub Island fisherman Bluey Bedford. He called them *ice boats*, suggesting they offered a good balance of operational and business simplicity and enough fishing capacity to support community-based freezers and fishery production.

People could stay overnight on these boats, fish in rough weather conditions more safely, and carry more product – perhaps 200-300kg of fish. Using ice rather than freezers was more suitable to ensure consistently high quality product could be landed to a community freezer where skilled fish processors are available. Fish could then be more rapidly frozen in larger quantities using blast freezers and then stored at low temperatures in the storage freezer.

Some Directors of Community Fisheries Associations and Corporations indicated that the recent process which transferred ownership of the commercial access rights in the Finfish fisheries to traditional inhabitants had provided security and income which was being used to support local commercial fishing enterprises. Some favoured a similar arrangement for the TSPF.

The consultations by de Fries and Betzel (2013) suggested communities saw a need for more traineeship opportunities for young people to get into commercial maritime activities, and that these might be more easily facilitated by larger vessels. They also considered this to be secondary to a right to receive income from the fishery.

Considerations related to business skills

Many Torres Strait Islander fishers are not operating their fishing using business planning or a business approach and many do not have a detailed understanding of the costs and returns of their fishing businesses and may be subject to higher taxation rates as a result.

If fishers are only fishing at a low level, or complementing RJCP income they are also less likely to be able to generate income sufficient for maintaining boats.

Business skills and cash-flow management etc are likely to be more demanding to operate bigger boats and it may be more appropriate for low catch fishers to stay at a small scale with minimum cost and complexity until they are ready to take on more ambitious activities.

Considerations related to cultural factors

A number of cultural factors may affect the success of flow of benefit related programs aimed at increasing fishing participation of TO fishers:

- “Ailan Kustom” is sometimes given as a reason that new practices, considered more commercially viable, are not adopted.
- Effort and time put into fishing is inconsistent. In part this may reflect a choice to prioritise community and cultural events over fishing; but it also relates to the alternative income opportunities, such as CDEP.
- Occasional fishers are less likely to engage in training and capacity-building focused on increasing fishing participation, as they may be content to fish as an income supplement or for personal or cultural reasons.
- Larger boats have been suggested for improved participation and profitability in Torres Strait fisheries although TO’s have also stated they prefer not to spend time at sea away from home communities. Many current fishers prefer day trips taking advantage of favourable tides or weather conditions. These more occasional fishers are less likely to take up opportunities for training on larger vessels.

Considerations related to regulatory and policy factors

Consultation with communities and literature reviewed continues to suggest the majority of fishing by TO’s was part-time and often supplementing income support from the government. The phasing out of CDEP which had started by 2009 was thought to be helpful in promoting more fishing effort although replacement programs (RJCP and My Pathways) are relatively new and their contribution to fishing related capacity building is still being established.

Regulations that limit non Torres Strait Islanders from being employed in operations with traditional inhabitant licenses may be a possible barrier to profitability and accessing labour with the specific skills required. These are under review.

Legislative and administrative requirements for employment and broader participation in fisheries related businesses can also be challenging. Food safety requirements are fundamentally important for any sea food supply operation, and meeting these regulatory requirements can also be challenging; AQIS certification in particular can be complex and relatively expensive.

The aspirations of traditional inhabitant fishers are also an important consideration in evaluating potential FoB opportunities. From a survey of just 25 representatives of the traditional inhabitant sector for the TRL fishery Marsden Jacobs Associates found that they placed much greater emphasis on maintaining lifestyle than expanding the business. Their work also identified strong support for training and support in the use of marine safety equipment, with 80% of those surveyed suggesting it was a high priority.

Considerations specific to the TSPF

Overall there has been a lack of TO participation in the TSPF over recent years. There have been some notable exceptions in the past – for example different communities mentioned a prawn trawler run successfully by Bluey Bedford. Several people interviewed had worked on this vessel and had gained valuable skills that had helped them in later fishing ventures.

Key reasons given during interviews and meetings for the lack of direct TO involvement in the TSPF include high capital costs, both for setting up and operating fishing vessels, the high levels of skills, experience and confidence required to fish successfully in this remote and challenging environment, and more recently issues related to low profitability (e.g. it's not worth getting involved for such a low return).

These barriers do not apply to the same extent for crew, and for the right people there are likely to be TSPF crewing opportunities. Some of the stated barriers to this include:

- Prawn fishing occurs at night, and most TO's fish during the day, preferring to balance their fishing with other personal, cultural and community activities;
- Many TO's have identified their preference not to work as part of established commercial (TVH) fishing operations. This should be considered where training programs, mentor roles, or joint-venture style options are being considered;
- Some community elders have worked on prawn trawlers, and some of their views about bycatch and broader sustainability impacts arose from these experiences.

Several specific suggestions were made at the Masig meeting to help ensure FoB options under consideration were both more appropriate and more likely to succeed:

“Participants cautioned against benefit sharing ideas that are unlikely to work - some of the previous ideas and programs have not been based on what people in the communities want, or things they are good at doing.” The latter echoes some of the general findings about why Torres Strait Islanders may not have adopted particular profitable practices – with these practices not being identified as the ‘island way’.

“Suitable ideas for sharing benefits from the prawn fishery more quickly were likely to be closely aligned with how the fishery works, and would not cost too much. These might be things like taking Traditional Owners out overnight to learn about the fishery, or helping Traditional Owners’ access bycatch species of value to them, which might otherwise be discarded.”

“People suggested linking some of the prawn fishery benefit sharing ideas with other programs like My Pathways. An example was to use a prawn vessel to introduce Traditional Owners to the fishery and how it works. Perhaps do some training, with vessel running costs covered by My Pathways, and product sale proceeds retained by licence holders”.

Strategies and Pathways for Flow of benefit Opportunities

TSPF licence holders, PZJA agencies, Traditional Owners and other stakeholders all recognise the importance of some level of flow of benefits from the fishery back to the communities around it. Some of the flow of benefit opportunities identified during this project may be implemented without significant additional work or cost.

These more modest benefits are important, they can help demonstrate a commitment from all stakeholders to increase the relevance and value of the fishery to Traditional Owners and their communities.

The more complex and costly flow of benefit opportunities need to be carefully considered against the operating and regulatory context of the fishery. The project has identified several important policy considerations that will impact decisions about how some of these more significant benefits might be pursued, and who should pay for them.

Supported by the information and insights from this project, these issues should be discussed by TSPMAC and the PZJA agencies as required. TSPF licensees should also carefully consider their more strategic objectives. Ideally they will develop an agreed industry position as part of the development of a strategic plan for the fishery.

Under current TSPF regulatory (and subordinate policy) objectives; and noting the very significant financial pressures on the fishery and real risks such as withdrawal of the mother ships, it is critically important that any flow of benefit opportunities are implemented at little or no cost to the fishery. This also recognises that the fishery is paying substantial management costs both directly and indirectly as a result of divergent and somewhat unreconciled formal and informal objectives.

Wherever possible any larger scale flow of benefit opportunities should be aligned with other regional strategic priorities expressed through strategic and development plans such as those managed by the Torres Strait Regional Authority, Torres Strait Islands Regional Council, and state and federal Torres Strait Islander development programs. These include overarching government objectives like the indigenous advancement strategy and closing the gap initiatives.

Development of some of the flow benefit opportunities identified through this project, or new opportunities identified through strategic planning processes, require a level of capacity building within traditional owner communities. In most cases these are fisheries and business related capabilities that are increasingly becoming a focus for TSRA and other regional agencies.

There is an important role for the existing and newly formed community fisheries associations in the communities where the prawn fishery operates. These associations can operate as a hub or fisheries related capacity building, and for day-to-day administration and management of fisheries related issues faced by the communities.

For example during the Masig community meeting the fishers association suggested they put together a training program to enable suitable community members to gain experience on-board TSPF vessels in a gradual way so that they can make a decision whether or not they should continue further training (details are provided in the attached summary of community meetings). This could also form part of a broader fisheries training program for other key TS fisheries. This illustrates the importance of these fisheries' associations, and the opportunity for them to actively contribute to the success of fisheries related capacity building and fisheries development.

Other important issues are:

- Identifying the right people to undertake the right training, and also identifying and supporting mentors to facilitate development across the communities is also important.
- People in communities working together to develop an agreed set of fisheries related priorities, a consensus on how to spend any available grant, or training related funding.
- Developing and maintaining good communication and governance processes to facilitate constructive relationships between community members', PBC's, and fisheries associations.

There are substantial efforts underway currently to make sure that Torres Strait community assistance programs aimed at enabling economic development opportunities in the region are practical and reflect genuine opportunities within the region.

At Community meetings for the project participants emphasised the importance of training and development activities that are directly relevant for them in their communities. Fisheries related activities are increasingly recognised as one of the most important opportunities for economic development.

