

PIRSA Fisheries & Aquaculture Cost Recovery Program

MARINE SCALEFISH FISHERY AND
MUD COCKLE (VONGOLE) 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 Marine Scalefish Fishery

2016-17 (\$)	PROGRAM AREA	2017-18 (\$)	COMMENTS	DAYS	FTE
RESEARCH COSTS					
708,237	Stock Assessment and Monitoring	819,173	Year 2 of 3 year SARDI project scope.		
23,405	Economic Assessment	23,617	As per contracted services 2017-18		
12,324	Other Research	12,482	Contribution towards Threatened and Endangered Species		
PIRSA RELATED COSTS					
199,283	Policy and management	203,500	Same level of service as previous year.	220	1.10
9,777	Legislation	10,020	Same level of service as previous year	10	0.05
63,262	Licensing	65,070	Same level of service as previous year	90	0.45
14,131	Directorate	14,464	Same level of service as previous year	16	0.08
1,166,971	Compliance	1,183,608	Same level of service as previous year	967	4.84
42,706	Vessel	43,614	Same level of service as previous year	6	0.03
OTHER COSTS					
52,182	FRDC	52,433	Funding based on 0.25% of rolling three year average GVP		
161,202	Co-Management Services	161,202	Co-Management Services requested for 2017-18. Total of \$168,700 to be collected from across MSF and Sardine Fisheries.		
\$2,453,481	Total	2,589,183			

Licence Fees for 2017-18 (\$)	
Base Fee	5,361
Net Fee	4,841
<i>Licence Fees for 2016-17 (\$)</i>	
Base Fee	5,059
Net Fee	4,544

Summary Table Vongole Fishery

2016-17	PROGRAM AREA	2017-18	COMMENTS	DAYS	FTE
RESEARCH COSTS					
26,104	Stock Assessment and Monitoring	26,741	Year 2 of 3 year SARDI project scope.		
1,676	Economic Assessment	1,569	As per contracted services 2017-18		
PIRSA RELATED COSTS					
40,762	Policy and management	41,625	Same level of service as previous year	45	0.23
4,889	Legislation	5,010	Same level of service as previous year	5	0.03
7,029	Licensing	7,230	Same level of service as previous year	10	0.05
1,766	Directorate	1,808	Same level of service as previous year	2	0.01
45,858	Compliance	46,512	Same level of service as previous year	38	0.19
6,623	Quota Monitoring	6,754	Same level of service as previous year	11	0.06
OTHER COSTS					
2,422	FRDC	2,300	Funding based on 0.25% of rolling three year average GVP		
137,130	Total	139,549			

Licence Fees for 2017-18 (\$)	
Base Fee	1,842
(plus MSF Base fee)	5,361
Total Base:	7,203
Section Bank Quota Unit Fee	0.00
Coffin Bay Quota Unit Fee	69.80
West Coast Quota Unit Fee	45.80
Licence Fees for 2016-17 (\$)	
Base Fee	1,809
(plus MSF Base fee)	5,059
<i>Total base</i>	<i>6,867</i>
Section Bank Quota Unit Fee	0.00
Coffin Bay Quota Unit Fee	68.65
West Coast Quota Unit Fee	44.95

Program Daily Charge Out Rate

DAILY RATE (\$)	Compliance	Vessel	Quota	Directorate	Legislation	Licensing	Policy
Total Employee Expenses	609	2,307	365	575	685	460	582
Total Operating Expenses	325	3,252	61	136	123	71	150
Deprecation and Capital Costs	78	1,308	4	0	0	8	0
Total Other Expenses*	213	403	185	193	193	185	193
TOTAL DAILY RATE	1,224	7,269	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.

MARINE SCALEFISH FISHERY MANAGEMENT OBJECTIVES 2016/17 TO 2018/19

Fishery	Management Plan Goals	Outcomes 2016/17 to 2018/19	Policy and Management	Compliance	Assessment and Research	Leasing & Licensing
Marine Scalefish Fishery	Ensure MSF resources are harvested within ecologically sustainable limits	Implement management plan, including harvest strategies	<p>Lead implementation of management plan, including harvest strategies</p> <p>Lead review of management plan in 2017/18 including:</p> <ul style="list-style-type: none"> investigating developing economic indicators for inclusion in the harvest strategies (subject to funding) review Snapper harvest strategy review Garfish harvest strategy review King George Whiting harvest strategy review Vongole harvest strategy alignment with SA harvest strategy policy <p>other aspects as detailed in the management plan</p>	<p>Implement and review fishery compliance plan, informed by risk assessment</p> <p>Support implementation of management plan and review in 2018/19</p>	<p>Support implementation of management plan, including harvest strategies</p> <p>Support review of management plan in 2018/19</p>	<p>Support review of management plan, including issue of 10-year licences</p>
			<p>Update Snapper harvest strategy as appropriate, taking into account outcomes of the FRDC projects.</p> <p>Update Snapper management arrangements as needed.</p> <p>Implement outcomes of King George Whiting management review</p>	<p>Support implementation of Snapper management changes</p> <p>Support implementation of outcomes of King George Whiting management review</p>	<p>Support review of Snapper harvest strategy as necessary</p> <p>Undertake FRDC project – 'Developing DEPM to estimate the spawning biomass of snapper populations in the South Australian Gulfs'</p>	<p>Implement changes to licensing systems and update licences as required</p>

			<p>Ongoing meetings with Marine Fisheries Association to review and propose measures to meet harvest strategy</p> <p>Lead review of harvest strategy for Garfish in 2016/17</p> <p>Lead review of harvest strategy for Snapper in 2017/18</p> <p>Lead review of harvest strategy for King George Whiting in 2017/18</p> <p>Lead review of Western Australian Salmon Management Arrangements and allocation.</p> <p>Lead review of School and Gummy Shark management arrangements in SA</p> <p>Investigate appropriate management arrangements for Wrasse species</p> <p>Implement management changes via licence conditions or Notices under the <i>Fisheries Management Act 2007</i> or Regulation amendments (including Cabinet submissions) or a combination of the above instruments.</p> <p>Support FRDC projects as needed</p>	Support implementation of Garfish management changes	<p>Input and expertise into consultation processes with MFA (and or working groups) (Project 1)</p> <p>FRDC project- 'Do commercial fishery data reflect stock status in South Australia's Southern Garfish fisheries'</p>	Implement changes to licensing systems and update licences as required
		Monitor the biological performance of the fishery and ensure the collection of fishery and biological data	<p>Facilitate the distribution of research outcomes</p> <p>Consider stock assessment and stock status report with Marine Fisheries Association /SARDI, address any performance indicators (harvest strategy) as needed.</p>		<p>Stock assessment report for key species as per schedule in the harvest strategy (Project 3)</p> <p>Market sampling of key species to feed into fishery assessment reports as per schedule in the harvest strategy (Project 2)</p>	

