

## 5 Plaice, turbot, dab, and brill in the Baltic

The landing data of plaice, turbot, dab, and brill according to ICES Subdivisions and countries are presented in Tables 5.1–5.4. The trend and the amount of the landings of these flatfishes are shown in Figure 5.5. Plaice and dab have the greatest proportions of the total landings of flatfish when excluding flounder.

The highest total landings of **plaice** were observed at the end of the seventies (8289t in 1979) and the lowest around the year 1990 (1989 403t). Since 1995 the landings increased again and reached a moderate temporal maximum in 2002 (2763t). After then the landings decreased to 1860t in 2006. In 2011, the landings of 1936t were on the same level as 2010 (1948t). The fluctuations are supposed to be caused mainly by immigration of plaice from the Kattegat into the western Baltic Sea. ICES Subdivision 22 is the main fishing area, and Denmark is the main fishing country. Subdivision 25 is the second most important fishing area where Poland and Denmark are the main fishing countries. In SD24–28, the plaice stock shows some positive trend. Stock trends from the Baltic International Trawl Survey (BITS) are shown for plaice in Figure 5.1.

In the Baltic Sea three different stocks of plaice could be identified (WKFLABA, ICES 2010c). One stock in Belt Sea SD 22 + 24W, one in the Öresund SD 23 and one stock in Arkona, Bornholm, Gdansk and Eastern Gotland basins (Figure 5.6). WKPESTO (ICES 2012a) suggested for analytical assessment a separate stock constituted by Kattegat (SD 21), the Belts (SD22) and the Sound (SD 23), but this suggestion had not been finally approved by ACOM when WGBFAS met.

**Turbot** occurs mainly in the southern and western parts of the Baltic Proper. Therefore, most of the landings are reported from ICES Subdivisions 22–26. The total landings reported between 1965 and 1996 of turbot increased from 42t to 1210t. From that high level the landings decreased to about 500t in the 2000s. The total landings in 2011 of about 316t mean an increase by 20t compared to that of 2010 (285t).

A successful turbot gillnet fishery started at the beginning of the 1990s in Subdivisions 26 and 28. This development was caused by fishermen having more interest in turbot. Since 1990 in all eastern Baltic countries turbot was sorted out from the flatfish catches due to the better price. For example, the Polish landings of turbot increased from 33t to 360t from 1999 to 2003. Swedish landings are taken mainly from a gillnet fishery that reached a maximum of 250t in 1996. Since then landings decreased and have been under 50t for the last five years. Denmark and Germany landed turbot from Subdivisions 22 and 24. Since 2000 these landings have decreased notably. The German landings in the last year were about 56t and remained at the same level as 2010 (57t). According to the reported landings, the turbot stock in the Baltic Sea has decreased since the mid 1990s.

Due to the low stock level, fishery targeting turbot was totally closed for some years in the EEZ of Latvia and Lithuania.

Available age data were compared during WKFLABA meeting. Results using sliced otoliths were remarkable better than using whole otoliths. These two ageing methods showed significantly different results. Applying the new method, the fishing mortality estimate declined by a factor of about two. WKFLABA did not make suggestions for turbot stocks in the Baltic Sea. Genetic information did not show any stock structure while tagging data indicated the existence of small local stocks. Fur-

ther investigations, especially in the Eastern part of Baltic Sea are recommended. Stock trends from the Baltic International Trawl Survey (BITS) are shown for turbot in Figure 5.2.

The total landings of **dab** increased to 1894t in 2004. Then they decreased to 1230t in 2006. In 2011 the landings of about 1270t show an increase by 230t compared to the previous year (1040t). During the years 1994 to 1996 the total landings of dab were over-reported due to by-catch misreporting in cod fishery. The highest landings were observed in Subdivision 22. The main dab landings are reported by Denmark (Subdivision 22 and 24) and Germany (mainly in Subdivision 22). The German landings of dab are mostly by-catches of the directed cod fishery. In 2003 a trawl fishery targeted to dab was started in Subdivision 22. The recent years' increase in landings is due to an increase in the stock as also evidenced by the BITS survey data (Fig. 5.3).

