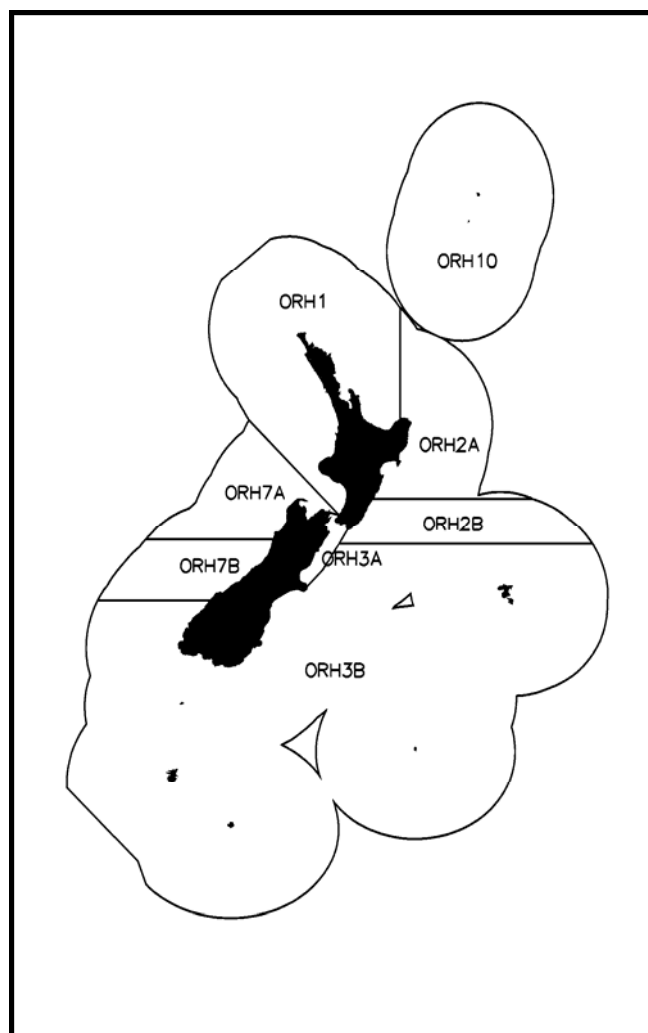


ORANGE ROUGHY (ORH 7B)

Figure 1. ORH 7B Quota Management Area



Executive Summary

- 1 The total allowable catch (TAC) and landings in the ORH 7B fishery reached a peak in the late 1980s and early 1990s and have subsequently declined to the point where the TAC is now less than 10% of its highest level. The TAC of 110 tonnes is the maximum constant yield (MCY) level estimated in 2001 (110 t mean, with a range of 80 t to 180 t). This TAC has not been fully caught in four of the five years since it was reduced to this level. Catch rates have also decreased with their mean values now less than 10% of those at the start of the fishery.
- 2 A new stock assessment was attempted in 2007 but was rejected on the basis that it was insensitive to the recent CPUE data and predicted a rebuild that was not supported by any observations in the fishery. The 2007 Plenary report concludes that no estimate of current biomass is available, although it is likely that the biomass of the stock is below that which can support the maximum

sustainable yield (B_{MSY}). The Plenary further states that it is not known if catches at the level of the current TAC will allow the stock to move towards a size that will support B_{MSY} .

- 3 Analysis of catch and effort data shows a spatial and temporal dispersion of effort, an increase in tow duration over the last five years and a decrease in both catch per tow and catch per hour over the course of the fishery (although catch per tow and catch per hour have been relatively stable over the past five years). It appears that fishers are finding it increasingly difficult to locate significant aggregations of orange roughy, suggesting concerns over the state of the ORH 7B fishery.
- 4 Three management approaches are considered to address the current situation in ORH 7B – retain the existing catch limits (options 1 and 2), reduce the TACC moderately below the level of current catch (option 3) or effectively close the fishery (option 4). For the Minister of Fisheries (the Minister) to effectively close the fishery he must consider that no level of commercial take will allow the stock to rebuild at an acceptable rate. Under this option no fishery dependent data would be collected and there would be little prospect of the TAC being increased in the short to medium term. Administrative requirements necessitate that a one tonne TAC is provided under option 4.
- 5 Under options 1, 2 and 3, the Ministry of Fisheries (MFish) proposes to require all operators in the fishery to report on Trawl Catch Effort Processing Return (TCEPR) forms to improve the spatial and temporal resolution of the CPUE data. MFish also considers it may be appropriate to set an allowance for other sources of fishing related mortality in line with other orange roughy fisheries in New Zealand (options 2 and 3). Under option 2 the total allowable commercial catch (TACC) remains the same and, although increased, the TAC better reflects the existing total fishing related mortality (commercial extractions and incidental mortality) in this fishery.