		Logbook review to improve catch validation and confidence of fishery dependent information which is used to monitor the stocks and allocations	Lead process to review logbook and reporting requirements for MSF species with the MFA Support development of e-catch reporting arrangements	Support logbook review, as required Support development of e-catch reporting arrangements	Support logbook review, as required Update logbook and database and assist in education, as required. Support development of e-catch reporting arrangements	Support development of e-catch reporting arrangements
Minimise impacts on the ecosystem Optimum utilisation and equitable distribution of Marine Scalefish Fishery resources Cost-effective and participative management of the fishery		Address recommendations and conditions from DotE under EPBC Act accreditation	Reporting and submissions on ecological sustainability for Commonwealth EPBC Act assessment as required by the accreditation Address other conditions/recommendations as required		TEPs annual report	
		Manage catch of each sector within allocated shares	Review any breaches of allocations and implement management arrangements as necessary		Status reports include assessment of catches against allocation triggers	
		Finalise review of individual closures to commercial net fishing in South Australian coastal waters Investigate development of underutilised species	Undertake consultation on proposals, consider the outcomes of consultation and implement management arrangements as necessary	Support development and implementation management strategy	Support development and implementation management strategy	
		Support industry body to participate and function within the co-management framework of the fishery	Support MFA in the development and implementation of a consultative model within the MSF Develop and implement communication protocol, with annual review Regular communication with industry and Executive Officer, Marine Fishers' Association and attendance of meetings, as required Implement changes to cost recovery from the 'Independent review of cost	Implement and review fishery compliance plan, informed by risk assessment Attend meetings with MFA and provide compliance advice, as required Support updates to MSF operator user guide as required	Industry liaison, attendance of meetings with MFA and provision of research advice, as required	Provide ongoing support for licensing queries Support and coordination of FISHWATCH number and commercial app Support updates to MSF operator user guide, as required

			<p>sharing arrangement for Marine Scalefish species cost recovery apportionment' as necessary.</p> <p>Update MSF operator user guide, as required</p>			
		<p>Implement rules review outcomes</p> <p>Finalise and implement gear review</p>	<p>Lead implementation of rules review outcomes, and consultation and regulatory changes, via relevant legislative means</p> <p>Undertake review of lift nets (combining hoop nets and drop nets) (NB: linked with review of recreational arrangements)</p> <p>Lead finalisation of gear review, undertake consultation and commence implementation of legislative changes</p>	<p>Support implementation of rules review outcomes</p> <p>Assist in development of user guide</p> <p>Participation in gear review and support implementation</p>	<p>Participation in gear review (Project 1)</p>	<p>Support implementation of rules review</p> <p>Implement changes to licensing systems and update licences as required</p>
		<p>Develop, agree and commence implementation of a strategic direction and plan for the MSF with the MFA</p>	<p>Assist the MFA in developing a strategic direction for the fishery (including consultation and seeking industry input and support)</p> <p>Develop a project plan to implement key projects to address the strategic issues</p> <p>Commence implementation of project plan to undertake agreed projects</p>	<p>Participation in projects and support of implementation</p>	<p>Participation in projects and support of implementation</p>	<p>Participation in projects and support of implementation</p>

VONGOLE FISHERY MANAGEMENT OBJECTIVES 2016/17 TO 2018/19

Long term objectives	Outcomes 2016/17 to 2018/19	Fishery Policy and Management	Compliance	Assessment and Research	Leasing and Licensing
<p>Ensure the Cockle and Vongole resource is harvested sustainably</p> <p>Optimal utilisation and equitable distribution of the Cockle and Vongole resource</p>	<p>Determine annual TACCs for Vongole quota zones according to biannual biomass estimates.</p> <p>Implement new management arrangements for the Cockle and Vongole fishery</p> <p>Review status of Port River closure</p> <p>Support research and development for Port River stock enhancement project</p>	<p>Recommend annual TACCs for quota zones, in consultation with industry</p> <p>Implement Vongole harvest strategy in management plan for the Marine Scalefish Fishery</p> <p>Review status of Port River closure with industry and SARDI</p> <p>Implement new management arrangements for the Cockle and Vongole fishery.</p> <p>Assist in stock enhancement research for Port River, and support, where necessary</p> <p>Review regularity and spatial extent of Vongole biomass surveys</p>	<p>Implement compliance program, informed by risk assessment.</p> <p>Provide compliance advice for the implementation of new managements arrangements for the Cockle and Vongole fishery</p> <p>Provide compliance advice for the stock enhancement initiatives for Port River, and support, where necessary</p>	<p>Provide scientific advice to support harvest strategy, underpinned by biomass estimates</p> <p>Provide scientific advice for the implementation of new managements arrangements for the Cockle and Vongole fishery</p> <p>Provide scientific advice for the stock enhancement initiatives for Port River.</p> <p>Support review of status of Port River closure with industry and PIRSA</p>	<p>Provide ongoing support for licensing quota and transfer queries</p> <p>Provide licensing advice for the implementation of new managements arrangements for the Cockle and Vongole fishery</p>
<p>Minimise impacts on the ecosystem</p>	<p>Address recommendations and conditions from DotE under EPBC Act accreditation</p> <p>Reassessment of the fishery before January 2015</p>	<p>Prepare EPBC Act reassessment report</p> <p>Address DotE conditions and recommendations</p> <p>Provide management advice on fish kills, as required</p>	<p>Provide support with investigation of fish kills, as required</p>	<p>Provide scientific advice and aid in investigation of fish kills</p>	
<p>Cost effective and participative management of the Cockle and Vongole Fishery</p>	<p>Support co-management of the fishery</p>	<p>Maintain regular communication with Executive Officer of the Marine Fishers' Association and be accessible to all licence holders</p> <p>Provide management advice, where necessary, throughout the licensing year</p>	<p>Maintain regular communication with industry representatives</p> <p>Provide compliance advice, where necessary, throughout the licensing year</p>	<p>Maintain regular communication with industry representatives</p> <p>Provide scientific advice, where necessary, throughout the licensing year</p>	

Fisheries Policy and Management Program

MARINE SCALEFISH FISHERY AND VONGOLE FISHERY
FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

Jon Presser, General Manager Fisheries Policy and Management Unit
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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 Marine Scalefish 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 Marine Scalefish Fishery and Vongole Fishery (regulations, catch limits, closure notices, licence conditions, Ministerial exemptions etc).
- Prepare policies to support fisheries management
- Prepare regular fisheries status reports
- Develop and maintain day-to-day productive working relationships and outcomes through cooperative management and collaboration with stakeholders
- Deliver quality and timely responses to correspondence.
- 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 Marine Scalefish and Vongole 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 - Marine Scalefish	220	1.10	203,500
Policy and Management - Vongole	45	0.23	41,625
TOTALS	265	1.33	245,125

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

Legal Services Program

MARINE SCALEFISH FISHERY AND VONGOLE FISHERY
FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

Lambertus Lopez, Manager, Legal and Legislative Programs
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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 Systems and Information) 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 – Marine Scalefish	10	0.05	10,020
Legislation – Vongole	5	0.03	5,010
TOTALS	15	0.08	15,030

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

Leasing and Licensing Program

MARINE SCALEFISH FISHERY AND VONGOLE FISHERY
FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

Rob Falco, Manager, Leasing and Licensing
Telephone: 08 8204 1374 Email: Rob.Falco@sa.gov.au

Program summary

The fisheries leasing & licensing unit within of 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 – Marine Scalefish	90	0.45	65,070
Leasing and Licensing – Vongole	10	0.05	7,230
Quota Monitoring – Vongole	11	0.06	6,754
TOTALS	30	0.15	79,054

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

Directorate Program

MARINE SCALEFISH FISHERY AND VONGOLE 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 – Marine Scalefish	16	0.08	14,464
Directorate - Vongole	2	0.01	1,808
TOTALS	18	0.09	16,272

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

Fisheries Compliance Operations Program

MARINE SCALEFISH FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

Marine Scalefish Fishery - All enquiries

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Compliance Program Summary

PIRSA Fisheries and Aquaculture teams coordinate compliance activities (outputs) to build awareness and behavioural outcomes that have a long term beneficial impact in the Marine Scalefish 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 Marine Scalefish Compliance Plan are primarily delivered by teams located in Largs North, Kingscote, Ceduna, Port Lincoln, Whyalla, Moonta, Yorketown and the Offshore Patrol Vessel. Support is also provided as required from the other Regional Operation teams 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 Marine Scalefish 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 Marine Scalefish 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 Marine Scalefish fishery are identified herein.

