



# Updated Status of New Zealand's fish stocks at September 2009

In New Zealand, setting and adjusting Total Allowable Catches (TACs) and/or Total Allowable Commercial Catch (TACCs) to limit annual catches is the primary mechanism for managing our fisheries. This is generally thought to be the most effective management method worldwide. The rationale for setting and varying TACs is specified in our Fisheries Act (1996) which states that fisheries must be managed so that fish stocks are maintained at or above the biomass associated with the maximum sustainable yield (MSY).

There is currently sufficient information to characterise stock status relative to MSY-compatible targets for 117 of the 628 fish stocks in the QMS (see the table and the figure opposite). This represents a net increase of 16 stocks (15.8 percent) over the 101 stocks of known status a year ago. Stocks of known status now account for 72 percent of the total landings by weight and value – up from 66 percent last year – and represent most of the main commercial species.

Of the 117 stocks or sub-stocks with known status relative to target reference points, 79 (68 percent) have been determined to be near or above target levels based on a recent assessment or evaluation. The 38 stocks that are known to be below their respective targets include two highly migratory species (over which New Zealand has limited influence), several orange roughy stocks, black cardinalfish, gemfish, Foveaux Strait oysters (due at least in part to disease), two rock lobster stocks, Tasman Bay and Golden Bay scallops, three paua stocks, all bluenose stocks, west coast North Island snapper, several other smaller inshore stocks and longfin eels (for further details see the Status of Stocks page on [www.fish.govt.nz](http://www.fish.govt.nz)).

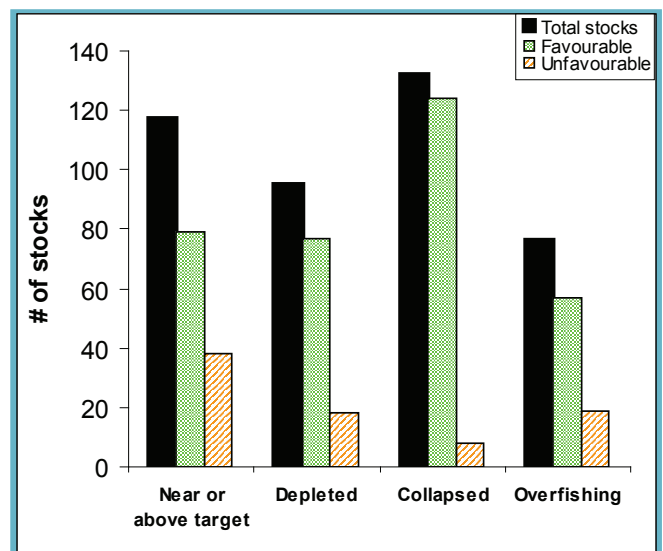
However, it should be noted that just because a stock is below its MSY-compatible target, it does not mean that the stock is being fished unsustainably. Fish stocks can and have been fished sustainably for long periods of time in many parts of the world while at levels well below MSY-compatible levels. Of greater relevance to sustainability concerns is how far the stock is below the target, and how intensely it is being fished.

**Table**

The number and percent of fish stocks assessed or evaluated in recent years up to 2009 in terms of whether or not they are near or above target levels (with comparable values for the 2008 year in parentheses); depleted, or collapsed, and whether or not overfishing is occurring. The number of stocks with sufficient information to make these determinations varies.

	Yes	No	Total stocks evaluated	Percent yes	Percent no
Near or above target levels	79 (72)	38 (29)	117 (101)	67.5% (71.3%)	32.5% (28.7%)
Depleted (Overfished)	18	77	95	18.9%	81.1%
Collapsed	8	124	132	6.1%	93.9%
Overfishing	19	57	76	25.0%	75.0%

**Figure**



The number of stocks of favourable or unfavourable status up to 2009 relative to being near or above target levels, depleted, collapsed, or subject to overfishing. Data are from the table above, in which a favourable status is indicated by "Yes" for near or above target levels and "No" for the other three categories.

The Harvest Strategy Standard defines two biomass limits that should be avoided with high probability: a soft limit and a hard limit. Essentially, the soft limit is half of the MSY-compatible biomass or 20 percent of the unfished biomass, whichever is higher; while the hard limit is a quarter of the MSY-compatible biomass or 10 percent of the unfished biomass, whichever is higher.

A stock that is below the soft limit is said to be depleted or overfished, while one that is below the hard limit is said to be collapsed. Where the fishing pressure is too high (fishing mortality greater than the MSY-compatible level), overfishing is said to be occurring.

Although 32 percent of the 117 stocks of known status relative to targets have been assessed or evaluated as being below target levels, only 19 percent of 95 stocks evaluated relative to the soft limit are depleted, and 6 percent of 132 stocks evaluated relative to the hard limit are collapsed (see the table overleaf). Overfishing is occurring in 25 percent of the 76 stocks where this has been evaluated (see the table).

A number of different actions are being taken to rebuild stocks that are below target levels or depleted or collapsed, with the magnitude of the action being commensurate with the status of the stock. Fisheries for two of the orange roughy stocks have essentially been closed for several years, with a third fishery being closed in 2007. A fourth consecutive year of continued TACC reductions has been proposed for the main Chatham Rise orange roughy stock.

The Tasman Bay scallop fishery has been closed to commercial fishing since 2006. Bluenose stocks were identified as being in need of rebuilding in May 2008, and quota reductions have subsequently been adopted. Staged TACC reductions have been proposed for black cardinalfish. TACCs for two rock lobster stocks were reduced for the season beginning in April 2009. Rebuilding programmes or TAC/TACC reductions have been put in place for all other depleted stocks.

These interventions are evidence of New Zealand's willingness to take action as needed to effectively manage our fisheries.

A concrete example of the success of recent rebuilding efforts is supplied by the western hoki stock, which began to decline below target levels around the year 2001 and was depleted during the period 2003–06. As a result, the hoki TACC has been substantially reduced in several stages over the last few years – from 250,000 tonnes in 2000 to 90,000 tonnes in 2007.

The latest stock assessment which was finalised in May 2009 indicates that the stock has now rebuilt to within the target range. A TACC increase has accordingly been proposed for the next fishing year.

It is difficult to directly compare the summary statistics on stock status for the current year with those from previous years.

The 2007/08 *Annual Report* indicated that of the 101 stocks for which we had sufficient information to characterise stock status related to target levels, 72 (71 percent) were near or above target levels (see the table overleaf).

This year, the total number of stocks with sufficient information has increased substantially, while the percentage below target levels has increased by 3 percent. The main reason for the increase in the number of stocks of known status is the relatively large number of stock assessments undertaken in 2008/09.

The main reasons for the increase in the percentage below target levels are that recent stock assessments for several stocks have changed the stock status from a favourable or unknown categorization to an unfavourable categorisation, and that the assessment information for some stocks is too out-of-date for their current status to be characterised.

There are limited human and financial resources to be able to collect extensive information on all 628 fish stocks currently in the QMS. As a result, our research budget is prioritised so that we focus on the stocks with the highest landings or value, or those with potential sustainability risks.