Dab occurs mainly in the western part of the Baltic Sea. According to WKFLABA conclusions, dab forms three stocks. One stock is identified in the Belt Sea (SD 22 +2 4W), one in the Öresund (SD 23) and one in Arkona and Bornholm basins (SD 24E + 25). It is unclear where the border in SD 24 has to be drawn. Possibly, the Öresund stock should be merged with the Belt Sea stock. Hence, for dab 3 and not 2 (Temming 1989, Nissling et al. 2002) stocks are proposed in the Baltic (Figure 5.7). Stock trends from the Baltic International Trawl Survey (BITS) are shown for dab in Figure 5.3.

The **brill** fishery is carried out mainly by Denmark (about 90-100% in the period 1985-2006) and in Subdivision 22. In the period from 1970 to 2005 the total reported landings varied between 1 and 160t. It can be assumed that the total landings of brill reported for 1994-1996 are overestimated due to species-misreporting in the landings of the directed cod fishery. Excluding these years, the landing averaged to about 25t between 1994 and 2004. A moderate increase of reported total landings was observed from 2001 (19t) to 2006 (56t). Since 2006 the reported landings varied between 56t and 105t. In 2010, the reported landing amounted to 57t, a decrease compared to the 82t of the previous year. WKFLABA did not find any data concerning genetic or tagging that could be used to illuminate the stock structure of brill in the Baltic, hence no suggestions for possible assessment units based on biological information were given. Stock trends from the Baltic International Trawl Survey (BITS) are shown for brill in Figure 5.4.

**Table 5.1. Plaice in the Baltic Sea: total landings (tons) by ICES Sub-division and country.**  
(There are some gaps in the information, therefore "Total" is preliminary)

Year/SD	Denmark					Germ. Dem. Rep. <sup>1</sup>		Germany, FRG			Poland		Sweden <sup>2</sup>							Finland								
	22	23	24(+25)	25	26+27	22	24	22	24(+25)	28	25(+24)	26	22	23	24	25	26	27	28	29	24	25						
1970	3.757		494					202	16																			
1971	3.435		314					160	2																			
1972	2.726		290					154	2																			
1973	2.399		203			2	44	163	1	174	30																	
1974	3.440		126			36	10	166	2	114	86																	
1975	2.814		184			11	67	302	1	158	142																	
1976	3.328		178			11	82	302	3	164	76																	
1977	3.452		221			5	36	348	2	265	26																	
1978	3.848		681			33	1.198	346	3	633	290																	
1979	3.554	2.027				10	1.604	195	7	555	224																	
1980	2.216	1.652				5	303	84	5	383	53																	
1981	1.193	937				6	52	74	31	239	27																	
1982	716	393				6	25	39	6	43	64				6			7		1								
1983	901	297				5	12	37	14	64	12				133	20			24		2							
1984	803	166				7	2	23	8	106					23	3					4		1					
1985	648	771				68	593	26	40	119	49				25	4			5		1							
1986	570	1.019				34	372	25	7	171	59				48	7			9		1							
1987	414	794				4	142	14	16	188	5				68	10			12		1							
1988	234	323				3	16	7	1	9	1				49	7			9		1							
1989	167	149					5	7		10					34	5			6		1							
1990	236	100					1	9	1	6					50													
1991	328	112						15	9	2	1				5	2			2									
1992	316	74						11	4	6					3	1			1									
1993	171	66						16	6	4					2	4												
1994	355	159						1		43	4				6	4	7											
1995	601	64	343					75	91	233	2				12	13	10	1										
1996	859	81	263					43	77	183	5			1	13	28	23	10	1									
1997	902		201					51	56	308	3				13	7	8		1									
1998	642		278					213	41	101	14				13	6	17		1									
1999	1.456		183					244	46	145	1			1	13	5	10											
2000	1.932		161					140	37	408	3				26	9	12											
2001	1.627		173					58	43	549	3				39	9	13											
2002	1.759		153	159	0			46	146	429	3				42	10	15											
2003	1024		326	299	2			35	96	480	10			0	26	16	51			0		0						
2004	911		167	239				60	65	292	8				35	6	37											
2005	908	145	164	241				51	108	511	11				35	16	28			0		0						
2006	600	166	82	632				46	185	52	3				39	17	41					0						
2007	894	193	408	490	0			63	157						69	41	61			0		0						
2008	750	116	450	339				92	159	29	0			0	45	45	69					0						
2009	633	139	581	359	0			194	120	42	0			0	42	43	79					0						
2010	748	57	345	295	1			221	78	93	8			0	17	22	61	1				0						
2011 <sup>4</sup>	823	44	291	233				310	115	37	1				11	33	36	0				0					1	0

