

Dear Stakeholder

SETTING OF SUSTAINABILITY MEASURES FOR STOCKS TO BE INTRODUCED INTO THE QUOTA MANAGEMENT SYSTEM ON 1 APRIL 2004

- 1 This letter outlines my final decisions for the setting of sustainability measures for giant spider crab, king crab, red crab, horse mussel, sea cucumber and surf clams, which will be introduced into the Quota Management System (QMS) on 1 April 2004.
- 2 I have made decisions regarding the setting of Total Allowable Catches (TACs), Total Allowable Commercial Catches (TACCs), other allowances, deemed values and overfishing thresholds, and some of the regulatory proposals for the stocks concerned. My decisions will take effect on 1 April 2004.
- 3 In reaching my final decisions, I have carefully considered the available fishery assessment information, MFish's Final Advice Paper (FAP), dated 18 November 2003, and the issues and information put forward by stakeholders for each of the stocks and regulatory proposals in response to the Initial Position Paper (IPP), dated 18 August 2003.
- 4 I have also given careful regard to the legislative provisions of the Fisheries Act 1996 (1996 Act), especially those relating to its purpose (s 8), environmental and information principles (ss 9 and 10, respectively), and the setting and amending of sustainability measures (ss 11 and 13).
- 5 I take this opportunity to acknowledge your participation in the MFish consultation process. I appreciate the amount of work and effort that went into the formulation of your submissions within the timeframe available. I note, however, that relatively few submissions were received, and that they did not raise any general issues that warrant comment beyond those outlined for each species, which makes up the remainder of this letter.

Giant Spider Crab (GSC), King Crab (KIC) and Red Crab (CHC)

- 6 The Quota Management Areas (QMAs) for giant spider crab *Jacquinotia edwardsii* (GSC), king crab *Lithodes murrayi* and *Neolithodes brodiei* (KIC), and red crab *Chaceon bicolor* (CHC) are outlined in Figures 1, 2, and 3, respectively.

