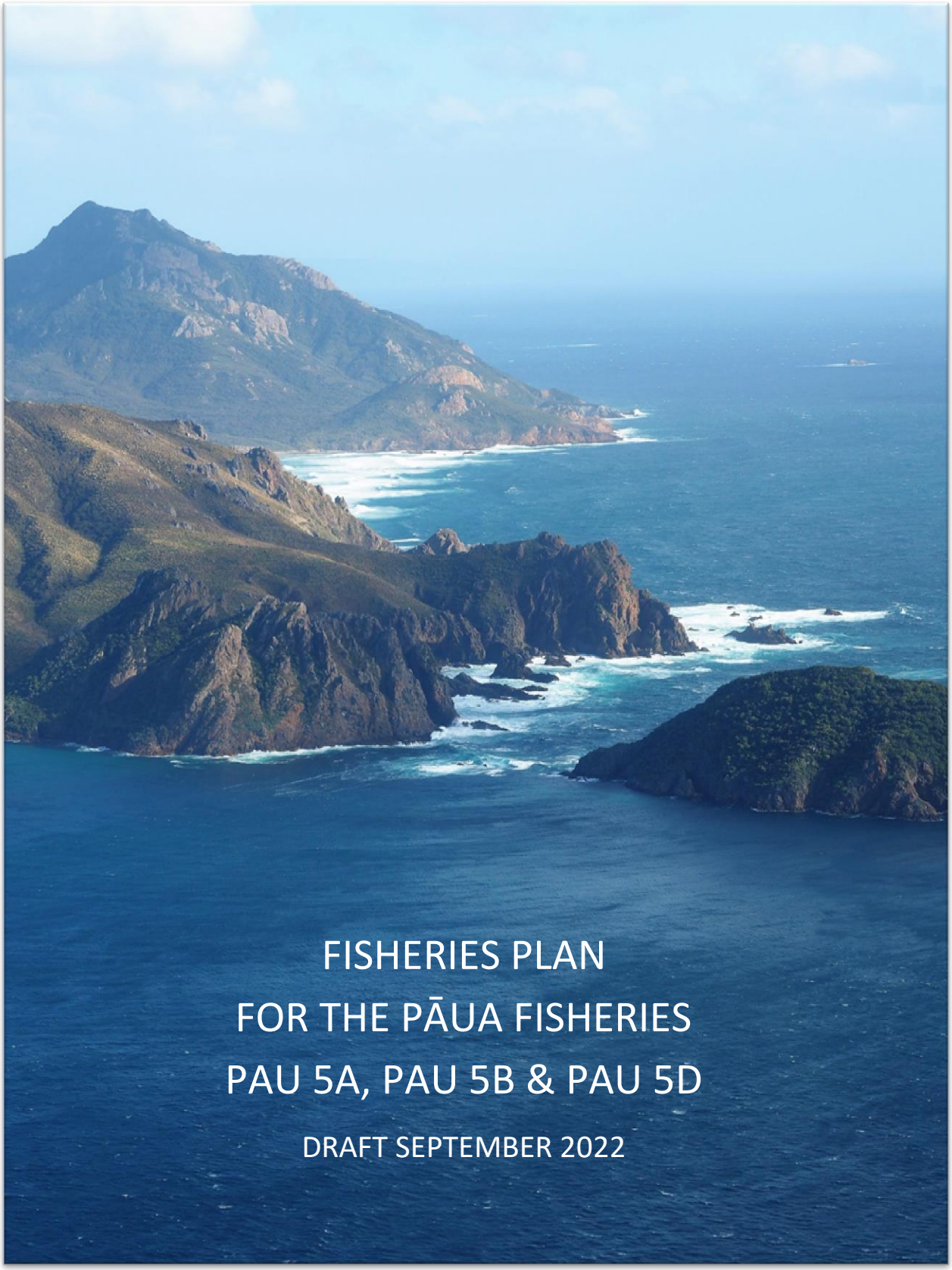


FISHERIES PLAN
FOR THE PĀUA FISHERIES
PAU 5A, PAU 5B & PAU 5D

DRAFT SEPTEMBER 2022

Contents

Part One: Introduction

Context

The pāua fisheries in the south of the South Island are highly valued by customary, commercial and recreational fishers. Pāua is a taonga for Ngāi Tahu. The commercial fishery is managed under the Quota Management System (QMS) as PAU 5A (Fiordland), PAU 5B (Stewart Island) and PAU 5D (Southland/Otago). Pāua is also important for recreational fishers, particularly around Dunedin.

