

Greater spotted dogfish (*Scyliorhinus stellaris*) in subareas 6 and 7 (Celtic Sea and English Channel)

ICES stock advice

ICES advises that when the precautionary approach is applied, catches in each of the years 2018 and 2019 should be decreased by 36% compared to the average of 2014–2016. ICES cannot quantify the resulting catches or landings.

Stock development over time

The abundance index has increased over the longer time-series, but recently declined.

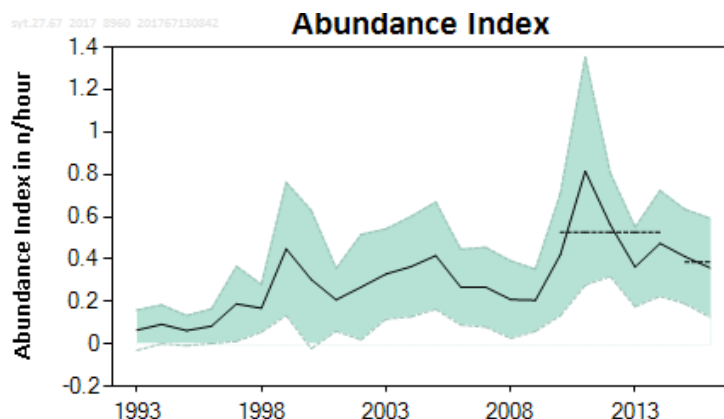


Figure 1 Greater spotted dogfish in subareas 6 and 7. Summary of the stock assessment. Abundance index ($n\ h^{-1}$) from the UK (E&W)-BTS-Q3 survey in divisions 7.a and 7.f. The dotted horizontal lines indicate mean catch rates for 2015–2016 and 2010–2014. The shaded area represents the 95% confidence interval.

Stock and exploitation status

Table 1 Greater spotted dogfish in subareas 6 and 7. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size					
		2014	2015	2016	2014	2015	2016			
Maximum sustainable yield	F_{MSY}	?	?	?	Undefined	MSY	?	?	?	Undefined
Precautionary approach	F_{pa} , F_{lim}	?	?	?	Undefined	B_{pa} , B_{lim}	?	?	?	Undefined
Management plan	F_{MGT}	-	-	-	Not applicable	B_{MGT}	-	-	-	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	↗	↘	↘	Decreasing

Catch options

The ICES framework for category 3 stocks (ICES, 2012) was applied. An abundance index derived from the BTS-UK(E&W)-Q3 survey was used to provide an overall stock size indicator. The advice is based on a comparison of the last two values (index A) with the five preceding values (index B). The stock size indicator has decreased by more than 20% and therefore the uncertainty cap was applied. The stock size relative to candidate reference points is unknown, and since the precautionary buffer has not been applied for three years, it is applied in 2017.

Discarding is known to take place, but ICES cannot quantify the corresponding catch or landings.

Table 2 Greater spotted dogfish in subareas 6 and 7. The basis for the catch options.*

Index A (2015–2016)		0.39 ind. h ⁻¹
Index B (2010–2014)		0.53 ind. h ⁻¹
Index ratio (A/B)		0.73
Uncertainty cap	Applied	0.8
Average catch (2014–2016)		Unknown
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Catch advice**	Decrease by 36% compared to the average catches in 2014–2016.	

*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.

** [Average catch (2014, 2015, 2016)] × [Uncertainty cap] × [precautionary buffer].

Basis of the advice

Table 3 Greater spotted dogfish in subareas 6 and 7. The basis of the advice.

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

Quality of the assessment

Landings data are too unreliable to be used in the advice, as some landings are included in generic “dogfish” or “catshark” categories, and some landings may be combined with the more common lesser-spotted dogfish *S. canicula*. The inshore fleet is expected to have a greater overlap with this stock, and landings data for vessels < 10 m length overall (LOA) may not be reported fully. Improved landings data are required, and it may be possible to estimate species-specific landings based on ratios found in survey and/or commercial sampling data.

