

PAU 4 MANAGEMENT BY MEATWEIGHT – INITIAL POSITION PAPER



Figure 1.

Executive Summary

- 1 This paper describes a request to alter management of the PAU 4 (Chatham Island) paua fishery from greenweight to meatweight.
- 2 The request comes from PAUMAC 4 Industry Association Incorporated (PAUMAC4) and aims to improve the productivity and sustainability of the fishery by removing incentives to over-fish those parts of PAU 4 with high meatweight recovery. Other areas in PAU 4 are under-fished due to extreme shell fouling by encrusting organisms (see figure 1) and consequent low meatweight recovery. The proposal may also help reduce illegal fishery practices to manipulate greenweight, such as shell chipping and delayed landing of paua.
- 3 To manage the fishery using meatweight would require changes to reporting regulations and the PAU 4 s18 notice. If the request is approved, a meatweight TAC, TACC and non-commercial allowances will also need to be set for PAU 4.

- 4 Discussions with the paua industry and the MFish Shellfish Working Group suggest that the paua greenweight to meatweight conversion factor of 2.5 (equivalent to 40% meatweight recovery) already specified in legislation may be an appropriate basis for translating to a meatweight TACC. However, proposals on the TAC, TACC and non-commercial allowances for PAU 4 will be put forward as part of the MFish sustainability round later this year, if the PAUMAC4 request is approved.
- 5 Other options for managing the PAU 4 fishery are discussed in this paper, including the use of conversion factors, and managing on the basis of paua numbers.

Regulatory Impact Analysis Requirements

- 6 This initial position paper (IPP) required a Regulatory Impact Statement which was reviewed internally by MFish.
- 7 For more information on the Regulatory Impact Analysis Requirements and the meaning of the word 'significant' with reference to an IPP, please refer to the Treasury website www.treasury.govt.nz.

The Issue.

- 8 Paua in some parts of PAU 4 are characterised by extreme fouling by encrusting organisms (figure 1). Fouling can comprise up to 15% of the total greenweight of paua in these areas and meat recovery rates can vary from 32%, for heavily encrusted paua, to 45%, for paua with clean shells.
- 9 The issue of encrusted shell is not limited to PAU 4, other FMA's also have this characteristic. The extent and volume of paua effected by fouling in the Chatham Island is of a different scale.
- 10 As a result, PAU 4 fishers fish in ways that, while maximising the meatweight return to the quota holder in the short term, work against the long-term productivity, sustainability and efficient utilisation of PAU 4. For example, fishers:
 - Fish only those areas without fouled shells.
 - Do not land paua the same day as caught. Paua will be left on vehicles to allow maximum drain time.
 - Manually chip excessive fouling off the shell.
- 11 All of these activities reduce the amount of greenweight paua reported from the fishery and, therefore, increase the meatweight return to ACE and quota holders. However, they also reduce the quality of paua being produced and result in over-fishing of areas with non-encrusted shells.
- 12 In 2008, PAUMAC4 representatives approached MFish to discuss progress on a suite of measures aimed at improving the productivity and sustainability of PAU 4. Fishers have initiated reseedling, fine scale monitoring and enhancement in PAU 4. Voluntary

catch spreading and MFish compliance initiatives have also resulted in improvements in the fishery¹.

- 13 PAUMAC4, however, also considers that management settings for PAU 4 were creating undesirable incentives to maximise short-term gains. They asked that MFish consider managing the fishery by meatweight rather than greenweight to eliminate some of these incentives.

Summary of Options

Option 1 – Status Quo

- 14 The status quo option means the fishery continues to be managed on a greenweight basis with the TACC for the fishery still at 326.543 tonnes. There are no other changes to management settings under the status quo option.
- 15 Under this option, improved management of the fishery will depend on the success of the recent compliance initiatives and voluntary catch spreading measures being implemented by the PAU 4 industry.

Option 2 – Management by Meatweight

- a) Amend the section 18 notice for PAU 4 to specify the fishery will be managed on the basis of meat weight, rather than greenweight (as currently).
- b) Amend the Fisheries (Reporting) Regulations 2001 to require PAU 4 returns to be reported by meatweight².
- 16 Under Option 2, all settings and reporting for the PAU 4 fishery will be in meatweight rather than greenweight³. Therefore, under this option, a meatweight TAC, TACC and non-commercial allowances will need to be set for PAU 4. It is proposed that decisions on these be made as part of the MFish sustainability round later this year, if this option proceeds.

