

Thornback ray (*Raja clavata*) in Subarea 8 (Bay of Biscay) (advice for 2021 and 2022)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 389 tonnes in each of the years 2021 and 2022. ICES cannot quantify the corresponding catches.

Note: This advice sheet is abbreviated due to the COVID-19 disruption. The previous advice issued for 2019 and 2020 is attached as Annex 1.

Stock development over time

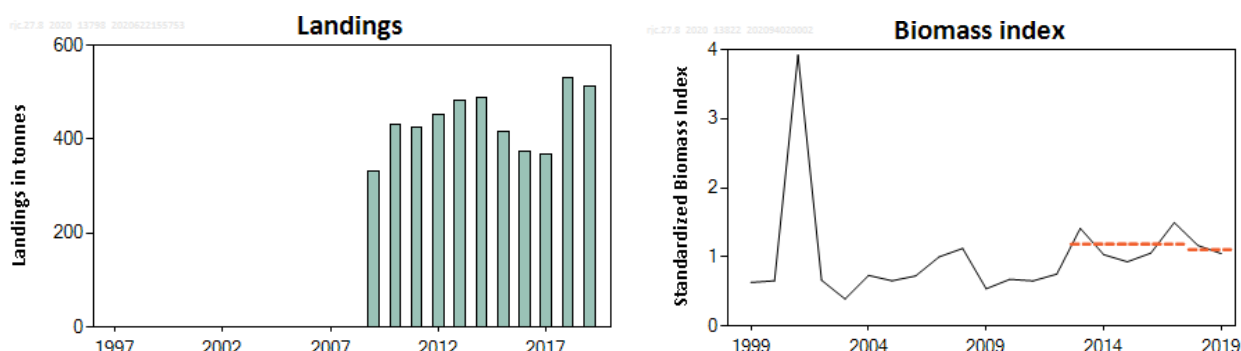





Figure 1 Thornback ray in Subarea 8. Left: ICES estimated landings (in tonnes). Right: Stock-size indicator (solid line) is the combined biomass index (standardized) from two surveys (EVHOE-WIBTS-Q4 and SpGFS-WIBTS-Q4). Horizontal lines show the mean stock-size indicators for 2013–2017 and 2018–2019.

Stock and exploitation status

Table 1 Thornback ray in Subarea 8. State of the stock and the fishery relative to reference points.

		Fishing pressure				Stock size				
		2017	2018	2019		2017	2018	2019		
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	-				Decreasing

Catch scenarios

The stock size and fishing pressure status relative to reference points is unknown. The precautionary buffer was last applied in 2018 and thus not applied in 2020.

Discarding is known to take place; however, ICES cannot quantify the corresponding dead catch.

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

Index A (2018–2019)		1.11
Index B (2013–2017)		1.19
Index ratio (A/B)		0.93
Uncertainty cap	Not applied	
Advised landings (revised) for 2019–2020 ^		417 tonnes
Discard rate		Unknown
Precautionary buffer	Not applied	-
Landings advice **		389 tonnes
% advice change ***		41%

* 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.

** [Revised advised landings 2018] × [index ratio 2020].

*** Advice value for 2021 and 2022 relative to the advice value for 2019 and 2020.

^ The initial advice for 2019 and 2020 was 276 tonnes. In 2020, an error was discovered in the biomass index and the advice for 2019–2020 has thus been revised using the corrected index. The updated advice for 2019–2020 is 417 tonnes (ICES, 2020a).

The advised landings have increased by 41% due to the revision of the biomass indicator.

Issues relevant for the advice

In 2020, an error was detected in the biomass index used in the calculation of the initial advice for 2019–2020. The advice given in 2018 for 2019–2020 was therefore revised using the corrected index, increasing the advice for 2019–2020 from 276 tonnes to 417 tonnes. This revised value (417 tonnes) was the basis for the calculation of the advice for 2021–2022.

History of the advice, catch, and management

Table 3 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	416
2016	No new advice, same as 2015	238	373
2017	Precautionary approach	≤ 434	369
2018	Precautionary approach (same value as advised catches for 2017)	≤ 434	529
2019	Precautionary approach	≤ 417**	513
2020	Precautionary approach	≤ 417**	
2021	Precautionary approach	≤ 389	
2022	Precautionary approach	≤ 389	

* 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.

** The initial advice was 276 t but was revised to 417 t following the correction of the biomass index.

Summary of the assessment

Table 4 Thornback ray in Subarea 8. The annual mean of two normalized biomass indices (EVHOF-WIBTS-Q4 and SpGFS-WIBTS-Q4) is used for the advice. Weights are in tonnes.