Summary of Options

- 6 MFish proposes four management options that reflect different responses to the current situation in ORH 7B. It is open to the Minister to choose other options (alternative TAC levels and management measures) that he considers will better meet his sustainability and utilisation obligations under the Fisheries Act 1996 (the Act).

Option 1 – Status quo

- 7 Retain the existing management measures for ORH 7B. That is:
 - a) Retain the current total allowable catch (TAC) of 110 tonnes;
 - b) Retain zero allowances for customary Māori interests and recreational fishery interests and other sources of fishing related mortality;
 - c) Retain the total allowable commercial catch (TACC) at 110 tonnes.

Option 2

- 8 Retain the existing TACC and provide an allowance for other sources of fishing related mortality. That is:
- a) Increase the total allowable catch (TAC) to 115.5 tonnes;
 - b) Retain zero allowances for customary Māori interests and recreational fishery interests
 - c) Provide an allowance of 5.5 tonnes for other sources of fishing related mortality;
 - d) Retain the total allowable commercial catch (TACC) at 110 tonnes.

Option 3

- 9 Reduce the existing TACC and provide an allowance for other sources of fishing related mortality. That is:
- a) Reduce the total allowable catch (TAC) to 52.5 tonnes;
 - b) Retain zero allowances for customary Māori interests and recreational fishery interests
 - c) Provide an allowance of 2.5 tonnes for other sources of fishing related mortality;
 - d) Reduce the total allowable commercial catch (TACC) to 50 tonnes.

Option 4

- 10 Effectively close the ORH 7B fishery. That is:
- a) Reduce the TAC to one tonne;
 - b) Retain zero allowances for customary Māori interests and recreational fishery interests and other sources of fishing related mortality;
 - c) Reduce the TACC to one tonne

Additional considerations

- 11 Under options 1, 2 and 3 the Chief Executive will require all vessels targeting orange roughy in ORH 3B, regardless of size, to report on TCEPR forms.

Background information

- 12 Quota Management Area (QMA) ORH 7B covers an area off the west coast of the South Island from near Westport to south of Jackson Head (Figure 1). Orange roughy occur throughout the QMA and are thought to constitute a single stock. It is likely that the stock is distinct from the Challenger and Puysegur fisheries to the north and south respectively.
- 13 The fishery developed from May 1985, with a rapid increase in the following year when aggregations of spawning orange roughy were targeted. The vast majority of orange roughy taken in ORH 7B has been targeted and this remains the case with targeted orange roughy fishing accounting for in excess of 98% of the catch in the last three fishing years.