Discarding is known to occur; however, it is variable between fishing fleets and has not been fully quantified. Discard survival has not been estimated, but is likely to be similar to lesser-spotted dogfish (Revill *et al.*, 2005).

Greater spotted dogfish is most abundant on inshore, rocky habitats, and such grounds are not sampled effectively by many trawl surveys. Only one survey (BTS-UK(E&W)-Q3) is currently used to inform on stock status, and this survey only covers part of the species distribution.

Issues relevant for the advice

Scyliorhinids are generally productive species in comparison to other demersal elasmobranchs and are typically either discarded or landed as a low-value bycatch.

Greater spotted dogfish occurs primarily in inshore waters on rocky grounds where commercial fishing pressure (for finfish) is low, with some grounds subject to spatial management. This species is locally important for recreational fisheries and it is generally released alive.

A biomass index shows the same trend as the stock size indicator (abundance index; ICES, 2017).

Reference points

Reference points are not defined for this stock.

Basis of the assessment

Table 4 Greater spotted dogfish in subareas 6 and 7. Basis of the assessment and advice.

ICES stock data category	3 (ICES, 2016).
Assessment type	Survey-based trends (ICES, 2017).
Input data	BTS-UK(E&W)-Q3 survey.
Discards and bycatch	Unknown.
Indicators	None.
Other information	None.
Working group	Working Group on Elasmobranch Fishes (WGEF).

Information from stakeholders

There is no additional available information for this stock.

History of the advice, catch, and management

Table 5 Greater spotted dogfish in subareas 6 and 7. ICES advice and official landings. All weights are in tonnes. (NA = Not available).

Year	ICES advice	Predicted catch corresp. to advice	Agreed TAC	Landings (tonnes)
2009	<i>Status quo</i> catch			NA
2010	-			NA
2011	No advice		No TAC	NA
2012	No advice		No TAC	NA
2013	-		No TAC	NA
2014	-		No TAC	NA
2015	-		No TAC	NA
2016	Decrease by 6% compared to the average catches in 2012–2014		No TAC	NA
2017	Same catch value advised for 2016		No TAC	
2018	Precautionary approach: Decrease by 36% compared to the average catches in 2014–2016			
2019	Precautionary approach (Same advice as for 2018)			

History of the catch and landings

Table 6 Greater spotted dogfish in subareas 6 and 7. Catch distribution by fleet in 2016 as estimated by ICES.

Catch (2016)	Landings	Discards
Unknown	Unknown	Unknown

Table 7 Greater spotted dogfish in subareas 6 and 7. History of ICES species-specific estimates of landings inside and outside of the NEAFC regulatory area. All weights are in tonnes.

Year	Inside the NEAFC regulatory area	Outside the NEAFC regulatory area	ICES species-specific estimates of landings
2014	0	NA	NA
2015	0	NA	NA
2016	0	NA	NA

Summary of the assessment

Table 8 Greater spotted dogfish in subareas 6 and 7. Assessment summary. An abundance index ($n\ h^{-1}$) derived from the BTS-UK(E&W)-Q3 survey was used as the stock size indicator.

Year	Stock size indicator
1993	0.065
1994	0.093
1995	0.063
1996	0.084
1997	0.189
1998	0.168
1999	0.448
2000	0.304
2001	0.208
2002	0.268
2003	0.330
2004	0.365
2005	0.417
2006	0.268
2007	0.268
2008	0.210
2009	0.206
2010	0.421
2011	0.815
2012	0.563
2013	0.363
2014	0.474
2015	0.412
2016	0.360

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. 2016. Advice basis. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.

ICES. 2017. Report of the Working Group on Elasmobranch Fishes (WGEF), 31 May–7 June 2017, Lisbon, Portugal. ICES CM 2017/ACOM:16. 1018 pp.

Revoll, 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.