Draft *Management Plan for the South Australian Commercial Abalone Fishery*

Summary Report

July 2020

Information current as of 27 July 2020

© Government of South Australia 2020

Disclaimer

PIRSA and its employees do not warrant or make any representation regarding the use, or results of the use, of the information contained herein as regards to its correctness, accuracy, reliability and currency or otherwise. PIRSA and its employees expressly disclaim all liability or responsibility to any person using the information or advice.

All enquiries

Primary Industries and Regions SA (PIRSA)

2 Hamra Ave, West Beach SA 5024

GPO Box 1671, Adelaide SA 5001

T: 08 8226 0900

# Introduction

Pursuant to the *Fisheries Management Act 2007* (the Act) a ten-year Management Plan for the South Australian Commercial Abalone Fishery was adopted on 1 September 2012. Under section 49(2) of the Act a review of the management plan was required as soon as practicable after the fifth anniversary of the commencement of the management plan, however industry requested that the review commence in 2015 to address discrepancies in stock status between the weight of evidence and application of the harvest strategy.

This review will be overseen by the Abalone Fishery Harvest Strategy Review Working Group (AFHSRWG).

The membership of this committee included an independent Chair, an independent scientist, independent economist, industry members from each of the three Abalone Fisheries, PIRSA Fisheries and Aquaculture and the South Australian Research and Development Institute (SARDI).

This document summarises the draft management plan developed by that working group pursuant to section 44(2) of the Act.

## Fishery to which this plan applies (Section 1)

Minor amendments to update references to fisheries regulations.

## Consistency with other management plans (Section 2)

Minor amendments to update.

## Term of plan (Section 3)

The term of the plan causes the plan to expire on 31 August 2022. To adopt a new management plan for a period of 10 years rather than amend the current plan and retain the date of expiry, the review identified the need to revoke the management plan and adopt a new management plan for a period of 10 years.

## Description of fishery (Section 4)

Updated to reflect changes since last management plan was published. Redundant information removed. New section included to fulfil the requirement to describe the economic characteristics of the fishery.

## Allocation (Section 5)

Minor changes to update.

## Disease risk (Section 6)

Minor changes to update.

## Current management arrangements (Section 7)

Minor changes to update.

## Ecosystem impacts (Section 8)

Update to refer to an updated Ecologically Sustainable Development (ESD) risk assessment conducted in 2019.

## Goals and objectives (Section 9)

Updated the table of goals and objectives to be consistent with amended performance indicators included in the proposed new harvest strategy.

Minor amendments to other wording of objectives recommended to address strategies with indicators that are able to be managed as part of the fishery.

## Harvest Strategy (Section 10)

The AFHSRWG reviewed the harvest strategy with the aim of simplifying and addressing discrepancies in stock status between a scientific weight of evidence approach and application of the harvest strategy, and the broad nature of the decision rules. Based on the recommendations of this review, amendments to the harvest strategy were recommended for inclusion in a new management plan.

The proposed harvest strategy has the following conceptual objectives:

1. Ensure harvesting from the Southern Zone Abalone Fishery, the Central Zone Abalone Fishery, and the Western Zone Abalone Fishery is within ecologically sustainable limits.
2. Provide stability and consistency in the level of catch determined annually.
3. Avoid recruitment overfishing with high probability.

Acceptable levels of risk are that reference points have a high likelihood of achieving stocks classified as sustainable nine in every ten years.

The Harvest Strategy comprises three main phases

* Monitoring
* Stock Assessment
* Harvest Strategy Decision rules

### Monitoring

To reflect the spatial structure of abalone stocks within each abalone fishery (zone), monitoring occurs at a finer scale, defined as a spatial-assessment-unit (SAU). The harvest strategy measures relative performance of the stock at the SAU level and describes how to combine these into one fishery wide measure of stock performance on a zonal level.

### Performance indicators

The key performance indicators (PI) are:

* Catch per unit of effort (CPUE) units of kg. hour-1; and
* Fishery-independent assessment of legal density derived from multiple diver surveys

The scores from the two performance indicators are combined to achieve a final SAU score. SAU scores are then combined to provide a zonal score between 1 and 10, which is a measure of overall stock performance for the zone.

