

Small-eyed ray (*Raja microocellata*) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea North)

ICES advice on fishing opportunities

ICES advises that when the maximum sustainable yield (MSY) approach is applied, landings should be no more than 103 tonnes in each of the years 2025 and 2026. ICES cannot quantify the corresponding catches.

Non-fisheries conservation considerations

Conservation aspects and associated management measures may exist at a national or regional level but were not reviewed by ICES.

Stock development over time

Fishing pressure on the stock is below $F_{MSY\ proxy}$, and the stock-size indicator is above $I_{trigger}$.



Figure 1 Small-eyed ray in divisions 7.f and 7.g. Summary of the stock assessment. ICES landings estimates. Fishing pressure proxy (inverse f , $L_F=M/L_{mean}$) from the length-based indicator (LBI) method is used for the evaluation of the exploitation status. The proxy fishing pressure is less than that corresponding to $F_{MSY\ proxy}$ when the value is lower than 1 (shown by the horizontal blue line). Note: Data for 2021 length composition from commercial fisheries not included. Biomass index from the UK (E&W)-BTS-Q3 survey [B6596] in divisions 7.f and 7.g (individuals ≥ 50 cm total length). The horizontal orange lines indicate the mean biomass index for 2019–2021 and 2022–2023.

Catch scenarios

ICES framework for category 3 stocks was applied (rfb rule, method 2.1; ICES, 2024a). A survey biomass index was used as an indicator of stock size. The advice is based on the recent advised landings (2023–2024 issued in 2022), multiplied by the ratio of the mean of the last two index values (index A) and the mean of the three preceding values (index B), a ratio of observed mean length in the catch relative to the target mean length, a biomass safeguard, and a precautionary multiplier. The stability clause was considered and applied to limit the increase in landings advice to 20%.

Discarding is known to take place, but ICES cannot estimate the quantity, nor the corresponding dead catch.

Table 1 Small-eyed ray in divisions 7.f and 7.g. The basis for the catch scenarios. Landings are in tonnes.*

| | | |
|--|--------------------------|-----|
| Previous landings advice A_y (2023–2024 issued in 2022) | 86 tonnes | |
| Stock biomass trend | | |
| Index A (2022, 2023) | 0.80 kg.h ⁻¹ | |
| Index B (2019, 2020, 2021) | 0.30 kg.h ⁻¹ | |
| r: stock biomass trend (index ratio A/B) | 2.6 | |
| Fishing pressure proxy | | |
| Mean catch length ($L_{\text{mean}} = L_{2022-2023}$) | 73.18 cm | |
| Maximum sustainable yield (MSY) proxy length ($L_{F=M}$) | 71.42 cm | |
| Fishing pressure proxy ($L_{F=M}/L_{\text{mean}}$) | 0.98 | |
| f: multiplier for relative mean length in catches ($L_{\text{mean}}/L_{F=M}$) | 1.02 | |
| Biomass safeguard | | |
| Last index value (I_{2023}) | 0.69 kg.h ⁻¹ | |
| Index trigger value ($I_{\text{trigger}} = I_{\text{loss}} \times 1.4$) | 0.095 kg.h ⁻¹ | |
| b: index relative to trigger value, $\min\{I_{2023}/I_{\text{trigger}}, 1\}$ | 1.00 | |
| Precautionary multiplier to maintain biomass above B_{lim} with 95% probability | | |
| m: multiplier (generic multiplier based on life history) | 0.95 | |
| RFB calculation ** | 220 | |
| Stability clause (+20%/-30% compared to A_y , only applied if $b \geq 1$) | Applied | 1.2 |
| Discard rate | Unquantified | |
| Landings advice for 2025/26 | 103 tonnes | |
| % advice change*** | +20% | |

* 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.

** Formula [$A_y \times r \times f \times b \times m$]

*** Advice value for 2025 and 2026 relative to the advice value for 2023 and 2024.

The advised landings are higher than the advice for 2023 and 2024 because of an increase in the biomass index.

Basis of the advice

Table 2 Small-eyed ray in divisions 7.f and 7.g. The basis of the advice.

| | |
|-----------------|---|
| Advice basis | Maximum sustainable yield (MSY) approach |
| Management plan | ICES is not aware of any agreed precautionary management plan for small-eyed ray in this area |

Quality of the assessment

The quality of landings data has improved in recent years. Reported landings of *Leucoraja circularis* (“sandy ray” in ICES advice) are considered to refer to *Raja microocellata* (small-eyed ray) in this stock area because of confusion over the local name “sandy ray”. These landings have therefore been reallocated to this stock. While the main part of the stock occurs in Division 7.f and the eastern part of Division 7.g, the stock also extends into the southern parts of Division 7.a (with occasional vagrants in the northern Irish Sea). Reported landings from Division 7.a are therefore also allocated to this stock.

The UK (E&W)-BTS-Q3 [B6596] covers the main stock area in the Bristol Channel (ICES, 2024b).

Issues relevant for the advice

Small-eyed ray is a coastal species, and it is a bycatch of trawl and gillnet fisheries. Although not usually targeted, it is one of the important components of the Bristol Channel skate fishery.