- 14 Reported landings reached a maximum of 1 763 tonnes in 1985-86 (Table 1). Catches in 1992–93 to 1994–95 were well below the TAC of 1 708 t. The TAC was subsequently reduced to 430 t for the 1995–96 fishing year, but was only reached for the 1995–96 and 1996–97 fishing years. Following a new stock assessment undertaken in 2001, the TAC was further reduced in the 2001–02 fishing year to 110 t to reflect the best estimate of current yield under an MCY strategy (110 t with 95% confidence limits of 80 – 180t). The TAC has remained at this level and has been undercaught in 4 of the last 5 fishing years and by 30% in the most recent fishing year.
- 15 Over the course of the fishery there has also been a reduction in the average size of vessels prosecuting the fishery and it is now dominated by small (approximately 25m) inshore vessels. Fourteen vessels have recorded orange roughly catch from ORH 7B in the last three fishing years although five vessels, all from different companies, dominate the catch. Following the reduction of the TAC to 110 t in 2001-02 there was a drop in the number of vessel days and tows. In recent years catch rates (both catch per tow and catch per hour) have remained low, with their mean values in the last three years less than 10% of their values at the start of the fishery. The average distance towed is now more than twice that in the late 1990's.
- 16 Historically most effort and catch in the ORH 7B fishery has been concentrated in the winter spawning period (June and July) with a much smaller, secondary peak in catch and effort in September and October. Since 1997–98 however catch has tended to be more evenly spread throughout the year.
- 17 The geographical distribution of effort has also changed over the course of the fishery. In the early years of the fishery, effort was concentrated in a very small area in the Cook Canyon which returned high catch rates. Effort became more dispersed in 1992–93 and relatively high catches were taken in the Moeraki Canyon to the south in 1992–93 and 1993–94. Fishers have subsequently ranged widely across the QMA. Catch rates have decreased as the fishery dispersed, and have been low throughout ORH 7B from 1997 to 2006, with very few catches over 5 t.

Table 1: Reported landings (t) of orange roughy and TACs (t) for ORH 7B from 1983–84 to 2005–06.

| Fishing year | Reported landings | TAC |
|---------------------|--------------------------|------------|
| 1983–84* | 2 | – |
| 1984–85* | 282 | – |
| 1985–86* | 1 763 | 1 558 |
| 1986–87* | 1 446 | 1 558 |
| 1987–88† | 1 413 | 1 558 |
| 1988–89† | 1 750 | 1 708 |
| 1989–90† | 1 711 | 1 708 |
| 1990–91† | 1 683 | 1 708 |
| 1991–92† | 1 604 | 1 708 |
| 1992–93† | 1 139 | 1 708 |
| 1993–94† | 701 | 1 708 |
| 1994–95† | 290 | 1 708 |
| 1995–96† | 446 | 430 |
| 1996–97† | 425 | 430 |
| 1997–98† | 330 | 430 |
| 1998–99† | 405 | 430 |
| 1999–00† | 284 | 430 |
| 2000–01† | 161 | 430 |
| 2001–02† | 95 | 110 |
| 2002–03† | 90 | 110 |
| 2003–04† | 119 | 110 |
| 2004–05† | 106 | 110 |
| 2005–06† | 77 | 110 |

* FSU data † QMS data

Rationale for Management Options

Stock assessment

- 18 The most recent stock assessment was carried out in 2004. Biomass was estimated to be 17% B_0 (95% confidence interval 14-23%) when CPUE was assumed to be directly proportional to abundance.
- 19 An updated assessment was attempted in 2007 with the addition of catch data up to 2005-06 and new standardised CPUE indices. The assessment returned a similar result to that from the 2004 assessment and showed a slow rebuild over the last five years. The Working Group considered that this rebuild was driven by the model's recruitment assumptions and was not supported by the CPUE data, which instead showed a stable trend. On the basis that the model was insensitive to the recent CPUE data and predicted a rebuild that was not supported by any observations in the fishery, the assessment was rejected by the Working Group.
- 20 A plot of the standardised CPUE indices is shown in figure 2. The change in fleet composition to smaller inshore vessels has also resulted in a change in the way catch is reported with Catch Effort Landing Returns (CELR) dominant in recent years and Trawl Catch Effort Processing Returns (TCEPR) more prevalent in the earlier part of the fishery¹. The period when both form types

¹ TCEPRs are completed by vessels larger than 28 m, unless smaller vessels are specifically directed to use these forms.

were in operation has been used to scale the CPUE index to allow a meaningful comparison across years.