continued

Table 5.1 continued

Year	Total by SD								Total SD 22-29
	22	23	24 <sup>3</sup>	25	26	27	28	29	
1970	3.959		659						4.618
1971	3.595		423						4.018
1972	2.880		370						3.250
1973	2.564		323	174	30				3.091
1974	3.642		198	114	86				4.040
1975	3.127		297	158	142				3.724
1976	3.641		307	164	76				4.188
1977	3.805		300	265	26				4.396
1978	4.227		1.914	633	290				7.064
1979	3.759		3.751	555	224				8.289
1980	2.305		2.073	383	53				4.814
1981	1.273		1.138	239	27				2.677
1982	761		464	49	64	7	1		1.346
1983	943		456	84	12	24	2		1.521
1984	833		199	109		4	1		1.146
1985	742		1.429	123	49	5	1		2.349
1986	629		1.446	178	59	9	1		2.322
1987	432		1.020	198	5	12	1		1.668
1988	244		389	16	1	9	1		660
1989	174		188	15		6	1		384
1990	245		152	6					403
1991	343		126	4	1	2			476
1992	327		81	7		1			416
1993	187	2	76	4					269
1994	356	6	163	50	4				579
1995	676	76	447	243	3		1		1.446
1996	903	94	368	206	15	1			1.587
1997	953	13	264	316	3	1			1.550
1998	855	13	325	118	14	1			1.326
1999	1.701	13	234	155	1				2.104
2000	2.072	26	207	420	3				2.728
2001	1.685	39	225	562	3				2.514
2002	1.805	42	309	603	3				2.763
2003	1.059	26	438	830	13	0	0		2.366
2004	971	35	289	781	11	0	0		2.087
2005	959	180	289	781	11	0	0		2.220
2006	646	205	284	725	3				1.863
2007	958	262	617	550	0	0	0		2.387
2008	842	161	665	437	0		0		2.105
2009	828	182	744	481	0	0			2.235
2010	970	74	473	420	9	0			1.948
2011 <sup>4</sup>	1133	55	437	309	1	0			1.936

<sup>1</sup> From October-December 1990 landings of Germany, Fed. Rep. are included.

<sup>2</sup> For the years 1970-1981 and 1990 the Swedish catches of Sub-divisions 25-28 are included in Sub-division 24.

<sup>3</sup> For the years 1970-1981 and 1990 catches of Sub-divisions 25-28 are included in Sub-division 24.

<sup>4</sup> Preliminary data

<sup>5</sup> Danish catches in 2002 in SW Baltic were separated according to Sub-divisions 24 and 25

Table 5.2. Turbot in the Baltic Sea: total landings (tons) by ICES Sub-division and country.  
(There are some gaps in the information, therefore "Total" is preliminary)

