



**Government of South Australia**

Primary Industries and Regions SA

# **PIRSA FISHERIES & AQUACULTURE**

## **COST RECOVERY PROGRAM**

**2015-16**

**PIPI FISHERY &**

**NET SECTOR**

**(LAKES AND COORONG)**

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## SUMMARY TABLE – LAKES & COORONG 2015-16

2014-15			2015-16				
Pipi \$	Lakes & Coorong \$	RESEARCH COSTS	Pipi \$	Lakes & Coorong \$	Comments	Days	FTE
<b>RESEARCH COSTS</b>							
182,919	149,893	Stock Assessment and Monitoring	169,563	128,567	One year program, as per SARDI project scope.		
4,448	4,966	Economic Assessment	4,582	5,115	Contracted services		
0	1,419	Other Research	0	1,318	Contribution towards Threatened and Endangered Species		
<b>PIRSA RELATED COSTS</b>							
35,873	35,873	Policy and management	35,768	35,768	Same level of service as previous year	80	0.40
4,749	4,749	Legislation	4,881	4,881	Same level of service as previous year	10	0.05
4,876	4,876	Licensing	4,545	4,545	Same level of service as previous year	13	0.07
1,805	1,805	Directorate	1,773	1,773	Same level of service as previous year	4	0.02
59,372	47,498	Compliance	60,378	48,302	Same level of service as previous year	90	0.45
12,576	0	Quota monitoring	11,985	0	Same level of service as previous year	20	0.10
<b>OTHER COSTS</b>							
6,733	7,681	FRDC	7,464	7,728	Funding based on 0.25% of rolling three year average GVP		
0	131,898	Co-Management Services	0	111,899	Co-management services requested and approved for 2015/16		
<b>\$313,353</b>	<b>\$390,658</b>	<b>TOTAL</b>	<b>\$300,938</b>	<b>\$349,895</b>			

<b>Licence Fees 2015-16</b>		<i>Licence Fees 2014-15</i>	
<b>Lakes and Coorong Access Fee</b>	<b>3,287</b>	<i>Lakes and Coorong Access Fee</i>	<i>3,841</i>
<b>Net Sector Base:</b>	<b>1,519</b>	<i>Net Sector Base:</i>	<i>1,527</i>
<b>Net Fee:</b>	<b>141.50</b>	<i>Net Fee:</i>	<i>157.90</i>
<b>Pipi Base:</b>	<b>3,202</b>	<i>Pipi Base:</i>	<i>2,702</i>
<b>Pipi Unit Fee:</b>	<b>246.50</b>	<i>Pipi Unit Fee:</i>	<i>259.30</i>

<b>Co-Management Services 2015-16</b>				
<b>ITEM</b>	<b>TOTAL</b>	<b>SFA</b>	<b>GPHA</b>	<b>\$/licence</b>
Communicating with PIRSA (and/or industry members) on matters related to fisheries management administration	\$9,931	\$8,000	\$1,931	\$275.86
Educating industry members on policy rules and regulations in consultation with PIRSA to improve voluntary compliance	\$3,476	\$2,800	\$676	\$96.56
Consulting with industry members on policy and other initiatives related to the administration of the Act as requested by PIRSA	\$10,179	\$8,200	\$1,979	\$282.75
Advising PIRSA on policy, initiatives, and plans related to administration of the Act	\$10,800	\$8,700	\$2,100	\$300.00
Participating in fisheries management decision making through the existing co-management framework	\$14,152	\$11,400	\$2,752	\$393.11
Undertaking research that will directly inform decisions relating to administration of the Act (and providing reports to PIRSA)	\$6,001	\$4,834	\$1,167	\$166.69
Undertaking projects that improve the administration of the Act (e.g. data, compliance, management), and reporting to PIRSA	\$8,938	\$7,200	\$1,738	\$248.28
Collecting relevant economic and social data relating to the administration of the Act, and reporting to PIRSA	N/A	N/A	N/A	N/A
Conducting strategic planning services for the industry through an existing strategic plan endorsed by PIRSA, and reporting to PIRSA	\$2,483	\$2,000	\$483	\$68.97
Providing Coordinator @ Sea (e.g. Real-Time Management) services	N/A	N/A	N/A	N/A
Participating in the cost recovery consultation process between PIRSA and industry, as requested by PIRSA	\$8,938	\$7,200	\$1,738	\$248.28
Actions to address Marine Stewardship Council (MSC accreditation) (i.e. consistent with the administration of the Fisheries Management Act 2007)	\$27,000	\$21,750	\$5,250	\$750.00
Addressing projects related to industry strategic plan – e.g.: o Aboriginal Traditional Fishing management o Improve economic / social status of fishery o People development / leadership	\$10,001	\$3,827	\$6,174	\$277.81
<b>TOTALS</b>	<b>\$111,899</b>	<b>\$85,911</b>	<b>\$25,988</b>	<b>\$3,108.31</b>

<b>PROGRAM DAILY CHARGE OUT RATE</b>
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<b>DAILY RATE (\$)</b>	<b>Compliance</b>	<b>Quota</b>	<b>Directorate</b>	<b>Legislation</b>	<b>Licensing</b>	<b>Policy</b>
<b>Total Employee Expenses</b>	593	365	565	604	422	549
<b>Total Operating Expenses</b>	318	39	131	181	82	154
<b>Depreciation and Capital Costs</b>	68	-	-	-	-	-
<b>Total Other Expenses*</b>	229	195	190	191	195	191
<b>TOTAL DAILY RATE</b>	<b>1,208</b>	<b>599</b>	<b>886</b>	<b>976</b>	<b>699</b>	<b>894</b>

**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.

FINAL DOCUMENT

## INTRODUCTION

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

## MANAGEMENT OBJECTIVES 2015/16: LAKES AND COORONG FISHERY

### NET SECTOR

Fishery	Management Plan objectives	Outcomes 2013/14 to 2015/16	Policy and Management	Compliance	Assessment and Research	Systems and Information
Lakes and Coorong Fishery (Net Sector)	Resources harvested within ecologically sustainable limits	Finalise and implement the new management plan under the <i>Fisheries Management Act 2007</i> , including harvest strategies	Finalise and implement new management plan, including supporting TRF project	Support implementation of management plan  Implement compliance plan in accordance with risk assessment	Support implementation of management plan, including supporting TRF project  Core stock assessment– 2013/14 Mulloway stock assessment 2014/15 Greenback Flounder/Black Bream stock assessment 2015/16 Multispecies/Pipi stock assessment	Issue 10 year licences, as part of the management plan implementation
	Optimum utilisation and equitable distribution of the resources for the benefit of the community					
	Impacts on the ecosystem are minimised	Participate in relevant environmental water flow Initiatives  Progress DotE recommendations	Progress DotE recommendations (re: condition 4 - Murray Cod)		Produce overall TEPS report	
Cost-effective, efficient and participative management of the fishery	Support industry to maintain MSC accreditation  Effective engagement with industry in accordance with agreed co-management arrangements.  Implement outcomes of Rules Review	Support ongoing MSC accreditation  Liaise with industry and attend meetings as appropriate  Implement outcomes of Rules Review  Consult with SFA and GPHA on policy and management issues.	Support ongoing MSC accreditation  Implement outcomes of Rules Review  Liaise with industry and attend meetings as appropriate	Support ongoing MSC accreditation  Liaise with industry and attend meetings as appropriate	Provide ongoing support for licensing, quota and transfer queries	