Legislative and Regulatory Framework

Fisheries Management Act 2007

Fisheries Management (Marine Scalefish Fisheries) Regulations 2006

Fisheries Management (Fish Processors) Regulations 2007

Fisheries Management (General) Regulations 2007 Schedule 2

Fisheries Management (Demerit Points) Regulations 2009

Fisheries Management (Rock Lobster Fisheries) Regulations 2006

Marine Scalefish Management Fishery Plan

Program Effort, Funding & Resources

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

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

- the identified risks to each fishery and any associated changes
- shifts or changes to the management of each fishery
- 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 Marine Scalefish 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 expended an additional 41 days of effort (~\$49k) above the cost recovered program and a further 1,658 days of effort into recreational fishery 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: MSF Effort Allocation Against Compliance Outputs

Compliance Outputs	Days	FTE	Cost (\$)
Education Awareness	130	0.65	158,956
Effective Deterrence, Monitoring & Surveillance	557	2.79	682,286
Enforcement	280	1.40	342,366
TOTAL OFFICER DAYS	967	4.84	1,183,608
Offshore Patrol Vessel	6		43,614

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 Marine Scalefish Industry. The plan ensures compliance effort is intelligence driven, efficient, and 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 risks to the sustainable harvest of Marine Scalefish. 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 with new entrants into the fishery 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 programs to facilitate discussion of topics such as compliance inspection outcomes and issues impacting the Marine Scalefish fishery
- Ongoing one on one education during inspections

Effective Deterrence, Monitoring and Surveillance

- Ensure all aspects of commercial fishing activities are monitored such as inspections of catch at sea, when landed, in transit and at fish processing premises.
- Conduct intelligence driven operations that give rise to appropriate enforcement action
- Ensure gear types being used within the fishery are compliant eg. net lengths, net mesh sizes, hook numbers, crab pot dimensions, fish trap specifications.
- Monitor fishing activities during seasonal closures and within spatial closed areas
- Respond to reported incidents/issue
- 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 suspensions

Risk Assessment and Management (work priorities)

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

1. Fish in Closed Seasons
2. Fish in Closed Areas.
3. Exceeding catch limits
4. Using Illegal Gear
5. Taking Undersize
6. Collusion between licences and unlicensed sectors

Anticipated Compliance Outcomes

PIRSA will assess the efficacy of each 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 Marine Scalefish 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 Marine Scalefish between user groups, a confidence in the ability of PIRSA to manage Marine Scalefish 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 resources is fair and equitable.
- Investment support continues for ecologically and economically sustainable harvest of Marine Scalefish

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

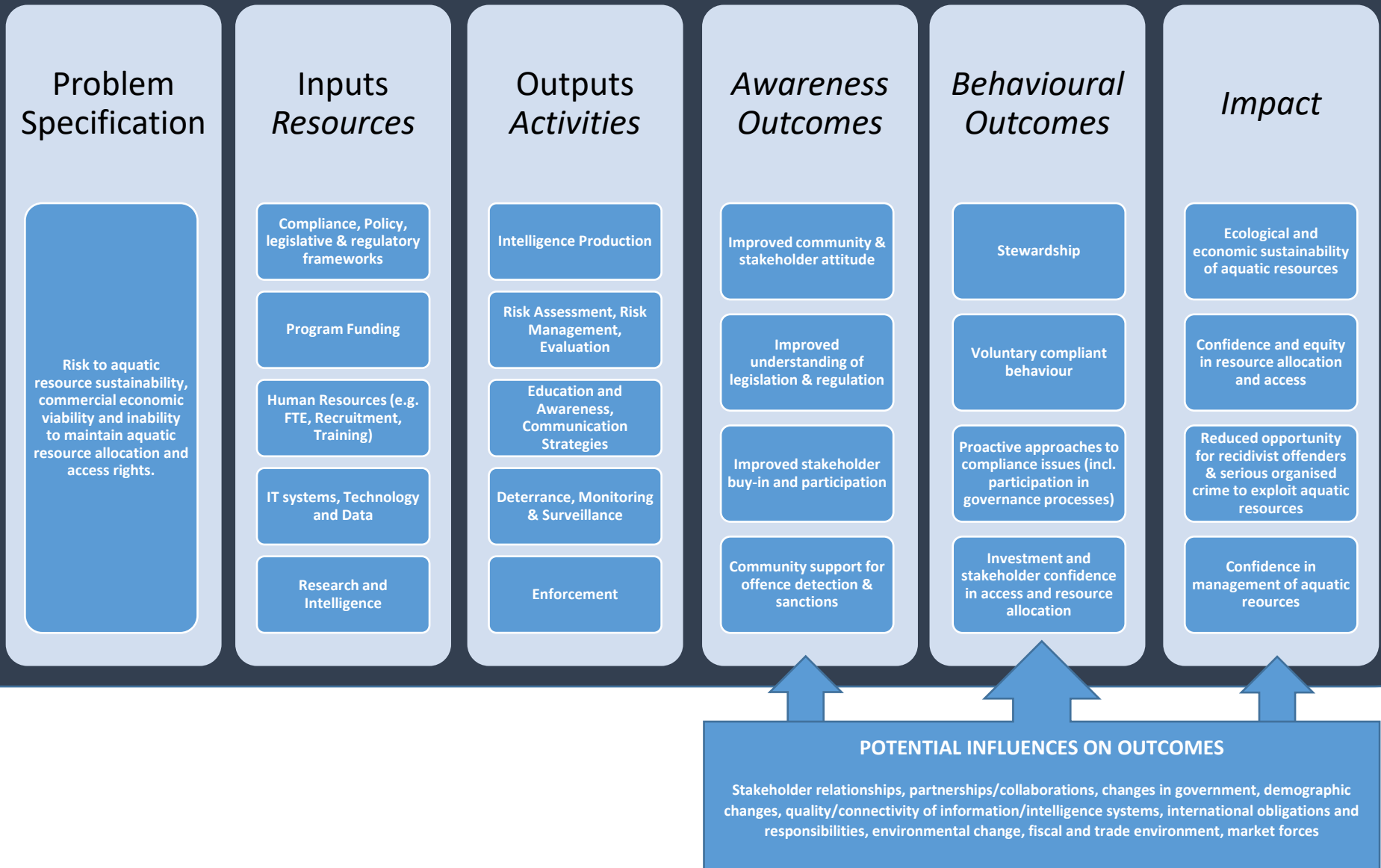
- Regulators, law enforcement and industry have closed opportunities for Serious Organised Crime to participate in the Marine Scalefish industry.
- Industry has not had any impact resulting from Serious Organised Crime activities for a significant period of time.

