

Lesser-spotted dogfish (*Scyliorhinus canicula*) in Subarea 6 and divisions 7.a–c and 7.e–j (West of Scotland, Irish Sea, southern Celtic Seas)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 3596 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 the maximum sustainable yield (MSY) and precautionary approach (PA) reference points because the reference points are undefined.

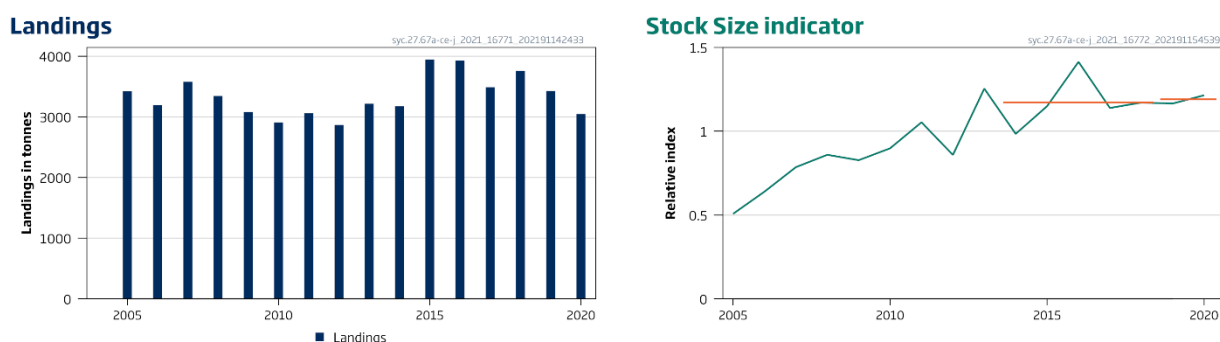


Figure 1 Lesser-spotted dogfish in Subarea 6 and divisions 7.a–c and 7.e–j. Summary of the stock assessment. Left: recent ICES estimates of species-specific landings. Right: stock-size indicator of the total biomass from four surveys [EVHOE-WIBTS-Q4 (G9527), IE-IGFS-WIBTS-Q4 (G7212), SP-PORC-WIBTS-Q3 (G5768), and UK(E&W)-BTS-Q3 (B6596)], with results from each survey being normalized by their long-term means] relative to the time-series mean. The horizontal lines show the mean stock indicators for 2019 and 2020 and 2014–2018.

Catch scenarios

The ICES framework for category 3 stocks was applied (ICES, 2012). Biomass indices derived from four surveys [EVHOE-WIBTS-Q4, IE-IGFS-WIBTS-Q4, SP-PORC-WIBTS-Q3, and UK(E&W)-BTS-Q3] were used to provide an overall stock size indicator. The advice is based on the ratio of the mean of the last two indices values (Index A) and the mean of the five preceding values (Index B), multiplied by the recent advised landings. The stock-size indicator is estimated to have increased by less than 20% 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 known to occur, has not been estimated for all métiers.

Table 1 Lesser-spotted dogfish in Subarea 6 and divisions 7.a–c and 7.e–j. The basis for the catch scenarios.*

Index A (2019–2020)		1.19
Index B (2014–2018)		1.17
Index ratio (A/B)		1.02
Uncertainty cap	Not applied	-
Advised landings for 2020 and 2021 (issued in 2019)		3540 tonnes
Discard rate		Unknown
Precautionary buffer	Not applied	
Landings advice **		3596 tonnes
% Advice change ***		+2%

* 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 2020–2021] × [index ratio].

*** Advice value 2022 and 2023 relative to the advice value for 2020 and 2021.

The advised landings are higher than advised for 2020 and 2021 because of the increase in the stock-size indicator.

Basis of the advice

Table 2 Lesser-spotted dogfish in Subarea 6 and divisions 7.a–c and 7.e–j. 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

The four trawl surveys used cover most of the stock area and sample mature fish effectively. In 2020 the area coverage of the UK(E&W)-BTS-Q3 survey was reduced due to COVID-19 restrictions (Division 7.a was not sampled). This survey has therefore not been used in calculating the 2020 stock-size indicator (ICES, 2021a).

There were minor changes to the biomass index derived for EVHOE-WIBTS-Q4, as this has now been based on DATRAS data instead of the national survey data used in previous advice (ICES, 2021a).

Issues relevant for the advice

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

Discarding is variable between fishing fleets and has not been fully quantified for all the time series. It is considered that discards are generally several times higher than landed quantities (ICES 2021a). In this area, discard survival of > 90% in beam trawl fisheries has been estimated (Revill *et al.*, 2005). Data are lacking for other metiers.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 3 Lesser-spotted dogfish in Subarea 6 and divisions 7.a–c and 7.e–j. Basis of the assessment and advice.

