

S8734

13 October 2008

Minister of Fisheries

APPROVAL OF THE HARVEST STRATEGY STANDARD

Purpose and Process

- 1 The Ministry seeks your approval of the Harvest Strategy Standard (HSS). This document explains the purpose of the HSS and its key elements. The implications of implementing the HSS are also addressed.
- 2 There are three attachments accompanying this briefing paper:
 - a) The HSS itself with a Foreword to be signed by you subject to your approval of the HSS (Appendix I);
 - b) A companion document that outlines “Operational Guidelines” that detail the technical application and implementation of the HSS (Appendix II); and
 - c) A more comprehensive summary of issues raised by stakeholders in submissions on two versions of the draft HSS and the Ministry’s responses to those issues (bound separately).
- 3 It is intended that the HSS will change infrequently; it should be reviewed approximately every five years in light of practical experience and changes in international best practice. It is intended that the Operational Guidelines will continuously evolve as new data, analyses and insights become available. Periodic revisions the Operational Guidelines will be approved by the Ministry’s Chief Executive. As such, we seek your approval of the HSS only. The current draft of the Operational Guidelines (Appendix II) will be subjected to at least one collaborative review by the Ministry’s Stock Assessment Methods Working Group, which is open to all stakeholders, prior to approval by the Chief Executive.

Content of the Harvest Strategy Standard

- 4 The HSS has been amended to be consistent with the recent amendment to section 13 of the Fisheries Act. The HSS consists of three core elements:
- a) A specified target about which a fishery or stock should fluctuate: this is a level that is based on an MSY-compatible reference point or better.¹ The target should be achieved with at least a 50% probability. Targets that are MSY-compatible, or better, should apply for all section 13 stocks, and most section 14 stocks other than those managed under section 14B where an alternative target may be appropriate.
 - b) A soft limit that triggers a requirement for a formal, time-constrained rebuilding plan: the soft limit equates to $\frac{1}{2} B_{MSY}$ or $20\% B_0$ ² (or proxies), whichever is higher. The soft limit is the biomass (or proxy) that should be avoided as continued decline may lead to a need to consider closure of fisheries. The soft limit is generally at the lower end of, or below, the range of natural fluctuations of a stock that is managed to achieve an MSY-compatible target (or better). There should be no more than a 10% probability of breaching the soft limit. Generally, management measures should have been implemented to ensure that fisheries and stocks fluctuate around targets and that they do not decline to the soft limit. The rebuilding plan requires that the biomass be fully rebuilt to the target level with at least a 70% probability. The rebuild should be achieved between the time it would take for the stock to rebuild in the absence of fishing, and twice that time. Stocks that are below the soft limit will be considered to be depleted.
 - c) A hard limit: the level below which there is a high risk of stock collapse. The hard limit equates to $\frac{1}{4} B_{MSY}$ or $10\% B_0$ (or proxies), whichever is higher, and should be avoided with a high level of probability (it should be breached with no more than an estimated 2% probability). Biomass levels below the hard limit will result in recommendations to close fisheries.
- 5 The HSS applies to all fisheries where a TAC or TACC is legally required (i.e. those stocks managed under the QMS) – 96 species (or species groupings) and 628 individual fishstocks.
- 6 The HSS covers a range of fisheries of widely differing characteristics, including relatively high information fisheries to data deficient fisheries, and lightly fished to heavily over-fished stocks. The most important differences are the type and quality of data available for calculating biological reference points and assessing the status of stocks relative to MSY-compatible reference points or better.

¹ MSY-compatible reference points include those related to stock biomass (i.e. B_{MSY}), fishing mortality (i.e. F_{MSY}) or catch (i.e. MSY itself), as well as analytical and conceptual proxies (i.e. approximations) for each of these three quantities. Guidance on methods for calculating these reference points (and their proxies) is contained in the Operational Guidelines.

² B_0 represents the biomass that would exist in the absence of fishing.