Year/SD	Denmark					Irm. Dem. Re	Germany, FRG				Poland		Sweden <sup>2</sup>								Latvia		Lithuania	Russia	Finland					Estonia			
	22	23	24(+25)	25	26+27		22	24	25	27	5(+24)	26	22	23	24	25	26	27	28(+29)	26	28	26	26	24	25	29	30	31	32	29	32		
1965						3	39																										
1966	16		21			5	53																										
1967	14		20			7	10																										
1968	14		18			3	67																										
1969	13		13			4	57																										
1970	11		13			5	40							2																			
1971	11		26			4	86							2																			
1972	10		26			3	100							3																			
1973	11		30			3	33				58	13		5																			
1974	14		40			2	23				34	36		6																			
1975	27		48			3	38	15			23	6		7																			
1976	29		24			52	11				14	12		7																			
1977	32		37				55	9			12	55		8																			
1978	33		37			2	27	9			7	3		10																			
1979	23		38			3	39	6			29	34		12																			
1980	28		38				30	9			12	20		15																			
1981	28		62			1	46	8			10	19		7																			
1982	31		51			1	27	7			2	17		3	4				4	3													
1983	33		40			3	9	8			5	4		31	41				35	24													
1984	41		45			4	8	12			13	2		3	4				3	2													
1985	56		34			5	22	15			67	15		4	5				4	3													
1986	99		81			6	32	25			32	37		6	8				7	5													
1987	134		93			4	34	30			155	21		8	11				9	6													
1988	117		117			3	28	34			7	10		12	16				14	9													
1989	135		109			7	22	20				11		11	15				13	9													
1990	178		181			4	2	26			24	25		14																			
1991	228		137					44	39		73	20		2	12				16														
1992	267		127					55	68		80	55		12	12				21	36													
1993	159	29	152					74	56		520	72		2	4	14			13	38													
1994	211	18	166					52	57	10	380	30		2	3	18			17	44													
1995	257	11	94					65	53	4	30	15		2	3	54	9	31	83		34	27											
1996	207	12	95					36	47	4	1	288	92	1	3	15	100	5	54	104	42	3											
1997	151		68					60	52	3	290	70		2	6	70	1	53	86	33	14												
1998	138		80					44	55	1	66	68		2	4	58	1	18	69	12	24												
1999	106		59					23	48		18	15		2	4	41	3	17	60	20	34												
2000	97		58					23	54		90	12		2	3	39		16	39	7	9												
2001	76		53					19	31		121	10		2	5	16		9	29	5	1												
2002	73		22	4	0			20	32	2	245	65		5	2	15		7	21	2	8												
2003	48		28	5	0			10	39	1	184	178		1	2	18		3	14	7	2												
2004	61		27	7				12	27	1	225	96		1	1	8		3	14	3	8												
2005	57	5	36	12				14	35	1	123	57		1	3	6		5	21	1	6												
2006	30	5	16	33				19	45	1	87	11		1	2	5	0	4	19	3	3												
2007	60	5	26	5	0			22	34	0	83	8		0	5	5		2	15	0	1												
2008	79	5	33	6				24	30	0	95	15		1	7	11		8	17														
2009	111	6	35	7	0			33	50	1	92	11		1	6	10	0	5	6	0	0												
2010	102	6	31	4	0			24	35	0	38	1		1	4	16	0	4	8	3	7												
2011 <sup>4</sup>	84	3	24	3	0			26	31	0	66	11		0	0	8	23	0	2	4	3	6											

