

April 2019 Competitive Round Call for Expressions of Interest

Closing date for applications 17th June 2019

Call for Applications

The Fisheries Research and Development Corporation ([FRDC](#)) is calling for Expressions of Interest (EOI) that address research, development & extension (RD&E) priorities nominated by the FRDC's Advisory Groups: Research Advisory Committees ([RACs](#)), Industry Partnership Agreements ([IPAs](#)) and [FRDC Subprograms](#).

The nominated RD&E priorities for investment are outlined below. EOIs that address multiple priorities are encouraged.

Applicants may also submit an EOI that does not address a nominated priority; however, it should be noted that preference may be given to applications that address nominated priorities. If you do wish to submit an application that does not address one of these priorities, it is recommended that you first discuss your research concept with the relevant [FRDC Advisory Group](#) contact. In addition, FRDC strongly recommends that all applicants consult with the relevant stakeholder groups and expected end users to ensure that research concepts has the support of beneficiaries. Support can be demonstrated through formal letters of support, in-kind contributions and project cash contributions.

Minimum EOI Requirements

All EOIs **MUST** be completed via [FishNet](#). Refer to the FRDC website for more information on the FRDC's process for [Applying for Funding](#).

Once you have completed your EOI you must finalise it on FishNet so that FRDC receives notification that the application is submitted. Failure to do so may mean that your application is not submitted and therefore not considered for funding.

If you have any questions or issues with FishNet, please contact the FRDC by phone (02) 6285 0400 or email frdc.programs@frdc.com.au.

Applications must be finalised by the 17th June 2019. Applications not submitted by this date may not be accepted unless prior approval for a later submission date is provided by the FRDC.

Each EOI must clearly outline how it will meet the relevant identified Need(s). Provide a succinct description of the proposed Method to achieve the stated Objectives, and deliver the expected Outputs and Outcomes. This should include a quantification of the impact of the research if the outputs were adopted such as a change in fisheries management, an improvement in the species population, increased profitability or efficiency of the commercial sector or improvements in recreational fishing experiences. Applicants also need to define project Extension activities that will be used to disseminate expected project findings. A realistic Budget that reflects the activity to be undertaken is to be provided along with Justification for the budget request. Where appropriate, applicants should demonstrate collaboration

with other relevant research providers and end users and consider past and current research to avoid duplication and build on previous outputs.

After the 17th June 2019, the FRDC will forward each EOI to the relevant FRDC Advisory Group(s) (e.g. RAC/IPA/Subprogram) for assessment. Following their meetings in July/August 2019, each FRDC Advisory Group will provide advice that will be communicated to applicants on whether their application has been supported or not supported in the round. An application that is not supported by an FRDC Advisory Group(s) is unlikely to be successful in obtaining funding.

The FRDC will assess all applications received in July/August, taking into consideration the level of FRDC Advisory Group(s) support and provide advice to applicants on the result of their application post-evaluation.

Under the FRDC's flexible approach to investment this is one of three potential [Calls for Applications](#) in 2019; with subsequent calls for applications to be made in August and November if additional research priorities are nominated. If the RACs, IPAs and Subprograms do not have any priorities they wish to address, a call for applications may not occur.

Nominated RD&E Priorities for Investment

(Relevant Funding Partner(s) are shown beside each RD&E priority title)