## MANAGEMENT OBJECTIVES 2015/16: LAKES AND COORONG FISHERY

### PIPI FISHERY

Fishery	Management Plan objectives	Outcomes 2013/14 to 2015/16	Policy and Management	Compliance	Assessment and Research	Systems and Information
Lakes and Coorong Fishery (Pipi fishery)	Resources harvested within ecologically sustainable limits	Finalise and implement new management plan under the <i>Fisheries Management Act 2007</i> , including harvest strategy  Facilitate industry economic and market development initiatives	Finalise and implement management plan, including annual TACC decision making  Review Pipi fishing season arrangements considering the FRDC Pipi report	Support implementation of new management plan  Implement compliance plan in accordance with risk assessment	2015/16 Pipi stock assessment  Annual Pipi stock status reporting including harvest strategy performance indicators  Progress development of a method for estimating relative abundance of pre-recruits to the Pipi fishery  Support implementation of management plan	Issue 10 year licences, as part of the management plan implementation
	Optimum utilisation and equitable distribution of the resources for the benefit of the community					
	Cost-effective, efficient and participative management of the fishery	Effective engagement with industry in accordance with agreed co-management arrangements.  Implement outcomes of Rules Review	Consult with SFA and GPHA on policy and management issues  Liaise with industry and attend meetings as appropriate  Implement outcomes of Rules Review	Implement outcomes of Rules Review  Liaise with industry and attend meetings as appropriate	Liaise with industry and attend meetings as appropriate	Provide ongoing support for licensing, quota and transfer queries
	Impacts on the ecosystem are minimised	Progress DotE recommendations	Progress DotE recommendations	Implement compliance plan in accordance with risk assessment	Produce overall TEPS report	



## PROGRAM: FISHERIES POLICY AND MANAGEMENT

### PROGRAM MANAGER

Keith Rowling, 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 Executive Director 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 Lakes and Coorong 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
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 Lakes and Coorong 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 Lakes and Coorong Fishery
- Prepare policies to support fisheries management
- Prepare submissions to enable regular assessment of the Lakes and Coorong Fishery under the EPBC Act
- Prepare annual report to the Australian Government on EPBC Act requirements for the Lakes and Coorong fisheries
- Prepare 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 Lakes and Coorong Fishery

**PROGRAM EFFORT ALLOCATION**

The table below includes an abbreviated suite of core activities reflect the anticipated split of effort and associated costs.

<b>Strategy/Activities</b>	<b>Days</b>	<b>FTE</b>	<b>Cost (\$)</b>
Policy and Management	Pipi – 40	0.20	35,768
	L&C – 40	0.20	35,768
<b>TOTALS</b>	<b>80</b>	<b>0.40</b>	<b>71,536</b>

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

## PROGRAM: LEGAL SERVICES

### PROGRAM MANAGER

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### PROGRAM SUMMARY

The Legal and Legislative Unit of PIRSA Fisheries & Aquaculture provides legal services to the Group Executive Director 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 abalone 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 including the implementation of statutory and administrative changes to government, 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 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 reflect the anticipated split of effort and associated costs.

<b>Strategy/Activities</b>	<b>Days</b>	<b>FTE</b>	<b>Cost (\$)</b>
Legislation	Pipi – 5	0.025	4,881
	L&C – 5	0.025	4,881
<b>TOTALS</b>	<b>10</b>	<b>0.05</b>	<b>9,762</b>

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

## **PROGRAM: LEASING AND LICENSING**

### **PROGRAM MANAGER**

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### **PROGRAM SUMMARY**

The Fisheries Leasing & Licensing Section of PIRSA Fisheries & Aquaculture is responsible for the management of Licensing, Quota Monitoring and VMS 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 quarterly activity report (as required), within one month at the end of each quarter.

#### **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 renewals.
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 Executive Director, 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 reflect the anticipated split of effort and associated costs.

<b>Strategy/Activities</b>	<b>Days</b>	<b>FTE</b>	<b>Cost (\$)</b>
Leasing and Licensing	Pipi – 6.5	0.035	4,545
	L&C – 6.5	0.035	4,545
Quota Monitoring	Pipi – 20	0.10	11,985
<b>TOTALS</b>	<b>33</b>	<b>0.17</b>	<b>21,075</b>

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

## PROGRAM: DIRECTORATE

### 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' service level agreements.
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 Group Executive Director, Director, Fisheries and Aquaculture Policy, Director, Operations, PIRSA fisheries managers, and the Office of the Minister and other parties as needed.
8. Management of industry funds and services.
9. Plan, coordinate and facilitate the cost recovery process with industry associations and program providers in a timely and efficient manner.
10. Ongoing review, development and documentation of the cost recovery model, framework, processes and roles.
11. Meet agreed timeframes on management and administration of external contractual services.
12. 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	Pipi – 2	0.01	1,773
	L&C - 2	0.01	1,773
<b>TOTALS</b>	<b>4</b>	<b>0.02</b>	<b>3,546</b>

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

## PROGRAM: FISHERIES COMPLIANCE OPERATIONS

### LAKES AND COORONG FISHERY COMPLIANCE PROGRAM 2015/2016

#### PROGRAM MANAGER

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Regional Manager

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#### COMPLIANCE PROGRAM SUMMARY

PIRSA Fisheries and Aquaculture teams undertake coordinated compliance activities to educate fishers, deter opportunistic and financially motivated fishery related offences and enforce the rules and regulations.

In consultation with industry a dedicated compliance plan has been developed for the Lakes and Coorong fishery. This compliance plan was developed to direct effort and ensure compliance activities are intelligence driven, efficient, cost effective and outcome focussed. The compliance plan is underpinned by three core strategies (Education and Awareness, Effective Deterrence and Appropriate Enforcement) and is focussed towards increasing voluntary compliance and maximising effective deterrence.

An analysis of intelligence and information holdings is conducted to identify the major risks for the fishery. A series of strategies, actions, and initiatives are detailed and used to focus the primary compliance effort in order to manage the risks and achieve targeted outcomes.

#### OBJECTIVES

This program provides a compliance framework to monitor and regulate fishing activities that support the sustainable commercial take of species that are able to be taken pursuant to a Lakes and Coorong licence in accordance with the Act and the Lakes and Coorong Fishery Management Plan.

The plan provides a focus for Fisheries Officers to undertake coordinated compliance activities to educate fishers, deter opportunistic and financially motivated fishery related offences, and enforce the rules and regulations of the fishery.

Any compliance related risks or emerging trends/issues of significance that arise outside the plan are addressed as required.

The risks and strategies are regularly reviewed and assessed for relevance to ensure compliance activities meet the following objectives:

- Meet the objectives of the *Fisheries Management Act 2007*;
- To promote compliance with the *Fisheries Management (Lakes and Coorong Fishery) Regulations 2009*;
- To support meeting the goals and objectives of the Lakes and Coorong Fishery Management Plan;
- To promote increased voluntary compliance;
- To deliver an effective education and awareness program;
- Continue developing effective deterrence strategies;
- Undertake appropriate enforcement activities;
- Increase integrity in fishery management systems and/or quota systems;
- Promote positive interactions & collaboration with stakeholders;

- To deliver an efficient and effective compliance program.

## **COMPLIANCE EFFORT**

- Monitoring of fishing activity, landings and consignments for compliance and integrity;
- Offence identification and response;
- Operational and Investigation Planning and Surveillance;
- Risk assessments, trend and threat analysis;
- Master Operational Planning Process;
- Legislative review for efficacy and relevance;
- Industry liaison and education.

## **ANTICIPATED OUTCOMES**

The principal outcome of this compliance program is to support sustainable management of the Lakes and Coorong fishery by:

- Increased voluntary compliance;
- Continued development of effective deterrence strategies;
- Accurate intelligence and risk predictions;
- Successful enforcement outcomes for repeat or serious offences;
- Development of efficient and cost effective compliance strategies;
- Continued development of stakeholder engagement programs;
- Reduced incidence of reported illegal activity
- Reduced incidence of documentation errors and inconsistencies
- Increased integrity in fishery management systems and/or quota systems
- Increased positive interactions & collaboration with stakeholders

## **PROGRAM DELIVERY**

The Fisheries & Aquaculture Operations Group comprises three Regional Operations teams, an Offshore Patrol Operations team and an Intelligence & Strategic Support team.