Confidence in management of aquatic resources

- Positive public perception in the management of Marine Scalefish stocks.
- Positive consumer perception for commercially harvested Marine Scalefish.
- An absence of adverse industry publicity.

Appendix 1: PIRSA Fisheries and Aquaculture Compliance Program Logic Model

Ecologically Sustainable Development (ESD) and Risk Management Framework



Fisheries Compliance Operations Program

VONGOLE FISHERY

FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Program Manager

Andrew Carr
Regional Manager
Telephone: 0438 459 679

Email: andrew.carr@sa.gov.au

State Coordinator

Jamie Courtney
Fisheries Officer
Telephone: 0477 367 995

Email: jamie.courtney@sa.gov.au

Compliance Program Summary

PIRSA Fisheries and Aquaculture teams coordinate compliance activities (outputs) to build awareness and behavioural outcomes that have a long term beneficial impact in the Vongole (Mud Cockle) 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 Vongole Compliance Plan are primarily delivered by teams located in Port Lincoln. Support is also provided as required from the other 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 Vongole 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 Vongole 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 Vongole fishery are identified herein.

Legislative and Regulatory Framework

Fisheries Management Act 2007

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

Fisheries Management (Vessel Monitoring Scheme) Regulations 2007

Marine Scalefish Fishery 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 Vongole 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 expended an additional 13 days of effort (~\$16k) above the cost recovered program. 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 2: Vongole - Effort Allocated Against Compliance Outputs

Compliance Outputs	Days	FTE	Cost (\$)
Education Awareness	7	0.03	7,344
Effective Deterrence, Monitoring & Surveillance	26	0.13	31,824
Enforcement	5	0.03	7,344
TOTAL OFFICER DAYS	38	0.19	46,512

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 Vongole Industry. The plan ensures compliance effort is intelligence driven, efficient, and 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 risks to the sustainable harvest of Vongole. 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 pre-season education meetings and participate in industry days.
- Provide electronic distribution of educational material to fishers and licence holders at the start of the season.
- Ensure all interested parties understand their respective obligations and the compliance focus for the coming season.
- Develop Industry communication & relationship programs to facilitate discussion of topics such as compliance inspection outcomes and other issues impacting the Vongole fishery.
- Ongoing one on one education during inspections

Effective Deterrence, Monitoring and Surveillance

- Ensure all aspects of the Quota Management System are monitored such as prior reporting and 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 that give rise to appropriate enforcement action
- Respond to reported incidents/issue
- 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 and sustainability risks to the fishery. This subsequently informs work priorities for service delivery. The priorities are prone to change during the fishing season however the following are currently relevant to the Vongole Fishery.

7. Quota Management System Integrity
8. Fishing Outside Quota Zones
9. Fishing Within Areas Closed to Quota Fishing
10. Take Undersize
11. Illegal Unreported Unregulated Take

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 initiative 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 Vongole 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 Vongole between user groups, a confidence in the ability of PIRSA to manage Vongole 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 Vongole resources is fair and equitable.
- Investment support continues for ecologically and economically sustainable harvest of Vongole.

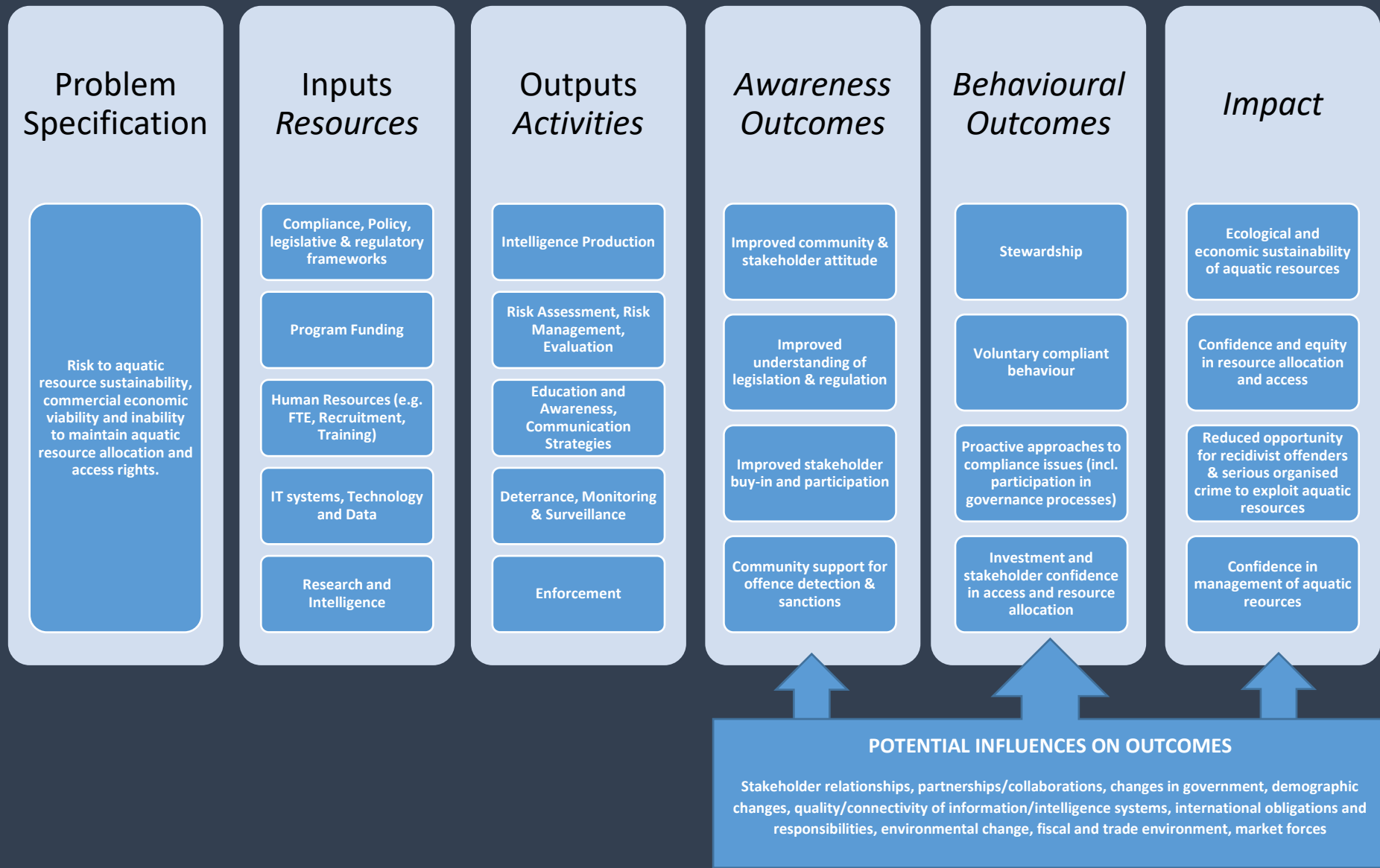
Reduced opportunity for recidivist offenders and Serious Organised Crime to exploit aquatic resources

- Regulators, law enforcement and industry have closed opportunities for Serious Organised Crime to participate in the Vongole 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 Vongole stocks.
- Positive consumer perception for commercially harvested Vongole.
- An absence of adverse industry publicity.