Option 3 – Use of a Conversion Factor

- 17 MFish also discussed with PAUAMAC4 the option of retaining greenweight settings for the fishery, but using the existing conversion factor specified in legislation to report greenweight catch based on the meatweight measured by the licensed fish receiver (LFR). This option requires the following actions:

¹ These include equipping divers with GPS data loggers to provide detailed fine scale reporting, and harvest contracts to ensure best harvest, landing and reporting practice. In addition, a processing specification is proposed for all licensed fish receivers. Future directions include added-value processing methods and discussions on use of UBA.

² Regulation 36(3) of the Fisheries (Reporting) Regulations 2001 requires allweights of fish (except scallops and Foveaux Strait dredge oysters) to be recorded in greenweight.

³ Under Option 2 fishers estimate catch in meatweight on paua catch effort landing returns. The licensed fish receiver, once the product is processed, will report back meatweight on a tax invoice to the fisher and complete the monthly harvest return in meatweight.

- a) Amend the Fisheries (Reporting) Regulations 2001 to specify a conversion factor must be used to estimate greenweight from meatweight.
- b) Determine an appropriate meatweight to greenweight conversion factor, and amend the Fisheries (Conversion factors) Notice 2005 accordingly.

Other Options

- 18 Other options to improve management of PAU 4 have been suggested during preliminary discussions. In particular, it has been proposed managing paua fisheries on the basis of number, rather than green or meatweight, may confer benefits.
- 19 Managing paua on this basis would require substantial amendment to the Fisheries Act since, apart from Foveaux Strait Dredge Oysters, the Act only allows management by green or meatweight. Long term management options for PAU 4, such as this, will be considered during development of the Chatham Island Fisheries Plan, scheduled to commence later this year.

Rationale for Management Options

- 20 **Option 1** would retain the status quo. Under this option there are no changes to management settings for PAU 4.
- 21 **Option 2** requires that the original section 18 notice declaring PAU 4 to be subject to the QMS be amended to specify meatweight as the basis for management.
- 22 Section 19(4) FA96 is very specific that certain aspects of the section 18 notice may not be changed. There is nothing in section 19 that expressly prevents a change in PAU 4 from greenweight to meatweight, therefore, through the application of section 15(a) of the Interpretation Act 1999 (power to issue a notice includes the power to amend), this aspect of the section 18 notice can be amended without any change to the legislation.
- 23 Under Option 2, the Fisheries (Reporting) Regulations 2001 will also be amended to require PAU 4 returns to be reported by meatweight. Regulation 36(3) of the Regulations requires all fish weights (except scallops and Foveaux Strait dredge oysters) to be recorded in greenweight kilograms. PAU 4 will need to be added to this list of exceptions.
- 24 No changes to reporting forms are anticipated as a result Option 2. As for scallops and oysters, all references to greenweight on these forms would be read as references to meatweight for PAU 4. A reporting workshop is scheduled to be held on the Chatham Islands to coincide with the annual harvesters meeting prior to the commencement of the 2009/2010 fishing year. This workshop will discuss the new reporting requirements if Option 2 is approved.
- 25 If this option proceeds, then a meatweight TAC, TACC and non-commercial allowances will also need to be set for PAU 4. Discussions with the paua industry and the MFish Shellfish Working Group suggest that the paua greenweight to meatweight conversion factor of 2.5 (equivalent to 40% meatweight recovery) already specified in

legislation⁴ may be an appropriate basis for translating to a meatweight TACC. However, proposals on the TAC, TACC and non-commercial allowances for PAU 4 will be put forward as part of the MFish sustainability round later this year, if this option proceeds.

- 26 **Option 3** achieves similar management outcomes to Option 2. However, instead of explicitly setting meatweight as the basis for reporting and management, under Option 3, fishers would use the existing conversion factor to convert meatweight recorded by the LFR to greenweight for the purposes of Paua Catch Effort Landing Returns (PCELR) and Monthly Harvest Returns (MHR) reporting. Through use of the conversion factor, all reporting in the fishery is, in practice, based on meatweight under this scenario.
- 27 Under all options, changes to management of the fishery would be introduced on 1 October 2009.

