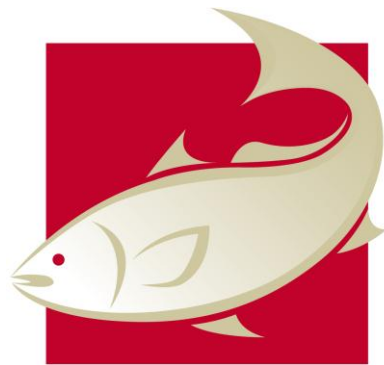


Australian Council of Prawn Fisheries Ltd.

Graeme Stewart

Project No. 2010/745



**AUSTRALIAN
SEAFOOD
COOPERATIVE
RESEARCH CENTRE**

December 2014



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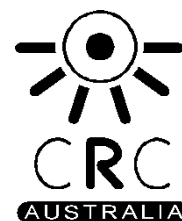
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Non-Technical Summary

PROJECT: 2010/745 Research and Development planning, implementation, extension and utilisation.

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PROJECT OBJECTIVES:

- 1 To facilitate prawn industry participation in Seafood CRC projects and the extension and utilisation of the project results, particularly in relation to the development of new products and new markets.
- 2 To coordinate the planning, implementation and reporting of R&D projects conducted by the Seafood CRC to achieve the outcomes specified in the ACPF Strategic Plan.
- 3 To establish, by December 2012, a mechanism by which the ACPF can fund its own R&D coordination and communication activities.

OUTCOMES ACHIEVED

The majority of Seafood Co-operative Research Centre [SCRC] participants are corporations with management and administration structures. Those participants have internal lines of authority and a single line of communication with external parties. In contrast, the Australian Council of Prawn Fisheries Ltd [ACPF] is a collective of individual prawn fishery organisations from separate prawn catching jurisdictions, each reflecting the legislative or administrative regime controlling each individual fishery.

When the ACPF's participation in the SCRC commenced, the ACPF was in the process of adopting a Strategic Plan and a Research and Development Strategic Plan but day to day operations were carried out on an *ad hoc* basis by individual members. The ACPF Board recognised that to realise the full potential of its SCRC participation there had to be a person dedicated to coordinating projects and providing an extension and implementation service to the Australian wild caught prawn industry.

An ACPF Research and Extension Manager was appointed in January 2011 and a campaign was launched to:

- Raise the Australian wild catch prawn industry's awareness of the role and function of the Seafood Cooperative Research Centre.
- Encourage the Australian wild catch prawn industry to submit project proposals.
- Encourage Australian wild catch prawn industry participation in Seafood CRC projects.

Communicating with the Australian wild catch prawn industry is a formidable task. The catching sector of the industry is spread along long stretches of often remote coastline. Whilst some processing is undertaken in remote locations, most processing occurs in State capitals or regional cities. In short, the industry is widely

dispersed and part of it is located where communications are non-existent or poor.

Initial communication was through electronic media; telephone, emails, eNewsletters and a website. Establishing communications was relatively swift in South Australia, Western Australia and the Commonwealth's Northern Prawn Fishery where there are strong fishery based organisations and communication channels are well established.

Communication with the Queensland and New South Wales prawn industry proved difficult. The great majority of Australian wild caught prawn operators are in Queensland and New South Wales where the wild caught prawn industry and its representative organisations were, and are, experiencing a period of disruption. Engaging with the wild caught prawn industry in Queensland and New South Wales was a major problem throughout the life of the project.

Encouraging interest in developing new products proved difficult because labour laws introduced soon after the project commenced provided a very strong incentive to process Australian seafood offshore and re-import all, or some, of the product. The number of Australian seafood processing establishments contracted rapidly during this time. Subsequent SCRC consumer research concluded that elaborately transformed prawn products rarely attract premium prices so the failure to engage the industry in developing new products is not surprising.

There was a positive response to the opportunity to develop new markets.

Selecting R&D projects to be undertaken by the SCRC process was determined by a Research Subcommittee established by the Australian Council of Prawn Fisheries Ltd.

The output of many early projects identified gaps and set priorities for subsequent research projects. It is no coincidence that the three major research projects are Value Chain Analysis, Quality Assurance and the National Prawn Marketing Strategy. The early projects identified these areas as having the greatest potential to provide enduring benefits for the Australian wild caught prawn industry.

While other projects tackled long standing problems in the Australian wild caught prawn industry, the Value Chain Analysis, Quality Assurance and the National Prawn Marketing Strategy projects have breathed new life and enthusiasm into the industry. Through the uptake of the outcomes of these three areas of SCRC projects, the outcomes of other lesser known SCRC projects [such as nutritional profiles] are being disseminated and adopted by the industry.

Other SCRC project outcomes such as food health and safety and compositional profile data are used in trade and market access negotiations and as reference material in public health discussions.

Legislative changes during the life of the project have opened the way for the ACPF to fund its own R&D coordination and communication activities. The SCRC R&D experience has provided a sound platform to launch the new arrangements.