Under the My Pathways program, successor to earlier CDEP programs, there is now a Torres Strait Marine Pathways (TSMPP) project. This appears to offer the most appropriate avenue for fisheries related training and development, including FoB opportunities related to prawn fishing activities. At the moment the TS NPP covers training and development related to:

- seafood handling and processing

- fishing based tourism such as recreational fishing charters
- Coxn's training
- wild harvest diving

One of the concerns people had expressed during the community visits was that it was very difficult for them to stop their current employment and go off for training courses. Travelling throughout Torres Strait is very expensive, and accommodation and overall expenses are also high. The ability to continue to earn an income, but also have the flexibility to benefit from training was very important.

From 1 July 2013, a new scheme came into force under the My Pathways program whereby participants must work 25 hours a week to be eligible for their income support payments. Discussions with the My Pathways Program Manager suggest there are opportunities for funding support for well-conceived fisheries related FoB opportunities.

For example it may cost something like \$30,000 - \$40,000 a year to support a person via income support payments. If investment priorities for practical, realistic and meaningful employment opportunities with potential to get people off income support payments, they have potential to receive funding support.

Monitoring and Evaluation for Flow of benefit Initiatives

A structured monitoring and evaluation approach is a critically important part of ensuring that any larger scale future FoB initiatives (for example training Traditional Owners' as fishery observers) deliver the best outcomes for the least cost. Such a plan should be designed to measure progress against activities, also identifying the information is needed to cost-effectively assess performance over time (e.g. performance indicators). It should also describe who is responsible for collection and reporting of this information.

Benefits of a structured approach to monitoring and evaluation include:

- Cost effective evaluation of FoB initiatives and their outcomes;
- Adaptive management of these initiatives (learning and improvement);
- Improved return on investment from FoB initiatives;
- Improved accountability and more efficient, and effective project and program evaluation and reporting, including external performance reviews and audits if required.

For smaller scale opportunities, particularly those involving TSPF licencees, TO's and PZJA agencies, a formal albeit simple qualitative evaluation exercise during TSPMAC meetings would be sufficient as well as cost effective.

Recommendations – Flow of benefit Opportunities

1. The objectives of any future flow of benefits program involving the TSPF and Traditional Owners in the area of the fishery should be clearly described. This will help to determine the relevance and value of flow of benefit opportunities, assisting a more structured evaluation approach.
2. Further development of more significant flow of benefit opportunities should be based on agreed strategic objectives for the fishery, which should also reflect traditional owner perspectives. Development of these strategic objectives will also reflect current regulatory and policy objectives for the fishery.
3. Flow of benefit options identified and evaluated during the project via the evaluation matrix will be presented by the principal investigator for the project at the next TSPMAC in Cairns 23 June 2015. These examples should be discussed by the group to illustrate how the evaluation process can work, or might be improved.
4. If possible an agreed group of flow of benefit opportunities should be developed during the June TSPMAC discussion.

5. The Australian Government's My Pathways program appears to offer one of the best avenues for funding support, including shared funding with other stakeholders, for the implementation of more significant flow of benefit opportunities. Close liaison between My Pathways coordinators and appropriate TSPF, community and PZJA agency representatives is encouraged.
6. Agreed flow of benefit arrangements that can be implemented directly between prawn fishermen and Traditional Owners in their communities should be initiated as soon as possible.
7. A structured monitoring and evaluation approach should be developed for any larger scale future FoB initiatives (for example training Traditional Owners' as fishery observers). For smaller scale opportunities, particularly those involving TSPF licencees, a simple qualitative evaluation exercise during TSPMAC meetings would be sufficient as well as cost effective.

Appendices

Appendix A: Example Evaluation Matrix for TSPF Flow of benefit Options.

Appendix B: Summary of Community Meetings.

Appendix C: Stakeholder survey instruments

Appendix D: Outcomes from the June 2014 Masig Island Meeting

Appendix E: Enabling Factors for Northern Prawn Fishery Management Performance

Appendix F: Summary of suggestions raised for flow of benefit opportunities.

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Appendix A: Example Evaluation Matrix for TSPF Flow of Benefit Options

Flow of benefit Candidates	Evaluation Criteria (or filters) for TSPF Flow of benefit Candidates . Range for scores is 1-5 with 5 being most beneficial/valuable.						summed scores	weighted scores
	Economic Efficiency	Level of Impact (contribution)	Practicality (implementation)	Fits community capabilities	Mutual Value (communities & TSPF)	supports strategic objectives		
Part time logistics support person (2 days/week?) to facilitate logistical support, spares, maintenance for TSPF boats.	4	4	3	3	4	5	23	23
Encourage regular sale of prawns through community shops and freezer facilities.	3	3	4	4	4	4	22	22
Examine the suitability of using trawl bycatch species for bait in the Coral Trout line sector.	4	2	4	4	4	4	22	22
Seafood branding to capitalise on clean environment, unique culture, and point of origin difference.	3	3	3	3	4	5	21	21
Increase the utilisation of by-product/bycatch through similar arrangements with communities.	4	2	3	4	4	3	20	20
Potential to store frozen prawns in community freezers as a contingency arrangement if required.	2	2	3	4	4	4	19	19
At sea training programs for traditional owners (particularly younger residents).	3	3	2	2	4	4	18	18
Potential for TO's to be trained as fishery observers and operate from home communities e.g. Masig Island;	4	2	3	2	3	4	18	16
Use TSPF bycatch as the basis of solid feed for grow out of ranched TRL in areas close to communities.	3	2	2	2	3	3	15	15
<i>Weighting applied per filter</i>	1	1	1	1	1	1		

Note: evaluation criteria (or filters) are intended to guide selection of the most appropriate flow of benefit options (candidates). Criteria may be changed to reflect current objectives, or priorities for the fishery. For example these may be aligned with the st

Economic Efficiency: consider - scale of outcomes, financial viability, economically efficient (benefits exceed costs), low cost to TSPF operators

Level of Impact (contribution): consider - labour (increase supply), increase vessel utilisation, increase catch, increase catch value, increase beach price

Practicality (implementation): consider - set up costs, timeframe for benefits, likely rate and extent of adoption, champions interested, realistic level of cooperation available, extent of external involvement or funding

Fits community capabilities: consider - does it fit with existing skills, community knowledge - or will it require training, does it require additional facilities/investment, alignment with aspirations

Mutual Value (communities & TSPF): consider - extent of benefits accruing to fishers and communities, strategic alignment for TO's, and for TSPF Industry

Supports strategic objectives: consider - builds relationships, supply chain resilience incl mothership, R&D leverage, extends flow of benefits etc

Torres Strait Islands Community Visit Summary

Purpose, scope and structure of visits

Community meetings provided the opportunity to talk with traditional owners in their communities about the project and its objectives; and expectations and ideas for possible flow benefit opportunities. The meetings comprised a public community meeting, and additional face-to-face discussions with community fishing representatives where possible.

Meetings were guided by questions for Traditional Owners detailed in the survey instrument. The community meetings also provided an opportunity to present the recently developed PZJA myth busting video and brochures.

Visits were conducted on two separate trips by Andy Bodsworth (Project Principal Investigator & Director Cobalt MRM) as follows:

5. Erub Island	24 - 25 February 2015
6. Poruma Island	26 - 27 February 2015
7. Ugar Island	26 May 2015
8. Masig Island	27 May 2015

Conduct of meetings

Meetings were conducted as follows:

- Andy Bodsworth welcomed participants and thanked them for attending. He then asked community elders present to formally open the meeting with a prayer; and provide a welcome or acknowledgement of the Traditional Owners for the community visited.
- Andy introduced himself as an independent fisheries consultant working under contract to AFMA to deliver the TSPF Flow of Benefits and Profitability Project. He provided an overview of the project and project activities thus far, including the Masig Island meeting in June 2014.
- He provided an overview of key outcomes from the Masig meeting, including that a more up to date picture of the TSPF be presented to communities, reflecting refinements to bycatch management, and industry's desire to work closely with communities and minimise the environmental impacts of the fishery.
- He provided participants with the recently produced PZJA "myth busting" brochure and spoke about that before showing the supporting PZJA video about the fishery, provided by AFMA Canberra. Participants then discussed the video and current operations in the fishery.
- Andy then facilitated a group discussion based on each of the questions in the Survey Instruments prepared for the community meetings. Notes capturing questions, comments and key points discussed were taken during each meeting.
- On completion of each meeting, a TO present presented a closing prayer and the facilitator thanked participants for their time and contributions.
- Draft records of each meeting were then distributed back to key fisheries representatives from the community and others who had provided their email addresses at the meeting for their consideration and comment.

The combination of one on one discussions with key fisheries representatives and an open community meeting provided a good opportunity to cover issues in detail and get an overall community perspective on the TSPF, and to discuss potential flow of benefit opportunities, and people's expectations about such benefits.

