

Thornback ray (*Raja clavata*) in Subarea 8 (Bay of Biscay)

ICES advice on fishing opportunities

Please note: This advice was updated in October 2020 (ICES, 2020)

ICES advises that when the precautionary approach is applied, landings should be no more than 276 tonnes in each of the years 2019 and 2020. ICES cannot quantify the corresponding catches.

Stock development over time

The stock size indicator has fluctuated without a trend since 2007.

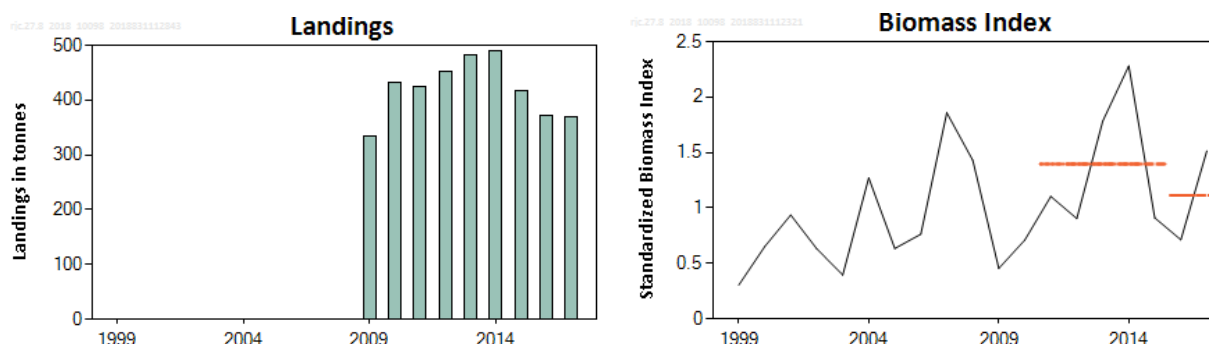


Figure 1 Thornback ray in Subarea 8. Left: ICES estimated landings (in tonnes) from Subarea 8. Right: Stock size indicator (solid line) is the combined biomass index (standardized) from two surveys (EVHOE-WIBTS-Q4 and SpGFS-WIBTS-Q4). The dotted horizontal lines show the mean stock indicators for 2016–2017 and 2011–2015.

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 Thornback ray in Subarea 8. State of the stock and fishery relative to reference points.

		Fishing pressure				Stock size				
		2015	2016	2017		2015	2016	2017		
Maximum sustainable yield	F_{MSY}	?	?	?	Unknown	$MSY B_{trigger}$?	?	?	Undefined
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Unknown	B_{pa}, B_{lim}	?	?	?	Undefined
Management plan	F_{MGT}	—	—	—	Not applicable	B_{MGT}	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	→	↘	↗	Increasing

Catch scenarios

The ICES framework for category 3 stocks was applied (ICES, 2012). The EVHOE-WIBTS-Q4 and SpGFS-WIBTS-Q4 survey data were used as indices of stock size. The survey data were normalized to their long-term mean from 1999 and onwards and then averaged, thus providing the stock size indicator. The advice is based on a comparison of the two latest index values (Index A) with the five preceding values (Index B), multiplied by the recent advised landings.

The index is estimated to have decreased by 20% and thus the uncertainty cap was not applied. The precautionary buffer has not previously been applied and was therefore applied.

Some estimates of discards are available but considered to be incomplete and therefore the overall discard rate is unknown. ICES cannot quantify the corresponding dead catch.

Table 2 Thornback ray in Subarea 8. The basis for the catch scenarios*.

Index A (2016–2017)		1.11
Index B (2011–2015)		1.40
Index ratio (A/B)		0.80
Uncertainty cap	Not applied	
Advised landings for 2017–2018 issued in 2016		434
Discard rate		-
Precautionary buffer	Applied	0.8
Landings advice**		276
% Advice change ***		-36%

* 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.

** Recent advised landings × index ratio × Precautionary buffer.

*** Advice value for 2019 and 2020 relative to advice value for 2018.

The advised landings are lower than those for 2017–2018 due to a decrease in the stock size indicator and the application of the precautionary buffer.

Basis of the advice

Table 3 Thornback ray in Subarea 8. The basis of the advice.

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

Quality of the assessment

Previous advice was based on an abundance stock indicator but is now based on a biomass index.

Two long-term scientific trawl surveys (SpGFS-WIBTS-Q4 and EVHOE-WIBTS-Q4) provide the basis for calculation of the stock size indicator, each covering extensive areas of continental shelf. The Spanish survey data for 2013 was not included previously. In 2013 a change of the rigging of the trawl used in the survey was thought to have induced a change in catchability, however the calibration did not show a difference in catchability. Consequently Spanish data from 2013 were reintegrated in the present advice. The survey of Division 8.c (SpGFS-WIBTS-Q4) has shown a longer-term increase, whereas the survey indices in divisions 8.a, 8.b, and 8.d (EVHOE-WIBTS-Q4) are generally variable. The EVHOE survey was not carried out in 2017, so that only the Spanish survey data (SpGFS-WIBTS-Q4) were used for the 2017 index.

