ICES Advice on fishing opportunities, catch, and effort
Ecoregions in the Northeast Atlantic
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Smooth-hound (*Mustelus* spp.) in subareas 1–10, 12, and 14 (Northeast Atlantic and adjacent waters)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 4441 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.
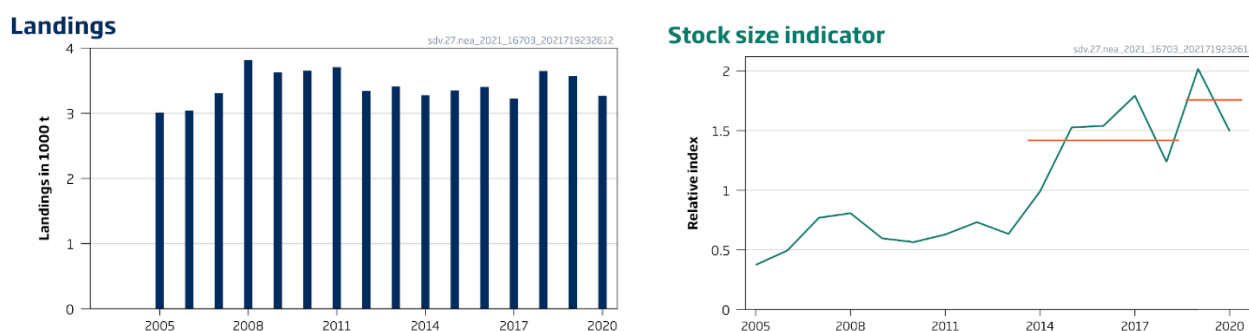

Figure 1   Smooth-hound (*Mustelus* spp.) in subareas 1–10, 12, and 14. Summary of the stock assessment. This stock consists primarily of starry smooth-hound (*Mustelus asterias*). Left: ICES estimated landings (in thousand tonnes; landings data before 2005 are incomplete and not shown). Right: stock-size indicator is the mean normalized exploitable biomass index (individuals of ≥ 50 cm total length) of starry smooth-hound from the average of the two NS-IBTS surveys (NS-IBTS-Q1 [G1022] and NS-IBTS-Q3 [G2829]), EVHOE-WIBTS-Q4 (G9527), FR-CGFS-Q4 (G3425), and IE-IGFS-WIBTS-Q4 (G7212). The horizontal lines show the mean stock indicators for 2019–2020 and 2014–2018.

Catch scenarios

ICES framework for category 3 stocks was applied (ICES, 2012). The stock-size indicator was derived from exploitable biomass indices (individuals of ≥ 50 cm total length) from five surveys (NS-IBTS-Q1, NS-IBTS-Q3, EVHOE-WIBTS-Q4, FR-CGFS-Q4 and IE-IGFS-WIBTS-Q4) to provide an overall index for the stock development. The advice is based on the ratio of the mean of the last two values (index A) and the mean of the five preceding values (index B), multiplied by the recent advised landings. The index is estimated to have increased by more than 20% and thus the uncertainty cap was applied. The precautionary buffer was last applied in 2015 and has therefore been considered this year. The stock status relative to candidate reference points is unknown; therefore, the precautionary buffer was applied in the advice.

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   Smooth-hound in subareas 1–10, 12, and 14. The basis for the catch scenarios. The index is based on data for starry smooth-hound, landings data reflect all smooth-hound species.*

Index A (2019–2020)		1.76
Index B (2014–2018)		1.42
Index ratio (A/B)		1.24
Uncertainty cap	Applied	1.2
Advised landings (2020, 2021 issued in 2019)		4626 tonnes
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Landings advice **		4441 tonnes
% Advice change ***		−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 (2020, 2021)] × [uncertainty cap] × [precautionary buffer].
*** Advice value for 2022 and 2023 relative to the advice value for 2021.

The advised landings for 2022 and 2023 are 4% lower than the previous advice because the precautionary buffer was applied.

Basis of the advice

Table 2   Smooth-hound in subareas 1–10, 12, and 14. The basis of the advice.