Priority Titles	Funding Partners
Pathways to reform in inshore fisheries	HDR
Investigate changes in acceptance of wild caught Barramundi in the foodservice and hospitality market sectors	QLD RAC; NT RAC
Digital literacy for commercial fishers	QLD RAC; HDR
Fishing behaviour change for recreational fishers	QLD RAC; HDR
Population dynamics for improved assessment and management of Queensland Mud Crabs	QLD RAC
Best Management Practise program for commercial and recreational fisheries	QLD RAC
Population biology of Black Jewfish <i>Protonibea diacanthus</i> in Queensland	QLD RAC
Cost-effective, non-destructive solutions to developing a pre-recruitment index for Snapper	SA RAC
The latent opportunities in Victorian inshore professional wild-capture fisheries	VIC RAC
Fish stocking – decision tools for native fish outside their range	VIC RAC
Recreational lobster tagging program – assessing current data and modelling assumptions / approaches to establish a robust estimate	VIC RAC
Corner Inlet Rock Flathead stock structure: At what spatial scale should this stock be managed?	VIC RAC
People Development	WA RAC
Benchmarking Western Australia’s southern commercial fisheries	WA RAC
Market development opportunities for Western Australia’s southern seafood producers	WA RAC
Impact of harvesting key species of Scleractinian (hard) corals in the Northern Territory	NT RAC
Improving sustainable yield estimates and informing stock assessment programs for undefined target species and protected species in the Offshore Net and Line Fishery	NT RAC
Marking of offshore fishing gear for navigational purposes	NSW RAC
A tool to determine the presence of ciguatera in NSW caught Spanish Mackerel	NSW RAC
Adding value to inshore fisheries through diversification of markets	NSW RAC

<p>Priority</p>	<p>Pathways to reform in inshore fisheries</p> <p>This aligns with HDR Subprogram’s RD&E goals ‘<i>Ensuring social, economic and cultural benefits</i>’ and ‘<i>Understanding markets and how they can work better</i>’. Specific priorities are:</p> <p>1.1 Understanding distributions; 1.3 Decision-support and governance; 3.1 Understanding seafood markets (license/entitlement/quota markets)</p>
<p>Need</p>	<p>Many inshore fisheries in Australia are characterised by low profitability and high levels of latent capacity. They are often highly heterogeneous, and the fact that they operate in a crowded and contested coastal space means access and allocation are ongoing concerns. Management’s ability to deliver outcomes that align with fisheries objectives and broader community expectations often requires fisheries to undergo a process of reform (such as harvest strategy implementation, adjustments to access/allocation arrangements and changes in the mix of management instruments). It also often requires structural adjustment, which may be impeded by the inflexibility of fishing capacity, potentially hampering autonomous adjustment processes and reducing the effectiveness of formal capacity reduction programs.</p> <p>Reform of inshore fisheries has consequently often foundered, delaying intended benefits and causing unnecessary economic and social costs. There is a need to design ‘pathways to reform’ in these fisheries, building on evidence provided by past reform processes and on an expanded knowledge of the drivers of fisher’s entry and stay/exit behaviour that underpins the structural adjustment process.</p> <p>This project will address this need by developing guidelines for managers and other key stakeholders to design effective and contextually appropriate pathways to reform for inshore fisheries based on improved knowledge of the structural adjustment process in these fisheries.</p> <p>Research tasks should include (but not be limited to):</p> <ol style="list-style-type: none"> 1. Documentation, synthesis and appropriate analysis of selected examples of past and current reform processes in inshore fisheries to characterise the key components of a reform process (including mechanisms for collaborative management), identify the goals of reform and determinants of success/failure. 2. Analysis of a small number of case studies to build deeper understanding of structural adjustment processes in inshore fisheries, including, but not limited to, the relationship between individual’s entry and stay/exit decisions and: <ol style="list-style-type: none"> a. individual’s assessments of financial/economic returns b. existing management processes and instruments (including the use of anticipatory impact analysis and the nature of rights) c. the economic and social operating conditions of fishers d. the process of reform (including the perceived legitimacy of reform and the governance of reform). 3. Development and testing of guidelines based on 1 & 2 that can be used by managers and key stakeholders to design effective and contextually appropriate pathways to reform of inshore fisheries. <p>Involvement from project inception by fisheries management agencies is necessary to ensure relevance and adoption. It is recommended that the project team include a senior fisheries manager with links to this forum. Similarly, involvement of industry leaders either directly or through project steering roles is recommended.</p> <p>Project outputs to include:</p> <ul style="list-style-type: none"> • Report detailing methods, analysis, results and their interpretation for research tasks 1 & 2 above. • Guidelines that can be used by managers to design effective and contextually appropriate pathways to reform of inshore fisheries.
<p>Planned outcomes</p>	<p>More effective fisheries reform and/or structural adjustment processes in inshore fisheries</p>
<p>Funding partners</p>	<p>HDR; All RACs; NP2</p>