Figure 1 Quota Management Areas for giant spider crab

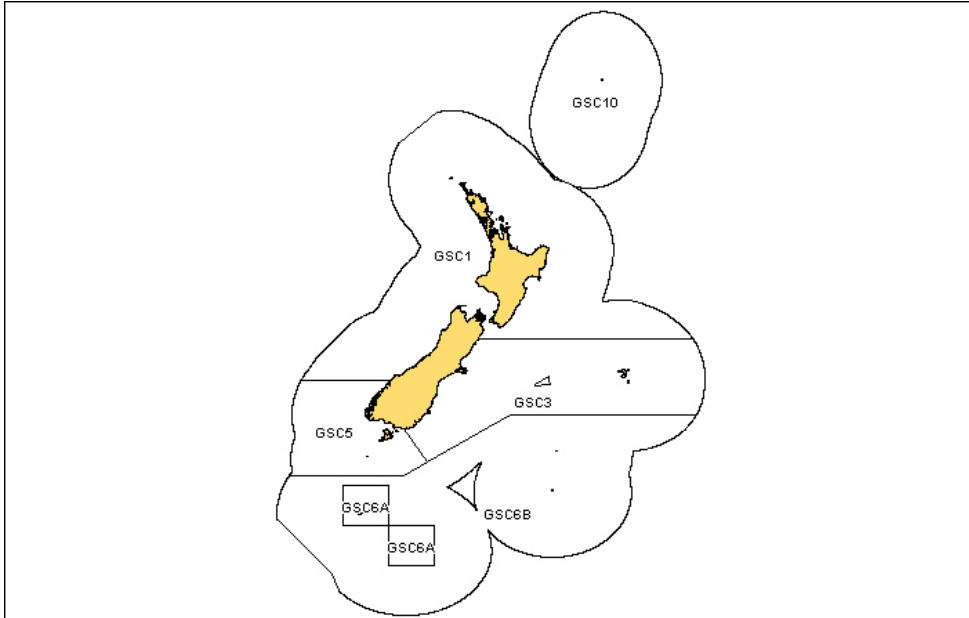


Figure 2 Quota Management Areas for king crab

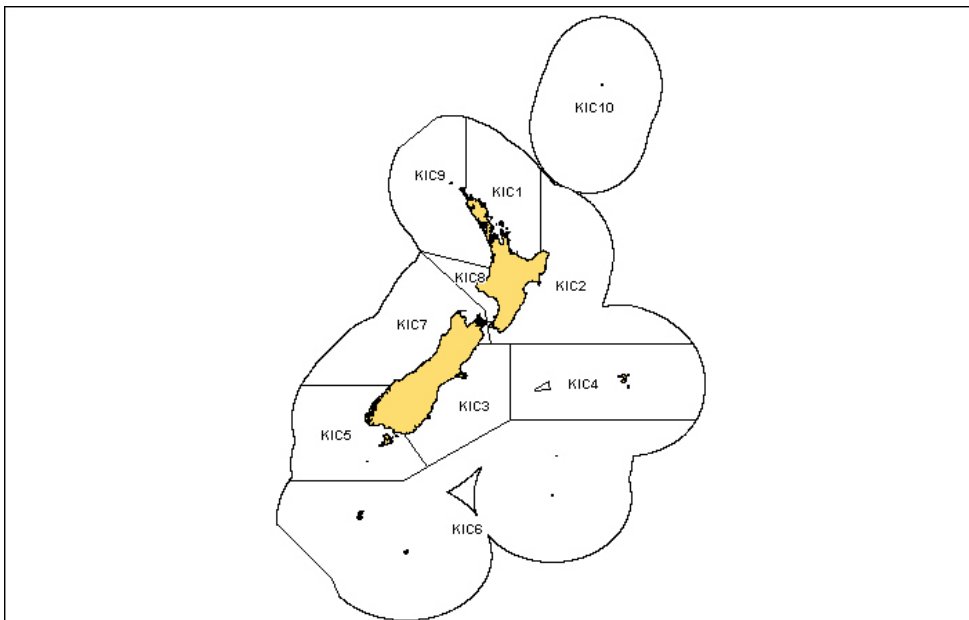
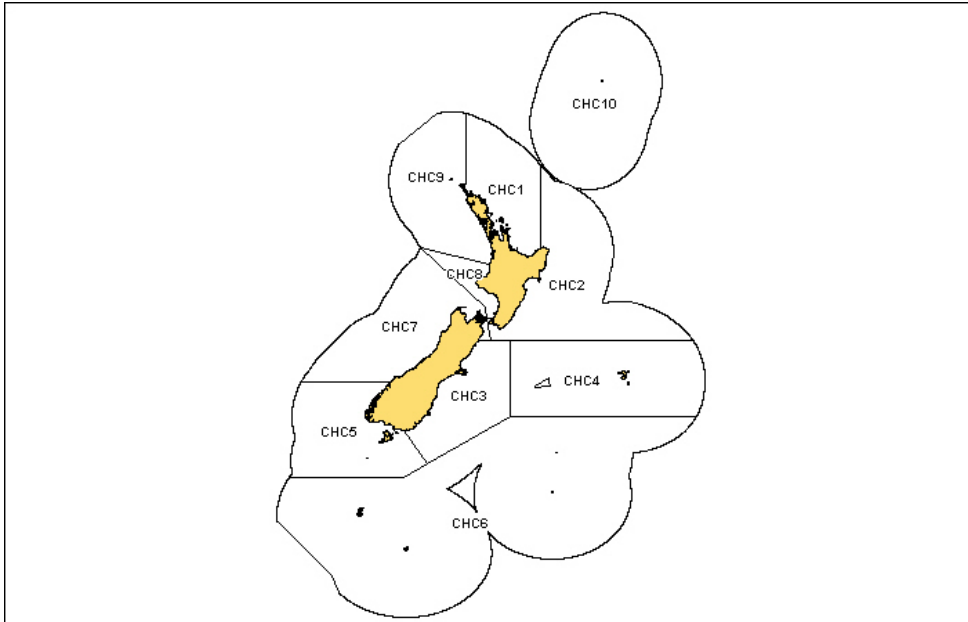


Figure 3 Quota Management Areas for red crab



7 I have decided to set the TACs, TACCs and other allowances for giant spider crab, king crab and red crab as outlined in Tables 1, 2, and 3, respectively.