The three PAU5 fisheries are estimated to be at or above their target levels. The biomass of PAU 5A and PAU 5B is slowly increasing, whereas PAU 5D is fluctuating around the target. In each fishery, the current abundance is reliant in part on measures that have been put in place by the industry, including ACE shelving, effort spreading and raising the minimum harvest size above the minimum legal size (MLS). While these initiatives have been positive for the sustainability of pāua stocks, more can still be done to enhance fine-scale management and improve the timeliness of management responses. Additional utilisation opportunities are potentially available – particularly around Stewart Island – but there is also a need to address ongoing and emerging issues in all three fisheries, including protecting important pāua habitat, continuing to build ecosystem considerations into fisheries management, and encouraging shared responsibility among fishing sectors.

In order to effectively implement the industry's contribution to the sustainable management of the PAU5 fisheries, PauaMAC5 has prepared this fisheries plan for approval by the Minister for Oceans and Fisheries under section 11A of the Fisheries Act 1996. The fisheries plan focuses on managing commercial harvesting activity and is intended complement other fisheries management initiatives for PAU5.

Scope

The fisheries plan was developed by industry representative body PauaMAC5 on behalf of all PAU 5A, PAU 5B and PAU 5D quota owners, ACE holders and harvesters.

The plan sets out actions that will be undertaken primarily by the fishing industry – that is, quota owners, ACE holders, harvesters and Licensed Fish Receivers (LFRs). These actions are implemented by industry initiatives within government management settings – i.e., within the constraints of the TACCs and current regulatory settings such as the MLS.

Because the PAU5 fisheries are shared with non-commercial fishers, the plan also includes strategies that recommend guidance for decisions made by the Minister for Oceans and Fisheries. Before making any decision to adjust a sustainability measure or regulate or control fishing in PAU 5A, PAU 5B or PAU 5D the Minister must take the fisheries plan into account, alongside all other relevant statutory considerations. Although the Minister is not bound to follow the provisions in the fisheries plan, the plan is one of the matters that will influence decision-making for the PAU5 fisheries.

The fisheries plan complements and is intended to integrate with other management initiatives relevant to the PAU5 fisheries including:

- The Te Waipounamu Iwi Forum Fisheries Plan and other expressions of iwi aspirations including mātaitai and taiāpure management plans;
- The Fiordland (Te Moana o Atawhenua) Marine Management Act 2005 and the responsibilities of the Fiordland Marine Guardians;
- Other relevant community initiatives, such as the Rakiura Marine Guardians; and
- The fisheries management functions of Fisheries New Zealand (FNZ).

Management Approach

The PAU5 plan is based on fine-scale, timely, and adaptive management responses. This management approach is particularly well suited to the PAU5 fisheries because the sustainability and abundance of sedentary species such as pāua depends primarily on local conditions and local fishing effort rather than on stock-wide factors. The four main management tools utilised in the plan are:

- Enhancing the productivity of pāua populations and protecting breeding stock by increasing the minimum size at which pāua are able to be harvested (i.e., the minimum harvest size or MHS);
- Boosting the rate of stock rebuild using the mechanism of ACE shelving in combination with TACC adjustments where appropriate;
- Controlling commercial fishing activity at a sub-QMA level, including by spreading harvesting effort and implementing variable MHSs within a QMA; and
- Enhancing local pāua populations using techniques such translocation.

The management measures in the PAU5 plan also recognise the important role that pāua play within the marine ecosystem.

