

5.2.3.1 Additional catch options for herring (*Clupea harengus*) in Divisions VIIa south of 52°30'N and VIIg,h,j,k (Irish Sea, Celtic Sea and southwest of Ireland)

Advice summary

ICES revised the short-term forecast for 2015 using the output of the 2015 assessment and the updated reference points from the 2015 benchmark. ICES advises that when the MSY approach is applied, catches in 2015 should be no more than 21 404 tonnes.

Taking into account the revised catch forecast for 2015, ICES advises that when the MSY approach is applied, catches in 2016 should be no more than 17 228 tonnes.

Request

The recent ICES benchmark assessment of Celtic Sea herring has changed the perception of the stock. By 1 September 2015:

1. *ICES is requested to update its catch advice for 2015, taking into account the outcome of the benchmark assessment. If the catch advice for 2015 changes, the Commission may propose a revised 2015 TAC for this stock.*
2. *ICES is requested to update its catch advice for 2016, taking into account a possible revision of the TAC as a result of the revised advice for 2015 (point 1 above).*

Elaboration on the advice

Request item 1. Update of the catch options for 2015, taking into account the outcome of the benchmark assessment (ICES, 2015b)

The output of the 2015 assessment (ICES, 2015a), together with the reference points from the latest benchmark (ICES, 2015b), were the key parameters used to provide revised catch options for 2015.

Table 5.2.3.1 Herring in Divisions VIIa south of 52°30'N and VIIg,h,j,k. Key parameters from the 2015 assessment (ICES, 2015a) for the updated 2015 catch options. All weights are in tonnes.

Variable	Value	Source	Notes
F _{ages (wr) 2-5} (2014)	0.19	ICES (2015a)	F ₍₂₀₁₄₎ as estimated in the 2015 assessment
Total catch (2014)	19 574	ICES (2015a)	ICES estimated total catch
Wanted* catch (2014)	18 930	ICES (2015a)	ICES estimated total landings
Unwanted* catch (2014)	644	ICES (2015a)	ICES estimated total discards
R _{age (wr) 1} (2014)	541 287 million	ICES (2015a)	Stock–recruitment relationship based on SSB ₂₀₁₂ from the assessment output, which is associated with the 2014 age (wr) 1 recruits
SSB (2014)	111 455	ICES (2015a)	SSB at spawning time, based on the output of the assessment and the estimated 2014 recruits

* “Wanted catch” is used to describe fish that would be landed in the absence of the EU landing obligation (EU, 2013). The “unwanted catch” refers to the component that was previously discarded.

Table 5.2.3.2 Herring in Divisions VIIa south of 52°30'N and VIIg,h,j,k. The 2015 catch options. All weights are in tonnes.

Rationale	Catch (2015)	Basis	F (2015)	SSB (2015) *	% SSB change **	% TAC change ***
MSY approach	21 404	F _{MSY}	0.26	92 220	-17%	-4%
Other options	0	Zero catch	0	104 428	-6%	-100%
	19 189	F _{MGT} in the management plan agreed by the Pelagic Advisory Council (AC)	0.23	93 541	-16%	-14%
	24 946	30% TAC increase	0.52	87 350	-22%	12%
	22 360	TAC 2014	0.27	96 725	-13%	0%
	14 421	F ₂₀₁₄	0.19	96 725	-13%	-36%
	15 652	30% TAC decrease	0.18	96 621	-13%	-30%

* For this autumn-spawning stock, the SSB is determined at spawning time and is influenced by fisheries between 1st of April and spawning, nominally on the 1st of October.

** SSB 2015 relative to SSB 2014.

*** Catch 2015 relative to TAC 2014.

Request item 2. Upate of catch options for 2016, taking into account a possible revision of the TAC as a result of the revised advice for 2015 (point 1 above)

The 2015 management plan catch option was used as the basis for the 2016 catch options as it was considered to be the most realistic scenario based on the historical TACs for herring in this area. For the interim year (2015) assumption, this catch was augmented with an anticipated quarter 1 (Q1) 2016 catch (because the assessment year runs from 1 April to 31 March, see Methods section below), and with an anticipated carry-over of unused 2014 quota of 4223 tonnes. The 4223 tonnes reflects the transfer of unused 2014 quota to 2015 that was agreed by managers.

Table 5.2.3.3 Herring in Divisions VIIa south of 52°30'N and VIIg,h,j,k. The basis for the 2016 catch options. All weights are in tonnes.

