



Western Rock Lobster

Research, Development and Extension Plan 2022-2025

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World-class innovation for a world-class industry

The commercial western rock lobster fishery is the largest wild-catch fishery in Australia, the second largest sector of the Australian seafood industry, and accounts for around 65 percent of Western Australia's fishing and aquaculture Gross Value of Product (GVP). The fishery was the first fishery in the world to be certified under the Marine Stewardship Council (MSC), a globally recognised framework for which the environmental credentials of the Western Rock Lobster fishery continue to meet and exceed.

Efficient investment in research and development that generates new knowledge and technology that can be used by industry to inform and implement resource management, strategic investment and operational decisions has always been, and always will be, vital to the sustainability, competitiveness, and profitability of the western rock lobster industry.

To this end, the Western Rock Lobster Council (WRL), the industry peak body representing over 750 western rock lobster managed fishery license holders, has developed this Research, Development and Extension (R, D&E) Plan, to ensure that the industry continues to be optimally positioned to:

- Understand and respond to the ever-changing ecosystem that supports the western rock lobster fishery, as well as cumulative impacts on that ecosystem.
- Determine with certainty, sustainable and economically optimal levels of harvest of that natural resource.
- Improve the productivity and safety and therefore, competitiveness and profitability of the fishing effort and downstream processes.
- Ensuring strong, evidence-based cases can be made to government and communities that underpin resource access security for the industry.
- Understand and be able to respond to changes in market and industry conditions.

Rigorous priority setting and governance of the research effort

The priorities set out in this RD&E Plan have been determined as a result of an extensive research priorities planning process that was undertaken by an independent expert over the course of 12 months to inform the establishment of the WRL Research Network. Research priorities were developed as the result of direct consultation with over 40 individual fishers, processors, researchers, research funders, regulators and other stakeholders and experts, further developed and refined by a comprehensive literature review, validated across the entire WRL membership, and finally endorsed by the Board of WRL.

The WRL Research Network itself is a governance framework reporting to the Board of WRL that will ensure that research, development, and extension investments made through the sector's Industry Partnership Agreement (IPA) with the Fisheries Research and Development Corporation (FRDC) and other proprietary resources are aligned with industry's priorities and optimally leveraged with other external sources of aligned research, development, and extension resources. Like all competent research strategies, the WRL R,D&E Plan is an open and adaptive strategy ensuring research and development can pivot to address industry challenges as they arise. It will be routinely reviewed in accordance with the terms of reference for the governance structure and be put to Members and the

WRL IPA Committee for input. The WRL Board will have the ability to redirect resources in the case of unforeseen urgent needs.

The Western Rock Lobster Research Priorities Framework

The WRL research priorities are organised according to a thematic framework that logically addresses the key issues of what can be fish, what should be fished and how it should be fished, making sure industry continues to have access to the natural resource to be able to fish and putting the knowledge, tools and technologies that enable this into practice.

This framework, illustrated in Figure 1 below, contains 50 research areas that were identified by the planning process as requiring research, development, and extension attention. Some of these are areas where WRL shares responsibility or interest in outcomes with other stakeholders, whereas some are of exclusive interest to WRL and its sole responsibility.

