

# Managing Under-Catch and Over-Catch in South Australian Fisheries

Policy Paper



**Government  
of South Australia**  
Department of Primary  
Industries and Regions

# **Policy Paper - Managing of under-catch and over-catch in South Australian fisheries**

Information current as of December 2021

© Government of South Australia 2021

## **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**

Fisheries and Aquaculture  
Primary Industries and Regions (PIRSA)  
2 Hamra Avenue, West Beach  
GPO Box 1671, Adelaide SA 5001  
T: 08 8429 0197

# Contents

PURPOSE .....	4
INTRODUCTION .....	4
DEFINITIONS .....	4
BACKGROUND .....	4
DISCUSSION.....	5
Ongoing under-catch and over-catch provisions	5
Exceptional Circumstances	6
APPENDIX A: FURTHER INFORMATION HIGHLIGHTING THE RATIONLE FOR THE POLICY.....	8
Background	8
Exceptional Circumstances	10
References	10

## PURPOSE

This Policy defines the principles that will be applied by the Department of Primary Industries and Regions (PIRSA) in managing under-catch (also known as carry-over) and over-catch (also known as carry-under) of quota for a species subject to a quota unit entitlement or effort (i.e., days) for a species subject to Individual Transferable Effort (ITE) entitlements over a quota period. These provisions are to provide industry with greater flexibility to better manage (and maximise the value of) their quota entitlements, while furthering the objects of the *Fisheries Management Act 2007*.

## INTRODUCTION

Industry has sought greater flexibility in the management of their operations through the under-catch and over-catch of quota managed species. The significant market disturbance caused by COVID-19 has resulted in licence holders in South Australian commercial fisheries seeking to have greater flexibility to capitalise on changing market environments where possible.

Specifically, as a result of COVID-19 industry has sought Government agreement to carry-over uncaught quota to the subsequent quota period following an exceptional circumstance situation caused by market failure<sup>1</sup>. Where scientific information provided a low risk to the sustainability of a stock, the carry-over of uncaught quota has been permitted. With the amount of carry-over in individual fisheries based on the scientific information provided and the circumstances of the particular fishery.

## DEFINITIONS

- Under-catch – arrangements allowing a licence holder who has under-caught their quota entitlement to carry-over under-catch to the subsequent quota period.
- Over-catch – arrangements allowing a licence holder to exceed their quota entitlement for a quota period which is then deducted from the subsequent quota period.

## BACKGROUND

This Policy provides the framework PIRSA will follow when applying under- and over-catch arrangements in individual fisheries managed through either quota unit entitlements or ITE entitlements. Therefore, where individual fisheries are seeking to apply under- and over-catch arrangements, they should be developed consistent with this Policy, taking into consideration each fishery's unique set of operational circumstances.

### Current over-catch arrangements

As defined in fishery regulations under the *Fisheries Management Act 2007*, current over-catch provisions in place in South Australian fisheries provide licence holders the ability to over-catch by small amounts to allow individual operators flexibility. Currently, over-catch is deducted from quota entitlements attached to a licence in the subsequent quota period at a ratio of 1:1, where for every one kilogram of over-catch taken, one kilogram is deducted up to a prescribed amount.

Should the prescribed amount of over-catch<sup>2</sup> be exceeded, quota entitlements from the subsequent quota period are deducted at a higher ratio of 1:2, where for every one kilogram of over-catch taken, two kilograms are deducted. These provisions allow licence holders to continue to take quota entitlements when close to exhausting their entitlements without the need to discard small excesses in catch and provides an administrative disincentive to over-catch large amounts of catch.

---

<sup>1</sup> OECD definition 2020: **Market failure** is a general term describing situations in which **market** outcomes are not Pareto efficient. **Market failures** provide a rationale for government intervention. Context: When individuals or firms impose costs or benefits on others for which the **market** assigns no price, then an externality exists.

