ICES Advice on fishing opportunities, catch, and effort
Bay of Biscay and the Iberian Coast Ecoregion
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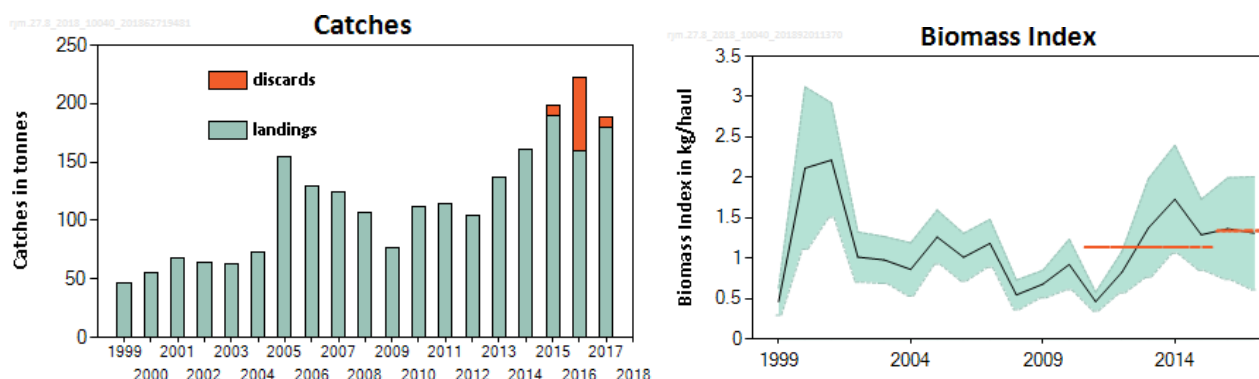*https://doi.org/10.17895/ices.pub.4560*

Spotted ray (*Raja montagui*) in Subarea 8 (Bay of Biscay)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 108 tonnes in each of the years 2019 and 2020. ICES cannot quantify the corresponding catches.

Stock development over time

The stock size indicator is variable. Recent survey estimates are above the average of the series.

Figure 1   Spotted ray in Subarea 8. ICES estimated landings (in tonnes). Left: total catches (in tonnes). Information on discards is available from some fleets since 2015. Right: biomass index (solid line) from the SpGFS-WIBTS-Q4 survey and Standard Error (SE) as the shadowed area. 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 the maximum sustainable yield (MSY) and precautionary approach (PA) reference points because the reference points are undefined.

Table 1   Spotted 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	-		↘	↗	→ Stable

Catch scenarios

The ICES framework for category 3 stocks was applied (ICES, 2012). The SpGFS-WIBTS-Q4 survey was used as the index of stock size. 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 increased by less than 20% and thus the uncertainty cap was not applied.

The stock size indicator has been stable over the longer time series. The precautionary buffer was last applied in 2015. Because there is no information on stock size or fishing pressure, the precautionary buffer was applied again in 2018. Some estimates of discards are available but considered to be incomplete and discard rate is unknown. ICES cannot quantify the corresponding dead catch.

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

Index A (2016–2017)		1.34
Index B (2011–2015)		1.14
Index ratio (A/B)		1.18
Uncertainty cap	Not applied	
Advised landings for 2017–2018 issued in 2016		115
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Landings advice**		108
% Advice change***		-5.9%

* 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 × index ratio × Precautionary Buffer].
*** Advice value for 2019 relative to advice value for 2018.

The advised landings are lower than advised for 2016 and 2017 because the biomass index has increased less than the precautionary buffer.

Basis of the advice

Table 3   Spotted 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 spotted ray in this area.

Quality of the assessment

Two long-term scientific trawl surveys take place in the ecoregion, one in Division 8.c (SpGFS-WIBTS-Q4) and another in divisions 8.a and 8.b (EVHOE-WIBTS-Q4). Catch rates in the latter survey are highly variable and not considered indicative of stock size. The stock indicator used, therefore, only covers part of the stock area.

Issues relevant for the advice

The quality of landings data has generally improved in recent years, especially following the 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). However, commercial data might not be fully accurate as *Raja montagui* are confounded with the larger-bodied, but morphologically similar *Raja brachyura*.

Discard information from the main fleets involved in the fishery (France and Spain) has been quantified from 2015 to 2017 but is uncertain.

Raja montagui is a coastal and inner-shelf species that is a bycatch in 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   Spotted 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 in Division 8.c
Discards and bycatch	Discard rates are considered low but have not been fully quantified.
Indicators	None
Other information	None
Working group	Working Group on Elasmobranch Fishes ([WGEF](#))

Information from stakeholders

No additional information is available.

History of the advice, catch, and management

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

Year	ICES advice	Landings corresp. to the advice	ICES species-specific landings: minimum estimate based on reported landings**
2011	No specific advice		114
2012	No specific advice		105
2013	No TAC, species-specific measures needed, catch to decrease by at least 20%	-	137
2014	No new advice, same as 2013	-	161
2015	20% decrease from last 3 years' average	94	190
2016	No new advice, same as 2015	94	159
2017	Precautionary approach	≤ 115	180
2018	Precautionary approach (same value as advised catches for 2017)	≤ 115	
2019	Precautionary approach	≤ 108	
2020	Precautionary approach	≤ 108	

* 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.
** Data revised in 2018 (ICES, 2018)

History of the catch and landings

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

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

Catch (2017)	Landings				Discards
188 tonnes	bottom trawl	hooks & lines	nets	other	8 tonnes (partial)
	12%	5%	76%	7%	
	180 tonnes				

Table 7   Spotted ray in Subarea 8. ICES estimates of landings by country (in tonnes). Data revised in 2018 (ICES, 2018).

Year	Belgium	Spain	France	UK	Ireland	Total
2009	0	11	64	1		77
2010	0	26	86	0		112
2011	0	22	91	0		114
2012	0	19	86			105
2013		28	109			137
2014		40	121			161
2015		28	149	1	12	190
2016		26	132	0	1	159
2017	0	27	153			180

Summary of the assessment

Table 8   Spotted ray in Subarea 8. Assessment summary. Time-series of survey index (SpGFS-WIBTS-Q4 (±Standard Error) in kg*haul^{-1}.

Year	Biomass index	SE upper	SE lower	Landings	Discards
	kg haul^{-1}			tonnes	
1999	0.46	0.29	0.63	46	
2000	2.11	1.11	3.12	55	
2001	2.21	1.51	2.92	67	
2002	1.01	0.7	1.32	64	
2003	0.98	0.69	1.27	62	
2004	0.86	0.53	1.19	73	
2005	1.26	0.93	1.6	155	
2006	1.01	0.72	1.31	130	
2007	1.18	0.89	1.48	124	
2008	0.55	0.36	0.73	107	
2009	0.68	0.51	0.85	77	
2010	0.92	0.61	1.24	112	
2011	0.46	0.35	0.58	114	
2012	0.83	0.57	1.09	105	
2013	1.37	0.77	1.98	137	
2014	1.73	1.06	2.4	161	
2015	1.29	0.85	1.73	190	9
2016	1.37	0.74	2.0	159	63
2017	1.31	0.61	2.01	180	8

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.

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