

The Status of New Zealand's Fisheries 2013

October 2013

Ministry for Primary Industries
Manatū Ahu Matua



Introduction

This document summarises the status of New Zealand's fish stocks relative to the requirements of the Harvest Strategy Standard for New Zealand Fisheries, which was finalised in October 2008 (<http://fs.fish.govt.nz/Page.aspx?pk=113&dk=16543>). Assessments against other metrics are documented in the annual review reports associated with the Ministry's Fisheries Plans.

In brief

By far the majority of New Zealand's fisheries are performing well

In 2013, 82.0% of the stocks (of known status) were above the soft limit, 93.5% were above the hard limit, 82.1% were below the overfishing threshold, and 69.2% were above the management target.

When considering the tonnage of landings (of known status), 96.2% of the landings was composed of stocks above the soft limit, 99.5% of the landings were above the hard limit, 95.5% were below the overfishing threshold, and 92.8% were above the management target.

The Harvest Strategy Standard

The Harvest Strategy Standard for New Zealand Fisheries guides the management of our fish stocks. It specifies four measures that are used to evaluate the status of New Zealand's fish stocks and fisheries, with management priority being on the first three of these:

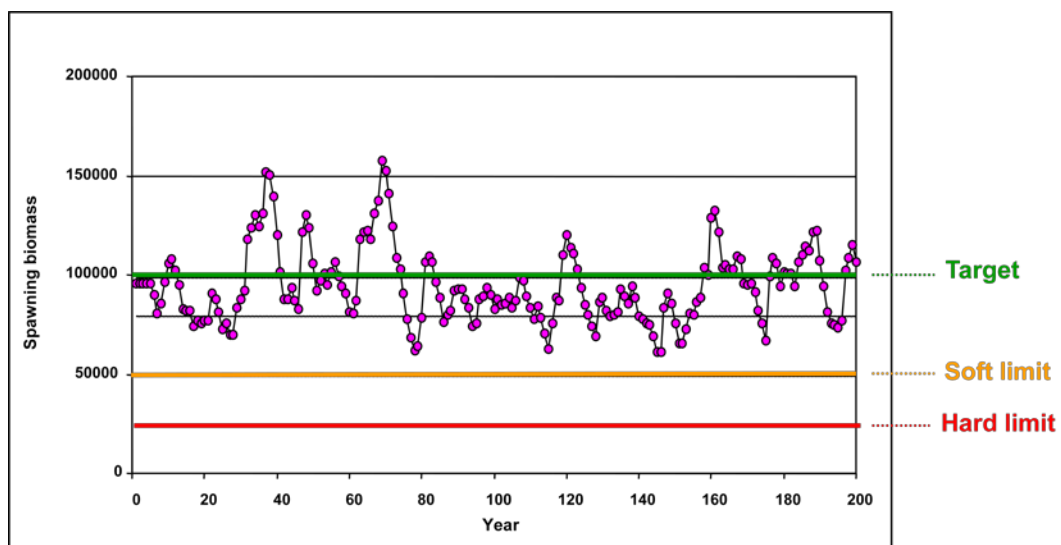
- the *soft limit* – a biomass level below which a stock is deemed to be “overfished” or depleted and needs to be actively rebuilt;
- the *hard limit* – a biomass level below which a stock is deemed to be “collapsed” where fishery closures should be considered in order to rebuild a stock at the fastest 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, with at least a 50% probability of achieving the target.

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.

The figure below shows the relationship between the *management target* and the *soft* and *hard limits* for a stock that is fished perfectly at a constant rate that tracks fluctuations in stock size. Fish stocks are expected to fluctuate around their targets with at least a 50% probability of achieving the target. This means that for well-managed fisheries at any given point in time approximately 50% of stocks should be above their management targets and 50% below.

The role of the management target is often misinterpreted by the media or incorrectly portrayed by some groups. Simply because a stock is below the management target does NOT mean it is 'overfished' or 'in danger', as is repeatedly reported by the media and some environmental organisations. Stocks that are below biomass limits (the *soft* or the *hard limit*), or where *overfishing* is occurring are in greater need of management intervention and therefore these stocks are more relevant for reporting on management issues.



“Fish stocks are expected to fluctuate around their targets...this means that at any given point in time approximately 50% of stocks should be above their management targets and 50% below.” In 2013, 69.2% of stocks were at or above their targets – well beyond their performance measure.

“The role of the management target is often misinterpreted by the media or incorrectly portrayed by some groups. Simply because a stock is below the management target does NOT mean it is ‘overfished’ or ‘in danger’, as is repeatedly reported by the media and some environmental organisations.”