Implications of Implementing the Standard

- 7 The HSS will bring about a number of fundamental changes to the current fisheries management regime in implementing targets, limits and rebuilding plans. However, there will be few, if any, implications of applying the HSS to New Zealand fisheries that have been managed to fluctuate around scientifically-defensible estimates of MSY-compatible reference points or better.
- 8 The majority of QMS stocks do not have a specified target. In the case of hoki, for example, the target is currently loosely defined – B_{MSY} is defined as being between 30–40% B_0 . Considerable effort will be required to develop targets, in accordance with the HSS and based on best available information, for all major QMS stocks.
- 9 Most stocks that might currently be considered to be depleted (i.e. those below the soft limit) do not have an explicitly-defined rebuilding plan. In the majority of cases, the immediate focus has been to somewhat arbitrarily reduce the TAC in order to provide the potential for rebuilding to occur. A robust projection of rebuild rates is often not undertaken; rather the emphasis is placed on increasing the likelihood that the biomass in five years time will be greater than current biomass, not on the extent of the increase.
- 10 No formal policy exists regarding the closure of fisheries. While the HSS (and current management action) is designed to ensure that effective measures are implemented to ensure that the hard limit is not breached, where that does nevertheless occur, a closure will be recommended as one management option. A closure of the target fishery will need to be supported by high deemed values, and potentially other supporting measures, to ensure catch of the species of concern is minimised.
- 11 In general, targets and limits should be set more conservatively for stocks with lower levels of information or higher levels of uncertainty, due to the higher risks associated with managing such stocks to ensure sustainability and long-term utilisation.
- 12 For stocks for which current estimates of MSY-compatible reference points or better are inconsistent with international best practice, it will be necessary to develop new estimates, along with appropriate harvest strategies, to achieve the associated targets and avoid the associated limits. Reconsideration of current estimates of MSY-compatible reference points is not formally part of the HSS. The Ministry will undertake appropriate reviews for selected stocks.
- 13 The hard limit of $\frac{1}{4} B_{MSY}$ or 10% B_0 (whichever is higher) is consistent with measures adopted in some other jurisdictions and less stringent than those adopted in others. There is some indication of an emerging trend internationally towards use of 20% B_0 as a potential closure point. This could potentially also be adopted in New Zealand. However, the Ministry considers that it is not practicable to do so at this time, especially given that current estimates of B_{MSY} for some important stocks are at or below 20% B_0 ; for example west coast North Island snapper (SNA 8). Hence, there is a need to re-evaluate these estimates before adopting a more conservative closure point. The Ministry recommends that a hard limit of $\frac{1}{4} B_{MSY}$ or 10% B_0 (whichever is higher) be adopted at this time. It is open to be amended over time and its application will be considered on a case by case basis.

- 14 The Ministry has not assessed the implications of implementing the HSS for all QMS stocks. Technical analyses for a few representative stocks have been carried out by NIWA, but they have not been peer reviewed. However, extensive testing of the types of approaches contained in the HSS (targets, limits, rebuild strategies and associated reference points) has been successful in other national and international jurisdictions.
- 15 The HSS and the Operational Guidelines are not statutory instruments; as a result they can be amended as required. The Ministry has explicitly stated that the Operational Guidelines will be subject to on-going refinement in light of practical experience. The Ministry will also monitor the performance of the HSS to assess the need to amend the HSS or conduct a formal review.
- 16 The HSS will be implemented over time, primarily through the development of fisheries plans. It is intended that fisheries plans will incorporate the core elements of the HSS. In the absence of a fisheries plan for any given stock, the HSS will be taken into account when reviewing management actions.
- 17 No date has been proposed for when all stocks, or fisheries plans that have been developed in advance of the HSS, must comply with the HSS. The reason for this is twofold – a lack of resources to fully implement the HSS within a short time frame and the effect of introducing a new policy direction. Given the available resources, a reasonable period needs to be provided to allow for adequate research and stock assessments to be conducted and fisheries plans to be developed. The objective is that in a maximum of 5–10 years from approval of the HSS, measures consistent with the core elements of the HSS will be in place for all major QMS stocks. The Ministry regards this as being a realistic objective, although the timeframe may need to be reassessed following experience gained from applying the HSS.
- 18 To the Ministry's knowledge, no fisheries that are currently open would need to be closed as a result of the HSS. Two fisheries have already been closed due to low biomass: ORH 7A and ORH 7B. The only other stocks that might approach the hard limit are SNA 8 (west coast North Island snapper) that was estimated to be at about 8-12% B_0 in 2005; however, this is expected to have been rebuilding slowly following a modest TAC reduction in 2005. In addition, southern bluefin tuna is estimated to currently be below 10% B_0 (but management of this stock is governed by an international organisation over which New Zealand has limited influence).
- 19 The HSS will result in fundamental and positive changes to the stock assessment working group process. The process will continue to deliver authoritative fisheries assessments of current stock status. However, the recently-introduced section 13(2A) and the HSS in combination will enable a much more comprehensive analysis of stock status relative to a wider range of reference points. This will greatly enhance the quality of the science advice on which to base management options and Ministerial advice.
- 20 The HSS is consistent with international best practice. International best practice management measures are becoming increasingly risk averse in nature. This in part reflects measures adopted in other jurisdictions to address the state of depleted fisheries and problems of overcapacity. It also reflects growing recognition of the uncertainty surrounding the ecosystem effects of fishing. Any decision about the extent to which New Zealand should follow international developments needs to be