1. Introduction

At the commencement of this project there were major commercial prawn fisheries in South Australia, Western Australia, New South Wales, Queensland and Commonwealth waters and a minor prawn fishery in Victoria. Total Australian wild capture prawn catches, which were approximately 23,000t valued at approximately \$300 million in 2003/4, reduced to approximately 19,000t valued at approximately \$223 million by 2007/8. (Source: ABARE (2009) Australian Fisheries Statistics, Canberra, Australian Bureau of Agricultural and Resource Economics)

The 2007/8 prawn catch breakdown between jurisdictions was:

Jurisdiction	Value (AUD millions)	Percentage of total
New South Wales	\$22.26	9.96%
Queensland	\$54.30	24.30%
South Australia	\$35.87	16.10%
Victoria	\$0.24	0.11%
Western Australia	\$26.98	12.08%
Commonwealth	\$83.68	37.45%

The 25% reduction in total prawn catch value from 2003/4 to 2007/8 was evidence that Australian prawn fisheries were facing serious problems.

The Australian wild caught prawn industry had experienced significant income growth in the 1990s but that growth was not sustained after 2000 due to increased market competition from imported aquaculture prawn production. The industry experienced a mild reprieve from imported competition when the Australian dollar devalued to less than USD0.50 in mid-2002. Thereafter the Australian dollar rose steadily to almost parity with the USD just prior to the Global Financial Crisis. The real value of Australian prawn production halved between 2000/1 and 2007/8. The estimated export value of Australian wild capture prawns in 2003/4 was \$116 million but by 2006/7 the value had fallen to \$97 million.

In South Australia the decline of exports was most dramatic. In 2004/5 nearly 70% of the state's prawn production was exported. In 2008/9 only 2% of the State's prawn production was exported. (Source: South Australian Food Centre, Food Export Bulletin Issue 1 – September 2009.)

Historically the Australian wild caught prawn industry had focused on export markets. Some larger producers maintained sales offices in Japan, Taiwan and Hong Kong but Australian market expertise was limited.

As the value of the Australian dollar increased, Australian prawns were priced out of the international market. Orders for and prices paid for Australian prawns declined. At the same time the Australian market experienced a surge of cheap [in Australian currency] imported aquaculture prawns.

The potential to increase wild capture prawn income by increasing catch was limited. The Australian wild caught prawn industry had focused on stock sustainability and production efficiency. The industry recognised that to achieve better returns it had to secure its existing catch volumes, improve its marketing, product positioning and supply chains within Australia. There was no national body to coordinate such an undertaking.

There had been an Australian Prawn Promotion Association established during the early 1990s but a proposal to introduce an export levy to fund international promotion had been rejected by Queensland producers and that, in turn, brought the association's operations to a halt.

Prawn fisheries are major contributors to the economies of regional coastal areas. Studies in South Australia [EconSearch, 2001] and Western Australia [ACIL Tasman 1999 and 2007] have shown that the indirect economic impact of the fishing industry in regional areas is greater than the direct economic impacts.

The Fisheries Research and Development Corporation [FRDC] sponsored a National Prawn Fisheries Conference in Cairns in November 2004. This was a major initiative and as a result of that conference, a draft Strategic Plan was released in 2006. At a further conference, held in Adelaide in February 2007, the draft Strategic Plan was refined to provide a Strategic Plan for the next 10 years and a Research and Development Strategic Plan [funded by the FRDC] was also developed.

From those conferences, the Australian Council of Prawn Fisheries Ltd. [ACPF] was formed to put the Strategic Plan into action.

The ACPF commissioned an analysis of the prawn market that identified market threats and opportunities for the Australian wild capture prawn industry. Drawing directly from Strategic Plan and the market analysis, the ACPF agreed upon the following actions:

1. Improved price – coordinated facilitation with national initiatives to value add and market profile the wild catch prawn industry so there is a high return on investment for Australian enterprises.
2. Secure volume – fostering collaborative approaches between fisheries and with the government to strengthen access, legislation and support for our young people so the industry has a secure future.
3. Assistance to reduce business operating and capital costs for wild capture prawn fisheries so there is a high return on investment for Australian enterprises.

When the Australian Seafood Cooperative Research Centre was formed, the ACPF became a participant and contributed to the SCRC from funding provided through the contribution of wild capture prawn industry to the Fisheries Research and Development Corporation. Once operational, the ACPF R&D Strategic Plan was adopted to provide the guiding principles for research and development investment. As a further principle, it was agreed that project output should deliver benefits to all Australian prawn fisheries.

1.1 Need

The Australian wild catch prawn industry has experienced a significant decline in its Gross Value of Production since 2003/4. The Australian wild catch prawn industry comprises many small businesses throughout Australia with little or no capacity to coordinate investment in, or manage, industry research and development.

The Australian Council Prawn Fisheries [ACPF] was well positioned, with the Seafood Cooperative Research Centre, to implement ACPF Research and Development Strategic Plan and promote the use of research and development outcomes. The ACPF determined that there are two major considerations to achieve

better national research and development coordination and outcomes for the prawn sector:

1. Strategic issues of; research and development prioritisation, funding and support for both industry development plans and government objectives for industry development.
2. Operational issues of; facilitating effective communication and coordination at all levels [within the industry, between researchers and industry, between researchers and research funders].

1.2 Objectives

1. To facilitate wild caught prawn industry participation in Seafood Cooperative Research Centre projects and extension and utilisation of the project results, particularly in relation to the development of new products and new markets.
2. To coordinate the planning, implementation reporting of Research and Development projects conducted by the Seafood CRC to achieve the outcomes specified in the ACPF strategic plan.
3. To establish, by December 2012 mechanism by which the ACPF can fund its own Research and Development coordination and communication activities.