continued

Table 5.2 continued

Year	Total by SD								Total
	22	23	24 <sup>3</sup>	25	26	27	28(+29)	30-32	SD 22-32
1965	3		39						42
1966	21		74						95
1967	21		30						51
1968	17		85						102
1969	17		70						87
1970	16		55						71
1971	15		114						129
1972	13		129						142
1973	14		68	58	13				153
1974	16		69	34	36				155
1975	45		93	23	6				167
1976	40		83	14	12				149
1977	41		100	12	55				208
1978	44		74	7	3				128
1979	32		89	29	34				184
1980	37		83	12	20				152
1981	37		115	10	19				181
1982	39		81	6	17	4	3		150
1983	44		80	46	4	35	24		233
1984	57		56	17	2	3	2		137
1985	76		60	72	15	4	3		230
1986	130		119	40	37	7	5		338
1987	168		135	166	21	9	6		505
1988	154		157	23	10	14	9		367
1989	162		142	15	11	13	9		352
1990	208		197	24	25				454
1991	272		178	85	20	16			571
1992	322		207	92	85	21	36		763
1993	233	31	212	534	106	13	38		1.167
1994	263	20	226	408	46	17	44		1.024
1995	322	13	150	88	93	31	110		807
1996	244	15	157	392	236	55	107		1.206
1997	211	2	126	363	188	53	100		1.043
1998	182	2	139	125	239	18	93		798
1999	129	2	111	59	144	17	94		556
2000	120	2	115	129	95	16	48		525
2001	95	2	89	137	102	9	30		464
2002	93	5	56	266	135	7	29		591
2003	58	1	69	208	225	3	16		579
2004	73	1	55	241	121	3	22		516
2005	72	5	74	143	104	5	27		429
2006	49	5	61	126	30	4	22		297
2007	83	5	60	94	42	2	16		301
2008	103	6	70	113	46	8	17		362
2009	144	7	91	110	33	5	6		396
2010	126	7	70	58	15	4	15		295
2011 <sup>4</sup>	110	4	82	74	34	2	10	0	316

<sup>1</sup> From October-December 1990 landings of Germany, Fed. Rep. are included

<sup>2</sup> For the years 1970-1981 and 1990 the catches of Sub-divisions 25-28 are included in Sub-division 24

<sup>3</sup> For the years 1970-1981 and 1990 the Swedish catches of Sub-divisions 25-28 are included in Sub-division 24

<sup>4</sup> Preliminary data

Danish catches in 2002-2004 in SW Baltic were separated according to Sub-divisions 24 and 25  
In 2005 Lithuanian landings are reported for 1995 onwards

**Table 5.3. Dab in the Baltic Sea: total landings (tons) of by Sub-division and country.**  
(There are some gaps in the information, therefore "Total" is preliminary)

Year/SD	Denmark				Ger. Dem. Rep. <sup>1</sup>		Germany, FRG				Sweden <sup>2</sup>						Total						Total					
	22	23	24(+25)	25-28	22	24	22	24	25	26	22	23	24	25	27	28	29	30	22	23	24 <sup>3</sup>	25 <sup>5</sup>	26	27	28	29	30	SD 22-30
1970	845		20		11		74											930	20									950
1971	911		26		10		64											985	26									1.011
1972	1.110		30		9		63					23						1.182	53									1.235
1973	1.087		58		18		118					30						1.223	88									1.311
1974	1.178		51		18		118					34						1.314	85									1.399
1975	1.273		74		20		131					32						1.424	106									1.530
1976	1.238		60		17		114					27						1.369	87									1.456
1977	889		32		13		89					25						991	57									1.048
1978	928		51		19	14	128	4										1.075	69									1.144
1979	1.413		50		18	25	123	1				9						1.554	85									1.639
1980	1.593		21		15	25	101					3						1.709	49									1.758
1981	1.601		32		24	39	164					5						1.789	76									1.865
1982	1.863		50		46	38	182	4				6	5	8	6		1	2.091	98	5			8	6			1	2.209
1983	1.920		42		46	28	198					24	20	32	22		2	2.164	94	20			32	22			2	2.334
1984	1.796		65		30	47	175	2				4	3	5	4		1	2.001	118	3			5	4			1	2.132
1985	1.593		58		52	51	187	2				3	3	5	3		1	1.832	114	3			5	3			1	1.958
1986	1.655		85		36	35	185	1				1	1	1	1			1.876	122	1			1	1				2.001
1987	1.706		93		14	87	276	4				1	1	1	1			1.996	185	1			1	1				2.184
1988	1.846		75		22	91	281	1				1	1	1	1			2.149	168	1			1	1				2.320
1989	1.722		48		26	19	218	1				1	1	2	1			1.966	69	1			2	1				2.039
1990	1.743		146		14	11	252	1				8						2.009	166									2.175
1991	1.731		95				340	5				1						2.071	101									2.172
1992	1.406		81				409	6						1	1		4	1.815	87	1				1			4	1.908
1993	996		155				556	10				7	1	1			1	1.552	7	166	1		32	22			1	1.727
1994	1.621		163				1.190	80	45			5	1	1				2.811	5	244	46							3.106
1995	1.510	47	127	10			1.185	49	3			5	1	5		1		2.695	52	177	18				1			2.943
1996	913	37	128				991	134	13	2	3		3	4	1			1.907	37	265	17	2	1					2.229
1997	728		60				413	21	2			5	5	10	3	1		1.141	5	86	12			3	1			1.248
1998	569		89				280	6	2			7	3	3	1			849	7	98	5			1				960
1999	664		59				339	4				3	1	1				1.003	3	64	1							1.071
2000	612		46				212	3				2	1					824	2	49	1							876
2001	586		72				191	5				4	1	2				777	4	78	2							861
2002	502		31				173	5				4						675	4	36								715
2003	559		171				494	7	0			1	0					1.053	1	179	0							1.233
2004	953		185				745	10	0			1	1	0				1.698	1	196	0							1.894
2005	752	34	163	16			474	45	9			1	1	0				1.226	35	209	25							1.495
2006	400	23	112	161			494	24	11			1	2					894	24	138	172							1.228
2007	860	40	108	7			472	18	0			0	0	0				1.332	40	126	7							1.504
2008	757	36	86	222			507	33	0			3	0	1	1	2		1.264	39	119	223			1	2			1.648
2009	521	25	97	0			587	32	0			2	0	0	1	3		1.108	27	129	1			1	3			1.268
2010	552	18	51	0			398	17	2			1	0	0				950	19	69	2							1.041
2011 <sup>4</sup>	544	20	39	0			647	15	0			1	0	1	0	0		1.192	21	53	1			0	0			1.268

