

Spotted ray (*Raja montagui*) in divisions 7.a and 7.e–h (southern Celtic Seas and western English Channel)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 1296 tonnes in each of the years 2019 and 2020. ICES cannot quantify the corresponding catches.

Stock development over time

The stock size indicator shows an increasing trend since 2008 and is at a high level compared to the rest of the time-series.

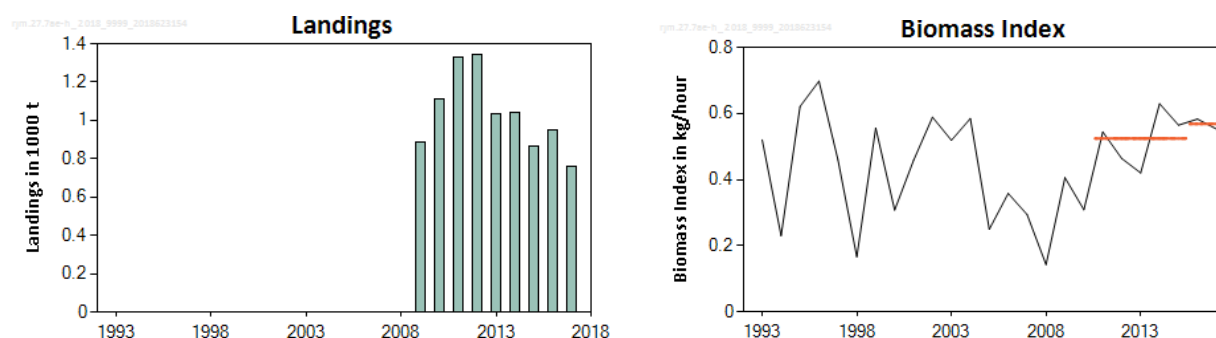


Figure 1 Spotted ray in divisions 7.a and 7.e–h. Left: ICES estimated landings (in tonnes). Right: UK (E&W)-BTS-Q3 survey index (kg hr⁻¹) (individuals of ≥ 50 cm total length). The horizontal lines show the mean stock indicators for 2016–2017 and 2011–2015.

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 Spotted ray in divisions 7.a and 7.e–h. 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	-	↘	↔	↘	Decreasing

Catch scenarios

The ICES framework for category 3 stocks was applied (ICES, 2012). The UK (E&W)-BTS-Q3 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 landings advice.

The index is estimated to have increased by less than 20% and thus the uncertainty cap was not applied. The precautionary buffer was last applied in 2014. Given the increasing trend in the stock size indicator since 2008, the precautionary buffer was not applied.

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

Table 2 Spotted ray in divisions 7.a and 7.e–h. The basis for the catch scenario*.

Index A (2016–2017)		0.568
Index B (2011–2015)		0.524
Index ratio (A/B)		1.08
Uncertainty cap	Not applied	-
Advised landings for 2017 and 2018 issued in 2016		1197 t
Discard rate		Unknown
Precautionary buffer	Not applied	-
Landings advice **		1296 t
% Advice change ***		+8%

* 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.

** [Advice for 2017–2018] × index ratio.

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

The advised landings are higher than advised for 2017 and 2018 because the biomass indicator has increased.

Basis of the advice

Table 3 Spotted ray in divisions 7.a and 7.e–h. 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

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

The UK (E&W)-BTS-Q3 covers a representative portion of the stock area and the survey gear samples the full size range of the species. The Irish groundfish survey (IGFS-IBTS-Q4) and the (UK-Q1SWBeam) both cover a part of the stock area and both show a similar trend to the stock size indicator used (ICES, 2018).

The quality of landings data has improved in recent years, especially following the WKSHARKS workshop where ICES has revised elasmobranch landings data for the period (2009–2015) (ICES, 2016a) and with increased species-specific reporting. However, commercial landings data may not be entirely accurate as *Raja montagui* can be confounded with the larger-bodied but morphologically similar *Raja brachyura*.

Issues relevant for the advice

Raja montagui is a shelf species that is a bycatch in trawl and gillnet fisheries, including in mixed demersal fisheries for groundfish and fisheries targeting the overall skate complex. As one of the smaller and less valuable species in the skate complex, it is not targeted, and a relatively high proportion of the catch may be discarded.

Reference points

No reference points are defined for this stock

Basis of the assessment

Table 4 Spotted ray in divisions 7.a and 7.e–h. Basis of assessment and advice.

ICES stock data category	3 (ICES, 2016b)
Assessment type	Survey-based trends (ICES, 2018)
Input data	UK (E&W)-BTS-Q3
Discards and bycatch	Discarding is known to take place but has not been fully quantified.
Indicators	None
Other information	IGFS-IBTS-Q4, UK-Q1SWBeam
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 divisions 7.a and 7.e–h. 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		1332
2012	No specific advice		1343
2013	No TAC, species-specific measures needed, catch could increase by up to 20%	-	1032
2014	No new advice, same as 2013	-	1042
2015	4% decrease from last 3 years' average	1118	864
2016	No new advice, same as 2015	1118	947
2017	Precautionary approach	≤ 1197	762
2018	Precautionary approach (same value as advised catches for 2017)	≤ 1197	
2019	Precautionary approach	≤ 1296	
2020	Precautionary approach	≤ 1296	

* Data revised in 2018.

** 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

The distribution of this stock does not extend into the NEAFC regulatory area.

Table 6 Spotted ray in divisions 7.a and 7.e–h. Catch distribution by fleet in 2017 as estimated by ICES.

Catch (2017)	Landings			Discards
	beam trawl	trawl	other	
Unknown	4%	71%	25%	Unquantified
	762 tonnes			

Table 7 Spotted ray in divisions 7.a and 7.e–h. ICES estimates of landings by country (in tonnes). Data revised in 2016 (ICES, 2016a).

Year	Belgium	Spain	UK	Ireland	Netherlands	France	Total
2009	63		38	0.4		785	887
2010	54	0.4	102	19		934	1110
2011	120		88	63	0.2	1062	1332
2012	70		85	53		1135	1343
2013	2.6		90	40	0.1	899	1032
2014	0.3	0.1	80	49		912	1042
2015	0.7	0.1	70	48		745	864
2016	6.9		80	41	0.2	819	947
2017	1.8		89	10		661	762

Summary of the assessment

Table 8 Spotted ray in divisions 7.a and 7.e–h. Time-series of the UK (E&W)-BTS-Q3 survey (kg hr⁻¹) (individuals of ≥ 50 cm total length) used for the advice.

Year	Biomass index (Kg hr ⁻¹)
1993	0.52
1994	0.23
1995	0.62
1996	0.70
1997	0.46
1998	0.166
1999	0.56
2000	0.31
2001	0.46
2002	0.59
2003	0.52
2004	0.59
2005	0.25
2006	0.36
2007	0.29
2008	0.143
2009	0.41
2010	0.31
2011	0.54
2012	0.46
2013	0.42
2014	0.63
2015	0.57
2016	0.58
2017	0.55

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.