Assessment of Management Options

Option 1 – Status Quo

Impact

- 28 Under this option, there is no change to current management settings. Improved management of the fishery will depend on the success of the voluntary measures being implemented by the PAU 4 industry, or on increased compliance effort and education to reduce undesirable fishery practices to manipulate greenweight, such as shell chipping and delayed landing of paua.

Costs

- 29 Retaining the status quo means the incentives to over-fish those parts of PAU 4 with high meatweight recovery will remain. Continued depletion of these areas could risk localised collapse of paua populations and reduce the productivity and long term sustainability of PAU 4. This risk is not quantified, but there is anecdotal concern from fishers over heavy fishing pressure in these areas.
- 30 Similarly, the incentives driving illegal practices to manipulate greenweight will remain. In the long-run, these practices could lower the quality of paua produced in PAU 4.
- 31 The paua fishery is a vitally important economic resource for the Chatham Island economy with income derived from processing and diving as well as returns to quota holders. Reduced value from the PAU 4 resource will impact on the Chatham Island economy.

Benefits

- 32 Retaining the status quo means recent compliance operations to improve reporting of greenweight will have time to have an effect. The main focus of these operations has

⁴ Fisheries (Conversion Factors) Notice 2005 (NO.F350)

been the relationship of greenweight to meatweight and the alleged inflation of recovery rates by licensed fish receivers (LFRs). Current misreporting practices are known to MFish, therefore, compliance activity can follow up on previous initiatives.

Option 2 – Management by Meatweight

Impact

- 33 Introduction of meatweight to the fishery would mean a change to reporting of catch. As this option does not change the requirement⁵ that shellfish remain unshucked until landed, fishers would need to estimate meatweight in order to fill in paua catch effort landing returns (PCELRs). This may cause some confusion in the initial implementation in that the fishers will have to estimate catch on these forms in meatweight. This will require monitoring in the early stages. PAUMAC4 will need to be proactive in ensuring a smooth transition.
- 34 The MFish Shellfish Working Group has considered the impact of changing to meatweight reporting on the stock assessment model for PAU 4. The group considers this proposed change would have no effect on stock assessments for PAU 4.

Costs

- 35 Introducing the new reporting framework would involve some effort. Complex changes are required to the management framework, including to reporting regulations, the PAU 4 s18 notice, the TAC and TACC.
- 36 MFish staff will be involved in a workshop to outline the framework and in increased education and compliance on the new framework over the first year of operation.
- 37 No other significant or ongoing costs are anticipated. Although there will be some initial cost associated with implementation of any changes and ongoing monitoring.
- 38 If practices such as draining or bleeding of paua meat were to increase, then this issue would need to be managed by industry through introduction of the contractual processing specification discussed in other management controls in the following section.

Benefits

- 39 This option would improve the productivity and sustainability of the fishery by removing incentives to over-fish those parts of PAU 4 with high meatweight recovery. Similarly, PAUMAC4 believes that incentives that have driven illegal fishery practices such as shell chipping and delayed landing of paua, will be lessened, increasing compliance with reporting requirements and the quality of paua from the fishery. However, MFish believes that improvements to reporting behaviour are hypothetical at this stage, and a shift to meatweight could, in fact, have negative compliance implications.

⁵ Regulation 33(1) of the Fisheries (Commercial Fishing) Regulations 2001

Option 3 – Use of Conversion factor

Impact

- 40 Impacts under this option are similar to Option 2. Fishers must change their reporting for the fishery, however, in this case by using the existing conversion factor to convert meatweight, recorded by the LFR, to greenweight for the purposes of filling in their PCELR and monthly harvest returns.
- 41 Discussions with industry have suggested this option creates additional complexity during the processing chain and is likely to be misunderstood or misinterpreted by fishers and processors.

Costs

- 42 Costs under this option are similar as for Option 2. While a TAC would not need to be set, nor the TACC altered, an appropriate conversion factor would have to be set. If, as suggested, this option is misunderstood or misinterpreted by fishers and processors, then additional compliance and education costs will be needed to resolve this.