The compliance program dedicated to the Lakes and Coorong fishery is primarily delivered by Fisheries Officers from the Central Region with support, as required, by officers from within the Operations Group.

## **PROGRAM STRATEGIES AND SUPPORTING ACTIONS & INITIATIVES**

The compliance program is tailored to the Lakes and Coorong fishery and uses a number of initiatives and actions that fall under the three core strategies of Education & Awareness, Effective Deterrence and Appropriate Enforcement. These initiatives and actions are outlined in the Lakes & Coorong fishery compliance plan which has been developed in consultation with the sector.

## PROGRAM EFFORT ALLOCATION

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 Lakes and Coorong 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.

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

Strategy/Activities	Days	FTE	Cost (\$)
<b>Education Awareness</b> <ul style="list-style-type: none"> <li>• Provide fishery related compliance advice to all industry stakeholders and potential stakeholders.</li> <li>• Provide electronic distribution of educational material to fishers and licence holders as required.</li> <li>• Ensure all stakeholders understand their respective obligations and the compliance focus for the coming season.</li> <li>• Develop Industry communication &amp; relationship program to facilitate discussion of topics regarding subsequent change management process</li> <li>• Ongoing one on one education during inspections and with new licence holders and masters</li> </ul>	6	0.03	7,245
<b>Effective Deterrence</b> <ul style="list-style-type: none"> <li>• Ensure all aspects of commercial fishing activities are monitored including inspections of fishing operations, catch at sea, catch when landed, in transit and at change of ownership in fish processing premises.</li> <li>• Conduct intelligence driven operations and use appropriate enforcement action</li> <li>• Collaborate with other enforcement agencies in order to provide greater reactive and proactive investigative capability</li> <li>• Communication Strategy</li> </ul>	16	0.08	19,321

<b>Enforcement</b>			
<ul style="list-style-type: none"> <li>Investigate reports of non-compliance and where appropriate take action</li> <li>Issue expiations, cautions and court enforced actions.</li> </ul>	18	0.09	21,736
<b>TOTALS</b>	<b>40</b>	<b>0.20</b>	<b>48,302</b>

**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.

All values have been rounded to the nearest dollar figure

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## PIPI FISHERY COMPLIANCE PROGRAM 2015/2016

### PROGRAM MANAGER

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Regional Manager

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### COMPLIANCE PROGRAM SUMMARY

PIRSA Fisheries and Aquaculture teams undertake coordinated compliance activities to educate fishers, deter opportunistic and financially motivated fishery related offences and enforce the rules and regulations.

In consultation with industry a dedicated compliance plan has been developed for the Pipi fishery. This compliance plan was developed to direct effort and ensure compliance activities are intelligence driven, efficient, cost effective and outcome focussed. The compliance plan is underpinned by three core strategies (Education and Awareness, Effective Deterrence and Appropriate Enforcement) and is focussed towards increasing voluntary compliance and maximising effective deterrence.

An analysis of intelligence and information holdings is conducted to identify the major risks for the fishery. A series of strategies, actions, and initiatives are detailed and used to focus the primary compliance effort in order to manage the risks and achieve targeted outcomes.

### OBJECTIVES

This program provides a compliance framework to monitor and regulate fishing activities that support the sustainable commercial take of species that are able to be taken pursuant to a Lakes and Coorong licence in accordance with the Act and the Lakes and Coorong Fishery Management Plan.

The plan provides a focus for Fisheries Officers to undertake coordinated compliance activities to educate fishers, deter opportunistic and financially motivated fishery related offences, and enforce the rules and regulations of the fishery.

Any compliance related risks or emerging trends/issues of significance that arise outside the plan are addressed as required.

The risks and strategies are regularly reviewed and assessed for relevance to ensure compliance activities meet the following objectives:

- Meet the objectives of the *Fisheries Management Act 2007*;
- To promote compliance with the *Fisheries Management (Lakes and Coorong Fishery) Regulations 2009*;
- To support meeting the goals and objectives of the Lakes and Coorong Fishery Management Plan;
- To promote increased voluntary compliance;
- To deliver an effective education and awareness program;
- Continue developing effective deterrence strategies;
- Undertake appropriate enforcement activities;
- Increase integrity in fishery management systems and/or quota systems;
- Promote positive interactions & collaboration with stakeholders;
- To deliver an efficient and effective compliance program.

## **COMPLIANCE EFFORT**

- Monitoring of Pipi fishery management and quota systems for compliance and integrity;
- Monitoring of fishing activity, landings and consignments for compliance and integrity;
- Offence identification and response;
- Operational and Investigation Planning and Surveillance;
- Risk assessments, trend and threat analysis;
- Master Operational Planning Process;
- Legislative review for efficacy and relevance;
- Industry liaison and education.

## **ANTICIPATED OUTCOMES**

The principal outcome of this compliance program is to support sustainable management of the Pipi fishery by:

- Increased voluntary compliance;
- Continued development of effective deterrence strategies;
- Accurate intelligence and risk predictions;
- Successful enforcement outcomes for repeat or serious offences;
- Development of efficient and cost effective compliance strategies;
- Continued development of stakeholder engagement programs;
- Reduced incidence of reported illegal activity
- Reduced incidence of documentation errors and inconsistencies
- Increased integrity in fishery management systems and/or quota systems
- Increased positive interactions & collaboration with stakeholders

## **PROGRAM DELIVERY**

The Fisheries & Aquaculture Operations Group comprises three Regional Operations teams, an Offshore Patrol Operations team and an Intelligence & Strategic Support team.

The compliance program dedicated to the Pipi fishery is primarily delivered by Fisheries Officers from the Central Region with support, as required, by officers from within the Operations Group.

## **PROGRAM STRATEGIES AND SUPPORTING ACTIONS & INITIATIVES**

The compliance program is tailored to the Pipi fishery and uses a number of initiatives and actions that fall under the three core strategies of Education & Awareness, Effective Deterrence and Appropriate Enforcement. These initiatives and actions are outlined in the Pipi fishery compliance plan which has been developed in consultation with the sector.

## PROGRAM EFFORT ALLOCATION

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 Pipi 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.

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

Strategy/Activities	Days	FTE	Cost
<b>Education Awareness</b> <ul style="list-style-type: none"> <li>• Provide fishery related compliance advice to all industry stakeholders and potential stakeholders.</li> <li>• Provide electronic distribution of educational material to fishers and licence holders as required.</li> <li>• Ensure all stakeholders understand their respective obligations and the compliance focus for the coming season.</li> <li>• Develop Industry communication &amp; relationship program to facilitate discussion of topics regarding subsequent change management process</li> <li>• Ongoing one on one education during inspections and with new licence holders and masters</li> </ul>	5	0.025	6,038
<b>Effective Deterrence</b> <ul style="list-style-type: none"> <li>• Ensure all aspects of commercial fishing activities are monitored such as inspections of fishing operations, catch when graded, in transit and at change of ownership in fish processing premises.</li> <li>• Ensure all aspects of the Quota Management System are monitored such as chain of custody requirements in catch disposal records (CDR) including auditing.</li> <li>• Conduct intelligence driven operations and use appropriate enforcement action</li> <li>• Collaborate with other enforcement agencies in order to provide greater reactive and proactive investigative capability</li> <li>• Communication Strategy</li> </ul>	17	0.085	20,529



