



Initial Position Paper on sustainability measures within PPI 1A at Mair Bank and Marsden Bank (Whangarei)

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MPI welcomes written submissions on the proposals contained in this consultation paper. All written submissions must be received no later than 5 pm on 1 July 2014.

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Contents

Page

Proposed sustainability measures Within PPI 1A (Whangarei Harbour)	1
Introduction	1
Context	2
Proposed Response	5
Input and participation by tangata whenua	7
Assessment against Statutory Obligations	7
Conclusion	8

Proposed sustainability measures Within PPI 1A (Whangarei Harbour)

INTRODUCTION

- 1 The Ministry for Primary Industries (MPI) is seeking tangata whenua and stakeholder information and views on proposed sustainability measures in response to the decline of pipi populations at Mair Bank and Marsden Bank at the entrance to the Whangarei Harbour (PPI 1A).
- 2 MPI proposes three options for sustainability measures on harvesting pipi from Marsden Bank and Mair Bank as set out in Table 1.

Table 1: Proposed options for sustainability measures for pipi at Mair Bank and Marsden Bank

Option 1 (<i>Status quo</i>)	<p>Mair Bank: Fishery is open for customary, recreational and commercial harvest</p> <ul style="list-style-type: none"> • Includes a daily bag limit of 150 pipi for recreational fishers (per person per day) <p>Marsden Bank: Fishery is temporarily closed under section 186A of the Fisheries Act 1996 to recreational and commercial harvest (ends 16 February 2015) supported by a customary rahui.</p>
Option 2 (<i>Mair Bank closure, Marsden Bank status quo</i>)	<p>Mair Bank: Pipi fishery is closed to recreational and commercial harvest under section 11 of the Fisheries Act 1996, supported by a customary rahui.</p> <p>Marsden Bank: Fishery is temporarily closed under section 186A of the Fisheries Act 1996 to recreational and commercial harvest (ends 16 February 2015), supported by a customary rahui.</p>
Option 3 (<i>Mair Bank and Marsden Bank closed using a consistent approach, MPI preferred option</i>)	<p>Mair Bank and Marsden Bank: Pipi fishery is closed to recreational and commercial harvest under section 11 of the Fisheries Act 1996, supported by a customary rahui.</p>

- 3 Evidence suggests a substantial decline in the Mair Bank pipi population over the last nine years. The current population biomass is estimated to be 73.5 tonnes, down from 4,452 tonnes in 2010 and 10,542 tonnes in 2005. As a result, Northland Regional Council, Northport, New Zealand Refining Company (from Marsden Point Refinery), and iwi representatives have requested a closure of the area to pipi harvesting to assist in recovery of the population.
- 4 Best available information also indicates that the adjacent pipi populations at Marsden Bank have not recovered since a temporary closure was put in place in 2011. This temporary closure expires in February 2015. MPI considers the decline in pipi abundance presents a sustainability concern for the pipi fishery at both Mair Bank and Marsden Bank.
- 5 As a result of the population decline, the biomass level is too low to support economically viable commercial harvesting of pipi. Therefore, no commercial harvest of pipi from Mair Bank has occurred over the past two years. Anecdotal information suggests that recreational fishing pressure at Mair Bank has increased in recent years as observed through increased numbers of boats present at the Bank. Best available information suggests that fishing activity has not caused

the pipi population decline. Nevertheless, MPI considers a closure is a reasonable precautionary tool to remove any risk from fishing that could exacerbate the decline, or affect recovery.

- 6 Because Mair and Marsden Banks are adjacent, MPI considers the cause of decline (while unknown) is likely to be the same, and it would be pragmatic to manage both banks under the same management measures. MPI considers the proposed closures are necessary to support the recovery of pipi populations at both Marsden Bank and Mair Bank. MPI will continue to engage with Northland Regional Council and other community stakeholders in determining possible reasons for the decline.