While many management issues and approaches are common across all three of the PAU5 fisheries, each fishery also has its own particular challenges and opportunities. The plan reflects these similarities and differences. Unless otherwise specified, the objectives, policies and actions apply to all three PAU5 fisheries.

Annual Operating Plan

The PAU5 Fisheries Plan provides an enduring framework for managing the fisheries, but the operational management measures for PAU 5A, PAU 5B and PAU 5D will be set and reviewed annually in the PauaMAC5 Annual Operating Plan (**AOP**).

The AOP will be prepared using the process documented overleaf and will be publicly available.

Year 1	Action	Responsibility
1 October	Implement Year 1 management measures	PAU5 industry
March	Assess Year 1 fishing activity, stock status and trends Set provisional measures for AOP Year 2 using best available information	PauaMAC5 Executive, informed by feedback from harvesters
April, May	Engage with and seek feedback on the draft AOP from: • PAU5 quota owners and harvesters • Ngāi Tahu • Fiordland Marine Guardians and other relevant community groups • FNZ	PauaMAC5 Executive
June	PAU5 sign-off on management measures for Year 2 AOP Provide AOP to FNZ	PauaMAC5 AGM PauaMAC5 Executive
July	If ACE shelving is used: Forward ACE shelving put in place for Year 2 Provide report to FNZ on level of ACE shelving achieved	PAU5 quota owners PauaMAC5 Executive

Part Two: Objectives, Strategies and Actions

Objectives

Objective 1: Support and enhance the sustainability of the pāua stocks by:

- **PAU 5A** (Fiordland): maintaining the biomass at a level above 40% B_0 and encouraging the spread of fishing effort across the full spatial extent of the fishery;
- **PAU 5B** (Stewart Island): maintaining the biomass at a level well above 40% B_0 while enhancing utilisation opportunities across the full spatial extent of the fishery;
- **PAU 5D** (Southland/Otago): continuing to rebuild the fishery, taking account of the need to provide for utilisation, so that the biomass is maintained above 40% B_0.

40% B_0 (40 percent of original biomass) is the default management target for New Zealand's pāua fisheries.[1] *The PAU5 Fisheries Plan seeks to maintain the PAU5 stocks above the default management target.*

Objective 2: Protect important pāua habitat.

Objective 3: Enhance industry performance.

[1] Harvest Strategy Standard for New Zealand Fisheries, Ministry of Fisheries 2008.

Strategies and Actions

Strategies for supporting and enhancing sustainability

Strategy 1.1 Comprehensive data collection: Improve the comprehensiveness and accuracy of information on the PAU5 fisheries by implementing the following actions:

1.1.1 Use data from FNZ's electronic catch and location reporting regime to detect fine-scale changes in the fisheries and inform management responses.

1.1.2 Require at least one shell sample per dive day (for shell length monitoring).

1.1.3 Incorporate diver-provided information into decision-making.

Explanation: *Timely, fine-scale, verifiable commercial harvest information will be collected using FNZ's mandatory electronic catch and location reporting regime. Shell length sampling provides an important indication of the health of the fishery. Information provided by commercial divers is relevant to all the management measures in the AOP.*

Strategy 1.2 Timely adjustments to catch levels: Adjust commercial catch levels in a responsive manner by implementing the following actions:

1.2.1 Use the PAU5 harvest control rule (HCR) to adjust commercial harvest levels in PAU 5A, PAU 5B and PAU 5D by:

a) Recommending to the Minister of Fisheries that the PAU5 HCR is formally adopted and used to inform adjustments to the TACC and TAC; and
b) Using ACE shelving to adjust commercial harvest levels within the TACC until such time as the HCR is formally adopted to inform TACC and TAC adjustments.

1.2.2 Use ACE shelving to enhance the rate of rebuild, where appropriate, including by:

a) Maintaining 30% ACE shelving in PAU 5A until the HCR indicates that the level of shelving can be reduced;
b) Maintaining 35% ACE shelving in PAU 5D until the HCR indicates that the level of shelving can be reduced.

1.2.3 Review the level of shelving annually using the HCR and specify the required level of ACE shelving for each fishery (if any) in the Annual Operating Plan.

