

ECOREGION North Sea
STOCK Cod in Division IIIa East (Kattegat)

Advice for 2015

New data (catch and surveys) available for this stock do not change the perception of the stock. Therefore, the advice for 2015 is the same as the advice for 2013 and 2014 (see ICES, [2012](#), [2013](#)): *ICES advises on the basis of precautionary considerations that there should be no directed fisheries and bycatch and discards should be minimised.*

Quality considerations

In recent years, reported landings and the discard estimates based on observer trips do not represent total removals from the stock. At present, the relative proportion of unallocated removals due to fishing and biology-driven factors (e.g. migration) cannot be quantified.

Scientific basis

Stock data category	1 (see ICES, 2014a)
Assessment type	Age-based analytical assessment (stochastic state–space model SAM).
Input data	Commercial catches (international landings, ages and length frequencies from catch sampling); four bottom trawl survey indices (IBTS-Q1; IBTS-Q3; Havfisker-Q1; Havfisker-Q4); annual maturity data from survey (IBTS-Q1); natural mortalities fixed at 0.2.
Discards and bycatch	Included in the assessment since 1997, data series from the majority of the fleets (covering 87% of the landings).
Indicators	None.
Other information	Last benchmarked in 2009 (ICES, 2009).
Working group report	Baltic Fisheries Assessment Working Group (WGBFAS)

Additional considerations

Management Considerations

The discard rate in 2013 is the highest of the whole times series with discard estimates (1997-2013) (Table 6.3.2.2). Existing management measures have not been effective to reduce discards. Additional measures to decrease the discard rates should rapidly be implemented.

Sources

- ICES. 2009. Report of the Benchmark and Data Compilation Workshop for Roundfish (WKROUND), 16–23 January 2009, Copenhagen, Denmark. ICES CM 2009/ACOM:32.
- ICES. 2012. Cod in Division IIIa East (Kattegat). Report of the ICES Advisory Committee, 2012. ICES Advice, 2012. Book 6, Section 6.4.1.
- ICES. 2013. Cod in Division IIIa East (Kattegat). Report of the ICES Advisory Committee, 2012. ICES Advice, 2012. Book 6, Section 6.4.2.
- ICES. 2014a. Advice basis. In Report of the ICES Advisory Committee, 2014. ICES Advice 2014, Book 1, Section 1.2.
- ICES. 2014b. Report of the Baltic Fisheries Assessment Working Group (WGBFAS), 3-10 April 2014, ICES Headquarters, Denmark. ICES CM 2014/ACOM:10.

Table 6.3.2.1 Cod in Division IIIa East (Kattegat). ICES advice, management, and landings.

Year	ICES Advice / 2005 onwards: Single-stock exploitation boundaries	Predicted catch corresp. to advice	Agreed TAC	ICES landings
1987	Reduction in F	< 13.0	15.5	11.5
1988	Reduction in F	< 15.0	15	5.5
1989	TAC	10	12.5	8.6
1990	TAC	7	8.5	5.9
1991	TAC	6.3	6.65	6.8
1992	30% reduction in fishing effort	-	6.65	6.3
1993	Limit fishing effort to 70% of 1991 effort	-	6.8	7.2
1994	Reduction in catch from 1991–1992	< 6.3–6.8	6.7	7.8
1995	Precautionary TAC based on recent catches	6–7	6.7	8.2
1996	30% reduction in fishing effort from 1994 level	-	7.7	6.1
1997	Fishing effort should not exceed 70% of the 1994 level	-	8.5	9.5
1998	Fishing effort should not exceed 70% of the 1994 level	-	7.5	6.8
1999	F = 0.6	4.5	6.3	6.6
2000	At least 40% reduction in F	6.4	7	4.9
2001	F = F _{pa} = 0.6	4.7	6.2	3.9
2002	No fishery	0	2.8	2.3
2003	No fishery	0	2.3	2
2004	No fishery	0	1.363	1.4
2005	No fishery	0	1	1.1
2006	No fishery	0	0.85	0.9
2007	No fishery	0	0.731	0.6
2008	No catch	0	0.673	0.45
2009	No catch	0	0.505	0.197
2010	No catch	0	0.379	0.155
2011	No directed fisheries, minimize bycatches	0	0.190	0.145
2012	No directed fisheries, minimize bycatch and discards	0	0.133	0.093
2013	No directed fisheries, minimize bycatch and discards	0	0.100	0.092
2014	Same advice as for 2013.	0	0.100	
2015	Same advice as last year			

Weights in thousand tonnes.