Ecologically Sustainable Development (ESD) and Risk Management Framework



Stock Assessment and Monitoring Program

MARINE SCALEFISH FISHERY AND VONGOLE FISHERY
FOR THE YEAR ENDING AT 30 JUNE 2018

All enquiries

Client Contact Details

Sean Sloan,
Director PIRSA Fisheries & Aquaculture
Telephone: 8429 0111 Email: Sean.sloan@sa.gov.au

Principal Investigator

Prof Gavin Begg
Research Chief, SARDI Aquatic Sciences
Telephone: 8207 5401 Email: gavin.begg@sa.gov.au

SCHEDULE 1 - PROJECT SCOPE

1. PROJECT DETAIL

1.1 Title Marine Scalefish Fishery

1.2 Client Contact Details

Name: PIRSA FISHERIES & AQUACULTURE
Address: GPO Box 1625, Adelaide, SA 5001
Attention: Sean Sloan
Email: Sean.Sloan@sa.gov.au
Telephone: 8429 0111
Facsimile: 8226 0434

1.3 SARDI Contact Details

Name: Prof Gavin Begg
Position: Research Chief
Address: SARDI Aquatic Sciences
2 Hamra Ave, West Beach, SA 5024
Email: gavin.begg@sa.gov.au
Telephone: 8207 5401
Facsimile: 8207 5406

1.4 Subcontractor/Collaborator

Not applicable

1.5 Timeframe

Commencement Date: 1 July 2016
Completion Date: 30 June 2019

1.6 Summary

This Project Scope outlines SARDI's research program for South Australia's Marine Scalefish Fishery for the three-year period of 2016/17 to 2018/19. The primary objective of the program is to provide scientific information and assessment of stock status for the different Marine Scalefish Fishery species, to support their sustainable utilisation. It conforms to the research and reporting plan outlined in the Management Plan for the South Australian Commercial Marine Scalefish Fishery. The Management Plan recognises that in this complex, multi-species fishery there is a considerable range in the contribution of the different taxa to the overall economic value of the fishery. Consequently, the multiple taxa taken in the fishery are divided into different categories according to their value (i.e. 'Primary', 'Secondary', 'Tertiary' and 'Other' species) and for which the research requirements to underpin the sustainable management vary. The Project adopts a cascading approach in its assessment of stock status for all the permitted species listed in 'Schedule 1' (Aquatic resources prescribed for the MSF under Schedule 1 of the Regulations) outlined in the Management Plan. This level of detail will cascade from a fully integrated fishery assessment of King George Whiting (KGW), Snapper (SNP) and Southern Garfish (GAR) at the biological stock level, a regional interrogation of commercial catch and effort data for Secondary species, a State-wide interrogation of the commercial catch and effort data for Tertiary species, and State-wide catch summaries of the other

species. Furthermore, broad spatial and temporal patterns in fleet dynamics will be summarised.

2. PROJECT DESCRIPTION

2.1 BACKGROUND

There are four primary components to the research program provided by SARDI Aquatic Sciences to PIRSA in support of the Marine Scalefish Fishery. These are:

1. to collect, collate and enter data on commercial catch and effort statistics to maintain the long-term Marine Scalefish Fishery Information System;
2. to undertake market sampling primarily at the SAFCOL fish market in Adelaide in each year for the three Primary species (KGW, GAR, SNP);
3. to provide a comprehensive annual report that assesses the stock status of the listed MSF species against their relative performance indicators identified in the Management Plan, as well as an analysis of the State-wide trends in total catch and effort by the MSF fishing fleet by species, season and gear.;
4. to undertake a strategic research project supporting specific fishery management issues. This is usually a collaborative project with the Fisheries Research and Development Corporation (FRDC). For 2016/17 and 2017/18, this project will focus on southern garfish (FRDC 2015/018), and in 2018/19 will be on King George whiting (FRDC 2016/003).

2.2 NEED

This three-year research program will fulfil the needs for scientific information in order to support the sustainable utilisation of South Australia's Marine Scalefish Fishery. The information conforms to that specified in the Management Plan, allowing application of species-specific harvest strategies and assessment of performances of fisheries based on established fishery performance indicators and reference points.

2.3 OBJECTIVES

- 2.3.1** to provide to PIRSA, an annual fishery assessment report that determines the stock status of the permitted 'Schedule 1' MSF species against their relative performance indicators identified in the Management Plan and provides an analysis of the State-wide trends in total catch and effort by the MSF fishing fleet by species, season and gear; and identification of future research needs. This report will summarise: (1) MSF fleet dynamics; (2) commercial catch and effort statistics for all permitted MSF species at either the biological stock, regional or State-wide level; (2) an assessment of stock status based on fishery performance indicators and reference points for each permitted species; (3) demographic data from market sampling program for KGW, GAR and SNP; (4) output parameters from the appropriate computer fishery model for KGW in 2016/17, GAR 2017/18 and SNP 2018/19; and (5) identification of key research priorities.
- 2.3.2** to undertake a strategic research project that contributes to understanding the biology or fishery of one of the primary species;
- 2.3.3** to assist PIRSA in 2017/18 with a review of the Management Plan for the South Australian Commercial Marine Scalefish Fishery.

2.4 METHODS

For the Primary species, the methodological approach is to integrate all fishery data from the different fishery sectors with the biological data from market sampling and any strategic research project to ultimately assess stock status. For Secondary and Tertiary species fishery performance will be assessed from commercial fishery data at either a regional or State-wide scale. These different levels of assessment require SARDI to:

1. collect, collate, and store commercial catch and effort data from fishery catch returns in order to maintain the on-going Marine Scalefish Fishery Information System;
2. continue market sampling for the Primary species, including the collection of region-specific age and length frequency data;
3. for the particular Primary species for which a full stock assessment is being undertaken, to integrate the fishery and biological data using the appropriate computer fishery model. Stock status will then be determined based on assessment of fishery and biological performance indicators and reference points specified in the Management Plan;

3. DELIVERABLES

3.1 Service Provided:

3.1.1 Collect, collate and store commercial fishery data

- manage the comprehensive commercial logbook program
- correct erroneous returns, involving contact with fishers when necessary
- undertake data-entry in association with appropriate error checking procedures
- maintain databases as required
- securely store original logbook returns.

3.1.2 Collect, collate, store and analyse data from market sampling to generate size and age structures for the primary species

- maintain a two-stage (fish length, fish age) market sampling program for the Primary species that involves measurements from representative samples from fishery catches and collections of otoliths to determine ages of fish.
- age fish from their otoliths using validated ageing protocols and established QA procedures
- generate age structures from otolith-based age estimates and length frequency distributions using age-length key statistical procedures
- interpret data on population structure in terms of population dynamics.