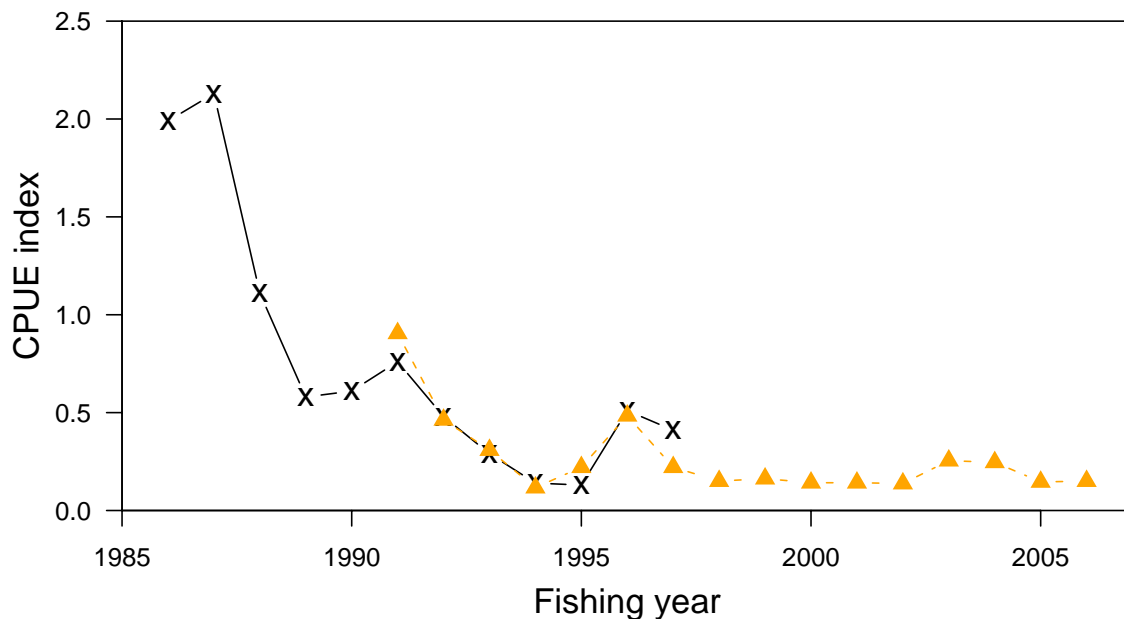


Figure 2: The CPUE indices based on: (i) TCEPR data (solid line and crosses) covering 1985–6 to 1996–97, and (ii) CELR data (triangles and dashed line) covering 1990–91 to 2005–06. The CELR index has been scaled so that it has the same mean value as the TCEPR index in the years that they overlap.

- 21 The TCEPR series is based on catch per tow and the CELR series used daily catch. As the average tow length in recent years is significantly longer than that in the early years of the fishery, the indices may underestimate a decline in catch rate at a finer temporal scale.

Status of the stock

- 22 The status of the ORH 7B stock is uncertain. The rejection of the stock assessment this year places greater emphasis on the CPUE data series. There are well documented problems with using CPUE indices to track abundance in aggregating species such as orange roughy.
- 23 The 2007 Plenary report concludes that no estimate of current biomass is available, although it is likely that the biomass of the stock is below that which can support the maximum sustainable yield (B_{MSY}) as catch rates have not increased over the last 5 years despite a large reduction in the annual removals from the stock. The Plenary further states that it is not known if catches at the level of the current TAC will allow the stock to move towards a size that will support MSY.
- 24 There are, however, grounds for concern over the state of the ORH 7B fishery. The dispersion of effort across the QMA, and throughout the fishing year suggests that it may be increasingly difficult to locate significant aggregations of orange roughy. The increase in trawl duration and the decrease in catch per

tow and catch per hour further support this position. The TAC, although only 110 t, has also been undercaught in four of the five years since it was reduced to this level, and in the most recent fishing year the TAC was undercaught by 30%.

