

ECOREGION North Sea
STOCK Turbot in Subarea IV and Division IIIa

Advice for 2012 and 2013

ICES advises on the basis of precautionary considerations that catches should not increase.

Stock status

F (Fishing Mortality)	
	2007 - 2009
Qualitative evaluation	⊛ Insufficient information
TSB (Total Stock Biomass)	
	2007 - 2009
Qualitative evaluation	➔ Stable

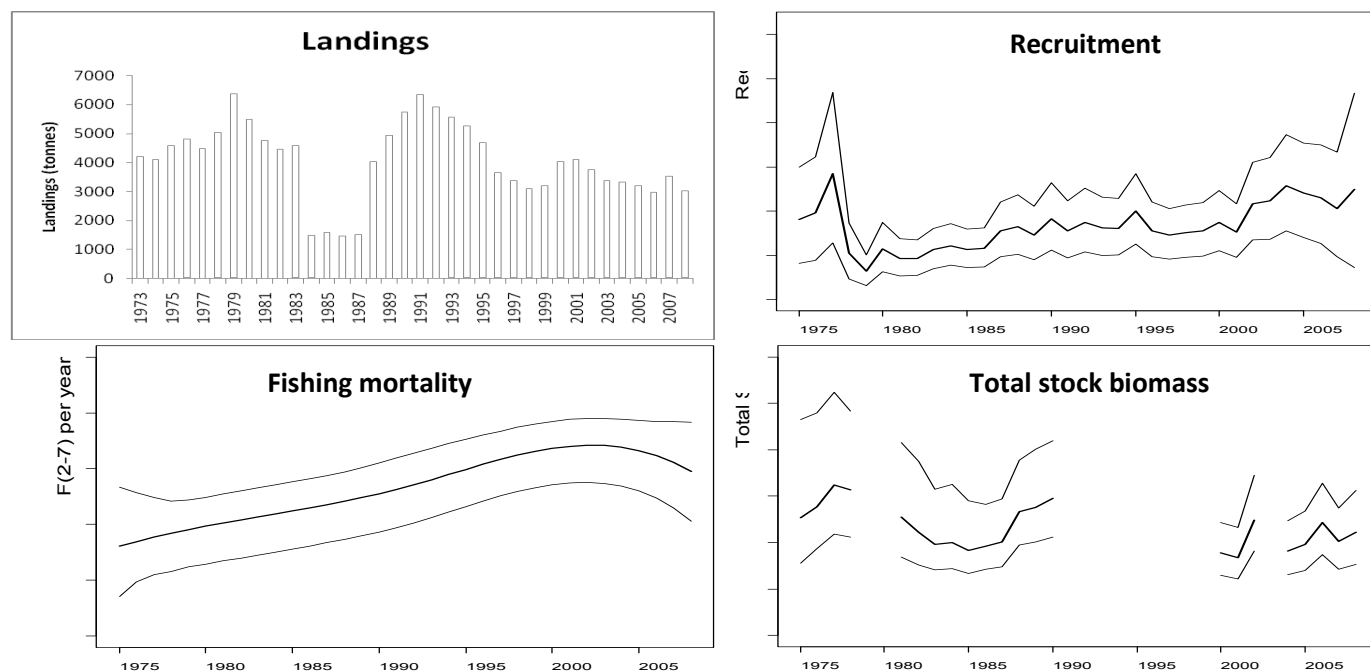


Figure 6.4.26.1 Turbot in Subarea IV and Division IIIa. Landings for the whole area (in tonnes, not all data available for the period 1984-1987) and summary of the trends based assessment for Subarea IV. Centre line indicates model estimate. Top and bottom lines indicate 95% confidence limits. TSB is only inserted where age data are available.

A trends based assessment for turbot in the North Sea is presented, which is taken to represent the stock throughout the area. Landings have been stable since 1995, and fishing mortality has declined since 2002. Recruitment has shown an increase since 2000 and total stock biomass has been stable in that period.

Management plans

No specific management objectives are known to ICES. An EU TAC is set for EU waters of area IIa and IV together with brill (ICES, 2011).

Biology

Turbot is one of the fastest growing flatfish. Turbot is a typical visual feeder and feeds mainly on other bottom living fishes and small pelagic fish and could be regarded as a top predator. In general, turbot is a rather sedentary species, but there are some indications of migratory patterns. For example in the North Sea, migrations from the nursery grounds in the south-eastern part to more northerly areas have been recorded. Adult turbot are more tolerant of the colder conditions in the northern areas of the North Sea where temperatures are too low for juveniles to survive.

