

ECOREGION North Sea
SUBJECT EU–Norway request to ICES on increasing the 2014 TAC for cod in the North Sea – Additional reply to part of the original request

Advice summary

ICES advises that a 10% increase in the North Sea cod TAC in 2014 (with respect to the TAC in 2013) can be considered precautionary if followed by implementation of the existing long term management plan and if catches are constrained so that discard rates do not increase and landings do not exceed the TAC. The evaluation indicates that in this scenario the fishing mortality would be slightly above F_{MSY} in 2015 and achievement of F_{MSY} (with 50% probability) would be expected for 2017.

The 10% TAC increase scenario corresponds to a substantial reduction in the cod fishing mortality in 2014. Achieving this reduction in fishing mortality will require that effort limitations or equivalent cod avoidance measures are implemented in addition to the TAC constraint on landings. This reduction is essential in order to be able to consider the scenario as precautionary.

Request

On behalf of the EU and Norway I would like to express again our sincere gratitude for ICES' advice following the request to evaluate alternative TAC options for North Sea cod. However, given that ICES was not able to fully answer the request because you could not fully evaluate the scenarios within the given timeframe, we would like to kindly enquire if you would be able to complete the analysis and answer the request in full by March 5, 2014. This is thus a question of clarification, not a change of the substance of the previous request, and we would be tremendously grateful if you could complete it by the time given.

The part of the request that was not fully answered is:

Given that the spawning biomass of the stock has increased in recent years, and is forecast to increase significantly in 2014, ICES is requested to advise whether an increase of 10% in the TAC for 2014 would be precautionary, and whether these options would be compatible with achieving a fishing mortality at F_{MSY} by 2015.

Elaboration on the advice

ICES has repeated the management strategy evaluation analysis conducted for the October 2013 advice on North Sea cod (ICES, 2013a), assuming a 10% increase in TAC in 2014 (34 981 t, compared to 31 801 t for the 2013 TAC) and that the management plan is then followed again from 2015 onwards (De Oliveira, 2014). The analysis relies on the same biological and fishery assumptions used in October 2013, including that discard rates remain the same as in recent years. As done in ICES (2013 a, b), fishing mortality in 2013 was assumed to be equal to fishing mortality in 2012 (based on no decrease in effort ceilings in 2013). The results shown in Table 6.2.3.2.1 of this advice are directly comparable to those in Table 6.3.5.5.1 of the ICES (2013a) advice.

The scenario tested indicates less than 5% probability of SSB being below B_{lim} in all years 2015-2023 (Table 6.2.3.2.1a). ICES therefore advises that a 10% increase in TAC in 2014 can be considered precautionary if catches are constrained so that discard rates do not increase and landings do not exceed the TAC.

The results also indicate that in this scenario the fishing mortality would be slightly above F_{MSY} in 2015 and achievement of F_{MSY} (with 50% probability) would be expected for 2017 (Table 6.3.5.2.1c, d).

The scenario evaluated corresponds to a substantial reduction in the cod fishing mortality in 2014. ICES considers that the single measure of either a rollover TAC or increasing the cod TAC by 10% in 2014 is likely to result in increased cod discards and therefore higher fishing mortalities than anticipated. To achieve precautionary catch will require additional effort reductions and/or implementation of cod avoidance measures to minimize discards in addition to the TAC constraint on landings.

References

- De Oliveira, J. A. A. 2014. Evaluation of single-year deviation for current NS cod management plan. Internal Cefas contract report MoU(2014)/MF/MP/WD3. 2 pp.
- ICES 2013a. Joint EU–Norway request on TAC setting options for cod in the North Sea and Skagerrak. *In* Report of ICES Advisory Committee, 2013. ICES Advice 2013, Book 6, Section 6.3.5.5.
- ICES. 2013b. Cod in Subarea IV (North Sea) and Divisions VIIId (Eastern Channel) and IIIa West (Skagerrak). *In* Report of ICES Advisory Committee, 2013. ICES Advice 2013, Book 6, Section 6.4.3.
- ICES. 2014. Joint EU–Norway request to ICES on the 2014 TAC for cod in the North Sea. *In* Report of ICES Advisory Committee, 2014. ICES Advice 2014, Book 6, Section 6.2.3.1.

Table 6.2.3.2.1 Summary results of the North Sea cod evaluation following the same settings as in the October 2013 advice (ICES, 2013a); numbers in this table are thus directly comparable to those in Table 6.3.5.5.1 of the October 2013 advice (ICES, 2013a). As in ICES (2013a,b), it is assumed that $F_{2013} = 0.39$ (which corresponds to F_{2012}). The HCR considered here is a 10% TAC increase in 2014, followed by the application of the cod management plan (including TAC constraints) from 2015.

(a)	Probability of $SSB < B_{lim}$ (expressed as a percentage)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	10	3	1	0	0	0	0	0	0	0
(b)	Probability of $SSB < B_{pa}$ (expressed as a percentage)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	100	94	64	35	19	10	7	4	3	3
(c)	median F (ages 2–4)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	0.26	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.15	0.14
(d)	Probability of $F \leq F_{MSY}$ (expressed as a percentage)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	3	29	44	50	55	60	64	63	65	67
(e)	median Catch (in thousand tonnes)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	42	43	49	57	66	77	91	106	126	147
(f)	median Landings (in thousand tonnes)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	35	36	41	47	55	64	76	89	105	123
(g)	median Discards (in thousand tonnes)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	7	7	8	9	11	13	14	16	18	21