

PIRSA Fisheries & Aquaculture Cost Recovery Program

BLUE CRAB FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018



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Information current as of June 2017

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Summary Table Blue Crab Fishery

2016-17 (\$)	PROGRAM AREA	2017-18 (\$)	COMMENTS	DAYS	FTE
RESEARCH AND ASSESSMENT					
165,444	Stock Assessment and Monitoring	170,479	1 year SARDI project scope		
6,425	Economic Assessment	6,415	As per contracted services 2017-18		
339	Other Research	347	Contribution towards Threatened and Endangered Species		
PIRSA RELATED COSTS *					
36,376	Policy and Management	37,176	Same level of service as previous year	40	0.20
9,928	Legislation	10,146	Same level of service as previous year	10	0.05
7,111	Licensing	7,267	Same level of service as previous year	10	0.05
3,606	Directorate	3,685	Same level of service as previous year	4	0.02
72,457	Compliance	74,051	Same level of service as previous year	59	0.30
15,845	Quota Monitoring	16,194	Same level of service as previous year	26	0.13
\$317,530	TOTAL	325,760			

Licence Fees for 2017-18 (\$)	
Base Fee	3,029
Unit Fee (Blue Crab Pot)	27.50
Unit Fee (MSF Net)	30.00
<i>Licence Fees for 2016-17 (\$)</i>	
<i>Base Fee</i>	<i>2,980</i>
<i>Unit Fee (Blue Crab Pot)</i>	<i>26.75</i>
<i>Unit Fee (MSF Net)</i>	<i>29.25</i>

* 'PIRSA Related Costs' section in longer-term program of indexation (to 30 June 2019). Indexation rate of 2.2% has been applied to 'PIRSA Related Costs', which is consistent with the rate to be applied for the 2017-18 regulated fees and charges process.

Program Daily Charge Out Rate

DAILY RATE (\$)	Compliance	Quota	Directorate	Legislation	Licensing	Policy
Total Employee Expenses	609	365	575	685	460	582
Total Operating Expenses	325	61	136	123	71	150
Deprecation and Capital Costs	78	4	0	0	8	0
Total Other Expenses*	213	185	193	193	185	193
TOTAL DAILY RATE	1,224	614	904	1,002	723	925

Please Note: All dollar values have been rounded to the nearest dollar figure.

** Other expenses includes ICT, finance, human resources, WHS, accommodation, insurance and other costs incurred corporately in providing services to divisions, apportioned across PIRSA using a range of cost drivers such as number of logons, headcount, volume data and other workload indicators, in accordance with PIRSA's cost recovery policy. It excludes the costs of servicing government and costs too far removed from the activity such as Ministerial Offices, Office of the Chief Executive, Strategic Communications and Engagement and the PIRSA Policy Unit, for example.*

Introduction

Wild catch commercial fisheries in South Australia continue to be managed in accordance with the PIRSA Cost Recovery Policy. This policy requires commercial fishery licence fees to fund services related to commercial fisheries management costs. PIRSA Fisheries & Aquaculture continue to manage the process of consulting with service providers and relevant industry associations to establish fishery based management programs which form the basis of annual licence fees.

For each sector, the program required to manage the fishery has the following components:

- Assessment and Research Services;
- Fisheries Policy and Management Services;
- Compliance Services, including communication, enforcement and monitoring activities;
- Support Services, including Legislation, Licensing and Business Services (Directorate).

This documentation provides a framework to assist in establishing appropriate research, policy, compliance and support services to manage a fishery.

BLUE CRAB FISHERY MANAGEMENT OBJECTIVES 2016/17 TO 2018/19

Long term objectives	Outcomes 2016/17 to 2018/19	Policy and Management	Compliance	Assessment and Research	Leasing and Licensing
Ensure the Blue Swimmer Crab resource is harvested within ecologically sustainable limits	<p>Implementation of management plan under <i>Fisheries Management Act 2007</i></p> <p>Revision of management plan consistent with agreed review timeframe</p>	<p>Implement plan, including TACC setting and updated harvest strategy protocols</p> <p>Progress program to look at transitional arrangements for harvest strategy</p> <p>Lead a review of the fishery management plan 2017/18</p> <p>Support review of harvest strategy in 2018/19</p>	<p>Implement compliance program, informed by risk assessment.</p> <p>Ensure integrity of quota system.</p>	<p>Conduct FIS consistent with updated harvest strategy</p> <p>Produce FIS and stock assessment reports to assess fishery performance, in accordance with management plan</p> <p>Research program to include field and analytical work to transition from June to March FIS, consistent with harvest strategy</p> <p>Support review of harvest strategy in 2018/19</p>	<p>Provide ongoing support for licensing, quota and transfer queries</p>
Allocate access to Blue Swimmer Crab resources to achieve optimum utilisation and equitable distribution to the benefit of the community	<p>Stock maintenance</p> <p>Mitigate conflict issues between sectors</p> <p>Evaluation of trial fishing through seasonal closure in GSV. Review of management arrangements as a result of the trial</p>	<p>Progress consideration of results of trial fishing through the GSV seasonal closure in 2015/16</p> <p>Review allocations consistent with management plan and allocation policy</p>	<p>Implement compliance programs for commercial and recreational fisheries, informed by risk assessment.</p>		