3.1.3 Analyse, integrate and interpret fishery and biological data

- for the triennial focus on Primary species, update and run the appropriate computer fishery model with fishery and biological data to provide estimates of output parameters for individual stocks Modelling to be undertaken for KGW in 2017, GAR in 2018 and SNP in 2019.
- assess general performance indicators against reference points to indicate stock status
- summarise all data and findings on stock status in a comprehensive fishery assessment report

- summarise annual commercial fishery data for multiple taxa at the regional or State-wide scale
- describe key patterns in State-wide fleet dynamics
- provide presentations to industry and PIRSA on the status of each permitted MSF species as requested.

3.2 Outcomes:

The principal outcome will be fishery and biological information and scientific advice to support the sustainability of South Australia's Marine Scalefish Fishery.

3.3 Outputs and Extension:

The key outputs and extensions are:

1. a comprehensive annual MSF report that assesses the stock status for each of the permitted species, describes key patterns in fleet dynamics and identifies future research priorities to be delivered on October 1st of each year;
2. PowerPoint presentations to PIRSA and industry in support of the report, and also an annual update for the strategic, collaborative project.

4. FUNDING ARRANGEMENTS

4.1 PROJECT COSTING POLICY

4.2 PROJECT COST

Total Program Cost (three years)	TOTAL PROJECT COST	Total Industry Contribution	Total PIRSA F&A Contribution	Total SARDI In-Kind
LOGBOOK PROGRAM	\$542,415	\$542,415	NIL	NIL
SIZE & AGE STRUCTURES	\$1,065,108	\$881,814	NIL	\$183,294
STOCK ASSESSMENT	\$920,440	\$649,827	\$134,622	\$135,991
STRATEGIC PROJECT	\$352,375	\$299,161	NIL	\$53,214
SUBTOTAL	\$2,880,338	\$2,373,217	\$134,622	\$372,499
GST	NO GST	NO GST	NO GST	NO GST
TOTAL	\$2,880,338	\$2,373,217	\$134,622	\$372,499

Note values rounded to nearest \$

4.3 MILESTONE AND PAYMENT SCHEDULE

2016-17 Costs and milestones

Program Milestones	Program Cost (\$) No GST	Industry Contribution 50.5%	PIRSA F&A Contribution	SARDI In-Kind
Logbook Program	\$175,499	\$175,499	NIL	NIL
Size & Age Structures	\$342,292	\$282,696	NIL	\$59,596
01 Oct 2017 MSF Report (KGW assessment and model)	\$298,775	\$150,881	\$103,678	\$44,216
Strategic Project*	\$116,463	\$99,161	NIL	\$17,302
TOTAL	\$933,029	\$708,237	\$103,678	\$121,114

*Total costs (funded and in-kind) for the Strategic Project (Garfish) are in schedule 3; Note values rounded to nearest \$

2017-18 Costs and milestones

Program Milestones	Program Cost (\$ No GST)	Industry Contribution 79.5%	PIRSA F&A Contribution	SARDI In-Kind
Logbook Program	\$180,752	\$180,752	NIL	NIL
Size & Age Structures	\$355,525	\$294,440	NIL	\$61,085
01 Oct 2018 MSF Report (GAR assessment and model)	\$306,894	\$243,981	\$17,592	\$45,321
Strategic Project*	\$117,735	\$100,000	NIL	\$17,735
TOTAL	\$960,906	\$819,173	\$17,592	\$124,141

*Total costs (funded and in-kind) for the Strategic Project (Garfish) are in schedule 3; Note values rounded to nearest \$

2018-19 Costs and milestones

Program Milestones	Program Cost (\$ No GST)	Industry Contribution 81.0%	PIRSA F&A Contribution	SARDI In-Kind
Logbook Program	\$186,164	\$186,164	NIL	NIL
Size & Age Structures	\$367,291	\$304,678	NIL	\$62,613
01 Oct 2019 MSF Report (SNP assessment and model)	\$314,771	\$254,965	\$13,352	\$46,454
Strategic Project*	\$118,177	\$100,000	NIL	\$18,177
TOTAL	\$986,403	\$845,807	\$13,352	\$127,244

*Total costs (funded and in-kind) for the Strategic Project (King George Whiting) are in schedule 3; Note values rounded to nearest \$

Payment schedule

Date	Milestone	Payment (\$) Ex GST
31 December 2016	First Half Payment 2016/17 SLA	\$405,957
31 May 2017	Second Half Payment 2016/17 SLA	\$405,958
31 December 2017	First Half Payment 2017/18 SLA	\$418,382
31 May 2018	Second Half Payment 2017/18 SLA	\$418,383
31 December 2018	First Half Payment 2018/19 SLA	\$429,579
31 May 2019	Second Half Payment 2018/19 SLA	\$429,580
TOTAL FUNDED		\$2,507,839

5. PROJECT STAFF

Staff	FTE 2016/17	FTE 2017/18	FTE 2018/19
Principal Scientist	1.05	1.05	1.05
Research Scientist	0.70	0.70	0.70
Research Officers	1.40	1.40	1.40
TOTAL	3.15	3.15	3.15

SCHEDULE 2 - RESEARCH PROJECT COSTING

1. PROJECT COST SUMMARY

Cost	Detail	2016/17 Total (\$) Ex GST	2017/18 Total (\$) Ex GST	2018/19 Total (\$) Ex GST
Salaries (FTE)		3.15	3.15	3.15
Salaries (\$)		392,950	405,812	417,229
Operating				
Logbook program		175,499	180,752	186,164
Payment to industry for surveys				
Fieldwork		32,650	34,664	35,405
Laboratory		5,000	5,000	5,000
Travel				
Office & communication		3,000	3,000	3,000
Capital equipment				
SARDI overhead		202,816	207,536	212,361
SARDI inkind		121,114	124,141	127,244
Total Cost		933,029	960,905	986,403
Revenue – PRICE				
Licence Holders		708,237	819,173	845,807
PIRSA F&A		103,678	17,592	13,352
Total Revenue		811,915	835,925	859,159
SARDI Investment		121,114	124,141	127,244

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 stakeholders⁷

Office and communication

Stationery, communications and publications

Capital equipment

SCHEDULE 3 - RESEARCH PROJECT COSTING

Total funded and in-kind costs (\$) for the two strategic projects relevant to this 3-year SLA

Project	Funding Source	2016/17	2017/18	2018/19
Garfish	FRDC (cash)	255,781	143,888	-
FRDC 2015/018	SARDI (in kind)	93,291	83,839	-
	PIRSA F&A (licence fees)	99,161	100,000	-
Project	Source	2016/17	2017/18	2018/19
KGW	FRDC (cash)	113,598	159,036	181,756
FRDC 2016/003	SARDI (in kind)	27,366	49,736	53,492
	PIRSA F&A (licence fees)	-	-	100,000

SCHEDULE 1 - RESEARCH PROJECT SCOPE

1. PROJECT DETAIL

1.1 Title South Australian Mud Cockle (Vongole) Fishery (Coffin Bay)

1.2 Client Contact Details

Name: PIRSA FISHERIES & AQUACULTURE
Address: GPO Box 1625, Adelaide, SA 5001
Attention: Sean Sloan
Email: Sean.Sloan@sa.gov.au
Telephone: 8429 0111
Facsimile: 8226 0434

1.3 SARDI Contact Details

Name: Prof Gavin Begg
Position: Research Chief
Address: SARDI Aquatic Sciences
2 Hamra Ave, West Beach, SA 5024
Email: gavin.begg@sa.gov.au
Telephone: 8207 5401
Facsimile: 8207 5406

1.4 Subcontractor/Collaborator

Marine Fishers Association

1.5 Timeframe

Commencement Date: 1 July 2016
Completion Date: 30 June 2019

1.6 Summary

The vongole research program provides survey-based estimates of vongole biomass and estimates of the size at maturity in each of the three fishing zones in South Australia.