CONTEXT

The need to act

- 7 The pipi fishery is a significant cultural, recreational and economic resource. In addition, the thick shell cap¹ is recognised as providing physical stability to Mair Bank. The banks play an important role in maintaining the navigable channel for the deep-water port and the stability of the sand spit as the site of New Zealand's only oil refinery. MPI therefore consider that the stability of both banks is of regional and national importance.
- 8 The 2014 survey results provide evidence of a substantial decline in the Mair Bank pipi population². The current population estimate (73.5 tonnes) is less than 1% of what was estimated in 2005 (10,542 tonnes). In addition, the estimated pipi population at the adjacent Marsden Bank has declined to approximately 30% of the estimated 2010 abundance³ (60 million in 2012 down from 208.8 million in 2010). This indicates that pipi populations have not recovered at Marsden Bank since its temporary closure. MPI considers that the drop in the number of pipsis at Marsden Bank is likely related to the decline in pipi numbers at neighbouring Mair Bank.
- 9 MPI also considers that the level of catch from all sectors is unlikely to have been responsible for the decline at Mair Bank or Marsden Bank. Historical levels of commercial catch were very low compared with the available biomass. Likewise, while MPI does not have estimates on recreational and customary catch, it would be improbable that non-commercial harvest would remove a level of biomass sufficient to result in the current levels of abundance. The drop in pipi abundance at Marsden Bank, while closed, also suggests fishing is not the likely cause.
- 10 While fishing is an unlikely cause for the decline in population numbers, the population is at such a low level on each bank that it cannot support any level of utilisation without exacerbating the decline or affecting the recovery of cockles.

¹ A shell cap can be described as an armouring of the seabed by shells that stabilises the sediments.

² Pawley, M.D.M. (2014). *Population and biomass survey of pipi (Paphies australis) on Mair Bank, Whangarei Harbour, 2014*. Draft report prepared for Northern Regional Council

³ Pawley, M.D.M., Smith, A.N.H. (2013). *The distribution and abundance of pipsis and cockles in the Northland, Auckland and Bay of Plenty regions, 2013*. New Zealand Fisheries Assessment Report 2013/0

The fishery

- 11 Mair Bank and Marsden Bank are located at the entrance to Whangarei Harbour, which is the Quota Management Area (QMA) for PPI 1A. However, management settings (Total Allowable Catch and Total Allowable Commercial Catch) and the fisheries for this QMA are based on the banks and available data relate only to the pipi in that area. This paper focuses solely on Mair Bank and Marsden Bank and proposes actions that relate only to pipi harvesting.
- 12 Mair Bank is an intertidal sand and shell ebb-tidal delta located at the southern side of the entrance to the Whangarei Harbour, north-eastern New Zealand. Marsden Bank is a sand-bank on the shoreward side of Mair Bank attached to the headland and accessible on foot from the shore at low tide (a relatively small feature compared to Mair Bank, Figure 1).
- 13 Mair Bank previously supported New Zealand's largest commercial harvesting industry for pipi. Over 99% of the total commercial landings of pipi in New Zealand were harvested in PPI 1A, averaging 138 tonnes between 2004/05 and 2009/10. Commercial landings began to decrease in 2010 and no commercial harvest of pipi has occurred over the past two years as a result of the population decline. The low abundance of pipi means commercial harvest is no longer considered economically viable at Mair Bank.



Figure 1: The 2010 Mair Bank survey split the bank into intertidal and subtidal strata (shown by the yellow and blue contours respectively). Red lines show the intertidal and sample extent from the 2005 survey (Williams et al. 2007). The pale yellow filled polygon indicates the sample extent for Marsden Bank. (2010 study).

- 14 Pipi on Mair Bank and Marsden Bank are a resource of cultural and recreational significance to local residents and iwi. The Kaimoana regulations enable Tangata Kaitiaki to issue authorisations for customary fishing⁴. Marsden Bank is currently closed under section 186A of the Fisheries Act 1996 (the Act) to provide for the use and management practices of tangata whenua in the exercise of their non-commercial fishing rights. At the time of the closure, Patuharekeke hapu

⁴ Fisheries (Kaimoana Customary Fishing) Regulations 1998

highlighted that a healthy stock is vital to enable them to meet their customary obligations and duties. As such, the hapu confirmed they would not issue customary authorisations for the take of pipi from Marsden Bank during its closure.

- 15 The channel that runs adjacent to Marsden Point restricts access to Mair Bank other than by boat. Boat users, as they enter and exit the harbour, are the main recreational fishers. Recreational limits for pipi at Mair Bank are 150 per person per day⁵. There are no estimates of recreational or customary mean harvest weights, or harvest estimates specific to Mair Bank.

Decline of pipi populations

- 16 Comparable biomass surveys of pipi on Mair Bank were completed in 2005, 2010 and 2014. The population estimates were 10152 t in 2005, 4450 t in 2010 and 73.5 tonne in 2014. The 2014 survey estimate is a substantial decrease in the total (absolute) biomass of pipis at Mair Bank since the 2010 survey.
- 17 Comparable population surveys of pipi on Marsden Bank were completed in 2010 and 2012 (refer to Figure 2). The population estimate was 208.8 million pipis in 2010 which declined to 60.0 million pipis in 2012⁶. No harvestable pipi (fishers prefers ≥ 50 mm shell length) were found in the 2012 survey at Marsden Bank, compared to 10.0 million in 2010⁷.