Explanation: *A harvest control rule (HCR) is a pre-agreed guideline that determines how much fishing can take place, based on indicators of stock status. The PAU5 HCR was developed following a series of stakeholder meetings and was formally agreed to at the 2016 PAU5 AGM. Catch per unit effort (CPUE) is used as an indicator of abundance trends to set shelving levels for the following fishing season, allowing timely adjustments of commercial catch in between stock assessments, which typically get updated every 3-5 years. The HCR will be specified in the AOP. When used in conjunction with the TACC, ACE shelving is a secure and responsive way of enhancing the rate of fishery rebuild by fine-tuning commercial harvest levels on an annual basis. In the longer term, PauaMAC5 anticipates that the HCR will drive adjustments to the TACC and TAC.*

Strategy 1.3 Reduce the risk of serial depletion: Reduce the risk of serial depletion by spreading commercial fishing effort within each of the PAU5 QMAs, using the following actions:

1.3.1 Identify sub-areas of each QMA for industry catch monitoring and management purposes.

1.3.2 **PAU 5A** (Fiordland): Establish and maintain appropriate catch spreading arrangements in order to distribute fishing effort and catch throughout the coastline of the QMA.

1.3.3 **PAU 5B** (Stewart Island) and **PAU 5D** (Southland/Otago): Review the need for formal catch spreading arrangements on an annual basis, and establish if required.

1.3.4 Use the PAU5 Dashboard website to:

a) Monitor sub-area catch on a timely basis; and
b) Make aggregated catch and location information available to participating harvesters to assist in the implementation of formal and informal catch spreading.

1.3.5 Review sub-areas and effort spreading arrangements on an annual basis and specify in the Annual Operating Plan.

Explanation: *The management of commercial harvesting at a sub-QMA level can help spread fishing effort and catch and manage the risk of local depletion. Catch spreading arrangements may include sub-area targets or limits with a 'traffic light' system to indicate sub-areas that are approaching or have reached their desired level of catch, more formal assignment of a proportion of ACE to each sub-area, and in-season area closures of heavily fished areas if catches reach a specified threshold.*

For PAU 5A, formal catch spreading is desirable in order to ensure that pāua continues to be taken from the less accessible central areas of the Fiordland coast as well as the more accessible northern and southern areas. For PAU 5B, the widespread abundance of the fishery and distribution of effort around Stewart Island by harvest crews mean that formal catch spreading arrangements are not currently required. For PAU 5D, the low commercial catch limit, weather, and harvest crew behaviour informally spread effort across the fishery. The need to use more formal catch spreading in PAU 5B and PAU 5D will be reviewed regularly.

Strategy 1.4 Protect spawning opportunity: Protect and enhance pāua spawning opportunity by implementing the following actions:

1.4.1 Adjust pāua Minimum Harvest Size (MHS) at an appropriate spatial scale, with details specified in the Annual Operating Plan and reviewed annually.

1.4.2 Contribute to industry research programmes on pāua length at maturity and growth rates.

Explanation*: Adjusting the commercial MHS above the minimum legal size (MLS) of 125mm allows additional spawning events before pāua become available for harvest. This is particularly important in the southern part of New Zealand where pāua mature at a larger size than in elsewhere. For this reason, MHS in sub-areas of the PAU5 fisheries are currently set between 125 and 137mm. The results of*

research on fine-scale spatial variation in length at maturity, spawning behaviour, and the optimal number of spawning years will be used to set and adjust the MHS in the AOP.

Strategy 1.5 Fishery enhancement: Enhance the spatial extent of harvestable pāua populations in PAU 5A and PAU 5B, increase the rate of stock rebuild in PAU 5D, and contribute to the wider restoration of marine ecosystems using fishery enhancement techniques such as:

1.5.1 Translocation to establish spawning banks/founder populations in areas subject to historical localised depletion that previously supported strong pāua populations.