This is the second Project Scope developed specifically for the Coffin Bay Zone of the South Australian Vongole Fishery but the first three-year Project Scope for this zone. To minimise costs, this scope of work undertakes sampling and analysis across the principal fishing grounds within the Coffin Bay fishery (i.e. Point Longnose, oyster farms, Little Douglas and Long beach) on a tri-ennial basis (i.e. areas sampled annually on a rotational basis). Spot samples will be undertaken outside the main area sampled each year to monitor biomass changes between full surveys (e.g. when Point Longnose is sampled, spot samples will be obtained for the oyster farms, Little Douglas and Long beach).

The primary outcome is a report that provides estimates of vongole biomass for each fishing zone in a risk-analysis framework.

2. PROJECT DESCRIPTION

2.1 BACKGROUND

There are three primary components to the research provided by SARDI Aquatic Sciences to PIRSA in support of the South Australian vongole fisheries, these are:

- (1) conduct fisher-based surveys to determine the biomass of vongole on the key fishing grounds of the Port River, Coffin Bay and the West Coast;
- (2) obtain estimates of the size at maturity, and it's spatial variability, for vongole; and
- (3) provide a summary report that presents estimates of vongole biomass in a risk-analysis framework and estimates of size at maturity.

2.2 Need

This project addresses the need for biomass estimates and associated scientific information to support sustainable utilisation of vongole in SA.

2.3 Objectives

2.3.1 Review 2009/10, 2011/12, 2013/14 and 2015/16 sampling designs and implement an industry-based survey of vongole populations on commercially important fishing grounds in the Coffin Bay fishing zone;

2.3.2 Determine estimates of the harvestable biomass of vongole from the areas sampled;

2.3.3 Provide PIRSA with biomass estimates in a risk analysis framework; and

2.3.4 Provide PIRSA with scientific advice to support the sustainable management of the South Australian vongole Fishery, including TACC setting.

2.4 Methods

2.4.1 Work with vongole fishers from the Coffin Bay fishing zone to review the 2009/10, 2011/12, 2013/14 and 2015/16 sampling design, incorporating changes to important commercial fishing grounds;

2.4.2 Re-map the commercial fishing grounds and sampling locations into a GIS layer;

2.4.3 Undertake a transect-based method, to obtain representative data on the density of vongole across those fishing grounds. Sampling across the principal Coffin Bay fishing grounds (i.e. Point Longnose (2016/17), oyster farms and Little Douglas (2017/18) and Long beach (2018/19)) to occur on a tri-ennial rotational basis;

2.4.4 Undertake spot sampling outside of primary sampling area to monitor biomass changes between surveys

2.4.5 Apply a multi-level bootstrap analysis to determine estimates of vongole biomass in a risk-analysis framework; and

2.4.6 Document and interpret the research findings in a report.

3. DELIVERABLES

3.1 Service Provided:

3.1.1. Survey estimates of density and biomass

Review the commercially important fishing grounds.

Review (and amend as required) the 2009/10, 2011/12, 2013/14 and 2015/16 surveys to estimate vongole density and biomass.

Provide estimates of current biomass to PIRSA following survey

3.1.2. Data analysis

Apply a multi-level bootstrap model to provide estimates of vongole biomass for the Coffin Bay fishing zone.

3.1.3. Management and quality assurance of research data

Provide effective storage and management of research data.

Develop and implement a formal quality assurance program.

3.1.4. Analysis and Interpretation

Interpret the results of the research program in a report.

3.1.5. Project management

Ongoing supervision of projects.

Management of deliverables.

Quality control

Liaise with PIRSA, industry, State and Commonwealth agencies on matters relevant to the fishery.

Participate in industry development initiatives.

Development and implementation of new projects and collaboration on proposed/existing projects

Update relevant chapter in status report for SA fisheries

3.2 Outcomes:

The principal outcome will be scientific advice to support sustainable management of the SA vongole fishery.

3.3 Outputs and Extension:

The principal output is a report providing estimates of vongole biomass in a risk-analysis framework by 15 May 2019.

4. FUNDING ARRANGEMENTS

4.1 PROJECT COSTING POLICY

4.2 PROJECT COST

PROJECT COST	TOTAL FUNDED	TOTAL IN KIND	TOTAL PROJECT COST
SUBTOTAL	\$36,831	\$7,449	\$44,280
GST	NO GST	NO GST	NO GST
TOTAL	\$36,831	\$7,449	\$44,280

4.3 MILESTONE AND PAYMENT SCHEDULE

Date	Milestone	Payment (\$) Ex GST
31 December 2016	First Half Payment 2016/17 SLA	\$5,993
15 May 2017	Advice Note – Point Longnose Biomass	
31 May 2017	Second Half Payment 2016/17 SLA	\$5,993
31 December 2017	First Half Payment 2017/18 SLA	\$6,139
15 May 2018	Advice Note – oyster farms and Little Douglas Biomass	
31 May 2018	Second Half Payment 2017/18 SLA	\$6,140
31 December 2018	First Half Payment 2018/19 SLA	\$6,282
15 May 2019	Biomass report – Coffin Bay fishery	
31 May 2019	Second Half Payment 2018/19 SLA	\$6,283
SUBTOTAL		\$36,831
GST		NO GST
TOTAL FUNDED		\$36,831

5. PROJECT STAFF

Staff	FTE 2016/17	FTE 2017/18	FTE 2018/19
Research Scientist	0.01	0.01	0.01
Research Officers	0.043	0.043	0.043
TOTAL	0.053	0.053	0.053

SCHEDULE 2 - RESEARCH PROJECT COSTING

1. PROJECT COST SUMMARY

Cost	Detail	2016/17 Total (\$) Ex GST	2017/18 Total (\$) Ex GST	2018/19 Total (\$) Ex GST
Salaries (FTE)		0.053	0.053	0.053
Salaries (\$)		6,804	7,006	7,194
Operating				
Logbook program				
Payment to industry for surveys		750	750	750
Fieldwork		250	250	250
Laboratory		25	25	25
Travel				
Office & communication		100	100	100
Capital equipment				
SARDI overhead		4,057	4,148	4,246
SARDI inkind		2,422	2,482	2,545
Total Cost		14,408	14,761	15,110
Revenue – PRICE				
PIRSA F&A	87%	11,986	12,279	12,565
Total Revenue		11,986	12,279	12,565
SARDI Investment	13%	2,422	2,482	2,545