The objectives did not change during the project.

2. Methods

With the appointment of a Research and Extension Manager in January 2011 it was found that very few Australian wild catch prawn industry participants knew of the SCRC and, of those who did, only a very few appreciated the SCRC's potential to improve and develop Australia's wild caught prawn industry. A campaign was launched to raise the Australian wild catch prawn industry's understanding of the role and function of the SCRC.

The Australian wild catch prawn industry participants' failure to appreciate the significance of the SCRC is understandable. There is no national representative body for the Australian fishing industry. National representative bodies like the ACPF are rare and the ACPF itself had been a loose affiliation of prawn fishery representatives that united on matters of national importance.

Management and the legislative control of Australian commercial fishing are State and Commonwealth. Prawn fishing operators naturally focus on their controlling administration. With the exception of the Northern Prawn Fishery, all prawn fisheries are administered by a State and even within a State, individual prawn fisheries can operate with little regard to other prawn fisheries. On a day to day basis, national issues, or initiatives like the Seafood Co-operative Research Centre, have little relevance to trawler operators.

The Australian wild catch prawn industry consists of many fisheries widely dispersed along much of Australia's coast. Communicating with the wild catch prawn industry is a formidable task. Engagement is difficult because:

- Trawler owners lead busy and difficult work lives and many are often at sea for long periods of time in remote locations.

- Trawler owners can be difficult to locate or engage in conversation.
- Trawler owners are reluctant to meet as a group because of existing tensions in relation to other matters.
- The competitive culture of the industry when on the fishing grounds leads to unease when meeting as a group.
- There is a strong victim mentality caused by years of demonization of the industry by negative media.

In the case of the SCRC, trawler owners were also reluctant to engage because:

- The communication was viewed as coming from another “government organisation” and therefore considered to be the precursor to another regulatory or cost impost.
- Previous experience with research organisations had often led to more controls and restrictions on fishing activities.

The ACPF Research and Extension Manager’s initial communication was through electronic media; telephone, emails to members, eNewsletters and a website. Establishing communications was relatively swift in South Australia, Western Australia and the Northern Prawn Fishery where strong fishery based organisations exist; some with full time Executive Officers.

Moreover, ACPF Board members were all active in the major prawn fisheries and, with the exception of Queensland and New South Wales, had direct personal contact with virtually all trawler operators in every Australian prawn fishery.

Communication with the Queensland and New South Wales prawn industry, was, and is, difficult. The great majority of Australian wild caught prawn operators are in Queensland and New South Wales. Queensland and New South Wales combined catch represents about 35 percent of the total Australian wild caught prawn production. In both States the fishing industry and its representative organisations were experiencing a period of disruption caused by:

- Changed government or radically changed government policy.
- Governments announcing their intention to reduce fleet sizes and issuing investment warnings.
- Uncertainty about how fleet reduction would be achieved.

It is difficult to engage trawler owners in a broader vision of the future or to commit their resources to that vision when their day to day survival is under threat.

In addition, the Commonwealth Marine Reserves threatened to prohibit trawling in approximately one third of the Australian Fishing Zone. The proposal affected all Australian prawn fisheries and was a further disincentive to commit to long term projects.

To engage with Queensland and New South Wales fishers the Research and Extension Manager held face to face meetings and travelled to anywhere fishermen might gather; Fishermen’s Co-operative Annual General Meetings, fisheries management meetings and the like. The process was tedious and resource hungry.

Part of the project’s first objective is aimed at developing new products. Soon after the commencement of the project, the Commonwealth Government introduced labour laws penalising the use of labour during the hours when seafood is best processed. The labour laws, combined with the lack of import barriers, an historically

high Australian dollar and other legislated labour on-costs resulted in very strong financial incentives to process Australian seafood offshore and re-import all, or some, of the product for the Australian market. The Australian seafood processing industry witnessed a rapid decline in the number of operational seafood processing establishments. Subsequent SCRC consumer research concluded that elaborately transformed prawn products rarely attract premium prices sufficient to cover the cost of processing so the failure to engage the industry in developing new products is not surprising.

Consequently, there was little support for developing new products although there was a positive response to the opportunity to develop new markets.

To coordinate the planning, implementation and reporting of R&D projects, the ACPF established a Research Subcommittee. The Research and Extension manager developed an information pack that was distributed to ACPF members and anyone involved in the Australian wild caught prawn industry; including government agencies. ACPF Members were encouraged to distribute the information pack to anyone or any organisation that may have a project concept.

The information pack provided an explanation of:

- The Seafood Co-operative Research Centre's objectives, operational processes and a list of the SCRC research participants.
- The Australian Council of Prawn Fisheries Ltd.'s Research Strategy, including its priorities.
- The Australian Council of Prawn Fisheries Ltd.'s Research Subcommittee's role.
- The Research and Extension Manager's role.

The information pack invited recipients to submit project proposals to the Research and Extension Manager.

The Research and Extension Manager established a contact list and liaised with key personnel throughout the prawn industry and well beyond ACPF members to ensure that a wide range of applications were received. The Research and Extension Manager assisted project applicants when preparing their applications.