Priority	Investigate changes in acceptance of wild caught Barramundi in the foodservice and hospitality market sectors
Need	Recent market failure of wild caught Barramundi has seen the price to fishers fall to an all-time low. Anecdotal information suggests that this failure is, in part, from a lack of development in packaging, presentation and grading of product, and has seen demand from the food service and hospitality sectors decline over time. Research as to what the wild catch Barramundi sectors require today in terms of user-friendly packaging and presentation should be undertaken to define what requirements are needed in order to improve market share for this iconic species.
Planned outcomes	<ul style="list-style-type: none"> • Increased & stable market share for wild caught Barramundi sector • Greater economic stability for fishers • Consumer confidence in product
Funding partners	QLD RAC; NT RAC

Priority	Digital literacy for commercial fishers
Need	<p>Fisheries management reform is changing the way commercial fishers operate. In order to assist fishers adapt to these new arrangements it is imperative they adopt a wide range of new digital technologies that are coming online over the next few years. The QRAC views this as a national research and capacity building challenge, with specific urgency due to the current Queensland Fisheries Management reform processes.</p> <p>Accompanying management reform in Queensland, Fisheries Queensland is developing a range of new technologies such as the 'Commercial Fishery App'. This App will transfer many existing and new online functions to smartphones and other mobile device platforms. Many of these functions will be required for day-to-day commercial fishing activities, including confirming Vessel Monitoring System operation, reporting catch, trading quota units or other license entitlements.</p> <p>Fishers must understand and adopt these new technologies if they are going to transition smoothly to new management and/or reporting arrangements. The new technologies ensure that fishers can continue to operate efficiently and to maximize the advantages of new management arrangements.</p> <p>Project proposals will deliver a Queensland case study to investigate optimal means by which large numbers of commercial fishers can adopt these new technologies. Proposals should concentrate on providing online training tools and in-person training of the tools. Although the online material will be one of the legacies of the project, an important aspect would be to "train the trainer" thus promoting skilled individuals within industry who can then provide on-going, on the ground training to industry during and beyond the life of the project.</p>
Planned outcomes	<ul style="list-style-type: none"> • Online training tools for large numbers of commercial fishers to rapidly adopt new technologies • On the ground adoption of new technologies by Queensland commercial fishers (as a direct outcome of the Queensland case study) • Enhanced legacy of project through in person training and developing trainers within industry
Funding partners	QLD RAC; HDR

Priority	Fishing behaviour change for recreational fishers
Need	<p>Improvements in our understanding of stock status and contribution recreational fishing makes to the total harvest of some species brings about unique fisheries management challenges. Historically when regulating catch, managers work with commercial fishers to achieve suitable outcomes. However, when reductions or changes (spatial or temporal) to recreational catch are concerned fishery managers face an almost cultural change issue. However, if changes to the recreational catch of some at risk species are not made in a timely fashion it raises concerns that any future changes may be too little too late.</p> <p>Projects will aim to bring about sustainable recreational fishing practices for those species and or areas most in need, including considering the role of various methods such as Community Based Social Marketing.</p> <p>Successful projects should focus to pilot methods on recreational fishing for two key Queensland species: Snapper and Pearl Perch, with the ability to rollout on other species with large recreational catches. Projects should also aim to report on pilot study results for Snapper and Pearl Perch in a timely fashion, preferably within 2 years.</p>
Planned outcomes	Long term, rapid and widespread shifts amongst recreational fishers towards the adoption of sustainable fishing practices for at risk species or species with a large recreational catch component
Funding partners	QLD RAC; HDR