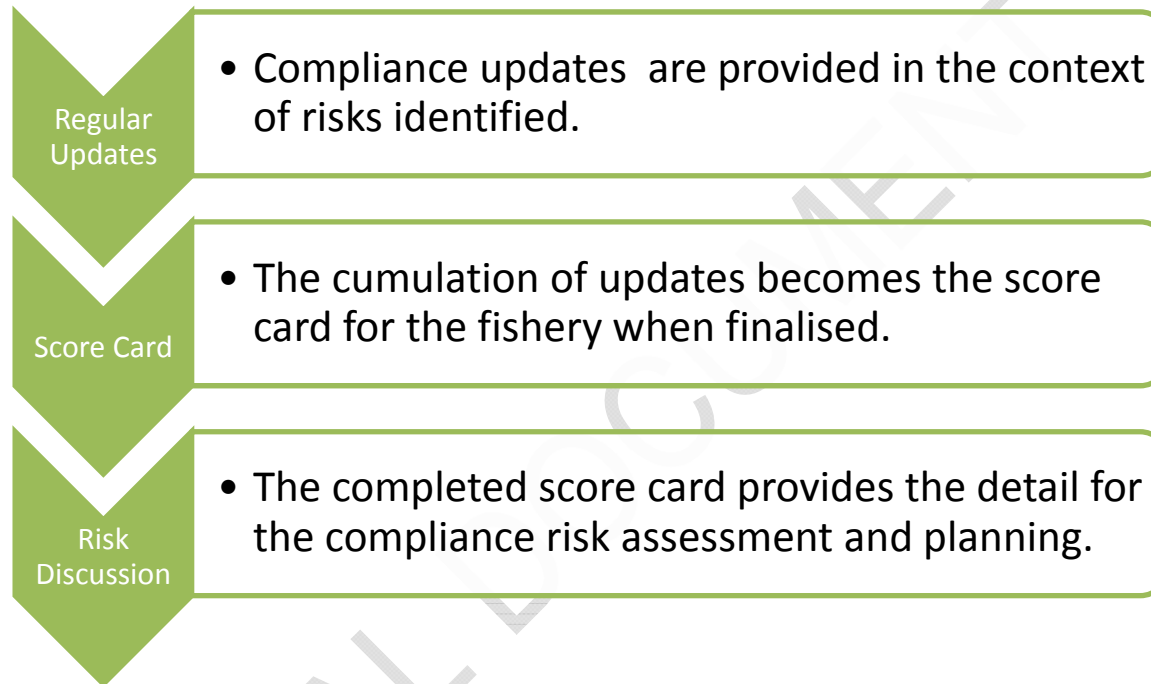
<b>Enforcement</b>			
<ul style="list-style-type: none"> <li>• Investigate reports of non-compliance and where appropriate take action</li> <li>• Issue expiations, cautions and court enforced actions.</li> </ul>	28	0.14	33,811
<b>TOTALS</b>	<b>50</b>	<b>0.25</b>	<b>60,378</b>

**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.

All values have been rounded to the nearest dollar figure

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## LAKES AND COORONG FISHERY – 15/16 RISK ASSESSMENT & COMPLIANCE PROGRAM



FINAL DRAFT



## LAKES AND COORONG FISHERY RISKS

<b>TAKE UNDERSIZE</b>	Likelihood: Likely	Consequence: Moderate	Risk Rating	<b>Moderate</b>
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<b>Risk Attribute</b>	<ul style="list-style-type: none"> <li>• Taking undersize fish is not a sustainable practice</li> </ul>
<b>Legislative &amp; Regulatory Framework</b>	<ul style="list-style-type: none"> <li>• <i>Fisheries Management (General) Regulations 2007 Schedule 2 – Undersize fish</i></li> <li>• <i>Fisheries Management (General) Regulations 2007 Schedule 6 Clause 114</i></li> <li>• Management objective (a) Fishing is conducted at a level that maintains ecologically viable stock levels and protects fish stocks from overfishing.</li> </ul>
<b>Implication</b>	<ul style="list-style-type: none"> <li>• Sustainability of fish stocks potentially threatened particularly with Mulloway</li> <li>• Undersize Mulloway are particularly vulnerable to capture in nets set to target Mullet</li> </ul>
<b>Control Measure</b>	<ul style="list-style-type: none"> <li>• Boarding vessels at sea</li> <li>• Checks in transit, at landing and at processors</li> <li>• Enforcement action – commencing prosecution proceedings, issuing expiation notices, issuing caution notices</li> <li>• Demerit Point Scheme</li> </ul>

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### LAKES AND COORONG FISHERY RISKS

<b>USE EXCESS AGENTS / FAIL TO REPORT RELIEF DAYS</b>	Likelihood: Occasional	Consequence: Moderate	Risk Rating	<b>Moderate</b>
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Risk Attribute	<ul style="list-style-type: none"> <li>• Not registering relief days when using agents</li> </ul>
Legislative Framework	<ul style="list-style-type: none"> <li>• Management objective (a) Fishing is conducted at a level that maintains ecologically viable stock levels and protects fish stocks from overfishing.</li> </ul>
Implication	<ul style="list-style-type: none"> <li>• Some fishers gain a competitive advantage by not declaring relief days</li> <li>• Impacts on stock modelling and policy decision making</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>• Education sessions offered to new entrants</li> <li>• Prior reporting relief days</li> <li>• Covert and overt surveillance</li> <li>• Audits</li> </ul>

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## LAKES AND COORONG FISHERY RISKS

<b>UNREGISTERED/ILLEGAL/EXCESS GEAR</b>	Likelihood: Occasional	Consequence: Moderate	Risk Rating	<b>Moderate</b>
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Risk Attribute	<ul style="list-style-type: none"> <li>• Additional effort through the use of unregistered, illegal or excess gear in an input controlled fishery has an impact to the management and sustainability of the fishery.</li> </ul>
Legislative Framework	<ul style="list-style-type: none"> <li>• <i>Fisheries Management Act 2007 Section 53 (2)</i></li> <li>• <i>Fisheries Management (General) Regulations 2007 Regulation 25 (1)</i></li> </ul>
Implication	<ul style="list-style-type: none"> <li>• Fishers gain a competitive advantage by using excess/unregistered/illegal gear</li> <li>• Impacts on stock modelling and policy decision making</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>• Education sessions offered to new entrants</li> <li>• Boarding vessels on water and checks at landing</li> <li>• Enforcement action – commencing prosecution proceedings, issuing expiation notices, issuing caution notices</li> <li>• Demerit Point Scheme</li> </ul>

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### LAKES AND COORONG FISHERY RISKS

<b>FISH IN CLOSED AREAS OR CLOSED SEASONS</b>	Likelihood: Occasional	Consequence: Minor	Risk Rating	<b>Low</b>
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Risk Attribute	<ul style="list-style-type: none"> <li>• Fishing near Goolwa Barrages or Murray Mouth</li> <li>• Fishing in Goolwa channel on weekends and public holidays</li> </ul>
Legislative Framework	<ul style="list-style-type: none"> <li>• <i>Fisheries Management (General) Regulations 2007 Regulation 102</i></li> <li>• Fisheries Management Plan – Strategy 5 “Restrict commercial and recreational fishing in certain areas at certain times to protect key species during critical stages of their life cycle.”</li> </ul>
Implication	<ul style="list-style-type: none"> <li>• Fishing near the Goolwa Barrages has the potential to harvest high proportions of spawning stock potentially undermining sustainability</li> <li>• Potential for reduced capacity to reproduce.</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>• Checks on water</li> <li>• Education sessions offered to new entrants</li> </ul>

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### LAKES AND COORONG FISHERY RISKS

<b>FAIL TO SUPPLY CATCH AND EFFORT LOG BOOK DATA</b>	Likelihood: Occasional	Consequence: Minor	Risk Rating	<b>Low</b>
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Risk Attribute	<ul style="list-style-type: none"> <li>• Fail to supply Periodic Return data to SARDI.</li> </ul>
Legislative Framework	<ul style="list-style-type: none"> <li>• <i>Fisheries Management (Lakes and Coorong Fishery) Regulations 2009</i></li> </ul>
Implication	<ul style="list-style-type: none"> <li>• Failure to accurately advise SARDI of periodic returns impacts on scientific modelling and stock status calculations</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>• SARDI provides reminder notices to licence holders who have not lodged periodic returns</li> <li>• Education sessions offered to new entrants</li> <li>• Enforcement action – commencing prosecution proceedings, issuing expiation notices, issuing caution notices</li> <li>• Demerit Point Scheme</li> </ul>

