ECOREGION Celtic Sea and West of Scotland
STOCK Cod in Division VIIa (Irish Sea)

Advice for 2012

ICES advises on the basis of MSY approach that zero catches be taken in 2012.

Stock status

F (Fishing Mortality)	2008	2009	2010	
MSY (F_{MSY})	✗	✗	✗	Above target
Precautionary approach (F_{pa},F_{lim})	✗	✗	✗	Harvested unsustainably

SSB (Spawning-Stock Biomass)	2009	2010	2011	
MSY ($B_{trigger}$)	✗	✗	✗	Below trigger
Precautionary approach (B_{pa},B_{lim})	✗	✗	✗	Reduce reproductive capacity

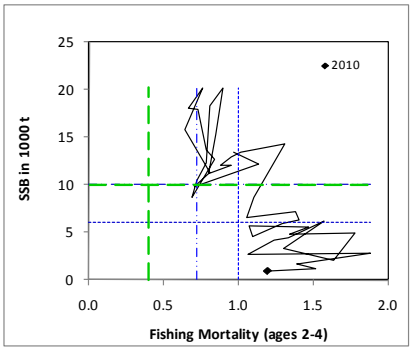

Figure 5.4.1.1 Cod in Division VIIa (Irish Sea). Summary of stock assessment (weights in tonnes) Landings: solid lines are reported landings; filled squares are landings incorporating sample-based estimates at three ports; circles are total removals estimates in excess of M=0.2 with 90% confidence intervals from B-Adapt. Recruitment, fishing mortality, and SSB: dotted lines are 5th and 95th bootstrap percentiles. Top right: SSB and F over the years.

The fishing mortality in recent years is uncertain, but total mortality remains very high. The spawning stock biomass has declined ten-fold since the late 1980s and has had reduced reproductive capacity since the mid-1990s. The spawning stock biomass remains well below B_{lim}. With the exception of the 2009 year class, recruitment has been low for the last 9 years.

Management plans

A long-term plan has been agreed by the EU in 2008 (Council Regulation (EC) 1342/2008) which results in a TAC of 380 t and effort reduction of 25%. ICES (2009a, b) evaluated the plan and considers the management plan not to be in accordance with the precautionary approach.

Biology

Due to the aggregating behaviour of cod it is still possible to find areas of high cod density even at low abundance. This can lead to high catches in localised areas and low levels of fishing effort causing high mortality on the stock is possible. Recent tagging experiments have shown migrations of cod out of the Irish Sea into the north Channel, and also migrations south through the deeper Channel into the Celtic Sea.

Environmental influence on the stock

There is evidence that the reduction in cod recruitment observed in the Irish Sea since the 1990s may be due to a combination of small spawning-stock biomass and poor environmental conditions, coinciding with a shift towards above-average sea temperatures.

The fisheries

The Irish Sea cod fishery has traditionally been carried out by otter trawlers targeting spawning cod in spring and juvenile cod in autumn and winter, and cod are also taken as a bycatch in fisheries for *Nephrops*, plaice, sole and rays. Available data indicates that until 2009 discarding was mainly a function of minimum landing size (MLS) and largely restricted to catches of 0 and 1 years old cod. In 2010 there appears to be a shift towards also discarding 2 years old fish. ICES estimates of the landing in 2010 were the lowest on record and ~30% below the TAC. The targeted whitefish fishery that developed during the 1990 using semi-pelagic trawls has continued to decline during 2010 to only four vessels mainly using the gear.

Catch by fleet	Total catch (2010) is unknown, landings estimated at 460 t, official landings were 28% higher, due to inaccurate area reporting. Accurate discard estimates are not available.

Effects of the fisheries on the ecosystem

Cod is taken in mixed demersal fisheries and there are no impacts specific to the catching of cod.

Quality considerations

The model estimates of total removals continue to vary around 2 to 3 times the reported landings, despite more accurate catch reporting and lack of evidence for significant highgrading of cod. There is currently very little direct evidence to evaluate the potential source(s) of this and how much is due to fishing in Division VIIa or elsewhere. Discard estimates are not currently integrated into the assessment.