Variable	Value	Source	Notes
F _{ages (wr) 2-5} (2015)	0.30	ICES (2015c)	Catch constraint, F _{MGT} (19 189 tonnes), plus carry-over (4223 tonnes), plus Q1 fishery assumption (600 tonnes)
Total catch (2015)	24 012	ICES (2015c)	Catch management plan (19 189 tonnes), plus carry-over (4223 tonnes), plus Q1 fishery assumption (600 tonnes)
Wanted* catch (2015)	23 244	ICES (2015a, 2015c)	Assuming same proportion of discards as the 2014 raised estimate (3.2%)
Unwanted* catch (2015)	768	ICES (2015a, 2015c)	Assuming same proportion of discards as the 2014 raised estimate (3.2%)
R _{age (wr) 1} (2015/2016)	541 287 million	ICES (2015a, 2015c)	Stock–recruitment relationship based on SSB ₂₀₁₃ from the assessment output, which is associated with the 2015 age (wr) 1 recruits
SSB (2015)	90 645	ICES (2015c)	SSB associated with interim catch assumption and 2015 estimated recruits

* “Wanted catch” is used to describe fish that would be landed in the absence of the EU landing obligation (EU, 2013). The “unwanted catch” refers to the component that was previously discarded.

Table 5.2.3.4 Herring in Divisions VIIa south of 52°30'N and VIIg,h,j,k. The 2016 catch options. All weights are in tonnes.

Rationale	Catch (2016)	Basis	F (2016)	SSB (2016) *	% SSB change **	% TAC change ***
MSY approach	17 228	F_{MSY}	0.26	77 122	-15%	10%
Other options	0	Zero catch	0	86 915	-4%	-100%
	15 442	F_{MGT} in the management plan agreed by the Pelagic AC	0.23	78 183	-14%	-1%
	20 348	30% TAC increase	0.32	75 230	-17%	30%
	15 652	TAC 2015	0.23	78 058	-14%	0%
	19 521	F_{2015}	0.30	75 740	-16%	25%
	10 956	30% TAC decrease	0.16	80 755	-11%	-30%

* For this autumn-spawning stock, the SSB is determined at spawning time and is influenced by fisheries between the 1st of April and spawning, nominally on the 1st of October.

** SSB 2016 relative to SSB 2015.

*** Catch 2016 relative to TAC 2015.

Basis of the advice

Table 5.2.3.5 Herring in Divisions VIIa south of 52°30'N and VIIg,h,j,k. The basis of the advice.

Advice basis	MSY approach
Management plan	ICES evaluated the 2011 long-term management plan for Celtic Sea herring agreed by the Pelagic AC in 2011 as precautionary (ICES, 2012, 2015a; Pelagic Advisory Council, 2011). ICES was requested to provide advice based on the MSY approach and to include the management plan as a catch option.

Background

This stock was benchmarked by ICES in 2014 (ICES, 2014b) and again in 2015 (ICES, 2015b). The purpose of the 2015 benchmark was to address two main concerns: the estimate of F_{MSY} was very large and different to any previous estimate for this or similar stocks, and the assessment displayed marked retrospective revisions of SSB when updated survey data were included. The 2015 benchmarked assessment displayed an upward revision of SSB in recent years, relative to the 2014 assessment, and it improved the retrospective pattern relative to previous assessments. Reference points were also revised, based on the 2015 benchmark; F_{MSY} was revised from 0.37 to 0.26 (ICES, 2015b).

Methods

Two consecutive short-term forecasts were performed. ICES used the outcome of the 2015 assessment (ICES, 2015a) and the revised reference points (ICES, 2015b) to determine updated catch options for the 2015 catch advice and the 2016 catch advice.

The hockey stick model assumption on stock–recruitment relationship was used as input for the short-term forecast (ICES, 2015a, 2015b), and the intermediate year catch for 2014 was estimated by ICES (2015a) at 19 574 tonnes. The intermediate catch for 2015 (24 012 tonnes) was estimated as the sum of the management plan catch option in 2015 (19 189 tonnes), plus provision for a likely 2016 Q1 fishery (600 tonnes) and carry over from 2014 (4223 tonnes). Fisheries in Q1 must be included in the intermediate year because the assessment year is 1 April to 31 March. A small fishery for 600 tonnes in 2016 is being considered by the local Irish co-management committee at present and will be the first such Q1 fishery in some years. Carry over of unused quota (4223 tonnes) from 2014 to 2015 is due to a special dispensation from normal procedures (ICES, 2014a). Normally, only 10% is allowed for transfer of unused quota. However in 2014, the closure of the Russian market to EU exports resulted in only partial uptake of the quota. Special arrangements have been made by the EU authorities to allow carry over, which is estimated at 4223 tonnes (ICES, 2015c). Nevertheless, ICES stresses that the revised advice for 2015 does

not include such a carry over because the unused quota of 2014 is already accounted for in the revised short-term forecast catch options for 2015 by using the actual estimated catch of 2014 for the revised short-term forecast.

