

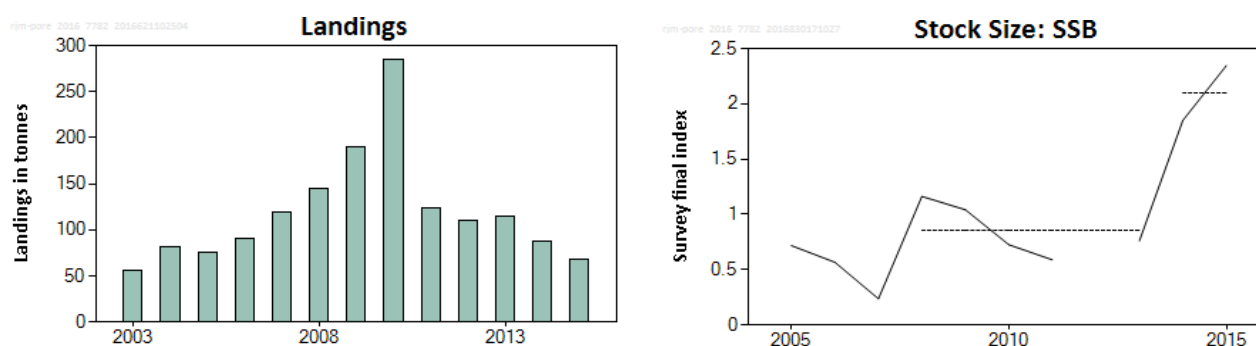
### 7.3.14 Spotted ray (*Raja montagui*) in Division 9.a (Atlantic Iberian waters)

#### ICES stock advice

ICES advises that when the precautionary approach is applied, landings should be no more than 112 tonnes in each of the years 2017 and 2018. ICES cannot quantify the corresponding catches.

#### Stock development over time

Estimated landings (2003–2015) ranged from 56 to 284 tonnes, and have declined since 2010. The stock size indicator has increased and the 2015 biomass index was the highest in the time-series.



**Figure 7.3.14.1** Spotted ray in Division 9.a. Left: ICES landings estimates (in tonnes) Right: Stock size indicator (solid line) is a standardized biomass survey index from Portuguese groundfish survey (PtGFS-WIBTS-Q4) normalized by the mean. The dotted horizontal lines show the mean stock indicators for the periods 2009–2013 and 2014–2015. No survey was conducted in 2012.

#### Stock and exploitation status

**Table 7.3.14.1** Spotted ray in Division 9.a. State of the stock and fishery relative to reference points.

		Fishing pressure				Stock size			
		2013	2014	2015		2013	2014	2015	
Maximum sustainable yield	$F_{MSY}$	?	?	?	Undefined	MSY	?	?	?
Precautionary approach	$F_{pa}$ , $F_{lim}$	?	?	?	Undefined	$B_{trigger}$	?	?	?
Management plan	$F_{MGT}$	-	-	-	Not applicable	$B_{pa}$ , $B_{lim}$	?	?	?
Qualitative evaluation	-	?	?	?	Unknown	$SSB_{MGT}$	-	-	-
						-	?	↗	↗
									Increasing

#### Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). Data from the Portuguese survey (PtGFS-WIBTS-Q4) were 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; note that in 2012 no survey was conducted), multiplied by the recent advised landings.

The recent advised landings for 2015 and 2016 were originally derived using landings statistics from 2011–2013. In 2016, a review of the landing statistics of elasmobranchs (ICES 2016a) was conducted. As a result, the basis which was used to provide advice in 2014 for 2015 and 2016 has been adjusted to account for the update in the landing statistics in the period 2011–2013.

The stock size indicator increased by 169% from the average of 2009–2013 to the average of 2014–2015. As the stock size indicator therefore is estimated to have increased by more than 20%, the uncertainty cap was applied. The PA buffer was applied previously (ICES, 2014) and has not been applied again.

Discarding is known to take place, but ICES cannot quantify the corresponding catch. In addition, discard survival, which might occur, has not been estimated.

**Table 7.3.14.2** Spotted ray in Division 9.a. For stocks in ICES data categories 3–6, one catch option is provided.

Index A (2014–2015)		2.10
Index B (2009–2013)		0.78
Index ratio (A/B)		2.69
Uncertainty cap	Applied	1.2
Recent advised landings (2015–2016)		106 t
Recent advised landings adjusted (2015–2016)* [106 t x 0.88]		93 t
Discard rate		Unknown
Precautionary buffer	Not applied	-
Landings advice**		112 t

\*Recent advised landings adjusted for the revision of the landings statistics in 2011–2013

\*\* (Recent advised landings adjusted × uncertainty cap).

### Basis of the advice

**Table 7.3.14.3** Spotted ray in Division 9.a. The basis of the advice.

Advice basis	Precautionary approach.
Management plan	There is no management plan for this stock.