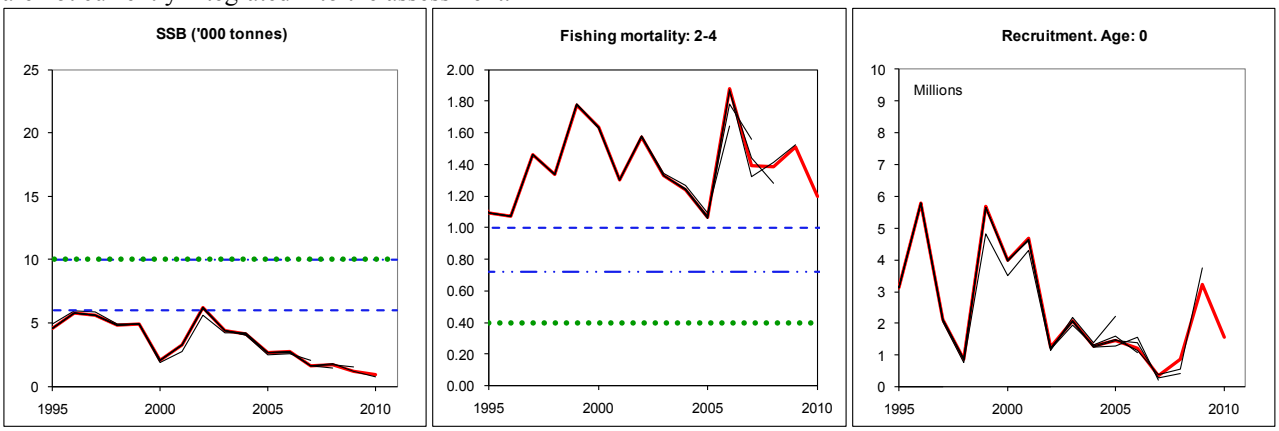

Figure 5.4.1.2 Cod in Division VIIa (Irish Sea) Historical assessment results (final year recruitment estimates included for SSB).

Scientific basis

Assessment type	Analytical assessment (B-Adapt).
Input data	Five survey indices (NIGFS-WIBTS-Q1,NIGFS-WIBTS-Q4,ScoGFS-WIBTS-Q1, UK(E&W)-BTS-3Q; NIMIK).
Discards and bycatch	Discards are not included in the assessment.
Indicators	Egg production (Irish Sea AEPM) and UK fisheries/science partnership survey (UK-FSP).
Other information	This stock is planned to be benchmarked in 2012.
Working group report	WGCSE

ECOREGION Celtic Sea and West of Scotland
STOCK Cod in Division VIIa (Irish Sea)

Reference points

	Type	*Value*	*Technical basis*
MSY Approach	MSY $B_{trigger}$	10 000 t	B_{pa}
	F_{MSY}	0.4	Provisional proxy. Fishing mortalities in the range of 0.25–0.54 are consistent with F_{MSY}
Precautionary Approach	B_{lim}	6000 t	B_{lim}= $B_{loss,}$ lowest observed level.
	B_{pa}	10 000 t	B_{pa} = MBAL, this level affords a high probability of maintaining the SSB above B_{lim}. Below this value the probability of below-average recruitment increases.
	F_{lim}	1.00	F_{lim}= F_{med}
	F_{pa}	0.72	F_{pa}: F_{med}* 0.72. This F is considered to have a high probability of avoiding F_{lim}. Fishing mortalities above F_{pa} have been associated with the observed stock decline.

(unchanged since: 2010)

Yield and spawning biomass per Recruit F-reference points (2011):

	Fish Mort Ages 2–4	Yield/R	SSB/R
Average last 3 years	1.36	1.42	1.29
F_{max}	0.40	1.74	4.84
$F_{0.1}$	0.21	1.60	8.16
F_{med}	1.00	1.53	1.84

Outlook for 2012

No short term forecast is provided because recent mortality values are highly uncertain due to unaccounted mortality. However, assuming a 25% reduction in mortality in 2011, the spawning stock biomass is expected to increase in 2012 due to the higher recruitment estimated in 2009. Given the uncertainty in the F estimation the MSY results below should be treated with caution. Current landings (i.e. TAC), effort, and spatial management of fisheries catching cod in Division VIIa are not controlling mortality levels.

