

## Undulate ray (*Raja undulata*) in Division 9.a (Atlantic Iberian waters)

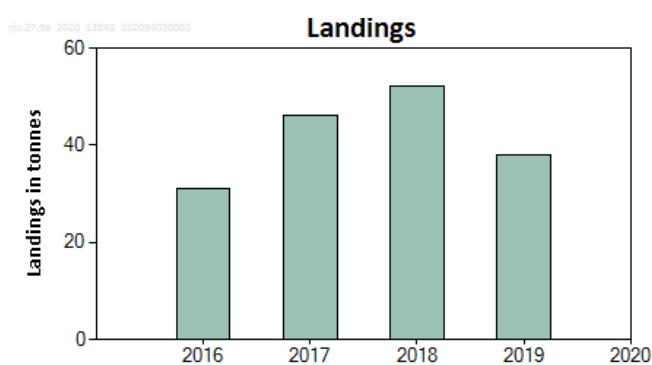
### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 31 tonnes in each of the years 2021 and 2022. ICES cannot quantify the corresponding catches.

ICES also advises that those landings are bycatches and that there should be no targeted fisheries on this stock.

*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** Undulate ray in Division 9.a. Total international landings (in tonnes).

### Stock and exploitation status

**Table 1** Undulate ray in Division 9.a. State of the stock and the fishery relative to reference points.

Table 2. Checkmate key in Division star 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	$MSY B_{trigger}$	?	?	?	Unknown
Precautionary approach	$F_{pa}, F_{lim}$	?	?	?	Unknown	$B_{pa}, B_{lim}$	?	?	?	Unknown
Management plan	$F_{MGT}$	—	—	—	Not applicable	$B_{MGT}$	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	?	?	?	Unknown

### 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** Undulate ray in Division 9.a. Basis for the catch scenarios.

Advised landings for 2019–2020	31 tonnes	
Discard rate	Unknown	
Precautionary buffer	Not applied	
Landings advice	31 tonnes	
% advice change *	0%	

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

## History of the advice, catch, and management

**Table 3** Undulate ray in Division 9.a. History of ICES advice and ICES estimates of landings \*. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	TAC	ICES landings
2011	No specific advice			-
2012	No specific advice			-
2013	No specific advice	-		-
2014	No specific advice	-		-
2015	No targeted fisheries. Any possible provision for bycatch to be landed should be part of a management plan	-		0.2
2016	No new advice, same as for 2015	-	40	31
2017	Precautionary approach	-	48	46
2018	Precautionary approach	-	48	52
2019	Precautionary approach	≤ 31	50	38
2020	Precautionary approach	≤ 31	50	
2021	Precautionary approach	≤ 31		
2022	Precautionary approach	≤ 31		

\* Fishing opportunities are managed through an overall TAC by management unit, which includes all species of skates and rays. Since 2015–2016, there has been a sub-TAC for this species in Subarea 9.

## Summary of the assessment

There is no assessment for this stock in this area.

## Sources and references

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

*Recommended citation:* ICES. 2020. Undulate ray (*Raja undulata*) in Division 9.a (Atlantic Iberian waters). In Report of the ICES Advisory Committee, 2020. ICES Advice 2020, rju.27.9a, <https://doi.org/10.17895/ices.advice.5811>.

## Annex 1

ICES Advice on fishing opportunities, catch, and effort  
Bay of Biscay and the Iberian Coast Ecoregion  
rju.27.9a

### Undulate ray (*Raja undulata*) in Division 9.a (Atlantic Iberian waters)

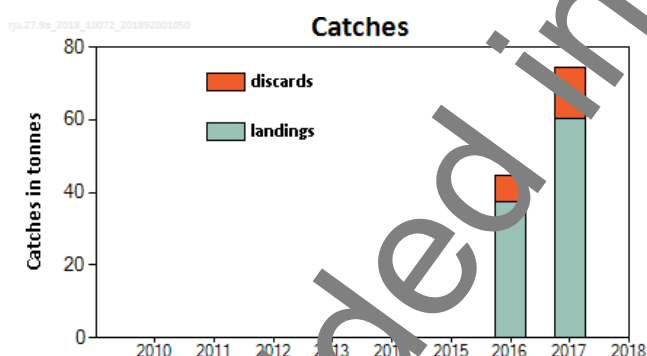
#### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 31 tonnes in each of the years 2019 and 2020. ICES can not quantify the corresponding catches.

ICES also advises that those landings are bycatches and that there should be no targeted fisheries on this stock.

#### Stock development over time

From 2009, management regulations have included this stock on the EU prohibited species list. Limited fishing opportunities (bycatch allowance as part of fisheries monitoring programme) started in 2016.



**Figure 1** Undulate ray in Division 9.a. Total international catches (in tonnes). Discards are only from the Spanish fleet; the overall discard rate is unknown.