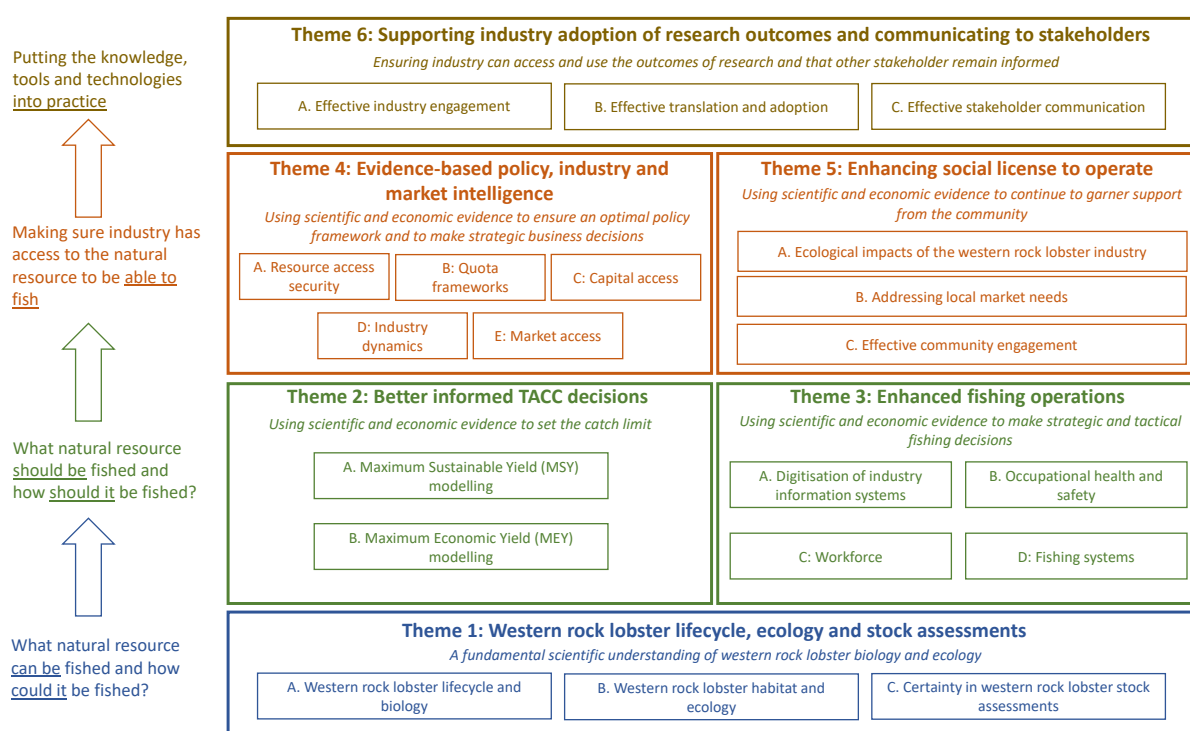


Figure 1 – Western Rock Lobster Research Priorities Framework

First Order Western Rock Lobster Research Priorities

The priorities setting process identified a total of 22 research areas that, by virtue of their business critical and urgent nature, are considered the first order priorities. These First Order Priorities will be the initial focus of investment by WRL and are described in the following table.

Programme	Research Area
Theme 1: Western rock lobster lifecycle, ecology, and stock assessments	
Programme A: Western rock lobster lifecycle and biology	<p>Toward and evidence-based understanding of western rock lobster migration</p> <p>While there is an understanding of the destination of western rock lobster in their annual ‘whites’ migration run, the precise pathway(s) that are taken and events that may occur along that migration pathway are not understood. An evidence-based, more detailed understanding of migration pathway(s) and factors that impact on that pathway will inform both tactical fishing decisions and provide a broader understanding of ecological factors that may impact on western rock lobster lifecycle. For example, what impacts do quota changes have on the balance of whites and reds caught and what is the optimal balance of catching migrating whites versus reds for the fishery.</p>