Priority	Population dynamics for improved assessment and management of Queensland Mud Crabs
Need	<p>Mud crabs (<i>Scylla serrata</i>) comprise major commercial and recreational fisheries in Queensland, with catches taken in the Gulf of Carpentaria and along the east coast. The commercial Queensland east coast catch alone averages approx. 1000 tonnes and exceeds \$20 million annually (at \$20/kg), making it one of the State's most valuable fished species. The recreational and Indigenous catches are largely unknown, but thought to exceed 50% of the total harvested catch.</p> <p>Despite the economic and cultural importance of Mud Crabs, the species has received relatively little research attention in Queensland. For example, growth rates, migration patterns and mortality rates remain unknown, and no formal quantitative assessment of the east coast stock has been undertaken.</p> <p>Current management measures in Queensland include a male-only catch and a minimum legal size of 150 mm carapace width. Currently, there are no limits on total annual catch for any sector, nor are there any biological or economic reference points for management (apart from a recent preliminary MSY estimate). Projects will aim to address these knowledge gaps by providing:</p> <ul style="list-style-type: none"> • Quantitative estimates of the growth of male and female mud crabs. This should consider spatial, latitudinal and seasonal variation in growth • Quantitative information on the movements and migration rates of Queensland Mud Crabs • Estimates of the total mortality rate and the natural mortality rate of Queensland Mud Crabs, based on tag-recapture or other experiments
Planned outcomes	<ul style="list-style-type: none"> • A greater understanding of the biology and ecology of the Queensland Mud Crab • Appropriate management planning for the Queensland Mud Crab Fishery • Development of a quantitative assessment model for the east coast stock, including key biological reference points • Greater certainty of the long-term sustainability of the commercial Queensland Mud Crab Fishery
Funding partners	QLD RAC

Priority	Best Management Practise program for commercial and recreational fisheries
Need	<p>Best Management Practices (BMP) have been developed for a number of terrestrial farming industries. BMPs are driven by the producer and utilise the best available science and up-to-date recommended management practices underpinned by industry R&D and producer expertise, to improve productivity, profitability, biosecurity, environmental and natural resource stewardship.</p> <p>BMP identifies practices considered best practices now and those that may be considered best practices in the future. They also identify practices that are no longer considered BMP and should no longer be practiced and/or updated.</p> <p>BMP programs are voluntary, and have been shown to be an effective mechanism to achieve positive outcomes – including enhancing community support.</p> <p>BMP is considered as a suitable fisher driven approach to improve the practices of recreational and commercial fishers, and could build upon current codes of conduct or environmental management systems developed in some fisheries. BMPs could also include specific training requirements (e.g. protected species identification or handling training).</p> <p>Projects will aim to establish an industry agreed BMP framework for key Queensland fisheries (starting with inshore, trawl and crab). This should include different practices – i.e. Reduced impacts on non-target species and habitats – under a framework of either: A - innovative; B - best practice; C - common practice; D - outdated practice; OR: Above; at; or below best practice.</p>
Planned outcomes	<ul style="list-style-type: none"> • The identification and adoption of best practice by industry • Improved productivity, profitability, biosecurity, environmental and natural resource stewardship • Improved community support
Funding partners	QLD RAC

Priority	Population biology of Black Jewfish <i>Protonibea diacanthus</i> in Queensland
Need	<p>There is significant concern about the sustainability of Black Jewfish in Queensland waters given increases in catch over the last 12-18 months. These catch increases have been driven by a high demand for swim bladders that has also result in an increased risk of black-marketing.</p> <p>Black Jewfish are vulnerable to overfishing and stock collapses have been previously documented in Australia and overseas. Work has been undertaken to characterise Black Jewfish population biology in regions of Northern Australia; however, there is limited information on the population biology of Black Jewfish on the east coast of Queensland.</p> <p>The paucity of up to date information of the age, growth, reproduction, stock structure and connectivity of Black Jewfish on the east coast of Queensland is critical for informing fisheries assessment and management planning for the at risk species.</p>
Planned outcomes	<ul style="list-style-type: none"> • A greater understanding of the biology and ecology of the Black Jewfish on the east coast of Queensland • Appropriate management planning for Queensland Black Jewfish Fishery
Funding partners	QLD RAC