Table 1 TACs, TACCs and other allowances for giant spider crab (tonnes)

Stock	TAC	Customary allowance	Recreational allowance	Other fishing-related mortality	TACC
GSC 1	1	0	0	0	1
GSC 3	15	0	0	1	14
GSC 5	20	0	0	1	19
GSC 6A	165	0	0	17	148
GSC 6B	250	0	0	13	237
GSC 10	0	0	0	0	0

Table 2 TACs, TACCs and other allowances for king crab (tonnes)

Stock	TAC	Customary allowance	Recreational allowance	Other fishing-related mortality	TACC
KIC 1	10	0	0	0	10
KIC 2	10	0	0	0	10
KIC 3	10	0	0	0	10
KIC 4	10	0	0	0	10
KIC 5	10	0	0	0	10
KIC 6	10	0	0	0	10
KIC 7	10	0	0	0	10
KIC 8	10	0	0	0	10
KIC 9	10	0	0	0	10
KIC 10	0	0	0	0	0

Table 3 TACs, TACCs and other allowances for red crab (tonnes)

Stock	TAC	Customary allowance	Recreational allowance	Other fishing-related mortality	TACC
CHC 1	10	0	0	0	10
CHC 2	10	0	0	0	10
CHC 3	4	0	0	0	4
CHC 4	4	0	0	0	4
CHC 5	4	0	0	0	4
CHC 6	4	0	0	0	4
CHC 7	4	0	0	0	4
CHC 8	4	0	0	0	4
CHC 9	4	0	0	0	4
CHC 10	0	0	0	0	0

- 8 As noted in the IPP, there is no scientific stock assessment information available to show whether any of the deepwater crab stocks are at, above, or below a level that can produce the maximum sustainable yield (MSY). However, the best available information suggests that the respective stocks are likely to be at or near virgin stock size. The TACs (0 – 250 tonnes) are intended to move the biomass towards a level that can produce the MSY. However, these species of crab have in general late onset of maturity and low productivity, which could result in smaller TACs in the future. I have set TACs at zero for GSC 10, KIC 10, and CHC 10 as the area within 12 nautical miles of the Kermadec Islands is a marine reserve with all fishing prohibited.
- 9 As no submissions were received in response to the IPP for the deepwater crab species, I have made no changes to the TACs, TACCs and other allowances as set out in the IPP. The TACs are consistent with s 13 of the 1996 Act. I have made no allowances for recreational and customary fishing, as there are no known records of these sectors catching the deepwater crab species. No allowance has been made for other sources of fishing-related mortality for king crab and red crab given the low reported catch and absence of empirical evidence of discarded and non-reported bycatch. Because giant spider crab is taken largely as trawl bycatch, there is likely to

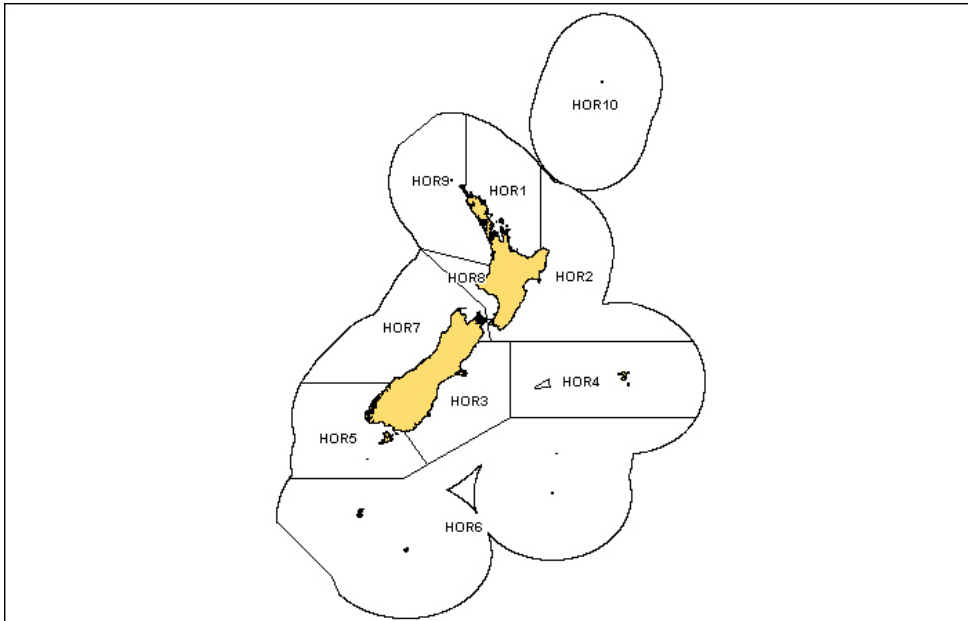
have been some fishing-related mortality. Accordingly, I have made allowances ranging from nil to 17 tonnes for other sources of fishing-related mortality, depending on the giant spider crab stock and the extent of the commercial catch.