Part of the community visit discussion centered on understanding skills, capabilities, assets and infrastructure relevant to the TSPF and broader fisheries related flow of benefit opportunities (capability and skills audit). This information is being compiled into a community-specific table for future reference, and to assist evaluation of flow of benefit opportunities raised at each community discussion and over the course of the project.

Summary of Discussion

Discussions at the community meetings and responses to questions posed to participants are summarised below, grouped under subject matter/themed headings. Detailed draft records of each meeting, and other one-on-one meetings over the period, have been circulated to community representatives and/or participants for their review and comment. To date no substantive comments on these draft meeting records have been provided by participants.

Current scale of Indigenous involvement in prawn fishing

Some of the Traditional Owners who attended the meetings had direct experience working on prawn boats previously. Most of these were older community members, and some had worked in the NPF or the Torres Strait fishery. In recent years there has been very little involvement of Torres Strait Islanders in the prawn fishery.

- A participant said he had worked in the TSPF sorting prawns and had been given those of less value, such as the soft and broken prawns. They had also been provided with fresh finfish bycatch. These were welcomed back in the community.
- More than 10 years ago when the fishery was more active the boats used to call into Poruma Island and this was generally welcomed by the community. One boat would provide about 10 boxes of frozen prawns for sale within the community and this was popular.
- Bluey Bedford from Erub Island had owned a prawn trawler for some time, also working closely with the Raptis Company. This was a successful operation and had provided many opportunities for Torres Strait Islanders that wanted to fish or learn to fish in the prawn fishery.
- People remembered the much larger number of boats fishing in the fishery through its earlier history and up until around 2005. Some people suggested describing the amount of activity in the fishery in terms of boat numbers might be more meaningful than catch amounts or the amount of fishing effort.
- A participant mentioned that since the fishery had been operating with many boats in the 1970s and '80s the pearl shell stocks had all but disappeared and he wondered if this was a result of prawn trawling.
- A participant suggested that if TSPF vessels were going to TI from island communities it would be very helpful if they were available to take any passengers as airfares to and from Horn Island were prohibitively expensive.
- Another participant noted that this was the first time in his experience that the TSPF operators had openly recognised the need to work more closely with people in the communities to identify and develop benefits for the communities and he welcomed this initiative.
- People noted that the fishery is more mechanised and modern than when some of the older community members had their experiences aboard prawn boats, and that this may mean that working in the fishery now is easier than it used to be.

Fishing-related activities/businesses along the supply chain

Comments about fishing-related activities along the supply chain focused on issues such as equipment maintenance and potential training assistance from external businesses:

- Outboards are very important on every community to support fishing and developing a capability to maintain them would be a valuable service. If prawn fishermen could help TO's do this it would be valuable.
- It was suggested that community freezers may be a useful alternative for prawn storage if the mother ship is not available for short periods of time, prawns might also be shipped on the weekly barges.
- A participant suggested the supply chain needs to be efficient so that more of the value of prawns goes to the fishermen, perhaps benefits from the fishery should come from the buyers rather than the fishermen? He suggested that buyers and fishermen and traditional owners should sit around the table to identify value in the supply chain so that there can be benefits for everyone.
- Participants discussed fuel prices in the area and how these vary, in part because of the presence of prawn boats. Prices from the weekly barges for unleaded petrol as outboard fuel were \$3.60 per litre for Ugar, \$2.70 per litre for Darnley Island, and \$1.50 per litre from the mother ship that services the prawn fleet. For a 20 L container of fuel it was \$54 from the Malu barges, and \$30 from the mother ship.

Traditional owners' aspirations / roles for the fishery

Different views about the future of the TSPF were expressed at the community meetings – some focused on the importance of engaging youth in fishing and on working together; others on impacts from the fishery and potential wealth to be realised from the TSPF.

The need for commitment to building profitable fishing businesses and gaining the necessary skills, and whether the prawn fishery could help were also discussed.

Participants said they still wanted the fishery to operate, but there needs to be benefits back to the communities. There needs to be a strategic plan developed to meet stake-holder's needs.

Participants generally understood the need to keep potential flow of benefit arrangements costs very low, noting that the TSPF overall was barely profitable and there had been some years of negative net returns.

Key points were:

- Those at the Poruma meeting spoke at length about the challenge of engaging younger community members in fishing businesses – reflected by the lack of younger people at this meeting – and ways that they could be genuinely encouraged to take part. They identified a need to show young people the benefits of taking control of their own future – using good local examples and champions and step by step ways to build their own fishing businesses.
- In discussing the need for any proposed benefits back to the community to be very low cost or cost neutral to TSPF fishers, a participant suggested that up to date information about the profitability of the fishery, including running costs – e.g. cost of fuel used per night – would help people understand the relative costs of the fishery and the need to make sure any flow on benefits were appropriate and affordable in the business context of licencees.
- It was noted that the potential wealth in Torres Strait fisheries is not being realised; and that people could focus on developing businesses in their own backyard. This requires education and good initial and simple business training in how to do a budget, how to save money first and spend later, how to save money for expenses like boat maintenance and crew wages etc.

- Participants also noted that traditional owners can't move from their traditional lands whereas fisheries can move. People can take advantage of other fisheries however traditional owners have their home island and it is very important that fisheries around these communities are managed carefully.

Specific comments about costs and business included:

"We are sitting on a million dollars right here – we just need to realise that and make the most of it."

"Anyone can be a diver, anyone can dive for crayfish – but not just anyone has the skills and the determination to take the next step and build those skills into a successful business."

Participants recognised the need for people to work together and support each other for everyone's benefit. They spoke of people's different strengths that could contribute to building a community-focused fishing operation; and discussed a need to be serious and committed to fishing to develop a good sustainable and profitable business.

Many participants at meetings suggested the prawn fishery has been operating in the region for a long time and yet there have been very few benefits going back to communities. People had very different ideas about scale and value of benefits that should be provided.

Some felt that the prawn fishery should pay royalties to traditional owners, and some felt that ownership of the fishery should go to traditional owners as has happened for the finfish fishery, and is underway for the TRL fishery.

Others suggested there was a place for the prawn fishery, but that it should contribute more to the area where it was operating. For example one community mentioned that they are developing arrangements to allow traditional owners from other areas to come and fish in their traditional waters however these visitors would be required to sell their product to the corporation's freezer as a condition of operating in that area. They suggested the prawn fishery should be no different.

Infrastructure / processes that can be improved to increase flow of benefits to TOs

Freezers

When talking about infrastructure opportunities, a lot of discussion focused on the use of freezers. Working freezers were considered to be vitally important assets for communities to support a wide range of fisheries-related activities and opportunities.

In discussing pros and cons of community-owned versus privately-owned freezers, participants overwhelmingly suggested that a community freezer should be the first priority. People thought individuals or small groups may want to invest in their own freezers and should be free to do so.

Comments on freezer issues covered various challenges and ideas for keeping the freezer running such as:

- Electricians are scarce and expensive – Erub's fisheries association tries to get them to come when they are on the island for Council work, however they are very busy and also get called away for emergency work etc. It can be inefficient if several electricians work on the same job over time and each one does things a bit differently.
- There may be various competing interests around use of the freezer; e.g. status or protocol related. It can be challenging to sort these issues out and agree on a solution between parties to keep the freezer going.
- An idea arose of refurbishing the ancillary (old) freezer room and turning it into a small shop front. A participant suggested there's a small but steady local market for seafood, including frozen prawns in 3–5kg boxes offloaded from prawn boats pulling into TI.

- A Poruma participant suggested mobile freezer facilities may be a good alternative to a fixed facility. These could be owned by a broader group or community and used where the demand and need is greatest. For example, a mobile freezer could be transferred from TI for the mackerel season on Poruma; or if Poruma fishers weren't providing enough fish then it could be transferred to Warraber. It could be carefully maintained and run for the season, before being returned and ready for the next deployment. If people weren't fishing enough to support its use (ie weren't able to meet that commitment) the freezer could be moved somewhere else where fishing activity and commitment was higher.
- Ugar representatives noted the very significant constraint for them of lack of deeper water access to the island. This meant that larger vessels had very limited access depending on tides.

Participants at the Masig meeting spoke about the delays getting the Masig Island freezer up and running, including the difficulty of getting permission from landowners for a secure site for the freezer. They suggested a floating pontoon freezer, similar to one that had operated previously, could be a good solution to this problem. The pontoon could also include a small shop area for the sale of fuel and fishing gear and similar supplies.

