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# Other skates and rays in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)

## ICES advice on fishing opportunities

ICES cannot provide catch advice for these stocks due to a lack of reliable survey and catch data. Discarding is known to take place, but ICES cannot quantify the corresponding catches.

## Stock development over time

There are insufficient survey or abundance data available to assess these species individually. All stocks are considered as minor ones for the commercial fisheries in this ecoregion. The apparent reduction in landings since 2009 is attributed to improved reporting at the species level, which has reduced the amount of skates reported as unidentified.

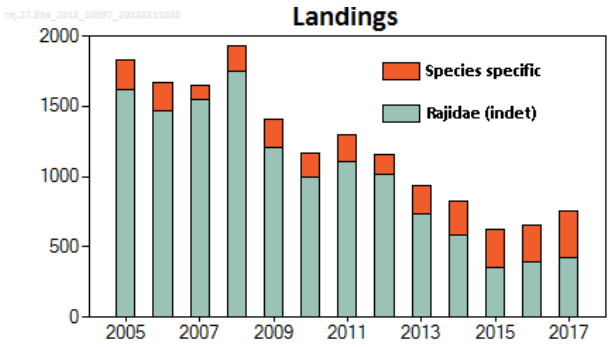


**Figure 1** Other skates and rays in Subarea 8 and Division 9.a. ICES estimated landings for species covered by this advice includes species not reported elsewhere (*Dipturus oxyrinchus*, *Leucoraja circularis, Leucoraja fullonica, Raja microocellata, Raja miraletus* and *Rajella fyllae*), species outside stock boundaries (*Leucoraja naevus* and *Raja brachyura*) and generic reported landings (indeterminate Rajiformes) in tonnes.

## 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** Other skates and rays in Subarea 8 and 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 $B_{trigger}$ | ? | ? | ? | 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

ICES cannot provide catch advice for these stocks owing to lack of reliable survey and catch data. Recent landings are not considered reliable to provide advice due to progressive changes in the level of species-specific reporting.

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

**Table 2** Other skates and rays in Subarea 8 and Division 9.a. The basis for the catch scenarios.

| | | |
|---|---|---|
| Advised landings for 2017 and 2018, issued in 2016 | | No advice |
| Discard rate | | Unknown |
| Precautionary buffer | Not Applied | - |
| Landings advice | | - |
| % Advice change* | | - |

* Advice value 2019 relative to advice value 2017.

There is no change to the advice.

## Basis of the advice

**Table 3** Other skates and rays in Subarea 8 and 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 these stocks. |

## Quality of the assessment

There is no assessment for these stocks in this area.

## Issues relevant for the advice

This advice relates to skates (order Rajiformes) not specified elsewhere in ICES advice for this ecoregion. Specifically, it refers to: i) skates not reported to species level, ii) commercial species (Cuckoo ray (*Leucoraja naevus)* and Blonde ray (*Raja brachyura*)) reported from divisions outside defined stock boundaries, and iii) other skates and rays landed in this ecoregion (*Dipturus oxyrinchus*, *Leucoraja circularis, Leucoraja fullonica*, *Raja microocellata, Raja miraletus,* and *Rajella fyllae*). See Table 8 for more details.

Most nations have reported the species separately in recent years, even though current EU regulations only require *Leucoraja naevus*, *Raja clavata,* and *Raja brachyura* to be reported separately to species level in landings. The collection of species-specific landings data for *Dipturus oxyrinchus*, *Leucoraja circularis, Leucoraja fullonica*, *Raja microocellata* and *Raja montagui*, including dedicated sampling programmes, would facilitate the assessment and advisory process.

On 22 August 2014 the Portuguese government adopted 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 onboard, and landing of any skate species belonging to Rajiformes during the months of May and June, which covers part of the spawning period. For each fishing trip during these two months vessels are permitted 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 these stocks.

## Basis of the assessment

**Table 4** Other skates and rays in Subarea 8 and Division 9.a. The basis of the assessment.

| | |
|---|---|
| ICES stock data category | 5 (ICES, 2016b) |
| Assessment type | No assessment (ICES, 2018) |
| Input data | Landings |
| Discards and bycatch | Discarding is known to take place but has not been fully quantified |
| Indicators | None |
| Other information | None |
| Working group | Working Group on Elasmobranch Fishes (WGEF) |

## Information from stakeholders

There is no additional available information.