ICES stock data category	3 (ICES, 2021b).
Assessment type	Survey trends-based assessment (ICES, 2021a)
Input data	Surveys: EVHOE-WIBTS-Q4 (G9527), IE-IGFS-WIBTS-Q4 (G7212), SP-PORC-WIBTS-Q3 (G5768), UK(E&W)-BTS-Q3 (B6596)
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 6 and divisions 7.a–c and 7.e–j. History of ICES advice, agreed TAC 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	3426
2006	No advice		No TAC	3195
2007	No advice		No TAC	3579
2008	No advice		No TAC	3344
2009	<i>Status quo</i> catch		No TAC	3080
2010	No new advice, same as for 2009		No TAC	2909
2011	Maintain catch at recent level		No TAC	3064
2012	No new advice, same as for 2011		No TAC	2868
2013	Increase catch by maximum 20% + no species-specific TAC		No TAC	3219
2014	No new advice, same as for 2013		No TAC	3176
2015	No new advice, same as for 2014		No TAC	3948
2016	Precautionary approach	Increase by no more than 18% compared to the average catches in 2012–2014	No TAC	3932
2017	Biennial advice	Same catch value as advised for 2016	No TAC	3490
2018	Precautionary approach	≤ 4296	No TAC	3763
2019	Precautionary approach (same advice as for 2018)	≤ 4296	No TAC	3429
2020	Precautionary approach	≤ 3540	No TAC	3048
2021	Same advice as in 2020	≤ 3540	No TAC	
2022	Precautionary approach	≤ 3596		
2023	Precautionary approach	≤ 3596		

History of the catch and landings

The distribution of this species may extend into the NEAFC Regulatory Area, but the main component of the stock occurs in shelf seas and catches from the NEAFC Regulatory Area are considered to be negligible with no reported landings.

Table 5 Lesser-spotted dogfish in Subarea 6 and divisions 7.a–c and 7.e–j. Catch distribution by fleet in 2020 as estimated by ICES.

Catch (2020)	Landings			Discards
Unknown	Bottom trawl 78%	Beam trawl 18%	Other gears 4%	Unknown
	3048 tonnes			

Table 6 Lesser spotted dogfish in Subarea 6 and divisions 7.a–c and 7.e–j. ICES estimates of landings by country (in tonnes).

Year	Belgium	Spain	France	UK	Ireland	Netherlands	Total
2005	240	34	2936	123	92	0	3426
2006	225	33	2873	22	42	0	3195
2007	199	37	3101	115	128	0	3579
2008	165	12	2728	191	248	0	3344
2009	168	17	2479	226	190	0	3080
2010	165	28	2368	111	232	6	2909
2011	227	48	2359	111	317	1	3064
2012	236	109	2060	241	221	1	2868
2013	216	26	2284	380	310	4	3219
2014	141	18	2292	389	336	0	3176

Year	Belgium	Spain	France	UK	Ireland	Netherlands	Total
2015	252	20	2024	1282	367	3	3948
2016	194	9	1969	1333	425	1	3932
2017	209	12	1677 *	1067	524	0	3489 *
2018	181	25	1518	1628	411	0	3763
2019	194	7	1479	1510	235	4	3429
2020	176	6	1277	1364	224	2	3048

* Revised in 2021 (ICES, 2021a).

Summary of the assessment

Table 7 Lesser-spotted dogfish in Subarea 6 and divisions 7.a–c and 7.e–j. Assessment summary. Biomass indices were derived from four trawl surveys (EVHOE-WIBTS-Q4, IE-IGFS-WIBTS-Q4, SP-PORC-WIBTS-Q3 and UK(E&W)-BTS-Q3). The stock-size indicator is the annual mean of the normalized survey indices.

Year	EVHOE-WIBTS-Q4	IE-IGFS-WIBTS-Q4	SP-PORC-WIBTS-Q3	UK(E&W)-BTS-Q3	Stock-size indicator
2005	0.56	0.57	0.36	0.53	0.57
2006	0.69	0.59	0.53	0.74	0.55
2007	0.89	0.71	0.82	0.71	0.78
2008	0.91	0.90	0.79	0.84	0.94
2009	0.61	1.03	0.73	0.93	0.79
2010	0.75	1.21	0.79	0.84	0.98
2011	0.70	1.45	0.75	1.30	0.92
2012	0.79	0.80	0.70	1.14	0.86
2013	0.86	0.94	1.96	1.24	1.28
2014	0.76	1.00	1.10	1.08	1.01
2015	1.45	1.23	0.96	0.94	1.27
2016	1.20	1.47	1.94	1.03	1.44
2017	NA	1.23	1.22	0.96	1.10 *
2018	1.12	0.96	1.31	1.29	1.12
2019	1.94	0.90	1.04	0.78	1.22
2020	1.75	1.01	0.88	NA	1.21 **

* In 2017, the stock-size indicator does not include the EVHOE-WIBTS-Q4 survey (survey incomplete).

** In 2020, the stock-size indicator does not include the UK(E&W)-BTS-Q3 survey (survey incomplete).

Sources and references

ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM:68. 42 pp.

ICES. 2021a. Working Group on Elasmobranch Fishes (WGEF). ICES Scientific Reports. 3:59. <http://doi.org/10.17895/ices.pub.8199>.

ICES. 2021b. Advice on fishing opportunities. In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, section 1.1.1. <https://doi.org/10.17895/ices.advice.7720>.

McCully Phillips, S. R., Scott, F., and Ellis, J. R. 2015. Having confidence in Productivity Susceptibility Analyses: A method for underpinning scientific advice on skate stocks? Fisheries Research, 171: 87–100. <https://doi.org/10.1016/j.fishres.2015.01.005>.

Revill, A. S., Dulvy, N. K., and Holst, R. 2005. The survival of discarded lesser-spotted dogfish (*Scyliorhinus canicula*) in the Western English Channel beam trawl fishery. Fisheries Research, 71: 121–124. <https://doi.org/10.1016/j.fishres.2004.07.006>.

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

Recommended citation: ICES. 2021. Lesser spotted dogfish (*Scyliorhinus canicula*) in Subarea 6 and divisions 7.a–c and 7.e–j (West of Scotland, Irish Sea, southern Celtic Seas). In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, syc.27.67a-ce-j, <https://doi.org/10.17895/ices.advice.7872>.