Constraints on greater Traditional Owner involvement in prawn fishing; and possible solutions

Identified constraints on involvement in prawn fishing included concerns that participation in fishing might compromise people's access to income support payments. Other related comments were:

- Welfare availability stops younger people from getting involved in fisheries. If they didn't need to work, and weren't aware of its benefits or the risks of being dependent on government funds, why would they choose hard work like prawn trawling?
- A participant noted that the likelihood of government continuing to provide money for welfare or generous grants etc was likely to become less and less in the future. People in Torres Strait need to recognise this and prepare themselves; to take control of their future.
- People talked about the PNG people that come to Saibai that don't have access to any government welfare money. They are hungry for work and if they get an opportunity – e.g. to clean houses or mow lawns – they do it well because they need to make money to eat. They don't have a choice.
- Several participants said that people were not as interested in prawn fishing because it happened at night, and they needed to stay at sea on boats for months at a time.
- Several participants felt traditional owners were holding themselves back from fisheries development opportunities because of their own politics and arguments; including a lack of agreement across the communities about the best ways to proceed with various opportunities; an example was:
 - If there was to be an Eastern region fishing hub, fisheries leaders from these communities needed to work together to agree different roles and responsibilities for an efficient structure;
 - the three traditional owned prawn fishing licenses recently surrendered back as part of the finfish buyout should have been allocated to the three eastern communities closest to and most impacted by the prawn fishery; being Ugar, Masig and Poruma Islands.

Prawn fishery skills and training

There was much discussion at the meetings about fishery-related training. Main issues identified were that TO's working aboard TSPF vessels needed support and that this could be a good way to learn about how to fish on larger commercial fishing boats; and some of the business skills associated with that. Comments about on-board training included:

- Many participants thought that some sort of observer-related training and employment on-board boats was a valuable idea and would also help to make sure people in communities understood how the fishery operates. This could help to give people confidence in the management of the fishery and the way TSPF fishers operate their boats in the region.
- Working aboard vessels in pairs for mutual support and confidence in an environment they are not familiar with would work best. Given the likelihood of opportunities for Traditional Owners to work on prawn boats, doing so in pairs is a good idea, particularly in the initial stages.
- Skills learned on-board prawn boats would also be transferable to other larger vessels that may be more common in lobster and finfish fisheries in the future.
- One community suggested their fishing corporation work towards owning their own prawn boat, perhaps over a five-year period. They could then sell their catch to the corporation as part of a broader fishing and seafood marketing operation. This was an example of a more strategic approach to TO engagement with the TSPF;
- For training in future prawn fishing, there were traditional owners that had done cox'n training that would benefit from training enabling them to move to the next level, and ultimately to become skippers of commercial fishing vessels.
- Participants at the Masig community meeting discussed the idea of setting up a crew training program with the prawn fishery. Key points were:
 - initial training or familiarization should be brief, for example one night on the vessel, and perhaps two of the interested community members would go on the vessel together for mutual support;
 - this could then gradually lead to more nights on board successively;
 - Would need clear guidelines about how this training would work, including what sort of payment was available, or how much of the work was covered under my Pathways income support.
 - These guidelines would be developed jointly by the fishermen's Association and the prawn fishing boats involved;
 - It was critically important that the right boats were involved, these would be boats with a very professional attitude that treated trainees respectfully.
 - It was important that potential trainees understood how the program would work, including their level of commitment, and the sort of benefits they receive. This would include how the training would position them for future employment on larger vessels, including prawn boats.
 - One vessel was mentioned (the Miranda 2) as the owner Andy had initial discussions the Masig fishermen's Association. Ed Morrison's vessels were also mentioned as a possible training opportunity.
 - The fishermen's association could put together a training program that involved experience and time in different Torres Strait fisheries, including the prawn fishery. They would rotate participants through training in the Cray fishery, Beche de Mer, finfish, and time on prawn boats.
 - There was concern that some of the prawn fishing boats might have drugs on board. Participants at the meeting felt very strongly that these vessels would not be suitable for training. The purpose of the training was to provide a very professional environment for trainees to learn and benefit. Any problems with drugs on board would send a very bad signal about the fishery.

- The first step might be qualification as a deckie, noting that people who had Coxn's tickets were already qualified as fishing vessel deckies.
- If there were deckies available from the communities this could help the prawn fishery if there is a shortage of available crew;
- Any reports of these sort of training activities should go to members of the fishermen's Association, community leaders, and my Pathways. It was important that information was available to everyone, and not just held by one person or within a group.
- If there were troubles between traditional owners on a vessel for training and the skipper of the vessel, feedback about these things should go back to the fishermen's Association. It was important that the fishermen's Association, or the Island Council or PBC provided feedback to the vessel rather than the skipper dealing directly with the traditional owner crew member concerned.
- Participants agreed that the fishermen's Association has an important role in coordinating these sort of training activities, and providing support to people undertaking the training. It was also important for the Association to develop skills for problem-solving amongst themselves, and to talk constructively about issues so that there were not continued hold-ups to progress on fishing related development.

Comments about business skills relevant to running a prawn fishery boat and how these should be taught include:

- If clear examples of the business of fishing operations are provided, people will benefit from seeing the actual costs of running a prawn boat – e.g. how much money would a prawn skipper expect to make if they fished around 100 nights, and also how much would a crew member on that vessel be likely to make? This would allow traditional owners to understand the nature of different fishing opportunities available to them.
- People need to see pictures on a wall, show them clearly what happens, what a budget looks like etc. Show that they need to catch a certain number of crayfish each week to make enough to put money aside for future boat and motor maintenance, and to pay themselves a wage when other costs are accounted for.
- A participant said the visual presentations and face to face meetings were very important for talking about these sort of issues. Written material was less useful. People want to look at the person, see their face, their expression, and decide whether to trust and listen to them.

Another method discussed is to tell people a clear and compelling story about how to build their fishing business. Examples given include:

- Graham Irikawa on TI who started his own cray business with a dinghy and discipline, budgeted, put money in the bank until he could go to the bank and show them that he is earning and saving. He then got a sensible loan and a bigger boat and built his business step by step. This is a good story that local people could relate to – someone like them who had faced the challenges and steadily built his business from the ground up.
- Daniel Takai at Pearl Island Seafoods (TI) was given a business profile in the Torres News; this is a useful way to give people some insight and confidence about doing it themselves.

Myth Busting Considerations

- Several participants expressed concerns about bycatch from the fishery and the damage this is having (in their view) on other fisheries and the ecology of the region. These concerns have been addressed to some extent in the myth busting work however more needs to be done.

- Some participants felt the footage in the myth busting video did not represent actual fishing conditions, and that there should be footage of actual fishing operations in Torres Strait. For example they felt nets may become twisted, and other underwater effects could make bycatch reduction devices much less effective.
- A participant noted that not just crayfish were caught as bycatch, other species include scallops, blue swimmer crabs, and some finfish species all of which are valuable to the communities.
- A participant asked about the actual performance of the turtle excluder devices (TEDS) and bycatch reduction devices, and how long this equipment had been in use in the fishery. Andy said TEDs had to be used under the rules/regulations for the fishery, also mentioning CSIRO (Roland Pitcher's work) on environmental performance of the fishery, and noted substantial bycatch reductions in the TSPF and other tropical Australian prawn fisheries like the NPF. He noted these fisheries were much more sustainable now than they had been many years ago, and that fishing effort and catch now in the prawn fishery was much lower than it had been historically.
- There's a need to get information about the fishery back into communities every season so that they know what is happening, what sort of impacts the fishery is having, and what sort of opportunities there might be for traditional owners.
- Participants said the prawn fishery has always paid a percentage back to the government, but there has never been a percentage paid to traditional owners; they felt these issues needed to be sorted out between government and the prawn industry;
- An effective way to get information about the fishery back to traditional owners in their communities would be to prepare a brochure similar to the Torres Strait prawn myth busting brochure. This sort of simple and targeted communication was helpful. Such a brochure should be prepared every year to provide information about each fishery for that year.
- A participant suggested initiatives like the video were helpful to provide more up-to-date information about how the fishery operates, however people remained concerned about the impacts of the fishery in the area, including debris from earlier fishing operations in the anchorage around Masig.
- Participants at some meetings discussed some of the costs and benefits of larger or more efficient boats in the prawn fishery, recognising that the larger boats may provide a more suitable training platform. However there were still significant concerns about the prospect of bigger boats in the fishery.
- People remembered the much larger number of boats fishing in the fishery through its earlier history and up until around 2005. Some people suggested describing the amount of activity in the fishery in terms of boat numbers might be more meaningful than catch amounts or the amount of fishing effort.
- A participant mentioned that since the fishery had been operating with many boats in the 1970s and '80s the pearl shell stocks had all but disappeared and he wondered if this was a result of prawn trawling?
- Another participant noted that this was the first time in his experience that the TSPF operators had openly recognised the need to work more closely with people in the communities to identify and develop benefits for the communities and he welcomed this initiative.
- People noted that the fishery is more mechanised and modern than when some of the older community members had their experiences aboard prawn boats, and that this may mean that working in the fishery now is easier than it used be.