Minimise impacts on the ecosystem	Progress DotE recommendations under EPBC Act accreditation	Continue implementation and management of DotE recommendations through existing programs and reporting		Produce Overall TEPS report (all fisheries)	
Cost effective and participative management of the fishery	Effective engagement with industry in accordance with agreed co-management arrangements and communication strategy	Follow co-management arrangements, and timelines including maintaining regular communication with industry representatives Implement Rules Review outcomes	Support industry by following co-management arrangements, and communication strategy for Blue Crab Fishery	Support industry by following co-management arrangements, communication strategy for Blue Crab Fishery	Provide ongoing support for licensing, quota and transfer queries

Fisheries Policy and Management Program

BLUE CRAB FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

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Program Summary

The Fisheries Policy and Management Unit of PIRSA Fisheries & Aquaculture undertakes activities such as day-to-day management, long-term planning and policy development for South Australian commercial, recreational and Aboriginal traditional fisheries

The Fisheries Policy and Management unit has the following core functions:

- Administer the *Fisheries Management Act 2007* and regulations.
- Day-to-day management of fisheries resources, to ensure catch and effort levels are commensurate with resource sustainability.
- Develop and implement management plans, including harvest strategy development and ESD risk assessment, in accordance with the *Fisheries Management Act 2007*.
- Provide advice to the Minister for Agriculture, Food and Fisheries, Chief Executive and Deputy Chief Executive on matters relating to fisheries.
- Represent the Director, Fisheries & Aquaculture Policy and Director, Operations on committees and other forums on matters related to the administration of the *Fisheries Management Act 2007*.
- Develop over-arching policy frameworks to support fisheries management.
- Build and maintain relationships with key stakeholders, with a particular focus on the commercial and recreational fishing sectors.
- Progress Australian Government recommendations under EPBC Act assessment.

Objectives

To provide day-to-day fisheries management services to for the Blue Crab Fishery to government and industry, as well as advice and facilitation of fisheries policy and management issues, through the Fisheries Policy and Management Program.

PROGRAM STRATEGIES AND SUPPORTING ACTIONS & INITIATIVES

Program Delivery

1. Participate in inter and intra-departmental meetings and workshops on issues relevant to fisheries management
2. Liaise within the Fisheries and Aquaculture Division, with SARDI Aquatic Sciences, other parts of PIRSA and other State and Commonwealth agencies on matters relevant to fisheries management
3. Liaise within PIRSA, with other government agencies and with industry representatives in implementing decisions relevant to fisheries management
4. Conduct regular assessment or review of existing management arrangements for fisheries management, including analysis of statistical information on fisheries and interactions with threatened, endangered and protected species
5. Coordinate consultation with fishery stakeholders through established co-management processes
6. Participate in industry liaison in the field and on vessels to strengthen fishery management knowledge and understanding, and develop rapport with licence holders and divers.
7. Participate in industry development initiatives related to fisheries management
8. Attending to general correspondence and enquiries relevant to fisheries
9. Provide advice to Minister in relation to the management of fisheries and Ministerial correspondence

10. Communicate on fisheries management issues to key stakeholder groups and the broader community

Anticipated Outcomes

- Prepare day-to-day necessary legislative instruments and/or advice required for the management of the Blue Crab Fishery (regulations, closure notices, licence conditions, Ministerial exemptions etc).
- Provide advice to the Minister or his/her delegate on setting total allowable commercial catch and effort levels for the Blue Crab Fishery
- Prepare policies to support fisheries management
- Prepare submissions to enable regular assessment of the Blue Crab Fishery under the EPBC Act
- Prepare annual report to the Australian Government on EPBC Act requirements for the Blue Crab Fishery
- Support preparation of regular fisheries status reports
- Develop and maintain day-to-day productive working relationships and outcomes through cooperative management and collaboration with stakeholders
- Further the development of co-management arrangements

Performance Indicators:

1. Strong industry and government involvement in co-management relationship and adherence to formally agreed co-management arrangements.
2. Develop and implement management plan. Management plans to include harvest strategies that protect sustainability of the fishery based on ESD risk assessment processes.
3. Australian Government recommendations met in relation to EPBC assessment.
4. Setting of TACC for Blue Crab Fishery

Program Effort Allocation

The table below includes an abbreviated suite of core activities and initiatives used to manage risks and reflect the anticipated split of effort and associated costs.

