

Cuckoo ray (*Leucoraja naevus*) in subareas 6 and 7, and in divisions 8.a–b and 8.d (West of Scotland, southern Celtic Seas, and western English Channel, Bay of Biscay)

ICES advice on fishing opportunities

ICES advises that when the maximum sustainable yield (MSY) approach is applied, landings in 2025 and 2026 should be no more than 7 799 and 7 529 tonnes, respectively. ICES cannot quantify the corresponding catches.

Management of the catches of skates and rays under a combined TAC prevents effective control of single-stock exploitation rates and could lead to the overexploitation of some species.

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} , and biomass is above $MSY B_{trigger}$ and B_{lim} .

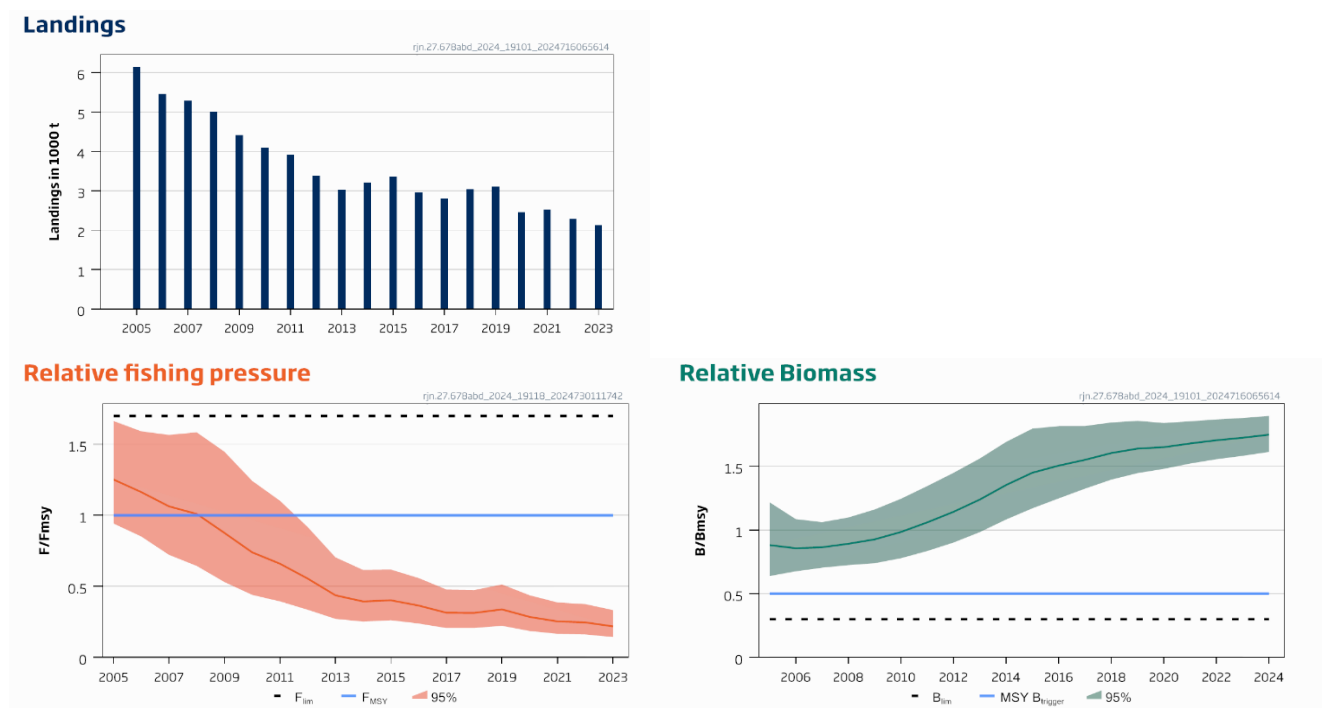


Figure 1 Cuckoo ray in subareas 6 and 7, and in divisions 8.a–b and 8.d. Summary of the stock assessment. ICES estimated landings (2005–2023; landings reconstructed from 2005–2008), relative fishing pressure and relative biomass.

Catch scenarios

Table 1 Cuckoo ray in subareas 6 and 7, and in divisions 8.a–b and 8.d. The basis for the catch scenarios.

Variable	Value	Notes
$F(2024)/F_{MSY}$	0.21*	Status quo $F: F_{2023}/F_{MSY}$
$B(2025)/B_{MSY}$	1.76	Short-term forecast (STF)
Landings (2024)	2131	Projected landings in tonnes (STF)

* Any difference between F_{2024}/F_{MSY} in this table and F_{2023}/F_{MSY} in Table 9 is due to stochasticity in the projections.