## History of the advice, catch, and management

**Table 5** Other skates and rays in Subarea 8 and Division 9.a. 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 | | 1293 |
| 2012 | No specific advice | | 1153 |
| 2013 | No TAC, species-specific measures needed, catch to decrease by at least 20% | - | 940 |
| 2014 | No new advice, same as 2013 | - | 831 |
| 2015 | Decrease landings by at least 20% ** | ≤ 614 | 620 |
| 2016 | No new advice, same as 2015 ** | ≤ 614 | 653 |
| 2017 | No advice | - | 755 |
| 2018 | No advice | - | |
| 2019 | No advice | - | |
| 2020 | No advice | - | |

* There is no specific TAC for these stocks. Fishing opportunities are managed through an overall TAC by management unit, which includes all species of skates and rays.
** ICES provided advice for these skates in 2014 as a larger proportion of total skate landings were not assigned to assessed stock units.

## History of the catch and landings

While various skate species may be captured in the NEAFC regulatory area, the quantities caught and species composition are uncertain and cannot be quantified.

**Table 6** Other skates and rays in Subarea 8 and 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" (ICES, 2016a).

| Catch (2017) | Landings | | | | | Discards |
|---|---|---|---|---|---|---|
| Unknown | bottom trawl | hook and lines | nets | seines | unspecified gear | Unquantified |
| | 22% | 8% | 50% | 2% | 18% | |
| | 755 tonnes | | | | | |

**Table 7** Other skates and rays in Subarea 8 and Division 9.a. ICES estimates of landings by country. Data revised in 2016 (ICES, 2016a). Weights are in tonnes.

| Year | Portugal | Spain | France | Belgium | Netherlands | UK | Ireland | Total* |
|---|---|---|---|---|---|---|---|---|
| 2009 | 308 | 707 | 391 | 2 | 0.05 | 0.02 | 0.03 | 1408 |
| 2010 | 293 | 627 | 244 | 1 | | 0.01 | | 1166 |
| 2011 | 276 | 840 | 175 | 2 | | | | 1293 |
| 2012 | 240 | 762 | 151 | 0.3 | | 0.01 | | 1153 |
| 2013 | 144 | 616 | 179 | 1 | | 0.4 | | 940 |
| 2014 | 132 | 461 | 238 | 0.3 | | | | 831 |
| 2015 | 113 | 299 | 202 | 1 | | 0.7 | 4 | 620 |
| 2016 | 99 | 367 | 181 | 0.3 | | | 5 | 653 |
| 2017 | 116 | 396 | 243 | 0.03 | | | | 755 |

* These data represent *Dipturus oxyrinchus*, *Leucoraja circularis*, *Leucoraja fullonica*, *Rajella fyllae*, *Raja miraletus*, *Raja microocellata*, *Rajella fyllae,* and Rajiformes (indet.) from Subarea 8 and Division 9.a and *Leucoraja naevus* and *Raja brachyura* in Subarea 8 only.

**Table 8** Other skates and rays in Subareas 8 and Division 9.a. ICES estimates of landings by species and year (in tonnes). Data revised in 2016 (ICES, 2016a) and 2018 (ICES, 2018).