The Australian Council of Prawn Fisheries Ltd Research Subcommittee reviewed project proposals and prioritised approved project proposals based upon the priorities in the existing Research Strategy. The approved projects were then submitted to the SCRC Research Advisory Committee for final approval.

The Research and Extension Manager assisted project applicants and co-ordinated the progress of each approved project with the project's Principal Investigator.

It was in the nature of some projects that findings along the way would determine whether the project could achieve its stated objective. These projects were subject to "go or no go" decision points. This approach required close monitoring by the Research and Extension Manager and proved its worth for some projects.

The ACPF partnered in a number of omnibus projects with other SCRC participants. Benefits from these projects accrued to the wild caught prawn industry as well as many sectors of the Australian fishing industry. They were typically projects where large scale consumer surveys were undertaken and the data is relevant to many sectors of the fishing industry or they were academic studies that provided alternative

fisheries management perspectives to the long established practice of only focusing on biology.

The value of the consumer survey data became apparent as other prawn research projects progressed.

Research project outcomes, other than commercial in confidence material, have been distributed by:

- Electronic media; telephone, emails to members, eNewsletters and a website with links to the SCRC website and the Fisheries Research and Development Corporation website with consumer related information posted on www.fishfiles.com.au
- Hard copies of final reports; requested as reference material by organisations with traditional library resources.
- Articles in fishing industry magazines such as the FRDC's "FISH".

3. Results

3.1 To facilitate prawn industry participation in Seafood CRC projects and the extension and utilisation of the project results, particularly in relation to the development of new products and new markets.

With the exception of Queensland and New South Wales, industry participation in Seafood CRC projects improved dramatically after the circulation of the information pack.

The ACPF adopted a position that the REM should support and work in collaboration with industry organisations – particularly ACPF member organisations. The ACPF Board is aware of rivalries and disaffection that has arisen in the past if a local organisation perceives that a national initiative is encroaching on its membership. The demise of the Australian Prawn Promotion Association Inc. is an example.

For reasons that remain unclear, industry engagement via the State wide fishing industry associations did not materialise in a meaningful way in Queensland and New South Wales - except for the Queensland Seafood Marketers Association Inc. and the Moreton Bay Seafood Industry Association Inc. [MBSIA] which also embraced the opportunity to participate in SCRC projects. The MBSIA Value Chain project has been an outstanding success – not least for the confidence that it has instilled in the membership.

Queensland and New South Wales are the only States where there are no dedicated "wild caught prawn" representative organisations.

Part of the project's first objective is aimed at developing new products. Soon after the commencement of the project, the Commonwealth Government introduced labour laws penalising the use of labour during the hours when seafood is best processed. The labour laws, combined with the lack of import barriers, a high Australian dollar and other legislated labour on-costs resulted in very strong financial incentives to process Australian seafood offshore and re-import all, or some, of the product for the Australian market. The Australian seafood processing industry witnessed a rapid decline in the number of operational seafood processing establishments. The reduction in the number of food processing establishments

accelerated with the introduction of a carbon tax which had the effect of making refrigerants prohibitively expensive.

Regardless of the rapidly declining food processing sector, the ACPF encouraged project applications aimed at developing new prawn product presentations. Very few prawn processing submissions were received. No projects were supported. The majority of applications were for developing a “new” presentation that was either already produced or was no longer produced in Australia because of the high cost environment.

One area of potential was transforming prawn that might otherwise be sold as bait. Notwithstanding the fact that the retail value of small size prawns sold as bait generally exceeds the value of small size prawn sold for human consumption, an attempt was made to produce prawn mince using prawns that would otherwise be used for bait. The quality of mince product was not acceptable.

Subsequent SCRC consumer research confirmed the long held industry view that elaborately transformed prawn products rarely attract prices sufficient to cover the cost of extra processing so the failure to engage the seafood processing industry in developing new products is not surprising.

3.2 To coordinate the planning, implementation and reporting of R&D projects conducted by the Seafood CRC to achieve the outcomes specified in the ACPF Strategic Plan.

The ACPF Research Sub-committee and the REM were proactive in seeking out potential research projects. The ACPF Research Sub-committee convened at least once per month during the period from April 2011 to December 2011 to evaluate the many proposals that were received. After that time proposals were received at a slower pace. The ACPF Research Sub-committee’s selection of projects was guided by the outcome specified in the ACPF Strategic Plan, most particularly the objective to improve price.

As early projects were completed it became clear that there were some “gaps” in the industry’s capability to meet consumer demands and hence achieve the “improve price” strategic objective. The ACPF Research Sub-committee’s focus then moved in favour of projects with outcomes that could fill those gaps to meet the “improve price” strategic objective.

For example, the *Time/temperature monitoring for maximizing returns through the supply chain [Project 2011/748]* was selected to meet gaps that had been identified by the following projects:

- Consumer perceptions of inconsistent quality and confusing product description [outcome of Consumer Surveys – Communal projects].
- Through chain ignorance of quality assessment [outcome of the *Optimising quality and value in domestic prawn value chains. Project 2008/793.10*].
- Through chain product temperature variations [outcome of *Maximising the quality of Australian wild-caught prawns. Project 2011/747*].

3.3 To establish, by December 2012, a mechanism by which the ACPF can fund its own R&D coordination and communication activities.

