



PAU 2 (WAIRARAPA) FISHERIES PLAN

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Part One: Introduction

Context

The pāua fisheries on the Wairarapa coast are highly valued by customary, commercial and recreational fishers. The commercial fishery is managed under the Quota Management System (QMS) as PAU 2. Although the PAU 2 Quota Management Area (QMA) is extensive, this plan applies only in the area where commercial harvesting takes place – that is, from Turakirae Head to Blackhead.



The PAU 2 Total Allowable Commercial Catch (TACC) of 121 tonnes was set in 1986 when pāua was introduced into the QMS.¹ Pāua is a taonga for mana whenua and is also a popular recreational dive fishery.

The PAU 2 stock is estimated to be fluctuating at or above its management target. Although the fishery has been healthy and stable for many years, some areas are coming under increasing pressure and the PAU 2 industry considers that there is no room for complacency. The current abundance is reliant in part on measures that have been put in place voluntarily by the industry, including effort spreading and raising the minimum harvest size above the minimum legal size (MLS). These initiatives have helped sustain the fishery, but more can still be done to enhance fine-scale management, improve the timeliness of management responses,

build ecosystem considerations into fisheries management, and encourage shared responsibility among fishing sectors. There is also a need to respond to current and future threats to pāua populations and habitats that are beyond the industry's direct control, such as siltation from terrestrial activities, warming sea temperatures and ocean acidification.

In order to effectively implement the industry's contribution to the sustainable management of PAU 2, PauaMAC2 has prepared this fisheries plan on behalf of all PAU 2 quota owners, ACE holders and harvesters 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 PAU 2.

¹ PAU 2 does not have a Total Allowable Catch (TAC) or allowances for customary or recreational fishing as these were not necessary prior to 1996. If the PAU 2 TACC is adjusted in future, a TAC and allowances will be set.

Scope

The fisheries plan applies only to the area of PAU 2 that is harvested commercially (Turakirae to Blackhead). It sets out actions that will be undertaken primarily by the fishing industry – that is, PAU 2 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 TACC and current regulatory settings such as the MLS.

The plan also provides 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 2 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 plan, it is one of the matters that will influence decision-making for PAU 2.

The fisheries plan complements and is intended to integrate with other PAU 2 management initiatives, including the lower east coast Iwi Forum Fisheries Plan, other iwi management initiatives such as mātaihai and taiāpure, and the fisheries management functions of Fisheries New Zealand (FNZ).

Management Approach

The PAU 2 plan is based on fine-scale, timely, and adaptive management responses. This management approach is particularly well suited to pāua 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 two main management tools utilised in the plan are:

- Enhancing pāua productivity 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); and
- Controlling commercial harvesting activity at a fine spatial scale, including by spreading harvesting effort and adjusting the MHS in different areas of the fishery.

Other tools are also available if required, such as reducing the total level of commercial catch by setting aside an agreed proportion of Annual Catch Entitlement (i.e., ACE shelving) or enhancing local pāua populations using translocation. The management measures in the PAU 2 plan also recognise the important role that pāua play within the marine ecosystem.

Annual Operating Plan

The PAU 2 Fisheries Plan provides an enduring framework for managing the fishery, but the operational management measures will be set and reviewed in the PauaMAC2 Annual Operating Plan (**AOP**).

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

Timing	Action	Responsibility
May	Assess fishing activity, stock status and trends Set provisional measures for draft AOP using best available information	PauaMAC2 Executive, informed by feedback from harvesters
June, July	Engage with and seek feedback on the draft AOP from: <ul style="list-style-type: none"> • PAU 2 quota owners and harvesters • Iwi • FNZ 	PauaMAC2 Executive
August	Discuss and propose fine-scale management measures Approve AOP management measures Provide AOP to FNZ	Divers forum PauaMAC2 AGM PauaMAC2 Executive
October onwards	Implement management measures specified in AOP	PAU 2 industry

Part Two: Objectives, Strategies and Actions

Objectives

Objective 1: Support and enhance the sustainability of PAU 2 by building and maintaining a buffer of abundance above the default target level of 40% B_0 .