Programme	Research Area
	<p><i>Given its importance to fishing productivity and understanding and managing cumulative impacts on the fishery, this research area is considered to demonstrate a high level of criticality and moderate to high urgency. Furthermore, given its relevance to fishery management decisions, it should also be an area of research that is of importance to the Department of Primary Industries and Regional Development (DPIRD). Potential collaborators in research in this area include The University of Western Australia (UWA) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).</i></p>
<p>Programme B: Western rock lobster habitat and ecology</p>	<p>Impact of seismic surveys on the western rock lobster lifecycle The impact of seismic survey operations conducted by the offshore oil and gas industry on the lifecycle of various commercial fishery species has been the focus of research in areas across the globe where petroleum prospective offshore basins intersect with areas that important for supporting the lifecycle of commercially fished species.</p> <p>The nature of this interaction is unique to every circumstance based on the specific species, the stage of lifecycle impacted, frequency and nature of seismic survey and specific oceanography. In the case of western rock lobster, its significant migratory footprint at various stages of its lifecycle and the intensity of seismic survey along the Western Australian coast, particularly in the Carnarvon and increasingly, Perth Basins, arguably make its circumstance particularly unique.</p> <p><i>An evidence-based scientific understanding of the specific impact of offshore seismic surveys on the western rock lobster lifecycle is important for informing predictive stock models, tactical fishing decisions, fishing investment decisions and ultimately rights to compensation for loss of access to the fishery that may result from seismic survey activity. Furthermore, offshore petroleum exploration is increasing in areas adjacent to and within the western rock lobster fishery. For these reasons, this area of research is considered to be of high criticality and urgency and is primarily the responsibility of WRL – while Southern Rock Lobster Limited (SRL) has also conducted some work in this area, the intensity of oil and gas exploration in offshore Western Australia and uniqueness of the bathymetry and marine ecosystem means that very focused work is likely required for Western Rock Lobster.</i></p>
<p>Programme C: Certainty in stock assessments</p>	<p>Shared responsibility for stock assessments The stock observations of fisherman who interact with the natural resource on an almost daily basis is a potentially rich source of additional information on the status of the resource and ecological and other factors that influence stocks. DPIRD currently utilise relationships with some fishers to conduct surveys. However, a broader and deeper relationship regarding the collection of measured and observational data and discussion of various aspects of stock assessment and its outputs with industry would likely lead to enhanced outcomes.</p> <p><i>This issue is a shared responsibility with DPIRD and is considered by industry to be an issue of high criticality and urgency.</i></p> <p>Certainty in assessment of the recreational catch The number of western rock lobster taken by the recreational sector is a significant component of the Total Allowable Catch and impacts on the sustainability of the fishery. Whereby the commercial catch is accurately monitored and measured, assessment of the recreational take is measured by surveys of recreational fishers and some periodic and <i>ad hoc</i> monitoring at recreational boat ramps.</p> <p>Significantly greater accuracy in the measurement of the recreational catch could be achieved through the development of a mobile phone application that uses real-time data entry, digital imaging, GIS and potentially block-chain technology that is linked to individual recreational licenses to monitor the recreational catch in real time with much greater accuracy.</p> <p>Greater certainty as to the number of lobsters taken throughout a season at different locations would provide greater certainty in managing the sustainability of the resource and provide a platform for potential migration toward quota trading between the sectors. This data could also be used to better inform predictive stock assessment models.</p> <p><i>Uncertainty with respect to the recreational catch is potentially a major point of inaccuracy in stock assessments. Therefore, improving the accuracy of the assessment of the recreational catch is a critical issue that requires relatively urgent resolution. However, this is a responsibility that is shared with the recreational sector (Recfishwest) and DPIRD. Additional potential partners in this program include UWA and CSIRO. Further if the solution is to include mobile phone applications Edith Cowan University and private sector mobile application development may also be suitable partners.</i></p>
<p>Theme 2: Better informed TACC decisions</p>	
<p>Programme A: Optimising maximum sustainable yield (MSY) modelling</p>	<p>Evidence-based case for MSY v MEY determination of TACC The recent decline in price for western rock lobster that is the result of the suspension of exports to the PRC has led to some to call for the TACC to be set at or close to the MSY. This argument is based on two logics. The first is that without the premium pricing attainable in the PRC market, Australian lobster will trend away from being a luxury product towards commoditisation and therefore fishing business returns will be increasingly driven by volume. The second is that, setting TACC against MEY in current market conditions means that the commercial sector is fishing substantially below MSY, creating a potential case for reallocation of the resource to the benefit of the recreational, customary and charter sectors.</p> <p>These arguments are countered by the notion that, subject to the robustness of the MEY model, TACC set against MEY will deliver the best economic outcome for industry and in almost all circumstances the best</p>