Table 2a Cuckoo ray in subareas 6 and 7, and in divisions 8.a–b and 8.d. Annual catch scenarios for 2025. All weights are in tonnes.

Basis	Total landings (2025)	Fishing mortality F_{2025}/F_{MSY}	Stock size B_{2026}/B_{MSY} *	% B change**	% advice change***
ICES advice basis					
Maximum sustainable yield (MSY) approach (15th percentile of predicted landings distribution under $F = F_{MSY}$)	7 799	0.82	1.55	-12.1	-3.3
Other scenarios					
$F = F_{MSY}$	9 351	1.00	1.49	-15.6	16
$F = F_{2024}$	2 147	0.21	1.77	0.56	-73
$F = 0$	0	0	1.86	5.3	-100
Landings = 10th percentile of predicted landings distribution under $F = F_{MSY}$	7 471	0.78	1.56	-11.3	-7.4
Landings = 20th percentile of predicted landings distribution under $F = F_{MSY}$	8 069	0.85	1.54	-12.7	0.066
Landings = 35th percentile of predicted landings distribution under $F = F_{MSY}$	8 741	0.93	1.51	-14.2	8.4

* Biomass is at 01 January.

** Percentage change of B_{2026}/B_{MSY} relative to B_{2025}/B_{MSY} (1.76).

*** Advice value for 2025 relative to landings advice value for 2024 (8 064 tonnes).

Table 2b Cuckoo ray in subareas 6 and 7, and in divisions 8.a–b and 8.d. Annual catch scenarios for 2026 with $F_{2025} = 15$ th percentile of the predicted landings distribution under $F = F_{MSY}$. All weights are in tonnes.

Basis	Total landings (2026)	Fishing mortality F_{2026}/F_{MSY}	Stock size B_{2027}/B_{MSY} *	% B change**	% advice change***
ICES advice basis					
Maximum sustainable yield (MSY) approach (15th percentile of predicted landings distribution under $F = F_{MSY}$)	7 529	0.78	1.57	1.14	-3.5
Other scenarios					
$F = F_{MSY}$	9 394	1.00	1.49	-3.7	20
$F = F_{2024}$	2 156	0.21	1.78	14.8	-72
$F = 0$	0	0	1.86	20	-100
Landings = 10th percentile of predicted landings distribution under $F = F_{MSY}$	7 145	0.74	1.58	2.1	-8.4
Landings = 20th percentile of predicted landings distribution under $F = F_{MSY}$	7 849	0.82	1.56	0.32	-0.64
Landings = 35th percentile of predicted landings distribution under $F = F_{MSY}$	8 652	0.91	1.52	-1.74	10.9

* Biomass is at 01 January.

** Percentage change of B_{2027}/B_{MSY} relative to B_{2026}/B_{MSY} (1.55).

*** Advice value for 2026 relative to landings advice value for 2025 (7 799 tonnes).

Basis of the advice

Table 3 Cuckoo ray in subareas 6 and 7 and divisions 8.a–b and 8.d. 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 cuckoo ray in this area

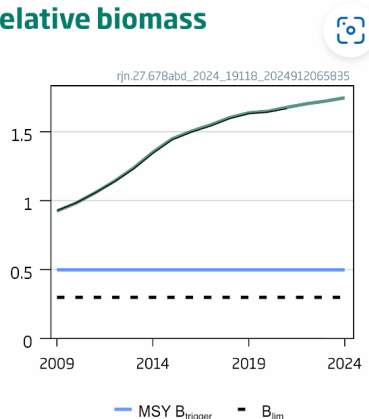
Quality of the assessment

This stock was benchmarked in 2022 (ICES, 2022) and is now in category 2. The number of surveys used for the swept-area biomass index increased from two to eight, thus covering nearly all of the stock area. The data were normalized to the long-term mean.

Stock-specific landings data are not available before 2009. Landings 2005–2009 were estimated based on the proportion of cuckoo ray in the total ray catch in subsequent years.