- 10 At this stage no further management measures have been proposed. I will revisit the need for any other management measures should explicit sustainability or utilisation issues be identified in the future.

Horse Mussel (HOR)

- 11 The QMAs for horse mussel *Atrina zelandica* (HOR) are outlined in Figure 4.

Figure 4 Quota Management Areas for horse mussel



- 12 I have decided to set the TACs, TACCs and other allowances for horse mussel stocks as outlined in Table 4.

Table 4 TACs, TACCs and other allowances for horse mussel (tonnes)

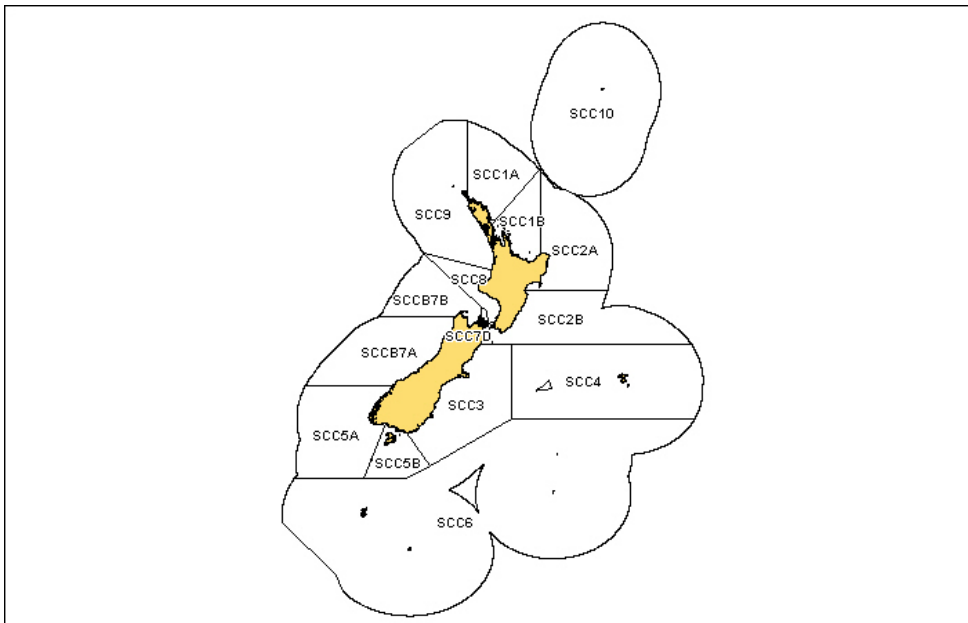
Stock	TAC	Customary allowance	Recreational allowance	Other fishing-related mortality	TACC
HOR 1	14	1	1	8	4
HOR 2	8	1	1	4	2
HOR 3	8	1	1	4	2
HOR 4	5	1	1	2	1
HOR 5	5	1	1	2	1
HOR 6	5	1	1	2	1
HOR 7	50	1	1	32	16
HOR 8	5	1	1	2	1
HOR 9	5	1	1	2	1
HOR 10	0	0	0	0	0

- 13 Horse mussel is primarily taken as a bycatch in trawl and dredge fisheries targeting other more valuable species. No stock assessment information is available for horse mussel. There are no estimates of reference or current biomass in relation to the MSY. Accordingly, it is not known whether the horse mussel stocks are at, above, or below a level that can produce MSY. MFish is not aware of any concerns from interested parties regarding the sustainability of the horse mussel fishery.
- 14 Since horse mussel is primarily caught commercially, the TACs (0-50 tonnes) I have set are based mainly on the reported commercial catch. It is likely that a reasonably high level of the commercial catch of horse mussel is discarded from vessels at sea and not reported. It is legal for fishers to discard non-QMS species, but fishers do have a legal obligation to estimate and report the weight of fish discarded. The reported catches of horse mussel are likely to substantially underestimate the actual catch and levels of mortality caused by fishing gear coming in contact with the mussel beds. I have set allowances (0-32 tonnes) for other sources of fishing-related mortality at approximately 200% of the TACCs (0-16 tonnes) for each mussel stock to take into account mortality caused by dredging and trawling.
- 15 I have set the TAC at zero for HOR 10, as the area within 12 nautical miles of the Kermadec Islands is a marine reserve with all fishing prohibited.
- 16 No quantitative estimates of the recreational catch or customary Māori catch are available. Since the horse mussel catch from both sectors is thought to be negligible, 0-1 tonne allowances have been set for each stock.