Year	Biomass index	Landings
1999	0.63	
2000	0.65	
2001	3.9	
2002	0.66	
2003	0.39	
2004	0.73	
2005	0.65	
2006	0.73	
2007	1.00	
2008	1.12	
2009	0.54	333
2010	0.68	432
2011	0.65	424
2012	0.75	451
2013	1.41	483
2014	1.03	489
2015	0.93	416
2016	1.05	373
2017	1.50	369
2018	1.16	529
2019	1.05	513

Sources and references

ICES. 2020a. Thornback ray (*Raja clavata*) in Subarea 8 (Bay of Biscay) (advice for 2019 and 2020). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, rjc.27.8. <https://doi.org/10.17895/ices.advice.7498>.

ICES. 2020b. Working Group on Elasmobranch Fishes (WGEF). ICES Scientific Reports, 2:77. <http://doi.org/10.17895/ices.pub.7470>.

Recommended citation: ICES. 2020. Thornback ray (*Raja clavata*) in Subarea 8 (Bay of Biscay) (advice for 2021 and 2022). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, rjc.27.8. <https://doi.org/10.17895/ices.advice.5786>.

Annex 1

ICES Advice on fishing opportunities, catch, and effort
Bay of Biscay and the Iberian Coast ecoregion
Published 1 October 2020

Thornback ray (*Raja clavata*) in Subarea 8 (Bay of Biscay) (advice for 2019 and 2020)

ICES advice on fishing opportunities

Please note: The present advice replaces the advice given in October 2018 for landings in 2019 and 2020.

ICES advises that when the precautionary approach is applied, landings should be no more than 411 tonnes¹ in each of the years 2019 and 2020. ICES cannot quantify the corresponding catches.

Stock development over time

The stock size indicator has fluctuated over the time series but has generally increased since 2009.

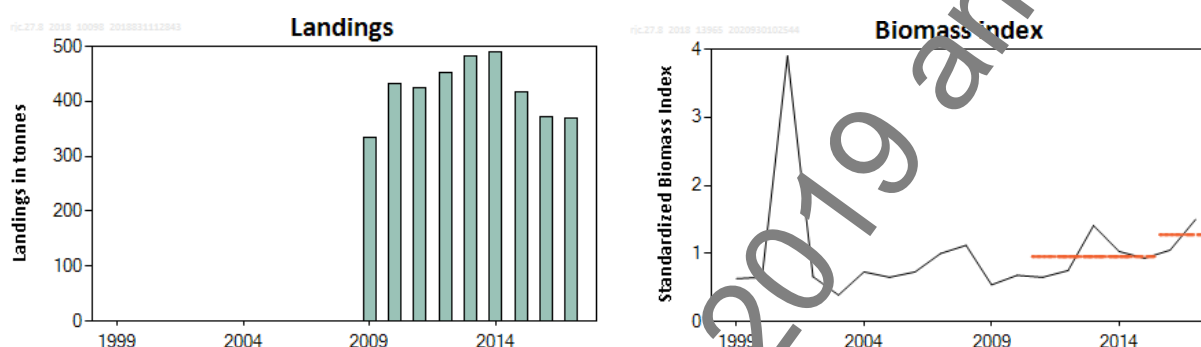


Figure 1 Thornback ray in Subarea 8. Left: ICES estimated landings (in tonnes) from Subarea 8. Right: Stock size indicator (solid line) is the combined biomass index (standardized) from two surveys (EVHOE-WIBTS-Q4 and SpGFS-WIBTS-Q4). The dotted horizontal lines show the mean stock indicators for 2016–2017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

¹ Value corrected. The advice for this stock has been revised because the biomass index used in the 2018 assessment was found to be incorrectly calculated. This revised advice for 2019 and 2020 is based on the corrected biomass index.

The index is estimated to have increased by more than 20% and thus the uncertainty cap was 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)		1.28
Index B (2011–2015)		1
Index ratio (A/B)		1.34
Uncertainty cap	Applied	1.2
Advised landings for 2017–2018 issued in 2016		434
Discard rate		-
Precautionary buffer	Applied	0.8
Landings advice**		417
% Advice change ***		-3.9%

* 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 × Uncertainty cap × 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 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 (WGEEF).

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 corresponding 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 catch for 2017)	≤ 434	
2019	Precautionary approach	≤ 417	
2020	Precautionary approach	≤ 417	

* 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
	100%	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		493
2016	2	307	166		7	482
2017	1	203	191			395

Summary of the assessment

Table 8 Thornback ray in Subarea 8. Annual mean of two normalized biomass indices (EVHOE-WIBTS-Q4 and SpGFS-WIBTS-Q4) used for advice. Weights are in tonnes.

Year	Biomass index
1999	0.63
2000	0.65
2001	3.9
2002	0.66
2003	0.39
2004	0.73
2005	0.65
2006	0.73
2007	1.00
2008	1.12
2009	0.54
2010	0.68
2011	0.65
2012	0.75
2013	1.41
2014	1.03
2015	0.93
2016	1.05
2017	1.50

* 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 based on 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.

Recommended citation: ICES. 2020. Thornback ray (*Raja clavata*) in Subarea 8 (Bay of Biscay) (advice for 2019 and 2020). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, rjc.27.8.
<https://doi.org/10.17895/ices.advice.7498>.