40% B_0 (40 percent of original biomass) is the default management target for all New Zealand's pāua fisheries.² The PAU 2 Fisheries Plan seeks to maintain the PAU 2 stock above the default management target by proactively building and maintaining additional abundance as an insurance policy against future risks to the fishery.

Objective 2: Protect important pāua habitat.

Objective 3: Enhance industry performance.

Strategies and Actions

Strategies for supporting and enhancing sustainability

Strategy 1.1 Comprehensive data collection: Improve the comprehensiveness and accuracy of information about the PAU 2 fishery 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.

² Harvest Strategy Standard for New Zealand Fisheries, Ministry of Fisheries 2008.

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 Reduce the risk of serial depletion: Reduce the risk of serial depletion by spreading fishing effort within the commercially harvested area of PAU 2, using the following actions:

- 1.2.1 **North-south ACE split:** Require an agreed proportion of ACE to be harvested in the north of the fishery.
- 1.2.2 **Catch caps:** Set and implement catch caps to spread effort at a smaller spatial scale.
- 1.2.3 **Area closures:** Close an area when the catch cap is reached, where necessary.
- 1.2.4 **Dashboard:** Use the PAU 2 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 catch spreading.
- 1.2.5 **Annual review:** Review all effort spreading arrangements on an annual basis and specify details in the Annual Operating Plan.

Explanation: *The management of commercial harvesting at a sub-QMA level can help spread fishing effort and reduce the risk of local depletion. Two types of catch spreading are used in PAU 2 – i.e., the north-south split and catch caps at a finer spatial scale. The north-south split relieves pressure from the well-utilised southern fishery and shifts effort into the northern area which is more challenging to fish due to the prevailing conditions. The boundaries and targets for ACE splitting will be reviewed on an annual basis. Consideration will also be given to mechanisms to facilitate ACE swaps between the north and south zones in order to suit the circumstances of individual ACE holders.*

Catch caps will be set at an appropriate spatial scale (currently statistical areas) and will be reviewed annually, particularly if adjustments are made to the MHS. In some areas, catch caps will be indicative targets but in other areas it may be necessary to close the area to commercial harvesting when the catch cap has been reached. The AOP will specify the details of the catch spreading regime, including how decisions will be made about whether an area will be closed.

Strategy 1.3 Build abundance and protect spawning opportunity: Build and maintain a buffer of abundance by implementing the following actions:

- 1.3.1 Gradually increase the Minimum Harvest Size (MHS) in areas of the fishery that can support the harvesting of larger pāua, with details specified in the Annual Operating Plan and reviewed annually.
- 1.3.2 Contribute to industry research programmes on pāua length at maturity and growth rates.
- 1.3.3 Ensure that well-utilised areas of the fishery are rested between fishing seasons.

Explanation: Increasing the commercial MHS above the MLS of 125mm will increase the biomass of the fishery and will allow additional spawning events before pāua become available for commercial harvest. Not all areas of PAU 2 support larger pāua and it is important to ensure that the MHS is compatible with catch spreading objectives. Variable MHS will therefore be set at an appropriate spatial scale and will not apply in all areas. The results of research on 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.

Anecdotal information indicates that the PAU 2 fishery responds well to being left for a period of time between harvesting events. While resting often occurs naturally as a consequence of environmental conditions, consideration will be given to mechanisms to implement seasonal rest periods in areas where this would benefit abundance in the following season.

Strategy 1.4 Timely adjustments to catch levels: If a decline in biomass is indicated, proactively manage commercial catch levels by implementing the following actions:

- 1.4.1 Use ACE shelving to protect the fishery from the risk of significant decline, and specify the required level of shelving (if any) in the Annual Operating Plan.
- 1.4.2 Support the development and adoption of a harvest control rule (HCR) for PAU 2, and use the HCR to inform future adjustments to commercial harvest levels.

