



## ICES advice on West of Scotland cod needs to be reconsidered in the light of new evidence

**Purpose:** To alert the Scottish Government to the urgent need for an official UK request to ICES to re-open the advice provided to the 2018 December Council on the state of the west of Scotland cod stock in the light of a new assessment.

### The problem

The latest assessment of West of Scotland cod carried out by ICES in 2018 indicates that the stock is being harvested unsustainably. The stock size has been well below the minimum safe level since 2006, with no sign of recovery. In common with the last 15 years, ICES advice for 2019 was a zero catch.

The west of Scotland mixed demersal fisheries unavoidably take cod along with a mix of other species, such as haddock and monkfish. The advice for cod (zero catch), together with the new obligation to land all catches, presents a problem for these fisheries. Although a cod by-catch limit has been agreed it may not be sufficient to prevent an early closure of the mixed fishery in 2019 (i.e. cod would act as a “choke” species).

### A new assessment

A new independent peer-reviewed assessment of West of Scotland cod<sup>1</sup> estimates that the stock is healthier than the current ICES advice suggests (see accompanying figures and summary in Box 1). The difference between the two assessments is mainly due to the way in which harvest rates of older cod are modelled. The new results indicate that

harvest rates have been declining since 2004 and the stock is now being harvested sustainably, well below the maximum safe level. The declining harvest rates are consistent with the reductions in fishing effort observed since the early 2000s, when a large number of active fishing vessels were decommissioned and effort limitations were imposed. This decline is also consistent with harvesting trends for other species in the same fishery. The reduced harvesting rate has resulted in a recovery in the size of the cod stock to a level from which it has previously been able to increase, although not yet to a safe level.

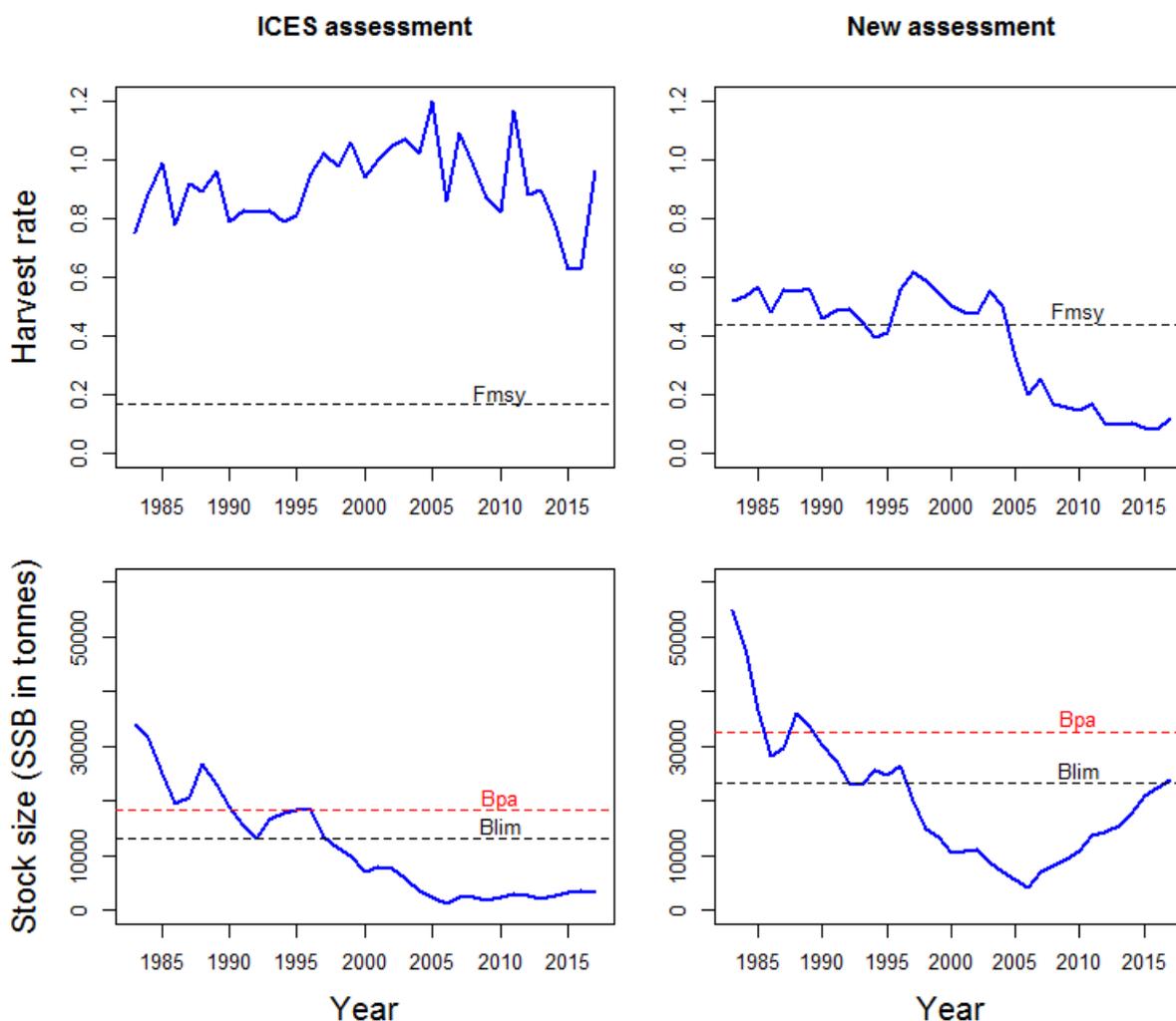
### Implications

Contrary to ICES advice, the new assessment indicates that effort controls have in fact been successful in reducing fishing pressure to a low level and are already promoting stock recovery. This could lead to more options for flexibility in the mixed demersal fishery. A re-evaluation of the bycatch limit should be carried out as soon as possible to reduce the risk of cod becoming a choke species.

### Recommendation

The Scottish Government should urgently request that DEFRA make an official UK request to ICES to re-open the advice

**Box 1.** Stock status of west of Scotland cod. Comparison of the ICES assessment (left panels) and the new assessment (right panels). Fmsy is the fishing mortality (harvest rate) consistent with maximum sustainable yield. Blim is the biomass limit reference point, which is the level of stock size (spawning stock biomass, SSB) from which the stock has previously been able to increase. Bpa is the precautionary biomass, the level of stock size which is considered safe.



**Summary of the peer-reviewed article by Cook (2019)<sup>1</sup>, taken from a forthcoming edition of the ICES Journal of Marine Science.**

ICES assessments of cod in the west of Scotland (ICES Division 6a) suggest the stock has collapsed and that the harvest rate has remained well above the rate giving Maximum Sustainable Yield (MSY). By contrast, other stocks in the same fishery, and adjacent cod stocks all show marked declines in harvest rate and some stock recovery. The perception of the status of 6a cod appears to be dependent on an a priori assumption of the proportion of older fish caught by the fishery. An assessment that estimates this proportion without making such an assumption suggests there has been a substantial decline in harvest rate and that the stock size has recovered to the minimum stock size reference point (Blim). The reduction in harvest rate is consistent with substantial reductions in fishing effort and shows a similar pattern to stocks taken within the same fishery such as haddock and whiting. The management implications arising from the two assessments differ substantially as the new assessment suggests the harvest rate is already below that required for MSY.

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## Reference

<sup>1</sup>[Cook, R.M. \(2019\). Stock collapse or stock recovery? Contrasting perceptions of a depleted cod stock. \*ICES Journal of Marine Science\* \(in press\).](#)