Broader fisheries and related issues

The community meetings held to discuss issues relating to the prawn fishery also brought up many issues relating to fishing and fisheries more broadly. These included discussion about equipment, leadership and the need for a Torres Strait seafood brand. Comments specifically were:

- Participants spoke about the overarching regional leadership group called GBK which is the mother group for TO's across all of Torres Strait. Malu Lamar fits in with GBK, which is looking into the strategic development of fisheries and sees the need to develop good quality products from a position of strength with the seafood buyers. A good future Torres Strait brand needs a good reputation as a supplier of high quality fish.
- One issue discussed is that people will move to where the money is being made –so if they think cray is the best money they will go for cray. But if people have made a promise to their community freezer – or another buyer – to do mackerel this may be a problem. For example people might start training in the prawn fishery, and then move to doing lobster because it was more profitable for them;
- Participants noted that My Pathways is more focused on developing people's skills to work in areas that offered jobs around Australia and not just suited to Torres Strait. Hospitality training is an example –if this was done by My Pathways then there was not much call for it in Torres Strait but it was good because it enabled TO's to work in other places and get experience elsewhere.
- Access to GPS units was discussed as an important initiative that would help people fish more efficiently, and also help to engage younger people who were more aware of the use of this technology and its benefits.
- A participant said that old nets and ghost nets were valuable for community arts centres.

There was also discussion about use of the freezers for bycatch and species other than prawns:

- Freezers support some TSPF flow of benefit ideas such as the use of bycatch species for eating, or for storage and sale of boxes of frozen prawns. On Poruma a freezer would complement the existing privately run freezer used for crayfish processing.
- EFMA suggested that the freezer could make use of smaller baitfish species caught as TSPF bycatch and provide this to Coral Trout fishers as bait. It is important to use a range of different baits to catch the finicky fish in areas that may be subject to more fishing pressure.
- A similar trial of edible good quality finfish bycatch could be useful as well; the freezer could trial the sale of this type of product.
- One participant suggested that such an agreement to provide bycatch or bait species could be reflected formally in the boat's management regulations or via licence conditions.

Note: *Andy and the project team would like to thank the Traditional Owners, elders, community leaders, community fisheries representatives and community members of Erub, Poruma, Ugar and Masig Islands for their hospitality and support in making the visits and other meetings possible.*

Appendix C: Stakeholder survey instruments

TSPF Profitability and flow of benefits project - survey instruments to guide stakeholder and licensee interviews

The survey instruments comprise a package of 3 questionnaires tailored to:

1. Cairns-based supply chain business such as

- Licensees (most working other larger prawn fisheries as well)
- Wholesalers/marketers
- Processors
- Logistics such as the Sea Swift barge company

2. Licensees

- All TVH– non-indigenous fishers. Noting there are currently no TIB (indigenous) prawn fishery licences.

3. Capability audit of Traditional Owners' in their communities

- Community leaders, community fisheries representatives, and prawn fishery stakeholders

Each survey is designed to guide face to face or telephone interviews. Copies may be circulated in advance to interviews, but we do not expect respondents to complete the questionnaire independently (i.e. we will facilitate the process).

Appendix C: Stakeholder survey instruments

Questions for regional supply chain businesses

We are conducting research for AFMA on the Torres Strait Prawn Fishery, looking for ways in which the flow of benefits from the fishery to island communities can be enhanced and the profitability of the fishery improved. We are not reviewing or considering any changes to the management of the fishery and its licensing arrangements, rather we are looking into ways in which costs might be reduced through improved facilities in the Torres Strait, ways in which islander involvement in servicing the fishery might be increased, or the value of the fishery increased.

As an important business in the supply chain for TSPF prawns we are seeking your views on what drives the fishery, including costs, pricing; and prospects for a distinct Torres Strait prawn or a broader seafood brand.

1. What proportion of your throughput does the TSPF make up?
2. What has been the scale of seasonal variation in product volume and quality you have seen from TSPF? How does it compare with the other prawn fisheries (e.g. Northern Prawn Fishery and QLD East Coast Prawn Fishery)?
 - a. What's the recent peak and trough for TSPF prawns in your business?
 - b. Has your purchase of TSPF prawns been generally rising or falling?
3. Who in your view sets the prices received along the supply chain?
4. Where do you see the main competition in prawns coming from? Other Australian prawn fisheries, overseas fisheries, domestic or overseas aquaculture production? Which are having the most impact on your business?
5. Do you think that there is any scope for quality/point of origin based price differentiation for the TSPF?
 - If so, what kind of premium would be possible?
 - What would the supply chain have to demonstrate (eg quality assurance, value chain integrity) to secure a price premium?
6. Is there any scope in your view for further value-adding to TSPF catch before it leaves the Torres Strait, either onboard or ashore?
7. What have been the major challenges you've faced in the last five years (TSPF and more broadly)?
8. What are the main challenges you will face over the next ten years? Eg competition from other fisheries, fuel prices, changing consumer demand, quality assurance etc?

Questions for TSPF Licensees

We are conducting research for AFMA on the Torres Strait Prawn Fishery, looking for ways in which the flow of benefits from the fishery to island communities can be enhanced and the profitability of the fishery improved. We are not reviewing or considering any changes to the management of the fishery and its licensing arrangements, rather we are looking into ways in which costs might be reduced through improved facilities in the Torres Strait, ways in which islander involvement in servicing the fishery might be increased, or the value of the fishery increased

Our project aims to improve the profitability of the TSPF for licensees, and to identify practical and mutually beneficial opportunities to distribute benefits of the fishery across Torres Strait communities.

As an important prawn fisher in the TSPF we are seeking your views and experiences in relation to variability in fishing effort and catch, ways in which profitability might be improved, and any suggestions as to how the flow of benefits to islanders could be improved.

1. What was the scale of your TSPF operations last season?

Number and size of boats _____

Average number of fishing days per season (all vessels) _____

Average tonnages per season (all vessels) _____

Average labour levels per vessel per season _____

2. How long have you been working the TSPF?

- a. If over 10 years, why in your opinion has the prawn fishing effort dropped so much (eg from 10,000 fishing days in 2002 to 2,200 in 2013 – or catch drop from 2000t to 500t)?

3. Do you intend to continue working the TSPF?

- a. If so, will your operations
 Increase Decrease Remain stable

4. What role does the TSPF play in your overall operations?

Small part Major part Proving/testing/shakedown

5. How important is accessing the TSPF to your business prospects?

Not important at all	Somewhat important	Neutral	Important	Very important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Do you fish for tiger prawns? And endeavour prawns? What proportion of your catch is each? ___% tiger ___% endeavour

7. Did you have any unused fishing days last season?
8. Where does your catch go?
9. How much processing occurs before the catch is sold on eg:
- | | |
|-------------------------|--------------------------|
| sorting/grading tray | <input type="checkbox"/> |
| boxed and snap frozen | <input type="checkbox"/> |
| Other (please describe) | |
-
10. What are your main cost items during a TSPF season?
- | | |
|---------------------------|--------------------------|
| Fuel | <input type="checkbox"/> |
| Labour | <input type="checkbox"/> |
| Finance payments | <input type="checkbox"/> |
| Packaging | <input type="checkbox"/> |
| Prawn transport (freight) | <input type="checkbox"/> |
| Repairs/maintenance | <input type="checkbox"/> |
| Administration | <input type="checkbox"/> |
| Insurance | <input type="checkbox"/> |
| Marketing | <input type="checkbox"/> |
| License fees | <input type="checkbox"/> |
| Other (please describe) | <input type="checkbox"/> |
-
11. Do you source any of these from the Torres Strait?
- a. If not, is there any scope for any of these to be supplied from the Islands?
 - b. What criteria would a new supplier need to meet?
12. Are your TSPF operations profitable? Eg is each crew/boat profitable over the season?
- a. Are there any constraints on you expanding your TSPF fishing effort?
 - b. Are there any bottlenecks or gaps in the prawn fishing system/supply chain in the Torres Strait?
13. What are the most prospective areas of cost reduction in your TSPF operations? For example:
- | | |
|--|--------------------------|
| Cheaper fuel | <input type="checkbox"/> |
| Lower cost labour | <input type="checkbox"/> |
| Reduced finance payments | <input type="checkbox"/> |
| Faster/cheaper prawn transport | <input type="checkbox"/> |
| Cheaper repairs/maintenance | <input type="checkbox"/> |
| More local processing | <input type="checkbox"/> |
| Smaller crew | <input type="checkbox"/> |
| Higher skilled labour | <input type="checkbox"/> |
| Using bigger boats | <input type="checkbox"/> |
| Longer season | <input type="checkbox"/> |
| Longer duration fishing trips | <input type="checkbox"/> |
| Bigger mother ships | <input type="checkbox"/> |
| Well-equipped ports closer to fishing zones (longer jetty, bigger fuel depots) | <input type="checkbox"/> |
| More skilled labour either on board or on shore | <input type="checkbox"/> |
| Bigger freezers | <input type="checkbox"/> |
| Other (please describe) | <input type="checkbox"/> |
-

14. Would your TSPF activity and profitability increase if you were able to use larger fishing boats?
 - a. Would you take up the option if this restriction was amended to allow longer fishing boats?
15. Do you have any difficulties finding workers with the right skills?
16. Is there scope to hire more workers from Torres Strait communities?
 - a. What skills/experience would they need to demonstrate?
17. Are there any benefits from your TSPF activities that flow to Torres Strait communities? E.g. bycatch, jobs or servicing work, provision of fuel depots etc.
18. Can you suggest any areas where more benefits from fishing might flow to Torres Strait communities?
 - a. Can you foresee any impediments to making these happen?
19. How important do you think it is that any increased flow of benefits to Torres Strait communities not impose additional costs on licensees?

