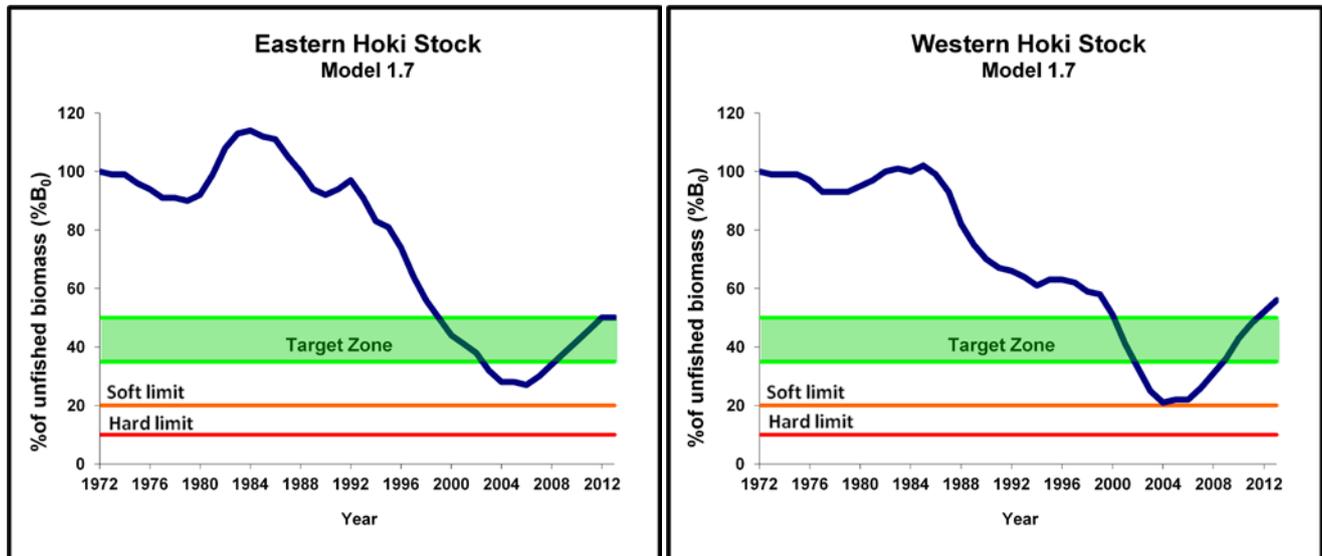




2013 Hoki Stock Assessment Results

(Source: Ministry for Primary Industries. Fisheries Assessment Plenary, May 2013: stock assessments and yield estimates)



Estimated biomass as a proportion of the unfished level (%B₀) from the 2013 hoki stock assessment. ¹

Unlike most fisheries, the hoki stock assessment traces the history of stock size (biomass) from a largely unfished state in 1972. International best practice suggests that stocks like hoki should be fished down to a level of about 35–40% B₀. New Zealand uses a target of 35–50% B₀ for hoki. The left hand panel shows that the eastern stock of hoki has never been below the soft limit, having remained far above the biomass limits that would signify an overfished, depleted, or collapsed stock. ²

The right hand panel shows that the western hoki stock began to decline below target levels around the year 2001. As a result, the hoki Total Allowable Commercial Catch (TACC) was reduced from 250,000 tonnes in 2000 to 200,000 tonnes in 2001, then to 180,000 t in 2003. Nevertheless, hoki fell to the soft limit around 2004 and a further TACC reduction to 100,000 tonnes was enacted in 2004. When stock size did not improve substantially – at least in part due to several successive years of poor numbers of new recruits – the TACC was further reduced to 90,000 tonnes in 2007.

These substantial quota cuts subsequently began to turn the situation around and both stocks are now assessed to have been increasing for seven consecutive years, and to have been within or above the target range for the last 5 years. TACC increases have accordingly been enacted for the 2009-10, 2010-11, 2011-12 and 2013-14 fishing years. This history of TACC changes is indicative of sound and responsive management. The current TACC is 150,000 t.

In May 2011, the Fishery Assessment Plenary meeting declared the western stock to be fully rebuilt based on the criteria set out in the Harvest Strategy Standard for New Zealand Fisheries. This situation has continued into 2012 and 2013.

¹ Note that the 2013 hoki stock assessment accepted three final runs, only one of which is shown here, for simplicity. The three final runs reflect uncertainty about the stock assessment. Results from all three runs are very similar for the eastern stock, but show different patterns for the western stock, with the run shown being between the other two in 2013.

² Note that the definition of “overfished” or “depleted” is that the stock is below the soft limit of ½ of the biomass associated with maximum sustainable yield, or 20% of the unfished level (i.e. 20% B₀), whichever is higher. A “collapsed” stock is one that is below the hard limit of ¼ of the biomass associated with maximum sustainable yield, or 10% of the unfished level (i.e. 10% B₀), whichever is higher.