Options considered

- 25 Although no firm conclusions on the status of the ORH 7B fishery were reached through the 2007 working group process, the 2007 Plenary report constitutes the best available information on the status of the stock. That report states that, despite uncertainty, the biomass of ORH 7B is considered likely to be below B_{MSY} . On that basis MFish considers that the TAC should be set under s 13 (2)(b) - that is the TAC should be set such that it enables the level of the stock to be altered –
- i) In a way and at a rate that will result in the stock being restored to or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks; and
 - ii) Within a period appropriate to the stock, having regard to the biological characteristics of the stock and any environmental conditions affecting the stock.
- 26 The key consideration in determining appropriate management action in this fishery is whether the existing TAC is appropriate – that is, whether it is allowing the stock to rebuild and if it is, whether the rate of rebuild is appropriate to the stock. The Plenary report provides no guidance on this point.
- 27 MFish considers that there are two broad approaches open to the Minister – retain or reduce the current catch limits. If the Minister considers that the existing TAC is not allowing the stock to rebuild within an appropriate timeframe he should reduce the TAC.
- 28 The 2006 Plenary noted that reported catch overruns are likely to occur in ORH 7B because of fish loss from torn nets, and discarding of small or damaged fish. There is no estimate of the size of the overrun, but it means that actual fishing related mortality is greater than reported catch. The Plenary further states however that, although overruns have not been added in the catch history for stock assessment purposes, this will have no affect as long as future overruns are similar to those in the past.
- 29 The nature of the fishing effort in ORH 7B has changed over time. On average tows are now longer and towing speeds are higher which may increase incidental mortality relating to fishing. This may however be offset to an extent by smaller catches per tow minimising the chance of lost catch.

Assessment of Management Options

Total allowable catch

Section 13 (2)

- 30 There is no new stock assessment on which the Minister may base a determination as to whether the existing TAC will enable the stock to rebuild. The existing TAC was derived under an MCY strategy based on the 2001 stock assessment. The stock assessment model predicted a rebuild subsequent to the reduction of the TAC to the present level. The predicted rebuild was not seen in the 2004 assessment or in the rejected 2007 assessment.
- 31 Standardised CPUE indices are available, and although there are problems with using this data as a basis for making management decisions in stocks such as ORH 7B, they do suggest some sustainability concerns for the stock if the existing TAC is retained. This position is supported by additional information on the spatial and temporal changes that have occurred in the fishery in recent years which suggest that fishers may be finding it increasingly difficult to catch the TAC.
- 32 If the Minister has concerns that the existing TAC is not moving the stock towards B_{MSY} , or is not moving the stock towards B_{MSY} at an appropriate rate, then he may consider it appropriate to reduce the TAC. Information as to the whether the existing TAC will enable the stock to rebuild and, more generally in relation to the biological characteristics of orange roughy, are uncertain. Reducing the TAC would represent a cautious approach to managing ORH 7B in light of this uncertainty.
- 33 If the Minister determines to reduce the TAC there is little information on which to determine an appropriate TAC reduction that will allow the stock to rebuild within an appropriate timeframe. Options 3 and 4 have been proposed for reducing the TAC.
- 34 Under option 3 the TACC has been reduced to effect a 50% reduction in current catch levels. The reported annual landings over the last 5 fishing years have averaged approximately 100 t. The TACC proposed under this option is therefore 50 t. This option represents a reasonable mid-point between retaining the existing TACC (options 1 and 2) and effectively closing the fishery (option 4). Option 3 incorporates the likelihood that the stock will rebuild towards B_{MSY} , although the effect cannot be quantified.
- 35 Given the already low TAC, the Minister may consider that setting the TAC at some level below the current level would not provide a meaningful or reasonable management response. He may therefore consider it appropriate to effectively close the fishery (option 4).
- 36 For the Minister to choose this option he must consider that no level of commercial take will allow the stock to rebuild at an acceptable rate.
- 37 Existing information on the status of the stock is based on fishery-dependent data and the value of the fishery is such that the collection of fishery-

independent data is unlikely to be economically viable. Closure of the fishery would mean that no information would be collected and there would be little prospect of the fishery reopening in the short to medium term.

- 38 Administration requirements in regard to the maintenance of quota shares dictate that a fishery managed under the QMS should not be completely closed to commercial fishing. Thus option 4 retains a one tonne TAC.

Section 13 (3)

- 39 Section 13 (3) requires that, in considering the way and the rate that the stock may be moved towards a level that can produce MSY under s 13 (2)(b), the Minister shall have regard to such social, cultural and economic factors as he or she considers relevant.

- 40 Social, cultural and economic aspects of the fishery are discussed in the following sections. MFish requests that industry submissions provide additional information on social, cultural and economic factors relevant to this decision.