Explanation: Commercial catch levels in PAU 2 have not required adjustment since 1986. However, if a future decline in the fishery is indicated – e.g., through changes in catch per unit effort, biological indicators, or diver observations – the most effective response is to reduce the total amount of catch. ACE shelving allows the industry to proactively reduce catch in a secure and timely manner, and can be supported by TACC adjustments if required.

A harvest control rule (HCR) is a pre-agreed guideline that determines how much fishing can take place, based on indicators of stock status. An HCR will improve certainty and responsiveness for catch level adjustments in PAU 2.

Strategy 1.5 Fishery enhancement: Explore the potential to enhance the spatial extent of harvestable pāua populations in PAU 2 by translocating pāua from ‘stunted’ populations to faster growing areas by implementing the following actions:

- 1.5.1 Conduct research to identify suitable donor and recipient sites for pāua translocation.
- 1.5.2 Discuss and agree any proposed translocation trials or projects with mana whenua hapū.

Explanation: Translocation is the moving of pāua from ‘stunted’ populations (i.e., areas where mature pāua rarely reach the MLS of 125mm) to faster growing areas in order to increase local pāua abundance. 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. Translocation requires a special permit to be obtained from FNZ. Any translocation plans for the special permit will be developed collaboratively with mana whenua. Details of translocation projects will be specified in the AOP.

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 HPSFM in the Annual Operating Plan, reviewing and amending as new information becomes available.

Strategy 2.2 Habitat protection: Work with iwi and other interested parties 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 forestry harvesting or land disturbance. 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 along the Wairarapa coast will become increasingly important as the effects of climate change are felt.

Strategies for enhancing industry performance

Strategy 3.1 Industry organisation: Make sure that PauaMAC2 is able to effectively support the implementation of the PAU 2 Fisheries Plan by implementing the following actions:

- 3.1.1 Ensure the PauaMAC2 governance arrangements are fit for purpose and effectively represent the full range of interests of PAU 2 quota owners and harvesters.
- 3.1.2 Support the establishment and regular operation of a Divers' Forum for harvesters to share information and to develop and propose appropriate management responses for consideration by the wider PAU 2 industry.

Explanation: PAU 2 has a wide range of quota owning interests, including substantial iwi quota ownership, and is harvested by local dive crews as well as crews based in other parts of the country. It is important for the implementation of the fisheries plan that PauaMAC2 effectively represents the full range of commercial rights and interests in the fishery. A divers' forum provides an opportunity for sharing information among harvesters and allows divers' knowledge and understanding of the fishery to be fed into management decisions.

Strategy 3.2 Professional and responsible harvest crews: Improve the performance of harvest crews by the following actions:

- 3.2.1 Require all harvesters to comply with PauaMAC2's general operating procedures and best practice rules, including procedures related to:
 - a) Harvesting, returning to the sea, handling, and landing of pāua;
 - b) Biosecurity;
 - c) Protecting the fishery from theft; and
 - d) Recreational take by commercial operators.
- 3.2.2 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 PAU 2 fishery.*

Strategy 3.3 Quota owner responsibility: Foster quota owner responsibility for harvest crew performance by implementing the following actions:

- 3.3.1 Obtain agreement from PAU 2 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 from harvesters who fail to comply with the industry rules.
- 3.3.2 Encourage PAU 2 quota owners to use multi-year ACE commitments so that harvesters have the security of a longer-term interest in the fishery.

***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 PAU 2 fishery.*

Strategy 3.4 Shared fishery responsibility: Engage with iwi, other fishing sectors, and FNZ to promote the shared interests of iwi and all stakeholders in the responsible management of the PAU 2 fishery, including by the following actions:

- 3.4.1 Establish mechanisms for regular engagement between PauaMAC2 and iwi representatives to address common management issues for the pāua fishery and to discuss PauaMAC2's Annual Operating Plan.
- 3.4.2 Encourage the participation of mandated representatives of the recreational fishing sector in the management of PAU 2 by building relationships at local community level (e.g., at Ngawi, Tora, Riversdale).
- 3.4.3 Support the future subdivision of the PAU 2 quota management area, provided that boundaries are agreed by relevant iwi and the subdivision has the support of iwi and all fisheries stakeholders.