Priority	Cost-effective, non-destructive solutions to developing a pre-recruitment index for Snapper
Need	<p>Snapper pre-recruitment surveys have been undertaken in South Australia from 2000 to 2010 using an established trawl-based sampling method. However, this method is non-discriminatory, incidentally catching a range of other demersal species and is relatively destructive.</p> <p>Other non-destructive survey techniques, such as fish traps, baited remote underwater surveillance (BRUVS), or video transects may provide feasible and cost-effective alternatives. There is a need to trial and establish alternate methods that provide a suitable proxy for recruitment strength without destructively sampling undersize Snapper and the demersal assemblage. This will also contribute in reducing the impact of non-harvested fishing mortality.</p>
Planned outcomes	Development of a non-destructive, cost-effective, pre-recruitment index for Snapper
Funding partners	SA RAC

Priority	The latent opportunities in Victorian inshore professional wild-capture fisheries
Need	<p>There has been a reduction in the availability of fresh local sustainably caught fish to Victorian consumers over the past two decades. For example, Bay and Inlet fisheries have historically provided seafood to the Victorian public. With 7 out of 9 Bay and Inlet net fisheries now closed or restricted to fishing, approximately 60% of the fish caught 20 years ago is no longer available to the Victorian public. There are a number of reasons for the reduction in catches; however, these have not necessarily been for sustainability concerns, particularly in the case of Bay and Inlet fisheries. Instead, the Victorian consumer of fish has lost access due to competing interests.</p> <p>There is a clear demand from the Victorian (and Australian) public for access to locally-caught seafood, which raises the question, what latent opportunities exist in Victorian wild-capture fisheries to provide more seafood sustainably to Victorian consumers, what are the barriers to sustainably increasing production, what is the viability of potential opportunities, and who would they attract?</p> <p>In collaboration with industry leaders to develop the project and identify case studies, the project would seek to:</p> <ul style="list-style-type: none"> • Synthesise historical information on changes in fish production and species composition, and the reasons for change in production to identify economic and socio-political opportunities and barriers to increasing production as well as viability, particularly for underutilised species. An example of this may be small pelagic species such as Anchovy and Sardines in Victoria. • Identify opportunities and viability for commercial development and growth of emerging Victorian fisheries and critically examine barriers to increasing production. Examples may include Octopus and Sea Urchin fisheries in Victoria. • Critically examine existing latent licences, the social, economic, environmental and political reasons for latency, barriers and risks to optimal use, as well as the opportunities and viability of innovation, sustainable use and management. A potential case-study fishery would be the Victorian Ocean Access Fishery Licence, which allows licence holders to fish using a variety of methods in Victorian ocean waters (not Bay and Inlet) to 3 nautical miles, has considerable latent effort, and barriers to transferability.
Planned outcomes	<ul style="list-style-type: none"> • Identification of opportunities for sustainably growing Victorian wild-capture fisheries • Identification of the barriers and risks that need to be addressed to sustainably grow Victorian wild-capture fisheries • Determination of the investment required and viability of opportunities identified, including who would be most attracted to take up a new opportunity (e.g. existing operators from certain fisheries, or new entrants) • Development of a methodology to identify opportunities in inshore fisheries that is transferrable to other Australian jurisdictions
Funding partners	VIC RAC

Priority	Fish stocking – decision tools for native fish outside their range
Need	<p>Fish stocking continues to play an important role in providing fishing opportunities for many Victorians. Opportunities exist to catch native species like Murray Cod and Golden Perch as well as introduced species like Trout. The role of the Translocation Evaluation Panel is to provide advice to the DELWP on the management of risks associated with proposed translocations and to the Administration Officer on administrative assessments.</p> <p>Numerous factors are used to determine the level of risk associated with stocking waterways; e.g. threats to existing flora and fauna. Stocking fish outside their natural distribution provides a greater level of uncertainty regarding the impact that the stocked fish has on their surroundings. Similarly, recent changes in environment and climate may have impacted species distribution when compared to historical information. Hence, there is the need for the development of decision tools and objective criteria to inform the stocking native fish outside their ranges.</p>
Planned outcomes	<ul style="list-style-type: none"> • Determine the current and potential distribution of key inland native fish species based on historical information. • Assessed the potential impacts of native fish stocking outside their natural range for key native fish species • To develop protocols that minimise the risk to the environment and associated ecosystems when stocking fish outside their natural distribution.
Funding partners	VIC RAC

