

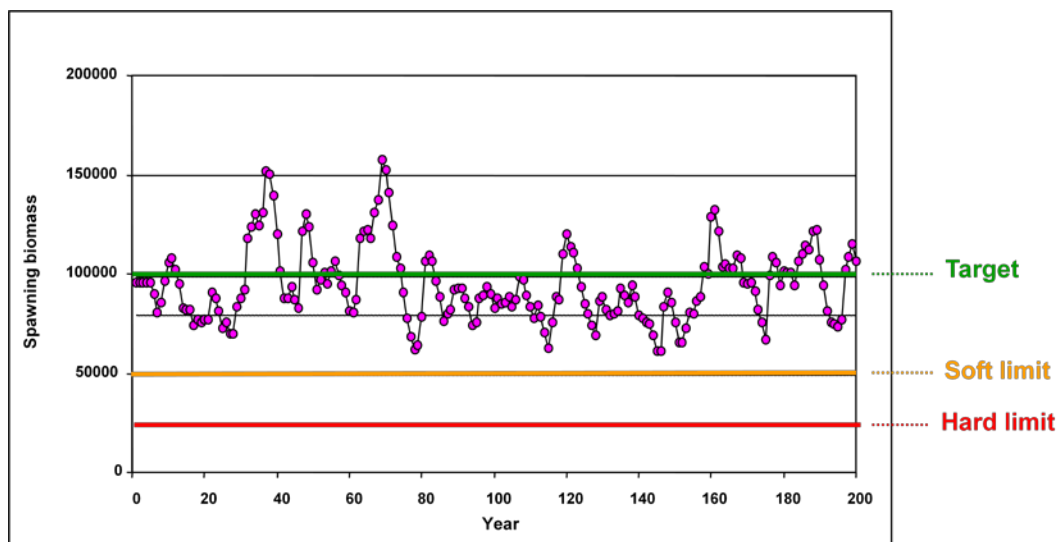
The Status of New Zealand's Fisheries 2011

Introduction

The Harvest Strategy Standard for New Zealand Fisheries specifies four measures relating to the status of New Zealand's fish stocks and fisheries:

- the *soft limit* – a biomass level below which a stock is deemed to be “overfished” or depleted and needs to be actively rebuilt;
- the *hard limit* – a biomass level below which a stock is deemed to be “collapsed” where fishery closures should be considered in order to rebuild a stock at the fastest possible rate;
- the *overfishing threshold* – a rate of extraction that, if exceeded, will lead to the stock biomass declining below management targets and/or limits; and
- the *management target* – usually a biomass level,¹ but sometimes a fishing mortality rate,² that stocks are expected to fluctuate around.

The figure below shows the relationship between the management target and the soft and hard limits for a stock that is fished perfectly at the overfishing threshold. Fish stocks are expected to fluctuate around their targets and simply being below the management target does not mean that the stock is being fished unsustainably. Of greater importance is the number of stocks that are below biomass limits, or where overfishing is occurring.



Stock assessments

Each year, the Ministry convenes Fisheries Assessment Working Groups to combine the results of scientific research with catch reports from commercial fisheries and data from the observer programme into assessments of the status of New Zealand's fish stocks. This information is summarised in two annual Fisheries Assessment Plenary Reports.

¹ Biomass targets are usually related to, or higher than, the biomass associated with the maximum sustainable yield (B_{MSY}).

² Usually the fishing mortality associated with maximum sustainable yield (F_{MSY}) or a related reference point.

There are currently 636 stocks in the Quota Management System (QMS). Of these, 286 stocks are considered to be “nominal” stocks (fish stocks for which a significant commercial or non-commercial potential has not yet been demonstrated). In 2010/11, Fisheries Assessment Working Groups made a concerted effort to increase the number of stocks of known status relative to the above four measures for the remaining 350 stocks:

- for the *soft limit*, the number increased to 127 from 105 a year ago – up by 21 percent;
- for the *hard limit*, the number increased to 164 from 146 a year ago – up by 12 percent;
- for the *overfishing threshold*, the number increased to 103 from 89 a year ago – up by 16 percent; and
- for the *management target*, the number increased to 123 from 119 a year ago – up by 3 percent.