Questions for Torres Strait Communities (covering Capability Audit & ideas for Flow of benefits)

We are conducting research for AFMA on the Torres Strait Prawn Fishery, looking for ways in which the flow of benefits from the fishery to island communities can be enhanced and the profitability of the fishery improved. We are not reviewing or considering any changes to the management of the fishery and its licensing arrangements, rather we are looking into ways in which costs might be reduced through improved facilities in the Torres Strait, ways in which islander involvement in servicing the fishery might be increased, or the value of the fishery increased

Our project aims to improve the profitability of the TSPF for licensees, and to identify practical and mutually beneficial opportunities to distribute benefits of the fishery across the Islands.

As a community leader, community fisheries representative (or fishery stakeholder) we are seeking your views and experiences in relation to current and potential traditional owner involvement and ways in which you see that the flow of benefits could be improved.

1. What is the current scale of Indigenous involvement in the fishery?
 - People
 - Boats
 - Freezers
 - Fuel sales
 - Maintenance and repair
2. How many businesses/people/boats are involved?
3. Please help us to identify each business along the supply chain so that we can ask them about their scale of their activity (staff/turnover/tonnage) and peaks/troughs in recent years – fishing, processing, support
4. What are the traditional owners' aspirations for the fishery and their role in it?

-
5. Do you know of any infrastructure or processes which might be improved to increase the flow of benefits from the fishery to Torres Strait communities?
 6. How important do you think it is that any increased flow of benefits to Torres Strait communities not impose additional costs on licensees?
 7. What are the constraints on greater traditional owner involvement?
For example, some recent studies have suggested a number of constraints including:
 - Small scale operations reduce productivity/profitability
 - Access to finance problems
 - Limited processing reduces prices received
 - Conflict with CDEP/RJCP rules
 - Cultural and skills gap to move from subsistence to commercial scale operations
 - Community ownership of freezers mitigates against more commercial approach
 8. How could these be fixed?

Summary report: Masig Island stakeholder meeting 16-17 Jun 14

Meeting Overview

The Masig Island stakeholder meeting was arranged by AFMA at TSSAC suggestion to determine the likely level of support from Traditional Owners for the proposed TSPF profitability and flow of benefits (TSPF FoB) project (AFMA Research Project RR2014-0824).

The meeting was chaired by AFMA's TSP MAC Chair, Mr Stuart Richey. It commenced soon after participants arrived at Masig Island, and reconvened briefly the following morning. After a summary of the meeting outcomes and closing remarks the Chair closed the meeting at approximately 10.00 a.m. 17 June 2014.

There was good representation from Traditional Owners across the four communities closest to the prawn fishery; as well as from community fisheries leaders and representatives. There were several TSRA Board Members present for the duration of the meeting, most with a strong fisheries interest. They and others contributed actively to the meeting. A list of participants is provided at Attachment A.

Overall there was general support for the project and none of the participants suggested the project should not go ahead, or that they would not cooperate with it. Participants emphasised that the project should proceed carefully, and proper consultation was very important.

Preliminaries

Chair of the Masig Island Prescribed Body Corporate (PBC), Mr John Morris, welcomed participants to Masig Island and the meeting. He acknowledged the Traditional Owners and community elders; also welcoming the opportunity to hold the meeting in a location where the prawn fishery is active.

The meeting Chair advised that the meeting was being held to talk about a proposed AFMA research project to improve the profitability of the prawn fishery, and identify practical ways to share some of the benefits from the prawn fishery with Traditional Owners.

The Chair reminded people that the meeting had not been arranged to discuss future 100% ownership of Torres Strait fisheries; and that the pathways project was doing this. He noted the flow of benefits project may help communities to get some benefits from the TSPF in the interim as pathways to 100% ownership were being developed and implemented.

Meeting Discussion

A Summary of the meeting discussion for each agenda item is provided below. The Chair categorised the issues discussed as either *Guiding Principles* for the project, or as *Issues Raised*. These are presented under Agenda Item 10 (group discussion) and arranged according to subject areas.

Agenda Item 4: What does the flow of benefits project propose?

Andy Bodsworth, Principal Investigator for the TSPF FoB project provided an overview of the project noting:

- the need for the project was based on TSSAC research priorities and other Torres Strait sustainable fisheries and community development objectives and programs;
- the project recognised the critical need to improve prawn fishery profitability recognising current and likely future consequences of very low activity and profitability for the fishery.

- support and strategies to build TSPF related business skills are also likely to be relevant for other Torres Strait fisheries like TRL & fin-fish. They may also be able to assist in the transition to 100% Traditional Ownership of TS fisheries.

Mr Bodsworth then provided a summary of the project methods and key steps in the project as contained in the final project full proposal submitted to AFMA.

Agenda Item 5: roadmap to 100% ownership by Traditional Owners

Mr Kenny Bedford, TSRA Board Member and Portfolio Member for Fisheries presented an overview of the background, current work and next steps for the roadmap for 100% ownership of Torres Strait Fisheries by Traditional Owners, noting:

- the buyback of TRL and Finfish Licences demonstrated the move to 100% ownership of TS fisheries was a reality; and a valuable opportunity for Traditional Owners;
- recognition by TSP MAC of the need for closer relationships and shared benefits; noting this as a positive development for fishers and Traditional Owners;
- the TSPF was an important part of 100% future ownership of TS fisheries, and timing of the proposed FoB project was very good in that context;
- whilst Traditional Owners have had less involvement with the TSPF historically, it remained an important fishery for them currently and in the future;
- the FoB project should work closely with programs like My Pathways and the Remote Jobs and Communities program (RJCP) to avoid duplication and gain leverage;
- fisheries related capabilities like technical knowledge and experience to maintain important community infrastructure like freezers were valuable to Traditional Owners;
- enabling profitability for the TSPF along with high sustainability performance was an important objective; noting opportunities for Traditional Owners to share TSPF benefits would be very limited without a profitable fishery.

Agenda Item 6: What are the Native Title holder aspirations for the Torres Strait Prawn Fishery and this project?

Jerry Stephen, TSRA Board Member (and Malu Lamar representative) provided an overview of *Malu Lamar* (a Prescribed Body Corporate - or PBC) set up to advance High Court sea claim findings, and support the move to 100% ownership of TS fisheries.

He emphasised the importance of TSPF and other TVH sector licence holders and the Traditional Owners working closely together to ensure sustainable and successful fisheries. Patrick Mills then provided an overview of the recently developed Torres Strait Fisheries Association (TSFA); set up as a grassroots representative body for Torres Strait fishers, and supported by AFMA.

Agenda Item 7: Where do the TSPF licence holders see the fishery in the future?

Mr Marshall Betzel presented an overview of industry perspectives on the future of the prawn fishery on behalf of TSPF licence holders. He noted:

- the timing of the meeting, and the TSPF FoB project was very suitable with respect to widely held industry views that fishery profitability must be improved; this may then support a greater flow of benefits to communities;

- TSPF licencees held diverse views about the future of the fishery; but were united in their hope that the profitability and value of the fishery could be improved;
- the need to integrate more closely with Traditional Owners in support of their process to develop 100% ownership of TS fisheries;
- major influences on profitability were high fuel costs and lower prawn prices, and these were difficult to influence. He suggested attention be placed on areas of cost and revenue generation that could be influenced by industry and Traditional Owners.