Stock assessments

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

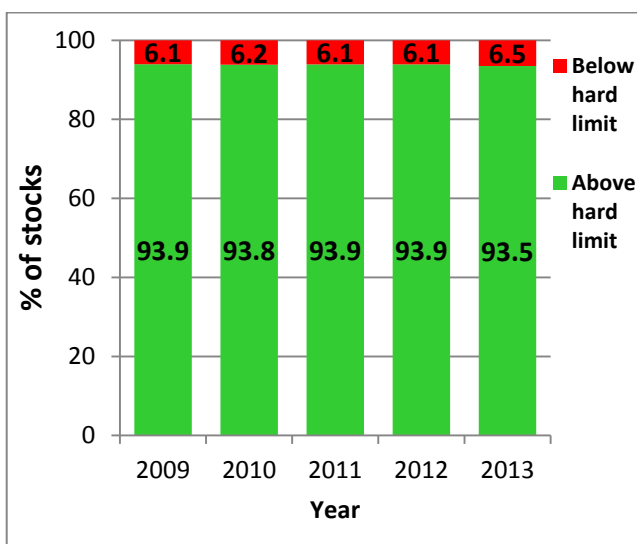
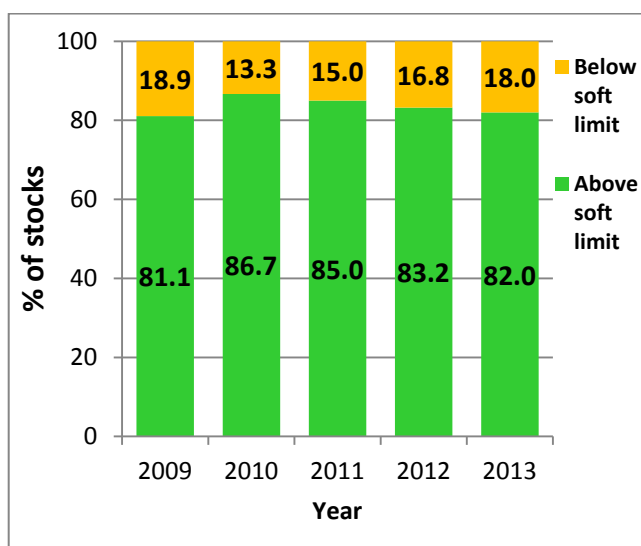
There are currently 638 stocks in the Quota Management System (QMS). Of these, 288 stocks are considered to be “nominal” stocks (fish stocks for which a significant commercial or non-commercial potential has not been demonstrated³), leaving 350 stocks that are included in this evaluation.

The number of stocks of known status relative to the four harvest strategy standard measures varies because, 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*. In 2013, stocks of known status relative to the soft limit accounted for 73.5% of the total landings by weight and value,⁴ representing most of the main commercial fish species.

2013 evaluations

New results for 2013 and recent trends in the four measures are summarised below. Evaluations of the first three of the measures have been undertaken since 2009, while the last has been calculated since 2008.

Of the 139 stocks of known status relative to the *soft limit*, 82.0% were above the limit – somewhat less than in 2010-12, but a slight improvement over 2009. In terms of the tonnage of landings of known status, the percentage above the *soft limit* was 96.2% in 2013.

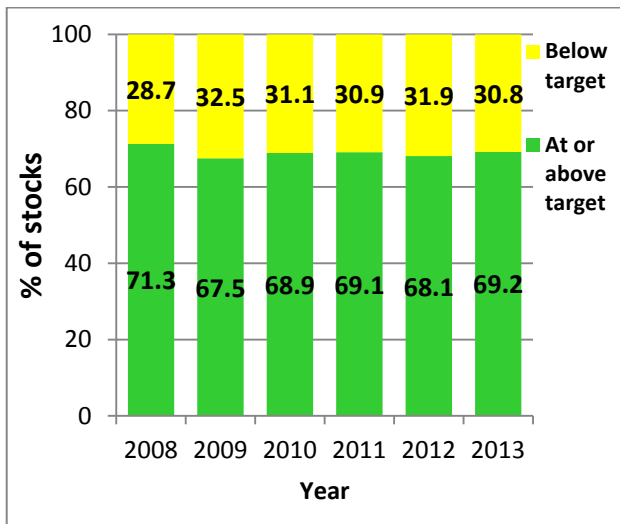
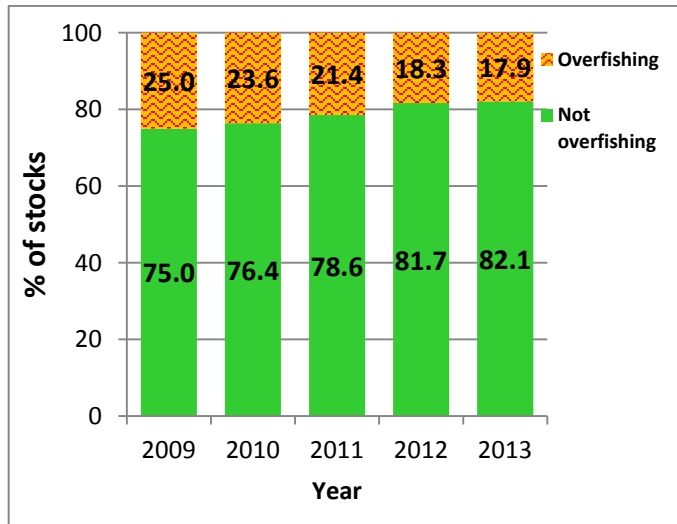


