

5.3.25 Thornback ray (*Raja clavata*) in Subarea 6 (West of Scotland)

ICES stock advice

ICES advises that when precautionary approach is applied, landings should be no more than 145 tonnes in each of the years 2017 and 2018. ICES cannot quantify the corresponding catches.

Stock development over time

Landings (2009–2015) have ranged between 114 and 241 tonnes. The stock size indicator shows an overall increasing trend; however, the last two indicator values are lower.

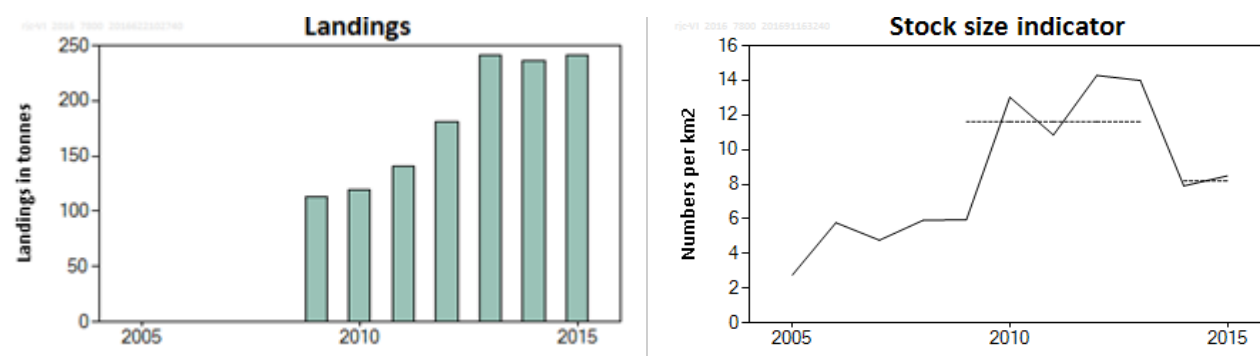


Figure 5.3.25.1 Thornback ray in Subarea 6. Left: ICES estimated species-specific landings for 2009–2015 (in tonnes). Species-specific data were not available for earlier years. Right: Mean number per km² (IGFS-WIBTS-Q4). Dashed lines indicate the mean annual CPUE for 2009–2013 and 2014–2015.

Stock and exploitation status

Table 5.3.25.1 Thornback ray in Subarea 6. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size		
		2013	2014	2015	2013	2014	2015
Maximum sustainable yield	F_{MSY}	?	?	?	MSY	?	?
Precautionary approach	F_{pa} , F_{lim}	?	?	?	$B_{trigger}$?	?
Management plan	F_{MGT}	-	-	-	B_{pa} , B_{lim}	?	?
Qualitative evaluation	-	?	?	?	SSB_{MGT}	-	-
					-	↘	↘
						↘	↗

Catch options

The ICES framework for category 3 stocks was applied (ICES, 2012). The Irish Groundfish Survey (IGFS-WIBTS-Q4) was used as the index of stock size. The advice is based on a comparison of the two latest index values (index A) with the five preceding values (index B), multiplied by the recent advised landings.

The recent advised landings for 2015 and 2016 were originally derived using landings statistics from 2011-2013. In 2016, a review of the landing statistics of elasmobranchs (ICES 2016a) was conducted. As a result, the basis which was used to provide advice in 2014 for 2015 and 2016 has been adjusted to account for the update in the landing statistics in the period 2011-2013.

The index is estimated to have decreased by more than 20% and thus the uncertainty cap was applied. The stock status relative to candidate reference points is unknown. Therefore, the precautionary buffer was applied to the landings advice.

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 5.3.25.2 Thornback ray in Subarea 6. For stocks in ICES data categories 3–6, one catch option is provided.

Index A (2014-2015)		8.19
Index B (2009-2013)		11.61
Index ratio (A/B)		0.70
Uncertainty cap	Applied	0.8
Recent advised landings (2015–2016)		205 t
Recent advised landings adjusted (2015–2016)* [205 t x 1.1]		226 t
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Landings advice**		145 t

*Recent advised landings adjusted for the revision of the landings statistics in 2011-2013

** (Recent advised landings adjusted × uncertainty cap × precautionary buffer).

Basis of the advice

Table 5.3.25.3 Thornback ray in Subarea 6. The basis of the advice.