1.5.2 Out-planting where this is practical and justified by analysis of costs and benefits.

Explanation*: Translocation and out-planting programmes can be used to target particular areas of the fishery where these techniques will help improve local abundance. The performance of these methods of fisheries enhancement will initially be trialed, monitored and assessed prior to broader implementation. The sustainability of pāua stocks in all areas is paramount, including 'donor areas' where pāua are sourced for translocation. Fishery enhancement techniques can also contribute to restoration of degraded marine ecosystems.*

In PAU 5A and PAU 5B, translocation will be trialed and used to "fill in the gaps" by repopulating areas that used to support healthy pāua populations but, as a result of historical depletion, no longer do. In PAU 5D enhancement techniques will be used to increase the rate of rebuild of the stock. Details of enhancement programmes will be specified in the AOP, and the translocation plans needed to obtain a special permit will be developed collaboratively with Ngāi Tahu Tangata Tiaki/Kaitiaki.

Strategy 1.6 Protect spatial access to pāua fisheries: Safeguard sustainability and prevent displacement of commercial fishing effort by:

1.6.1 Promoting continued access to the full spatial extent of all areas where commercial pāua harvesting currently occurs.

1.6.2 In the event that spatial access to a PAU5 fishery is reduced, recommending to the Minister of Oceans and Fisheries that the affected fishery should be 'rebalanced' by:

a) Rebalancing the biological system by implementing an appropriate fisheries management response to remove the displaced catch from the fishery; and
b) Rebalancing economic incentives by compensating affected quota owners for the market value of quota shares equivalent to the foregone commercial catch; or
c) As an alternative to a) and b), providing equivalent spatial access to suitable pāua habitat elsewhere in the QMA.

Explanation*: Pāua fisheries are extremely vulnerable to the impacts of displaced catch. When an area is closed to pāua harvesting, displaced catch – whether commercial, recreational or customary – leads to localised depletion outside the closed area as fishers compete to take their existing catch entitlements from a reduced area and, consequently, a smaller resource. Localised depletion can, in turn, lead to stock-wide sustainability risks. The PAU5 fisheries have experienced considerable loss of spatial access*

over many years, including as a result of regulatory closures imposed for non-fisheries purposes, marine reserves, mātaitai reserves, and taiāpure regulations. Displaced catch from closed areas has slowed the rebuild rate of PAU 5D. For these reasons, PauaMAC5 seeks to prevent any erosion of further spatial access to pāua fisheries.

The 'rebalancing' strategy, developed with the agreement of Ngāi Tahu, is intended to ensure that any future closures do not have adverse effects on the sustainability of pāua fisheries or on the economic incentives for the effective operation of the QMS.

Strategies for protecting important pāua habitat

Strategy 2.1 Identify habitat of particular significance for fisheries management (HPSFM): Identify areas that are particularly important for pāua larval settlement and nursery habitat, and map the identified HPSFM in the Annual Operating Plan, reviewing and amending as new information becomes available.

Strategy 2.2 Habitat protection: Work with the Fiordland Marine Guardians (for PAU 5A) and other interested parties (for all PAU5 fisheries) to ensure that important pāua habitat is protected from adverse effects of fishing and non-fishing activities, including activities managed under the Resource Management Act 1991 (RMA) or equivalent legislation, by implementing the following actions:

2.2.1 Build relationships with relevant local and regional authorities.

2.2.2 Promote the adoption of appropriate provisions to protect pāua habitat in planning documents prepared under the RMA and in resource consent conditions for activities that may have an adverse effect on pāua habitat.

2.2.3 Encourage FNZ to support the identification and protection of HPSFM under the Fisheries Act and other relevant legislation.

Explanation: *Fisheries Act section 9(c) requires decision makers to take account of the principle that HPSFM should be protected. Other marine and terrestrial activities can have adverse effects on pāua habitat – for example, the discharge of sediment from land disturbance or the erection of coastal structures. A fisheries plan approved under section 11A of the Act has status under other legislation, including the RMA, enabling an integrated, multi-agency approach to protecting areas that are critical for sustaining healthy pāua populations. The protection of pāua habitat in the south of New Zealand will become increasingly important as climate change shifts pāua fisheries southwards.*

Strategies for enhancing industry performance

Strategy 3.1 Professional and responsible harvest crews: Improve the performance of harvest crews by the following actions:

3.1.1 Require all harvesters to comply with PauaMAC5's general operating procedures and best practice rules, including procedures related to:

a) Harvesting, handling and landing of pāua;

b) Biosecurity;
c) Protecting the fishery from theft; and
d) Recreational take by commercial operators.