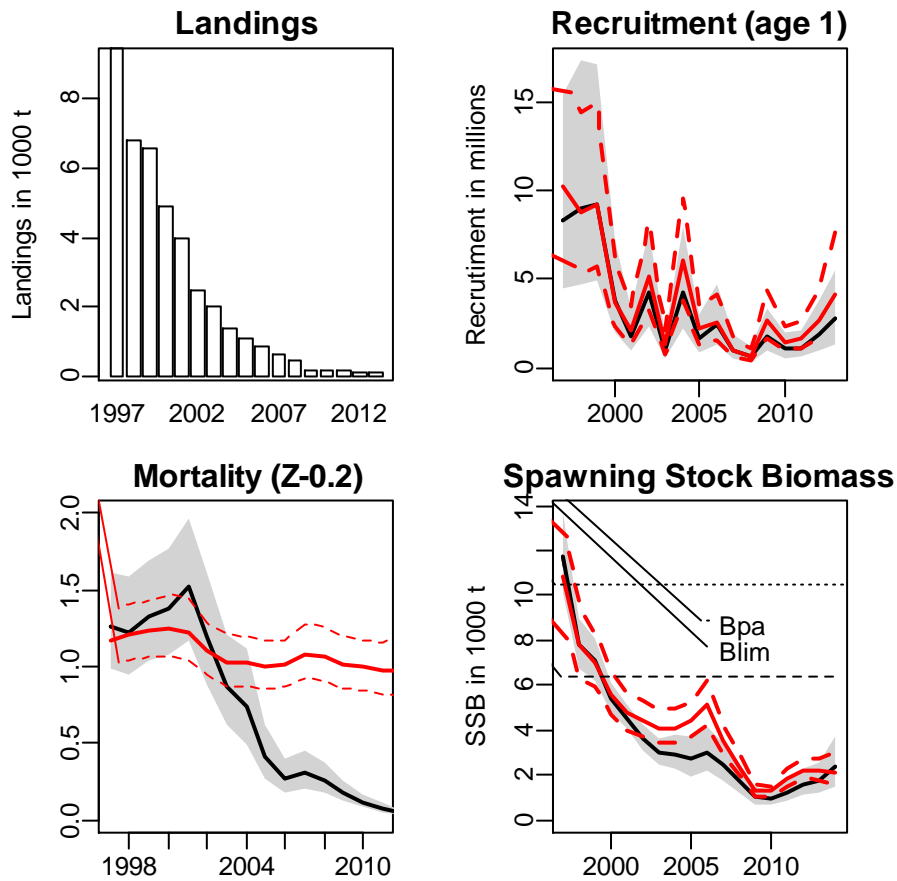


Figure 6.3.2.1 Cod in the Kattegat. Landings, Recruitment, Mortality (Z-0.2), and SSB estimates from the run including discards (black line), and estimating total removal within the model (red line). The grey and dashed lines show 95% confidence intervals.

Table 6.3.2.2 Cod in Division IIIa East (Kattegat). Landings and discard (tonnes).

Year	Landings	Discard
1997	9460	881
1998	6835	664
1999	6608	764
2000	4897	992
2001	3960	823
2002	2470	577
2003	2045	750
2004	1403	1063
2005	1070	575
2006	876	849
2007	645	577
2008	449	165
2009	197	77
2010	155	167
2011	145	216
2012	94	143
2013	92	351