Programme	Research Area
	<p>conservation outcome. Developing an evidence-based argument on this issue and market-based re-allocation process will be important for protecting industry's interests.</p> <p><i>This issue is considered to be of medium-to-high criticality and urgency and is primarily a WRL responsibility.</i></p>
<p>Programme B: Optimising maximum economic yield (MEY) modelling</p>	<p>MEY and DPIRD's new statutory responsibilities While DPIRD's primary statutory responsibility will remain as ensuring the sustainability of the natural resource, as industry transitions to regulation under the <i>Aquatic Resource Management Act 2016</i> (WA), DPIRD will be compelled, to some degree, to take into account economic issues at least as a secondary consideration in its resource management decisions.</p> <p>This will likely require the MEY model to take into account DPIRD requirements under the <i>Aquatic Resource Management Act 2016</i> (WA), as determined by DPIRD. A determination of these requirements and development of inputs and algorithms that address those requirements will be important to ensure the integrity and usefulness of the MEY model in the new regulatory environment.</p> <p><i>This is determined to be an issue of high criticality and urgency and is a shared responsibility with DPIRD. Other potential collaborators include Curtin University (Curtin), UWA, CSIRO and the private sector.</i></p>
	<p>Enhanced MEY algorithms Ensuring that the MEY is optimally accurate, that its integrity is maintained, that it is adequately robust enough to incorporate and model inputs that impact on its outcome is critically important. Changes in the structure of the industry and responses to changes in stock across the zones will result in changes in fishing strategy and tactics.</p> <p><i>The accuracy of the MEY model will be substantially enhanced if it is able to take into account changes in fishing strategies tactics. This issue is considered to be of high criticality, but medium urgency. It is primarily a WRL responsibility and research partners might include SRL, UWA, Curtin, CSIRO, Institute of Marine and Antarctic Studies (IMAS), DPIRD and the private sector.</i></p>
<p>Theme 3: Enhanced fishing operations</p>	
<p>Programme A: Digitisation of industry information systems</p>	<p>Modernisation of the DPIRD industry administrative interface As a result of both lags in digital infrastructure investment and the merger of three separate operating platforms when DPIRD was formed through the amalgamation of the former Departments of Agriculture, Regional Development and Fisheries, much of the administrative interface between DPIRD and the industry is antiquated and inefficient. This occurs to the extent that presentation of a physical paper cheque is still required to renew fishing licenses.</p> <p>While modernisation of the DPIRD's digital and online systems its entirely a Western Australian Government responsibility and DPIRD is currently in the process of assessing and implementing new systems, industry has a vested business motivation to ensure those systems deliver optimal administrative certainty and efficiency.</p> <p>The likelihood of this being the case is optimised by a proactive approach from industry with respect to presenting DPIRD with its administrative systems requirements.</p> <p><i>Progressing this issue to a conclusion is considered an issue of high criticality and urgency and is a shared responsibility with DPIRD. Potential collaborators include private sector ICT service companies.</i></p>
	<p>Access to DPIRD data for supply chain decision-making Currently the efficiency of the western rock lobster supply chain is suboptimal as the result of a range of uncertainties as to fishing effort and outputs in daily supply chain decision, particularly uncertainty as to sizes of catches, times of landing, locations of landing and bait requirements for following days. This uncertainty manifests in suboptimal logistics operations and downstream processes such as frozen production, live pack-outs and daily sales offers.</p> <p>Data collected by DPIRD through the DPIRD IVR system and FishEye provides a data platform for systems that could be used to better inform supply chains participants on fishing activities, resulting in a decision-making tool that allows supply chain systems to respond in near-real-time to the fishing effort and activities, improving overall industry productivity and profitability. Similarly, DPIRD would benefit from such a system through scope for automation of processes such as reconciliation of reported catch with processed catch.</p> <p>A study that scopes the nature and usefulness of data generated through the DPIRD IVR, FishEye and other systems in use in western rock lobster supply chain optimisation, potential data governance frameworks, architectures for developing Application Programming Interfaces (API) that allow industry to access the DPIRD data and a business case for development of that architecture and API would present a pathway for enhanced western rock lobster supply chains.</p> <p>Progressing this issue to a conclusion is considered an issue of high criticality and urgency and is a shared responsibility with DPIRD. Potential collaborators include private sector ICT service companies and the western rock lobster downstream supply chain industry.</p>
<p>Programme C: Workforce</p>	<p>Accreditation of the lobster fishing skillset Across many sectors of industry, previously 'unlicensed' or 'unaccredited' skill sets are transitioning to a 'licensed' or 'accredited' regime. This is driven by a desire to improve, standardise and certify quality of skills and OHS and to provide a basis for benchmarked remuneration. While lobster fishing shares many of</p>