The quality of landings data has improved in recent years, especially following the Workshop to compile and refine catch and landings of elasmobranchs WKSHARK2, where ICES revised elasmobranch landings data for the period 2009–2015 (ICES, 2016a). Although some misidentification at the species level is still possible, it is unlikely to occur in significant amounts for this well-known and commercially important species. Stock specific landings data are not available before 2009.

Issues relevant for the advice

Raja clavata is a coastal and shelf species that is a bycatch of trawl and gillnet fisheries. It is one of the most commercially important skate species in this ecoregion.

Reference points

No reference points are defined for this stock

Basis of the assessment

Table 4 Thornback ray in Subarea 8. Basis of assessment and advice.

ICES stock data category	3 (ICES, 2016b)
Assessment type	Survey-based trends (ICES, 2018)
Input data	Surveys: SpGFS-WIBTS-Q4 and EVHOE-WIBTS-Q4
Discards and bycatch	Discard information is available for the main fleets
Indicators	None
Other information	None
Working group	Working Group on Elasmobranch Fishes (WGEE).

Information from stakeholders

There is no additional available information.

History of the advice, catch, and management

Table 5 Thornback ray in Subarea 8. History of ICES advice and ICES estimates of landings*. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	ICES species-specific landings: minimum estimate based on reported landings
2011	No specific advice		424
2012	No specific advice		451
2013	No TAC, species-specific measures needed, catch should not increase from recent average	-	483
2014	No new advice, same as 2013	-	489
2015	20% decrease over last 3 years' average	238	493
2016	No new advice, same as 2015	238	482
2017	Precautionary approach	≤ 434	395
2018	Precautionary approach (same value as advised catches for 2017)	≤ 434	
2019	Precautionary approach	≤ 276	
2020	Precautionary approach	≤ 276	

* There is no specific TAC for this stock. Fishing opportunities are managed through an overall TAC by management unit, which includes all species of skates and rays.

History of the catch and landings

This stock is distributed primarily in the shallower EU waters, and whilst catches from the NEAFC area are not quantified, they are assumed negligible.

Table 6 Thornback ray in Subarea 8. Catch distribution by fleet in 2017 as estimated by ICES.

Catch (2017)	Landings				Discards
Unknown	bottom trawl	hooks and lines	nets	other	Unquantified
	80%	7%	12%	1%	
	395 tonnes				

Table 7 Thornback ray in Subarea 8. ICES estimates of landings by country (in tonnes). Data revised in 2016 (ICES, 2016a).

Year	Belgium	Spain	France	UK	Ireland	Total
2009	2	136	195			333
2010	1	214	217			432
2011	2	243	178	1		424
2012	2	268	179	2		451
2013	3	286	194			483
2014	3	284	202			489
2015	1	260	212	17	4	493
2016	2	307	166		7	482
2017	1	203	191			395

Summary of the assessment

Table 8 Thornback ray in Subarea 8. Time-series of normalized survey biomass indices used for the advice calculation. Series are normalized to their mean; the annual mean of the two indices was used for advice.

Year	EVHOE-WIBTS-Q4	SpGFS-WIBTS-Q4S	Biomass index
1999	0.18	0.43	0.305
2000	0.36	0.95	0.652
2001	0.98	0.89	0.936
2002	0.79	0.48	0.632
2003	0.20	0.59	0.396
2004	1.78	0.76	1.271
2005	0.55	0.72	0.635
2006	0.56	0.97	0.764
2007	2.80	0.91	1.858
2008	2.14	0.72	1.430
2009	0.03	0.88	0.455
2010	0.66	0.76	0.711
2011	1.26	0.95	1.104
2012	0.77	1.04	0.905
2013	1.16	2.41	1.784
2014	3.24	1.32	2.280
2015	0.29	1.53	0.911
2016	0.25	1.18	0.713
2017*	-	1.52	1.515

* The EVHOE survey was not carried out in 2017.

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. 2016a. Report of the Workshop to compile and refine catch and landings of elasmobranchs (WKSHARK2), 19–22 January 2016, Lisbon, Portugal. ICES CM 2016/ACOM:40. 69 pp.

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

ICES. 2018. Report of the Working Group on Elasmobranch Fishes (WGEF), 19–28 June 2018, Lisbon, Portugal. ICES CM 2018/ACOM:16.

ICES. 2020. Thornback ray (*Raja clavata*) in Subarea 8 (Bay of Biscay). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, rjc.27.8. <https://doi.org/10.17895/ices.advice.7498>.