Benefits

- 43 This option achieves a similar management result as Option 2. Consequently, the benefits achieved are also similar to Option 2.

Other Management Controls

- 44 As part of the process for converting greenweight to meatweight, PAUMAC4 has committed to introducing contractual harvesting and processing specifications for the divers and LFRs that harvest and process paua on the Chatham Islands.
- 45 Harvest specifications will detail conditions around landing catch on day of catch and other handling procedures that will enhance the quality of the paua.
- 46 Processing procedures for shucking and weighing of the paua meat will be produced. These will include temperature parameters and specific times in the process so that meatweight is recorded and reported consistently across all LFRs involved in processing paua on the Chatham Islands.
- 47 Other initiatives that have been discussed include harvester contracts, several management initiatives around improving the fisheries dependant data (these include equipping divers with GPS data loggers to provide detailed fine scale reporting), and voluntary minimum legal size increase.

Other Management Issues

- 48 A stock assessment is currently underway in PAU 4. This is the third in the present time series and should provide information on the sustainability of this fishery.
- 49 A proposal to introduce underwater breathing apparatus (UBA) to the PAU 4 fishery has also been discussed and PAUMAC4 are keen to pursue this proposal in the future.

- 50 Future management initiatives for PAU 4 are likely to be discussed and formulated in the Chatham Island Inshore Fisheries Plan which is in its initial stages. PAUMAC4 is represented on the Fisheries Advisory Planning Group.

Appendices

Statutory Considerations

- a) Section 5(a) and (b) – Application of international obligations and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992: MFish considers issues arising under international obligations and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 are adequately addressed in the management options.
- b) Section 8 of the Act describes the purpose of the act as being “to provide for utilisation of fisheries resources while ensuring sustainability”. Ensuring sustainability means “maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations”. Providing for utilisation means “conserving, using, enhancing, and developing fisheries to enable people to provide for their social, economic, and cultural wellbeing”.
- c) There is some doubt as to how the status quo option that retains the present management settings would satisfy section 8. The incentives in the fishery and the unique conditions on the Chatham Island have resulted in some practices that could be interpreted as not enhancing the fishery and certainly not maintaining the potential of this fishery, with particular regard to the lack of catch spreading.
- d) Options 2 and 3 remove the incentives that have applied under the current management setting and should better satisfy the purposes of section 8.
- e) The purpose of the Fisheries Act is to provide for utilisation of fisheries resources while ensuring sustainability. Under Section 9 in providing for utilisation, the Act requires that the adverse effects of fishing on the aquatic environment are avoided, remedied or mitigated.
- f) The Minister is also required to take into account the following three environmental principles, which specify an obligation to:
 - Maintain the long-term viability of associated or dependent species;
 - Maintain the biological diversity of the aquatic environment; and
 - Protect habitats of particular significance for fisheries management
- g) Associated or dependent species are defined by the Act as any non-harvested species taken or otherwise affected by the taking of any harvested species. The method for commercial harvest of pua in PAU 4 is hand-gathering while free-diving. Catch Effort Landing Return data indicates that there is no bycatch of any associated or dependent species in this fishery.
- h) There is limited information to provide an assessment of the effects of the pua fishery on either biological diversity or associated and dependent species. There is evidence of an interdependence relationship between pua, kina, and seaweeds. The continued loss of large pua from reefs by fishing may have a localised displacement effect on kina and seaweeds. The effects of this displacement on the inshore benthic community structure are unknown.

Spreading catch over the whole QMA rather than just on the high recovery reefs, will help to mitigate any such affect.

- i) No habitats of particular significance for fisheries management have been identified within PAU 4. It is considered unlikely that the method of hand-gathering would have a demonstrable adverse effect on the environment.
- j) Section 10 requires that “decisions should be based on the best available information: decision makers should consider any uncertainty in the information available, decision makers should be cautious when information is uncertain, unreliable, or inadequate”, and “the absence of, or uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act”.
- k) MFish will be consulting customary, environmental, commercial and recreational interests on the proposals in this IPP. MFish has discussed the issues outlined in this IPP with customary, recreational and community forums, and with the Paua Industry Council representing commercial paua interests.