Programme	Research Area
	<p>the skill requirements of other commercial fishing operations, it has its own unique skill sets. In an environment where the master of the vessel is licensed and not the crew, significant risk will accrue to the vessel master. A vessel master will have limited scope to manage the risk with crew under employment conditions without accredited programs.</p> <p>A study exploring the merits and viability of accreditation of the lobster fishing skillset should be the first stage in exploring the business case for investing in the development of an accreditation program with the vocational education and training sector.</p> <p><i>This is considered to be an issue of high criticality and urgency given the prosecution of vessel Master under Aquatic Resources Management Act 2016 WA (ARMA). This would represent a shared responsibility with the TAFE sector or private vocational training organisations.</i></p>
<p>Programme D: Fishing systems</p>	<p>Developing systems that optimise lobster welfare</p> <p>Addressing escalating market and community concerns with respect to animal welfare has become core business for many livestock and wild-catch oriented industries across the globe. While this is currently only a potential issue for the western rock lobster industry, fishing operations, processing and live export will almost certainly draw attention at some stage.</p> <p>A study that identifies the risk areas in this regard and scopes the nature and viability of potential solutions along the supply chain would provide industry with a basis for pre-emptive action should this issue escalate for the industry.</p> <p><i>This issue is considered to be of medium criticality and urgency and is principally the responsibility of WRL. Potential partners include UWA, Curtin and CSIRO.</i></p>
<p>Theme 4: Evidence-based policy, industry, and market intelligence</p>	
<p>Programme A: Resource access security</p>	<p>Maintaining thought leadership</p> <p>The paramount advocacy issue for the western rock lobster industry is ensuring resource access security. The Western Rock Lobster Council has undertaken extensive work in this area, which has entrenched its position as the thought leader in Western Australia on the natural resource management, economic and legal case for secure commercial fishing rights. This complements other similar work undertaken by national and international commercial fishing organisations.</p> <p>However, to mitigate the risks of required legislative amendments not being put into place, or further attempts by governments to appropriate commercial fishing rights, the western rock lobster industry must maintain its legitimacy as the intellectual authority on this issue.</p> <p>Maintaining a watching brief on relevant development in commercial fishing rights across the globe and working with national bodies to coordinate policy development will serve to ensure that the industry is equipped to respond when and if necessary.</p> <p><i>The encroachment by governments on commercial fishing rights is an ever-present threat. This issue is considered to be of high criticality and of medium to high urgency. It is the primary responsibility of WRL and an area that can draw on natural resource economics and legal expertise of UWA and Curtin, as well as the private sector.</i></p>
<p>Programme B: Quota frameworks</p>	<p>Assessment of the case for split quotas</p> <p>A significant benefit associated with quota-based systems for resource allocation is that through individual transferrable quota systems they facilitate the use of more efficient market mechanisms for allocation. However, somewhat perversely, they also provide governments with a mechanism to pursue policy objectives through arbitrary allocation of quota beyond just the commercial, recreational, customary and charter sectors.</p> <p>An example of this is the current local market quota allocation under the commercial quota in the form of the Back-of-Boats (BOBs) program. In an extreme and undesirable circumstance this could evolve into specific local market quotas, or even quotas for particular product forms or overseas markets, albeit this would be a contravention of many of Australia's bilateral and multilateral trade agreements.</p> <p>Understanding the commercial and license to operate implications of different forms of split-quota that governments may endeavour to impose on industry will be key to ensuring any changes in quota are of optimal benefit to the industry.</p> <p><i>This issue is considered to be of medium criticality and urgency and a share responsibility with DPIRD. Potential collaborators include UWA and private economics, legal and market advisory services.</i></p> <p>Toward cross sector quota trading</p> <p>It is widely understood that a system of integrated fisheries management based on set quota that is transparently grounded in sound scientific assessment of the resource, secure fishing rights and individual transferrable quota allocation is world-best-practice for managing most fisheries from an economic efficiency and resource sustainability perspective.</p> <p>With an established and relatively reliable systems for resource assessment, a cross sectoral quota framework and individual transferrable quota system operating within the commercial quota, there is a basis for a cross sectoral market-based re-allocation trading system in western rock lobster. This would allow market forces to efficiently re-allocate quota between the commercial, recreational, charter and customary sectors.</p>