Regulations for fishing opportunities have a TAC for small-eyed ray in divisions 7.f and 7.g within the overall TAC for skates and rays in divisions 6.a, 6.b, 7.a–c, and 7.e–k. Juvenile small-eyed ray occur in the shallower waters of Carmarthen Bay (Division 7.f). These grounds are often fished by whelk potters, and the presence of such static gear may limit the impacts of trawling on the nursery grounds.

A Belgian policy measure excluded Belgian vessels to land this species during the years 2021 to 2023. While reported landings from Belgium are zero in this time period, discard estimates are unavailable.

Length composition data from commercial fisheries available for 2021 were not included in the application of the rfb rule, as the high levels of discards in 2021 for specific length classes were considered to be unrealistic (ICES, 2024b).

Reference points

Table 3 Small-eyed ray in divisions 7.f and 7.g. Reference points, values, and their technical basis.

| Framework | Reference point | Value | Technical basis | Source |
|--|--------------------------------|---|---|--------------|
| Maximum sustainable yield (MSY) approach | MSY B_{trigger} proxy | 0.095 | Biomass index trigger value (I_{trigger}), defined as $I_{\text{trigger}} = I_{\text{loss}} \times 1.4$, where I_{loss} is the lowest observed historical biomass index value for 2020 | ICES (2024a) |
| | F_{MSY} proxy | $\frac{L_{F=M}}{L_{\text{mean}}} = 1^*$ | Relative value from LBI analysis, assuming $M/k = 1.5$. $L_{F=M}$ is based on L_c (length at 50% of modal abundance), which is taken from pooled data (2019–2020). | ICES (2024a) |
| Precautionary approach | B_{lim} | Not defined | | |
| | B_{pa} | Not defined | | |
| | F_{lim} | Not defined | | |
| | F_{pa} | Not defined | | |
| Management plan | SSB_{mgt} | Not applicable | | |
| | F_{mgt} | Not applicable | | |

* The F_{MSY} proxy reference point is defined for this stock in terms of relative values. The LBI-estimated values the ratio $L_{F=M}/L_{\text{mean}}$ are used to estimate exploitation status relative to the proxy MSY reference point.

Basis of the assessment

Table 4 Small-eyed ray in divisions 7.f and 7.g. Basis of the assessment and advice.

| | |
|--------------------------|--|
| ICES stock data category | 3 (ICES, 2023) |
| Assessment type | Trends from biomass index and length-based indicators (ICES, 2024b) |
| Input data | Survey: UK (E&W)-BTS-Q3 [B6596], length composition data from commercial fisheries |
| Discards and bycatch | Discarding is known to take place but has not been quantified |
| Indicators | Length-based indicators |
| Other information | None |
| Working group | Working Group on Elasmobranch Fishes (WGEF) |

History of the advice, catch, and management

Table 5 Small-eyed ray in divisions 7.f and 7.g. History of ICES advice, agreed TAC and species-specific ICES estimates of landings. All weights are in tonnes.

| Year | ICES advice | Landings corresp. to advice | Agreed TAC for 6.a–b and 7.a–ce–k* | Agreed TAC for small-eyed ray in 7.fg* | ICES landings |
|------|---|-----------------------------|------------------------------------|--|---------------|
| 2011 | No specific advice | | 11379 | | 323 |
| 2012 | No specific advice | | 9915 | | 362 |
| 2013 | No TAC, species-specific measures needed, catch to decrease by at least 36% (reduction of 20% followed by 20% PA buffer). | - | 8924 | | 247 |
| 2014 | No new advice, same as 2013. | - | 8032 | | 227 |

| Year | ICES advice | Landings corresp. to advice | Agreed TAC for 6.a–b and 7.a–ce–k* | Agreed TAC for small-eyed ray in 7.fg* | ICES landings |
|------|------------------------------|-----------------------------|------------------------------------|--|---------------|
| 2015 | Reduce catches by 36%. | 188 | 8032 | | 216 |
| 2016 | No new advice, same as 2015. | 188 | 8032 | 188 | 198 |
| 2017 | Precautionary approach | ≤ 154 | 8434 | 154 | 201 |
| 2018 | Precautionary approach | ≤ 154 | 9699 | 154 | 245 |
| 2019 | Precautionary approach | ≤ 192 | 10184 | 192 | 313 |
| 2020 | Precautionary approach | ≤ 192 | 10184 | 192 | 230 |
| 2021 | Precautionary approach | ≤ 123 | 9675 | 123 | 110 |
| 2022 | Precautionary approach | ≤ 123 | 9482 | 123 | 151 |
| 2023 | MSY approach | ≤ 86 | 9797 | 86 | 69 |
| 2024 | MSY approach | ≤ 86 | 9756 | 86 | |
| 2025 | MSY approach | ≤ 103 | | | |
| 2026 | MSY approach | ≤ 103 | | | |

* There was no specific TAC for this stock until 2016. Fishing opportunities were managed through an overall TAC for EU and UK waters of divisions 6.a–b and 7.a–ce–k, which includes all species of skate and ray (Rajiformes). Since 2016, there has been a specified TAC for this stock in EU and UK waters of divisions 7.f–g.