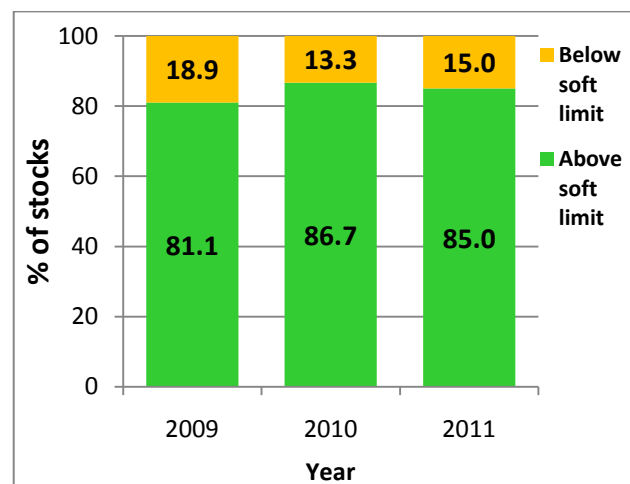
The reason the total numbers vary for each measure is that, for example, while it may not be possible to determine whether a stock is somewhat above or below its management target, it may be clear that it is above the hard limit.

Although stocks of known status relative to any of the measures is less than half of the total of 350 stocks, in 2011 they accounted for 66 percent of the total landings by weight and value³ and represent most of the main commercial fish species.

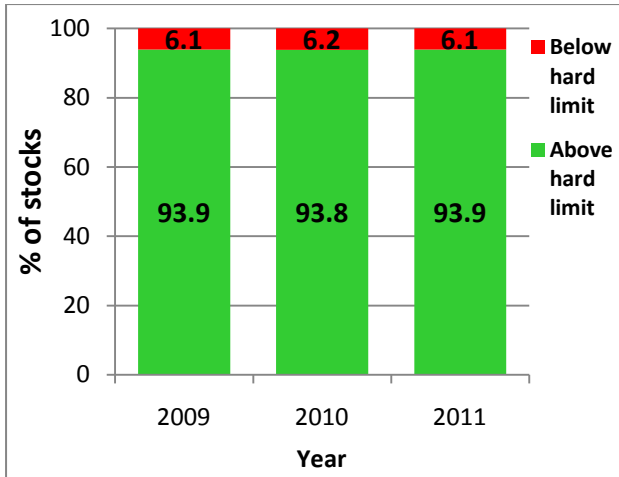
2011 evaluations

New results for 2011 and recent trends in the four measures are summarised below. Evaluations of the first three of the measures have only been undertaken since 2009.

Of the 127 stocks of known status relative to the *soft limit*, 85.0% were above the limit, slightly less than in 2010, but an improvement over 2009. In terms of tonnage of landings, 95.1% of stocks of known status were above the *soft limit* in 2011.