Strategy/Activities	Days	FTE	Cost (\$)
Policy and Management	40	0.20	37,176
TOTALS	40	0.20	37,176

Please Note: All dollar values have been rounded to the nearest dollar figure.

Legal Services Program

BLUE CRAB FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

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Program Summary

PIRSA Fisheries & Aquaculture Directorate provides legal services to the Deputy Chief Executive and all other members of the Division, in particular the policy group, on a daily basis. Among other things these services include strategic advice and problem solving, review of draft documentation and correspondence, statutory interpretation and the provision of general advice and statutory interpretation, in consultation with the Crown Solicitor's Office where necessary, regarding any legal issues relating to proposed actions and the implementation or administration of blue crab fisheries management and regulatory arrangements through existing legislative frameworks and licence conditions. Consideration is also given to the impacts and effects of other related legislation if and when required.

Objectives

To provide legal services supporting the implementation of necessary, appropriate and effective statutory and administrative changes to government administration of all fishery sectors, as well as strategic advice and facilitation of related policy development, legislative and regulatory issues, through the Legal Services Program.

PROGRAM STRATEGIES AND SUPPORTING ACTIONS & INITIATIVES

Anticipated Outcomes

1. Co-ordinate the introduction, amendment or revocation of Fisheries legislation in line with Fisheries Policy decisions i.e. Act or regulation amendments, the introduction of new regulations and drafting of other legislative and administrative instruments such as delegation, permit or exemption instruments as required under the *Fisheries Management Act 2007* (the Act). New regulations or amendments require the drafting of Cabinet submissions and supporting documentation, including the preparation of drafting instructions, for consideration by Cabinet. This service includes co-ordinating the cabinet process involving liaison with the Office of Parliamentary Counsel and the Crown Solicitor's Office and inter agency consultation to ensure that proposed regulatory arrangements are accurately described, drafted and scrutinised before being implemented.
2. Review licensing arrangements required on an as needs basis to appropriately implement approved fishery management policy and measures within the limitations of the Act. The service includes working with the Licensing program (part of Leasing and Licensing) where necessary to implement efficient administrative systems and finalise forms and instruments that are legally sound.
3. Problem solve together with the provision and co-ordination of legal advisory services in liaison with the Crown Solicitor's office relating to the implementation and administration of the Act, Regulations and fisheries management policies, interaction with other Acts, and the defence of those policies and arrangements raised in litigation or industry correspondence.
4. Coordinate applications for Ministerial exemptions under Part 10 Division 1 and Permits under Part 7 Division 2 of the Act.
5. Additional legal services to support, on an as needs basis, the decision-making of the Director Fisheries and Aquaculture policy and the Director Operations and other delegates of the Minister under the Act to safeguard the ongoing sustainability of a fishery in any particular year (where required), depending on positive or negative scientific indicators, to implement new fisheries management arrangements (for example the introduction or variation of a quota system) or new

administrative or compliance arrangements (for example, changes to licensing processes, conditions, introduction of closures).

6. Support compliance for statutory interpretation, problem solving and correspondence advice (per above).

Program Effort Allocation

The table below includes an abbreviated suite of core activities and initiatives used to manage risks and reflect the anticipated split of effort and associated costs.

Strategy/Activities	Days	FTE	Cost (\$)
Legislation	10	0.05	10,146
TOTALS	10	0.05	10,146

Please Note: All dollar values have been rounded to the nearest dollar figure.

Leasing and Licensing Program

BLUE CRAB FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

Rob Falco, Manager, Leasing and Licensing
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Program summary

The fisheries leasing & licensing unit in PIRSA Fisheries & Aquaculture is responsible for the management of licensing and quota monitoring services.

This business unit provides a range of services related to the timely processing and management of information leading to the issue of licences and other reporting services.

The unit administers a licensing call centre for licence inquiries and other administrative services. The success of these functions is based on maintaining the Primary Industries Information Management System (PIIMS) database.

Objectives

To provide leasing and licensing services to government and industry through the leasing and licensing program.

PROGRAM STRATEGIES AND SUPPORTING ACTIONS & INITIATIVES

Anticipated outcomes

1. Issue licences to licence holders in an accurate and timely manner.
2. Provide accurate and timely information related to licences.
3. Provide reports as required.