3.1.2 Implement and maintain a regular harvester training programme covering matters such as best pāua handling practice, and compliance with industry and government rules.

***Explanation**: Good harvesting practice builds on existing industry practices, and is an essential component of effective management of the PAU5 fisheries.*

Strategy 3.2 Quota owner responsibility: Foster quota owner responsibility for harvest crew performance by implementing the following actions:

3.2.2 Obtain agreement from PAU 5A, PAU 5B and PAU 5D quota owners to:

a) Place conditions on ACE requiring harvesters to comply with all industry rules in the Annual Operating Plan; and
b) Enforce ACE conditions by withholding ACE, where necessary, from harvesters who fail to comply with the industry rules.

3.2.3 Encourage PAU 5A, PAU 5B and PAU 5D quota owners to:

a) Use multi-year ACE commitments so that harvesters have the security of a longer-term interest in the fishery;
b) Where possible, provide harvesters with a portfolio of work in different dive fisheries; and
c) Avoid the use of casual labour on pāua vessels.

***Explanation**: The effective enforcement of quota owner-imposed ACE conditions is a critical aspect of ensuring compliance with industry-initiated management measures. Quota owners should take active steps to help ensure that their dive crews are professional, economically viable and have a secure future in the PAU5 fisheries.*

Strategy 3.3 Shared fishery responsibility: Engage with Ngāi Tahu, the Guardians of Fiordland, relevant community groups, and FNZ to promote the shared interests of iwi and all stakeholders in the responsible management of the PAU5 fisheries, including by the following actions:

3.3.1 Establish mechanisms for regular engagement between PauaMAC5 and Ngāi Tahu representatives to address common management issues for the PAU5 fisheries and to discuss PauaMAC5's Annual Operating Plan.

3.3.2 Encourage the participation of mandated representatives of the recreational fishing sector in the management of pāua fisheries, including discussion of the Annual Operating Plan.

3.3.3 Promote the following requirements for effective management of the PAU5 fisheries to government fisheries managers:

a) Greater clarity and certainty about inter-sectoral allocation, reflecting common interests in the health of the PAU5 fishery;

b) Higher regulated minimum legal size for recreational fishing, consistent with best available information about pāua length at maturity in the PAU5 fisheries; and
c) Reduction of illegal harvest of pāua.

***Explanation**: PauaMAC5 will establish regular opportunities to help inform Ngāi Tahu and local communities of the PAU5 Plan, to seek support for industry management measures, and to integrate the PAU5 Plan with other fisheries management initiatives. Strategy 3.3.3 addresses issues that are beyond the industry's direct control but are nevertheless essential for achieving the objectives of the Plan. PauaMAC5 will promote these measures directly to the recreational fishing sector, as well as to government fisheries managers.*

Part Three: Implementation, monitoring and review

Implementing the measures in the Plan

The annual measures that will be implemented by the PAU5 industry will be set out in the PauaMAC5 AOP, as described in Part One of the Plan.

The Plan's strategies and actions enable the implementation methods to evolve or change over time. At any one time a mix of the following implementation mechanisms may be in use.