<sup>1</sup> From October-December 1990 landings of Germany, Fed. Rep. are included.

<sup>2</sup> For the years 1970-1981 and 1990 the catches of Sub-divisions 25-28 are included in Sub-division 24.

<sup>3</sup> For the years 1970-1981 and 1990 the Swedish catches of Sub-divisions 25-28 are included in Sub-division 24.

<sup>4</sup> Preliminary data.

<sup>5</sup> In 1995 Danish landings of Sub-divisions 25-28 are included.

**Table 5.4. Brill in the Baltic Sea: total landings (tons) by Sub-division and country**  
(There are some gaps in the information, therefore "Total" is preliminary)

Year	Denmark			Germany, FRG	Sweden			Total			Total
	22	23	24-28	22	23	24-28	22	23	24-28	SD 22-28	
1970	4						4				4
1971	3						3				3
1972	7						7				7
1973	11		2				11		2		13
1974	25		1				25		1		26
1975	38		1	1			39		1		40
1976	45		1	2			47		1		48
1977	60		2	5			65		2		67
1978	37			3			40				40
1979	30						30				30
1980	26						26				26
1981	22			1			23				23
1982	19					17	19		17		36
1983	13					42	13		42		55
1984	12					3	12		3		15
1985	16					1	16		1		17
1986	15					3	15		3		18
1987	12					3	12		3		15
1988	5					1	5		1		6
1989	9					1	9		1		10
1990						1			1		1
1991	15						15				15
1992	28						28				28
1993	29	5	1				29	5	1		35
1994	57	4	1			1	57	4	2		63
1995	134	12	1		5	8	134	17	9		160
1996	56	6					56	6			62
1997	25				1		25	1			26
1998	21				1		21	1			22
1999	24				1		24	1			25
2000	27				1		27	1			28
2001	19						19				19
2002	25		0		1		25	1	0		27
2003	35		1		0		35	0	1		36
2004	39		1		1	0	39	1	1		41
2005	50	9	3		0	0	50	9	3		62
2006	42	9	2	3			45	9	2		56
2007	50			5	0	0	55	0	0		56
2008	81	9	3	11	1	1	92	10	3		105
2009	70	7	2	11	1	0	82	8	3		92
2010	65	4	1	10	0	0	76	5	1		82
2011 <sup>1</sup>	46	5	1	4	1	0	50	6	1		57