considered in the context of our unique approach to managing fisheries through the rights-based construct of the QMS.

- 21 Implementation of a best practice standard complements the initiative on environmental certification for New Zealand fisheries. The HSS provides a basis for achieving certification of the New Zealand fisheries management framework and individual fisheries. Adoption of the HSS is expected to have positive benefits for New Zealand's attempts to gain environmental certification for its fisheries.

Legal Framework

- 22 The HSS is intended to reflect the legal provisions of the Fisheries Act that relate to setting TACs. This section of the briefing paper describes the legal framework and the following section describes its practical application. The HSS also contains a detailed analysis of the legal framework (see Appendix II of the HSS).
- 23 The purpose statement (section 8) states the purpose of the Act as being:

“to provide for the utilisation of fisheries resources while ensuring sustainability”
- 24 The concepts of “ensuring sustainability” and “utilisation” are separately defined in the Act. The former focuses on long term needs for sustainable fisheries, the latter on enabling people to provide for their well-being, which can have varying time scales. In practice, both are closely intertwined.
- 25 One of the key means of giving effect to the purpose statement of the Act is the setting of a TAC for QMS fishstocks. The Act specifies three means of setting a TAC for a QMS fishstock.
- 26 The first TAC option is specified in section 13(2). It embodies the classical approach to the management of fisheries – setting a catch level to maintain the stock at or above, or to rebuild the stock to or above, the level that can produce the maximum sustainable yield. Other MSY-compatible reference points are widely used internationally.
- 27 The recent addition of section 13(2A) to the Act mirrors the requirements of section 13(2) but allows TACs to be set in the absence of reliable estimates of current biomass and the biomass that can produce the maximum sustainable yield. Given that section 13(2A) reflects current practice in setting TACs for most of the important QMS stocks, subsections 13(2) and 13(2A) will together form the statutory basis for setting most TACs in the future.
- 28 The second TAC option in the Act is section 14. Under section 14 there is no requirement to adopt an MSY-based approach; however, such an approach is not discounted. The Minister may set a TAC on an alternative basis only if the stock meets certain requirements and the Minister is satisfied that this would better achieve the purpose of the Act. In such a case, the TAC must, nevertheless, ensure sustainability while providing for utilisation. Use of the option is restricted to limited classes of fishstocks. Only a handful of stocks are managed under section 14; most are highly migratory species or species managed under an international agreement.

- 29 The third option is specified in section 14B of the Act. Essentially it is a mechanism that allows the catch of key target species to be optimised without being unnecessarily constrained by the need to maintain minor bycatch stocks at levels based on MSY-compatible reference points or better. Under section 14B, the TAC for such bycatch stocks must be set at a level no greater than that which will allow the TAC and TACC set for another stock(s) to be taken. As a precaution, the TAC for the bycatch stock must be set so as to maintain the stock above a level that ensures its long-term viability and all reasonable steps must be taken to minimise the catch of the bycatch stock. Long-term viability can be achieved by a level lower than that based on MSY-compatible reference points; however, such reference points should not generally be lower than $\frac{1}{2} B_{MSY}$ (although the appropriate management level will depend on the circumstances of the bycatch stock). As with section 14, certain criteria must be met in order for the stock to be managed under section 14B. This option has not been used despite being enacted in 1999.