Priority	Recreational lobster tagging program – assessing current data and modelling assumptions / approaches to establish a robust estimate
Need	<p>Currently there is a lack of information on how many Southern Rock Lobsters are taken in Victoria. By gaining better estimates of recreational catch, a greater understanding of total mortality in the fishery will be achieved. This will inform TACC setting and potentially inform resource allocation in the future.</p> <p>Data is presently being collected through a lobster tagging program; however, best practice methods have yet to be developed to integrate recreational catch estimates or mortality into the present stock assessment process. Successful project applications will address this need, and aid in the development of an ongoing sampling program based on citizen science.</p>
Planned outcomes	<ul style="list-style-type: none"> • Developing more accurate stock assessments through informing existing model assumptions around recreational catch • Creating a database of participants to serve as a communication and consultation tool • Develop a citizen science program collecting additional data including finer spatial information (catch by region), weight, fishing method, time spent fishing • Extending the project includes: <ul style="list-style-type: none"> ○ Developing a photographic feature on an App to improve accuracy of data collected and possibly remove the need for tags ○ Information used in association with a potential stock enhancement project (to account for lobsters removed from a particular area)
Funding partners	VIC RAC

Priority	Corner Inlet Rock Flathead stock structure: At what spatial scale should this stock be managed?
Need	<p>Rock Flathead supports commercial mesh-net fisheries in Corner Inlet; however, CPUE for this fishery has shown a declining trend since 2005, while remained above the management reference point. The stock structure of Rock Flathead in Victorian waters is largely unknown, presenting uncertainty for fishers and managers when assessing the future of the fishery and ensuring the sustainability of the stock.</p> <p>In line with the Victorian Research Advisory Committees commitment to support capacity building and personal development across Victorian fisheries and aquaculture sectors, applicants are encouraged to include high performing post-graduate students with up to \$10,000 available for project operating expenses.</p>
Planned outcomes	An improved understanding of the relevant spatial scale for management of the Rock Flathead in Corner Inlet
Funding partners	VIC RAC

Priority	People Development
Need	<p>The WA RAC has set aside an annual amount for a standard priority seeking applications for People Development from industry in WA. Some of the more common types of people development applications that are likely to be considered include:</p> <ul style="list-style-type: none"> • Bursaries, scholarships awarded to enable study to be undertaken • Capacity building – developing and strengthening the skills, processes and resources needed to survive, adapt, and thrive • Knowledge exchange (e.g. holding workshops/conferences, visiting experts) • International exposure (e.g. attend conferences, study tours) • Educational opportunities for learning new skills • To provide stewardship into the future (e.g. youth development programs) • Succession planning within industry <p>In seeking Western Australian Research Advisory Committee investment for capacity building activities, the WA RAC encourages some level of financial contribution from the applicant.</p>
Planned outcomes	<ul style="list-style-type: none"> • Provide opportunities for knowledge transfer and R&D adoption • Enhance industry leadership within, and across, all sectors • Build industry capacity to drive change to achieve goals • Build workforce capability
Funding partners	WA RAC