Services to directly support the fishery:

1. Renew and maintain fishery licences.
2. Database management for licence renewal.
3. Collect licence fees and associated payments.
4. Compose and send quarterly instalment notices.
5. Record and track unpaid invoices.
6. Compose and send late payment instalment notices for un-paid quarterly instalments.
7. Draft and issue notices to fishers.
8. Process requests for information from fishers who make such inquiries over the counter, through the call centre, via facsimile or e-mail. For example, helping fishers to process information relevant to licence renewal forms, application for licence transfers, boat changes, gear enquiries and fishing regulations.
9. Regularly update information about licence holders.
10. Research and prepare documents for public record.
11. Liaise with government stakeholders to verify the credentials of fishers.
12. Liaise with PIRSA Fisheries & Aquaculture, SARDI Aquatic Sciences, Crown Solicitors and other state and local agencies on matters relevant to the fishery.

13. Draft and update licence conditions over the duration of the licensing year as determined by the Deputy Chief Executive, Fisheries and Aquaculture and the Director, Fisheries and Aquaculture Policy.
14. Provide information to licence holders relating to the requirements pursuant to licence administration.
15. Manage calls from fishers regarding late payment notices, fees and general enquiries about their licences.
16. Provide support regarding an increased frequency of last minute administrative enquiries from fishers. e.g., master changes and quota transfers, as well as provide advice and support to fishers on licence information, to complete the required forms.

Services to support fisheries management:

1. Participate in inter and intra departmental meetings and workshops on issues relevant to the fishing industry.
2. Liaise with relevant staff within PIRSA Aquaculture and Fisheries in implementing decisions relevant to the fishery.
3. Interrogate the PIIMS database to extract information for other stakeholders to use in preparing reports.
4. Prepare reports requested by internal and external customers including maintenance of a public register of licence holders.
5. Liaise with information technology providers to maintain PIIMS and administer licensing requests.
6. Generate quota management reports to update stakeholders on varying Total Allowable Commercial Catch (TACC) returns and end of season quota holdings.

Program effort allocation

The table below includes an abbreviated suite of core activities and initiatives used to manage risks and reflect the anticipated split of effort and associated costs.

Strategy/Activities	Days	FTE	Cost (\$)
Leasing and Licensing	10	0.05	7,267
Quota Monitoring	26	0.13	16,194
TOTALS	36	0.18	23,461

Please Note: All dollar values have been rounded to the nearest dollar figure.

Directorate Program

BLUE CRAB FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

Chiara Ciui, Business Manager

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Program Summary

Business Strategy, within Directorate of PIRSA Fisheries & Aquaculture, provides a range of services to support fisheries management. These include coordinating the cost recovery process and establishing agreements with service providers; coordinating program provider reports; administering external contracts and agreements; and providing audit, financial and human resource functions.

Objectives

To provide support services to government and industry, as well as advice and facilitation of corporate related policy and management issues, through the Directorate Program that incorporates the Fisheries & Aquaculture Business Strategy Unit.

PROGRAM STRATEGIES AND SUPPORTING ACTIONS & INITIATIVES

Anticipated Outcomes

1. Coordinate and facilitate cost recovery processes and program agreements, including liaising with program providers, managers and financial services as required.
2. Attend meetings relating to cost recovery, licence setting and related policy issues.
3. Develop and review cost recovery policy, processes and program agreements.
4. Manage major service providers' contractual agreements, and co-management services contractual agreements with industry associations
5. Project manage and administer external contractual services and agreements – including liaising with PIRSA Accredited Purchasing Unit, preparing acquisition plans and selecting evaluation criteria, managing tender processes, drafting purchase recommendations and liaising with the Crown Solicitor's office to develop contractual agreements.
6. Provide advice on procurement and invoicing requirements.
7. Consult with the Deputy Chief Executive, Director Fisheries and Aquaculture Policy, Director Operations, PIRSA fisheries managers, and the Office of the Minister and other parties as needed.
8. Ongoing review, development and documentation of the cost recovery model, framework, processes and roles.
9. Meet agreed timeframes on management and administration of external contractual services.
10. Appropriate management of industry funds and services.

Program Effort Allocation

The table below includes an abbreviated suite of core activities and initiatives used to manage risks and reflect the anticipated split of effort and associated costs.

Strategy/Activities	Days	FTE	Cost (\$)
Directorate	4	0.02	3,685
TOTALS	4	0.02	3,685

Please Note: All dollar values have been rounded to the nearest dollar figure.

Fisheries Compliance Operations Program

BLUE CRAB FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

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Compliance Program Summary

PIRSA Fisheries and Aquaculture teams coordinate compliance activities (outputs) to build awareness and behavioral outcomes that have a long term beneficial impact in the Blue Swimmer Crab (BSC) Fishery. The objective of the compliance activities (outputs) is to minimise the risks to aquatic resource sustainability, resource allocation and access rights and ultimately commercial economic viability.

The outputs of the BSC Compliance Plan are primarily delivered by teams located in Largs North, Moonta and Yorketown. Support is also provided as required from the Western and Southern Regional Operation teams, Offshore Patrol Operations and the Intelligence and Strategic Support team.

