

WEST OF SCOTLAND HERRING

(Division 6.a North)



ADVICE FOR 2023

ICES advises that when the MSY approach is applied, catches in 2023 should be no more than 1,212 t.



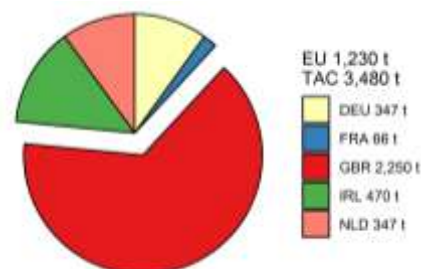
KEY POINTS

ICES Assessment Category	3 (Survey biomass trend)	
Management Plan	No	
Advice Basis	ICES MSY approach	Catch=1,212 t
Ranges	F _{MSY} Range Lower	Not Appropriate
	F _{MSY}	Not available
	F _{MSY} Range Upper	Not Appropriate
Landing Obligation	From 2015	No derogations or exemptions

MANAGEMENT IN 2022

- From 2016 until 2021, ICES gave one advice for two stocks in the combined area 6.aN, 6.aS, and 7.b-c. The 56°N boundary between 6.aS/7.b-c and 6.aN is not biologically meaningful. Created in 1981, it corresponds roughly to the boundary of the Irish and UK fishery patrol zones, or “EEZs”. The boundary cuts through both the summer feeding grounds and the winter spawning grounds, and thus the fishing grounds also.
- Since 2015 all targeted herring fishing is prohibited in the part of the ICES zones subject to this TAC between 56°N and 57°30'N, with the exception of a six nautical mile limit measured from the baseline of the United Kingdom's territorial sea.
- In 2016, a scientific monitoring fishery (4,840 t) was considered appropriate by ICES to allow the collection of samples for the two stocks and to continue the time series.
- In 2022, a TAC of 4,840 t was agreed and was split for 6.b and 6.aN, UK and international waters of 5.b, (3,480 t, 72%) and 6.aS and 7b-c (1,360 t, 28%).
- The Irish herring fishery in 6.a opened on 1st November 2022.
- Irish and Dutch vessels are not allowed to fish herring inside the UK (Scottish) 6-12 nautical mile limits, including the outlying Hebridean Islands (Appendix VI). German and French vessels have access to herring fishing between 6 and 12 nautical miles in Scottish waters in most areas, though not the mainland limits east of the Butt of Lewis.

2022 Quota Allocations for Herring in 5.b, 6.b and 6.aN



KEY STOCK CONSIDERATIONS

- This stock was benchmarked in 2022 and is now assessed separately from herring in 6.a South, 7.b-c. This was made possible by the development of a genetically split acoustic survey index, which is used as an indicator of stock development.
- The split survey biomass index is available from 2014-2021. The index has increased in 2020 and 2021 from the lowest observed level in 2019 (10,508 t) with the 2021 biomass index over 43,000 t.
- The current assessment represents autumn-spawning herring. Further genetic work is required to facilitate an assessment of Spring-spawning herring in 6.a North.

- There is evidence that autumn-spawning herring in 6.a North are genetically the same population as the North Sea autumn-spawning stock (NSAS) and a combined assessment should be considered.
- Genetic sampling of the catch is also required as the stocks recover and the fishing expands.
- Catches from 6.a North have been below the monitoring TAC from 2019-2021. As a result, sampling levels are also low.

Herring (*Clupea harengus*) in division 6.a (North), autumn spawners (West of Scotland)

ICES advice on fishing opportunities

ICES advises that when the MSY approach is applied, catches in 2023 should be no more than 1212 tonnes.

Stock development over time

Fishing pressure on the stock is at or below F_{MSY} proxy (figures 1 and 2). No reference points for stock size have been defined for this stock.

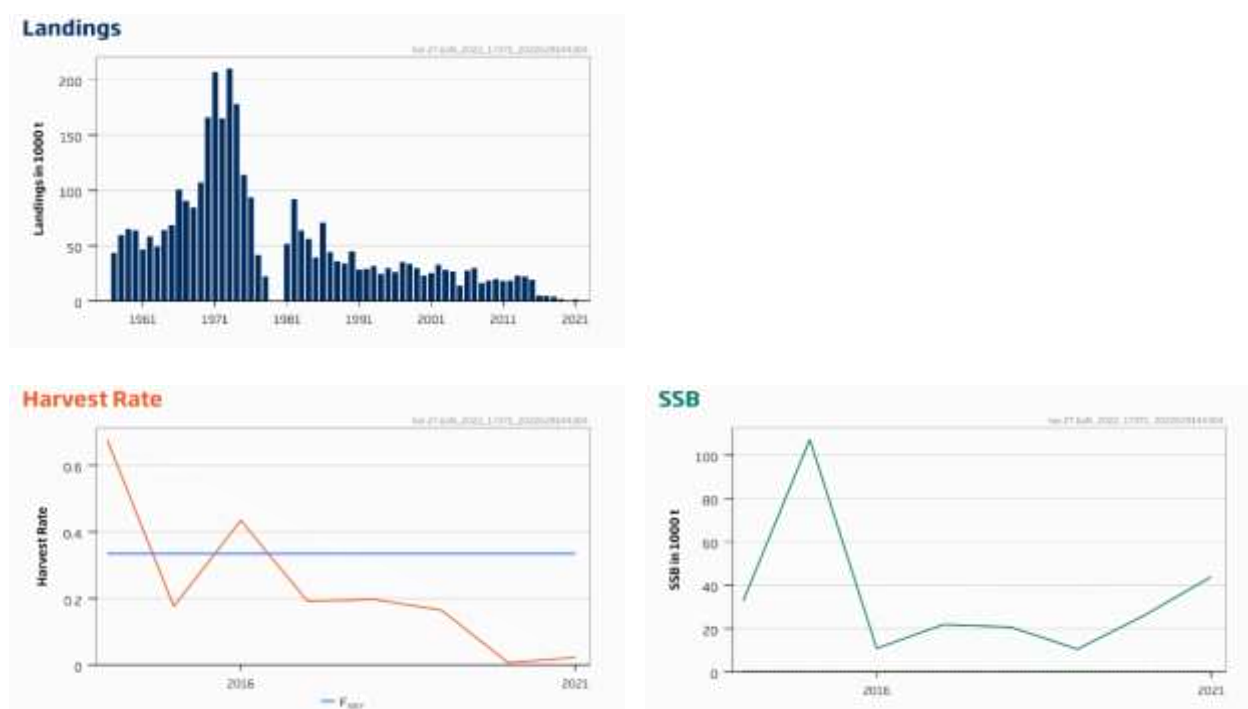


Figure 1 Herring in Division 6.a North. Summary of the stock assessment. Upper left: ICES estimated catches (in tonnes). Lower left: harvest rate (ratio between landings and acoustic survey SSB estimate). Lower right: spawning-stock biomass index of genetically split Malin Shelf Herring Acoustic Survey (tonnes) for Division 6.a (North).

Catch scenarios

ICES framework for category 3 stocks was applied (ICES, 2022a). The advice is based on the *chr* rule to provide MSY advice (ICES, 2022a, 2022b). A biomass index from the genetically split Malin Shelf Herring Acoustic Survey (MSHAS) was used as an indicator of stock development (ICES, 2022c). The advice is based on the stock indicator for 2021, multiplied by a constant harvest rate, a biomass safeguard, and a precautionary multiplier. As this is the first advice using this method for this stock, the harvest rate calculation was initialized using the average of the previous three