Management plan(s)

Following the cod long term management plan (EC 1342/2008) the stock is considered data poor which implies using article 9(a). This results in a TAC and associated effort reduction of at least 25%. ICES considers that article 10(2) may also apply.

ICES (2009a,b) evaluated the plan and considers the management plan not in accordance with the precautionary approach.

MSY approach

Fishing mortalities in the range 0.25–0.54 are consistent with maximising long-term yield for cod in Division VIIa. This is consistent with the management plan target fishing mortality of 0.4. Given the low SSB and low recruitment it is not possible to identify any non zero catch which would be compatible with the MSY transition scheme. This implies no targeted fishing should take place on cod in Division VIIa. Bycatches including discards of cod in all fisheries in Division VIIa should be reduced to the lowest possible level and uptake of further technical measures to reduce discards

PA considerations

No targeted fishing should take place on cod in Division VIIa. Bycatches including discards of cod in all fisheries in Division VIIa should be reduced to the lowest possible level.

Additional considerations

Management considerations

Both the recruitment and reproductive capacity of this stock have become severely impaired in recent years. Recruitment has been below average for the past eighteen years and eight of the last nine years of recruitment are amongst the lowest on record. The stock has been harvested unsustainably since the late 1980s. The fishing mortality in recent years is uncertain, but total mortality rates remain very high despite the establishment of a spawning closure since 2000, reductions in fishing effort and TAC reduction per year since 2006.

The 2009 year class is estimated to be more abundant, consequently additional measures to protect it are essential to ensure that it contributes to the rebuilding of the stock. It will be necessary to reduce all sources of fishing mortality on cod to as close to zero as possible if the stock is to recover above B_{lim} as quickly as possible. STECF (2010) data show that the main gear types catching cod in the Irish Sea in 2009, based on official landings data, were otter trawls and seines with 100 mm+ mesh (56% of cod landings), otter trawls with 70–99 mm mesh (mainly *Nephrops* gears; 29%), fixed nets (12%), and beam trawls (3%). Recent discard estimates available for some fleets indicate a potential shift from discarding mostly younger age 0 and 1 cod, to discarding age 2 fish also in 2010. It is not yet known if this is a long term change. Estimates of discarding are not used in the assessment due to the short time-series and variable quality of the data.

To minimize the impact of cod recovery measures on fisheries not targeting cod, there will be a need for gear designs and cod avoidance measures that can be proven effective in reducing by-catches of cod to as close to zero as possible. Council Regulation (EC) 1342/2008 states that Member States should introduce new mechanisms (developed in cooperation with the fishing industry) to encourage fishermen to engage in cod-avoidance programmes, and to exercise their power to allocate access to fishing for cod stocks so as to encourage their fishermen to fish in ways that result in more selective fishing and are less harmful to the environment. However it is necessary to quantify the impact of such measures, and they should be accompanied by appropriate monitoring and data collection schemes to determine if they are achieving their stated aims. This includes ensuring accurate data on quantities and composition of fishery removals from all sources.

Egg production surveys since 2006 (see Figure 5.4.1.4 for 2010 results) show that ~ 30 – 50% of the spawning took place in the eastern Irish Sea which is not included in the spring spawning closure, indicating that the design of the closure is not optimal.

There is evidence of substantial misreporting in the past, but observations at the ports indicate that the implementation of the Registration of Buyers and Sellers regulations since 2006 in the UK and Ireland has improved the accuracy of landings reporting.

In recent years, Irish landings of cod reported from ICES rectangles immediately north of the Irish Sea – Celtic Sea boundary have been re-allocated into the Celtic Sea as they represent a combination of inaccurate area reporting and catches of cod considered to be part of the Celtic Sea stock.

The ability to implement a management plan for this stock will remain compromised until all sources of significant unaccounted mortality are identified

Regulations and their effects

The regulations have had the following effects on Irish Sea cod and fisheries taking cod:

In 2000, a cod closure was introduced into Irish Sea, initially covering both cod spawning areas in the east and west of the Irish Sea, subsequently amended to only include the western Irish Sea. Derogations for *Nephrops* trawlers using separator panels was included. STECF (2007) was unable to determine the extent to which the closure has reduced fishing mortality STECF advised that a comprehensive evaluation of how fleet activities have been affected by the closure and other regulations and factors is required to evaluate the cod closure.