The ACPF was introduced to the opportunity of entering into an Industry Partnership Agreement with the FRDC in mid-2011. The ACPF Chairman recommended

entering into an Industry Partnership Agreement with the FRDC so that the ACPF could continue the R&D coordination and communication functions that it had developed as a SCRC participant. Entering into an Industry Partnership Agreement with the FRDC anticipated the termination of the SCRC in June 2014. At the 2014 ACPF AGM the ACPF Board has agreed to put a proposal to its membership.

4. Benefits and Adoption

A list of the projects undertaken by the ACPF is attached. The outputs of the many projects initiated by this project are still in the process of being adopted. At the time of writing this report, some projects are not finalised.

4.1 Communal Projects

The ACPF participated in, and members benefitted from, a number of communal projects. Some of those projects, such as the *Omnibus Seafood Consumer Survey [Project 2008/779]*, provided outcomes that had immediate value. The outcomes were presented to the industry and quickly integrated into the marketing plans of individual companies.

While the consumer surveys considered all seafood products, the survey found that the prawn [and barramundi] categories were considered “special” by consumers and that there was the potential to increase the price of Australian prawns without reducing demand. The finding redirected ACPF focus towards a domestic prawn marketing campaign. The *National Prawn Market Category Planning [Project 2011/736]* developed a strategy that had its roots in the findings of the Communal project consumer surveys.

Seafood Access Forum [Project 2008/907] provided members with up to date information on the import requirements for export markets and progress reports on export market issues. This was especially useful for prawn producers exporting to Europe who had experienced shipment rejection for alleged breaches of maximum cadmium residue in Australian prawn product.

Market Access Database [Project 2008/906] became the “go to” resource when investigating potential export markets.

Optimizing business structures and fisheries management systems for key fisheries [Project 2009/715] provided an insight into how the Australian prawn industry might be optimised. Out dated legislation and political inertia remain obstacles to achieving optimisation.

Establish compositional profiles for seafood products sold by CRC participants [Project 2008/905] developed compositional profiles for the major Australian prawn species that have provided the Australian prawn industry creditable nutritional information that will be used for years to come.

4.2 Co-contribution project

Future Harvest Theme leadership [Project 2009/712] developed disciplines that can provide considerable economic benefits to Australia, provided fisheries management agencies can overcome legislative inertia and engage personnel sufficiently motivated to implement management regimes that do not impose economic inefficiencies on fishing operations.

Chilled Pre Packaged Seafood Category Development [Project 2009/770] sought to bring some standardisation to the existing pre-packaged seafood category. The uptake of the outcomes from this project was constrained by the rapid decline of seafood processing in Australia due to factors noted earlier in this report.

National Prawn Marketing Category Planning [Project 2011/736] was jointly funded by the ACPF and the Australian Prawn Farmers Association, another SCRC participant.

The various SCRC projects were being watched closely by the prawn industry. It was apparent from the findings of the Value Chain Analysis projects and the Consumer Surveys that there was an opportunity to undertake a marketing campaign to secure higher prices for prawn product.

The consumer surveys concluded that consumers did not differentiate between wild caught and farmed prawns but they had a strong preference - and were prepared to pay a premium for - Australian prawns. The finding that consumers did not differentiate between wild caught and farmed prawns took a while for prawn trawler operators to accept. They had long held the view that wild caught prawns are superior to farmed prawns and had directed some of their marketing towards differentiating their product on that basis. It is measure of the power of the research data that prawn trawler operators ultimately accepted that “the customer is always correct”.

Once the consumers’ view was accepted, it was natural for prawn farmers and prawn trawler to coordinate their marketing under an Australian brand.

The outcome from the project was a marketing concept that was well received by the Australian prawn producers and the industry moved ahead with adopting the market plan. The outcome also precipitated the need for other projects to resolve issues critical to successful marketing.

4.2 ACPF Projects

ACPF R&D Planning, implementation, extension and utilisation [Projects 2008/748.01 and 2008/748.20] provided funds for R&D planning, implementation, extension and utilisation. Those functions were then undertaken by the Research and Extension Manager from January 2011 in a project with the same title *[Project 2010/745]*.

Prior to engaging the Research and Extension Manager, the ACPF undertook two projects to include the Australian wild caught prawn industry in setting R&D priorities for the remainder of the SCRC. The two projects were:

- *Development of priority projects for ACPF [Project 2009/731]*
- *Australian Council of Prawn Fisheries R&D Forum [Project 2010/711.01]*

Future Harvest Theme leadership [Project 2009/712] outcomes were embraced by the Queensland fisheries management agency and applied in the Moreton Bay area.

Harvest strategy optimization [and co-management for prawn] for the Moreton Bay Trawl Fishery [Project 2009/774] explored the possibility taking the outcomes of Project 2009/712 to the next level. The application of the outcomes has been a success for the Moreton Bay prawn fishery.

Optimizing quality and value in domestic prawn value chains [Project 2008/793.10] applied to a number of prawn fisheries and included the Moreton Bay Seafood Industry Association. There were synergies between the various projects undertaken by the Moreton Bay Seafood Industry Association and trawler operators in Moreton Bay have embraced down chain activities including a successful social media strategy.

