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C/o Tracey Steel
Ministry of Fisheries
PO Box 19747
WELLINGTON

Tena koe,

BLADDER KELP SEAWEED, MACROCYSTIS PYRIFERA (KBBG)

INTRODUCTION

1. In May 2010 the Ministry of Fisheries released its Initial Position Paper (IPP) on proposals to set Total Allowable Catches (TACs), Total Allowable Commercial Catches (TACCs), sector allowances, and other management controls to support the introduction of attached bladder kelp into the Quota Management System (QMS) on 1 October 2010. The Ministry of Fisheries has requested submissions from stakeholders and tangata whenua by the close of 21 April 2010. In this submission we present matters of interest to Te Ohu.

THE PURPOSE OF TE OHU KAI MOANA

2. Te Ohu is a statutory body established under s.31 of the Maori Fisheries Act 2004. The purpose of Te Ohu is to advance the interests of iwi individually and collectively, primarily in the development of fisheries, fishing, and fisheries-related activities, in order to-
 - (a) ultimately benefit the members of iwi and Maori generally
 - (b) further the agreements made in the Deed of Settlement
 - (c) assist the Crown to discharge its obligations under the Deed of Settlement and the Treaty of Waitangi
 - (d) contribute to the achievement of an enduring settlement of the claims and grievances referred to in the Deed of Settlement
3. Te Ohu must administer the settlement assets in accordance with its purpose set out in the Act, including but not limited to the following duties:
 - (e) to manage on a transitional basis, collectively or separately as Te Ohu considers appropriate, the settlement assets to be allocated to an iwi, until they are transferred to the Mandated Iwi Organisation of the iwi, and;

- (f) in relation to fisheries, fishing and fishing-related activities, act to protect and enhance the interests of iwi and maori in those activities
4. The Maori Fisheries Settlement in 1992 set out what was recognized through the Courts and agreed at a political level. The process established that Maori customary rights to fishing included both commercial and non-commercial elements. The commercial element was not just historic but also included future development dimensions. The Settlement established Te Ohu and provided recognition of the commercial dimensions by providing for transfer through Te Ohu of quota, cash and shares in fishing companies to iwi. It provided recognition of the non-commercial dimensions by agreeing to develop regulations to help recognise use and management practices and provide protection for and scope for exercise of rangatiratanga in respect of traditional fisheries including tauranga ika and mahinga mataitai.
 5. As noted above Parliament has established Te Ohu and given it responsibility to advance the agreements made in the Deed of Settlement and to assist the Crown to discharge its obligations and do so in a manner that contributes to an enduring settlement.

SUBMISSIONS

6. We endorse the submissions made by Ngati Mutunga, Moriori, Ngai Tahu, the Chatham's Enterprise Trust, and PAUAMAC4.

EXECUTIVE SUMMARY

7. The TACC setting advice in the IPP appears to be based upon the assumption that harvesting practices would be fatal or at least highly damaging to bladder kelp. The IPP contains no analysis of the sustainable harvesting methods used overseas to harvest standing stocks of *Macrosystis*. This lack of information on "non-mortal" trimming methods has led the Ministry to propose overly conservative TACs which cannot provide for sustainable utilisation. Even a rudimentary examination of known best practice harvesting methods from other jurisdictions shows that it is possible to trim standing bladder kelp in a way that has no apparent impact on the health of bladder kelp stocks.
8. As far as utilisation is concerned, commercial trials with dried bladder kelp show that a commercial operation would require a scale that is far above the TACC options contained in the IPP. A TACC of 1,000 tonnes would allow the production of approximately 100 tonnes of dried product over 12 months. Given the scale of the market for dried kelp as an ingredient for pharmaceutical and food products, this is barely enough to attract the interest of the major buyers of such products.
9. The harvesting techniques that are proposed by quota owners in KBB 3G and KBB 4G are designed to protect all sustainability values in the fishery and associated fisheries.

10. The limited TACCs proposed in the IPP are therefore an unjustified barrier to the sustainable commercial utilisation of this species, as proposed by the future quota owners. The IPP as it stands recognises that the QMS is the best framework for the commercial development of a bladder kelp industry but ironically contemplates setting TACCs that would preclude such development.