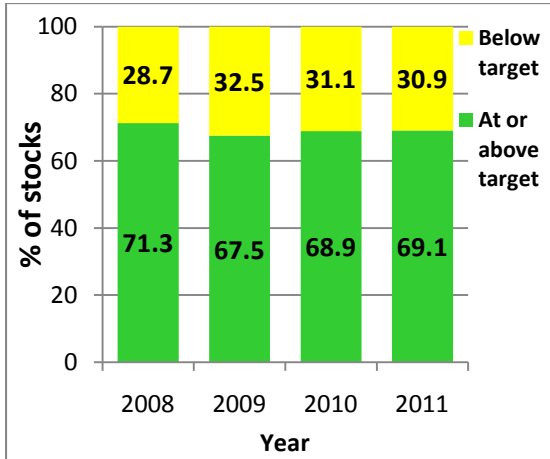
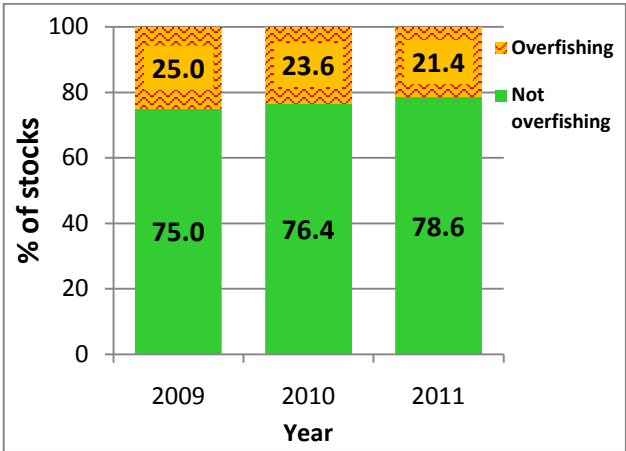


³ This excludes squid, which has a life cycle that is not amenable to management relative to maximum sustainable yield benchmarks.



Of the 164 stocks of known status relative to the *hard limit*, 93.9% were above the limit, similar to the previous two years. In terms of tonnage of landings, 97.1% of stocks of known status were above the *hard limit* in 2011.

Of the 103 stocks of known status relative to the *overfishing threshold*, 78.6% were below the threshold, an appreciable improvement over each of the previous two years. In terms of tonnage of landings, 92.8% of stocks of known status were below the overfishing threshold in 2011.



Of the 123 stocks of known status relative to the *management target*, 69.1% were above the target, a slight improvement over each of the previous two years, but 2.2% lower than in 2008. In terms of tonnage of landings, 78.6% of stocks of known status were above management targets in 2011.

However, as mentioned above, just because a stock is below its management target does not mean that the stock is being fished unsustainably, as fish stocks are expected to fluctuate around their targets. Of greater importance is the number of stocks that are below biomass limits, or where overfishing is occurring.

Management of stocks below biomass limits

At the time of their most recent assessment, 19 (of 127) stocks were considered to be below the soft limit:

- southern bluefin tuna (a highly migratory species over which New Zealand has limited influence);
- three stocks of black cardinalfish;
- five stocks of bluenose;
- six stocks or sub-stocks of orange roughy; and
- one stock or sub-stock each of rock lobster, scallop, snapper and rig.

Ten of these 19 stocks were also considered to be below the hard limit. Overfishing was documented for 21 stocks. (For further details see the Status of Stocks page at www.fish.govt.nz).

In all cases where fisheries are below the soft or hard limit, corrective management action has been, or is being, put in place to rebuild the stocks. For example, fisheries on three previously-collapsed orange roughy stocks were closed to maximise the rate of rebuilding. Two of these have since been re-opened. A sixth consecutive year of Total Allowable Commercial Catch (TACC) reductions has been proposed for the main Chatham Rise orange roughy stock. A TACC reduction has also been proposed for orange roughy on the Mid-East Coast for 2011. In 2010, the industry DeepWater Group voluntarily agreed not to fish for orange roughy on the northwest Chatham Rise.

The Tasman Bay scallop fishery has been closed by the fishing industry to commercial fishing since 2006. Bluenose stocks were identified as being in need of rebuilding in May 2008, and TACCs have subsequently been reduced, with further reductions proposed for 2011. Staged TACC reductions have been adopted for black cardinalfish. The TACC for one rock lobster stock was reduced in April 2010.

International context

The overall status of New Zealand's fish stocks compares favourably with the rest of the world. For example, in the USA which has one of the most extensive research, monitoring and fish stock assessment programmes in the world (and defines "overfished" in much the same way as New Zealand), the most recent information indicates that 23 percent of stocks of known status are overfished. The comparable figure for New Zealand is 15 percent.