

Lesser-spotted dogfish (*Scyliorhinus canicula*) in Subarea 4 and in divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 2389 tonnes in each of the years 2022 and 2023. ICES cannot quantify the corresponding catches.

Stock development over time

ICES cannot assess the stock and exploitation status relative to maximum sustainable yield (MSY) and precautionary approach (PA) reference points because the reference points are undefined.

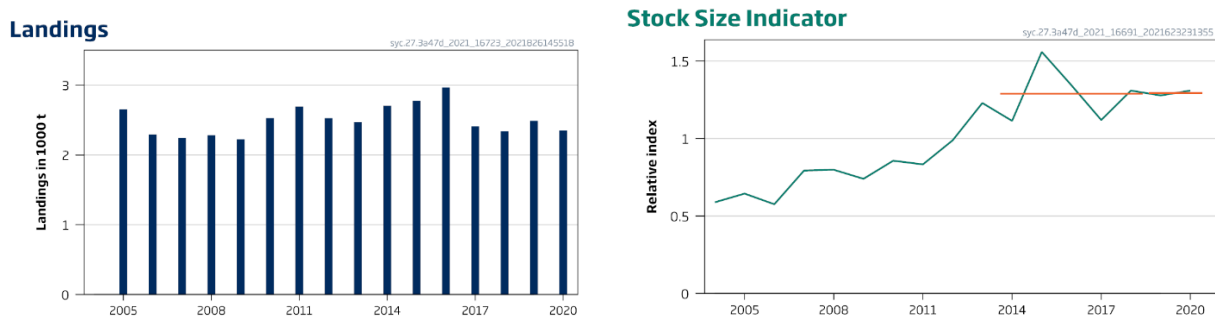


Figure 1 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. Summary of the stock assessment. Left: ICES estimated landings (landings data before 2005 are incomplete and not shown). Right: stock-size indicator is the mean normalized total biomass index from the average of the two NS-IBTS surveys (NS-IBTS-Q1 [G1022], and NS-IBTS-Q3 [G2829]), the BTS-ENG-Q3 (G2453), the FR-CGFS Q4 (G3425) and the BTS-BE-Q3 (G2453). The horizontal lines show the mean stock indicators for 2019–2020 and 2014–2018.

Catch scenarios

The ICES framework for category 3 stocks was applied (ICES, 2012). Biomass indices derived from five surveys (NS-IBTS-Q1 [G1022], NS-IBTS-Q3 [G2829], FR-CGFS-Q4 [G3425], BTS-ENG-Q3 [G2453], and BTS-BE-Q3 [G2453]) were used to provide an overall stock-size indicator. The advice is based on the ratio of the mean of the last two index values (index A) and the mean of the five preceding values (index B), multiplied by the recent advised landings. The index ratio increased only slightly and thus the uncertainty cap was not applied. The precautionary buffer was last applied in 2019 and has therefore not been considered again.

Discarding is known to take place, but ICES cannot quantify the corresponding dead catch. Discard survival, which is likely to occur, has not been estimated.

Table 1 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. The basis for the catch scenarios.*

Index A (2019–2020)		1.29
Index B (2014–2018)		1.29
Index ratio (A/B)		1.00
Uncertainty cap	Not applied	-
Advised landings for 2020 and 2021 (issued in 2019)		2380 tonnes
Discard rate		Unknown
Precautionary buffer	Not applied	-
Landings advice **		2389 tonnes
% Advice change ^		+0.4%

* The figures in the table are rounded. Calculations were done with unrounded inputs, and computed values may not match exactly when calculated using the rounded figures in the table.

** [Advised landings for 2020 and 2021] × [index ratio]

^ Advice value for 2022 and 2023 relative to the advice value for 2021.

The advised landings are slightly higher than advised for 2020 and 2021 because the biomass indicator shows a slight increase.

Basis of the advice

Table 2 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. The basis of the advice.

Advice basis	Precautionary approach
Management plan	ICES is not aware of any agreed precautionary management plan for lesser spotted dogfish in this area

Quality of the assessment

Fishery-independent trawl surveys indices were updated and combined following the recommendation of WSKATE (ICES, 2021a, 2021b). The stock-size indicator is based on five surveys (ICES, 2021a), now including the BTS-BE-Q3, instead of four surveys (ICES, 2019), which cover most of the stock area. The current assessment is now based on total biomass, and not exploitable (≥ 50 cm) biomass.

In 2020, only the French waters of the English Channel were sampled during the FR-CGFS-Q4 survey. The index from this survey was thus not considered representative and not included in the calculation of the combined index for 2020 used in the assessment.

Issues relevant for the advice

Scyliorhinids are considered to be productive species in comparison to other demersal elasmobranchs (McCully Phillips *et al.*, 2015).

A discard survival of $> 90\%$ has been estimated for the beam-trawl fisheries in this area (Revill *et al.*, 2005). Data are lacking for other métiers.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 3 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. Basis of the assessment and advice.