Prawn market access defenders [Project 2009/787] grew out of the industry's participation in the Seafood Access Forum [Project 2008/907]. It provided technical data to support international market access and a quick response to emerging access issues. The data has already been included in submissions made to the Codex Alimentarius and will continue to support the Australian wild caught prawn access to markets for years to come.

Prawn industry black spot management problem size and appropriate research [Project 2008/793] provided data that resulted in the issue being identified as a R&D priority.

Evaluation of Bifilar coil sensor for Sodium Metabisulphite [Project 2010/705] was approved to develop and automated or semi-automated dipping system to more efficiently combat black spot discolouration. The study encountered major technical barriers and identified that it was unlikely that a reliable automated or semi-automated dipping system could be developed. The project was then terminated.

Commercial value chain analysis of Spencer Gulf prawns [Project 2009/786] was being undertaken when the black spot management project was initiated and the findings of the Spencer Gulf project were available to the black spot management project investigators. It became clear that there was much to be gained from undertaking supply chain and value chain analysis in other prawn fisheries including the introduction of practices to eliminate black spot discolouration.

Optimising quality and value in domestic prawn value chains [Project 2008/793.10] was approved and the existing Spencer Gulf project was folded into this larger project that also included the Moreton Bay prawn fishery and the Shark Bay prawn fishery. As a result of these projects, individual fisheries developed their own brands [Bay Prawns, Shark Bay Wild, Lincoln King] developed successful social media, events and advertising campaigns that will continue for years to come.

The Whole Prawn (Stage 1) – Product Development Ideation [Project 2010/744] was undertaken to develop new products. The *Chilled Pre Packaged Seafood Category Development [Project 2009/770]*, had identified low value prawn products as potential candidates for value adding and a decision was made to use eastern school prawns to test the commercial viability of transforming eastern school prawns.

Eastern school prawns had suffered significant price competition from imported prawn products and the value of the prawns had been reduced to point that the best market for the bulk of the catch was for recreational fishing bait. .

Value adding to the school prawn fishery; Clarence River case study [Project 2011/746] was approved. The project endeavoured to make prawn mince for use in the food service industry. However, the microbiological load in mince prepared from whole prawns was too great. Cooking prior to mincing reduced the microbial load but also reduced the quality of the final product to an unacceptable level.

Building the social capital of the East Coast Trawl Fishery to meet domestic and international market opportunities [Project 2010/777] was approved because the ACPF believed that disunity in the Queensland prawn industry was preventing it from participating in the SCRC opportunities that were available to other parts of the Australian prawn industry. The problem was highlighted when Queensland based prawn trawler operators, other than the Moreton Bay Seafood Industry Association, could not meet the criteria that the Principal Investigators required for their inclusion in the *Optimising quality and value in domestic prawn value chains [Project 2008/793.10]*. The rejection was based around the fisheries' lack of cohesion and "industry champions" to carry the project to its conclusion. The situation reflected similar problems that the ACPF had encountered when trying to engage with the Queensland prawn fishery. The project was of great assistance to the Moreton Bay fishery in its participation in the value adding project, but it was not successful in improving the Queensland industry leadership situation.

Maximising the quality of Australian wild caught prawns [Quality assurance] [Project 2011/747]. The value chain analysis projects had revealed product treatment inconsistencies in the value chain. This project is aimed at producing a consistent quality rating system throughout the prawn supply chain. The outcomes of the project will be used to provide every sector of the supply chain with educational material to train staff. The educational material will also be distributed to training institutes.

Time temperature monitoring for maximising returns on the supply chain [Project 2011/748]. Previous projects had revealed poor refrigeration practices at the retail level of the supply chain. This project is aimed at providing every level of the supply chain with a staff training resources to ensure that product temperature is maintained at a level that will maximise returns.

Funding options for the Australian wild catch prawn industry [Project 2011/749]. The project examined options for funding the National Prawn Marketing Campaign. Given the lead time in establishing alternative options, the wild caught prawn industry adopted the option of seeking donations to carry out the national prawn marketing campaign. At the time of writing this report, the national prawn marketing campaign had entered its second year. Donations in excess of \$300,000 were received in each year, which was a sufficient level to maintain the campaign.

Bio-economic model for SA prawn trawl fisheries [Project 2011/750]. Drawing upon the outcomes of the *Future Harvest Theme leadership [Project 2009/712]* this project seeks to provide a template to provide a predictive model of the economic consequences of adopting alternative management regimes. At the time of writing this report the project is not completed.

Development of new refrigeration system reference design and demonstration prototype for fishing vessels [Project 2013/753]. The majority of the Australian prawn fleet's refrigeration designs are approximately 40 years old. Australia's adoption of a carbon tax increased the cost of standard refrigerants by much as six times. The cost of replacing lost refrigerant is prohibitive and the existing systems are often not compatible with new refrigerants. This project seeks to develop more efficient refrigeration systems for Australian prawn trawlers. At the time of writing this report, the project has not been completed.

5. Further Development

The ACPF website [currently being redesigned in anticipation of the termination of the SCRC] will remain the primary access point for the ACPF/SCRC project outcomes. It is also anticipated that the appropriate FRDC websites will be populated with the project results.

The major commercial outcome of the ACPF/SCRC projects is the Love Australian Prawns marketing campaign. This joint ACPF and Australian Prawn Farmers Association [APFA] initiative has its own structures and is transitioning to self-funded independent status. It is anticipated that some of the research that supported the initiation of the campaign will need to be updated and that projects that have produced training material will need to be maintained, reviewed and updated as technology advances.