The fisheries

Turbot is a valuable bycatch in the fishery for flatfish and demersal species and takes place with beam trawls, otter trawl and static gear. There is a targeted gill net fishery that takes less than 10% of the total catch. Discarding in the trawl fisheries for turbot is low. No official minimum landing size has been set, but part of the fisheries adopted a voluntary minimum landing size of 30 cm. A reduction in fishing effort on target flatfish species such as plaice and sole (sections 6.4.7 and 6.4.10) may have influenced the level of bycatch.

Quality considerations

Age data only exist for several short periods. The collection of data needs to be continued for the whole area in order to get a better understanding of the stock identity and state of turbot stocks in the Northeast Atlantic area.

Scientific basis

Assessment type	Trends based assessment (Aarts and Poos)
Input data	Catch statistics together with SNS, BTS-Isis and BTS-Tridens surveys.
Discards and bycatch	Not included in the assessment
Indicators	None
Other information	Beam trawl surveys IBTS-Q1, EVHOE-WIBTS-Q4 2011 was the first year ICES reported on this species in this area
Working group report	WGNEW

ECOREGION **North Sea**
STOCK **Turbot in Subarea IV (North Sea)**

Reference points

No reference points have been defined.

Outlook for 2012 and 2013

No reliable assessment can be presented. The main cause of this is a lack of data. Therefore, fishing possibilities cannot be projected.

Precautionary considerations

The available information suggests that total stock biomass varies without trend, and fishing mortality has decreased recently. Effort for the main fleet with turbot bycatches (beam trawls) in the North Sea and Skagerrak has declined 40% between 2003 and 2009. Based on these considerations ICES advises that catches should not increase.

Additional considerations

Turbot is mainly a bycatch species in fisheries for plaice and sole. TACs may not be appropriate as a management tool for bycatch species.

Data requirements

The collection of data needs to be continued in order to get a better understanding of stock identity and the state of turbot stocks in the Northeast Atlantic.

Assessment and management area

Stock identity of turbot in the Northeast Atlantic is not fully understood, but 90% of the catches in the Northeast Atlantic are taken in the North Sea. Therefore, the North Sea can be used as a provisional management unit.

Sources

- ICES.2010. Report of the Working Group on Assessment of New MoU Species (WGNEW) 11-15 October 2010 ICES HQ, Denmark, ICES CM 2010/ACOM: 21
- ICES.2011. Brill in Division IV, Subdivision IIIa and VIId,e, Report of the ICES Advisory Committee, 2011. ICES Advice, 2011. Book 6, Section 6.4.27.