Figure 2: The Marsden Bank sample extent (yellow polygon) extended south and west of the bank itself. The pipi bed (red polygon) was divided into high (A) and lower (B) density strata. (2012 study).

⁵ Fisheries (Amateur Fishing) Regulations 2013

⁶ MPI are unable to present figures in tonnes at this time.

⁷ While there is no minimum legal size for pipi, harvesters generally prefer to collect pipi that are > 50 mm shell length.

Possible Causes

- 18 Information on the reasons for the decline of pipi is limited. Mair and Marsden Banks are adjacent banks within the same population and the cause of decline is likely to be the same between these locations.
- 19 It is commonly perceived that harvest pressure on intertidal shellfish resources has been a major contributor to the decline in shellfish abundance at popular beaches in the Auckland, Northland, and Bay of Plenty areas. However, it is not considered realistic that harvesting could have removed 98% of the large biomass previously surveyed in Mair Bank.
- 20 Intertidal shellfish resources are also perceived to be under pressure from other impacts such as environmental degradation (Grant & Hay 2003). Potential stressors, other than human harvesting, to infaunal bivalves include: anthropogenic contaminants such as organotin compounds and organic booster biocides (such as those associated with marine antifoulants), heavy metals, organochlorines and polyaromatic hydrocarbons; changes in the marine environment associated with human activity, such as increased sediment loading, nutrient enrichment and climate change; natural phenomena of an extraordinary nature such as harmful algal blooms, and diseases/parasite events.
- 21 The 2010 survey concluded that it was unlikely that fishing was a cause of the decline at that time. Two results from the length frequency data suggest that the observed differences in the estimated biomass between 2005 and 2010 are not the result of fishing pressure. Firstly, although there was a decline in the 2010 biomass estimates from 2005, the proportion of pipi over 60 mm was similar to 2005 proportions. Fishers generally target pipi 60 mm or larger. Therefore, MPI would expect any fishery-driven changes to be expressed in this length class first. Secondly, there was a strong bimodality of the 2010 length frequencies that suggests changes are driven by reproductive pulses, rather than fisheries.

Likely Recovery Period

- 22 MPI scientists state that it is unclear if the Mair Bank and Marsden Bank pipi populations will recover, and if so, how long that will take.

PROPOSED RESPONSE

- 23 MPI is consulting on three management options to address the decline in the pipi populations in Whangarei Harbour (Table 1). MPI's preferred option is Option 3: To close both Marsden Bank and Mair Bank to fishing under section 11 of the Act until such time as MPI is satisfied the populations are rebuilt and sustainable harvesting can begin again.

- 24 While fishing is an unlikely cause for the decline in population numbers, a closure would be used as a precautionary tool to remove any level of utilisation that could exacerbate the decline, or affect recovery.

Option 1 (Status quo)

- 25 Option 1 is the *status quo*. Under this option, no additional sustainability measures will be set for the pipi fishery at Mair Bank. Marsden Bank will continue to be temporarily closed under section 186A. This closure is due to end in February 2015. Local iwi have indicated that they will request a further temporary closure of Marsden Bank in the absence of a section 11 closure.
- 26 Anecdotal information suggests that non-commercial harvest has increased at Mair Bank, but estimates of catch are not available.
- 27 However, Marsden Bank has been closed to fishing for three years (since February 2011) with little evidence to suggest rebuilding pipi populations. The decline in pipi abundance at Mair Bank, and lack of recovery at Marsden Bank where fishing does not occur, indicates that there are other factors besides fishing contributing to the decline in the pipi populations.
- 28 Nevertheless, there remains a sustainability risk from continuing with the *status quo* and the risk that fishing activities could exacerbate the decline, or affect recovery.

Option 2

- 29 Option 2 proposes to close Mair Bank to pipi harvesting using section 11 of the Act. Marsden Bank would, as in Option 1, stay temporarily closed under section 186A until it is scheduled to reopen in February 2015. Local iwi have indicated that they will request a further temporary closure of Marsden Bank in the absence of a section 11 closure.
- 30 Option 2 is a more cautious option than Option 1, but does not acknowledge that the decline in pipi abundance at the two banks could be linked. Patuharekeke hapu has indicated their preference for a section 11 closure of Marsden Bank as well as Mair Bank.