### Stock status

The harvest strategy intentionally links TACC recommendations to the status of the stock. The Status of Fish Stocks (SAFS) uses two factors; biomass, and fishing mortality to establish the status of a stock as sustainable, depleting, recovering or depleted. The zonal score derived from the key performance indicators (PIs) functions as a proxy for biomass and the trend of the zonal score over four years provides a proxy for fishing pressure. The use of trend in zonal score in this way assume that non-fishing factors effecting mortality remain constant (e.g. productivity, disease, recruitment, and environment) and therefore fishing mortality represents any overall change in mortality.

### Harvest strategy decision rules

Target zonal catches are described for Blacklip and Greenlip Abalone in each zone as:

* Southern Zone Abalone Fishery – Blacklip 132,000 kg whole weight
* Central Zone Abalone Fishery – Greenlip 46,000 kg meat-weight
* Central Zone Abalone Fishery – Blacklip 9,000 kg meat-weight
* Western Zone Abalone Fishery – Greenlip 78,000 kg meat-weight
* Western Zone Abalone Fishery – Blacklip 77,000 kg meat-weight

The harvest decision rules result in a positive or negative adjustment to zonal catch when zonal scores are greater than 7 or below 5, respectively. An additional meta-rule is included to allow a recovering zonal stock to increase incrementally back to the target level and will avoid a large increase in fishing mortality.

A key component to the decision rules includes 10% variance around the zonal catch value. The % change to the adjustment value within this 10% limit is informed by the secondary sources of information provided at the data workshop.

### Secondary sources of information

To ensure additional evidence of performance is integrated into the harvest strategy, the harvest decision rules introduce a secondary level of information using a structured, justifiable and systematic approach ensuring evidence is weighted and used appropriately, particularly where the additional evidence is inconsistent.

The harvest strategy provides for the considered incorporation of relevant information provided from multiple sources based on its merits. The incorporation of additional information in the harvest decision rules is undertaken in a systematic pre-determined manner and the interpretation and rationale for inclusion is provided in the harvest strategy

### Exceptional circumstances

It is recommended that the Management Plan consider exceptional circumstances. These circumstances may include stressors on the stock fisheries that are deemed outside the impacts considered as a part of the harvest strategy at the time of development and may include mass mortality events, disease out-breaks, market failure, natural or human-induced disasters. In these instances it may be necessary to temporarily amend management arrangements to address these exceptional circumstances.

### Closures

Lower limit reference points for biomass, and fishing pressure are recommended. It is recommended that the fishery is closed at the level of fishery zone(s), or within SAUs to mitigate risk to stocks.

### Review of the harvest strategy

It is recommended that a review of the harvest strategy be undertaken to facilitate the integration of improved data and information when it becomes available in the future. Improved data are likely to include additional fishery-dependent information gathered from diver-GPS logger data and data derived from commercial diver assessment surveys or transformation of the fishing fleet. Amendments to the harvest strategy developed to incorporate improved information is intentional and the incorporation of such information will follow an investigation and review of the harvest strategy in consultation with industry and any committee established to oversee the review. Such a change to the harvest strategy including the decision rules may occur if approved by the Minister, and is considered a change of a specified kind for the purposes of section 46(1)(d) of the *Fisheries Management Act 2007*.

## Research needs and priorities (Section 11)

A new section is recommended for inclusion relating to research needs as prescribed by the *Fisheries Management Act 2007*.

Research needs and priorities for the management of the fisheries are as follows:

* Ensure the principle of constant improvement is embraced by all stakeholders in support of the adaptive management of abalone stocks.
* Use of spatially derived information as a potential harvest strategy performance indicator.
* Develop a comprehensive diver assessment survey for integration into the harvest strategy.
* Understand the extent and triggers to expressions of Perkinsus in the Western Zone.
* Develop a program of stock enhancement including a cost benefit analysis of varying approaches.

## Resources required to implement the plan (Section 12)

Updated to reflect general arrangements.