The cod recovery plan introduced a system for limiting fishing effort by adjusting the number of fishing days allowed for various vessel categories deploying gears with various mesh sizes. STECF, 2010 reported that

- *"Nominal effort (kW*days-at-sea) within the Irish Sea has decreased by 36% since 2000. The overall trend indicates historical effort was relatively stable until 2003, after which effort declined. Overall effort within the Irish Sea has declined by ~40% since 2003. An 11% decline occurred between 2008 and 2009."*

- *"Over the time series available, Irish Sea fisheries have been dominated by demersal trawling and seining (TR category). This category accounts for around 60% of overall effort, mirroring the overall declining effort trend. Beam trawling has declined over time, now accounting for <10% in the last two years. All other regulated gears account for <1% combined."*

Changes in fishing technology and fishing patterns

The introduction of the effort control elements of the cod long term plan (LTP) is expected to lead to changes in fishing effort in different "effort groups". This and the introduction of more selective gears are likely to change exploitation patterns in 2011. The impact of these is currently difficult to quantify. Four Irish vessels have gained exemption from the effort regulation by using a sorting grid to maintain cod catches below 1.5%. The use of grids in the *Nephrops* fishery should be promoted to reduce capture of cod, or selectivity devices that achieve equivalent or better improvements.

Data and methods

The quality of the commercial data for this stock deteriorated in the 1990s. ICES has attempted to improve the accuracy of the landings data by replacing the reported landings figures in 1991–1999 from three major Irish Sea ports by estimates derived from a sampling scheme.

The sampling scheme had insufficient coverage in some subsequent years, and the assessment model (B-Adapt) implements a procedure for estimating any unaccounted removals of cod since 2000. All removals prior to 2000 are assumed to be accounted for, apart from discards which are not included in the assessment. The procedure estimates the quantity of total removals since 2000 needed for catch-based estimates of abundance to follow the same trends over time given by several series of survey indices. The model estimates of removals since 2000 are up to three times larger than reported landings for those years. The existence of substantial unaccounted removals can explain the lack of any improvement in age structure of cod and the continuation of an apparently high mortality rate well in excess of the precautionary approach reference points.

Discard estimates prior to 2010 indicate a variable, but high discard rate for 0- and 1-year-old cod. Some 2010 data indicate a shift into discarding the larger 2-year-old cod along with the younger fish. Estimates of discarding are not used in the assessment due to the short time-series and variable quality of the data.

Information from the fishing industry

The UK Fisheries–Science Partnership surveys of the Irish Sea cod spawning grounds in spring 2005–2011, carried out using commercial trawlers, indicated a widespread distribution of cod mostly at low density but with some localized aggregations. The time-series of SSB indices shows a downward trend similar to the trends shown by the other surveys used in the assessment. The surveys also indicate a highly truncated age composition of cod, which supports the ICES assessment, indicating continuing high mortality rates.

Uncertainties in assessment and forecast

The assessment indicates additional, unaccounted removals from the stock in recent years, which are not explained from the recent observation of reported landings.

A large but variable proportion of the catch of 1-year-old cod is discarded and 2010 data suggests an increase number of discarded 2-year-old fish are discarded. Discards are not included in the assessment, leading to an underestimate of the mortality at this age.

Comparison with previous assessment and advice.

The perception of the stock has not changed since last year's assessment. The basis for the advice is the same as last year.

Sources

ICES. 2009a. Report of the Working Group on Celtic Seas Ecosystems, 12–19 May 2009, Copenhagen, Denmark. ICES CM 2009/ACOM:09.

ICES. 2009b. Report of the ICES Advisory Committee 2009. ICES Advice, 2009. Book 5. 251 pp.

ICES. 2011. Report of the Working Group on Celtic Seas Ecosystems, 11–19 May 2011, Copenhagen, Denmark. ICES CM 2011/ACOM:12.