<sup>2</sup> Vongole 50 kg, Sardine 15 tonnes, Rock Lobster 20 kg, Abalone 50 kg, Blue Crab 20 kg, Pipi 500 kg

## Current under-catch arrangements

There has previously been limited consideration of under-catch arrangements in South Australian fisheries, except for the abalone fisheries where Southern Zone, Central Zone and Western Zone Abalone Fishery licence holders are permitted to carry-over for each class of abalone up to 50 kg meat weight of uncaught abalone in a quota period at a ratio of 1:1. This provision has been in place to provide daily operational flexibility for the abalone fisheries and allows a diver to not operate for approximately one day, allowing that uncaught quota to be carried over to the following quota period.

## **DISCUSSION**

This Policy will guide how PIRSA will apply under-catch and over-catch arrangements in fisheries regulated by quota unit entitlements and ITE entitlements. Where under-catch and/or over-catch arrangements are implemented in individual fisheries by PIRSA they will be applied to all licence holders in a fishery equally as a collective. Once under-catch and over-catch arrangements are provided to all licence holders in a fishery equally as a collective, individual licence holders can then determine the extent to which they use the arrangements. Further information and rationale regarding the issues considered to develop this Policy can be found in Appendix A.

Several fisheries have identified that the carry-over of uncaught quota entitlements, through under-catch arrangements would provide greater operational flexibility to maximise the value of the resource by catching when markets are available, the price is higher and/or to accommodate a broader range of individual operational issues (e.g. breakdown or repair).

The market impact of the COVID-19 pandemic and the following international trade issues has resulted in the need for a higher level of flexibility for fisheries to operate than previously contemplated. This has resulted in PIRSA identifying the need to provide for varying types of under-catch and over-catch arrangements to meet different operational needs; those that relate to providing ongoing operational flexibility and those that are a response to an exceptional circumstance. The methods and set of principles under which both categories will be applied by PIRSA are described below.

## **Ongoing under-catch and over-catch provisions**

A number of issues were identified by PIRSA and industry when assessing and developing potential over-catch and under-catch arrangements:

- The movement of entitlements across quota periods as either over-catch or under-catch may result in either reduced or larger catches of a species for a specific quota period, which may raise sustainability concerns, particularly in short lived species, or where localised depletion may occur.
- The introduction of over-catch and under-catch provisions may significantly distort quota markets as operators refrain from trading quota or actively bank quota which can lead to inflated quota entitlements over time.

To address these issues:

- The potential impacts of carry-over and over-catch on sustainability will be considered in scientific stock assessments or through advice provided by SARDI, which will inform under-catch and over-catch arrangements developed for individual fisheries.
- PIRSA will implement under-catch and over-catch arrangements across individual fisheries, applied at the individual licence holder level, of up to 10% of quota entitlements held by a licence holder (both permanent and leased quota entitlements). With the reconciliation of under-catch and over-catch for individual licence holders undertaken by PIRSA following the completion of the quota period.
- To prevent the banking of quota entitlements carried over quota entitlements, through under-catch arrangements, will be separated from other quota entitlements on a licence, will not be permitted to

be carried over to multiple quota periods, will be non-transferable and must be used prior to other quota entitlements attached to the licence for the current quota period.<sup>3</sup>

To provide certainty of over-catch and under-catch provisions to be applied for a specific quota period, industry will be consulted on the provisions to be applied at the same time consultation on the total allowable commercial catch (TACC) occurs. Management Advisory Committees, where one exists, or the relevant industry fishing Association will be the body consulted by PIRSA prior to the commencement of a quota period on over-catch and under-catch provisions. As over-catch and under-catch provisions will be permanently regulated in the respective fisheries regulations, PIRSA will only be seeking to change regulations enacting the provisions where clear justification based on sound advice from a Management Advisory Committee or relevant industry Association is provided.