11. Te Ohu:

In relation to general aspects of the IPP

- Supports industry initiatives to work collaboratively in the development of the New Zealand kelp industry.
- Supports industry initiatives to work with iwi non commercial interests and other industry interests to ensure that harvest protocols take into account their views.
- Supports an industry Memorandum of Understanding which sets out agreements in relation to:
 - Harvesting protocols
 - Shelving arrangements
 - Pilot Areas
 - Research

In relation to the QMA3 TAC

- Rejects the proposed TACs on the grounds they are too conservative and ignore the evidence of the very large biomass of this stock.
- Recommends the IPP be withdrawn and re-consulted with higher initial TAC options
- Recommends re-consultation be undertaken in the shortest time frame possible
- Recommends a TACC of at least 800 tonne and possibly as high as 2000 tonne subject to further consultation.

In relation to the QMA4 TAC

- Rejects the proposed TACs on the grounds they are too conservative and do not enable utilisation.
- Recommends the IPP be withdrawn and re-consulted with higher TAC options
- Recommends re-consultation be undertaken in the shortest time-frame possible
- Recommends a TAC of 1000 tonnes

In relation to adding KBB 3G and KBB 4G to the Sixth Schedule

- Recommend both stocks be placed on the Sixth Schedule

In relation to amending the Fisheries (Reporting) Regulations 2001

- support amending the Fisheries (Reporting) Regulations 2001

In relation to deemed values

- Recommend setting the interim and annual deemed values for attached bladder kelp at \$4.00 per kg AND Interim deemed value of \$2.00 per kg

THE PROPOSAL

12. The Ministry of Fisheries (MFish) is consulting stakeholders on management controls for the KBB 3G and KBB 4G stocks. KBB 3G covers an area between the Clarence River and the bottom of the south island (roughly 90% of the east coast of the south island) and KBB 4G covers the entire Chatham Islands. MFish is considering the following options for proposed TACs, sector allowances and other sources of fishing-related mortality (Table 1).

Table 1. Proposed TACs, TACCs, and sector allowances for the KBB 3G and KBB 4G Stocks

Stock		TAC	Customary Allowance	Recreation Allowance	Sources of mortality	TACC
KBB 3G	Option 1	377 tonnes	0.1 tonne	0.1 tonne	1 tonne	375.8 tonnes
	Option 2	41.2 tonnes	0.1 tonne	0.1 tonne	1 tonne	40 tonnes
	Option 3	18.2 tonnes	0.1 tonne	0.1 tonne	1 tonne	17 tonnes
KBB 4G	Option 1	26.2 tonnes	0.1 tonne	0.1 tonne	1 tonne	25 tonnes
	Option 2	2.2 tonnes	0.1 tonne	0.1 tonne	1 tonne	1 tonne

13. MFish also propose the following management measures for each stock to support QMS introduction:

- Add KBB 3G and KBB 4G to the Sixth Schedule of the Fisheries Act 1996;
- Amend the Fisheries (Reporting) Regulations 2001 to outline the codes to be used by commercial seaweed fishers when completing their statutory catch returns; and
- Set the interim and annual deemed values for attached bladder kelp using one of the two options outlined below:

- i) Annual deemed value of \$4.00 per kg AND Interim deemed value of \$2.00 per kg; OR
- ii) Annual deemed value of \$1.00 per kg AND Interim deemed value of \$0.50 per kg
- iii) Standard differential deemed value rates are used in KBB 3G and KBB 4G but no overfishing thresholds will be set at this time.

COMMENTS

Industry working together

14. First of all we would like to commend and encourage the kelp industry to continue working together to develop this fishery. To develop the fishery any other way would undermine progress and significantly increase costs. Potentially, it could also lead to lower export prices or worse not developing the kelp industry at all.
15. In our opinion, a single management company for the whole of New Zealand, or at least for the South and Chatham Islands is desirable. It provides opportunities to share information and organisational overheads across combined quota management areas. There is more work to achieve this outcome but early discussions are promising.