| Species | Division | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Dipturus oxyrinchus* | 27.8.a | 11 | 2 | 1.10 | 3 | 0.4 | 5 | 6 | 0.07 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 |
| | 27.8.b | 0.01 | 6 | 0.2 | 0.03 | | | | 0.01 | 0.06 | | | | 0.00 |
| | 27.8.c | | | | | | | | 0.05 | 0.3 | 0.01 | 3 | 0.5 | |
| | 27.8.d | 0.6 | 1.5 | 0.6 | 0.5 | 0.4 | 0.03 | 0.01 | 0.00 | 0.05 | 0.10 | 0.04 | 0.09 | 0.06 |
| | 27.9.a | | | | 72 | 75 | 20 | 68 | 24 | 64 | 33 | 74 | 26 | 41.06 |
| *Leucoraja circularis* | 27.8.a | 72 | 48 | 52 | 59 | 18 | 22 | 14 | 17 | 15 | 20 | 21 | 16 | 0.14 |
| | 27.8.abd | | | | | | | | | | | | 2 | |
| | 27.8.b | 2 | 0.85 | 0.5 | 0.2 | 0.3 | 3 | 0.7 | 1.3 | 1.6 | 1.39 | 1.45 | 2.32 | |
| | 27.8.c | | 0.01 | | 4 | 0.7 | 2 | 0.9 | 0.9 | 0.7 | 0.01 | 0.00 | 0.07 | |
| | 27.8.d | 9.73 | 4 | 6 | 10 | 2 | 3 | 2 | 2 | 3 | 4 | 2 | 2 | |
| | 27.8.e | 0.00 | | | | | | | | | | | | |
| | 27.9.a | 0.00 | 0.00 | 0.00 | 1.2 | 2 | 11 | 1.5 | 0.4 | 0.07 | 0.01 | 0.00 | 2 | 1.3 |
| *Leucoraja fullonica* | 27.8.a | 12 | 7 | 6 | 6 | 41 | 33 | 32 | 28 | 23 | 30 | 35 | 32 | 25 |
| | 27.8.abd | | | | | | | | | | | 5 | 4 | |
| | 27.8.b | 0.5 | 0.71 | 0.2 | 0.06 | 0.14 | 1.07 | 1.3 | 0.3 | 5 | 5.08 | 5 | 3 | 0.50 |
| | 27.8.c | | 0.02 | | 0.00 | 0.04 | | | | | 0.02 | | | 0.02 |
| | 27.8.d | 0.9 | 0.7 | 0.6 | 0.82 | 4 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 |
| | 27.8.e | | | | 0.00 | | | | | | | | | |
| | 27.9.a | | | | | | | | 0.2 | | | 0.00 | | |
| *Leucoraja naevus* | 27.8.e | | 0.00 | | 0.02 | 0.03 | 0.03 | 0.2 | | | | | | |
| *Raja brachyura* | 27.8.a | | | | 0.01 | 8 | 7 | 4 | 6 | 25 | 63 | 63 | 75 | 142 |
| | 27.8.abd | | | | | | | | | | | 0.2 | | |
| | 27.8.b | | | | 0.01 | 2.6 | 4 | 14 | 1.1 | 2 | 4 | 2 | 1.4 | 1.6 |
| | 27.8.c | | | | | 0.07 | 4.85 | 0.7 | 0.21 | 0.13 | 0.12 | 1.21 | 1.39 | 0.3 |
| | 27.8.d | | | | | 0.01 | 0.00 | 0.5 | 0.02 | 0.09 | 0.04 | 0.02 | 0.01 | |
| | 27.8.e | | | | | | | | 0.12 | | | 0.09 | | |
| *Raja microocellata* | 27.8.a | 0.24 | 0.41 | 0.2 | 0.3 | 1.7 | 1.12 | 1.3 | 2 | 6 | 12 | 12 | 15 | 37 |
| | 27.8.b | 0.00 | 0.00 | | 0.04 | 0.2 | 0.2 | 3 | 11 | 14.0 | 25.3 | 9 | 15.2 | 16.9 |
| | 27.8.c | | | | | | | | | | | | | 0.2 |
| | 27.8.d | | | 0.2 | 0.5 | 0.6 | 0.3 | | 0.00 | 0.02 | 0.05 | 0.01 | 0.05 | 0.10 |
| | 27.9.a | 88 | 105 | 35 | 19 | 45 | 43 | 29 | 36 | 40.61 | 45 | 31.5 | 63 | 68.4 |
| *Raja miraletus* | 27.9.a | 16 | 19 | | 4 | 2 | 6 | 5 | 5 | 1.08 | 2 | 0.3 | 2 | 0.2 |
| *Rajella fyllae* | 27.8.b | | | | | | | | | 0.02 | | | | |
| Rajiformes (indet) | 27.8.a | 561.7 | 537 | 535 | 474 | 160 | 144 | 122 | 68 | 63 | 54 | 38 | 9 | 4 |
| | 27.8.abd | 1.4 | 2 | 36 | 76 | 16 | 14 | 19 | 85 | | | | | |
| | 27.8.b | 548 | 434 | 388 | 408 | 194 | 46 | 107 | 44 | 18 | 25 | 14 | 10 | 12 |
| | 27.8.c | 178 | 194 | 420 | 426 | 409 | 299 | 409 | 385 | 278 | 198 | 149 | 187 | 190 |
| | 27.8.c.e | | | | | | | | | 30.40 | 14 | 13 | 12 | |
| | 27.8.c.W | | | | | | | | | 0.1 | | | | |

*raj.27.89a*

| Species | Division | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 27.8.d | 22 | 21 | 27 | 16 | 3 | 3 | 5 | 0.8 | 1.4 | 0.8 | 0.06 | 0.2 | 2 |
| | 27.8.d.2 | | | | | | | | | | | 0.06 | | |
| | 27.8.e | 2 | | 0.08 | 0.08 | 0.01 | | | | | 0.06 | 0.01 | | 0 |
| | 27.9.a | 301 | 283 | 142 | 345 | 421 | 491 | 447 | 432 | 345 | 289 | 138.9 | 171 | 210 |
| | 27.9.b | | | | | | | | | | | 0.3 | | |
| Total | | 1827 | 1665 | 1651 | 1924 | 1408 | 1166 | 1293 | 1153 | 940 | 831 | 620 | 653 | 755 |

## Summary of the assessment

There is no assessment for these stocks in this area.

## Sources and references

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. 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.