

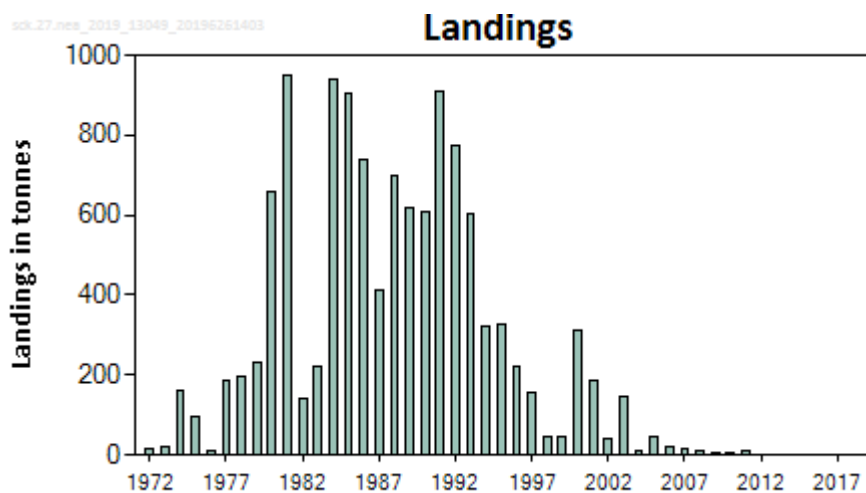
## Kitefin shark (*Dalatias licha*) in subareas 1–10, 12, and 14 (the Northeast Atlantic and adjacent waters)

### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, there should be zero catches in each of the years 2020–2023.

### Stock development over time

Landings have declined after the early 1990s, which is considered to be partly due to market conditions. In line with the zero TAC, landings have been negligible since 2010.



**Figure 1** Kitefin shark in the Northeast Atlantic. Total landings, in tonnes.

### Stock and exploitation status

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.

**Table 1** Kitefin shark in the Northeast Atlantic. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size					
		2016	2017	2018	2016	2017	2018			
Maximum sustainable yield	$F_{MSY}$	?	?	?	Unknown	$MSY B_{trigger}$	?	?	?	Unknown
Precautionary approach	$F_{pa}, F_{lim}$	?	?	?	Unknown	$B_{pa}, B_{lim}$	?	?	?	Unknown
Management plan	$F_{MGT}$	—	—	—	Not applicable	$B_{MGT}$	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	?	?	?	Unknown

### Catch scenarios

The ICES framework for category 6 was applied (ICES, 2012). For stocks without information on abundance or exploitation, ICES considers that a precautionary reduction of catches should be implemented unless there is ancillary information clearly indicating that the current level of exploitation is appropriate for the stock.

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

**Table 2** Kitefin shark in the Northeast Atlantic. Basis for the catch scenario.

Recent advised catch for 2016–2019 (issued in 2015)		0
Discard rate		Unknown
Precautionary buffer	Not applied (not applicable)	-
Catch advice		0
% Advice change *		0%

\* Advice value 2020–2023 relative to the advice for 2016–2019 issued in 2015.

The advice for 2020–2023 has not changed from the previous advice.

### Basis of the advice

**Table 3** Kitefin shark in the Northeast Atlantic. The basis of the advice.

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

### Quality of the assessment

There is no recent assessment for this stock.

### Issues relevant for the advice

This stock is classified as Category 2 in the [NEAFC categorization of deep-sea species/stocks](#) which implies that NEAFC requires measures stipulating that directed fisheries are not authorized and that bycatches should be minimized.

Kitefin shark is mainly distributed at the Azorean Islands, but occurs widely at low abundance throughout the ICES area. The target fishery has now been closed for several years, and the lack of data (both fishery-dependent and -independent data) prevents the assessment of current stock status.

### Reference points

No reference points have been defined for this stock.

### Basis of the assessment

**Table 4** Kitefin shark in the Northeast Atlantic. The basis of the assessment.

ICES stock data category	6 ( <a href="#">ICES, 2018</a> ).
Assessment type	No assessment.
Input data	Landings.
Discards and bycatch	Unknown.
Indicators	None.
Other information	None.
Working group	Working Group on Elasmobranch Fishes ( <a href="#">WGEF</a> ).

### Information from stakeholders

There is no additional available information.

## History of advice, catch, and management

**Table 5** Kitefin shark in the Northeast Atlantic. History of ICES advice, the agreed TAC, and ICES estimates of landings. Weights are in tonnes\*.