STECF. 2007. Evaluation of closed area schemes (SGMOS-07-03).
STECF. 2010. Report of the STECF SGMOS-10-05 Working Group on Fishing Effort Regimes Regarding Annexes IIA, IIB and IIC of TAC & Quota Regulations, Celtic Sea and Bay of Biscay. 27 September – 1 October 2010, Edinburgh, Scotland.

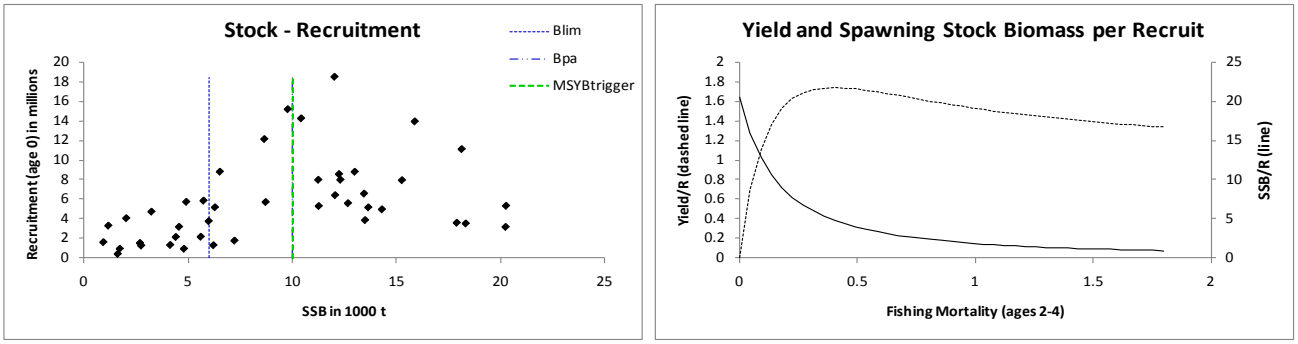

Figure 5.4.1.3 Cod in Division VIIa (Irish Sea). Stock–recruitment (left panel) and yield-per-recruit and SSB plot (right panel).