Sustainability issues

16. Provided harvesting follows the basic harvesting protocols used in California (where they have had a kelp industry for the past 100 years), there should be no known issues around the sustainability of kelp forests. Harvesting kelp forests is like mowing a lawn, it keeps growing back. As the kelp industry is developed we would like to adopt and refine these protocols to fit the Chathams and South Island conditions.
17. We recognise that bladder kelp in both attached and unattached forms is an important source of nutrition for associated species. For instance, in Tory Channel, which is situated on the Cook Strait side of the top of the South Island, unattached kelp has been observed at a range of depths down to 80 feet being consumed by kina. Similar observations have been made with paua, although in much shallower water. There is often kelp and other marine plants stuck to the foot of paua or wrapped around kina. Clearly these fish are eating the kelp. In the case of kina they seem to work together to trap large amounts of kelp drifting in the tide. We would expect the same sorts of things to be happening in KBB 3G and KBB 4G.
18. Accordingly, in developing the kelp industry we support ongoing research into the relationship between kelp forests and associated stocks so we better understand these interactions.
19. We are pleased that the future quota owners of kelp - Ngai Tahu, Moriori, Ngati Mutunga, Chatham's Enterprise Trust, and Roger Beattie – have interests in stocks associated with kelp forests, including paua and rock lobster. These latter two stocks represent the most commercially valuable inshore fisheries in NZ and from a non commercial perspective two of the main iconic delicacies that

Tangaroa has to offer. So these quota owners and iwi have every reason to look after their existing interests.

What research is needed to support management?

20. Quota owners aim to develop an agreed research programme. Baseline studies would be a useful starting point so we at least know how much kelp is in the areas to be harvested, and what species are in and around these kelp forests. By monitoring these kelp forests over time they should be able to establish whether harvesting them is adversely impacting associated stocks. If there are adverse impacts we would expect there to be discussions and possibly negotiations between affected parties. We would expect all harvesting to stop if it is found that there will be significant adverse impacts on associated stocks.
21. The kelp industry will also need to put in place a programme aimed at collecting relevant management information at appropriate scales. We recommend industry works closely with the Ministry of Fisheries Shellfish Working Group, or other relevant group, to develop a research programme. Te Ohu would like to be involved in developing this programme and we would encourage SeaFic to do the same.
22. We acknowledge the Memorandum of Understanding which has been developed by future KBB 4G quota holders and that these issues will be dealt with as part of a broad research plan that also encompasses KBB 3G. The plan will need to explore whether the same research should be replicated in each quota management area.

Pilot Areas

23. We support KBB quota owners incrementally developing the KBB fishery and restricting scientific and commercial research to agreed pilot areas until there is reasonable evidence to show that harvesting does not adversely impact associated stocks. These pilot areas will need to be of a size that enables proper scientific and commercial research.
24. Based upon a 10 hectare kelp forest, a 1.5kg per m² harvest rate, and no more than two harvests in every 12 months you could expect to produce 30 tonne. A 70 hectare bed, which is roughly the size of a kelp forest in front of Waitangi on the Chathams, could produce 200 tonnes. In order to harvest 800 tonnes you would be looking for at least 300 hectares.
25. We acknowledge the intention of the kelp industry to work closely with other industry groups and iwi to identify appropriate pilot areas. We would expect this work to be done this year.

Shelving

26. We note that future quota owners of KBB have made provision in their Memorandum of Understanding to shelve a certain amount of KBB 4G ACE. Shelved ACE would be made available once it is better understood whether, and if so how any adverse impacts of harvesting kelp forests on associated stocks can be mitigated or managed.

Harvest Controls

27. All future quota owners have worked to develop harvest protocols along the lines that are employed in the Californian kelp industry but suitably modified for local conditions. Californian kelp forests have been successfully harvested for almost 100 years.
28. An industry Memorandum of Understanding has been drafted setting out agreed protocols associated with management controls, pilot areas, shelving, and research. The harvest controls are proposed to include:
 - No more than 50% of any one forest's canopy biomass should be harvested over a period less than 6 months.
 - The maximum cutting depth is no more than 1.2 m
 - Harvesting the canopy biomass should be carried out in strips no greater than 5 m in width
29. This Memorandum of Understanding is at this stage supported by all but one of the future quota owners in KBB 4G.
30. We believe these combined controls that are being advanced by the kelp industry will mitigate any risks, perceived or otherwise, associated with TACs that are higher than those proposed in the current IPP.
31. We encourage the adoption of these combined controls across both KBB 3G and KBB 4G.