Agenda Item 8: historical commitments to engage communities in the TSPF - lessons learnt

AFMA's Senior Manager for the Northern and Torres Strait Fisheries (Mr Steve Bolton) provided an overview of historical efforts to engage Traditional Owners in TSPF activities noting:

- stakeholder engagement is one of AFMA's most important functions, having a major influence on the quality and outcomes of fisheries management;
- AFMA is focusing strongly on improving stakeholder consultation and engagement processes, including areas of mutual benefit for stakeholders and AFMA;
- feedback from meeting participants thus far about how to engage more effectively with Traditional Owners in the context of the TSPF FoB project; and
- one of the reasons some earlier efforts to engage Traditional Owners in the prawn fishery had been less successful may have been because these initiatives were not strongly aligned with the needs and aspirations of Traditional Owners.

Agenda Item 9: Can this project help bring native title and licence holder aspirations together?

Andy Bodsworth summarised the main points from the previous speakers, describing where these different points of view could support both the prawn fishery flow of benefits project, and other activities and programs underway or planned for TS fisheries.

He mentioned examples of shared objectives between TSPF licencees and Traditional Owners; noting these were also areas where practical shared benefits may be identified.

He also suggested that a more active and profitable prawn fishery, that is also environmentally sustainable, can help to strengthen the need for important infrastructure and services that are valuable to both the fishery and communities (i.e. Sea-swift mother-ships/barge services; and direct flights to Cairns from Masig Island).

He also noted Traditional Owners' emphasis on respectful and thorough consultation, agreeing this was essential for the project to deliver the best value.

Mr Bodsworth emphasised that suggestions from Traditional Owners, prawn fishers and others about areas of shared value were very important for the project; these ideas could then be evaluated against needs of Traditional Owners and the fishery.

He noted that some capabilities and skills to build shared value from the TSPF would take time to develop. Practical suggestions that can deliver shared benefits as soon as possible were also important.

He recognised that several outcomes from the Malu Lamar fisheries meeting on 1 April 2013 were similar to objectives of the FoB project. Examples included developing practical pathways for

fisheries related benefits, finding ways to improve availability of local crews for TIB or TVH fishing operations, and working together toward the 100% ownership aspiration.

Agenda Item 10: small group discussions about project goals, risks and benefits

Meeting participants then formed two groups to discuss the purpose of the project, how supportive Traditional Owners were for the project to proceed, and ways to manage project risks. The main points from the discussion, as summarised by the Chair, are provided below. They are arranged as *Guiding Principles* for the project and *Issues Raised* during discussion.

Guiding Principles for the project

Transparency and no hidden agendas: Traditional Owners questioned if there were hidden agendas from the prawn fishery in relation to the meeting. Participants agreed that transparency and trust were essential to good outcomes and sustainable future benefits.

Consultation protocols and process: participants agreed consultation processes for the FoB project (and other TS fisheries projects) must be tailored carefully to the communities; recognising their different preferences and abilities to access, understand and share information in communities.

Myth Busting for the TSPF: people recognised that some of the views about the TSPF may be based on old information, or ways the fishery used to operate in the past. Efforts must be made to illustrate the way the fishery currently operates, particularly fishery impacts on issues that are highly valued by Traditional Owners.

Enable benefits as soon as possible: as well as longer term strategies and opportunities, participants agreed the project should also try to identify more immediate shared benefits at least disruption to current fishing operations, and minimal cost. Where possible this should be done in a logical step by step way.

Issues raised in the discussion

Effective Consultation

Protocols for Torres Strait communication and research were critically important and must be followed; suggestions for consultation included Facebook and SMS messages, as well as email, Torres News notices, Community Notices and word of mouth to arrange visits, and distribute important information.

Most participants thought the project should concentrate on the four islands in the proposal (Masig, Ugar, Poruma and Erub Islands), some thought consultation should also occur on other Islands including Mer and Warraber.

Project Design

Participants suggested clear terms of reference for the project - and the current focus on the prawn fishery - were very important. The timeframe for the project and likely timeframes for follow on capacity development work or other benefits should also be clear.

Environmental Risks

Several participants expressed their concern about external risks to the TSPF and the marine environment supporting this and other TS fisheries (e.g. pollution from the PNG Ok Tedi mine, oil being shipped from PNG through Torres Strait, climate change risks, and possible disease and pest species' introduction).

Traditional Owners remain concerned about prawn fishery risks to the local environment and to other TS fisheries (e.g. possible impacts from the TSPF on baby lobsters, or disruption to migrating lobsters; effects of trawling on other fish, and food webs).

Helping Traditional Owners get some personal understanding of the fishery and how it operates would be valuable. They might spend one night onboard and see how fishing is done; they could then share their experience and understanding of the fishery with others.

Information packages and videos for schools to demonstrate how the prawn fishery works may be useful (also for other TS fisheries if needed). Children may then understand the fishery more accurately; and this may enable their future participation in fisheries activities.

TSPF Vessel Operations

Prawn fishers raised the idea of developing Torres Strait seafood branding - a unique seafood brand that captures the pristine and unique nature of TS fisheries. The Brand might be available for use by Traditional Owners, or by TVH fishers for a suitable fee?

To strengthen relationships with Traditional Owners and communities the TSPF must maintain very high standards of environmental performance, and protect the environment;

Maintaining very high quality products from the fishery was also critically important - both to support profitability and underpin development of a strong Torres Strait seafood brand.

Traditional Owners emphasised the importance of TSPF vessels not discarding rubbish that may then turn up on shorelines, detracting from the pristine nature of the region.

A more profitable fishery is usually a more professional fishery. Profitable fishers are more likely to respect the fishery and the environment, and less likely to take short-cuts with their gear, and fishing practices.

A very strong code of practice for prawn fishers would strengthen community acceptability of the fishery (e.g. minimise rubbish, fishers to inform Traditional Owners when coming ashore so they know who is visiting communities).

Suitable ideas for sharing benefits from the prawn fishery more quickly were likely to be closely aligned with how the fishery works, and would not cost too much (e.g. Traditional Owners embarking overnight to learn about the fishery, or helping Traditional Owners' access bycatch species of value to them, that might otherwise be discarded).

When discussing the costs and benefits of bigger boats in the fishery it was important to recognise that bigger boats were more valuable because they could catch prawns efficiently (less cost), and also provide better quality prawns for sale. Larger boats also have better on board processing and packing facilities, and freezers. Better quality prawns meant that the fishery earned more money from the same amount of catch and could support a future Torres Strait seafood brand.

Knowledge & Research

Traditional Owners mentioned that most TS fisheries research is not accessible enough to them and is difficult to understand. Traditional Owners should be involved in research as much as possible; they have extensive knowledge about the area and its environment. An example was whether Traditional Owners could be trained as fishery observers.

The successful Aboriginal and Torres Strait sea and land ranger programs was mentioned. This is work that Traditional Owners may be well suited to and interested in.

What is government bringing to the table?

There was discussion about the management costs for the prawn fishery and could these be reduced to help the profitability of the fishery? AFMA said they were always looking for ways to reduce management costs and would continue to do that.

People suggested linking some of the prawn fishery benefit sharing ideas with other programs like My Pathways. An example was to use a prawn vessel to introduce Traditional Owners to the fishery

and how it works. Perhaps do some training, with vessel running costs covered by My Pathways, and product sale proceeds retained by licence holders?

Participants cautioned against benefit sharing ideas that are unlikely to work - some of the previous ideas and programs have not been based on what people in the communities want.

Traditional Owners support and likely engagement with the project

The meeting broke into two groups to discuss participants support for the project, and whether Traditional Owners were likely to actively participate and engage with it. Participants in both groups agreed there was a strong need for the project, recognising the opportunities for shared benefits.

Traditional Owners recommended the project should proceed carefully, and proper consultation was very important. No participants suggested the project should not go ahead, or that they would not cooperate with it.