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**LAKES AND COORONG FISHERY RISKS**

<b>WILDLIFE ENTANGLEMENTS</b>	Likelihood:	Consequence:	Risk Rating	
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<b>Compliance Effort</b>	<ul style="list-style-type: none"> <li>Fisheries Officers conducted two vessel patrols in Lake Alexandrina as a result of information received regarding abandoned/ unattended nets. These nets were retrieved and found no wildlife entangled.</li> </ul>
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**LAKES AND COORONG FISHERY RISKS**

<b>OTHER</b>	Compliance risks identified within the fishery that may occur which will be addressed as they are detected
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Potential Risks	<ul style="list-style-type: none"><li>• Biosecurity</li><li>• Provide false and misleading information to the Minister</li><li>• Illegal Sales - information in July, August, September 2014 alleging that some licence holders were selling fish through their licences that had not been taken in the Fishery (INT3000, INT 3060, INT3061 and INT 3094)</li></ul>
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		CONSEQUENCES					
		NEGLECTIBLE	MINOR	MODERATE	SEVERE	MAJOR	CATASTROPHIC
		0	1	2	3	4	5
LIKELIHOOD	REMOTE	1					
	RARE	2					
	UNLIKELY	3					
	POSSIBLE	4					
	OCCASIONAL	5					
	LIKELY	6					

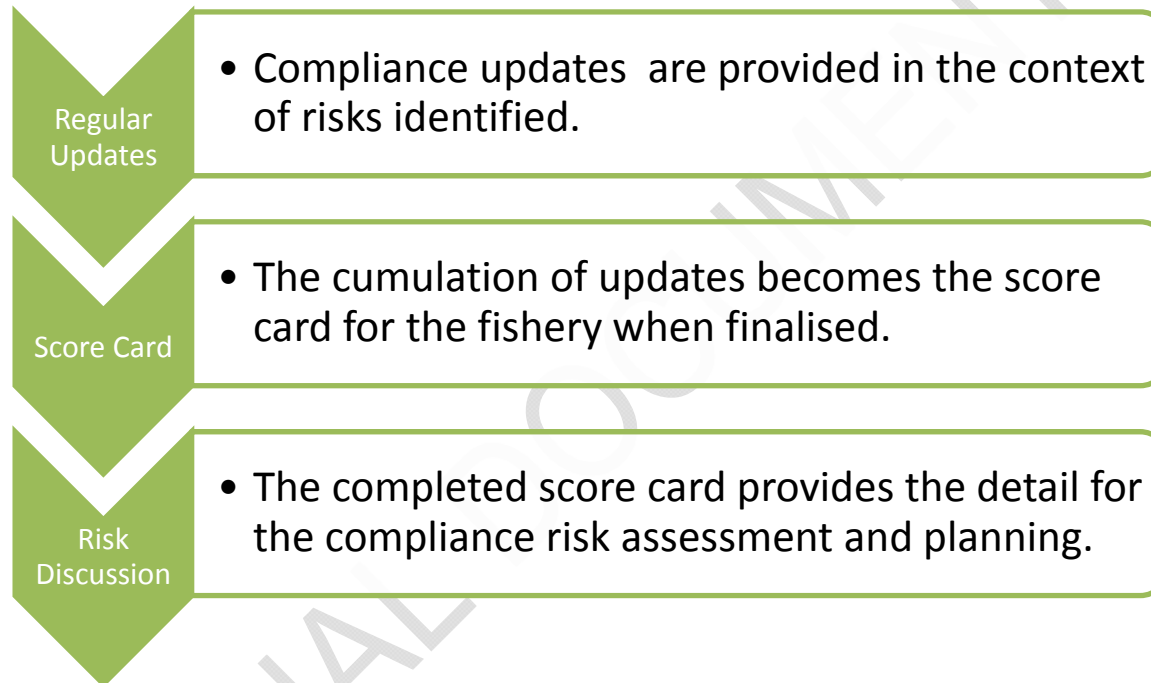
LIKELIHOOD DEFINITIONS		CONSEQUENCE DEFINITION	
LIKELY	It is expected to occur	CATASTROPHIC	Local extinctions are imminent / immediate
OCCASIONAL	May occur	MAJOR	Likely to cause local extinctions, if continued in longer term
POSSIBLE	Some evidence to suggest this is possible here	SEVERE	Affecting recruitment levels of stocks / or their capacity to increase
UNLIKELY	Uncommon, but has been known to occur elsewhere	MODERATE	Full exploitation rate, but long term recruitment / dynamics not adversely impacted
RARE	May occur in exceptional circumstances	MINOR	Possibly detectable, but minimal impact on population size and none on dynamics
REMOTE	Never heard of but not impossible	NEGLECTIBLE	Insignificant impacts to population. Unlikely to be measurable against background variability for this population

**RISK RATING**

Negligible	Low	Moderate	High	Extreme
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## PIPI FISHERY – 15/16 RISK ASSESSMENT & COMPLIANCE PROGRAM



### PIPI FISHERY RISKS

**TAKE UNDERSIZE**

Likelihood: Possible

Consequence: Moderate

Risk Rating

**Low**

Risk Attribute	<ul style="list-style-type: none"> <li>• Incorrect grading when high abundance of Pipi</li> <li>• Pipsis graded above high water mark and undersize Pipsis not returned immediately to the water</li> <li>• Failing to grade Pipsis</li> <li>• Failing to use Cockle nets with correct minimum mesh size</li> </ul>
Legislative & Regulatory Framework	<ul style="list-style-type: none"> <li>• <i>Fisheries Management (General) Regulations 2007 Schedule 2 – Undersize fish</i></li> </ul>
Implication	<ul style="list-style-type: none"> <li>• Taking undersize Pipi is not a sustainable practice</li> <li>• Graded Pipi discarded above the high water mark do not survive.</li> <li>• Potential exists to sell undersize Pipi</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>• Education sessions offered to new entrants,</li> <li>• Patrols on Pipi beaches,</li> <li>• checks at processors and in transit</li> <li>• Enforcement action taken – court proceedings commenced, expiation notices issued, caution notices issued</li> <li>• Demerit Point Scheme</li> </ul>

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### PIPI FISHERY RISKS

<b>QUOTA EVASION</b>	Likelihood: Possible	Consequence: Moderate	Risk Rating	<b>Moderate</b>
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Risk Attribute	<ul style="list-style-type: none"> <li>The potential for Pipi taken and sold but not decremented from quota</li> <li>The potential to submit false and misleading information on CDR and Periodic Returns</li> <li>The potential to re-use PIRSA tags</li> <li>The potential to overfill bags</li> </ul>
Legislative Framework	<ul style="list-style-type: none"> <li><i>Fisheries Management Act 2007</i></li> <li><i>Fisheries Management (Lakes and Coorong Fishery) Regulations 2009</i></li> <li><i>Fisheries Management (General) Regulations 2007</i></li> </ul>
Implication	<ul style="list-style-type: none"> <li>Inaccurate measures may influence management decision making</li> <li>Sustainability of fishery potentially threatened</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>Education sessions offered to new entrants,</li> <li>Patrols on Pipi beaches,</li> <li>checks at processors and in transit</li> <li>Enforcement action taken – court proceedings commenced, expiation notices issued, caution notices issued</li> <li>Demerit Point Scheme</li> <li>Prior Reporting and requirements for completion of CDR documentation</li> </ul>