- 3.4.4 Maintain voluntary closures for community purposes at Ngawi and any other locations specified in the Annual Operating Plan.
- 3.4.5 Promote to government fisheries managers the following measures for effective management of the PAU 2 fishery:
- a) Given the observed increase in recreational fishing pressure in PAU 2:
 - Accurate and timely information is required on recreational harvest;
 - More effective constraint of recreational harvesting is necessary to reflect shared responsibilities and to protect the pāua fishery for future generations;
 - b) If a TAC is set for PAU 2, incentives and equity among sectors should be maintained by retaining the current proportionality between the TACC and a reasonable level of recreational catch; and
 - c) If additional areas of PAU 2 are closed to commercial or recreational pāua harvesting for any purpose, appropriate steps should be taken to avoid the adverse effects of displaced effort and catch.

Explanation: *PauaMAC2 will establish regular opportunities to help inform Iwi and local communities of the PAU 2 Fisheries Plan, to seek support for industry management measures, and to integrate the PAU 2 Plan with other fisheries management initiatives. PauaMAC2 will not initiate a subdivision of PAU 2, but will support it where agreement is reached among relevant iwi. Subdivision can enhance sustainability and utilisation of pāua outside the current commercial area by improving fisheries information and management. Action 3.4.5 addresses issues that are beyond the industry's direct control but are nevertheless essential for achieving the objectives of the Plan. PauaMAC2 will promote these measures directly to the recreational fishing sector, as well as to FNZ and the Minister.*

Part Three: Implementation, monitoring and review

Implementing the measures in the Plan

The annual measures that will be implemented by the PAU 2 industry will be set out in the PauaMAC2 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.

- **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).
- **ACE shelving** – If ACE shelving is used, prior to the start of the fishing year, PAU 2 quota owners will transfer the specified percentage of ACE to a non-fishing entity on the publicly-accessible ACE register maintained by FishServe. ACE that is shelved cannot be fished during that year. ACE shelving requires a high level of support from quota owners in order to achieve the specified level of catch reduction.
- **Authorised management** – PauaMAC2 and the seafood industry have for many years been advocating for amendments to be made to the Fisheries Act to enable 'authorised

management'.³ 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 PAU 2 industry and rely on the actions of other parties – for example, in relation to protection of pāua habitat from degradation by land-based activities. In these cases, the PAU 2 industry will seek to implement the strategies in the plan by education and advocacy.

Performance measures and monitoring

The PAU 2 Fisheries Plan has four performance measures which are set out below. Performance will be monitored by the PauaMAC2 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 Industry compliance with industry rules in the AOP is sufficient to ensure the integrity of the management measures	PauaMAC2 monitors compliance with industry rules using information from harvesters, LFRs, and the PAU2 Dashboard FNZ monitors electronic catch and position reporting
3 If ACE shelving is used, the level of ACE shelving is consistent with Fisheries Act requirements for ensuring stock sustainability and the specified level is achieved well prior to the start of the fishing year	PauaMAC2 and FNZ share information on PAU2 stock sustainability and discuss AOP specifications before July each year PauaMAC2 monitors the level of ACE shelving using the quota register and reports the level of shelving achieved to FNZ
4 Community support for the Plan	PauaMAC2 and FNZ monitor community views through direct liaison with the Iwi Fisheries Forum and representatives of other fishing interests

³ Authorised management is described in detail in the Initial Seafood Industry Contribution to Fisheries Management Review 2015/16 *Creating Value 'Beyond Sustainability'* (December 2015).

Review

PauaMAC2 will review the PAU 2 Fisheries Plan after the plan has been in place for five years. The review will be undertaken in consultation with FNZ and will include relevant iwi engagement.

Integrating the Fisheries Plan with FNZ management measures

The PAU 2 Fisheries Plan aligns with FNZ's management services for PAU 2 as shown below.

