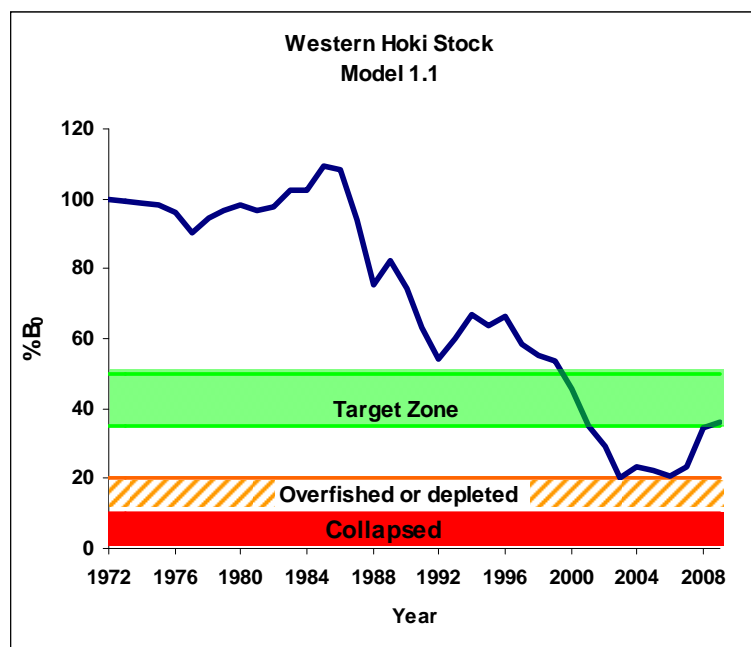
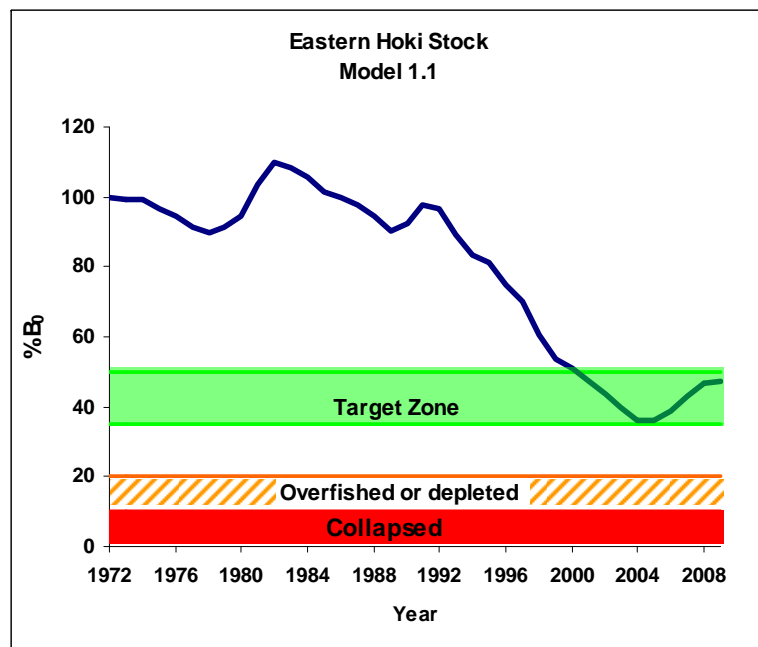


## 2009 Hoki Stock Assessment Results



Estimated biomass as a proportion of the unfished level ( $\%B_0$ ) from the 2009 hoki stock assessment. Unlike most fisheries, the assessment traces the history of stock size (biomass) since the inception of the fishery. International best practice suggests that stocks like hoki should be fished down to a level of about 30–40%  $B_0$ . New Zealand uses a target of 35–50%  $B_0$  for hoki. The left hand panel shows that the eastern stock of hoki has never been below the target zone and has remained far above biomass limits that would signify an overfished, depleted, or collapsed stock.<sup>1</sup> 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 TACC was reduced from 250,000 tonnes in 2000 to 200,000 tonnes in 2001, then to 180,000 tonnes in 2003. Nevertheless, hoki approached a depleted state in 2003 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 low numbers of new recruits (young fish) – the TACC was further reduced to 90,000 tonnes in 2007. The effect of the severe quota cuts subsequently began to turn the situation around and the stock is now assessed to have rebuilt to within the target range. A TACC increase has accordingly been proposed for the next fishing year. This history of TACC changes is indicative of sound and responsive management.

<sup>1</sup> Note that the definition of overfished or depleted is that the stock is below the soft limit of  $\frac{1}{2}$  of the biomass associated with maximum sustainable yield, or 20% of the unfished level, whichever is higher. This is the same as the definition used in most U.S. fisheries.