The following principles will be applied when implementing under-catch and over-catch arrangements on an on-going basis:

- The power and function to determine under-catch and over-catch provisions will be held by the Minister for Primary Industries and Regional Development or their delegate.
- Over-catch and under-catch provisions will be determined separate to the TACC and will be set permanently in the regulations for the fishery to which they apply.
- Under-catch and/or over-catch provisions will be applied consistently to all licence holders in the fishery to which they are applied.
- Through under-catch provisions, no more than 10% of uncaught quota entitlements, as a percentage of the total quota entitlements held (permanently held or temporarily leased) on a licence at the completion of the quota period, will be permitted to be carried over to the subsequent quota period.
- Through under-catch provisions quota entitlements carried over to the next quota period on individual licences will be:
  - Designated as a separate quota entitlement on a licence
  - Non-transferable to other licence holders in the fishery
  - Non-transferable to subsequent quota periods
  - Required to be used prior to other quota entitlements attached to the licence.
- Through over-catch provisions a licence holder will not be permitted to catch in excess of 10% of the quota entitlements held (permanently held or temporarily leased) on a licence. Noting at the completion of the quota period a reconciliation of licences in a fishery will be undertaken to determine if any licence holders have caught in excess of 10% of the quota entitlements held (permanently held or temporarily leased) on a licence.
- Where over-catch provisions have been applied in a fishery, any over-catch by an individual licence holder will be deducted from the quota entitlements provided to the licence holder in the subsequent quota period.
- Where a fishery has implemented on-going over- and under-catch arrangements, these arrangements should be described in the management plan and harvest strategy for the fishery at the earliest opportunity.

## Exceptional Circumstances

Exceptional circumstances are circumstances beyond the control of a fishery that limit the operation of the fishery, as a collective and result in a market failure. Where unforeseen exceptional circumstances that cannot be controlled occur (e.g. COVID-19), greater than 10% of under-catch or carry-over of quota entitlements may be sought.

To ensure licence holders for a fishery support cases for an exceptional circumstance claim, claims should be considered and supported by the relevant Management Advisory Committee, Association or

---

<sup>3</sup> Operational and regulatory requirements applied by AFMA and NZ Fisheries.

have the support of a large proportion of licence holders in a fishery before representations are made to PIRSA. If these consultative processes are not undertaken, PIRSA may undertake this consultation to confirm support from the relevant fishery before proceeding.

Exceptional circumstances may include, but are not limited to the following unforeseen circumstances:

- A demonstratable temporary drop in market price or markets become temporarily unavailable due to market failure.
- An event significantly impacting fishing activities for the fishery and would include impacts such as fish kills or biosecurity incursions.

Exceptional circumstance claims can be made to PIRSA for assessment on a case-by-case basis for an individual fishery, which includes all licence holders as a collective at any time. Noting that exceptional circumstance claims can only be made for under-catch circumstances and claims for exceptional circumstance to over-catch will not be considered by PIRSA.

The following principles will be applied when implementing exceptional circumstance under-catch arrangements:

- Applies to circumstances where greater than 10% under-catch is requested to be carried over to the subsequent quota period.
- Exceptional circumstance situations will be considered on a case-by-case basis and is a temporary arrangement that will not be considered as an ongoing arrangement.
- Will be applied consistently to all licence holders in the fishery to which the arrangements are applied.
- Following the request, PIRSA will work with industry to develop temporary arrangements taking into consideration the following:
  - Proposed arrangements must further the Objects of the *Fisheries Management Act 2007* and the relevant fishery management plan.
  - Scientific advice provided by SARDI on the impact of arrangements on stock sustainability will need to support the proposed arrangements and be considered by the relevant Management Advisory Committee, where one exists, or Association in providing advice to PIRSA.

Specific, tailored regulatory amendments will likely be required to implement exceptional circumstance under-catch provisions and the implementation of any arrangements will be subject to the normal regulatory amendment process. Any exceptional circumstance under-catch provisions will also be required to adhere to the principles preventing the banking of quota entitlements as outlined in section 5.1.

