

ECOREGION North Sea
SUBJECT Joint EU-Norway request on management plan for North Sea herring

Advice for 2012

The management plan (See Annex 6.3.3.1) appears to perform well in relation to the objectives of providing sustainable fisheries and stable yield in conformity with the precautionary approach. The current fishing mortality target (F_{2-6}) of 0.25 is consistent with the MSY approach under the current low recruitment regime. There is no basis to further adjust the harvest control rule to account for recruitment variability or trends. Rather than within-year revisions of the TAC, ICES considers that it is better to have a management plan that is can respond to large changes in the biology of the stock or assessment uncertainty. ICES would favour a collaborative iterative process between scientists, managers, and stakeholders if the management plan is revisited in 2011.

Request

JOINT EU-NORWAY REQUEST ON THE EVALUATION OF THE LONG-TERM MANAGEMENT PLAN FOR HERRING

The objectives of the long-term management plan for herring of North Sea origin and allocation of catches agreed between Norway and the European Union is to provide for sustainable fisheries with high and stable yields in conformity with the precautionary approach.

ICES is requested by 30 June 2011:

1. *To evaluation the performance of the plan in meeting its objectives, identifying any weaknesses in design or implementation that undermine its effectiveness;*
2. *To evaluate whether the values assigned to the precautionary reference points remain appropriate;*
3. *To indicate whether the target fishing mortalities rate of 0.25 for the 2-ringings and older and no more than 0.05 for 0-1-ringings, are consistent with MSY for the stock; and*
4. *To indicate any adjustments that should be made to harvest control rules to take into account low levels of recruitment.*
5. *In view of exceptional increase in the estimated SSB in 2010, to comment on whether an in-year revision of the TAC in similar circumstances is consistent with the objectives of the LTMP.*

Elaboration on the Advice

Request 1. Evaluate the performance of the plan in meeting its objectives, identifying any weaknesses in design or implementation that undermine its effectiveness.

The management plan appears to perform well in relation to the objectives of providing sustainable fisheries with stable yield in conformity with the precautionary approach. The management plan is also considered consistent with the MSY approach. In relation to the objectives of achieving high and stable yield, the change in the perception of the stock for 2010 is a type of situation that has not been part of the evaluations so far. Only by testing the HCR within a Management Strategy Evaluation will it be possible to judge the implications of this kind of uncertainty on the trade-off between high and stable yield.

The evaluation was done in a single species framework and thus did not consider multispecies interactions and the role of herring in the North Sea ecosystem.

Request 2. Evaluate whether the values assigned to the precautionary reference points remain appropriate.

F_{lim} is not defined for this stock. ICES considers that F_{pa} has been addressed at length in the past and still considers the value appropriate.

For North Sea herring, B_{lim} is set at the level below which there is an increased probability of reduced recruitment at 800 000 t. This value has been analysed several times (Patterson *et al.*, 1997; ICES, 2008) since it was implemented and has always come out as an appropriate value.

ICES finds that using B_{pa} has so far been effective at keeping the SSB above B_{lim} under the precautionary approach framework. Therefore, B_{pa} at 1.3 million t is still considered appropriate as a precautionary reference point.

The management plan has shifted the biomass break point to 1.5 million tonnes and B_{pa} is therefore no longer considered in the management plan.

Request 3. Indicate whether the target fishing mortality rate of 0.25 for the 2- ringers and older and no more than 0.05 for 0-1 ringers, are consistent with MSY for the stock.

The current target fishing mortalities of the management plan are consistent with the MSY approach under the current low recruitment regime.

Request 4. Indicate any adjustments that should be made to harvest control rules to take account of recent low levels of recruitment.

As the management plan has already been adjusted (in 2008) to account for the lower productive regime since the 2001 year class and there has been no observed change to the pattern of recruitment, ICES considers that there is no basis to further adjust the harvest control rule to account for changes in recruitment.

Request 5. In view of the exceptional increase in the estimated SSB in 2010, comment on whether an in-year revision of the TAC in similar circumstances is consistent with the objectives of the LTMP.

There are technical difficulties in evaluating in-year revisions of the TAC under exceptional circumstances. Moreover, within-year revisions of the TAC could result in management responding to noise in the biological signal. Therefore ICES considers that it is better to have a management plan that can respond to large changes in the biology of the stock or assessment uncertainty, rather than within-year revisions of TACs.

If clients consider it necessary to revisit the management plan in 2011 ICES would favour a collaborative iterative process between scientists, managers, and stakeholders.

Sources

- ICES. 1998. Report of the Study Group on the Precautionary Approach to Fisheries Management. 3–6 February 1998. ICES CM 1998/ACFM:10.
- ICES. 2008. Report of the Workshop on Herring Management Plans (WKHMP), 4–8 February 2008, ICES CM 2008/ACOM:27.
- ICES. 2011. Report of the Workshop on the evaluation of the long-term management plan for North Sea herring (WKHERMP), 14–15 March 2011. ICES CM 2011/ACOM:55.
- Patterson, K. R., Skagen, D., Pastoors, M., and Lassen, H. 1997. Harvest control rules for North Sea herring. WD to ACFM 1997.

Annex 6.3.3.1 Agreed Management Plan for North Sea herring

According to the EU Norway agreement:

The Parties agreed to continue to implement the management system for North Sea herring, which entered into force on 1 January 1998 and which is consistent with a precautionary approach and designed to ensure a rational exploitation pattern and provide for stable and high yields. This system consists of the following

- 1. Every effort shall be made to maintain a minimum level of Spawning Stock Biomass (SSB) greater than 800,000 tonnes (Blim).*
- 2. Where the SSB is estimated to be above 1.5 million tonnes the Parties agree to set quotas for the directed fishery and for bycatches in other fisheries, reflecting a fishing mortality rate of no more than 0.25 for 2 ringers and older and no more than 0.05 for 0 - 1 ringers.*
- 3. Where the SSB is estimated to be below 1.5 million tonnes but above 800,000 tonnes, the Parties agree to set quotas for the direct fishery and for bycatches in other fisheries, reflecting a fishing mortality rate on 2 ringers and older equal to:*

0.25-(0.15(1,500,000-SSB)/700,000) for 2 ringers and older,
and no more than 0.05 for 0 - 1 ringers*

- 4. Where the SSB is estimated to be below 800,000 tonnes the Parties agree to set quotas for the directed fishery and for bycatches in other fisheries, reflecting a fishing mortality rate of less than 0.1 for 2 ringers and older and of less than 0.04 for 0-1 ringers.*
- 5. Where the rules in paragraphs 2 and 3 would lead to a TAC which deviates by more than 15 % from the TAC of the preceding year the parties shall fix a TAC that is no more than 15 % greater or 15 % less than the TAC of the preceding year.*
- 6. Notwithstanding paragraph 5 the Parties may, where considered appropriate, reduce the TAC by more than 15 % compared to the TAC of the preceding year.*
- 7. Bycatches of herring may only be landed in ports where adequate sampling schemes to effectively monitor the landings have been set up. All catches landed shall be deducted from the respective quotas set, and the fisheries shall be stopped immediately in the event that the quotas are exhausted.*
- 8. The allocation of the TAC for the directed fishery for herring shall be 29 % to Norway and 71 % to the Community. The bycatch quota for herring shall be allocated to the Community.*
- 9. A review of this arrangement shall take place no later than 31 December 2011.*
- 10. This arrangement enters into force on 1 January 2009.*