Of the 169 stocks of known status relative to the *hard limit*, 93.5% were above the limit, similar to the previous four years. In terms of the tonnage of landings of known status, the percentage above the *hard limit* was 99.5% in 2013.

³ Many of these have actually been set up for administrative purposes only and may not exist in some geographic areas.

⁴ This excludes squid, which has a life cycle that is not amenable to management relative to maximum sustainable yield benchmarks.

Of the 117 stocks of known status relative to the *overfishing threshold*, 82.1% were below the threshold, reflecting a continually increasing positive trend since 2009. In terms of the tonnage of landings of known status, the percentage below the *overfishing threshold* was 95.5% in 2013.



Of the 133 stocks of known status relative to the *management target*, 69.2% were above the target, similar to the previous four years, but 2.1% lower than in 2008. In terms of the tonnage of landings of known status, the percentage above *management targets* was 92.8% in 2013.

Fisheries management responses

The main fisheries management mechanism used to take advantage of utilisation opportunities for high performing fish stocks, or to reduce sustainability risks for fish stocks that are not meeting their performance metrics, is to modify the Total Allowable Catch (TAC) or Total Allowable Commercial Catch (TACC) appropriately.

Highlights

- As a consequence of substantial reductions in hoki quotas over the period 2002-07, both stocks of hoki (eastern and western) have continued to increase in size for the last seven consecutive years, and both are now well within or above their management target range. As a result, the hoki quota was progressively increased from 90,000 metric tonnes to 150,000 metric tonnes over the period 2009-2013.
- In 2011 a new and substantial aggregation of orange roughy was surveyed on the Chatham Rise and this has led to a favourable revision of the status of this orange roughy stock.

- The Campbell Island Rise stock of southern blue whiting was estimated to be well above its management target and is currently at an historic high.
- Gurnard around the east and south coasts of the South Island were assessed as being very likely to be above their management targets. On the west coast of the South Island the trawl survey estimate for 2011 was the highest recorded over the period 1992-2011. On the east coast of the South Island, the trawl survey estimate for 2012 was the highest recorded since 1991.
- The trawl survey estimate for John dory off the west coast of the South Island was also the highest recorded over the period 1992-2011.
- Elephantfish around the east coast of the South Island appear to have fully rebuilt from the low levels experienced in the late 1980s, and elephantfish around the south coast of the South Island have been continually increasing since the mid-1990s.
- A new assessment of blue cod in the south of the South Island in 2013 indicated that the stock is performing well relative to all harvest strategy standard measures.

Management of stocks below biomass limits

At the time of their most recent assessment, 25 (of 139) stocks were considered to be below the *soft limit* (and therefore overfished):

- southern bluefin tuna and Pacific bluefin tuna (highly migratory species that are seasonally present in New Zealand waters);
- three stocks of black cardinalfish;
- five stocks of bluenose;
- six stocks or sub-stocks of orange roughy;
- three stocks or sub-stocks of snapper;
- two stocks or sub-stocks of scallops; and
- one stock or sub-stock each of oyster, paua, John dory and rig.

Eleven of these 25 stocks were also considered to be below the *hard limit* (collapsed). *Overfishing* was documented for 21 stocks. (For further details see the Status of Stocks page at <http://fs.fish.govt.nz/Page.aspx?pk=16&tk=478>).

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 (they effectively have a TACC or voluntary catch limit of zero) to maximise the rate of rebuilding. Two of these have since been re-opened. 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 voluntarily 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 introduced in 2012 to ensure the stocks rebuild to target levels. The Commission for the Conservation of Southern Bluefin Tuna (of which New Zealand is a member) has adopted a management procedure tuned to rebuild the stock to interim and long-term target levels.

These changes demonstrate the responsiveness of New Zealand's fisheries management system to the intrinsic fluctuating nature of wild fish stocks and our contributions to the management of international fish stocks.