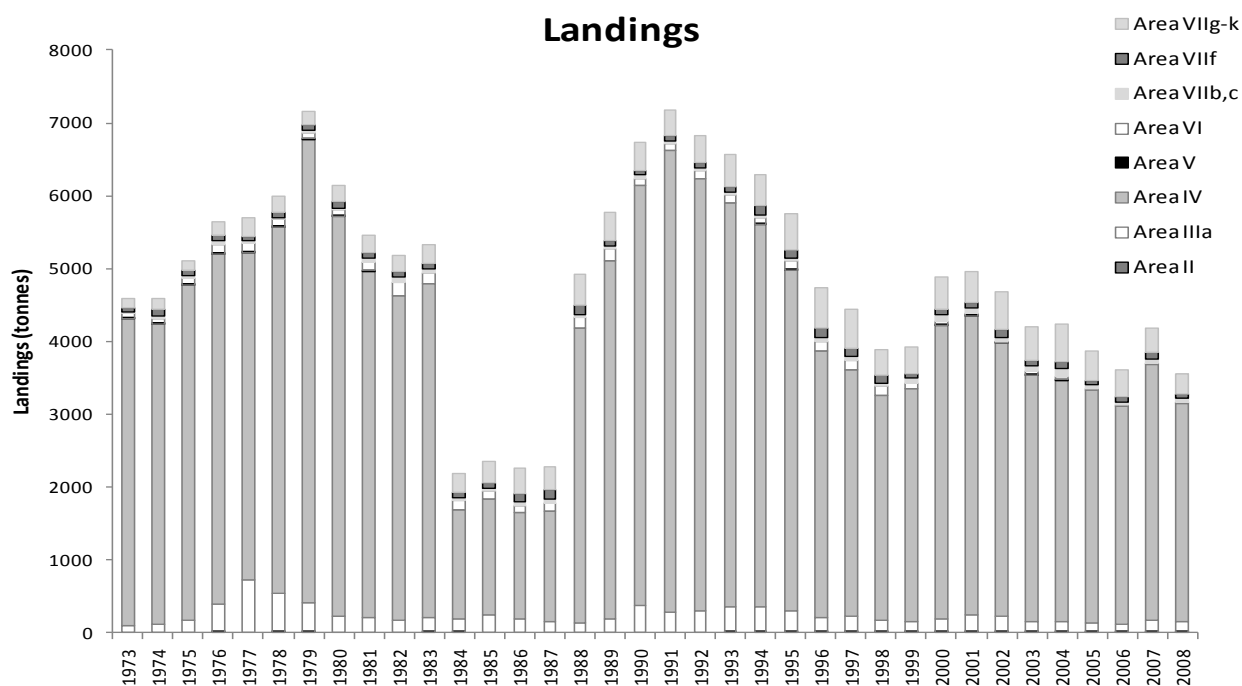


Figure 6.4.26.2 Turbot in European waters. Official landings per area (in vertical order, in tonnes). Note that for the period 1984-1987 no Dutch landings data are available, causing the low landing estimates in that period.

Table 6.4.26.1 Turbot in Subarea IV. ICES advice, management and official landings

Year	ICES Advice	Predicted catch corresp. to advice	Agreed TAC ¹⁾ turbot & brill	Official landings turbot
2000		-	9	6.4
2001		-	9	6.3
2002		-	6.750	6.0
2003		-	5.738	5.6
2004		-	4.877	5.6
2005		-	4.550	5.4
2006		-	4.323	5.1
2007		-	4.323	5.7
2008		-	5.263	5.0
2009		-	5.263	
2010		-	5.263	
2011		-	4.642	
2012	No increase in catches	-		
2013	No new advice, same as for 2012			

¹⁾ EU combined TAC for turbot and brill in EU areas IIa and IV.

Table 6.4.26.2

Turbot in European waters. Official landings per area (in tonnes).

	II	IV	V	VI	VIIIb,c	VIII f	VIIg-k	TOT
1973	0	4212	1	70	19	57	136	4495
1974	0	4116	2	86	21	96	154	4475
1975	0	4588	3	94	31	75	139	4930
1976	5	4814	3	122	48	75	188	5255
1977	0	4484	3	131	35	58	242	4953
1978	17	5034	1	100	25	74	211	5462
1979	8	6364	2	86	29	72	191	6752
1980	0	5485	1	82	34	77	237	5916
1981	0	4755	20	103	60	70	241	5249
1982	0	4453	0	174	80	70	224	5001
1983	2	4575	0	162	52	68	256	5115
1984	1	1497	0	138	36	61	273	2006
1985	0	1588	0	112	39	73	306	2118
1986	0	1453	0	102	56	99	351	2061
1987	0	1511	0	118	46	134	309	2118
1988	0	4041	0	160	31	126	418	4776
1989	0	4927	0	162	31	79	385	5584
1990	0	5750	0	103	45	54	398	6350
1991	0	6340	0	100	29	83	353	6905
1992	0	5933	0	98	45	62	370	6508
1993	13	5546	0	98	42	78	430	6207
1994	11	5244	1	96	33	130	421	5936
1995	6	4671	1	124	46	101	495	5444
1996	6	3644	0	141	60	114	561	4526
1997	6	3382	0	128	51	112	545	4224
1998	6	3086	0	124	46	107	350	3719
1999	6	3187	0	81	64	58	365	3761
2000	7	4025	1	48	89	80	448	4698
2001	7	4100	1	43	67	83	427	4728
2002	4	3749	1	31	55	98	524	4462
2003	5	3374	3	48	69	80	468	4047
2004	7	3317	1	52	101	94	513	4085
2005	7	3195	0	27	45	67	408	3749
2006	6	2976	0	18	42	69	372	3483
2007	7	3508	0	23	51	81	335	4005
2008	6	3005	0	14	48	67	265	3405