

France request on the impact of the 2018 landing hypothesis on the recommendation of Atlantic cod fishing opportunities in the western English Channel and the Celtic Seas (divisions 7.e–k)

Service summary

Short-term forecasts were carried out assuming various values for the landings of cod in divisions 7.e–k in 2018, as requested, based on the same input data and methodology used to provide the current advice for this stock. The resulting catch values are provided for each of the catch scenarios, applying the MSY approach.

ICES notes that when the MSY approach is applied, the spawning-stock biomass (SSB) in 2020 is greater than B_{lim} only under the assumption that the landings of cod in 2018 are at or lower than 1200 tonnes.

Request

*The advice that was published in June for cod (*Gadus morhua*) in Divisions 7e-k is based on the assumption that fishing pressure in 2018 will remain constant compared to the 2015–2017 period. This assumption led ICES to assume that 2,354 tonnes of cod caught in this area would be landed in 2018. Under this assumption, no catch scenario in 2019 made it possible to reach the biomass limit in 2020, which led ICES to recommend zero catches in 2019, that is to say a complete cessation of the activity of the demersal fisheries in these areas.*

Cod landings are reported to the European Commission by the various Member States on a monthly basis. The reported cod landings for these areas for the period from January 1st to August 30th 2018 amounted to 1,007 tonnes. Thus the intermediate declarations of quota consumption by the involved Member States suggest that landings in 2018 are likely to be significantly lower than the ICES assumption of 2,354 tonnes.

At the European Council of Ministers in December 2018, intermediate quota consumption reports will be available for the period from January 1st to October 31st 2018. On the basis of these reports, it will then be possible to propose a more realistic hypothesis for the 2018 landings.

France would therefore request ICES to provide catch scenarios for 2019 assuming that landings in 2018 would be:

- a) 1,600 tonnes;*
- b) 1,500 tonnes;*
- c) 1,400 tonnes;*
- d) 1,300 tonnes;*
- e) 1,250 tonnes;*
- f) 1,200 tonnes.*

In order for these elements to guide decisions at the European Council of Ministers in December 2018, France would be deeply thankful if they could be available on November, 30th 2018.

Basis of the service

Background

Cod landings are reported to the European Commission by the various EU Member States on a monthly basis. The reported cod landings for these areas for the period 1 January–30 August 2018 amounted to 1007 tonnes. Thus, the intermediate declarations of quota consumption by the involved EU Member States suggest that landings in 2018 are likely to be significantly lower than the ICES assumption of 2354 tonnes. EC requires a range of potential catches for 2018 in its discussions on the coming TAC for the stock and has therefore requested ICES to calculate forecast scenarios with different assumed catches for 2018.

Methods

The present technical service was completed based on the methods and data used by ICES to provide its advice for 2018 on the fishing opportunities for cod in divisions 7.e–k (ICES, 2018a).

In its 2018 advice for 2019, ICES assumed a fishing mortality (F) of 0.612 ($= F_{\text{average}(2015-2017)}$) for the intermediate year (i.e. 2018). In the present document, each of the catch scenarios presented uses a different value for F (ranging from 1200 tonnes to 1600 tonnes), derived from various assumptions on the amount of landings of cod in 2018.

All other assumptions (mean weights-at-age, natural mortality, selection pattern, proportion of discards-at-age, recruitment, and number-at-age at the start of 2018) are kept unchanged.

The advice rule described in the Introduction to ICES advice (ICES, 2018b) is applied in each catch scenario:

"The advice rule leads to catch advice corresponding to a fishing mortality of:

1. $F = F_{\text{MSY}}$ when the spawning-stock biomass is at or above $\text{MSY } B_{\text{trigger}}$; and
2. $F = F_{\text{MSY}} \times \text{spawning-stock biomass} / \text{MSY } B_{\text{trigger}}$ when the stock is below $\text{MSY } B_{\text{trigger}}$ and above B_{lim} ;
3. If the F following from applying rule 2 is insufficient to bring the stock above B_{lim} in the short term ICES advice will be based on bringing the stock above B_{lim} in the short term. This may result in advice of zero catch."

The reference points are those estimated in 2012 (ICES, 2012) for the biomass reference points, and in 2016 (ICES 2016) for the fishing mortality reference points:

Reference point	Value
$\text{MSY } B_{\text{trigger}}$	10 300 tonnes
F_{MSY}	0.35
B_{lim}	7 300 tonnes
B_{pa}	10 300 tonnes
F_{lim}	0.80
F_{pa}	0.58

Results

Results are presented in Table 1.

Table 1 Catch scenarios for 2019 assuming various values for the landings in 2018. All weights are in tonnes.

Assumed landings in 2018	Catches (2018)	F_{2-5} (2018)	SSB (2019)	Basis for F in 2019	F_{2-5} (2019)	Total catch (2019)	Wanted catch (2019)	SSB (2020)
1600	1734	0.37	4506	$\text{SSB (2020)} = B_{\text{lim}}$	0.09	544	502	7300
1500	1626	0.34	4625	$\text{SSB (2020)} = B_{\text{lim}}$	0.11	666	614	7300
1400	1517	0.32	4744	$\text{SSB (2020)} = B_{\text{lim}}$	0.13	788	727	7300
1300	1409	0.29	4863	$\text{SSB (2020)} = B_{\text{lim}}$	0.15	910	840	7300
1250	1355	0.28	4923	$\text{SSB (2020)} = B_{\text{lim}}$	0.16	972	897	7300
1200	1301	0.26	4983	$F_{\text{MSY}} \times \text{SSB}_{2019} / \text{MSY } B_{\text{trigger}}$	0.17	1019	940	7316

Sources and references

ICES. 2012. Report of the Working Group on the Celtic Seas Ecoregion (WGCSE), 9–18 May 2012, Copenhagen, Denmark. ICES CM 2012/ACOM:12. 1725 pp.

ICES. 2016. Report of the Workshop to consider F_{MSY} ranges for stocks in ICES categories 1 and 2 in Western Waters (WKMSYREF4), 13–16 October 2015, Brest, France. ICES CM 2015/ACOM:58. 187 pp.

ICES. 2018a. Cod (*Gadus morhua*) in divisions 7.e–k (western English Channel and southern Celtic Seas). In Report of the ICES Advisory Committee, 2018. ICES Advice 2018, cod.27.7.e–k. 8 pp. <https://doi.org/10.17895/ices.pub.4490>.

ICES. 2018b. Advice basis. In Report of the ICES Advisory Committee, 2018. ICES Advice 2018, Book 1, Section 1.2. <https://doi.org/10.17895/ices.pub.4503>.

ICES. 2018c. Report of the Working Group for the Celtic Seas Ecoregion (WGCSE), 9–18 May 2018, ICES Headquarters, Copenhagen, Denmark. ICES CM 2018/ACOM:13. 1340 pp.