The Love Australian Prawns campaign operates independently of the ACPF and the APFA and it has its own website.

The APFC is likely to enter into an Industry Partnership Agreement with the FRDC for the purpose of continuing prawn industry related R&D.

6. Planned Outcomes

Public Benefit Outcomes

Benefits that have accrued to Australia are:

- The production of creditable composition profiles for different prawn species that at a minimum will provide consumers with nutritional information.
- A creditable and respected body of knowledge about the composition profiles for different prawn species that is available for trade and market access negotiations.
- Reliable nutritional data that can inform consumer choices. For example, debunking the cholesterol myth.
- Bio-economic models and templates that can predict the economic consequences of alternative fisheries management regimes.

Private Benefit Outcomes

The benefits that have accrued to the Australian wild caught prawn industry are:

- A unified national prawn category marketing strategy – Love Australian Prawns
- Branding regional fisheries under the Love Australian Prawns banner; Lincoln King, Shark Bay Wild, Exmouth Fresh, Moreton Bay – Bay Prawns each with their own website and expanding social media presence.
- A standard method of measuring prawn quality through the supply chain.
- Standard training resources through the supply chain.
- A wider industry appreciation of the R&D resources available from SCRC research provider participants.
- Improved product traceability methods – likely to be the subject of more R&D.
- The production of creditable composition profiles for different prawn species that at a minimum will provide consumers with nutritional information.

- A creditable and respected body of knowledge that is available for trade and market access negotiations.

Linkages with CRC Milestone Outcomes

1. Improved price – coordinated facilitation with national initiatives to value add and market profile the wild catch prawn industry so there is a high return on investment for Australian enterprises.

The Love Australian Prawns marketing campaign has entered its second year. Anecdotal advice is that it has increased demand and sales volume. This assertion is supported by much reduced cold storage volumes since the campaign commenced.

Prior to the Love Australian Prawns campaign it was not uncommon for prawns to be held in cold storage for up to two years. In 2011 it was difficult to find cold storage space because of the volume of prawns in storage. Larger fleet operators now report that stocks on hand are at the lowest level for many years. A number of smaller catchers [around 120 tonnes per annum] have reported that they were holding back product in November 2014 to fulfil pre-existing Christmas orders.

Price increases are less obvious. While some wholesale prices increases have been reported other prices have remained static as long term contracts are completed.

The development of new products has been less successful. As the SCRC research revealed, value adding does not necessarily result in profit adding. Additionally changed labour laws have severely limited the viability of processing seafood in Australia.

2. Secure volume – fostering collaborative approaches between fisheries and with the government to strengthen access, legislation and support for our young people so the industry has a secure future.

Whilst the ACPF projects have fostered standardised down chain training for the Australian prawning industry, the mismatch between waters subject to Commonwealth environmental jurisdiction and waters subject State fisheries legislation continue to create contradictory policy settings.

The Commonwealth holds the ultimate jurisdictional power over most of Australia's fish resources. Electorally popular Commonwealth environment policy [Marine Reserves] often negates State fisheries policy and Commonwealth/State responsibilities reflected in the Offshore Constitutional Settlement. There are no checks and balances and no electoral consequences for announcing electorally popular decisions that pay little heed to science and fact.

While access to resources continues to be a concern, the outcomes of many of the SCRC projects provide methods for assessing the economic consequences of adopting alternative fisheries management options.

3. Assistance to reduce business operating and capital costs for wild capture prawn fisheries so there is a high return on investment for Australian enterprises.

The Value Chain Analysis projects have focused on identifying where value can be captured by the wild caught prawn industry and where costs might be eliminated.

The industry in many fisheries has seized upon those opportunities and controllable costs have been reduced. The process continues.

The new refrigeration design project has the potential to reduce costs. The time – temperature monitoring project and the value chain projects have revealed that freezing on board is often resulting in core temperatures that are well below the temperatures necessary to preserve quality. Technological advances since the design of those original systems could well result in new systems that snap freeze and hold product at higher temperatures than those that are currently used but still sufficient for optimum quality. The potential energy savings for trawlers that are at sea for long periods could be significant.

7. Conclusion

The engagement of a Research and Extension Manager under this project fostered prawn industry participation in Seafood CRC projects and facilitated the extension and utilisation of project results. The value of the work that has been done is recognised by the wild caught prawn industry. The proposal for the ACPF to enter into an Industry Partnership Agreement with the FRDC is evidence that the industry sees value in the outcomes that were achieved and that the wild caught prawn industry wants to continue to enjoy those benefits.

An unexpected benefit of the project design has been that it has allowed an iterative process to occur whereby the outcomes of early projects revealed “gaps” and that, in turn, led to a reassessment of priorities as the project progressed. Whilst the criteria for assessing project proposals remained true to the ACPF’s original R&D Strategic Plan, more weight was given to approving research project proposals that answered the knowledge gaps that became evident during the project.

Similarly, when research project outcomes were overwhelmingly pointing towards the need for national marketing action, the active management of proposals by the Research and Extension Manager allowed the ACPF Research Sub-committee to turn its thinking towards those research projects that could contribute to a national prawn category marketing campaign.