Economic factors

Value of the fishery

- 41 A conservative estimate of the landed value of the fishery may be determined from the port price of orange roughy landed from ORH 7B. The port price for 2005-06 and 2006-07 was \$3.35 which equates to a value of \$368,500 if the TACC was fully caught. The estimated value of the reported landings of orange roughy from ORH 7B for 2005-06 based on port price was \$258,000.
- 42 The export value of the ORH 7B fishery for the 2005-06 fishing year was determined by multiplying the export earnings from orange roughy products by the percentage of the total orange roughy catch (derived from monthly harvest returns) that came from ORH 7B. On that basis export earnings of approximately \$423,500 were derived from the ORH 7B fishery in 2005-06.

Vessels in the fishery

- 43 Over the last three fishing years there have been 5 vessels that have taken in excess of 98% of the orange roughy from ORH 7B with the total catch fairly evenly spread between them. All are small vessels with an average registered length of approximately 25m. Three of the vessels are based in Nelson, one in Greymouth and one in Wellington with the proportion of their annual effort expended in the statistical areas that comprise the ORH 7B QMA varying substantially between vessels. Two vessels spend over 50% of the year within these statistical areas, with the vessel based in Greymouth spending 99% of its time there.
- 44 Orange roughy taken from ORH 7B is virtually all targeted (98-99% over the last three fishing years) with the remaining 1-2% taken primarily in the targeted hoki and hake fisheries. For each of the vessels which dominate the ORH 7B fishery, including that based in Greymouth, orange roughy from ORH 7B represents less than 3% of their annual catch by greenweight over the last three fishing years. Hoki contributes a significant component of the total

catch for all of these vessels (between 25-53% greenweight) with the remainder of their catch dominated by red cod, black and smooth oreo, barracouta, squid and orange roughy from other QMAs, although the contribution of each of these species to their total catch varies by vessel.

Social factors

- 45 These vessels operating in ORH 7B employ a small number of crew (5-6 each) and the majority operate across a number of QMAs. Only one vessel is located locally and, while this vessel operates almost exclusively in the statistical areas which comprise the ORH 7B QMA, orange roughy provides only a small proportion of its total catch.

Cultural factors

- 46 There is no known Customary Maori interest in the fishery and no other cultural factors that MFish consider are relevant to the Ministers determination under section 13(3).

TACC and Allowances

- 47 There are no known Maori customary or recreational fisheries for orange roughy and no catch entitlement is currently provided, or proposed for Maori customary or recreational interests.
- 48 No allowance is currently provided for other sources of fishing related mortality. MFish has typically recommended a 5% allowance for other sources of fishing related mortality in trawl fisheries generally and this figure has been used in a number of other orange roughy fisheries. ORH 7B is the only orange roughy fishery with significant catch for which no such allowance has been provided.
- 49 The Plenary has stated that catch overruns will not have an impact on estimates of the status of the stock as long as future overruns remain similar to those in the past. Increases in average tow length and towing speeds may cause an increase in incidental fishing related mortality although this may be offset by smaller catches per tow minimising the chance of lost catch.
- 50 MFish considers that it is appropriate to provide an allocation for other sources of fishing related mortality for the ORH 7B stock to better reflect the impact of fishing and to provide a basis for taking into account any changes in fishing related incidental mortality in the future. MFish proposes that, consistent with other trawl fisheries, the allowance be set at 5% of the TACC at this time. If the TACC of 110 t is retained, this equates to an allowance of 5.5 tonnes (option 2) and if the TACC is reduced to 50 t this equates to 2.5 t (option 3). If the fishery is effectively closed a zero tonne allocation will be required (option 4).
- 51 Option 2 is intended to better reflect the current level of fishing related mortality (from both fish landed and other sources of fishing related mortality) in the ORH 7B fishery. Under this option MFish proposes to add the allowance to the existing TACC, increasing the TAC to 115.5 tonnes.

Additional considerations

Future stock assessments

- 52 Stock assessments in ORH 7B rely on CPUE indices and closure of the fishery under option 4 would mean that no such data would be available in future. Once closed, the cost of collecting stock assessment information to support the possible reopening of the fishery would appear to outweigh the economic value that may be derived from it.
- 53 If closed, it is unlikely that the ORH 7B fishery would re-open in the short to medium term.