Sea Cucumber (SCC)

17 The QMAs for sea cucumber *Stichopus mollis* (SCC) are outlined in Figure 5.

Figure 5 Quota Management Areas for sea cucumber



18 I have decided to set the TACs, TACCs and other allowances for the sea cucumber stocks as outlined in Table 5.

Table 5 TACs, TACCs and other allowances for sea cucumbers (tonnes)

Stock	TAC	Customary allowance	Recreational Allowance	Other fishing-related mortality	TACC
SCC 1A	7	2	3	0	2
SCC 1B	8	2	4	0	2
SCC 2A	4	1	1	0	2
SCC 2B	11	2	4	0	5
SCC 3	5	1	2	0	2
SCC 4	4	1	1	0	2
SCC 5A	4	1	1	0	2
SCC 5B	4	1	1	0	2
SCC 6	0	0	0	0	0
SCC 7A	8	1	2	0	5
SCC 7B	8	1	2	0	5
SCC 7D	4	1	1	0	2
SCC 8	4	1	1	0	2
SCC 9	4	1	1	0	2
SCC 10	0	0	0	0	0

19 I note that there were no submissions that had any bearing on the setting of TACs and allowances for sea cucumber. New information has become available on the distribution of sea cucumber, *S. mollis*. In the IPP, MFish assumed that sea cucumber catch recorded on Catch Effort Landing Returns is the edible, inshore *S. mollis*, while those recorded on Trawl Catch Effort and Processing Returns are other deepwater sea cucumber species. In light of a new NIWA report, MFish considers that this assumption largely holds true. I consider that the new information does not warrant any change to the TACs or allowances proposed in the IPP.

20 I note that there is no scientific data about whether or not the proposed TACs will allow the stocks to be maintained at or above the level that will produce the MSY. However, I accept that MFish has considered the best available information on catches, habitat and biology of the stocks in proposing the TACs and TACCs. MFish believes the TAC proposals are consistent with s 13, and the TACC proposals are consistent with s 21. I consider that the proposed TAC and TACC levels provide for utilisation of sea cucumber while ensuring its sustainability (s 8).

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21 I have set a TAC of 0 for SCC 6, as there have been no recorded catches of *S. mollis* in that area. This species may not exist in SCC 6, and if it does exist there is limited habitat for it. The area within 12 nautical miles of the Auckland Islands is also a marine reserve with all fishing prohibited. I have set a TAC of 0 for SCC 10 as the only available habitat for *S. mollis* is within the 12 nautical mile marine reserve around the Kermadec Islands where all fishing is prohibited.

22 MFish anticipates that the setting of TACs and TACCs for sea cucumber stocks could result in a target dredge fishery developing, which could result in previously unexploited areas being dredged. I note that MFish has reconsidered its IPP approach to managing the potential impacts of fishing on previously unexploited areas when targeting sea cucumber, other than by the method of handgathering. MFish proposes not to impose method or further area restrictions, and is currently consulting on removal of the existing method restrictions for taking sea cucumber in FMAs 2, 3, 4, 7, and 8. Under these circumstances, until such time as the nature and scope of impacts are better understood and mitigated, or stakeholders can provide documented measures to mitigate environmental damage in the sea cucumber fishery, MFish proposes that low TACCs be set for sea cucumber stocks to mainly accommodate only bycatches of this species. I support this approach of setting low TACCs to mitigate potential environmental damage and have set a number of TACCs at lower levels than was proposed in the IPP.

23 I note that sea cucumber is a traditional food of the Polynesian community and is of considerable interest to members of the Asian community in New Zealand. I have, therefore, decided to set allowances for recreational use for certain stocks based on location, accessibility of the resource, and the proximity of the resource to the location of Polynesian and Asian communities.