### Quality of the assessment

The advice is based on a biomass index from the Portuguese survey (PtGFS-WIBTS-Q4), which covers the main part of the stock area. This survey was not conducted in 2012.

### Issues relevant for the advice

The quality of landings data has improved in recent years, following a Portuguese Pilot Study on Skates (2010–2013) and the WKSHARKS workshop, where ICES revised elasmobranch landings data for the period 2005–2015 (ICES, 2016a, b). The quality of landings data has improved in recent years, but there might be some misidentification errors, mainly with *Raja brachyura*.

This species is usually caught as a bycatch in artisanal fisheries by Portuguese fleets and in trawl fisheries by Spanish fleets.

Survey data from the south of Spain were not used as an indicator of stock size, as catches were low and variable. Nevertheless, this survey also suggested a recent increase, consistent with the Portuguese survey.

On 22 August 2014 the Portuguese government adopted a national legislation (Portaria no. 170/2014) that established a minimum landing size of 520 mm (total length) for specimens of the genus *Leucoraja* or *Raja*, covering all of the continental Portuguese EEZ.

The national legislation adopted on 29 December 2011 (Portaria no. 315/2011) was updated by the Portuguese government on 21 March 2016 (Portaria no. 47/2016). The new legislation prohibits, throughout the whole of the continental Portuguese EEZ, the catch, retention on board, and landing of any skate species belonging to Rajiformes during the months of May and

June. For each fishing trip during these two months it is allowed to retain on board and to land a maximum of 5% bycatch, in weight, of the Rajiformes species.

### Reference points

No reference points are defined for this stock

### Basis of the assessment

**Table 7.3.14.4** Spotted ray in Division 9.a. The basis of the assessment.

ICES stock data category	3 (ICES, 2016c).
Assessment type	Survey-based trends, (ICES, 2016b).
Input data	PtGFS-WIBTS-Q4 survey.
Discards and bycatch	Discarding has not been quantified.
Indicators	None.
Other information	Sp-GCGFS-Q1 and Sp-GCGFS-Q4 surveys.
Working group	Working Group on Elasmobranch Fishes (WGEF).

### Information from stakeholders

No information was provided.

### History of the advice, catch, and management

**Table 7.3.14.5** Spotted ray in Division 9.a. History of ICES advice and ICES estimates of landings\*. All weights are in tonnes.

Year	ICES advice	Predicted landings corresp. to advice	ICES species-specific landings: minimum estimate based on reported landings**
2011	No specific advice		124
2012	No specific advice		110
2013	No TAC, species-specific measures needed, catch to decrease by at least 20%.	-	115
2014	No new advice, same as 2013	-	87
2015	20% decrease from last 3 years' average.	106	68
2016	No new advice, same as 2015	106	
2017	Precautionary approach	≤112	
2018	Precautionary approach (same value as advised catches for 2017)	≤112	

\* There is no a 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 2016 (ICES, 2016a).

### History of catch and landings

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

**Table 7.3.14.6** Spotted ray in Division 9.a. Catch distribution by fleet in 2015 as estimated by ICES. Portugal does not have official landings with information by fleet, and all polyvalent landings are classified as "other gears" (ICES, 2016b).

Catch (2015)	Landings			Discards
Unknown	otter trawl	fixed nets	other gears	Discarding is known to take place but cannot be quantified
	13%	1%	86%	
	68 tonnes			

**Table 7.3.14.7** Spotted ray in Division 9.a. ICES estimates of landings by country (in tonnes). Data revised in 2016 (ICES, 2016a). Species-specific landings data between 2003 and 2008 are only presented for Portugal, as Spanish species-specific landings are not available for this period.

Year	Spain	Portugal	Total
2003	-	56	56
2004	-	82	82
2005	-	76	76
2006	-	90	90
2007	0	119	119
2008	0	144	144
2009	7	184	191
2010	10	275	284
2011	3	121	124
2012	2	108	110
2013	4	111	115
2014	2	85	87
2015	1	67	68

### Summary of the assessment

**Table 7.3.14.8** Spotted ray in Division 9.a. Assessment summary. Normalized stock-size indicator (PtGFS-WIBTS-Q4 biomass index). No survey was conducted in 2012.

Survey	Stock-size indicator
2005	0.72
2006	0.57
2007	0.24
2008	1.16
2009	1.04
2010	0.73
2011	0.59
2012	
2013	0.76
2014	1.85
2015	2.35

### 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. 2014. Spotted ray (*Raja montagui*) in Division IXa (west of Galicia, Portugal, and Gulf of Cadiz). In Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 7, Section 7.3.18.5.

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

ICES. 2016b. Report of the Working Group on Elasmobranch Fishes (WGEF), 15–24 June 2016, Lisbon, Portugal. ICES CM 2016/ACOM:20. 684 pp.

ICES. 2016c. General context of ICES advice. In Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.