In this regard the ACPF Research Sub-committee and the Research and Extension Manager were greatly assisted and expertly guided by the professional capacity of SCRC staff and Directors. The value of this resource and the encouragement provided by the SCRC Directors and staff cannot be over-estimated. The ACPF was stepping into unfamiliar territory and without the reassurance and guidance of the SCRC Directors and staff it is not certain that outcome would have been so successful.

While there was an unexpected change of the Research and Extension Manager during the project, the Principal Investigator was able to step into that position and coordinate the planning, implementation and reporting of R&D projects conducted by the Seafood CRC. As outlined above, the projects were largely able to achieve the outcomes specified in the ACPF Strategic Plan.

The ACPF was not able to establish, by December 2012, a mechanism by which the ACPF can fund its own R&D coordination and communication activities. The 2014 ACPG AGM agreed to put a proposal to ACPF members to enter into an Industry Partnership Agreement with the FRDC so that R&D coordination and communication

activities can be funded separate from any other ACPF functions and the Love Australian Prawns campaign.

8. Staff

The Research and Extension Manager position was performed by;

Ms Karen Hollamby [January 2011 – July 2013]

Mr Graeme Stewart [August 2013 - December 2014]

Australian Council of Prawn Fisheries Limited										
16-Jan-15		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Totals	Notes
Funds Pool:										
	FRDC Contribution	100,000	150,000	200,000	200,000	200,000	200,000	200,000	1,250,000	
	participant cash contribution	100,000	150,000	200,000	200,000	200,000	200,000	200,000	1,250,000	
	Seafood CRC	64,800	97,200	129,600	129,600	129,600	129,600	129,600	810,000	B Funding
	Carried forward		264,800	594,538	872,912	876,625	779,473	-124,941		
Total funds available		264,800	662,000	1,124,138	1,402,512	1,406,225	1,309,073	404,659	3,310,000	
	Project No								Totals	
	Actual	Actual	Actual	Actual	Actual	Est.	Est.			
Communal projects	Communal \$		27,804	37,072	37,072	37,072	37,072	37,072	213,164	
ACPF Management/ Strat Planning Projects										
ACPF - R&D Planning, implementation, extension and utilisation	2008/748.01		19,658	15,852					35,509	Completed
ACPF - R&D Planning, implementation, extension and utilisation	2008/748.20		20,001						20,001	Completed
Development of priority projects for ACPF	2009/731			30,500					30,500	Completed
Australian Council of Prawn Fisheries - R&D planning, implementation, extension and utilisation.	2010/745				48,100	67,500	43,800	81,100	240,500	
Australian Council of Prawn Fishers R&D Forum	2010/711.01			8,371					8,371	Completed
Funding options for the Australian wild-catch prawn industry	2011/749						71,200		71,200	Completed
	Subtotal								406,081	
R&D Projects										
Prawn Industry black spot management: problem size and appropriate research	2008/793			44,722	4,969				49,691	Completed
Optimising quality and value in domestic prawn value chains	2008/793.10				88,970	105,465	101,875		296,310	Includes variation to inc MBSIA. Plus \$30k from SGWCPF and \$18K Shark Bay. \$20 Savings subtracted
Future Harvest Themeleader	2009/712			8,280	5,520	5,520	14,720	11,960	46,000	Syndicate ACA 20% (ACA, ACPF, SRL, TasSeafoods, WAFIC) Total \$230,000
Optimising business structures and fisheries management systems for key fisheries	2009/715					23,667	48,667		72,333	Syndicate ACA, ACPF & SRL 1/3 each Total \$217,000
Chilled Pre Packaged Seafood Category Development (CRC Syndicate Project)	2009/770			46,609	8,840	11,151			66,600	Completed
Harvest strategy optimization for Moreton Bay fishery	2009/774				87,600	39,000	53,400		180,000	Completed
The Whole Prawn - Prawn value chain analysis	2009/786			59,820	14,955				74,775	Completed
Prawn market accessdefenders	2009/787				136,648	70,648	56,704	66,000	330,000	Completed
Evaluation of a Bifilar coil sensor for Sodium Metabisulphite	2010/705				36,000	4,000			40,000	Completed
The Whole Prawn (Stage 1) - Product Development Ideation	2010/744				57,213				57,213	Completed
Building the social capital of the east coast trawl to meet domestic and international marketopportunities	2010/777					196,698	138,108		334,806	\$38K savings under negotiation
National Prawn Market Category Planning	2011/736					47,334	125,166	1,250	173,750	Shared 50/50 ACPF & APFA
Value adding to the school prawn industry: Clarence River case study	2011/746					15,000	35,000	24,450	74,450	Completed
Maximising the quality of Australian wild-caught prawns (Quality Assurance)	2011/747					3,697	346,303		350,000	
Time-temperature monitoring for maximising returns in the supply chain	2011/748						175,000		175,000	Completed
Bio-economic model for SA prawn trawl fisheries	2011/750						187,000		187,000	
Development of a new refrigeration system reference design and demonstration prototype for fishing vessels	2013/753							125,393	125,393	
Total commitments		-	67,462	251,226	525,887	626,752	1,434,014	347,225	3,252,566	
Balance available		264,800	594,538	872,912	876,625	779,473	-124,941	57,434	57,434	