Year	ICES advice	Catch corresponding to advice	Agreed TAC			ICES landings
			Subareas 5–9**	Subarea 10**	Subarea 12**	
1992	No advice	-	No TAC	No TAC	No TAC	772
1993	No advice	-	No TAC	No TAC	No TAC	602
1994	No advice	-	No TAC	No TAC	No TAC	320
1995	No advice	-	No TAC	No TAC	No TAC	328
1996	No advice	-	No TAC	No TAC	No TAC	220
1997	No advice	-	No TAC	No TAC	No TAC	156
1998	No advice	-	No TAC	No TAC	No TAC	46
1999	No advice	-	No TAC	No TAC	No TAC	45
2000	No advice	-	No TAC	No TAC	No TAC	313
2001	No advice	-	No TAC	No TAC	No TAC	189
2002	No advice	-	No TAC	No TAC	No TAC	40
2003	No advice	-	No TAC	No TAC	No TAC	144
2004	No advice	-	No TAC	No TAC	No TAC	9
2005	No advice	-	6763	14	243	137
2006	No target fisheries	-	6763	14	243	63
2007	No target fisheries	-	2472	20	99	15
2008	No new advice, same as for 2007	-	1646	20	49	12
2009	No target fisheries	0	824	10	25	8
2010	No new advice, same as for 2009	0	0 <sup>^</sup>	0 <sup>^</sup>	0 <sup>^</sup>	4
2011	No target fisheries	0	0 <sup>^</sup>	0 <sup>^</sup>	0 <sup>^</sup>	2
2012	No new advice, same as for 2011	0	0	0	0	0
2013	No target fisheries	0	0	0	0	0
2014	No new advice, same as for 2013	0	0	0	0	0
2015	No target fisheries	0	0	0	0	0
2016	Precautionary approach, fishing mortality minimized and no targeted fisheries	0	0	0	0	0
2017	Quadrennial advice	0	10 ***	10 ***	0	0
2018	Quadrennial advice	0	10 ***	10 ***	0	0
2019	Quadrennial advice	0	7 ***	7 ***	0	0
2020	Precautionary approach	0	7 ***	7 ***	0	0
2021	Same advice as in 2020	0				0
2022	Same advice as in 2020	0				0
2023	Same advice as in 2020	0				0

\* Figures were revised in 2019 following data revision from WKSHARK2 (ICES, 2016).

\*\* This is a general deep-water sharks TAC (ICES, 2019).

\*\*\* This is a general deep-water sharks bycatch TAC for the blackscabbard fish longline fishery (EU, 2016).

<sup>^</sup> Bycatches of up to 10% (2010) and 3% (2011) of 2009 TAC permitted.

## History of catch and landings

The distribution of this stock extends into the NEAFC Regulatory Area.

**Table 6** Kitefin shark in the Northeast Atlantic . Landings inside and outside the NEAFC Regulatory Area (RA) as estimated by ICES. Weights are in tonnes.

Year	Inside the NEAFC RA	Outside the NEAFC RA	Total landings
2014	0	0	0
2015	0	0	0
2016	0	0	0
2017	0	0	0
2018	0	0	0

**Table 7** Kitefin shark in the Northeast Atlantic. Catch distribution by fleet in 2018 as estimated by ICES.

Total catch (2018)	Landings	Discards
Unknown	0 tonnes	Unknown

**Table 8** Kitefin shark in the Northeast Atlantic. History of commercial landings (ICES estimates) is presented by country and area participating in the fishery. + = values between 0.5 tonnes and 1 tonnes.

Country	UK (Scotland)	Germany	France	UK (E&W)	Portugal	Portugal (Azores)	Ireland	Total
Subarea	5.b, 6	7	5.b, 7, 8	6, 7, 8, 9.b	6, 9.a	10.a	7, 10	
1988	0	0	0	0	149	549		698
1989	0	0	0	0	57	560		617
1990	0	0	0	0	7	602		609
1991	0	0	0	0	12	896		908
1992	0	0	0	0	11	761		772
1993	0	0	0	0	11	591		602
1994	0	0	0	0	11	309		320
1995	0	0	0	0	7	321		328
1996	0	0	0	0	4	216		220
1997	0	0	0	0	4	152		156
1998	0	0	0	0	6	40		46
1999	0	0	0	0	14	31	0	45
2000	0	0	0	0	282	31	0	313
2001	0	0	0	0	176	13	0	189
2002	0	0	0	0	5	35	0	40
2003	+	0	0	+	119	25	0	144
2004	+	0	+	+	2	6	0	9
2005	20	21	1	70	3	14	8	137
2006	25	0	3	10	6	10	9	63
2007	2	0	1	4	3	7	0	17
2008	0	0	1	0	1	10	0	12
2009	0	0	0	0	1	6	0	8
2010	0	0	1	0	0	2	0	2
2011	0	0	1	0	0	1	0	2
2012	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0

## Summary of the assessment

There is no assessment for this stock.

## Sources and references

EU. 2016. Council Regulation (EU) 2016/2285 of 12 December 2016 fixing for 2017 and 2018 the fishing opportunities for Union fishing vessels for certain deep-sea fish stocks and amending Council Regulation (EU) 2016/72. Official Journal of the European Union, L 344. 14 pp. <http://data.europa.eu/eli/reg/2016/2285/oj>.

ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM:68. 42 pp. <https://doi.org/10.17895/ices.pub.5322>.

ICES. 2018. Advice basis. *In* Report of the ICES Advisory Committee, 2018. ICES Advice 2018, Book 1, Section 1.2. <https://doi.org/10.17895/ices.pub.4503>.

ICES. 2019. Working Group on Elasmobranch Fishes (WGEF). ICES Scientific Reports, 1:25. <http://doi.org/10.17895/ices.pub.5594>.

*Recommended citation:* ICES. 2019. Kitefin shark (*Dalatias licha*) in subareas 1–10, 12, and 14 (the Northeast Atlantic and adjacent waters). *In* Report of the ICES Advisory Committee, 2019. ICES Advice 2019, sck.27.nea, <https://doi.org/10.17895/ices.advice.4842>.