Practical Application of the Legal Framework

- 30 The Act does not refer to the terms “targets”, “limits” or “formal, time-constrained rebuilding plans”. Notwithstanding the difference in wording between the three TAC options in the Act, it is reasonable to infer that a TAC should be set so as to maintain stocks at or above a particular level, at least on average. That level may change over time in response to relevant factors. The identification of a target provides a clear reference point for current assessments of the status of stocks. The adoption of a target ensures that a consistent approach is taken to the management of QMS fishstocks, independent of the specific factors to be taken into account under sections 13, 14 and 14B.
- 31 The HSS proposes that a formal, time-constrained rebuilding plan must be adopted for QMS stocks that fall below the soft limit. Section 13 requires a stock to be rebuilt to the target (s 13(2) – at or above B_{MSY} , or s 13(2A) – a level not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the maximum sustainable yield). Section 13 does not identify a biomass size at which rebuilding should be formally invoked. This is a discretionary decision of the Minister subject to an assessment of the “way and rate” that is appropriate. Sections 14 and 14B do not explicitly mandate the need to rebuild a biomass in any given situation. However, where the current TAC is clearly above the level that enables the desired target level to be maintained, the TAC should be reduced to optimise the potential for a stock to rebuild. The requirement in section 14B to maintain stocks above the long-term viability level strongly infers that when stock size falls below that level the biomass needs to be rebuilt; it is arguably the closest expression of a limit is found in the Act.
- 32 The Act does not stipulate that a fishstock must be closed to fishing at any given biomass level. The Minister, however, is lawfully entitled to set a TAC at zero. The decision on when to do so is discretionary, subject to due consideration of relevant factors.
- 33 Hence, while there is no explicit reference to the main elements of the proposed HSS in the Act, those elements can be logically inferred in order to give practical effect to the Act.

- 34 The February 2008 High Court decision regarding ORH 1³ found that the decision to reduce the TAC for ORH 1 failed to comply with the requirements of s 13(2) of the Act. The Court found that the Minister must set the TAC with reference to where a stock is ($B_{CURRENT}$) in relation to B_{MSY} and that TAC changes could not be made without estimates of these quantities. The decision led to uncertainty about the use of reference points that are not directly related to B_{MSY} ; e.g. conceptual proxies that use catch rates or catch levels for selected years. These proxies represent internationally-accepted reference points for calculating or inferring B_{MSY} in information-deficient situations. The Operational Guidelines reflect current practice in meeting the requirements of s 13, as applied in New Zealand and throughout the world for more than 20 years.
- 35 The recently-passed Fisheries Act 1996 Amendment Act 2008 added subsection 13(2A) to section 13 of the Act. This will enable Ministers to continue to set TACs according to current practice prior to the ORH 1 decision.
- 36 The HSS is not a substitute for the Fisheries Act nor does it fetter Ministerial discretion. It simply provides guidance on the application of the legal provisions in the Act relating to the setting of a TAC. It expressly acknowledges that alternative approaches may be adopted. The Ministry does not consider the Act needs to be modified in order to implement the HSS.
- 37 Given that the HSS is essentially a policy statement, it is unlikely to be legally challenged in or of itself. However, a TAC decision guided by the HSS may be legally challenged at some point in the future. Industry may challenge a decision on the basis that the HSS unfairly or unlawfully constrains utilisation. Environmental NGOs may challenge a decision because they question the interpretation of B_{MSY} as a target rather than a limit; or that the HSS does not adequately take into account environmental and ecosystem considerations.
- 38 The Ministry considers the legal risk will be reduced by applying the HSS subject to the relevant sections of the Act. All TAC decisions must be justified and supported by the relevant sections of the Act and the Ministry believes the HSS is well aligned with those sections of the Act.