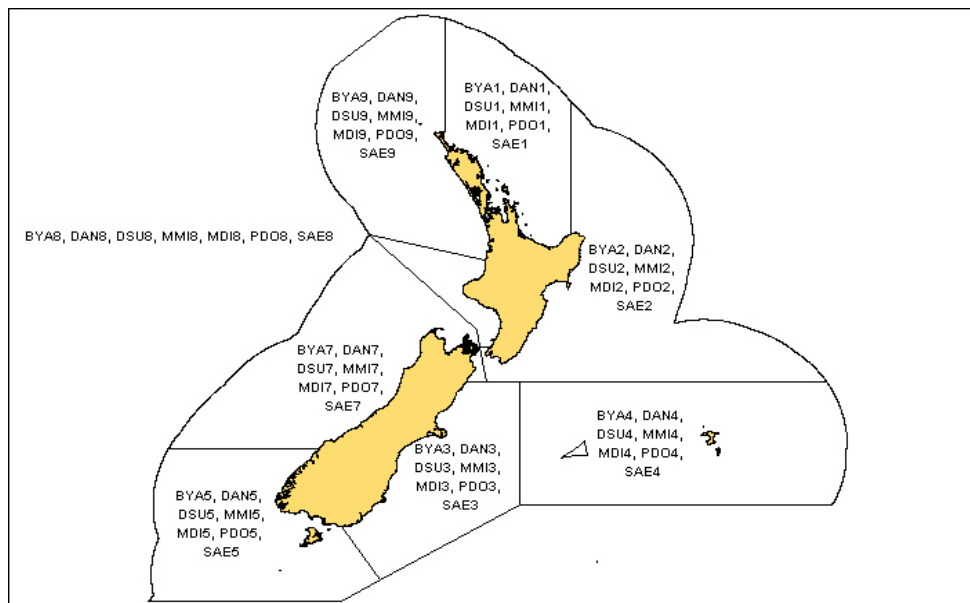
24 As there is no quantitative information on the current level of Māori customary catch, but customary use is likely to be less than recreational catch, I have decided to set the customary allowances lower than recreational allowances.

25 Sea cucumber is robust and can be returned to the sea with only a very low rate of mortality, and so I have decided to make no allowance for fishing-related mortality.

Surf Clams

- 26 The QMAs for the seven species of surf clams are outlined in Figure 6. The species include: frilled venus shell *Bassina yatei* (BYA); ringed dosinia *Dosinia anus* (DAN); silky dosinia *Dosinia subrosea* (DSU); large trough shell *Mactra murchisoni* (MMI); trough shell *Mactra discors* (MDI); deepwater tuatua *Paphies donacina* (PDO); and triangle shell *Spisula aequilatera* (SAE).

Figure 6 Quota Management Areas for surf clams (7 species)



- 27 I have decided to set TACs, TACCs and other allowances for the seven species of surf clams as outlined in Table 6.

Table 6 Proposed TACs, TACCs and other allowances for surf clam stocks (tonnes)

Stock	TAC	Customary Allowance	Recreational Allowance	Other fishing-related mortality	TACC
BYA1	1	0	0	0	1
DAN1	7	0	0	0	7
DSU1	1	0	0	0	1
MMI1	2	0	0	0	2
MDI1	1	0	0	0	1
SAE1	9	0	0	0	9
PDO1	1	0	0	0	1
BYA2	1	0	0	0	1
DAN2	18	0	0	0	18
DSU2	1	0	0	0	1
MMI2	3	0	0	0	3
MDI2	1	0	0	0	1
SAE2	1	0	0	0	1
PDO2	23	9	9	0	5

Table 6 **Continued**

Stock	TAC	Customary Allowance	Recreational Allowance	Other fishing-related mortality	TACC
BYA3	1	0	0	0	1
DAN3	4	0	0	0	4
DSU3	1	0	0	0	1
MMI3	44	0	0	0	44
MDI3	1	0	0	0	1
SAE3	264	0	0	0	264
PDO3	150	21	21	0	108
BYA4	1	0	0	0	1
DAN4	1	0	0	0	1
DSU4	1	0	0	0	1
MMI4	1	0	0	0	1
MDI4	1	0	0	0	1
SAE4	1	0	0	0	1
PDO4	3	1	1	0	1
BYA5	1	0	0	0	1
DAN5	1	0	0	0	1
DSU5	1	0	0	0	1
MMI5	1	0	0	0	1
MDI5	14	0	0	0	14
SAE5	3	0	0	0	3
PDO5	3	1	1	0	1
BYA7	9	0	0	0	9
DAN7	15	0	0	0	15
DSU7	1	0	0	0	1
MMI7	61	0	0	0	61
MDI7	26	0	0	0	26
SAE7	112	0	0	0	112
PDO7	52	1	1	0	50
BYA8	1	0	0	0	1
DAN8	33	0	0	0	33
DSU8	1	0	0	0	1
MMI8	25	0	0	0	25
MDI8	27	0	0	0	27
SAE8	8	0	0	0	8
PDO8	19	9	9	0	1
BYA9	1	0	0	0	1
DAN9	33	0	0	0	33
DSU9	1	0	0	0	1
MMI9	25	0	0	0	25
MDI9	27	0	0	0	27
SAE9	8	0	0	0	8
PDO9	53	26	26	0	1