History of the catch and landings

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

Table 6 Small-eyed ray in divisions 7.f and 7.g. Catch distribution by fleet in 2023 as estimated by ICES. Landings data for Division 7.a also allocated to this stock.

| Catch (2023) | Landings | | | | Discards |
|--------------|-------------------|--------------------------------|-----------------|-------------------|--------------|
| Unknown | Beam trawls 7% | All other bottom trawls 74% | Set nets 18% | Other gears 1% | Unquantified |
| | 69 tonnes | | | | |

Table 7 Small-eyed ray in divisions 7.f and 7.g. History of landings*. ICES estimates of landings by country (in tonnes). Blank cell = no data reported; 0 = value less than 0.5.

| Year | Belgium | UK | Ireland | France | Total landings |
|------|---------|-----|---------|--------|----------------|
| 2009 | | 157 | | 29 | 187 |
| 2010 | 37 | 214 | 0 | 21 | 272 |
| 2011 | 117 | 189 | 0 | 16 | 323 |
| 2012 | 124 | 208 | 0 | 30 | 362 |
| 2013 | 99 | 117 | 0 | 30 | 247 |
| 2014 | 83 | 79 | 0 | 65 | 227 |
| 2015 | 106 | 78 | 0 | 31 | 216 |
| 2016 | 123 | 69 | 0 | 5 | 198 |
| 2017 | 116 | 30 | | 56 | 201 |
| 2018 | 121 | 55 | | 69 | 245 |
| 2019 | 137 | 83 | 0 | 92 | 313 |
| 2020 | 94 | 67 | | 69 | 230 |
| 2021 | | 68 | 0 | 42 | 110 |
| 2022 | | 67 | 1 | 84 | 151 |
| 2023 | | 46 | | 23 | 69 |

* The figures in the table are rounded. Total landings were calculated using unrounded inputs, and computed values may not match exactly when calculated using the rounded figures in the table.

Summary of the assessment

Table 8 Small-eyed ray in divisions 7.f and 7.g. Assessment summary. The stock-size indicator is the mean biomass per hour (individuals ≥ 50 cm total length) from the UK (E&W)–BTS–Q3 [B6596].

| Year | Stock-size indicator | | | Landings (tonnes) | Fishing pressure indicator | |
|------|----------------------|---|------|----------------------|---|---|
| | Low | Biomass index (kg.hr ⁻¹) | High | | Inverse f (L _{F=M} /L _{mean}) | Length-based fishing pressure proxy (f, L _{mean} /L _{F=M}) |
| 1993 | 0.29 | 1.05 | 2.1 | | | |
| 1994 | 0.73 | 1.88 | 3.5 | | | |
| 1995 | 0.69 | 2.3 | 4.4 | | | |
| 1996 | 0.084 | 0.53 | 1.14 | | | |
| 1997 | 0.94 | 2.3 | 3.9 | | | |
| 1998 | 0.90 | 2.6 | 4.7 | | | |
| 1999 | 1.23 | 2.5 | 4.0 | | | |
| 2000 | 0.23 | 0.82 | 1.58 | | | |
| 2001 | 0.64 | 1.9 | 3.5 | | | |
| 2002 | 1.18 | 2.3 | 3.5 | | | |
| 2003 | 0.40 | 1.32 | 2.4 | | | |
| 2004 | 0.47 | 1.6 | 3.2 | | | |
| 2005 | 0.60 | 1.67 | 2.9 | | | |
| 2006 | 0.165 | 0.51 | 1.00 | | | |
| 2007 | 0.084 | 0.54 | 1.06 | | | |
| 2008 | 0.174 | 0.51 | 0.95 | | | |
| 2009 | 0.177 | 0.77 | 1.44 | 187 | | |
| 2010 | 0.124 | 1.06 | 2.2 | 272 | | |
| 2011 | 0.195 | 0.79 | 1.64 | 323 | | |
| 2012 | 0.176 | 0.58 | 1.11 | 362 | | |
| 2013 | 0.00 | 0.28 | 0.61 | 247 | | |
| 2014 | 0.00 | 0.66 | 1.72 | 227 | | |
| 2015 | 0.00 | 0.35 | 0.94 | 216 | | |
| 2016 | 0.128 | 0.58 | 1.17 | 198 | | |
| 2017 | 0.55 | 1.6 | 2.8 | 201 | | |
| 2018 | 0.066 | 0.6 | 1.35 | 245 | | |
| 2019 | 0.00 | 0.43 | 1.28 | 313 | 0.98 | 1.02 |
| 2020 | 0.00 | 0.068 | 0.27 | 230 | 0.98 | 1.02 |
| 2021 | 0.00 | 0.42 | 1.08 | 110 | * | * |
| 2022 | 0.110 | 0.91 | 1.98 | 151 | 0.98 | 1.02 |
| 2023 | 0.141 | 0.69 | 1.34 | 69 | 0.98 | 1.02 |

* Commercial length data not considered in 2021 (ICES, 2024b)

Sources and references

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[Download the stock assessment data and figures](#)

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