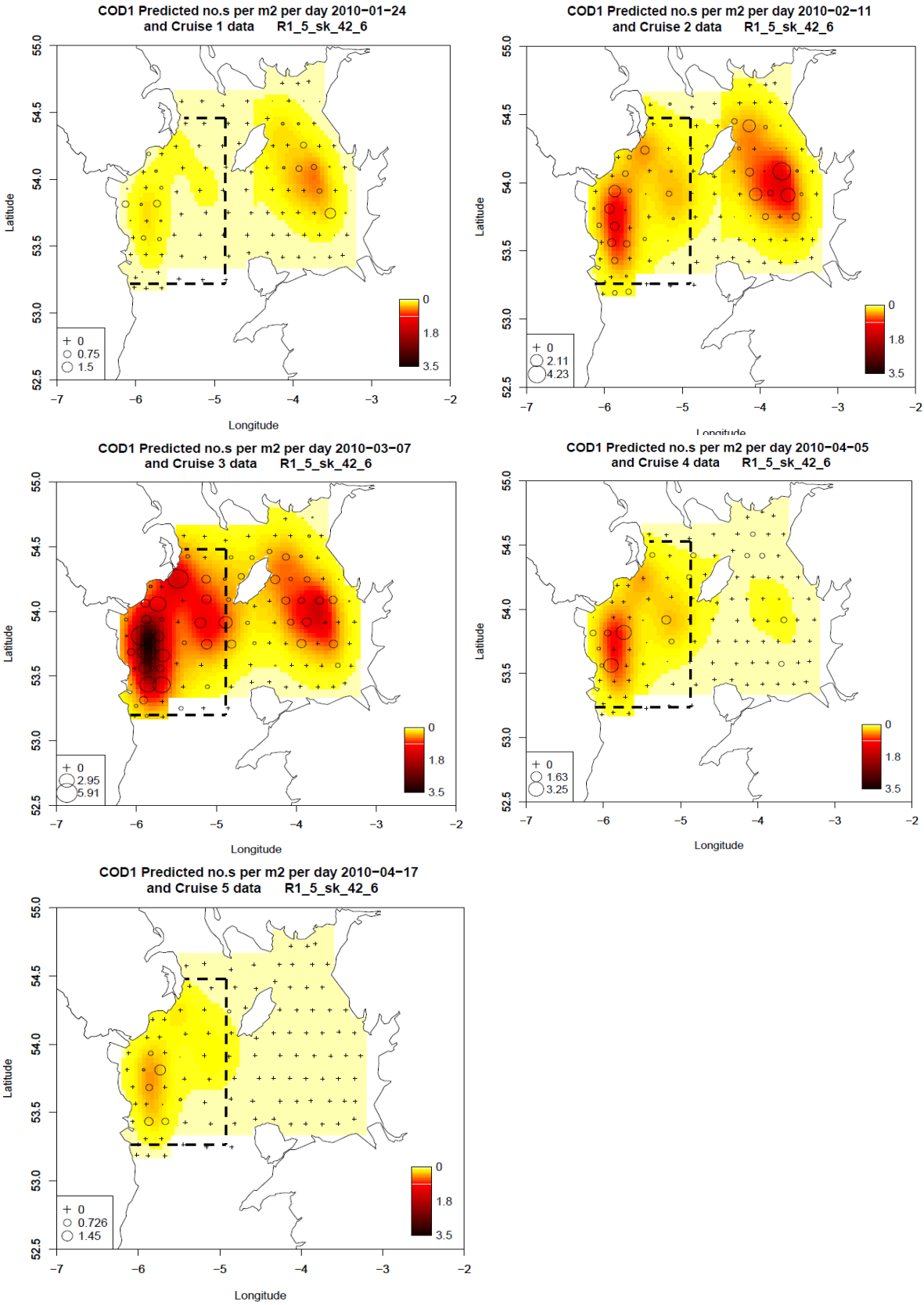

Figure 5.4.1.4 Cod in Division VIIa (Irish Sea). Annual Egg Production Method (AEPM) distribution of Stage 1 cod eggs during 2010. Station estimates of egg production given by circles, GAM predictions by contours. The dotted line gives an indication of the cod closed area.

Table 5.4.1.1 Cod in Division VIIa (Irish Sea). ICES advice, management, and landings.

Year	ICES Advice / Single-stock exploitation boundaries since 2004	Predicted catch corresponding to advice	Agreed TAC	Official landings	ICES landings
1987	No increase in F; interaction with *Nephrops*	10.3	15.0	13.2	12.9
1988	No increase in F; interaction with *Nephrops*	10.1	15.0	15.8	14.2
1989	No increase in F	13.4	15.0	11.3[1]	12.8
1990	F at F_{med}; TAC	15.3	15.3	9.9[1]	7.4
1991	Stop SSB decline; TAC	6.0	10.0	7.0[1]	7.1[2]
1992	20% of F(90) ~ 10 000 t	10.0	10.0	7.4	7.7[2]
1993	F_{med} ~ 10 200 t	10.2	11.0	5.9	7.6[2]
1994	60% reduction in F	3.7	6.2	4.5	5.4[2]
1995	50% reduction in F	3.9	5.8	4.5	4.6[2]
1996	30% reduction in F	5.4	6.2	5.30	4.96[2]
1997	30% reduction in F	5.9	6.2	4.44	5.86[2]
1998	No increase in F	6.2	7.1	4.96	5.31[2]
1999	Reduce F below F_{pa}	4.9	5.5	2.96	4.78[2]
2000	Lowest possible F	0	2.1	1.42	1.27[3]
2001	Lowest possible F	0	2.1	2.03	2.25[3]
2002	Establish recovery plan	-	3.2	2.7	2.69[3]
2003	Closure of all fisheries for cod	-	1.95	1.5	1.28[3]
2004	Zero catch	0	2.15	1.1	1.07[3]
2005	Zero catch	0	2.15	0.97	0.91[3]
2006	Zero catch	0	1.828	0.95	0.84[3]
2007	Zero catch	0	1.462	1.12	0.70[3]
2008	Zero catch	0	1.199	1.22	0.66[3]
2009	Zero catch	0	0.899	0.75	0.47
2010	Zero catch	0	0.674	0.59	0.46[3]
2011	Zero catch	0	0.506		
2012	Zero catch	0			

Weights in '000 t.
[1]Preliminary.
[2]Includes sample-based estimates of landings into three ports.
[3]As reported to the WG.