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### PIPI FISHERY RISKS

<b>QUOTA MANAGEMENT SYSTEM INTEGRITY</b>	Likelihood: Possible	Consequence: Moderate	Risk Rating	<b>Moderate</b>
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Risk Attribute	<ul style="list-style-type: none"> <li>• The potential exists to misreport the number of bags taken</li> <li>• Overfilling bags but not exceeding a bucket measure</li> <li>• The potential for failing to prior report, fill out CDRs and to deliver documentation to PIRSA within the regulated time exists</li> </ul>
Legislative Framework	<ul style="list-style-type: none"> <li>• <i>Fisheries Management Act 2007</i></li> <li>• <i>Fisheries Management (Lakes and Coorong Fishery) Regulations 2009</i></li> <li>• <i>Fisheries Management (General) Regulations 2007</i></li> </ul>
Implication	<ul style="list-style-type: none"> <li>• Inaccurate measures used in fishery management decision making</li> <li>• Sustainability of fishery potentially threatened</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>• Education sessions offered to new entrants,</li> <li>• Patrols on Pipi beaches,</li> <li>• checks at processors and in transit</li> <li>• Enforcement action taken – court proceedings commenced, expiation notices issued, caution notices issued</li> <li>• Demerit Point Scheme</li> <li>• Audits</li> </ul>

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PIPI FISHERY RISKS				
<b>FAIL TO SUPPLY PERIODIC RETURN DATA</b>	Likelihood: Occasional	Consequence: Minor	Risk Rating	<b>Low</b>

Risk Attribute	<ul style="list-style-type: none"> <li>Fail to supply Periodic Return data to SARDI.</li> </ul>
Legislative Framework	<ul style="list-style-type: none"> <li><i>Fisheries Management (Lakes and Coorong Fishery) Regulations 2009</i></li> </ul>
Implication	<ul style="list-style-type: none"> <li>Failure to accurately provide SARDI periodic returns impacts on scientific modelling and stock status calculations</li> </ul>
Control Measure	<ul style="list-style-type: none"> <li>SARDI provides Fisheries Officers details of licence holders who have not lodged periodic returns</li> <li>New entrants are provided education and awareness information of requirements relating to lodgement of SARDI periodic returns.</li> <li>Licence holders are sent Pipi “User Guide’s” in July of each year. Included in the “User Guide” are details in relation to the lodgement of SARDI Periodic Returns.</li> <li>Enforcement action taken – court proceedings commenced, expiation notices issued, caution notices issued</li> <li>Demerit Point Scheme</li> </ul>

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**PIPI FISHERY RISKS**

**OTHER** Compliance risks identified within the fishery that may occur which will be addressed as they are detected

Potential Risks	<ul style="list-style-type: none"><li>• Biosecurity</li><li>• Fishing in “non-quota” areas</li><li>• Failure to lodge accurate SARDI catch and effort returns</li><li>• Fishing with too many agents</li><li>• Licence holder not present/ failure to record relief days</li><li>• Take fish using illegal gear</li></ul>
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		CONSEQUENCES					
		NEGLECTIBLE	MINOR	MODERATE	SEVERE	MAJOR	CATASTROPHIC
		0	1	2	3	4	5
LIKELIHOOD	REMOTE	1					
	RARE	2					
	UNLIKELY	3		Take Undersize (6)			
	POSSIBLE	4		Quota Evasion (8) Quota Management System Integrity (8)			
	OCCASIONAL	5		Fail to supply periodic returns to SARDI (5)			
	LIKELY	6					

LIKELIHOOD DEFINITIONS		CONSEQUENCE DEFINITION	
LIKELY	It is expected to occur	CATASTROPHIC	Local extinctions are imminent / immediate
OCCASIONAL	May occur	MAJOR	Likely to cause local extinctions, if continued in longer term
POSSIBLE	Some evidence to suggest this is possible here	SEVERE	Affecting recruitment levels of stocks / or their capacity to increase
UNLIKELY	Uncommon, but has been known to occur elsewhere	MODERATE	Full exploitation rate, but long term recruitment / dynamics not adversely impacted
RARE	May occur in exceptional circumstances	MINOR	Possibly detectable, but minimal impact on population size and none on dynamics
REMOTE	Never heard of but not impossible	NEGLECTIBLE	Insignificant impacts to population. Unlikely to be measurable against background variability for this population

**RISK RATING**

Negligible	Low	Moderate	High	Extreme
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**SCHEDULE 1 - PROJECT SCOPE**

**1. PROJECT DETAIL**

**1.1 Title: Lakes and Coorong Fishery (pipi)**

**1.2 Client Contact Details**

Name: PIRSA FISHERIES  
Address: GPO Box 1625, Adelaide, SA 5001  
Attention: Sean Sloan  
Email: Sean.Sloan@sa.gov.au  
Telephone: 8226 2318  
Facsimile: 8226 0434

**1.3 Principal Investigator**

Name: Dr Greg Ferguson  
Position: Research Scientist  
Address: SARDI Aquatic Sciences  
2 Hamra Ave, West Beach, SA 5024  
Email: greg.ferguson@sa.gov.au  
Telephone: 8207 5467  
Facsimile: 8207 5406

**1.4 Timeframe**

Commencement Date: 1 July 2015  
Completion Date: 30 June 2016

**1.5 Summary**

This scope of work is to (i) conduct a fishery independent survey of relative abundance and size structure of pipi, (ii) provide an advice note and presentation on the status of the stock which supports the Lakes and Coorong Fishery for pipi, and (iii) continue to develop/evaluate a method for estimating relative abundance of pre-recruits.

The key output is a presentation on stock status of pipi is to be given to the Pipi TACC Advisory Group in May 2016. Key objectives of the presentation on stock status of pipi are (i) to provide estimates of two fishery performance indicators in the harvest plan for pipi (fishery independent relative abundance, presence/absence of pre-recruits); and (ii) to supplement this with other relevant information based on fishery catch and effort data.

The objective of the developmental index of pre-recruit abundance is to replace the existing indicator based on presence/absence of pre-recruits with a more robust quantitative indicator.

## **2. PROJECT DESCRIPTION**

### **2.1 BACKGROUND**

This project provides information to support the ecologically sustainable management of the fishery for pipi (*Donax deltoides*) and continues to address a key finding of an industry workshop in 2007 that recommended that future assessments of the fishery should not rely solely on commercial CPUE.

The project uses methodology which was developed over three years and provides a fishery independent estimate of relative abundance of pipi (Ward et al 2010). The strategy is to continue to build on the collaborative relationship between fishers, researchers, and managers established in 2007-08 to conduct cost-effective fishery-independent surveys that involve coordinated scientific sampling and structured commercial fishing. This approach is similar to that taken in other South Australian fisheries such as the Blue Crab Fishery and Spencer Gulf Prawn Fishery. The project also aims to develop a method for estimating relative abundance of pre-recruits which was identified as key to further development of the existing fishery independent survey method (Ward et al 2010). Development of this indicator was also identified as important at the Pipi Harvest Plan Development Workshop (19 Dec 2011, PIRSA, Grenfell Centre)

The project builds on: (i) stock assessment reports on pipi in 2002-03; 2005-06 and 2013-14 (ii) annual stock status presentations from 2007 to 2015 by SARDI Aquatic Sciences; (iii) an FRDC project to support develop of a harvesting strategy for the Lakes and Coorong Fishery for pipi; and (iv) winter fishing/market trials conducted in 2010 and 2011.

The project aims to provide a presentation of the stock status of the pipi resource on Youngusband Peninsula which includes estimates of two key fishery performance indicators described in the harvest plan for pipi: (i) fishery independent relative biomass and (ii) presence/absence of pre-recruits. The presentation also incorporates analyses of fishery catch and effort data.