- 28 MFish acknowledges in the IPP that the information used to set TACs is, for many QMAs, uncertain and inadequate. I consider the level of uncertainty in surf clam stock assessment information is appropriately taken into account in the above TACs.
- 29 While there is likely to be opportunity for further development of the surf clam fishery, development will need to be supported by new research on the stocks and environmental impacts. There are also issues in terms of interaction with non-commercial fishing that require further consideration.
- 30 I note that submissions generally support the TACs and TACCs as proposed in the IPP. One submission opposed commercial fishing of surf clams until it is proven that the impacts of dredging are minimal. MFish considers that available information suggests that the immediate impact of surf clam dredging in the areas likely to be fished is negligible. I consider the TACs take into account any uncertainty in terms of the current information on environmental impacts of surf clam harvesting. Further development of the fishery above these TACs will need to be supported by new research on environmental impacts.
- 31 MFish proposed two options in the IPP for TAC and TACC setting for QMA 9 surf clam stocks. Under the first option, TACs and TACCs would be based on those for QMA 8. Under the second, TACs and TACCs would be based on those for QMA 1. No submissions were received regarding these options. I have decided on the first option, which results in a slightly higher TAC and TACC.
- 32 A further submitter requested surf clams be listed in the Fifth and Sixth Schedules of the 1996 Act to allow, respectively, a higher quota aggregation limit and return of surf clams to the sea. I do not consider there are any particular circumstances that warrant the setting of higher aggregation limits for surf clams. In terms of the Sixth Schedule, there is insufficient information on the likelihood of surf clam survival to recommend inclusion on this schedule at this time. Quota holders have the opportunity to gather information on incidental surf clam mortality with a view to proposing that surf clams be included on the Sixth Schedule at a later date.
- 33 The allowances made for Māori customary and recreational use of the surf clam stocks reflect the likely level of fishing activity for surf clams. Of the seven surf clam species being introduced into the QMS, only the deepwater tuatua, *P. donacina*, is likely to be accessible to customary and recreational harvesters. Other, normally inaccessible, surf clam species may be taken following strandings of dying shellfish after storms. However, I do not propose to make an allowance for this catch because the mortality associated with shellfish strandings is not fishing related and is already taken into account in estimates of sustainable yield. I note that not making allowances for recreational or customary non-commercial catches does not act as constraints on any catch taken.
- 34 There is a negligible amount of other sources of fishing-related mortality, which warrants setting this allowance at zero.

Deemed Values and Overfishing Thresholds

- 35 I have set interim and annual deemed values for the above stocks, which apply to all catch taken in excess of Annual Catch Entitlements in the 2004-05 fishing year. All the stocks are categorised as “low knowledge fisheries”. The interim and annual deemed value rates for 2004-05 are contained in the Deemed Values and Overfishing Thresholds section of the FAP. The interim and annual deemed value rates have been set by Gazette Notice, and letters will be sent to quota holders notifying them of the deemed value rates for the 2004-05 fishing year. I have decided not to set overfishing thresholds for any of the surf clam stocks.

Other Regulatory Changes

- 36 I have decided to revoke Fisheries (Southland and sub-Antarctic Areas Commercial Fishing) Regulations 1986, and Fisheries (South-East Area Commercial Fishing) Regulations 1986 that restrict the taking of deepwater crabs in FMAs 3, 4, 5 and 6 to handgathering or potting.
- 37 MFish has consulted a second time on changes to method restrictions for sea cucumber stocks and will advise me on this matter early next year. At that time I will also make decisions regarding method restrictions for horse mussel stocks and whether to add sea cucumber stocks to the Sixth Schedule of the 1996 Act.

Yours sincerely

Hon Pete Hodgson
Minister of Fisheries