Table 5.4.1.2 Cod in Division VIIa. Nominal landings (tonnes) of as officially reported to ICES, and used by ICES.

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010[1]
Belgium	187	142	183	316	150	60	283	318	183	104	115	60	67	26	19	21
France	166	148	268	269	n/a	53	74	116	151	29	35	18[2]	17[2]	3	1[2]	1
Ireland	1,414	2,476	1,492	1,739	966	455	751	1,111	594	380	220	275	608	618[2]	323[2]	289
Netherlands	-	25	29	20	5	1	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-
UK (England, Wales & NI)	2,330	2,359	2,370	2,517	1,665	799	885	1,134	505	646	594	589[2]	423	543[2]	387[2]	282
UK (Isle of Man)	22	27	19	34	9	11	1	7	7	5	n/a	n/a	n/a	2[2]	1[2]	1
UK (Scotland)	414	126	80	67	80	38	32	29	23	15	3	6	2	1[2]	1[2]	-
Total	4,533	5,303	4,441	4,962	2,875	1,417	2,026	2,715	1,477	1,179	967	948	1,117	1224	754	594
Unallocated	54	-339	1,418	356	1,909	-143	226	-20	-192	-107	-57	-108	-415	-563	-286	-130
Total as used by WG	4587[3]	4964[3]	5859[3]	5318[3]	4784[3]	1274[4]	2252[4]	2695[4]	1285[4]	1072[4]	910[4]	840[4]	702[4]	661[4]	468[4]	464[4]

[1]Preliminary. [2]Revised. n/a = not available [3] includes sample-based estimates of landings into three ports [4] based on official data only. [5]Estimate due to incorrect submission to ICES.

Table 5.4.1.3 Cod in DivisionVIIa (Irish Sea). Summary of the assessment (without SOP correction) "B-Adapt removals" are the estimated total removals from 2000 onwards in excess of removals due to the assumed natural mortality rate.

Year	Recruits age 0 (thousands)	Total biomass (t)	Spawning stock biomass (t)	Input landings (t)	B-Adapt removals (t)	FBAR 2- 4
1968	6512	19351	13444	8541		0.96
1969	8506	18040	12241	7991		1.14
1970	15131	17709	9785	6426		0.70
1971	5239	23476	11271	9246		0.81
1972	13883	26393	15873	9234		0.64
1973	3107	30044	20227	11819		0.76
1974	11055	27155	18121	10251		0.67
1975	3533	25060	17886	9863		0.73
1976	5103	21465	13647	10247		0.78
1977	5529	16614	12673	8054		0.84
1978	12082	14188	8662	6271		0.69
1979	14196	19638	10426	8371		0.72
1980	7923	26103	12310	10776		0.78
1981	3461	29723	18317	14907		0.81
1982	5264	27025	20249	13381		0.90
1983	7879	21842	15260	10015		0.85
1984	7922	18773	11249	8383		0.80
1985	6350	21980	12055	10483		0.95
1986	18442	20979	12026	9852		0.88
1987	8743	28289	12995	12894		0.95
1988	3803	26056	13492	14168		1.01
1989	4904	21061	14300	12751		1.31
1990	5648	14540	8725	7379		1.10
1991	8751	13177	6531	7095		1.05
1992	1709	15518	7231	7735		1.38
1993	5110	12376	6295	7555		1.41
1994	3699	10460	5995	5402		1.29
1995	3121	10439	4575	4587		1.10
1996	5793	10298	5747	4964		1.07
1997	2106	11796	5614	5859		1.46
1998	882	9889	4811	5318		1.34
1999	5672	6772	4920	4784		1.77
2000	4000	6647	2044	1274	2440	1.63
2001	4668	10227	3252	2252	4211	1.30
2002	1238	12227	6223	2695	6643	1.57
2003	2082	8417	4420	1285	4874	1.33
2004	1270	6970	4152	1072	3534	1.24
2005	1468	5083	2700	910	2431	1.06
2006	1203	4612	2763	840	2790	1.88
2007	352	3538	1637	702	1827	1.39
2008	881	2670	1733	662	1652	1.39
2009	3240	2231	1185	466	1084	1.51
2010	1551	5065	947	464	1192	1.19*
Average (1968-2010)	5651	15905	9256	6912	2971	1.10