Option 3 (MPI's preferred option)

- 31 Option 3 proposes to close both Mair Bank and Marsden Bank to pipi harvesting using section 11 of the Act. As opposed to Option 2, management of the closure of Marsden Bank to pipi harvest would now fall under the section 11 sustainability closure.
- 32 Option 3, while also a more cautious option than Option 1, is also more effective than Option 2 as it acknowledges that the same factors (or combination of factors) are likely contributing to the decline in pipi populations in both banks. Option 3 also acknowledges Patuharekeke's preference for a section 11 closure of Marsden Bank.

- 33 MPI has little information to indicate how long a rebuild of the populations may take. MPI considers the sustainability measures provided for under section 11 to close both Marsden Bank and Mair Bank is the best available tool to control the harvest of pipi as soon as practicable. The banks can then be opened when the pipi population has recovered. MPI would continue to work with stakeholders to monitor the pipi populations for any further changes in abundance.
- 34 MPI considers this approach is necessary to provide for long-term utilisation of this fishery while ensuring sustainability, thus serving the purpose of the Act.

INPUT AND PARTICIPATION BY TANGATA WHENUA

- 35 The Minister, when setting or varying a sustainability measure for a stock, must: provide for the input and participation of tangata whenua having an interest in the stock; have particular regard to kaitiakitanga; and, take any relevant Iwi or Forum Fishplans into account. For PPI 1A, the input and participation of tangata whenua is affected through MPI's engagement with Patuharakeke, Ngatiwai, and Te Uri O Hau, all having interests in the area and its fisheries.
- 36 MPI has held preliminary discussions with Patuharakeke representatives who have also separately held a hui-a-hapu with members from Patuharakeke, and several Parawhau and Ngatiwai whanau. At this hui, an update was provided on the state of the Mair Bank pipi fishery. It was recognised by all members attending that there is a need to protect remaining stocks and as such there was universal support of the closure of both Marsden Bank and Mair Bank.

ASSESSMENT AGAINST STATUTORY OBLIGATIONS

Section 11

- 37 Section 11(1) of the Act allows the Minister for Primary Industries (the Minister) to set or vary any sustainability measure for one or more stocks or areas, after taking into account any effects of fishing on any stock and the aquatic environment, any existing controls that apply to the stock or area concerned, and the natural variability of the stock concerned.
- 38 Section 11(2) states that before setting or varying any sustainability measure, the Minister shall have regard to any provisions of: any regional policy statements, regional plans, or proposed regional plans under the Resource Management Act 1991; any management strategy or plan under the Conservation Act 1987; sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000; any regulations under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012; and any planning documents lodged with the Minister of Fishers (Minister for Primary Industries) by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011. MPI is not aware of any provisions that would impact on the proposals in this paper. MPI considers that there are no relevant conservation services, fisheries services or fisheries plans to be taken into account in considering the proposed sustainability measures.

- 39 Section 11(3) outlines a non-exhaustive list of sustainability measures that the Minister may set for a stock. Sustainability measures may relate to the areas from which any fish, aquatic life, or seaweed of any stock may be taken. The Minister may implement any sustainability measures by notice in the *Gazette* as proposed in this paper or by the making of regulations under section 298 of the Act.
- 40 Section 11(4) allows sustainability measures to be set or varied by Gazette Notice or by recommending the making of regulations. MPI proposes that the sustainability measures be set by notice in the *Gazette*.

Section 12

- 41 Before implementing any section 11 sustainability measure, section 12 of the Act specifies the Minister shall consult with persons or organisations that the Minister considers have an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including Maori, environmental, commercial, and recreational interests. This paper forms part of that consultation process.
- 42 MPI has been approached by Northland Regional Council, Northport and the Refinery and had initial discussions on the pipi population decline at Mair Bank and Marsden Bank. MPI has also had preliminary discussions with local iwi representatives and quota holders. During this consultation, Patuharakeke hapu requested that the Marsden Bank closure be considered and transferred (from a s186A closure) to the sustainability measures set out under section 11. MPI is now seeking views and input on the options presented in this paper.

CONCLUSION

- 43 Pipi populations have recently experienced a substantial decline in numbers over the past nine years at Mair Bank and between 2010 and 2012 at Marsden Bank. Scientific and anecdotal evidence suggests that pipi are experiencing localised depletion although the direct cause(s) have not yet been identified. While fishing may not be the primary cause, there is an immediate sustainability concern that harvest pressure may inhibit the recovery of the populations. MPI considers the closure of both Marsden Bank and Mair Bank will alleviate further pressure and may allow for recovery and stabilisation of populations.