## APPENDIX A: FURTHER INFORMATION HIGHLIGHTING THE RATIONLE FOR THE POLICY.

**Table 1: Summary of under-catch and over-catch arrangements in other jurisdictions**

Jurisdiction	Under-catch and Over-catch	Comments
Australia (Commonwealth)	Under-catch and over-catch up to 10%	In 2003 after consultation policy outlining principles for under-catch and over-catch introduced  Policy reviewed in 2015 and considered appropriate
Canada	Carry-over 10% to 30%	Requires 100% observer coverage to be in place  Differs depending on species  Can be eliminated or reduced depending on conservation concerns  When setting limits for specific species factors considered are: Overharvesting in next quota period; Increased or decreased discarding; Administrative burden
Iceland	Carry-over up to 15%  Over-catch up to 5%	Discard ban implemented in 1989  Quota balancing to address discarding in multi-species individual transferable quota (ITQ) species
New Zealand	Carry-over of up to 10% in fisheries  For over-catch fishers pay a “deemed value”, which is a fee per kilogram in excess of their allocation	Deeming arrangements considered preferred method to remove incentive to over-catch
United States	Generally carry-over and carry-under of 10%	July 2020 guidelines developed by National Oceanic Atmospheric Administration (NOAA) to be applied by Fisheries Management Councils across the US in Fisheries Management Plans  Guidelines to prevent harvesting above Recommended Biological Catch (RBC)  Any over-catch deducted from (Total Allowable Catch) TAC for subsequent quota period  For Atlantic shark species up to 50% carry-over, when overfishing is not occurring
International Commission for the Conservation of Atlantic Tunas (ICCAT)	For Western Atlantic Bluefin Tuna up to 10% carry-over	Impact on recovery of stock unclear
Commission for the Conservation of Southern Bluefin Tuna (CCSBT)	Member nations can carry-over up to 20% of uncaught TAC from a year	Member nations must enforce and apply carry-over themselves  Member nations must notify secretariat if they wish to carry-over TAC  Secretariat has rules for member nations to not apply over catch (i.e. TAC reduction)

### Background

PIRSA regulates the use of small over-catch provisions to enable small quantities of over-catch to be taken in a quota period for the Sardine, Rock Lobster, Blue Crab, Pipi and Vongole and Abalone fisheries. These provisions have been implemented to provide licence holders with day-to-day operational flexibility and remove the need to prosecute should quota allocations be exceeded by small amounts. Similar quota balancing systems have been applied widely internationally (see Table 1: Iceland, New Zealand and the Commonwealth SETF).



While the legislated provisions in place in South Australian fisheries permit quota allocations to be exceeded by small amounts, without the need for prosecution, they do not provide the ability to over-catch at levels permitting fishing to continue when individual quota allocations have been reached (i.e. 10% of quota allocation). Rather, they provide the provision to continue to fish when close to reaching quota allocations without the need to discard excess catch and/or fish a small remaining quota allocation, which may not be economically viable.

There has previously been limited consideration of under-catch of uncaught quota entitlements in South Australian fisheries, except for the abalone fisheries. However, several fisheries have identified that the carry-over of quota entitlements provides the ability to maximise the value of the resource by catching when the price is higher and/or to accommodate operational issues (e.g. breakdown or repair).

In the case of catching when the price is higher this behaviour may be considered speculative; however, seasonal supply and demand in markets can lead to price fluctuations. Noting that higher prices may be experienced during periods when particular fish species are difficult to catch.

A system of under- and over-catch provisions will provide licence holders in South Australia's quoted commercial fisheries the option of having unused quota entitlements (under-catch) or above-quota catch (over-catch) in a quota period considered in the following quota period. The challenge is that while these provisions may provide flexibility for licence holders, market distortions are introduced. Market distortions are introduced as quota is not transferred to where it is most valued. Instead, under- and over-catch provisions work against the market allowing individuals to hold onto quota or exceed their quota allocations, impeding the operation of quota markets (AFMA, 2002).

To reduce the effect of market distortions the proportion of under- and over-catch within a quota period can be restricted. Those fisheries management organisations who have created provisions have restricted the level of under- and over-catch. Generally, up to 10% of the quota entitlements held by a licence holder at the end of the quota period has been considered an appropriate level of under-catch and over-catch limiting market distortion, while enabling operational flexibility (AFMA, 2002; Sanchirico et al, 2006 and NOAA, 2020) (see Table 1).

The application of under- and over-catch provisions may also affect stock sustainability. Through under- and over-catch arrangements the total catch in a quota period may be smaller or larger than the Total Allowable Commercial Catches (TACCs) set for that quota period. Therefore, both the stock assessments and the harvest strategies for fisheries should consider the application of these provisions.