- **ACE shelving** – Prior to the start of the fishing year, PAU5 quota owners transfer the specified percentage of ACE to a non-fishing entity – i.e., to PauaMAC5's account on the publicly-accessible ACE register maintained by FishServe. ACE that is shelved cannot be fished during that year. The security and effectiveness of ACE shelving has been demonstrated by PauaMAC5 over many years. ACE shelving requires a high level of support from quota owners in order to achieve the specified level of catch reduction.
- **Industry rules** – Industry members agree to and implement non-regulatory measures on a voluntary basis (e.g., rules relating to area closures or catch spreading).
- **Authorised management** – PauaMAC5 and the seafood industry have for many years been advocating for amendments to be made to the Fisheries Act to enable 'authorised management'.[2] Under authorised management, a group of quota owners would be authorised by the Minister to perform specified management functions for the commercial share of a fishery within government-set standards. Industry rules made under this regime would bind all quota owners and commercial harvesters in a fishery so as to provide government, iwi, and fisheries stakeholders with confidence that industry management measures will be implemented in a transparent, equitable and enforceable manner.
- **Advocacy & education** – In some cases the necessary management measures are beyond the control of the PAU5 industry and rely on the actions of other parties – for example, in relation to

[2] Authorised management is described in detail in the Initial Seafood Industry Contribution to Fisheries Management Review 2015/16 *Creating Value 'Beyond Sustainability'* (December 2015).

protection of pāua habitat from degradation by land-based activities. In these cases, the PAU5 industry will seek to implement the strategies in the plan by education and advocacy.

Performance measures and monitoring

The PAU5 Plan has five performance measures which are set out below.

Performance will be monitored by the PauaMAC5 Executive and by FNZ on an ongoing basis.

	Performance measure	Monitoring mechanism
1	The AOP is prepared according to the requirements of Plan	FNZ receives the AOP by the due date and the AOP covers the measures specified in Plan
2	The level of ACE shelving specified in the AOP is consistent with Fisheries Act requirements for ensuring stock sustainability[3]	PauaMAC5 and FNZ share information on PAU5 stock sustainability and discuss AOP specifications before June each year
3	The specified level of ACE shelving is achieved by 31 July each year	PauaMAC5 monitors the level of ACE shelving using the quota register and reports the level of shelving achieved to FNZ
4	Industry compliance with industry rules in the AOP is sufficient to ensure the integrity of the management measures	PauaMAC5 monitors compliance with industry rules using information from harvesters and LFRs, data loggers and the PAU5 Dashboard website FNZ monitors electronic catch and position reporting
5	Community support for the Plan	PauaMAC5 and FNZ monitor community views through direct liaison with Ngāi Tahu and representatives of other fishing interests