Concept of Best Practice Standards

- 39 There is no universally-recognised best practice fisheries regime or scientific assessment technique. In the context of fisheries, the concept of best practice entails identifying those regimes that have been adopted by the leading proponents in the field, and relevant literature and research. The purpose of identifying best practice is to provide useful benchmarks for the standards that the Ministry is developing. Implementing best practice approaches is a way of ensuring New Zealand's management regime keeps pace with international developments.
- 40 The use of target and limit reference points is also found in the United States National Standard Guidelines, the International Council for the Exploration of the Sea, the Northwest Atlantic Fisheries Organisation, the Northern Pacific Fisheries

³ *Anton's Trawling Company Limited v The Minister of Fisheries* (22 February 2008) HC WN CIV 2007-485-2199.

Management Committee, the International Commission for the Conservation of Atlantic Tunas, the Western Central Pacific Fisheries Commission and the Commission for the Conservation of Antarctic Marine Living Resources.

- 41 In September 2007, the Australian Minister for Fisheries, Forestry and Conservation released the Commonwealth Fisheries Harvest Strategy Policy. The aim of the policy is to “maximise the net economic returns to the Australian community from the harvest of Commonwealth fish stocks, while at the same time maintaining stocks at safe and productive levels.” It takes a best practice approach.
- 42 Similar to the Ministry’s proposed HSS, Australia has adopted target and limit reference points and the concept of formal rebuilding plans. The metrics adopted for the Australian Commonwealth are different from those proposed in the HSS. The Australian target reference point (B_{TARG}) is equal to the stock size required to produce maximum economic yield (B_{MEY}). The default position is that B_{MEY} is a level 20% higher than B_{MSY} . In addition, the default estimate of B_{MSY} is 40% B_0 . Consequently, the Australian default target will generally be higher than the target proposed in the HSS.
- 43 The hard limit in the Australian Policy has been set at $\frac{1}{2} B_{MSY}$ (or proxy). Stocks below this limit must be rebuilt to the target biomass. Under the Australian Policy, targeting a stock should not occur when a stock is below B_{LIM} (this compares with the New Zealand hard limit of 10% B_0). Once the stock is above B_{LIM} , targeted fishing may be allowed to recommence in line with a rebuilding plan. In Australia, the harvest strategy must ensure the stock stays above the limit at least 90% of the time.

Submissions

- 44 Views on the HSS have been diverse. A detailed summary of the submissions is contained in a companion paper and full copies of submissions are available upon request.

General support

- 45 Supportive comments were received from representatives of different sectors. However, there were differing views on changes required to meet stakeholder expectations.
- 46 There was opposition by industry to the level of prescription in the HSS as it considered this may lead to higher direct costs, possible reduction of fisheries utilisation opportunities and reduced flexibility.
- 47 ENGOs stated that the proposed HSS did not incorporate environmental variables into the management framework and thus the decision-making process for setting a TAC. Some suggested that environmental standards must constrain harvest decisions.

Ministry response

- 48 The level of prescription in the HSS has been reduced significantly from the initial consultation document. The defaults in the HSS for targets and limits can be departed from with appropriate justification. The Ministry has clearly signalled its intent to

work with stakeholders on the Operational Guidelines that will guide implementation of the HSS.

- 49 Integration of an ecosystem approach into the HSS is likely to ultimately result in more conservative management strategies. The notion of having more conservative target and limit reference points than those proposed in the HSS can only be achieved over time and in accordance with fisheries legislation; it is also essential to take the short-term consequences of associated management actions into account.
- 50 Based on stakeholder comments and submissions, as well as reviews by international experts, the initial draft of the HSS was considered too complex, too difficult to understand, and too different from current practice. A key change following the first consultation was the removal of information tiers and associated harvest control rules from the HSS; this change simplified the HSS considerably. Other issues that were raised by stakeholders are addressed below.