The coordination of the compliance outputs is guided by an industry specific compliance plan which was developed in consultation with the BSC Industry. These outputs are aimed at educating fishers, deterring opportunistic and financially motivated crimes, enforce the rules and regulations and reducing overall compliance risks to resource sustainability.

A diagrammatic representation of the PIRSA compliance model is shown as a Program Logic Model (Appendix 1). This identifies the high level relationships and intended causal links between fisheries compliance inputs, outputs and intended program outcomes.

The elements of the compliance Program Logic Model are also linked to a new assessment tool (Maturity Model) that was developed during National Fisheries Compliance Committee (NFCC) workshops. The Maturity Model allows a weight of evidence approach to assess the efficacy of the compliance outputs and the outcomes achieved. This is designed to support decisions that achieve a shared view between BSC industry and PIRSA and the existence of a mature sustainable fishery.

Compliance Inputs

Compliance inputs are the resources and constraints that frame the delivery of the compliance outputs or activities. This covers policies, legislative and regulatory frameworks, program funding, human resourcing, information technology systems and research. The compliance inputs for the BSC fishery are identified herein.

Legislative and Regulatory Framework

Fisheries Management Act 2007

Fisheries Management (Blue Crab Fishery) Regulations 2013

Fisheries Management (Fish Processors) Regulations 2007

Fisheries Management (General) Regulations 2007 Schedule 2

Fisheries Management (Demerit Points) Regulations 2009

Fisheries Management (Marine Scalefish Fisheries) Regulations 2006

Blue Crab Fisheries Management Plan

Program Effort, Funding & Resources

The level of effort required to deliver the compliance program in accordance with the dedicated plan is reviewed annually taking into account;

- previous effort required to deliver established programs developed over last 10 years

- the identified risks to the fishery and any associated changes
- shifts or changes to the fishery management
- changes to fishing practices
- additional pressures or influences on fishers or the fishery
- intelligence holdings
- trends or change behaviours that required monitoring and/or investigation
- cost effectiveness and identified efficiencies
- any other relevant information required to deliver an effective compliance program to monitor and enforce the rules and regulations for each fishery

PIRSA has continually reviewed the BSC fishery compliance program, gaining efficiencies through intelligence driven and targeted operations and re-directing compliance effort where necessary to address current and emerging issues and risks. It should be noted that for the year ending 30 June 2016 PIRSA invested an additional 205 days of effort into Blue Crab recreational compliance. The table below includes the number of days predicted to reflect the anticipated split of effort and associated costs to deliver the compliance outputs for 2017/18.

Table 1: BSC Effort Allocated Against Compliance Outputs

Compliance Outputs	Days	FTE	Cost (\$)
Education Awareness	15	0.08	19,747
Effective Deterrence, Monitoring & Surveillance	30	0.15	37,025
Enforcement	14	0.07	17,279
TOTALS	59	0.30	74,051

Please Note; to comply with Work Health & Safety obligations and evidentiary requirements, operational activities are generally required to be undertaken by a minimum of two (2) officers at any time.

IT Systems, Technology & Data

Fisheries and Aquaculture Compliance Operations are supported by a number of electronic systems which continue to be refined to allow optimum delivery of information in a reliable and timely way. Some of the key systems that assist to drive the compliance outputs include:

- IBase and Analyst Notebooks (Intelligence system)
- FACT (Fisheries and Aquaculture Information Collection Tool)
- Timewise (Effort Reporting Tool)
- Evidence.com (Video Evidence Collection Tool)
- PIIMS (Primary Industries Information Management System – Quota and Licence Information)
- eCatch
- eBrief (prosecutions system)

- Commercial Fishing Application

Compliance Delivery Outputs

The coordination of compliance outputs is guided by an industry specific compliance plan which was developed in consultation with the BSC Industry. The plan ensures compliance effort is intelligence driven, efficient, cost effective and outcome focused. The compliance plan comprises three core outputs (Education and Awareness, Effective Deterrence and Appropriate Enforcement) and is optimised towards increasing voluntary compliance and maximising effective deterrence.

Analysis of intelligence and information holdings is regularly conducted to identify the major compliance related risks to the sustainable harvest of Blue Swimmer Crabs. The combination of strategies, actions, and initiatives are critical to focus the primary compliance effort to manage the risks and achieve targeted outcomes. The details are identified herein.

Intelligence

- Information collection.
- Analysis and testing of information voracity.
- Provide recommendations for targeted operations.
- Develop strategic assessments.