Priority	Benchmarking Western Australia’s southern commercial fisheries
Need	<p>The 2017 Discussion Paper “The Case for Establishing Southern Seafood Producers Western Australia” (Dr Peter Rogers) put forward a range of recommendations to progress a strategic outlook on the prospect of future fisheries resource development on the south coast of Western Australia, and market development opportunities. The Southern Seafood Producers Western Australia has since been established, and along with WAFIC and DPIRD is progressing the recommendations of the initial Rogers Discussion Paper.</p> <p>One such recommendation was to undertake an initial benchmarking exercise of Western Australia’s Southern Fisheries against other primary industry sectors. Such a benchmarking exercise will provide the frameworks to monitor, measure and review industry progress with regard to critical KPI’s on the journey of delivering the bigger picture of improved profitability and the long-term security for WA’s southern commercial fisheries.</p> <p>The project should consider benchmarking of existing performance in key areas such as production and profitability. The framework developed should be able to enable periodic/subsequent assessment of KPI’s beyond the life of the project.</p> <p>The local fishing Industry see this the start of an innovation pipeline that can deliver a market-focussed, value adding production system that is essentially a Producer Driven Value Chain (see Chair Beef and Lamb NZ, James Parsons’ concept).</p>
Planned outcomes	<ul style="list-style-type: none"> • Empower industry for future opportunity with information available in a cohesive format • Capacity to self-assess against metrics/KPIs to monitor, measure and review industry progress
Funding partners	WA RAC

Priority	Market development opportunities for Western Australia’s southern seafood producers
Need	<p>The viability of seafood sectors is supported by an understanding of and an appreciation for the service the fishing industry provides to the community. Consumers need information regarding the seafood offered such that it has a competitive advantage based on provenance and the story that underpins the product itself.</p> <p>There is also a need to not only tell the story of the product, but also that of the industry, “(re)introducing” the families and fishers to the communities and consumers. In many cases these stories may differ, however, they are likely to fit within an overarching narrative and complement efforts to establish provenance. Such activities are expected to have dual benefits in increasing the understanding and appreciation of the industry by the community, which in turn has the potential to yield greater economic returns to industry.</p> <p>Effective engagement and communication is required to promote regional product knowledge, support food tourism programs and provide a platform for industry led promotion of lesser known species and local hero seafood products and producers.</p>
Planned outcomes	Improved community awareness and recognition of the profile and activities of the Western Australian fishing community and seafood provenances
Funding partners	WA RAC

Priority	Impact of harvesting key species of Scleractinian (hard) corals in the Northern Territory
Need	<p>The Aquarium Fish/Display Fishery (A12) supplies a range of CITES listed coral species to fulfil demand in the global marine aquarium trade. The movement of corals is regulated under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) in order to meet Australia's obligations under CITES.</p> <p>In the absence of empirical evidence, precautionary harvest limits are set on all coral species, and monitored and reported by NT Fisheries to the Commonwealth Department of Environment and Energy (DoEE), to fulfil EPBC requirements. Increased global demand for valuable coral species presents an opportunity for licenced fishers to develop new and existing international markets. However, in order to assess the potential for increased harvest limits, evidence is required to demonstrate that the harvest and subsequent export will not have a detrimental effect on the population status of the species (CITES non-detriment finding). Any supporting non-detriment finding must be corroborated with new empirical evidence on the impacts of harvesting corals.</p> <p>Whilst the FRDC project <i>Establishing baselines and assessing vulnerability of commercially harvested corals across northern Australia</i> (FRDC 2014-029) (currently underway) attempts to address issues of taxonomy, abundance and distribution of key coral species, it does not address the long-standing concern of the impacts of coral harvesting. Understanding and quantifying the impacts of harvesting coral is needed to support the sustainable development of this industry. The specific need is for an empirical investigation of the impact of commercial harvest of key species of Scleractinian (hard) corals in the NT and for recommendations regarding the potential effects of increased harvest on coral populations based on this information.</p>
Planned outcomes	<ul style="list-style-type: none"> • An understanding and quantification of the impacts of harvesting hard coral • The sustainable development of the NT Aquarium Fish/Display Fishery, particularly with regards to meeting CITES and EPBC requirements based on empirical information
Funding partners	NT RAC

