

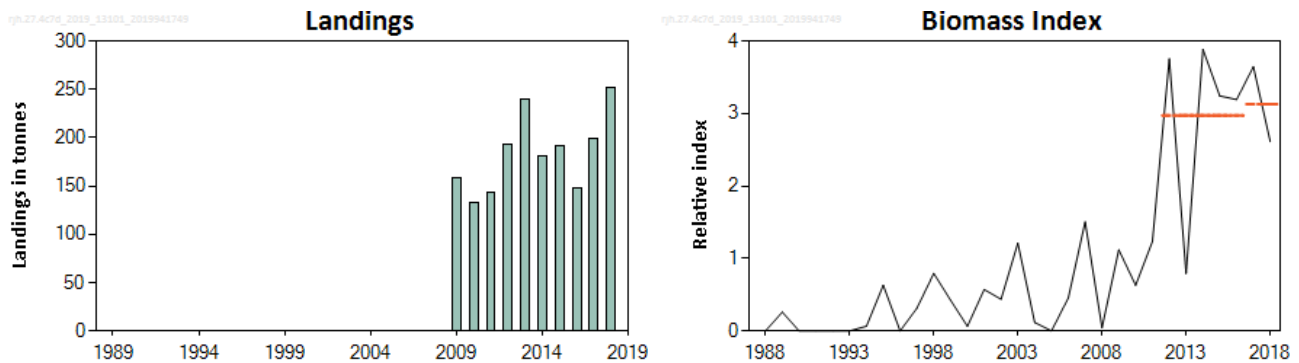
## Blonde ray (*Raja brachyura*) in divisions 4.c and 7.d (southern North Sea and eastern English Channel)

### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, landings should be no more than 164 tonnes in each of the years 2020 and 2021. ICES cannot quantify the corresponding catches.

### Stock development over time

The stock size indicator increased in the late 2000s-early 2010 and is now above the long-term mean.



**Figure 1** Blonde ray in divisions 4.c and 7.d. Summary of the stock assessment. Left: ICES estimates of landings of blonde ray since 2009. Right: Stock size indicator of exploitable biomass from the CGFS-Q4 survey ( $\text{kg km}^{-2}$ ; individuals of  $\geq 50$  cm total length). The red horizontal lines show the mean stock indicators for 2017–2018 and 2012–2016.

### 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** Blonde ray in divisions 4.c and 7.d. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size					
		2016	2017	2018	2016	2017	2018			
Maximum sustainable yield	$F_{\text{MSY}}$	?	?	?	Unknown	$\text{MSY } B_{\text{trigger}}$	?	?	?	Unknown
Precautionary approach	$F_{\text{pa}}, F_{\text{lim}}$	?	?	?	Unknown	$B_{\text{pa}}, B_{\text{lim}}$	?	?	?	Unknown
Management plan	$F_{\text{MGT}}$	—	—	—	Not applicable	$B_{\text{MGT}}$	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	→	↗	↘	Decreasing

### Catch scenarios

The ICES framework for category 3 stocks was applied (ICES, 2012). A biomass index derived from the CGFS-Q4 survey was used as the stock size indicator. The advice is based on a comparison of the two latest index values (index A) with the five preceding values (index B), multiplied by recent advised landings for the years 2018–2019. The index is estimated to have increased by less than 20% and thus the uncertainty cap was not applied. The precautionary buffer was last applied in 2015. While the stock has increased prior to 2014, it appears to have stabilized in recent years. Because the stock size relative to candidate reference points is unknown, the precautionary buffer was therefore applied in 2019.

Discarding is known to take place, but ICES cannot quantify the corresponding catch. In addition, discard survival, which is likely to occur, has not been estimated.

**Table 2** Blonde ray in divisions 4.c and 7.d. The basis for the catch scenarios.\*

Index A (2017–2018)		3.13
Index B (2012–2016)		2.97
Index ratio (A/B)		1.05
Uncertainty cap	Not applied	
Advised landings for 2018 and 2019 (issued in 2017)		195 tonnes
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Landings advice **		164 tonnes
% Advice change ***		-16%

\* 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.

