

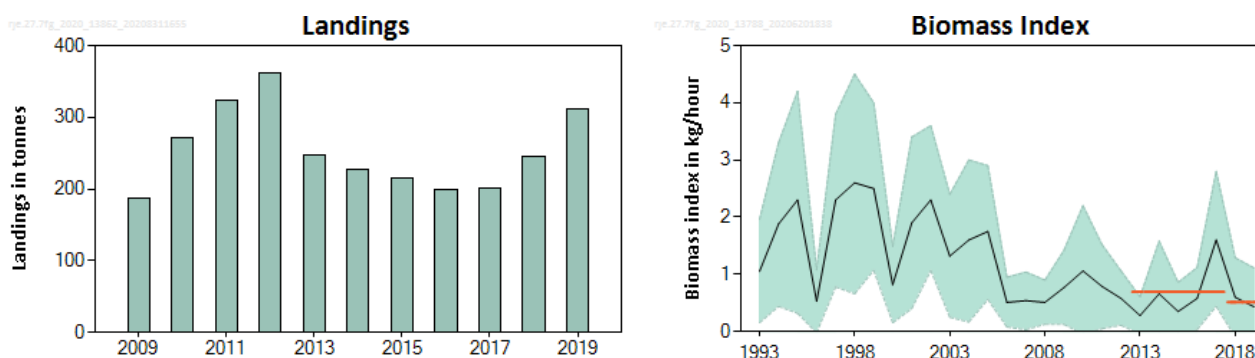
## Small-eyed ray (*Raja microocellata*) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea North)

### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 123 tonnes in each of the years 2021 and 2022. ICES cannot quantify the corresponding catches.

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** Small-eyed ray in divisions 7.f and 7.g. Summary of the stock assessment. Left: ICES estimates of species-specific landings of *Raja microocellata* since 2009. Right: Biomass index ( $\text{kg h}^{-1}$  and 95% confidence interval [CI] as shaded area) from the UK (E&W)-BTS-Q3 survey in divisions 7.f–g (individuals of  $\geq 50$  cm in total length). The horizontal lines show the mean stock-size indicator for 2013–2017 and 2018–2019.

### Stock and exploitation status

**Table 1** Small-eyed ray in divisions 7.f and 7.g. State of the stock and the fishery relative to reference points.

		Fishing pressure			Stock size				
		2017	2018	2019	2017	2018	2019		
Maximum sustainable yield	$F_{MSY}$	?	?	?	MSY $B_{trigger}$	?	?	?	Undefined
Precautionary approach	$F_{pa}, F_{lim}$	?	?	?	$B_{pa}, B_{lim}$	?	?	?	Undefined
Management plan	$F_{MGT}$	—	—	—	$B_{MGT}$	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	-	↗	↘	↘	Decreasing

### Catch scenarios

The precautionary buffer was last applied to the landings advice in 2014. The stock size and fishing pressure status relative to reference points is unknown and the precautionary buffer is therefore applied again in 2020.

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

**Table 2** Small-eyed ray in divisions 7.f and 7.g. The basis for the catch scenarios \*.

Index A (2018–2019)		0.51
Index B (2013–2017)		0.69
Index ratio (A/B)		0.74
Uncertainty cap	Applied	0.8
Advised landings for 2019–2020 issued in 2018		192 tonnes
Discard rate	Unknown	-
Precautionary buffer	Applied	0.8
Landings advice **		123 tonnes
% advice change ***		-36%

\* 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 2019–2020] × [Uncertainty cap] × [Precautionary buffer].

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

The advised landings have decreased by more than 20% compared to last year’s advice due to the decreasing biomass index and the application of the precautionary buffer.

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

**Table 3** Small-eyed ray in divisions 7.f and 7.g. History of ICES advice and ICES estimates of landings \*. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	EU TAC **	ICES species-specific landings: minimum estimate based on reported landings *
2011	No specific advice			323
2012	No specific advice			362
2013	No TAC, species-specific measures needed, catch to decrease by at least 36% (reduction of 20% followed by 20% PA buffer).	-		247
2014	No new advice, same as 2013.	-		227
2015	Reduce catches by 36%.	188		216
2016	No new advice, same as 2015.	188	188	198
2017	Precautionary approach	≤ 154	154	201
2018	Precautionary approach (same value as advised catches for 2017)	≤ 154	154	245
2019	Precautionary approach	≤ 192	192	312
2020	Precautionary approach	≤ 192	192	
2021	Precautionary approach	≤ 123		
2022	Precautionary approach	≤ 123		

\* Data revised in 2020.

\*\* Fishing opportunities are managed through an overall TAC by management unit, which includes all species of skates and rays. Since 2016, there has been a specified TAC for this stock in the overall management unit.

## Summary of the assessment

**Table 4** Small-eyed ray in divisions 7.f and 7.g. Time-series of survey index used for the advice. Series are the mean biomass per hour (for specimens  $\geq 50$  cm total length) from the UK (E&W-BTS-Q3).

Year	Biomass index kg h <sup>-1</sup>	High 95% CI	Low 95% CI	Landings tonnes
1993	1.05	1.96	0.154	
1994	1.88	3.3	0.44	
1995	2.3	4.2	0.32	
1996	0.53	1.08	0	
1997	2.3	3.8	0.78	
1998	2.6	4.5	0.66	
1999	2.5	4.0	1.07	
2000	0.82	1.49	0.15	
2001	1.90	3.4	0.40	
2002	2.3	3.6	1.07	
2003	1.32	2.4	0.25	
2004	1.60	3.0	0.167	
2005	1.75	2.9	0.56	
2006	0.51	0.95	0.080	
2007	0.54	1.04	0.031	
2008	0.51	0.90	0.128	
2009	0.77	1.42	0.127	187
2010	1.06	2.2	0	272
2011	0.79	1.52	0.051	323
2012	0.58	1.06	0.110	362
2013	0.28	0.61	0	247
2014	0.66	1.58	0	227
2015	0.35	0.86	0	216
2016	0.58	1.12	0.033	198
2017	1.60	2.8	0.44	201
2018	0.60	1.29	0	245
2019	0.43	1.11	0	312

## Sources and references

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

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