Programme	Research Area
	<p>The first stage in assessing this is a scoping study that explores the merits, viability, and potentially operating models for cross sectoral market-based re-allocation as a basis for deep preliminary consultation with stakeholders in each sector of the western rock lobster fishery and DPIRD.</p> <p><i>This issue is considered to be of medium criticality and urgency and a share responsibility with DPIRD and Recfishwest. Potential collaborators include UWA and private economics, legal and market advisory services.</i></p>
Programme C: Capital access	<p>Industry financial benchmarking</p> <p>The outcomes of the recent asset seizure have potentially undermined the bankability of the sector. A key input to the bankability of an industry is credible industry benchmark data that financiers can use to assess the bankability of actual businesses. Sectors that have previously had financing issues have overcome this problem through the development of reliable industry benchmarking data systems.</p> <p>The first step in this is scoping the trialling of a data collection, aggregation, analysis, and anonymised reporting of that analysis across key drivers of western rock lobster fishing business cash flow and profitability such as days fished, average catch, average labour costs, average fuel costs, average bait utilisation and costs, average repairs and maintenance cost, average capital intensity, etc. The trial would be on a voluntary basis and undertaken in conjunction with the banking sector to design and test its utility.</p> <p><i>This is primarily a WRL responsibility and is considered to be of medium to high criticality and urgency. Potential partner in this area are banks and finance advisory services.</i></p>
	<p>Unit registry reform</p> <p>The outcome of the recent asset seizure has undermined a perception held by industry and financiers that liens listed on the DPIRD unit register against quota were secure. A unit registry that does not provide for secure registration of liens over quota has limited if any use for financing purposes, other than to confirm quota ownership.</p> <p>A feasibility study should be undertaken to determine the legal and practical issues that need to be overcome to implement a unit register that facilitates secure registration of liens by financiers hosted by either the Western Rock Lobster Council, DPIRD or another authorised third party service provider. This study should also consider the scope of a prospective online quota trading platform that is the subject of Program A in Theme 3.</p> <p><i>This issue is business critical but of low to medium urgency and secondary to resolving the quota trading platform issue. It is a shared responsibility between WRL and DPIRD, with potential partners including private sector legal advisory services.</i></p>
Programme D: Market access	<p>Market intelligence</p> <p>Deep knowledge of specific markets for western rock lobster is a source of competitive advantage for downstream processes, distributors, and marketers of western rock lobster. However, from a whole of industry perspective, fishing businesses need to have some understanding of trends in key markets and industry peak bodies require knowledge of geopolitical trends that may lead to market disruption or opportunities to inform their advocacy.</p> <p>This information can be attained most efficiently through clear arrangements with downstream businesses, where appropriate market intelligence is shared with the peak body and integrated with information in the public domain to keep industry informed and to inform advocacy.</p> <p><i>This issue is considered of high criticality and urgency. It is a shared responsibility with the downstream sector and would be undertaken with private sector seafood market research organisations.</i></p>
	<p>Residue testing</p> <p>Potential presence of trace elements in exported western rock lobster was the cited reason for the most recent market disruption. The development of reliable and efficient pre-emptive testing for regulated trace elements by processors would substantially mitigate this risk in the future.</p> <p>This issue can be progressed through research that seeks to develop reliable, rapid, cost-effective residue tests that do not impact product quality and can be effectively deployed in the processing flow-of-product line.</p> <p><i>This issue is considered of high criticality and urgency. It is a shared responsibility with the downstream sector and SRL and would be undertaken with testing organisations.</i></p>
Theme 5: Enhancing social licence to operate	
Programme A: Ecological impacts of the western rock lobster industry	<p>Plastics reduction in fishing gear</p> <p>Western rock lobster fishing gear typically incorporates a significant number of plastic components including bait traps, roles, floats and in some instances, the pots themselves.</p> <p>In line with growing market and community concerns, innovation that presents competitive and practical alternatives to plastics in western rock lobster fishing gear will serve to alleviate market and community concerns in this regard.</p> <p><i>Ocean plastics is a very topical issue. This is seen to be an issue of high criticality and urgency and a share responsibility with SRL. Potential partners include fishing equipment manufacturers.</i></p>
Programme B: Local market access	Understanding local market lobster demand dynamics