Results and conclusions

Catch options include the MSY approach option (i.e. the ICES advice) and the option consistent with the long-term management plan agreed by the Pelagic Advisory Council and used for TAC setting in recent years. ICES has been requested by the European Commission to provide advice consistent with the MSY approach and to provide the catch option that corresponds to the long-term management plan. The TAC usually corresponds to the long-term management plan. All options are considered to be within the ICES precautionary approach, and SSB in both relevant years (SSB_{2014} and SSB_{2015}) is above $B_{trigger}$ both for the management plan and the MSY approach catch options. The 30% rule in the long-term management plan does not apply in either forecasted year because the advice does not differ from the previous TAC by more than 30%.

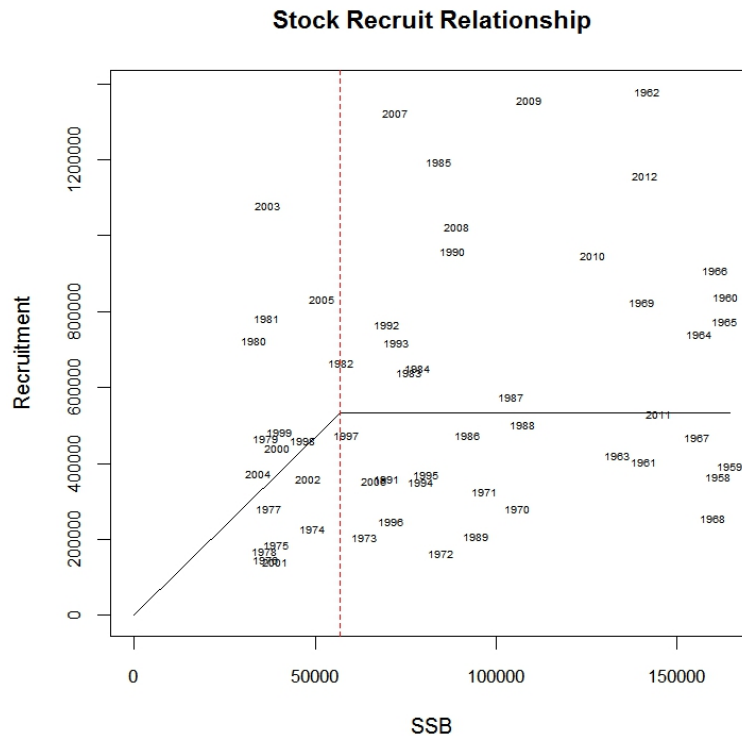


Figure 5.2.3.1 Herring in Divisions VIIa south of 52°30'N and VIIg,h,j,k. Stock–recruitment relationship based on assessment following the procedures of ICES (2015b) and data from ICES (2014a) for 1958–2013.

Additional information

A comparison of recent assessment outputs is presented below.

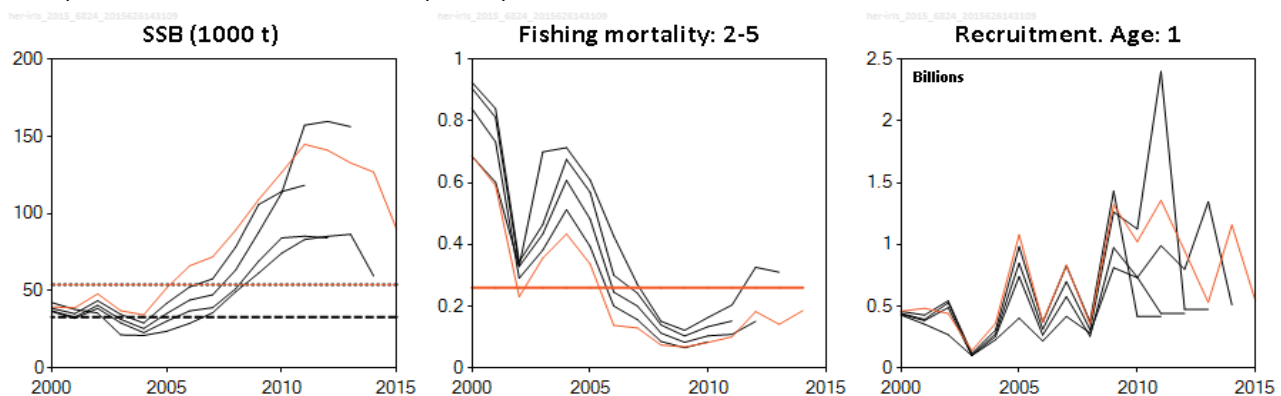


Figure 5.2.3.2 Herring in Divisions VIIa south of 52°30'N and VIIg,h,j,k. Historical assessment results (final-year recruitment estimates included). The stock was benchmarked (ICES, 2015b) after the 2014 assessment.

Sources and references

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