The legal basis of the HSS

- 51 The legal basis of the proposed HSS was questioned by some stakeholders. A major concern was that the HSS went well beyond what was required to meet obligations under the Act; hence it will not enable utilisation as required by the purpose of the Act. It was contended that any standards higher than those included in the Act would require legislative amendments. A contrary view was expressed by ENGOs that the proposed HSS failed to consider all the requirements of the purpose and principles of the Act and international obligations.

Ministry response

- 52 The Ministry has addressed legal issues in paragraphs 22 to 38 of this paper.

Specific reference points

- 53 Widely differing views were expressed about the targets and limits in both consultation documents. SeaFIC did not support the proposed default value of 20% B_0 for the soft limit. SeaFIC also considered that the soft limit of $\frac{1}{2} B_{MSY}$ or 20% B_0 (whichever is greater) implied a target level of 40% B_0 which it considered was too high.
- 54 SeaFIC contended that fish stocks can be managed sustainably and legally at lower levels than those specified in the HSS. SeaFIC submitted that, based on overseas studies, B_{MSY} is on average about 25%–30% of B_0 ; hence, the proposed HSS default of hard and soft limits at 10% B_0 and 20% B_0 respectively are not well justified.
- 55 Recreational and environmental groups argued for setting targets and limits higher than those in the HSS. This was particularly so for shared fisheries in order to allow for the social, cultural and economic well-being of those sectors of the public who value recreational activities such as fishing and diving. Environmental groups viewed B_{MSY} as a limit rather than a target. They advocated a precautionary approach that requires action to avoid stocks falling below B_{MSY} , rather than fluctuating around B_{MSY} , in order to recognise environmental and existence values.

Ministry response

- 56 The Ministry deliberately omitted 40% B_0 as a default target in order to allow lower or higher targets where justified; this has been clarified in the HSS. Even where B_{MSY} estimates are low, such as for SNA 8, there is an opportunity to manage above that level. Based on international best practice, targets lower than 30% B_0 are becoming increasingly harder to justify.
- 57 Industry is correct that for some fish stocks current estimates of B_{MSY} are lower than 40% B_0 . However, the Ministry is concerned that it may be inappropriate to adopt a soft limit of $\frac{1}{2} B_{MSY}$ for stocks with low target levels. For SNA 8 for example, based on current estimates, the soft limit would be only 9% B_0 and the hard limit 4.5% B_0 .
- 58 The Ministry considers that the soft limit should remain at $\frac{1}{2} B_{MSY}$ or 20% B_0 (whichever is higher). For stocks with low B_{MSY} estimates, the Ministry will signal that formal reviews will be undertaken to determine whether such estimates are appropriate. The most appropriate target level, soft limit and hard limit will also be discussed with stakeholders.

Rebuilding Plans

- 59 The notion of a formal time-constrained rebuilding plan was generally supported; however, no consensus existed about the timeframes for rebuilding. Some recreational fishers advocated a 5–10 year rebuild timeframe for shared fisheries. Industry argued that the HSS potentially neglects important social and economic objectives when calculating rebuilding times.

Ministry response

- 60 The proposed rebuild timeframe, up to twice the minimum rebuild time that would occur in the absence of fishing, is a default that can be overridden when the Minister thinks this is appropriate. For example, in the case of SNA 8, the minimum rebuild time may be of the order of 4–5 years; hence, adopting a longer rebuild timeframe of 3 times the minimum rebuild time would equate to a rebuild timeframe of 12–15 years. This may be acceptable for snapper, but three times the minimum is unlikely to be acceptable in the case of longer-lived stocks such as orange roughy. For orange roughy, a rebuilding strategy of three times the minimum rebuild time may be of the order of 45–60+ years. Consequently, the Ministry supports retaining the proposed rebuild time with the option of departure from that default time on a case by case basis.

Recommendations

61 The Ministry recommends that you:

- a) **Note** that officials are available to discuss any aspect of this briefing paper or the Harvest Strategy Standard; and,
- b) **Approve** the Harvest Strategy Standard, both by signing this briefing paper and the attached Foreword to the Harvest Strategy Standard.

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APPROVED / NOT APPROVED / APPROVED AS AMENDED

Hon Jim Anderton
Minister of Fisheries

/ / 2008