Setting the total allowable catch

32. There has been considerable discussion amongst the kelp industry, other industry players, and customary non-commercial interests concerning the TACs proposed for KBB 3G and KBB 4G. The consensus is the proposed TACs are too low and should be increased to more appropriate levels. We have been provided with information that shows that the size of kelp beds in KBB 3G and KBB 4G are extensive.
33. In determining an appropriate TAC, the following information should be considered.
34. In KBB 3G:
 - The very extensive biomass of bladder kelp
 - The protocols proposed in the KBB 4 industry Memorandum of Understanding that will be advocated in KBB3
 - The need to provide sufficient harvesting scope for commercial scale.
35. We are mindful that the current Ministry of Fisheries proposals for KBB 3G are based only upon historical biomass estimates for 3 beds in Akaroa Harbour. The estimate ignores the existence of other known kelp forests.

36. We are aware that there are proposals that the TAC be set at 2000 tonnes and suggest this be included in a revised IPP.

37. In KBB 4G:

- The extensive biomass of bladder kelp
- The protocols proposed in the industry Memorandum of Understanding, including the agreement to mitigate any risks that are detected
- The need to provide sufficient harvesting scope for commercial scale

TAC preferences

38. Our preference is for a TAC of at least 800 tonne in KBB 3G and 1000 tonnes in KBB 4G. We consider these allowances to be conservative and at a level that would enable the fishery to be developed whilst ensuring sustainability.

39. We would expect industry to undertake a stock assessment after industry has done the research and the effects of harvesting are better understood.

Sixth Schedule matters

40. The sixth schedule relates to stocks which may be returned to the sea or other waters in accordance with stated requirements. Te Ohu supports adding KBB 3G and KBB 4G to the Sixth Schedule.

Fisheries reporting regulations

41. Te Ohu supports an amendment to the Fisheries (Reporting) Regulations 2001 as proposed.

Deemed values

42. Te Ohu recommends setting the interim and annual deemed values for attached bladder kelp at \$4.00 per kg AND Interim deemed value of \$2.00 per kg. In this instance we are unaware of any good reason for overharvesting without ACE.

Concluding comments

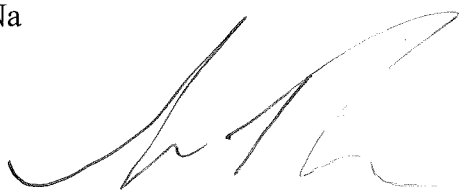
43. The Ministry of Fisheries should withdraw the current IPP and re-consult with higher TAC options. There is significant support for this.

44. In the future we would like the Ministry of Fisheries to have discussions with Iwi, Te Ohu, and SeaFic before the initial TACs are consulted under section 12 of the Fisheries Act. If there are other known quota owners, they too should be involved in such discussions.

45. We agree that for some new species entering the QMS it may be appropriate to set a very low initial TAC but this is not the case for KBB 3G and KBB 4G. Nor is it the case for a range of other species that have recently been brought into the QMS, such as surf clam, deepwater crab, and geoduc. Having the discussion will help the Ministry of Fisheries to avoid proposing inappropriate initial TACs.

46. We have mentioned sensitive areas in previous submissions on the introduction of bladder kelp to the quota management system. We support the kelp industry working with stakeholders and tangata whenua to identify sensitive areas where commercial kelp harvesting may be inappropriate. We support Ngai Tahu's wish that no commercial harvesting of kelp beds occurs within important mahinga kai areas.
47. We would appreciate the opportunity for stakeholders and tangata whenua to meet with the Ministry of Fisheries prior to the Minister being given the Final Position Paper (FPP).
48. Please contact the writer if you would like to discuss any matters raised in this submission.

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A handwritten signature in black ink, appearing to read 'A. T. Riwaka', written in a cursive style.

Alan T Riwaka
Senior Fisheries Management Advisor