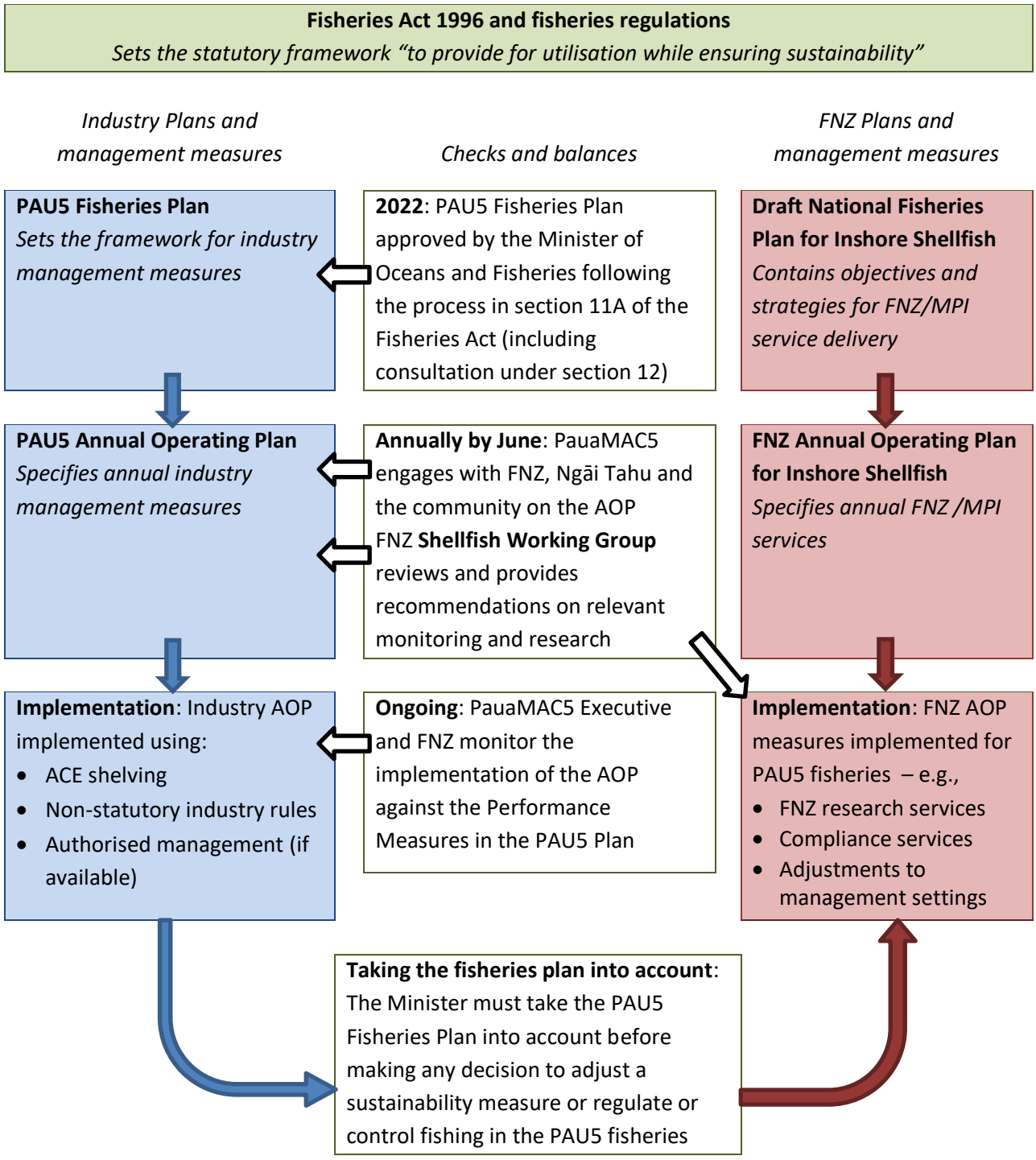
Review

PauaMAC5 will review the PAU5 Fisheries Plan after the plan has been in place for five years. The review will be undertaken in consultation with FNZ and Ngāi Tahu representatives.

Integrating the Fisheries Plan with FNZ management measures

The PAU5 Fisheries Plan aligns with and complements FNZ's management services for the PAU5 fisheries as shown in the diagram overleaf.

[3] These requirements are set out in Fisheries Act sections 11 and 13.


Fisheries Act 1996 and fisheries regulations
Sets the statutory framework "to provide for utilisation while ensuring sustainability"
Industry Plans and management measures
Checks and balances
FNZ Plans and management measures
PAU5 Fisheries Plan
Sets the framework for industry management measures
2022: PAU5 Fisheries Plan approved by the Minister of Oceans and Fisheries following the process in section 11A of the Fisheries Act (including consultation under section 12)
Draft National Fisheries Plan for Inshore Shellfish
Contains objectives and strategies for FNZ/MPI service delivery
PAU5 Annual Operating Plan
Specifies annual industry management measures
Annually by June: PauaMAC5 engages with FNZ, Ngāi Tahu and the community on the AOP
FNZ Shellfish Working Group reviews and provides recommendations on relevant monitoring and research
FNZ Annual Operating Plan for Inshore Shellfish
Specifies annual FNZ /MPI services
Implementation: Industry AOP implemented using:
ACE shelving
Non-statutory industry rules
Authorised management (if available)
Ongoing: PauaMAC5 Executive and FNZ monitor the implementation of the AOP against the Performance Measures in the PAU5 Plan
Implementation: FNZ AOP measures implemented for PAU5 fisheries – e.g.,
FNZ research services
Compliance services
Adjustments to management settings
Taking the fisheries plan into account: The Minister must take the PAU5 Fisheries Plan into account before making any decision to adjust a sustainability measure or regulate or control fishing in the PAU5 fisheries