Reporting requirements

- 54 The stock assessment for 2006 was rejected by the Working Group and MFish does not consider that it will be possible to undertake a new stock assessment for ORH 7B in the short to medium term. CPUE indices derived from each vessels catch and effort reports will therefore be relied on to monitor the status of the stock.
- 55 CELR forms provide daily records by statistical area or general location and include number of trawls, total trawl duration and estimated catch on a daily basis. TCEPR forms provide greater spatial and temporal resolution of catch and effort information by recording tow-by-tow information including location, time, trawl length and estimated catch.

- 56 Regulations require that all vessels over 28m in length use TCEPR forms but the smaller vessels which dominate the ORH 7B fishery may use either CELR or TCEPR forms. Where fishers have a choice, CELR forms are typically preferred over TCEPR forms as they are quicker and simpler to use.
- 57 Under options 1,2 and 3, MFish intends to recommend that fishers targeting orange roughy in ORH 7B use TCEPR forms regardless of the size of the vessel. The additional spatial and temporal resolution provided by TCEPR forms would enhance the utility of CPUE data for stock assessment and management purposes. New points on the TCEPR derived CPUE time-series could also be used to validate the full time-series of CPUE indices derived from the two form types shown in figure 2.
- 58 Decisions concerning the manner and form in which records are to be kept or provided may be specified by the Chief Executive under s 190 of the Act. As such, specific reporting requirements are not a condition of any TAC decision by the Minister. Unless option 4 is selected, MFish will advise the Minister of the Chief Executive's intention to implement, subject to this consultation, a requirement for all vessels targeting orange roughy within ORH 7B to report on TCEPR forms.

Environmental considerations

- 59 Key environmental issues in relation to the ORH 7B fishery are discussed below. In general the environmental impacts discussed are, to an extent, proportional to effort in this fishery. Effort in vessel days has significantly decreased over the course of the fishery as catch limits have decreased. The trend of reducing vessel days has been partially offset in recent years as tow duration has increased.

Finfish Bycatch

While a number of deepwater species that share similar habitat to orange roughy are taken in the ORH 7B target fishery, the management proposals do not include an increase in the orange roughy TAC and there should be no additional adverse implications for fish bycatch.

Marine Mammals

MFish considers that the management proposals will have no additional adverse implications for fur seals and other marine mammals as no increase in orange roughy catch allowances is proposed.

Seabirds

Trawl fisheries for orange roughy are known to interact with seabirds, and fishing-related mortalities of seabird species are known to occur, although it is difficult to quantify the overall impact as knowledge of the population characteristics of seabird species is typically limited. The management proposals should have no additional adverse implications for seabirds as no increase in orange roughy catch allowances is proposed.

Benthic impacts and coral bycatch

Bottom trawling can affect fragile benthic invertebrate communities and two initiatives are in place to address benthic impacts nationally. In 2001 the

Minister initiated a trawl closure covering a selection of 19 seamounts of varying size and depth within New Zealand. In addition it has recently been confirmed that further areas will be closed to bottom trawling under the BPA proposal, including an area (Challenger South) which partially overlaps the north-western extent of the ORH 7B QMA.

MFish note that the area over which the ORH 7B fishery is distributed has increased over the life of the fishery although the catch limits and effort have decreased significantly. On balance, MFish considers that the management proposals should have no additional benthic impact as no increase in orange roughy catch entitlements is proposed.

Statutory Considerations

- 60 Statutory considerations in relation to sections 13(2) and 13(3) are central to the Ministers decision in relation to ORH 7B and the implications of these sections on the options proposed in this paper have been discussed at length above.
- 61 Additional legal obligations, and how they are applicable to the Ministers decision are included in Appendix 1.