#### 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** Undulate ray in Division 9.a. 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	$MSY B_{trigger}$	?	?	?
Precautionary approach	$F_{pa}, F_{lim}$	?	?	?	Unknown	$B_{pa}, B_{lim}$	?	?	?
Management plan	$F_{MGT}$	—	—	—	Not applicable	$B_{MGT}$	—	—	—
Qualitative evaluation	-	?	?	?	Unknown	-	?	?	?

## Catch scenarios

The ICES framework for category 6 stocks was applied (ICES, 2012). For stocks without information on abundance or exploitation, ICES considers that a precautionary reduction of catches should be implemented unless there is ancillary information clearly indicating that the current level of exploitation is appropriate for the stock.

As ICES has previously been unable to provide a landing advice (ICES, 2016), the mean of the last two years landings (2016–2017) was used as basis for the advice. Because there is no information on stock size and fishing pressure, the precautionary buffer was 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** Undulate ray in division in 9a. Basis for the catch scenarios.

Average of recent landings (2016–2017)		39 t
Discard rate		unknown
Precautionary buffer	Applied	0.8
Landings advice **		31 t
% Advice change ***		-

\* 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 landings × precautionary buffer].

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

ICES did not provide catch advice in previous years.

## Basis of the advice

**Table 3** Undulate ray in Division 9.a. The basis of the advice.

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

## Quality of the assessment

There is no index of abundance for this stock and only two years of landings data.

## Issues relevant for the advice

*Raja undulata* has a patchy and coastal distribution, with historically limited data on stock status. Data from existing trawl surveys give no information on the stock owing largely to the poor overlap between surveyed areas and the coastal habitat of this species.

The monitoring fishery program designed in line with STECF scientific advice (STECF-15-03) has been operating since 2016. In order to monitor the Portuguese bycatch quota, authorities introduced national legislation; vessels with fishing permits are obliged not to target *R. undulata*; to land the specimens whole or gutted under a daily landing limit (30 kg live weight per day). There are also minimum (78 cm total length) and maximum (97 cm total length) landing sizes, and the capture, retention onboard, and landings of *R. undulata* are not allowed during May, June, and July (the egg-laying season).

Fishery data collected under the Portuguese monitoring program is contributing to developing estimates of abundance (ICES, 2018). The spatial extent of the programme should be extended to cover the entire spatial distribution of the stock.

## Reference points

No reference points are defined for this stock.

## Basis of the assessment

**Table 4** Undulate ray in Division 9.a. Basis of assessment and advice.

ICES stock data category	6 (ICES, 2016a).
Assessment type	No assessment (ICES, 2018).
Input data	None.
Discards and bycatch	Discarding is known to take place but has not been fully quantified.
Indicators	None.
Other information	Life-history. Potential abundance estimates from monitoring programme.
Working group	Working Group on Elasmobranch Fishes (WGEF)

## Information from stakeholders

Fishers have reported that undulate ray is locally common in some areas, particularly sandy areas. This information has been confirmed by scientific observations on commercial fishing vessels.

In Portugal the self-sampling programme is carried out by fishing vessels with a special fishing licence. The georeferenced fishery data are provided by fishers.

## History of the advice, catch, and management

**Table 5** Undulate ray in Division 9.a. History of ICES advice and ICES estimates of landings\*. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	TAC	ICES species-specific landings: minimum estimate based on reported landings **
2011	No specific advice			-
2012	No specific advice			-
2013	No specific advice	-		-
2014	No specific advice	-		-
2015	No targeted fisheries. Any possible provision for bycatch to be landed should be part of a management plan	-		0.2
2016	No new advice, same as for 2015	-	40	31
2017	Precautionary approach	-	48	46
2018	Precautionary approach	-	48	
2019	Precautionary approach	≤ 31		
2020	Precautionary approach	≤ 31		

\* Fishing opportunities are managed through an overall TAC by management unit, which includes all species of skates and rays. Since 2015–2016, there has been a species-specific TAC for this species in Subarea 9.

\*\* Occasional landings are known to occur but are not recorded in official statistics.

## History of catch and landings

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

**Table 6** Undulate ray in Division 9.a. Catch distribution by fleet in 2017 as estimated by ICES. Portugal does not have official landings with information by fleet, and all polyvalent landings are classified as “unspecified gears”. Discards only refer to Spanish fleet; the overall discard rate is unknown.

Catch (2017)	Landings					Discards
	Otter trawl	Longlines	Fixed nets	Seines	Unspecified gears	
Unknown	36%	2%	8%	1%	53%	14 t (partial)
	46 tonnes					

**Table 7** Undulate ray in Division 9.a. ICES estimates of landings (in tonnes). Discards only refer to Spanish fleet (in tonnes); the overall discard rate is unknown.

Year	Landings	Discards	Catches
2016	31	7	38
2017	46	14	60

## Summary of the assessment

There is no assessment for this stock in this area.

## 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. 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.

STECF. 2015. Scientific, Technical and Economic Committee for Fisheries (STECF) – Possible by-catch provisions for undulate ray in ICES areas VIIde, VIIIaband IX (STECF-15-03), 2015. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXXX, 41 pp.