Advice basis	Precautionary approach.
Management plan	There is no management plan for this stock.

Quality of the assessment

The Irish survey is considered to cover a large proportion of the stock area; there is, however, a large amount of untrawlable grounds in this area.

Issues relevant for the advice

The quality of landings data has improved in recent years, especially following the WKSHARKS workshop where ICES revised elasmobranch landings data for the period (2009-2015) (ICES, 2016a). Although some misidentification at the species level is possible, it is unlikely to occur in significant amounts for this well-known and commercially important species.

Raja clavata is a coastal and inner shelf species that is caught as bycatch in trawl and gillnet fisheries. As one of the larger species in the skate complex, it is also targeted in some local, seasonal fisheries with trawls and static nets.

The apparent increase in landings from 2009 to 2013 might have also been influenced by the introduction of mandatory species-specific reporting of skate landings.

Reference points

No reference points are defined for this stock

Basis of the assessment

Table 5.3.25.4 Thornback ray in Subarea 6. The basis of the assessment.

ICES stock data category	3 (ICES, 2016b)
Assessment type	Survey-based trends (ICES, 2016c)
Input data	Surveys: IGFS-WIBTS-Q4
Discards and bycatch	Discarding is known to take place but cannot be quantified.
Indicators	None
Other information	None
Working group	Working Group on Elasmobranch Fishes (WGEF)

Information from stakeholders

No information has been provided.

History of advice, catch, and management

Table 5.3.25.5 Thornback ray in Subarea 6. History of ICES advice and ICES estimates of landings**. All weights are in tonnes.

Year	ICES advice	Predicted catch corresp. to advice	ICES species-specific landings: minimum estimate based on reported landings*
2011	No specific advice		141
2012	No specific advice		181
2013	No TAC, species-specific measures needed, catch could increase by up to 20%	-	241
2014	No new advice, same as 2013	-	236
2015	No changes to generic skates TAC, no species-specific measures needed	205	241
2016	No new advice, same as 2015	205	
2017	Precautionary approach	≤145	
2018	Precautionary approach (same value as advised catches for 2017)	≤145	

*ICES (2016a,c) revised landings data for the period 2009-2015.

** There is no a specific TAC for this stock. Fishing opportunities are managed through an overall TAC by management unit, which includes all species of skates and rays.

History of catch and landings

This stock is distributed primarily in EU waters, and whilst catches from the NEAFC area are not quantified, they are assumed negligible.

Table 5.3.25.6 Thornback ray in Subarea 6. Catch distribution by fleet in 2015 as estimated by ICES.

Catch (2015)	Landings			Discards
Unknown	% bottom trawl	% Seine Net	% other gear	Discarding is known to take place but cannot be quantified
	95%	1%	4%	
	241 tonnes			

Table 5.3.25.7 Thornback ray in Subarea 6. History of landings; ICES estimates of landings by country (in tonnes). Data revised in 2016 (ICES, 2016a).

Year	Spain	UK	Ireland	France	Total
2009	16	56	3	39	114
2010	2	61	33	24	120
2011	10	57	56	19	141
2012	6	67	69	39	181
2013	23	120	71	28	241
2014	21	120	85	10	236
2015	21	128	91	2	241

Summary of the assessment

Table 5.3.25.8 Thornback ray in Subarea 6. Time-series of survey (IGFS-WIBTS-Q4) indices (n/km²) used for the advice.

Year	Stock size Indicator
2005	2.76
2006	5.78
2007	4.77
2008	5.91
2009	5.95
2010	13.02
2011	10.84
2012	14.28
2013	13.99
2014	7.90
2015	8.49

Sources and references

- ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM:68. 42 pp.
- 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. General context of ICES advice. *In* Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.
- ICES. 2016c. Report of the Working Group on Elasmobranch Fishes (WGEF), 15–24 June 2016, Lisbon, Portugal. ICES CM 2016/ACOM:20.