Advice basis	Precautionary approach
Management plan	ICES is not aware of any agreed precautionary management plan for smooth-hound in this area

Quality of the assessment

The assessment was based on survey trends for starry smooth-hound (*Mustelus asterias*) and landings data for the smooth-hound genus from the overall Northeast Atlantic.

Species-specific landings data are unreliable. An unknown proportion of landings of smooth-hound may be reported under more generic landings codes for dogfish and sharks, so are not included in the assessment. Furthermore, part of the inshore fleet (< 10 m) may not fully document landings of this non-quota species. Landings data prior to 2005 are uncertain although appear to have been reported more consistently in recent years. There is uncertainty in both the quantities discarded and in the discard survival rate.

The stock-size indicator relates to starry smooth-hound, which occurs primarily in subareas 4 and 6–8. Fishery-independent trawl survey indices were updated and combined following recommendations of WKSKATE (ICES, 2021a, 2021b). The stock-size indicator is now based on five surveys (ICES, 2021a), including FR-CGFS-Q4 and IE-IGFS-WIBTS-Q4, instead of three, increasing the area covered within the stock unit.

Although only the French waters of the English Channel were sampled during the FR-CGFS-Q4 survey in 2020, there is little evidence of an impact on the overall stock-size indicator for starry smooth-hound. Therefore, the survey index for 2020 has been used in the assessment (ICES, 2021b).

Danish data is not included in the NS-IBTS-Q3, as preliminary analyses suggest that data for smooth-hound and tope may be confounded, with further investigations required (ICES, 2017).

Issues relevant for the advice

Three species of smooth-hound occur in the Northeast Atlantic, mainly in subareas 4 and 6–9. Starry smooth-hound is the main species occurring in subareas 4 and 6–8, and this is the species assessed. Common smooth-hound (*Mustelus mustelus*) and, to a lesser extent, blackspotted smooth-hound (*Mustelus punctulatus*) occurs in Subarea 9. Data for these species are limited, and both species extend to the Mediterranean Sea and off Northwest Africa (CECAF area). ICES has been unable to assess these two other species.

Discarding and discard survival have not been fully quantified. Smooth-hounds are also taken by recreational fishers and, although they may often be released, post-release survival is unquantified.

Reference points

No reference points are defined for this stock.

Basis of the assessment

Table 3   Smooth-hound in subareas 1–10, 12, and 14. Basis of assessment and advice.

ICES stock data category	Category 3 (ICES, 2021c)
Assessment type	Landings, survey-based trends (ICES, 2021a)
Input data	Surveys: NS-IBTS-Q1 (G1022), NS-IBTS-Q3 (G2829), EVHOE-WIBTS-Q4 (G9527), FR-CGFS-Q4 (G3425) and IE-IGFS-WIBTS-Q4 (G7212)
Discards and bycatch	Unknown
Indicators	None
Other information	Additional surveys: UK(E&W)-BTS-Q3 (B6596) and BTS-ENG-Q3 (B2453; ICES, 2021a)
Working group	Working Group on Elasmobranch Fishes (WGEF)

History of the advice, catch and management

Table 4   Smooth-hound in subareas 1–10, 12, and 14. History of ICES advice, the agreed TAC, and ICES genus-specific estimates of landings. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	Agreed TAC	ICES genus-specific estimated landings
2005	No specific advice		No TAC	3013
2006	No specific advice		No TAC	3043
2007	No specific advice		No TAC	3308
2008	No specific advice		No TAC	3816
2009	No expansion in fisheries		No TAC	3628
2010	No new advice, same as for 2009		No TAC	3655
2011	Status quo catch (2006–2009)	2514	No TAC	3709
2012	No new advice, same as for 2011	2514	No TAC	3345
2013	Catch reduction of 4% (20% increase followed by 20% PA buffer)	-	No TAC	3415
2014	No new advice, same as for 2013	-	No TAC	3280
2015	No new advice, same as for 2013	-	No TAC	3349
2016	Precautionary approach	3272	No TAC	3407
2017	Biennial advice	3272	No TAC	3228 *
2018	Precautionary approach	≤ 3855	No TAC	3651 *
2019	Precautionary approach (same advice as for 2018)	≤ 3855	No TAC	3567
2020	Precautionary approach	≤ 4626	No TAC	3268
2021	Same advice as for 2020	≤ 4626	No TAC	
2022	Precautionary approach	≤ 4441	No TAC	
2023	Precautionary approach	≤ 4441	No TAC	

* Landings for 2017–2018 revised in 2021 (ICES, 2021a).