Programme	Research Area
	<p>An absence of accessible and affordable supply of western rock lobster in local markets has been cited as a social-license-to-operate challenge for the western rock lobster and has been the subject of Western Australian Government policy intervention.</p> <p>To respond effectively to this challenge, industry must understand how ‘real’ the issue is and its true nature. A study that delivers evidence-based analysis as to issues such as trends in local demand throughout the year, identification and segmentation of the end customer, preferred purchase methods and practical issues associated with different purchase methods (e.g. BOBs), extent of product value appropriation by restaurants (i.e. margin) and use and informal distribution of the recreational catch, will assist industry in understanding the precise nature of the issue and how best to respond to it to reinforce industry’s license to operate.</p> <p><i>This issue is primarily a WRL concern and is of medium to high criticality and urgency. Potential partners are UWA, Curtin and private sector market research firms.</i></p>
<p>Programme C: Effective community engagement</p>	<p>Effective engagement with the recreational sector</p> <p>As the industry’s main partner in the shared western rock lobster shared resource, it is in industry’s interests to ensure that it has a functional and harmonious relationship with the recreational sector. Research that revolves around collaboration with the recreational sector and delivers mutual benefits is beneficial in this regard.</p> <p><i>This is a shared responsibility with Recfishwest and is considered an issue of high criticality and urgency.</i></p>
	<p>Effective engagement with local fishing communities</p> <p>Historically, the economies of many coastal towns in Western Australia have revolved around the western rock lobster industry. A reduction in the operational footprint of the industry that occurred when the industry shifted to quota combined with economic diversification of the larger coastal settlements means that in many instances the western rock lobster industry isn’t as critical to the economic and social fabric of those towns as it once was.</p> <p>However, support for these industries from these coastal communities is vital for the industries social-license-to operate. Research that informs initiatives that can continue to underpin community support in this regard will ensure the industry is able to operate.</p> <p><i>This is primarily a WRL responsibility and of high criticality and urgency. Potential partners include UWA, Curtin and private sector community engagement advisory firms.</i></p>

Second Order Western Rock Lobster Research Priorities

The research areas that are considered a second order of priority are business critical, but by their nature there is less urgency in developing solutions because either a satisfactory, albeit suboptimal, solution currently exists or by virtue of circumstance there is limited scope for WRL to intervene in any event. Further, the research that is undertaken to resolve these issues is either a shared responsibility or the primary responsibility of another organisation. These research areas are detailed in the WRL Research Network Business Plan.

Programme	Research Area
Theme 1: Western rock lobster lifecycle, ecology, and stock assessments	
<p>Programme B: Western rock lobster habitat and ecology</p>	Enhanced prediction of warm water events and effects on the biomass.
	Enhanced prediction of currents.
<p>Programme C: Certainty in stock assessments</p>	Integrating enhanced understanding of impacts on western rock lobster lifecycle, habitat, and ecology into predictive modelling.
Programme	Research Area
Theme 3: Enhanced fishing operations	
<p>Programme A: Digitisation of industry information systems</p>	Scoping an online quota trading platform.
	Provenance traceability for processed production.
<p>Programme B: Occupational health and safety</p>	Accredited lobster fishing OHS induction course.
<p>Programme C: Workforce</p>	Training in ICT systems
Programme	Research Area

Theme 5: Enhancing social licence to operate	
Programme A: Ecological impacts of the western rock lobster industry	Reducing the fishing fleet carbon footprint

Third Order Western Rock Lobster Research Priorities

The Third Order Western Rock Lobster Research Priorities are considered less business critical. These research areas are detailed in the WRL Research Network Business Plan and include research areas that are the primary responsibility of WRL, a shared responsibility and the primary responsibility of another organisation.

Programme	Research Area
Theme 1: Western rock lobster lifecycle, ecology, and stock assessments	
Programme A: Western rock lobster lifecycle and biology	Do puerulus settle in deep water?
	Understanding the connection between the lifecycle of northern and southern western rock lobster populations.
	Causes and mitigation of cottontail in the lobster catch.
Programme B: Western rock lobster habitat and ecology	Scope of potential application of Traditional Ecological Knowledge to inshore rock lobster research.
	Vulnerability of the western rock lobster fishery to ocean acidification.
	River mouths and productivity in the western rock lobster fishery.
	Impact of microplastics on the western rock lobster fishery.
Programme C: Certainty in stock assessments	Snapper and the western rock lobster food web.
	Increased geographic resolution of puerulus surveys.
Theme 2: Better informed TACC decisions	
Programme B: Optimising Maximum Economic Yield (MEY) modelling	Innovation in stock assessment methods.
Theme 3: Enhanced fishing operations	
Programme A: Digitisation of industry information systems	Setting the recreational catch according to maximum social yield
Programme B: Occupational health and safety	Automated lobster measuring systems
Theme 4: Evidence-based policy, industry, and market intelligence	
Programme D: Market access	Development of an industry mental health programme
Programme E: Industry dynamics	Geographic traceability within the fishery.
	Monitoring and reporting on industry dynamics.