### **2.2 NEED**

There is a need for ongoing fishery independent surveys of the pipi resource on Youngusband Peninsula to inform management of the fishery for pipi. Fishery independent surveys provide spatially resolved estimates of relative biomass of pipi and population size structures which provide respectively, the primary and secondary performance indicators in the harvest strategy.

### **2.3 OBJECTIVES**

**2.3.1** To provide PIRSA with a presentation of the status of the pipi stock in May 2016;

**2.3.2** Collect data during the 2015-16 fishing season for pipi to:

- Provide estimates two fishery performance indicators (fishery independent relative abundance and presence/absence of pre-recruits) survey to assess the status of pipi on Youngusband Peninsula and to inform management;
- Provide size/age frequency information to characterise the demographic structure of pipi;

**2.3.3** Develop/evaluate a method for estimating relative abundance of pre-recruits to the pipi fishery;

**2.3.4** Provide ongoing and *ad hoc* advice and information to PIRSA.

## 2.4 METHODS

- Conduct fishery-independent surveys of pipi on the Youngusband Peninsula using the method developed between SARDI/PIRSA/industry (Ward et al 2010):
  - Sampling done by commercial fisher crews using standardised commercial pipi rakes;
  - Sampling done over approximately three weeks during the 2015-16 pipi fishing season;
  - Each commercial crew accompanied by one scientific observer (uses modified pipi rake to collect length frequency data with wide size range);
  - Collect, collate and analyse data.
  - Develop a method for estimating relative abundance of pre-recruits:
    - Trial modified commercial rake with fine mesh;
    - Validate with across-beach transects.

## 3. DELIVERABLES

### 3.1 Service Provided:

#### 3.1.1 Data collection

##### Collection of basic fisheries statistics

- Manage fishery logbook program;
- Collate fishing logbook returns;
- Validate returns (consultation with fishers to correct returns);
- Entry and storage of data;
- Database administration, maintenance, and development.

##### Collection of biological information

- Coordination of a fishery-independent survey of relative abundance of pipi on Youngusband Peninsula;
- Collection and storage of data from field surveys;
- Collection and storage of size/age samples;
- Laboratory processing of size/age samples.

#### 3.1.2 Analysis and reporting

##### Analysis and interpretation

- Analysis of data from field surveys;
- Analysis of size/age data;
- To provide PIRSA with a presentation that assesses the performance of the fishery against the reference points identified in the harvest strategy;

##### Industry and policy liaison

- Within the Lakes and Coorong Fishery, provide scientific advice to assist in the development of sustainable harvesting strategies;
- Attend research subcommittee meetings and other meetings with industry and PIRSA, including preparation and follow up;
- Facilitate the development of priority research projects identified by the management plan for the South Australian Lakes and Coorong Fishery;

- Keep the PIRSA and industry abreast of research projects relevant to the fishery;
- Supervise project, quality control, and management of deliverables.

### Reporting

- To provide PIRSA with a presentation that assesses the performance of the fishery against the reference points identified in the harvest strategy.

### 3.2 Outcomes:

- Advice note and presentation on stock status of pipi which includes estimates of key performance indicators (fishery-independent relative abundance, presence/absence of pre-recruits) used in the harvest strategy for pipi to inform setting the TACC;
- Fishery independent survey of pipi resource on Younghusband Peninsula which includes;
  - estimates of relative abundance, and
  - demographic information for pipi on Younghusband Peninsula,
- Further development of a method for estimating relative abundance of pre-recruits to the pipi fishery.

### 3.3 Outputs and Extension:

- Deliver advice note and presentation on status of pipi resource to PIRSA Fisheries and Aquaculture This includes updated estimates of performance indicators described in the harvest strategy for pipi;
- Deliver presentation on status of pipi resource, including updated estimates of performance indicators described in the harvest strategy for pipi, industry and other stakeholders in May 2016.

## 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	(\$ Ex GST
SUBTOTAL	169,563
GST	NO GST
TOTAL	169,563

#### 4.3 MILESTONE AND PAYMENT SCHEDULE

Date	Milestone	Payment (\$) Ex GST
31 December 2015	First Half Payment 2015/16 SLA	84,781
31 May 2016	Presentation of results from fishery independent surveys of pipi.	
31 May 2016	Second Half Payment 2015/16 SLA	84,782
<b>SUBTOTAL</b>		<b>169,563</b>
<b>GST</b>		<b>NO GST</b>
<b>TOTAL COST</b>		<b>169,563</b>

#### 5. PROJECT STAFF

Staff (if identified)	Position	FTE Commitment	Funded/ In-Kind
Greg Ferguson	Research Scientist	0.40	Funded
Damian Matthews	Research Officer	0.32	Funded
<b>TOTAL</b>		<b>0.72</b>	

## SCHEDULE 2 - PROJECT COSTING

### 1. PROJECT COST SUMMARY

<b>Cost</b>	<b>Detail</b>	<b>2015/16 Total (\$) Ex GST</b>
Salaries	0.72FTE	79,394
<b>Operating</b>		
Logbook program		11,874
Payment to industry for surveys		19,500
Fieldwork		12,000
Laboratory		1,000
Travel		0
Office & communication		0
Capital equipment		0
SARDI overhead		45,795
SARDI inkind		32,797
<b>Total Cost</b>		<b>202,360</b>
<b>Revenue – PRICE</b>		
PIRSA F&A	84%	169,563
<b>Total Revenue</b>		<b>169,563</b>
<b>SARDI Investment</b>	16%	<b>32,797</b>

#### 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. Contractor is Goolwa Pipi Harvesters Association.

*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*

Stationary, communications and publications

*Capital equipment*

# SCHEDULE 1 - PROJECT SCOPE

## 1. PROJECT DETAIL

### 1.1 Title: Lakes and Coorong Fishery (finfish)

### 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: 8226 2318  
Facsimile: 8226 0434

### 1.3 Principal Investigator

Name: Dr Jason Earl  
Position: Senior Research Officer  
Address: SARDI Aquatic Sciences  
2 Hamra Ave, West Beach, SA 5024  
Email: jason.earl@sa.gov.au  
Telephone: 8207 5483  
Facsimile: 8207 5406

### 1.4 Timeframe

Commencement Date: 1 July 2015  
Completion Date: 30 June 2016

### 1.5 Summary

This scope of work will provide PIRSA Fisheries and Aquaculture with the information required for the ecologically sustainable management of the Lakes and Coorong Fishery (finfish) in South Australia. The broad research program for 2015/16 is:

1. to continue collection of commercial catch and effort data, and the delivery of advice to PIRSA, industry and other stakeholders;
2. to undertake commercial catch sampling for Golden Perch; and
3. to compile of a range of environmental (flows, tides, wind, mouth opening) data to update and run the Coorong hydrological model and provide estimates of the three primary (environmental) performance indicators to inform the harvest strategy.

The primary outputs of the research program for 2015/16 are:

1. a fishery and environmental statistics report, that includes: (i) a historical summary of fishery statistics for each of the Primary and Secondary finfish species of the LCF; (ii) the primary environmental statistics for the three habitat/gear-based sectors of the fishery; and (iii) assessment of environmental performance indicators against the reference points identified in the finfish Harvest Strategy; and



2. an ecosystem-based fishery assessment report for the freshwater large mesh gill net sector of the LCF, which includes a detailed stock assessment for Golden Perch. This report will also evaluate the suitability of the new primary performance indicators as surrogate metrics for population biomass for Golden Perch, and review the effectiveness of the new reference points and associated decision rule framework for controlling exploitation to sustainable levels.

## **2. PROJECT DESCRIPTION**

### **2.1 BACKGROUND**

This research program builds on previous research by SARDI Aquatic Sciences that includes stock status reports (2006a, 2006b, 2008, 2010, 2011, 2012a, 2012b, 2014) and stock assessment reports on Yelloweye Mullet (2005, 2013), Black Bream (2008), Greenback Flounder (2007), Mulloway (2003, 2011, 2014) and Golden Perch (2004, 2011, 2012). A multi-species study of the Lakes and Coorong Fishery was completed in 2010.