Priority	Improving sustainable yield estimates to inform stock assessment programs for undefined target species and protected species in the Offshore Net and Line Fishery
Need	<p>The Northern Territory Offshore Net and Line Fishery is a net and longline fishery operating in Northern Territory and Commonwealth waters, to the outer boundary of the Australian Fishing Zone.</p> <p>Currently, the main management mechanisms for the fishery involve TACCs set using precautionary measures. Important biological parameters remain unknown for a range of species both targeted or that interact with the fishery – including Grey Mackerel, Spot Tail Shark and Common Blacktip Shark.</p> <p>Catches of the NT Offshore Net and Line Fishery also comprise quantities of CITES listed species both as target and non-target species – e.g. Winghead, Great and Scalloped Hammerhead and Narrow Sawfish. In order to meet the requirements of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) adhering to Australia's obligations under CITES; evidence is required to demonstrate that the harvest and subsequent export of listed species does not have a detrimental effect on population status (CITES non-detriment finding).</p> <p>Currently, the paucity of key biological and fisheries data (age & length structures, growth & mortality rates, catch composition etc.) impede the ability to quantify the stock status and inform the management of the range of species encountered by the fishery. Moreover, these data are required to fulfil EPBC requirements in relation to CITES.</p> <p>Ultimately, there is a need to improve sustainable yield estimates to inform stock assessment programs for undefined target species and CITES listed species in the Offshore Net and Line Fishery.</p>
Planned outcomes	<ul style="list-style-type: none"> • Improved biological information as model input parameters for key species • Accurate sustainable yield estimates for key species – including CITES listed species
Funding partners	NT RAC

Priority	Marking of offshore fishing gear for navigational purposes
Need	Commercial fishers are constantly report the loss of fishing gear due to suspected interactions with large vessels and marine mammals. Fishers estimate that the loss of such gear (anywhere from 20 to 50 floats/gear is lost per year) and associated product (catch) is estimated to be \$15,000 per fisher. There is a need to evaluate cost-effective and logistically feasible technological and/or practical deployment solutions that will prevent the loss of fishing gear. It is essential that proposed activities consider and conform to AMSA and fisheries compliance regulations / requirements.
Planned outcomes	Changes in gear configuration and management regulations that allow fishing gear to be deployed in a way that prevents interactions with vessels and marine mammals.
Funding partners	NSW RAC

Priority	A tool to determine the presence of ciguatera in NSW caught Spanish Mackerel
Need	As a precautionary measure The Sydney Fish Market will not auction Spanish Mackerel >10kg due to the risks of ciguatera poisoning. However, the risks of Spanish Mackerel with ciguatera varies within and between years. This results in safe to eat Spanish Mackerel being excluded from the market, which in turn impacts on the NSW commercial fishing industry as most Spanish Mackerel caught in NSW are >10kg. Rapid detection methods have failed to date and alternative ways to identify when and where Spanish Mackerel with ciguatera are present in NSW is needed. For example, a new ELISA commercial kit has recently become available, but has not yet been validated. Proposals will aim to address this need by: <ul style="list-style-type: none"> • Investigating alternative measures to manage the risk of ciguatera in Spanish Mackerel • Determine factors that increase or decrease the risk of ciguatera in Spanish Mackerel • Provide advice based on quality information regarding correlation of specific environmental conditions and migration patterns etc. with presence of ciguatera in Spanish Mackerel • Providing a tool that will allow fishers and the post-harvest sector to know when and where to catch Spanish Mackerel >10kg in NSW that are safe for the consumer to eat
Planned outcomes	<ul style="list-style-type: none"> • Greater confidence in detecting ciguatera in Spanish Mackerel • Improved seafood safety outcomes for domestic & international buyers • Improved access for NSW fishers targeting Spanish Mackerel to Sydney Fish Market buyers
Funding partners	NSW RAC

Priority	Adding value to inshore fisheries through diversification of markets
Need	Inshore fisheries are highly reliant on the domestic markets, which experiences troughs and peaks of supply and demand – impacting prices, revenues and profitability. Reliance on a single market creates risk for industry profitability; hence, diversification in products and markets is needed to promote industry resilience. There has been much research investment into investigating value adding and new product development of under-utilised / lesser-known species. To complement this work, there needs to be investment into identifying alternative markets to handle fluctuations in product supply, whilst building the capacity of fishers to reach those markets.
Planned outcomes	<ul style="list-style-type: none"> • Market diversification opportunities for NSW fishers • Capacity within NSW fishers to service a diversified range of markets
Funding partners	NSW RAC