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

SCHEDULE 1 - RESEARCH PROJECT SCOPE

1. PROJECT DETAIL

1.1 Title South Australian Mud Cockle (Vongole) Fishery (West Coast)

1.2 Client Contact Details

Name: PIRSA FISHERIES & AQUACULTURE
Address: GPO Box 1625, Adelaide, SA 5001
Attention: Sean Sloan
Email: Sean.Sloan@sa.gov.au
Telephone: 8429 0111
Facsimile: 8226 0434

1.3 SARDI Contact Details

Name: Prof Gavin Begg
Position: Research Chief
Address: SARDI Aquatic Sciences
2 Hamra Ave, West Beach, SA 5024
Email: gavin.begg@sa.gov.au
Telephone: 8207 5401
Facsimile: 8207 5406

1.4 Subcontractor/Collaborator

Marine Fishers Association

1.5 Timeframe

Commencement Date: 1 July 2016
Completion Date: 30 June 2019

1.6 Summary

The vongole research program provides survey-based estimates of vongole biomass and estimates of the size at maturity in each of the three fishing zones in South Australia.

This is the second Project Scope developed specifically for the West Coast Zone of the South Australian Vongole Fishery but the first three-year Project Scope for this Zone. To minimise costs, this scope of work undertakes sampling and analysis across the three spatial units of the West Coast fishery (i.e. Venus Bay, Streaky Bay and Smoky Bay) on a tri-ennial basis (i.e. one of the three areas sampled annually on a rotational basis).

The primary outcome is a report that provides estimates of vongole biomass for each fishing zone in a risk-analysis framework.

2. PROJECT DESCRIPTION

2.1 BACKGROUND

There are three primary components to the research provided by SARDI Aquatic Sciences to PIRSA in support of the South Australian vongole fisheries, these are:

- (1) conduct fisher-based surveys to determine the biomass of vongole on the key fishing grounds of the Port River, Coffin Bay and the West Coast;
- (2) obtain estimates of the size at maturity, and its spatial variability, for vongole; and
- (3) provide a summary report that presents estimates of vongole biomass in a risk-analysis framework and estimates of size at maturity.

2.2 Need

This project addresses the need for biomass estimates and associated scientific information to support sustainable utilisation of vongole in SA.

2.3 Objectives

2.3.1 Review 2009/10, 2011/12, 2013/14 and 2015/16 sampling designs and implement an industry-based survey of vongole populations on commercially important fishing grounds in the West Coast fishing zones;

2.3.2 Determine estimates of the harvestable biomass of vongole from the areas sampled;

2.3.3 Provide PIRSA with biomass estimates in a risk analysis framework; and

2.3.4 Provide PIRSA with scientific advice to support the sustainable management of the South Australian vongole Fishery, including TACC setting.

2.4 Methods

2.4.1 Work with vongole fishers from the West Coast fishing zones to review the 2009/10, 2011/12, 2013/14 and 2015/16 sampling design, incorporating changes to important commercial fishing grounds;

2.4.2 Re-map the commercial fishing grounds and sampling locations into a GIS layer;

2.4.3 Undertake a transect-based method, to obtain representative data on the density of vongole across those fishing grounds. Sampling across the three spatial units of the West Coast fishery (i.e. Streaky Bay (2016/17), Smoky Bay 2017/18 and Venus Bay (2018/19)) to occur on a tri-ennial rotational basis;

2.4.4 Apply a multi-level bootstrap analysis to determine estimates of vongole biomass in a risk-analysis framework; and

2.4.5 Document and interpret the research findings in a report.

3. DELIVERABLES

3.1 Service Provided:

3.1.1. Survey estimates of density and biomass

Review the commercially important fishing grounds.

Review (and amend as required) the 2009/10, 2011/12, 2013/14 and 2015/16 surveys to estimate vongole density and biomass.

Provide estimates of current biomass to PIRSA following survey

3.1.2. Data analysis

Apply a multi-level bootstrap model to provide estimates of vongole biomass for the West Coast fishing zone.

3.1.3. Management and quality assurance of research data

Provide effective storage and management of research data.

Develop and implement a formal quality assurance program.

3.1.4. Analysis and Interpretation

Interpret the results of the research program in a report.

3.1.5. Project management

Ongoing supervision of projects.

Management of deliverables.

Quality control

Liaise with PIRSA, industry, State and Commonwealth agencies on matters relevant to the fishery.

Participate in industry development initiatives.

Development and implementation of new projects and collaboration on proposed/existing projects

Update relevant chapter in status report for SA fisheries

3.2 Outcomes:

The principal outcome will be scientific advice to support sustainable management of the SA vongole fishery.

3.3 Outputs and Extension:

The principal output is a report providing estimates of vongole biomass in a risk-analysis framework by 15 May 2019.

4. FUNDING ARRANGEMENTS

4.1 PROJECT COSTING POLICY

4.2 PROJECT COST

PROJECT COST	TOTAL FUNDED	TOTAL IN KIND	TOTAL PROJECT COST
SUBTOTAL	\$44,881	\$8,278	\$53,159
GST	NO GST	NO GST	NO GST
TOTAL	\$44,881	\$8,278	\$53,159

4.3 MILESTONE AND PAYMENT SCHEDULE

Date	Milestone	Payment (\$) Ex GST
31 December 2016	First Half Payment 2016/17 SLA	\$7,059
15 May 2017	Advice Note – Streaky Bay Biomass	
31 May 2017	Second Half Payment 2016/17 SLA	\$7,059
31 December 2017	First Half Payment 2017/18 SLA	\$7,231
15 May 2018	Advice Note – Smoky Bay Biomass	
31 May 2018	Second Half Payment 2017/18 SLA	\$7,231
31 December 2018	First Half Payment 2018/19 SLA	\$8,150
15 May 2019	Biomass report – West Coast fishery	
31 May 2019	Second Half Payment 2018/19 SLA	\$8,151
SUBTOTAL		\$44,881
GST		NO GST
TOTAL COST		\$44,881

5. PROJECT STAFF

Staff	FTE 2016/17	FTE 2017/18	FTE 2018/19
Research Scientist	0.005	0.005	0.005
Research Officers	0.065	0.065	0.065
TOTAL	0.07	0.07	0.07

SCHEDULE 2 - RESEARCH PROJECT COSTING

1. PROJECT COST SUMMARY

Cost	Detail	2016/17 Total (\$) Ex GST	2017/18 Total (\$) Ex GST	2018/19 Total (\$) Ex GST
Salaries (FTE)		0.07	0.07	0.07
Salaries (\$)		7,188	7,433	7,644
Operating				
Logbook program				
Payment to industry for surveys		880	880	1,320
Fieldwork		1,400	1,400	2,480
Laboratory		40	40	40
Travel				
Office & communication		100	100	100
Capital equipment				
SARDI overhead		4,510	4,609	4,717
SARDI inkind		2,692	2,758	2,828
Total Cost		16,810	17,220	19,129
Revenue – PRICE				
PIRSA F&A	86%	14,118	14,462	16,301
Total Revenue		14,118	14,462	16,301
SARDI Investment	14%	2,692	2,758	2,828

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 WHS 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