\*\* [Advised landings for 2018 and 2019] × [Index ratio] × [precautionary buffer].

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

The advised landings are lower than advised for 2018 and 2019 because the precautionary buffer was applied.

### Basis of the advice

**Table 3** Blonde ray in divisions 4.c and 7.d. The basis of the advice.

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

### Quality of the assessment

Species-specific landings data are incomplete prior to 2009.

Fishery-independent trawl surveys provide the longest time-series of species-specific information.

### Issues relevant for the advice

Misidentification occurs between spotted ray (*Raja montagui*) and blonde ray (*Raja brachyura*).

Blonde ray is also taken in recreational fisheries, but the retained catches are unquantified.

### Reference points

Reference points are not defined for this stock.

### Basis of the assessment

**Table 4** Blonde ray in divisions 4.c and 7.d. Basis of the assessment and advice.

ICES stock data category	3 ( <a href="#">ICES, 2018</a> ).
Assessment type	Survey-based trends (ICES, 2019).
Input data	Survey CGFS–Q4.
Discards and bycatch	Unknown.
Indicators	None.
Other information	None.
Working group	Working Group on Elasmobranch Fishes ( <a href="#">WGEE</a> ).

### Information from stakeholders

No additional information available.

## History of the advice, catch, and management

**Table 5** Blonde ray in divisions 4.c and 7.d. History of ICES advice, agreed TAC and species-specific estimated landings. All weights are in tonnes.

Year	ICES advice	Landings corresp. to advice	Agreed TAC*		ICES landings
			2.a** and 4	7.d	
2009	No specific advice	-	1643	1044	158
2010	No specific advice	-	1397	887	133
2011	No specific advice	-	1397	887	144
2012	No specific advice	-	1395	887	194
2013	No TAC, species-specific measures needed, catch to decrease by at least 20%	-	1256	798	239
2014	No new advice, same as 2013	-	1256	798	181
2015	No new advice, same as 2014	-	1382	798	191
2016	Precautionary approach	162	1313	966	147
2017	Same advice as 2016	162	1378	1063	199
2018	Precautionary approach	≤ 195	1654	1276	251
2019	Precautionary approach (same advice as 2018)	≤ 195	1654	1404	
2020	Precautionary approach	≤ 164			
2021	Same advice as in 2020	≤ 164			

\* EU combined TAC for skates and rays.

\*\* Since 2016 fishing vessels have not been allowed to retain the species from EU waters in Division 2.a.

## History of the catch and landings

The distribution of this stock does not extend into the NEAFC Regulatory Area.

**Table 6** Blonde ray in divisions 4.c and 7.d. Catch distribution by fleet in 2018 as estimated by ICES.

Catch (2018)	Landings			Discards
Unknown	Beam trawl 64%	Nets 21%	Other gears 15%	Unknown
	251 tonnes			

**Table 7** Blonde ray in divisions 4.c and 7.d. ICES estimates of landings by country (in tonnes).

Year	Belgium	France	UK	Netherlands	Total*
2009	104	13	35	6	158
2010	63	21	39	10	133
2011	45	27	58	13	144
2012	72	23	45	53	194
2013	109	24	71	36	239
2014	69	30	57	24	181
2015	90	31	36	34	191
2016	65	36	22	25	147
2017	75	50	29	44	199
2018	108	46	32	65	251

\* 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.

## Summary of the assessment

**Table 8** Blonde ray in divisions 4.c and 7.d. Summary of the assessment. Biomass indices of exploitable biomass from the CGFS–Q4 trawl survey (individuals  $\geq$  50 cm total length), normalized to the time-series mean.

Year	Biomass index
1988	0
1989	0.26
1990	0
1991	0
1992	0
1993	0
1994	0.066
1995	0.631
1996	0
1997	0.314
1998	0.794
1999	0.425
2000	0.065
2001	0.571
2002	0.437
2003	1.211
2004	0.118
2005	0
2006	0.457
2007	1.504
2008	0.046
2009	1.118
2010	0.631
2011	1.234
2012	3.753
2013	0.793
2014	3.883
2015	3.242
2016	3.191
2017	3.645
2018	2.61

## Sources and references

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