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

Relative biomass



Relative fishing pressure

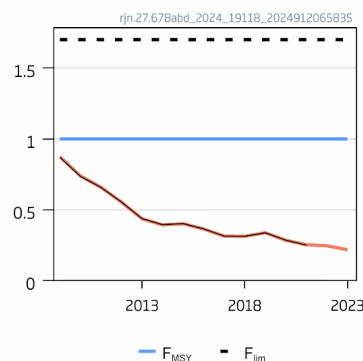


Figure 2 Cuckoo ray in subareas 6 and 7, and in divisions 8.a–b and 8.d. Historical assessment results (final-year recruitment assumptions included for each line). The reference points were revised in 2022 following a benchmark, and only the last 2 assessment results should be compared to the reference points indicated.

Issues relevant for the advice

ICES landings advice is based on the 15th percentile of predicted landings distribution, which was considered more robust to stock-specific uncertainties and more precautionary than the 35th percentile (ICES, 2024).

This is a common offshore species of varying commercial value. This species is a bycatch in demersal fisheries, especially for offshore trawl and gillnet fisheries targeting gadoids, anglerfish, megrim, and *Nephrops*. As one of the smaller and less valuable species in the skate complex, it is not targeted, but total landings of the complex may represent a high monetary value. There can be high levels of discarding of cuckoo rays. Discard survival is variable.

The introduction of minimum sizes may affect the retention patterns of smaller-bodied skates, such as cuckoo ray, but this has not been evaluated in relation to input data for the assessment.

Catches of skates and rays are managed under a common TAC. However, most landings are reported by species (ICES, 2024). ICES considers that management of the catches of several stocks under a combined TAC prevents effective control of single-stock exploitation rates and could lead to overexploitation of some stocks.

Reference points

Table 4 Cuckoo ray in subareas 6 and 7 and divisions 8.a–b and 8.d. Reference points, values, and their technical basis.

Framework	Reference point*	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	$\frac{B}{B_{MSY}} = 0.5$	Relative value from the SPiCT model. B_{MSY} is estimated directly from the SPiCT assessment model and changes when the assessment is updated.	ICES (2022)
	F_{MSY}	$\frac{F}{F_{MSY}} = 1$	Relative value from the SPiCT model. F_{MSY} is estimated directly from the SPiCT assessment model and changes when the assessment is updated.	ICES (2022)
Precautionary approach	B_{lim}	$0.3 \times B_{MSY}$	Relative value (equilibrium yield at this biomass is 50% of MSY)	ICES (2022)
	B_{pa}	Not defined		
	F_{lim}	$1.7 \times F_{MSY}$	Relative value (the F that drive the stock to B_{lim})	ICES (2022)
	F_{pa}	Not defined		
Management plan	SSB_{mgt}	Not defined		
	F_{mgt}	Not defined		

* Reference points for this stock are defined in terms of relative values. The SPiCT-estimated values of the ratios F/F_{MSY} and B/B_{MSY} are used to estimate stock status relative to the MSY reference points.

Basis of the assessment

Table 5 Cuckoo ray in subareas 6 and 7 and divisions 8.a–b and 8.d. The basis of the assessment.

ICES stock data category	2 (ICES, 2023)
Assessment type	SPiCT (ICES 2022, 2024; Pedersen and Berg, 2017)
Input data	Commercial landings with landings reconstructed for 2005–2008 using the proportion of cuckoo ray landed from 2009–2011. Surveys (EVHOE (Q4 [G9527]), IE-IGFS (Q4 [G7212]), NIGFS (Q1 [G7144] and Q4 [G7655]), SP-PORC (Q3 [G5768]), SCOWCGFS (Q1 [G4748] and Q4 [G4815]) and UK-Q1-SWBeam [B2732])
Discards and bycatch	Discarding is known to take place but cannot be quantified
Indicators	None
Other information	Benchmarked in 2022 (ICES 2022)
Working group	Working Group on Elasmobranch Fishes (WGEF)

History of the advice, catch, and management

Table 6 Cuckoo ray in subareas 6 and 7 and in divisions 8.a–b and 8.d. History of ICES advice, agreed TAC, and ICES estimates of landings. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	Agreed TAC*		ICES landings
			6.a-b, 7.a–c and 7.e–k	8 and 9	
2009	No specific advice		15 748	6423	4408
2010	No specific advice		13 387	5459	4096
2011	No specific advice		11 379	4640	3916
2012	No specific advice		9915	4222	3388
2013	Decrease catch by at least 36%	-	8924	3800	3028
2014	No new advice, same as 2013	-	8032	3420	3209
2015	Decrease landings by 34%	1998	8032	3420	3360
2016	No new advice, same as 2015	1998	8032	3420	2955
2017	Precautionary approach	≤ 2734	8434	3762	2804
2018	Precautionary approach	≤ 2734	9699	4314	3037
2019	Precautionary approach	≤ 3281	10 184	4759	3111
2020	Precautionary approach	≤ 3281	10 184	4759	2453
2021	Precautionary approach	≤ 3150	9675	5140	2517
2022	Precautionary approach	≤ 3150	9482	5140	2282
2023	MSY approach	≤ 7826	9797	5519	2131
2024	MSY approach	≤ 8064	9756	5576	
2025	MSY approach	≤ 7799			
2026	MSY approach	≤ 7529			