History of the catch and landings

The three smooth-hound species in the Northeast Atlantic occur on the continental shelf and do not extend into the NEAFC Regulatory Area.

Table 5   Smooth-hound in subareas 1–10, 12, and 14. Catch distribution by fleet in 2020 as estimated by ICES.

Catch (2020)	Landings			Discards
Unknown	Otter trawl 71%	Gillnets 15%	Other gears 14%	Unknown
	3268 tonnes			

Table 6   Smooth-hound in subareas 1–10, 12, and 14. ICES estimates of landings by country (in tonnes). Blank cell = no data reported; 0 = value below 0.5 tonnes.

Year	Belgium*	Denmark*	France**	Germany*	Ireland*	Netherlands*	Portugal**	Spain**	UK*	Total^
2005			2685				44	112	171	3013
2006			2722				57	134	130	3043
2007			2958		0		57	138	155	3308
2008			3403		1		41	200	171	3816
2009			3082		0	4	45	297	199	3628
2010			3204		0	9	38	129	275	3655
2011			3241		0	3	43	106	315	3709
2012			2821			23	42	120	339	3345
2013	1		2942			26	41	80	325	3415
2014	1		2836		0	24	17	70	331	3280
2015	1		2963		0	24	15	42	303	3349
2016	3	0	2855			22	18	40	469	3407
2017	2	0 ^^	2730			22	55	43	376	3228^^
2018	1	1 ^^	3136			34 ^^	51	38 ^^	390	3651^^
2019	1	0	2934	1		74	53	30	474	3567
2020	3	0	2665			91	64	41	405	3268

* Starry smooth-hound.
** All smooth-hound species.
^ Includes negligible landings reported to FAO Areas 34 and 37.
^^ Landings revised in 2021 (ICES, 2021a).

Summary of the assessment

Table 7 Smooth-hound in subareas 1–10, 12, and 14. Assessment summary. Biomass indices for exploitable biomass (individuals of ≥ 50 cm total length) of starry smooth-hound derived from five surveys (average of NS-IBTS-Q1 and NS-IBTS-Q3, EVHOE-WIBTS-Q4, FR-CGFS-Q4 and IE-IGFS-WIBTS-Q4).The stocksize indicator is the annual mean of the normalized surveys indices.

Year	NS-IBTS-Q1 Q3	EHVOE-WIBTS-Q4	FR-CGFS-Q4	IE-IGFS-WIBTS–Q4	Stock-size indicator
2005	0.179	0.39	0.72	0.21	0.37
2006	0.52	0.196	1.00	0.26	0.49
2007	1.23	0.59	0.82	0.44	0.77
2008	0.62	1.23	1.01	0.37	0.81
2009	0.60	0.00	1.38	0.40	0.60
2010	0.69	0.00	0.82	0.75	0.57
2011	0.70	0.89	0.60	0.33	0.63
2012	0.74	0.84	0.75	0.61	0.73
2013	0.95	0.27	0.75	0.57	0.63
2014	1.24	1.14	0.57	1.02	0.99
2015	0.62	2.20	1.74	1.59	1.53
2016	0.86	1.99	1.09	2.20	1.54
2017	1.87	NA	0.97	2.50	1.79*
2018	1.08	1.79	0.67	1.41	1.24
2019	2.20	1.69	1.76	2.40	2.00
2020	1.86	1.85	1.34	0.92	1.49

* In 2017, the stock-size indicator does not include EHVOE-WIBTS-Q4 (data not available).

Sources and references

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Download the stock assessment data and figures.

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