Through the mechanics applying under- and over-catch provisions it is also important to ensure clear rules are in place that can be administered effectively. While all jurisdictions ensure any over-catch is deducted from allocations provided in the subsequent quota period to address sustainability concerns, the level of deduction can be varied to remove incentive to over-catch<sup>4</sup>. The deduction from quota entitlements provided in the subsequent quota period has also made fishers generally conservative with using over-catch provisions, as the quota entitlements available in the subsequent quota period are reduced (Sanchirico et al, 2006).

Under-catch can be administered in a variety of ways. In all cases where the carry-over of quota entitlements is permitted, none allow quota entitlements to be carried over multiple years, which would permit the accumulation of banked quota entitlements for use in future quota periods (Sanchirico et al, 2006). In order to prevent the banking of carried over quota entitlements organisations require the carried over quota entitlements to be separated from other quota entitlements allocated in the quota period, made non-transferable and to be utilised before other quota entitlements allocated in the same quota period are utilised<sup>5</sup>. These requirements also provide for well defined operational rules around carry-over provisions.

---

<sup>4</sup> Once catch exceeds 10% of quota entitlements AFMA deduct over-catch at a rate 2:1 up to 2000kg.

<sup>5</sup> Operational and regulatory requirements applied by AFMA and NZ Fisheries.

While under-catch may reduce catches during a quota period, larger catches in the subsequent quota period may raise sustainability concerns, particularly in short lived species, or where localised depletion is possible. Consideration of this matter in stock assessment and harvest strategies will ensure the setting of TACCs in subsequent quota periods considers carry-over of quota entitlements from the subsequent quota period.

The consideration of both under- and over-catch provisions when setting the TACCs for a quota period in a fishery will enable any provisions applied to be considered as part of the TACCs. Therefore, while it is recommended that under-catch and over-catch could be up to 10% of the quota entitlements held by a licence holder at the end of the quota period, Management Advisory Committee's, where one exists, or the relevant industry fishing Association could recommend lower percentage under- and/or over-catch provisions be applied in some situations depending on the economic and/or stock sustainability requirements of the fishery.

### **Exceptional Circumstances**

Exceptional circumstances are circumstances beyond the control of a fishery that prevent the industry, as a collective, operating. The capacity to have up to 10% of quota entitlements carried over to the subsequent quota period provides some capacity for licence holders to adjust their business operations to address exceptional circumstances on an individual basis. However, where unforeseen exceptional circumstances that cannot be controlled occur (e.g. COVID-19), greater than 10% under-catch carry-over of quota entitlements may be sought.

An assessment of the impact caused by the exceptional circumstance on the ability of licence holders to harvest their quota entitlements in a fishery will be undertaken in the initial instance<sup>6</sup>. The second consideration will be the stock implications associated with an under-catch carry-over of greater than 10% to the next quota period. To address this risk, PIRSA will request scientific advice on the proposal.

### **References**

Connor, R., and D. Alden. 2001. Indicators of the effectiveness of quota markets: the Southeast Trawl Fishery of Australia. *Marine and Freshwater Research* 52:387–397.

National Oceanic and Atmospheric Administration; National Marine Fisheries Service. July 2020. National Standard 1 Technical Guidance for Designing, Evaluating, and Implementing Carry-over and Phase-in Provisions. NOAA Technical Memorandum NMFS-F/SPO-203: 7-23.

Sanchirico, J., Holland, D., Quigley, K., Fina, M. November 2005. Catch-Quota Balancing in Multispecies Individual Fishing Quotas. *Resources for the Future: Discussion Paper* 05-54: 15-19.

Sanchirico, J., Holland, D., Quigley, K., Fina, M. February 2006. Catch-Quota Balancing in Multispecies Individual Fishing Quotas. *Marine Policy*: 30-6: 767-785.

---

<sup>6</sup> *Kent v Wilson* [2000] VSC 98

"By and large "exceptional" is defined as being "unusual, or an unusual instance or extraordinary"."