

Executive Summary

The **Joint ICES-MYFISH Workshop to consider the basis for F_{MSY} ranges for all stocks** was held at DTU-Aqua, Charlottenlund, Denmark from 17–21 November 2014. The workshop was convened in response to a request from the European Commission for advice on potential intervals above and below F_{MSY}. The meeting was attended by 14 delegates from 8 countries and 3 representatives of 3 stakeholder organisations, and was chaired by John Simmonds (ICES) and Anna Rindorf (Denmark). The work conducted was centred around six Terms of Reference concerning methods for estimating F_{MSY} ranges, F_{MSY} ranges for North Sea demersal stocks, Baltic Sea stocks, anchovy in Subarea VIII and horse mackerel (Western stock) and guidelines for estimating F_{MSY} ranges for other stocks which are compatible with obtaining no less than 95% of the estimated maximum sustainable yield and which are considered precautionary in implementation.

The methodology used is based mostly on stochastic equilibrium yields that give 95% of yield at F_{MSY}. The approach was to use fixed F exploitation (without F reduced by the ICES HCR MSY B_{trigger}). The upper limit to F was constrained where necessary by precautionary criteria that there should be <5% probability SSB<B_{iim}.

For stocks assessed with surplus production models provisional intervals been calculated, but currently for the one stock concerned (megrim) it has not been possible to evaluate the precautionary considerations; therefore, the upper end of the MSY interval is limited to F_{MSY}.

For short lived stocks MSY intervals are based on escapement biomass targets and an interval at a lower exploitation rate that delivers 95% of MSY. No increase in exploitation is advised as escapement targets already include precautionary considerations.

MSY intervals are provided for category 1 stocks with age based assessment for the North Sea and Baltic regions. For only a few of these stocks were the upper ends of the F intervals within precautionary limits, and these were all species with L_{infinity} > 60cm.

For stocks where precautionary reference points are not available, MSY intervals are limited to a maximum rate equal to F_{MSY}.

For stocks without MSY targets (category 3, 4, 5 and 6 stocks) it is not possible to provide MSY intervals.