Education and Awareness

- Conduct education meetings for new entrants into the fishery (licence holders/ registered masters) and participate in industry days.
- Provide electronic distribution of educational material to fishers and licence holders.
- Ensure all interested parties understand their respective obligations.
- Develop Industry communication & relationship program to facilitate discussion of topics such as the Quota Management System Integrity review and subsequent change management process.
- Ongoing one on one education during inspections

Effective Deterrence, Monitoring and Surveillance

- Ensure all aspects of the Quota Management System are monitored such as chain of custody requirements in catch disposal records (CDR) including auditing.
- Ensure all aspects of commercial fishing activities are monitored such as inspections of catch at sea, when landed, in transit and at change of ownership in fish processing premises.
- Conduct intelligence driven operations and use appropriate enforcement action
- Respond to reported incidents/issues
- Communicate activities in formal reporting

Enforcement

- Investigate reports of non-compliance and where appropriate take action
- Issue expiations, cautions and court enforced actions.

- Communicate enforcement outcomes in formal reporting
- Service of suspension

Risk Assessment and Management (work priorities)

PIRSA use information obtained from intelligence, monitoring, surveillance and enforcement processes to assess compliance risks to the fishery. This subsequently informs work priorities for service delivery. The priorities are prone to change during the year however the following are currently relevant to the Blue Swimmer Crab Fishery.

1. Quota Management System Integrity
2. Illegal Unreported Unregulated take
3. Fish in closed areas.

Anticipated Compliance Outcomes

PIRSA will assess the efficacy of the compliance program by evaluating particular outcomes. The outcomes will be in the form of stakeholder awareness, behavior and impact. The evaluation in the form of a maturity model will be used to establish an order of magnitude to support decision making and progress towards a common view of a mature fishery and ultimately co-management.

Awareness

Awareness is a short term outcome that is necessary to prevent unnecessary use of enforcement activities. Awareness constitutes and improved community and stakeholder attitude towards compliance, an improved understanding of legislation and regulation, improved stakeholder buy-in and participation and community support for offence detection. The attributes for each are articulated herein.

Improved community and stakeholder attitude

- Confidence in compliance ability to use statutory and discretionary powers appropriately
- Understanding of the public value of compliance
- Comprehension of services delivered by compliance against the objects of The Act
- Confidence in compliance ability to sustain resource allocation equity amongst direct resource users.

Improved understanding of legislation and regulation

- Understanding fishing obligations
- Legislation and regulation is considered simple and fair to follow.

Improved stakeholder buy-in and participation

- Actively engage with compliance in development of risk assessments, reporting frameworks, reviewing rules
- Collaborative problem solving

Community support for offence detection and sanctions

- Actively provide relevant information

- Industry driven initiatives and evidence of self-regulation

Behaviour

Successful outcomes and long term sustainable fisheries are ultimately driven by behavior that is in the interest of sustainability, ongoing economic viability and public value. The behavioural outcomes that are important to PIRSA include stewardship, voluntary compliance and proactive approaches to compliance issues. The attributes for each are articulated herein.

Stewardship

Stewardship is the aggregation of a number of actions and behaviours where industry is entrusted with the management of the Blue Swimmer Crab resource and the associated compliance of its members within the regulatory and legislative input constraints.

Some of the behaviours of stewardship include:

- An acceptance of change from traditional approaches and attitudes to strong partnerships between government, industry and key stakeholder groups.
- An established mutual trust and respect between government, industry and key stakeholders
- An alignment of values that gives rise to industry and PIRSA communicating the same message focusing on the sustainability of the aquatic resource and associated ongoing economic viability as the primary drivers.
- PIRSA compliance appears seamless to industry. Inputs and outputs are shared. Joint investigations and national problem solving actions are taken by all, collectively and with representative groups engaged in partnership.
- Minimal conflict exists with other stakeholder groups or industry has clear mechanisms or a demonstrated capacity to address the conflict.

Voluntary compliant behavior

- All appropriate attempts to understand and adhere to rules and regulations are made by industry.
- PIRSA Fisheries and Aquaculture compliance is contacted when industry is unable to meet regulatory requirements so an alternative legal solution can be arranged.
- Industry members report other commercial fishers who fail to meet regulatory requirements.

Proactive approaches to compliance issues (incl. participation in governance process)

- Use established industry structures to collaborate on compliance issues to deliver the shared objective of sustainability and public value.
- Actively participate and respond to compliance issues.
- Highlight deficiencies in compliance programs and suggest improvements.
- Influence other industry participants to promote voluntary compliance.

Impact

The awareness and behavior changes will lead to a longer term impact that is reflected in economic and ecological sustainability, broad confidence in the allocation of Blue Swimmer Crab between user groups, a confidence in the ability of PIRSA to manage Blue Swimmer Crab resources and an industry that is free from the influence of serious and organised crime. The attributes for each impact is articulated herein.

Ecological and economic sustainability of aquatic resources

- SARDI stock status assessments reflect an ecological sustainability
- Industry reflect economic sustainability

Confidence and equity in resource allocation and access

- Recreational, commercial and Aboriginal fishing stakeholders are confident that the division of Blue Swimmer Crab resources is fair and equitable.
- Investment support continues for ecologically and economically sustainable harvest of Blue Swimmer Crab.