ICES stock data category	3 (ICES, 2021c)
Assessment type	Survey-based trends (ICES, 2021b)
Input data	Surveys: NS-IBTS-Q1 (G1022), NS-IBTS-Q3 (G2829), FR-CGFS-Q4 (G342), BTS-ENGQ3 (B2453), and BTS-BE-Q3 (B2453)
Discards and bycatch	Unknown
Indicators	None
Other information	None
Working group	Working Group on Elasmobranch Fishes (WGEF)

History of the advice, catch, and management

Table 4 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. History of ICES advice and estimates of landings. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	Agreed TAC	ICES landings
2005	No advice		No TAC	2652
2006	No advice		No TAC	2293
2007	No advice		No TAC	2243
2008	No advice		No TAC	2282
2009	<i>Status quo</i> catch	1800	No TAC	2223
2010	No new advice, same as for 2009	1800	No TAC	2528
2011	Maintain catch at recent level	1800	No TAC	2693
2012	No new advice, same as for 2011	1800	No TAC	2526
2013	Increase catch at most by 20% + no species-specific TAC		No TAC	2472
2014	No new advice, same as for 2013		No TAC	2705
2015	No new advice, same as for 2014		No TAC	2776
2016	Precautionary approach	Increase by no more than 20% compared to the average catches in 2012–2014	No TAC	2968
2017	Biennial advice	Same catch value as advised for 2016	No TAC	2407 ^
2018	Precautionary approach	≤ 3380	No TAC	2340 ^
2019	Precautionary approach (same advice as for 2018)	≤ 3380	No TAC	2488
2020	Precautionary approach	≤ 2380	No TAC	2348
2021	Same advice as in 2020	≤ 2380	No TAC	
2022	Precautionary approach	≤ 2389	No TAC	
2023	Precautionary approach	≤ 2389	No TAC	

^ Data were revised in 2021 (ICES, 2021b)

History of the catch and landings

The distribution of this stock does not extend into the NEAFC Regulatory Area.

Table 5 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. Catch distribution by fleet in 2020 as estimated by ICES.

Catch (2020)	Landings			Discards
	Bottom trawl 61%	Beam trawl 18%	Other gears 21%	
Unknown	2348 tonnes			Unknown

Table 6 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. ICES estimates of landings by country (in tonnes).
Blank cell = no data reported; 0 = value less than 0.5.

Year	Belgium	Denmark	France	Netherlands	UK	Total
2005	238		2265	56	92	2652
2006	267		1857	48	121	2293
2007	264		1843	32	104	2243
2008	337		1822	29	94	2282
2009	309		1758	37	118	2223
2010	290		2055	37	146	2528
2011	311		2150	47	185	2693
2012	249		2061	35	181	2526
2013	231		2021	36	184	2472
2014	325		2189	45	146	2705
2015	416	0	2090	85	185	2776
2016	343	0	2173	122	330	2968
2017	338	0*	1641	141	287	2407 *
2018	305	0*	1580	180	275	2340 *
2019	328	0	1640	218	302	2488
2020	256	0	1613	186	292	2348

* Data were revised in 2021 (ICES, 2021b)

Summary of the assessment

Table 7 Lesser-spotted dogfish in Subarea 4 and in divisions 3.a and 7.d. Assessment summary. Stock size indicator is the mean normalized total biomass from the average of the two NS-IBTS surveys (NS-IBTS-Q1 and NS-IBTS-Q3), the BTS-ENG-Q3, the FR-CGFS-Q4 and the BTS-BE-Q3.

Year	NS-IBTS-Q1 & Q3	BTS-ENG-Q3	FR-CGFS-Q4	BTS-BE-Q3	Stock-size indicator
2004	0.41	0.64	0.58	0.73	0.59
2005	0.29	0.80	1.00	0.49	0.64
2006	0.35	0.41	1.07	0.46	0.58
2007	0.36	0.69	1.29	0.83	0.79
2008	0.60	1.19	0.89	0.51	0.80
2009	0.56	0.80	1.01	0.59	0.74
2010	0.84	1.17	0.88	0.53	0.86
2011	0.80	0.79	0.78	0.96	0.83
2012	1.19	1.17	0.84	0.75	0.99
2013	1.55	1.37	1.01	0.98	1.23
2014	1.54	1.22	0.77	0.93	1.11
2015	1.49	1.44	1.39	1.92	1.56
2016	1.45	1.14	1.08	1.70	1.34
2017	1.50	0.85	0.96	1.17	1.12
2018	1.49	1.12	1.06	1.56	1.31
2019	1.23	1.00	1.39	1.49	1.28
2020	1.34	1.19	NA	1.39	1.31 *

* Does not include FR-CGFS-Q4.

Sources and references

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[Download the stock assessment data and figures.](#)

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