(*) recent mortality values are poorly estimated due to unaccounted mortality

Annex 5.4.1

The European Commission has enacted a Council Regulation ((EC) No. 1342/2008) which establishes measures for the recovery and long term management of cod stocks. The stated objective of the plan is to ensure the sustainable exploitation of the cod stocks on the basis of maximum sustainable yield while maintaining a fishing mortality of 0.4. Articles 7 – 9, describing aspects of the plan relevant for Irish Sea cod, are reproduced below:

Article 7

Procedure for setting TACs for cod stocks in the Kattegat the west of Scotland and the Irish Sea

1. Each year, the Council shall decide on the TAC for the following year for each of the cod stocks in the Kattegat, the west of Scotland and the Irish Sea. The TAC shall be calculated by deducting the following quantities from the total removals of cod that are forecast by STECF as corresponding to the fishing mortality rates referred to in paragraphs 2 and 3: (a) a quantity of fish equivalent to the expected discards of cod from the stock concerned; (b) as appropriate a quantity corresponding to other sources of cod mortality caused by fishing to be fixed on the basis of a proposal from the Commission.

2. The TAC shall, based on the advice of STECF, satisfy all of the following conditions: (a) if the size of the stock on 1 January of the year of application of the TAC is predicted by STECF to be below the minimum spawning biomass level established in Article 6, the fishing mortality rate shall be reduced by 25 % in the year of application of the TAC as compared with the fishing mortality rate in the previous year; (b) if the size of the stock on 1 January of the year of application of the TAC is predicted by STECF to be below the precautionary spawning biomass level set out in Article 6 and above or equal to the minimum spawning biomass level established in Article 6, the fishing mortality rate shall be reduced by 15 % in the year of application of the TAC as compared with the fishing mortality rate in the previous year; and (c) if the size of the stock on 1 January of the year of application of the TAC is predicted by STECF to be above or equal to the precautionary spawning biomass level set out in Article 6, the fishing mortality rate shall be reduced by 10 % in the year of application of the TAC as compared with the fishing mortality rate in the previous year.

3. If the application of paragraph 2(b) and (c) would, based on the advice of STECF, result in a fishing mortality rate lower than the fishing mortality rate specified in Article 5(2), the Council shall set the TAC at a level resulting in a fishing mortality rate as specified in that Article.

4. When giving its advice in accordance with paragraphs 2 and 3, STECF shall assume that in the year prior to the year of application of the TAC the stock is fished with an adjustment in fishing mortality equal to the reduction in maximum allowable fishing effort that applies in that year.

5. Notwithstanding paragraph 2(a), (b) and (c) and paragraph 3, the Council shall not set the TAC at a level that is more than 20 % below or above the TAC established in the previous year.

Article 9

Procedure for setting TACs in poor data conditions

Where, due to lack of sufficiently accurate and representative information, STECF is not able to give advice allowing the Council to set the TACs in accordance with Articles 7 or 8, the Council shall decide as follows: (a) where STECF advises that the catches of cod should be reduced to the lowest possible level, the TACs shall be set according to a 25 % reduction compared to the TAC in the previous year; (b) in all other cases the TACs shall be set according to a 15 % reduction compared to the TAC in the previous year, unless STECF advises that this is not appropriate.

Article 10

Adaptation of measures

1. When the target fishing mortality rate in Article 5(2) has been reached or in the event that STECF advises that this target, or the minimum and precautionary spawning biomass levels in Article 6 or the levels of fishing mortality rates given in Article 7(2) are no longer appropriate in order to maintain a low risk of stock depletion and a maximum sustainable yield, the Council shall decide on new values for these levels.

2. In the event that STECF advises that any of the cod stocks is failing to recover properly, the Council shall take a decision which: (a) sets the TAC for the relevant stock at a level lower than that provided for in Articles 7, 8 and 9; (b) sets the maximum allowable fishing effort at a level lower than that provided for in Article 12; (c) establishes associated conditions as appropriate.