Reduced opportunity for recidivist offenders and Serious Organised Crime to exploit aquatic resources

- Regulators, law enforcement and industry have closed opportunities for Serious Organised Crime to participate in the Blue Swimmer Crab industry.
- Industry has not had any impact resulting from Serious Organised Crime activities for a significant period of time.

Confidence in management of aquatic resources

- Positive public perception in the management of Blue Swimmer Crab stocks.
- Positive consumer perception for commercially harvested Blue Swimmer Crab.
- An absence of adverse industry publicity.

Appendix 1: PIRSA Fisheries and Aquaculture Compliance Program Logic Model Ecologically Sustainable Development (ESD) and Risk Management Framework

Problem Specification

Risk to aquatic resource sustainability, commercial economic viability and inability to maintain aquatic resource allocation and access rights.

Inputs *Resources*

Compliance, Policy, legislative & regulatory frameworks

Program Funding

Human Resources (e.g. FTE, Recruitment, Training)

IT systems, Technology and Data

Research and Intelligence

Outputs *Activities*

Intelligence Production

Risk Assessment, Risk Management, Evaluation

Education and Awareness, Communication Strategies

Deterrence, Monitoring & Surveillance

Enforcement

Awareness *Outcomes*

Improved community & stakeholder attitude

Improved understanding of legislation & regulation

Improved stakeholder buy-in and participation

Community support for offence detection & sanctions

Behavioural *Outcomes*

Stewardship

Voluntary compliant behaviour

Proactive approaches to compliance issues (incl. participation in governance processes)

Investment and stakeholder confidence in access and resource allocation

Impact

Ecological and economic sustainability of aquatic resources

Confidence and equity in resource allocation and access

Reduced opportunity for recidivist offenders & serious organised crime to exploit aquatic resources

Confidence in management of aquatic resources

POTENTIAL INFLUENCES ON OUTCOMES

Stakeholder relationships, partnerships/collaborations, changes in government, demographic changes, quality/connectivity of information/intelligence systems, international obligations and responsibilities, environmental change, fiscal and trade environment, market forces

Stock Assessment and Monitoring Program

BLUE CRAB FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Client Contact Details

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Principal Investigator

Prof Gavin Begg
Research Chief, SARDI Aquatic Sciences
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SCHEDULE 1 - RESEARCH PROJECT SCOPE

1. PROJECT DETAIL

1.1 Title BLUE CRAB FISHERY

1.2 Client Contact Details

Name: PIRSA FISHERIES AND AQUACULTURE
Address: GPO Box 1625, Adelaide, SA 5001
Attention: Sean Sloan
Email: Sean.Sloan@sa.gov.au
Telephone: 8429 0111
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1.3 SARDI Contact Details

Name: Prof Gavin Begg
Position: Research Chief
Address: SARDI Aquatic Sciences
Email: Gavin.Begg@sa.gov.au
Telephone: 8207 5401
Facsimile: 8207 5406

1.4 Subcontractor/Collaborator

Company Name: The South Australian Blue Crab Pot Fishers' Association Inc (SABCPFA)

1.5 Timeframe

Commencement Date: 1 July 2017
Completion Date: 30 June 2018

1.6 Summary

This is a one-year research scope for the Blue Crab Fishery (BCF).

This scope of work will provide PIRSA Fisheries and Aquaculture with the information required for the ecologically sustainable management of the Blue Crab Fishery in South Australia. The primary output is a stock assessment report that will be provided to PIRSA by 31 March 2017.

2. PROJECT DESCRIPTION

2.1 BACKGROUND

The blue swimmer crab *Portunus armatus* is widely distributed in tropical coastal margins of Australia but also occurs in isolated populations in the temperate gulf waters of South Australia and on the West Coast. Historically, blue swimmer crabs were taken as a by-product of prawn fishing, however since the early 1980's targeted commercial fishing of crabs has been undertaken in three regional fishing zones in South Australia (West Coast, Spencer Gulf, Gulf St Vincent). Research primarily

focuses on the pot fishing sectors in Spencer Gulf and Gulf St Vincent, which collectively harvest ~99% of the TACC.

2.2 NEED

The provision of accurate information on blue swimmer crab stocks is critical to ongoing management strategies for the sustainable harvesting of the resource. Data obtained from this annual assessment will provide PIRSA with the capacity to monitor the ongoing performance of the fishery and initiate, where necessary, adaptive management strategies in a timely manner.

2.3 OBJECTIVES

- 2.3.1** To provide PIRSA with a stock assessment report of historical blue swimmer crab catches and associated fishing effort in South Australia;
- 2.3.2** To assess the current status of the blue swimmer crab resource in South Australia;
- 2.3.3** To provide PIRSA with ongoing and *ad hoc* advice.