* There is no specific TAC for this stock. Fishing opportunities are managed through an overall TAC across each of the two management units (EU and UK waters of divisions 6.a-b and divisions 7.a–c and 7.e–k, and of subareas 8–9), which includes all species of skate and ray (Rajiformes).

History of the catch and landings

This stock is distributed primarily in EU and UK waters, and while catches from the NEAFC regulatory areas are not quantified, they are assumed negligible.

Table 7 Cuckoo ray in subareas 6 and 7 and divisions 8.a–b and 8.d. Catch distribution by fleet in 2023 as estimated by ICES.

Catch (2023)	Landings			Discards
Unknown	All other bottom trawls 90%	Beam trawls 2%	Other gears 8%	Unquantified
	2131 tonnes			

Table 8 Cuckoo ray in subareas 6 and 7 and divisions 8.a–b and 8.d. ICES estimates of landings by country (in tonnes). Data revised in 2016 (ICES, 2016) and 2018 (ICES, 2018). Blank cell = no data reported; 0 = value less than 0.5.

Year	Belgium	Spain	UK	Ireland	Netherlands	France	Total
2009	81	778	321	12		3217	4408
2010	70	480	421	55	0	3069	4096
2011	112	387	402	106		2909	3916
2012	93	311	306	108		2571	3388
2013	97	373	269	93	0	2195	3028
2014	48	300	262	83	0	2515	3209
2015	51	343	266	79		2621	3360
2016	27	372	254	69		2233	2955
2017	26	305	260	69	0	2144	2804
2018	28	335	272	115		2288	3037
2019	25	295	289	103		2398	3111
2020	18	192	186	73		1984	2453

Year	Belgium	Spain	UK	Ireland	Netherlands	France	Total
2021	0	145	166	55		2151	2517
2022	0	221	154	36		1872	2282
2023		217	172	21		1721	2131

Summary of the assessment

Table 9 Cuckoo ray in subareas 6–7, and in divisions 8.a–b and 8.d. Assessment summary. Biomass is relative to B_{MSY} at the end of the year and fishing mortality relative to F_{MSY} . High and low values are 95% confidence intervals. Landings are in tonnes (landings reconstructed from 2005-2008).

Year	Relative biomass			ICES landings (tonnes)	Relative fishing pressure		
	Low	B/B_{msy}	High		Low	F/F_{msy}	High
2005	0.64	0.88	1.22	6149	0.94	1.25	1.66
2006	0.68	0.86	1.09	5455	0.85	1.16	1.59
2007	0.70	0.86	1.06	5283	0.72	1.06	1.57
2008	0.72	0.89	1.10	5010	0.64	1.01	1.58
2009	0.74	0.93	1.16	4408	0.53	0.88	1.45
2010	0.78	0.98	1.25	4096	0.44	0.74	1.24
2011	0.83	1.06	1.35	3916	0.39	0.66	1.10
2012	0.90	1.14	1.45	3388	0.34	0.55	0.92
2013	0.98	1.24	1.56	3028	0.27	0.44	0.71
2014	1.08	1.35	1.69	3209	0.25	0.39	0.62
2015	1.17	1.45	1.80	3360	0.26	0.40	0.62
2016	1.25	1.51	1.82	2955	0.24	0.36	0.56
2017	1.32	1.55	1.82	2804	0.21	0.31	0.48
2018	1.40	1.60	1.84	3037	0.21	0.31	0.47
2019	1.45	1.64	1.86	3111	0.22	0.34	0.51
2020	1.48	1.65	1.84	2453	0.19	0.28	0.44
2021	1.52	1.68	1.85	2517	0.17	0.25	0.39
2022	1.56	1.70	1.87	2282	0.16	0.25	0.38
2023	1.58	1.72	1.88	2131	0.14	0.22	0.33
2024	1.61	1.75	1.90				

Sources and references

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

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