APPENDIX 1

Statutory Considerations

62 In forming this management proposal, the following statutory considerations have been taken into account:

- a) **Section 8** of the Act describes the purpose of the Act as being to provide for the utilisation of fisheries resources while ensuring sustainability, and defines the meanings of utilisation and sustainability. The management options presented seek to achieve the purpose of the Act. Under option 4 no utilisation is provided for. This option is available to the Minister if he determines that no level of utilisation is required to ensure the rebuild of the ORH 7B stock.
- b) **Section 11(1)(c)** requires the Minister to take into account the natural variability of the stock when setting or varying any sustainability measure. Orange roughy year-to-year biomass is not known to be highly variable.
- c) **Sections 9(a) and (b)** require the Minister to take into account that associated or dependent species (those that are not harvested) be maintained at or above a level that ensures their long-term viability, and that the biological diversity of the aquatic environment should be maintained.

Seabirds and marine mammals have been discussed in the body of the paper. Some concern has also been raised regarding highly vulnerable deepwater sharks, but sharks account for less than 1% of the bycatch in orange roughy fisheries. A specific national plan of action for deepwater sharks is in preparation by MFish.

- d) **Section 9(c)** requires that habitat of particular importance for fisheries management should be protected. Our knowledge of the distribution of such habitats is fragmentary however some habitats that are understood to be important are protected from trawling under the seamount closures and the BPA initiative.
- e) **Sections 5(a) and (b)** require the Act to be interpreted consistently with New Zealand's international obligations with respect to fishing and with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. Provisions of general international instruments such as the United Nations Convention on the Law of the Sea (UNCLOS) and the Fish Stocks Agreement have been implemented through the provisions of the Fisheries Act 1996 and given effect to here. MFish considers that issues relating to international obligations and the Settlement Act are adequately addressed in the management options proposed.
- f) **Section 11(1)(b)** requires any existing controls under the Act to be taken into account. For ORH 7B, the only measure that applies currently is a TACC.

- g) **Section 11(2A)(b)** requires the Minister to take into account any relevant fisheries plan approved under the Act. There is no fisheries plan in operation that applies to ORH 7B.
- h) **Sections 11(2A)(a) and (c)** require that before setting or varying any sustainability measure, the Minister must take into account any conservation or fisheries service, or any decision not to require such services. MFish does not consider that existing or proposed services materially affect the proposals for the ORH 7B stock. No decision has been made to require or not require a service in this fishery at this time.
- i) **Sections 11(2)(a) and (b)** require the Minister to have regard to any provisions in any policy statement or plan under the Resource Management Act 1991, or any management strategy or plan under the Conservation Act 1987, that are relevant to the setting of any sustainability measure for the ORH 7B stock. MFish is not aware of any such provisions that should be taken into account for ORH 7B.
- j) **Section 11(2)(c)** requires the Minister to have regard to ss 7 and 8 of the Hauraki Gulf Marine Park Act 2000. This provision is not relevant to ORH 7B.
- k) **Section 21** requires the Minister to allow for non-commercial Maori and recreational fishing interests, and other sources of fishing-related mortality when setting or varying the TACC. There are no known customary or recreational interests in ORH 7B and other sources of fishing-related mortality have been considered in the paper. Section 21 also requires that any mātaimai reserve or closure/restriction under s 186A to facilitate customary fishing be taken into account. There are no mātaimai reserves and s 186A measures that intersect with the ORH 7B fishery. No area has been closed or fishing method restricted (that affects the fishery within ORH 7B) under the customary fishing provisions of the Act. Section 21 also requires that any regulations to prohibit fishing made under s 311 be taken into account when setting allowances for recreational interests. This consideration is not relevant with regard to ORH 7B.
- l) **Section 10** of the Act sets out the information principles, which require that decisions be based on the best available information, taking into account any uncertainty in that information, and applying caution when information is uncertain, unreliable, or inadequate. In accordance with s 10, the absence of information should not be used as a reason to postpone, or fail to take, any measure to achieve the purpose of the Act, including providing for utilisation at levels considered to be sustainable. MFish considers that the information used to support the management proposals are the best available information on the status of the ORH 7B stock. There remains significant uncertainty in regard to what level of catch will allow the stock to rebuild. MFish considers that the range of options presented will allow the decision maker to exercise his discretion with regard to determining the appropriate degree of caution to apply in setting sustainability measures.