2.4 METHODS

- 2.4.1** Collect, collate and analyse fishery-dependent data (catch and effort) data;
- 2.4.2** Collect, collate and analyse fishery-independent survey data;
- 2.4.3** Collect, collate and analyse fishery-dependent pot sampling data

3. DELIVERABLES

3.1 Service Provided:

3.1.1 Collection of Basic Fisheries Statistics

- Manage a comprehensive fishing logbook program.
- Collate fishing logbook returns and provide an in-confidence service
- Validate returns including consultation with fishers to correct returns
- Enter data and maintain storage in a secure location
- Ongoing database administration, maintenance and development.

3.1.2 Fishery Independent Survey

- Fishery-independent surveys are to be conducted in Spencer Gulf and Gulf St Vincent using commercial vessels. Surveys to be conducted twice in each gulf (March/April; June/July) with approximately half the survey sites to be sampled when compared to the historical winter surveys. The cost of hiring commercial vessels is included in the budget.

3.1.3 Voluntary pot sampling program

- Manage and report against data collected by fishers for up to two fine-mesh pots for each fishing day.

3.1.4 Review of management strategies and plan

- Work with the industry and the fishery manager to review the research plan and the Management Plan.

- Investigate opportunities for new projects and potential additional funding sources.

3.1.5 Analysis and interpretation

- Interpret results of the research program in the stock assessment report
- Update SA fisheries status report as required

3.1.6 Project management

- Supervise project, quality control, management of deliverables
- Respond to requests from PIRSA Fisheries and Aquaculture

3.1.7 Reporting

- Attend Blue Crab industry meetings including preparation and follow up
- Keep the industry abreast of research projects relevant to the Blue Crab Fishery.

3.2 Outcomes:

- Stock assessment of the BCF
- Advice on the survey results measures against the performance indicators and reference points in the Management Plan
- Advice on harvest strategy development including scoping work for transition to March surveys
- Advice to support fishery management from stock assessment outputs

3.3 Outputs and Extension:

- Provide an annual survey report (in the form of an advice note to PIRSA) that summarises survey results by 31 July 2017.
- Provide a stock assessment report on the Blue Crab Fishery to PIRSA Fisheries and Aquaculture by 31 March 2018 that documents, analyses and interprets the available data and assesses the fishery against the performance indicators identified in the Management Plan.
- Annual presentation to PIRSA Fisheries and Aquaculture and the SABCPFA on the stock assessment of the BCF.

4. FUNDING ARRANGEMENTS

4.1 PROJECT COSTING POLICY

This Research Project Scope and Costing has been costed at a Discounted rate.

4.2 PROJECT COST

PROJECT COST	TOTAL FUNDED 2017/18	TOTAL IN KIND 2017/18	TOTAL PROJECT COST 2017/18
SUBTOTAL	243,542	45,030	288,572
GST	NO GST	NO GST	NO GST
TOTAL	243,542	45,030	288,572

4.3 MILESTONE AND PAYMENT SCHEDULE

Date	Milestone	Payment (\$) Ex GST
31 July 2017	Advice Note: 2017 March/April & June/July surveys	
31 December 2017	First Half Payment 2017/18 SLA	121,771
31 March 2018	2015/16 Stock Assessment report	
31 May 2018	Second Half Payment 2017/18 SLA	121,771
TOTAL		243,542
GST		NO GST
TOTAL FUNDED		243,542

5. PROJECT STAFF

Staff	FTE 2017/18
Principal Scientist	0.10
Research Officer	0.38
Senior Research Officer	0.34
TOTAL	0.82

SCHEDULE 2 - RESEARCH PROJECT COSTING

1. PROJECT COST SUMMARY

Cost	Detail	2017/18 Total (\$) Ex GST
Salaries (FTE)	0.82	
Salaries (\$)		93,574
Operating		
Logbook program		14,732
Payment to industry for surveys		68,202
Fieldwork		12,500
Laboratory		
Travel		
Office & communication		1,500
Capital equipment		
SARDI overhead		53,034
SARDI inkind		45,030
Total Cost		288,572
Revenue – PRICE		
Licence holders	59%	170,479
PIRSA F&A Contribution	25%	73,062
Total Revenue		243,542
SARDI Investment	16%	45,030

Breakdown explanations:

Logbook Program

Entry, validation, management and reporting of data

Payment to industry for surveys

Direct costs of using industry vessels and staff to undertake surveys

Fieldwork

Fieldwork costs including vessels, travel and OHS requirements

Laboratory

Costs for processing samples

Travel

Costs for attending meetings with industry, PIRSA F&A and stakeholders

Office and communication

Stationery, communications and publications

Capital equipment