Additionally, between 2001-02 and 2007-08, PIRSA was also provided a review of the literature on Greenback Flounder and peer-reviewed publications on habitat association and stock structure of Mulloway in South Australia. Funding through PIRSA and SARDI towards a PhD on the biology and ecology of Mulloway supplemented the cost of producing a workshop on this species in 2005 and stock assessments in 2003 and 2011.

The FRDC funded project (FRDC2005/061) "Gear interaction of non-targeted species in the Lakes and Coorong commercial and recreational fisheries of South Australia" that was completed in 2010 has provided a performance indicator for levels of by-catch in the LCF.

The FRDC funded project (FRDC2013/225) "Developing a management framework and harvest strategies for small scale multi-species, multi-method community based fisheries, using the South Australian Lakes and Coorong Fishery as a case study" is due for completion in early 2015 and will include recommendations of a new harvest strategy for finfish, including a new suite of performance indicators to support the management of the fishery.

It is anticipated that a new harvest strategy for finfish will be implemented in 2015/16. This will include new environmental performance indicators, reference points and decision rule framework used to guide management of the fishery. A critical component of the research program for 2015/16 will involve evaluation the suitability of the new primary performance indicators as surrogate metrics for population biomass for key species of the LCF, and review the effectiveness of the proposed reference points and associated decision rule framework for controlling exploitation to levels that ensure the future sustainability of key fish stocks.

### **2.2 NEED**

The provision of accurate information on key finfish stocks of the LCF is critical to ongoing management strategies for the sustainable harvesting of these resources. Data obtained from this research program 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 fishery and environmental statistics report.
- 2.3.2** To provide PIRSA with an ecosystem-based fishery assessment report for the freshwater large mesh gill net sector of the LCF which includes a detailed stock assessment for Golden Perch.
- 2.3.3** To support PIRSA with the continued development and refinement of the new performance indicators, reference points and decision rule framework described in the harvest strategy for finfish, including provision of *ad hoc* advice.
- 2.3.4** To prepare information for, and participate in, meetings with PIRSA Fisheries and Aquaculture, the Southern Fishermen's Association (SFA) and other working or industry groups.

## **2.4 METHODS**

- Collection, collation, storage and analysis of fishery-dependent catch and effort data;
- Field collection, storage, processing and interpretation of otoliths to provide age/size structures for Golden Perch.
- Compilation of a range of environmental (flows, tides, wind, mouth opening) data to update and run the Coorong hydrological model and provide estimates of the three primary (environmental) performance indicators to inform the harvest strategy.

## **3. DELIVERABLES**

### **3.1 Service Provided:**

#### **3.1.1 Data collection**

##### Collection of basic fisheries statistics

- Manage fishery logbook program, including updates to logbook as required;
- Collate fishing logbook returns;
- Validate returns (consultation with fishers to correct returns);
- Entry and storage of data;
- Database administration, maintenance, and development.

##### Collection of biological information

- Collection and storage of size/age samples for Golden Perch;
- Laboratory processing of size/age samples for Golden Perch.

##### Collection of environmental information

- Compilation of a range of environmental (flows, tides, wind, River Murray mouth opening) data from various agencies to update and run the Coorong hydrological model and provide estimates of the three primary (environmental) performance indicators to inform the harvest strategy.

### 3.1.2 Analysis and reporting

#### Analysis and interpretation

- Analysis of size and age data for Golden Perch;
- To update and run the Coorong hydrological model to provide estimates of performance indicators for the estuarine sectors of the LCF.
- To evaluate the suitability of the new primary performance indicators as surrogate metrics for population biomass for Golden Perch, and review the effectiveness of the new reference points and associated decision rule framework for controlling exploitation to sustainable levels.

#### Reporting

- To provide PIRSA with a fishery and environmental statistics report for the LCF (1984/85 – 2014/15).
- To provide PIRSA with an Ecosystem-based fishery assessment report for the freshwater large mesh gill net sector of the LCF.

In addition to the information presented in the Fishery performance and environmental assessment report, this report will include:

- (i) a detailed analysis of fishery statistics for key species (Golden Perch, Carp and Bony Bream);
- (ii) a review of all relevant research undertaken on key species;
- (iii) assessment of population size and age structure for Golden Perch; and
- (iv) scientific interpretation of all available information which will support a weight-of-evidence approach to determine stock status for Golden Perch.

#### Industry and policy liaison

- Within the Lakes and Coorong Fishery, provide scientific advice to assist in the development of sustainable harvesting strategies;
- Attend meetings of the Commercial Lakes and Coorong Fishery Management Plan Steering Committee, including preparation and follow up;
- Attend research subcommittee meetings and other meetings with Industry and PIRSA, including preparation and follow up;
- Facilitate the development of priority research projects identified by the management plan for the South Australian Lakes and Coorong Fishery;
- Keep PIRSA and industry abreast of research projects relevant to the fishery;
- Supervise project, quality control, and management of deliverables.

### 3.2 Outcomes:

- Fishery and environmental statistics report. Provide report to PIRSA by 31 March 2016.
- Ecosystem-based fishery assessment report for the freshwater large mesh gill net sector of the LCF, including updated estimates of performance indicators described in the harvest strategy for finfish and a stock assessment for Golden Perch. Provide report to PIRSA by 30 June 2016.

### 3.3 Outputs and Extension:

- Deliver presentation on the fishery and environmental statistics report. This presentation will also be delivered to industry and other stakeholders.

- Deliver presentation on the Ecosystem-based fishery assessment report for the freshwater, large mesh gill net sector of the LCF, including a stock assessment for Golden Perch and updated estimates of performance indicators described in the harvest strategy for finfish, to PIRSA. This presentation will also be delivered to industry and other stakeholders.
- To prepare information for, and participate in, meetings with PIRSA Fisheries and Aquaculture, the South Fishermen's Association (SFA) and other working or industry groups.

#### 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	(\$ Ex GST
SUBTOTAL	128,567
GST	NO GST
TOTAL	128,567

##### 4.3 MILESTONE AND PAYMENT SCHEDULE

Date	Milestone	Payment (\$) Ex GST
31 December 2015	First Half Payment 2015/16 SLA	64,283
31 March 2016	<u>Report</u> : Fishery and environmental statistics	64,284
31 May 2016	Second Half Payment 2015/16 SLA	
30 June 2016	<u>Report</u> : <i>Ecosystem-based fishery assessment: freshwater large-mesh gill net sector</i>	
<b>SUBTOTAL</b>		<b>128,567</b>
<b>GST</b>		<b>NO GST</b>
<b>TOTAL COST</b>		<b>128,567</b>

#### 5. PROJECT STAFF

Staff (if identified)	Position	FTE Commitment	Funded/ In-Kind
Jason Earl	Research Officer	0.60	Funded
<b>TOTAL</b>		<b>0.60</b>	

## SCHEDULE 2 - PROJECT COSTING

### 1. PROJECT COST SUMMARY

Cost	Detail	2015/16 Total (\$) Ex GST
Salaries	0.60fte	60,615
<b>Operating</b>		
Logbook program		19,790
Payment to industry for surveys		0
Fieldwork		3,700
Laboratory		2,000
Travel		800
Office & communication		3,500
Capital equipment		0
SARDI overhead		38,162
SARDI inkind		27,331
<b>Total Cost</b>		<b>155,898</b>
<b>Revenue – PRICE</b>		
PIRSA F&A	82%	128,567
<b>Total Revenue</b>		<b>128,567</b>
<b>SARDI Investment</b>	18%	<b>27,331</b>

#### 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, mobile phone and publications

*Capital equipment*