Masig Island Community Meeting Participants

Name	Who they represent
Stuart Richey	Chairperson
Andy Bodsworth	Project primary investigator
Victor Mabo	Murray Island
John Mosby	Yorke Island
John Morris	Yorke Island
Ned Mosby	Yorke Island
Percy Misi	Yorke Island
Jack Pearson	Yorke Island
Simon Naawi	Yorke Island
Mary Savage	Yorke Island
Patrick Mills	Torres Strait Fisheries Association
Daniel Stephen	Ugar Island
Francis Pearson	TSRA board member – Coconut Island
Cedric Pearson	Coconut Island
Michael Passi	TSRA board member – Murray Island
Pastor Kiwat Lui	TSRA board member St Pauls (Moa) Island
Hilda Mosby	TSRA board member – Masig island
Kenny Bedford	TSRA board member, MyPathways, Erub Fisheries Association
Jerry Stephen	TSRA Board member Ugar Island
Darren Roy	Queensland Fisheries
Tom Roberts	Queensland Fisheries
Steve Bolton	Australian Fisheries Management Authority
Lisa Cocking	Australian Fisheries Management Authority and Executive Officer
Alicia Sabatino	Australian Fisheries Management Authority
Clive Turnbull	Fisheries consultant TSPMAC scientific member
Ron Earle	TSPMAC industry member and licence holder
Ed Morrison	TSPMAC industry member and licence holder
Nick Schultz	TSPMAC industry member and licence holder
Marshall Betzel	TSPMAC industry member
Mariana Nahas	Torres Strait Regional Authority
Aaron Smith	Torres News

Appendix E: Enabling Factors for Northern Prawn Fishery Management Performance (profitability and stakeholder engagement)

Primary Enabling Factors for Business Performance and Stakeholder Engagement in the Northern Prawn Fishery	
Key Attributes	Primary Enabling Factors
<p>Industry's Engagement with Management</p> <ul style="list-style-type: none"> Industry leaders and representatives contribute actively and professionally to the development of cost effective and ecologically sustainable management. Industry has maintained strong problem solving skills, and an excellent knowledge base of the fishery. They manage change, stakeholder relations and sustainability challenges proactively and strategically. Industry engages professionally and influentially with government (managers & scientists). Many enabling factors for co-management are evident in the NPF, both industry and management and research; and dynamics across these stakeholders. Sought and have now achieved MSC certification for tiger, endeavour and banana prawns, supporting market access and fishery reputation. 	<p>Regulatory/Policy: legislative basis for consultative approach to management via Commonwealth Fisheries Management Act 1991. NPF Management Plan affirms the role of NORMAC and its members to support these processes. Policy guidelines are provided to enable effective operation of NORMAC.</p> <p>Strong rights based management has encouraged industry ownership of issues and development of management solutions and related human capacity.</p> <p>Guiding strategies: consistent and effective engagement by industry through the various NPF Industry Associations over time. Effective operating procedures to harness industry input at the association level and to manage corporate knowledge.</p> <p>Professional capacity within industry and at the leadership level to engage influentially and strategically with government, management agencies, and scientists across the spectrum of economic efficiency and sustainability issues.</p> <p>Human Capacity: Organic industry leadership, influence, and problem solving capacity over time. Strong and influential leadership of successive industry associations over time. Consistent ability to work towards common strategic objectives in the face of numerous distractions and challenges, and despite divergent priorities across industry sectors.</p> <p>Strong NPF industry culture centred on strategic awareness of issues and potential problems, innovation and problem solving, uptake of appropriate technology, and solution driven approach to bycatch and other environmental issues.</p> <p>A professional and corporate approach to their fishery and its management.</p> <p>Loyalty in the NPF fisheries management "community" which has reduced staff turnover in management agencies and enabled better than average relationships with industry and corporate knowledge of history, issues, and possible solutions.</p>
<p>Business Efficiency and Profitability</p> <ul style="list-style-type: none"> Consistent and significant positive net returns from fishery over time¹⁵ 	<p>Regulatory/Policy: legislative mandate for economic efficiency (aggregate fleet profitability) and cost effective and efficient management.</p> <p>Strong rights based management promoting resource stewardship and economically efficient</p>

¹⁵ Except negative net returns recorded for FY 2004-05 to 2005-06.

<ul style="list-style-type: none"> • Consistently low ratio of recoverable management costs to Fishery GVP (relative to other commercial fisheries) • Successful structural adjustment of the fishery toward a vessel capacity target aligned with Maximum Economic Yield. • Rationalisation of fleet structure to point where most companies operate several vessels and have a substantial investment. Medium to longer term business viability heavily dependent on the fishery's ESD performance. 	<p>management systems (i.e. transferrable effort units).</p> <p>Maximum Economic Yield target reference point and successful stock recovery strategy up to that target.</p> <p>Government commitment to, and support for, efficient fisheries through both legislation and successive government and industry funded structural adjustment programs.</p> <p>Strong institutional support for economically efficient fisheries management through ABARES and their fisheries economic performance evaluation and reporting; similar support via ANU Fenner School for economic efficiency research and capability (e.g. Q Grafton and T Kompas).</p> <p>Guiding strategies: Cost recovery approach ensures close industry scrutiny of proposed management and research expenditure contributing to efficiency gains.</p> <p>Ongoing commitment by industry to strategies ensuring efficient business structures and fleet operations.</p> <p>Corporate management performance reporting by AFMA against key legislative objectives; and for specific statutory management plan objectives. Economic performance of fisheries evaluated and reported through ABARE fisheries economic status reports and surveys for selected fisheries.</p> <p>Human Capacity: Cost recovery and the NORMAC approach and more recently NPF Incorporated, has generated strong stakeholder awareness of management processes, and ways to improve the efficiency of management. The ability to identify efficiency gains and add value to fisheries management processes is now bedded into industry's human resource capability.</p> <p>Influential with political representatives, generally increasingly polished and professional in their influencing strategies engagement with key stakeholders.</p> <p>NPF fishing companies take pride in, and place an emphasis on, their ESD performance. This is reflected in the training and ongoing education of skippers and crews, and exemplified by the successful industry led CMO program.</p> <p>Successful MSC accreditation for key prawn species' taken (Tiger, endeavour, banana) illustrates Industry's awareness and commitment to derive market advantages through environmental stewardship.</p>
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Appendix F: Summary of TSPF flow of benefit ideas raised during community meetings and discussions, including the June 2014 Masig Island meeting.

Broader initiative	Specific suggestions	Estimated cost to trial
Trade/sale of TSPF product to Traditional Owners' and/or TO businesses.	<ol style="list-style-type: none"> 1. Encourage regular sale of prawns through community shops and freezer facilities, or donate/sell soft and broken, or otherwise less valuable prawns at a reduced rate. 2. Potential to store frozen prawns in community freezers as a contingency arrangement if required. 3. Increase the utilisation of by-product/bycatch through similar arrangements with communities. 4. Examine the suitability of using trawl bycatch species for bait in the Coral Trout line sector. 	<p>All generally low cost</p> <p><i>May require amendments to fishing concessions</i></p>
Torres Strait seafood 'brand'	<ol style="list-style-type: none"> 1. Seafood branding to capitalise on clean environment and the strong role of indigenous custodians in ensuring fishing is sustainable. 	<p>Medium – High</p> <p><i>Expertise needed –perhaps a cost benefit analysis/business case needed</i></p>
Crew training programs	<ol style="list-style-type: none"> 1. At sea training programs for traditional owners (particularly younger residents); also likely to have benefits for other fisheries as they develop in the fishery (i.e. skills and experience to operate large boats in finfish, TRL and BDM fisheries. Discussed in some detail at the Masig meeting, and the Masig Fishers Association agreed they would be a good group to coordinate TO perspectives on how to run such training and to support on-ground implementation. 2. Training and skills development in maintaining motors/engines would be valuable. Particularly outboard motors 3. Assistance with fishing business skills (i.e. what are the basics of running a successful commercial prawn fishing business, what do the costs and revenues look like, likely profits etc). 	<p>1 – Medium <i>Survey issues may need to be resolved.</i></p> <p>2 – low cost/opportunistic <i>May qualify for external funding</i></p> <p>3 - Low cost</p>
Greater involvement of traditional owners in research projects.	<ol style="list-style-type: none"> 1. Potential for TO's to be trained as fishery observers and operate from home communities e.g. Masig Island; 2. Harness traditional knowledge of the local marine environment to support strong environmental management and cultural outcomes. 	<p>1 - Low (Medium cost once in place, higher initial training costs)</p> <p><i>May need additional training i.e. sea safety</i></p>
Efficiency of the fishery	<ol style="list-style-type: none"> 1. Industry to work with traditional owners, community and regional fishery associations (Torres Strait Fisheries Association (TSFA) to develop agreed approaches to reduce costs and increase revenue. 	<p>A more cooperative relationship leading to a more secure and profitable fishery could be achieved at low – medium cost</p>
Establish local presence on Masig Island for logistic support to TSPF vessels	<ol style="list-style-type: none"> 1. Engage a part time logistics support person (several days/week – to be advised) to facilitate logistical support, spares and maintenance for TSPF boats. Net mending services would also be valuable to TSPF licences and may offer lower level employment opportunities for local TO's. 	<p>Low to medium, potentially funded by a TSPF licence & My Pathways or similar.</p>
Sea ranching of TRL using TSPF bycatch as feed or to supplement feed.	<ol style="list-style-type: none"> 1. Use TSPF bycatch as the basis of solid feed for grow out of ranched TRL in areas close to communities. 	<p>Cost of providing bycatch low, some implications re bycatch sensitivity. Cost of TRL ranching - pilot program high.</p>
Facilitate inter-island travel	<ol style="list-style-type: none"> 1. If TSPF vessels were going to TI from island communities and had space to take one or two passengers this would help as airfares are very expensive. 	<p>Low, depends on space available.</p>
Nets for Community Arts Centres	<ol style="list-style-type: none"> 1. Old or unwanted trawl nets, or salvaged ghost nets are sought after and valued by community arts centres 	<p>Low.</p>