<sup>1</sup> Preliminary data



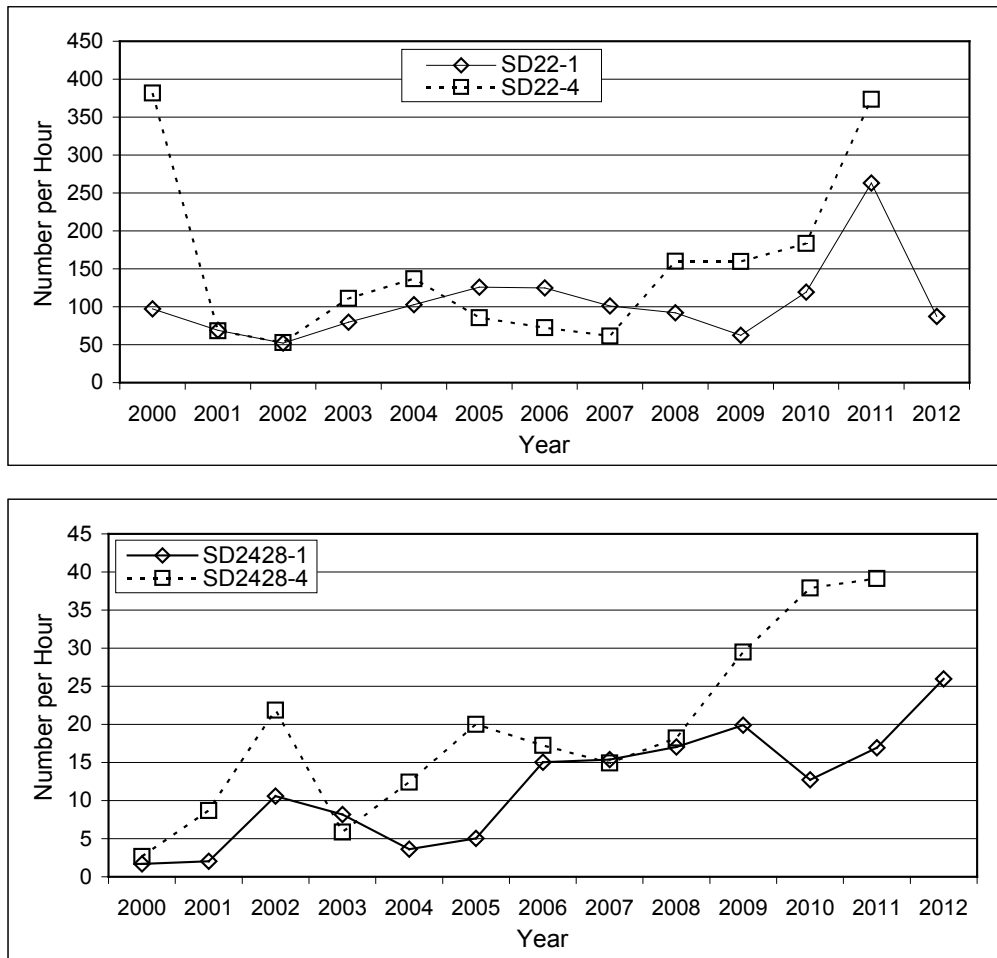


Figure 5.1 Plaiice in Subdivisions 22–32 (Baltic Sea). Catch per unit of effort (number/hour) of fish  $\geq 20$  cm from Q1 and Q4 BITS survey SD22 (upper) and SD24-28 (lower), from ICES DATRAS database. Averages from all (incl. 0 catch) daytime hauls standardised to gear TVL (1.4 \* TVS) and weighted by depth stratum area (stratum 8: area 10-19m only). SDs 29-32 are not sampled representatively by BITS and were therefore excluded from the calculations.

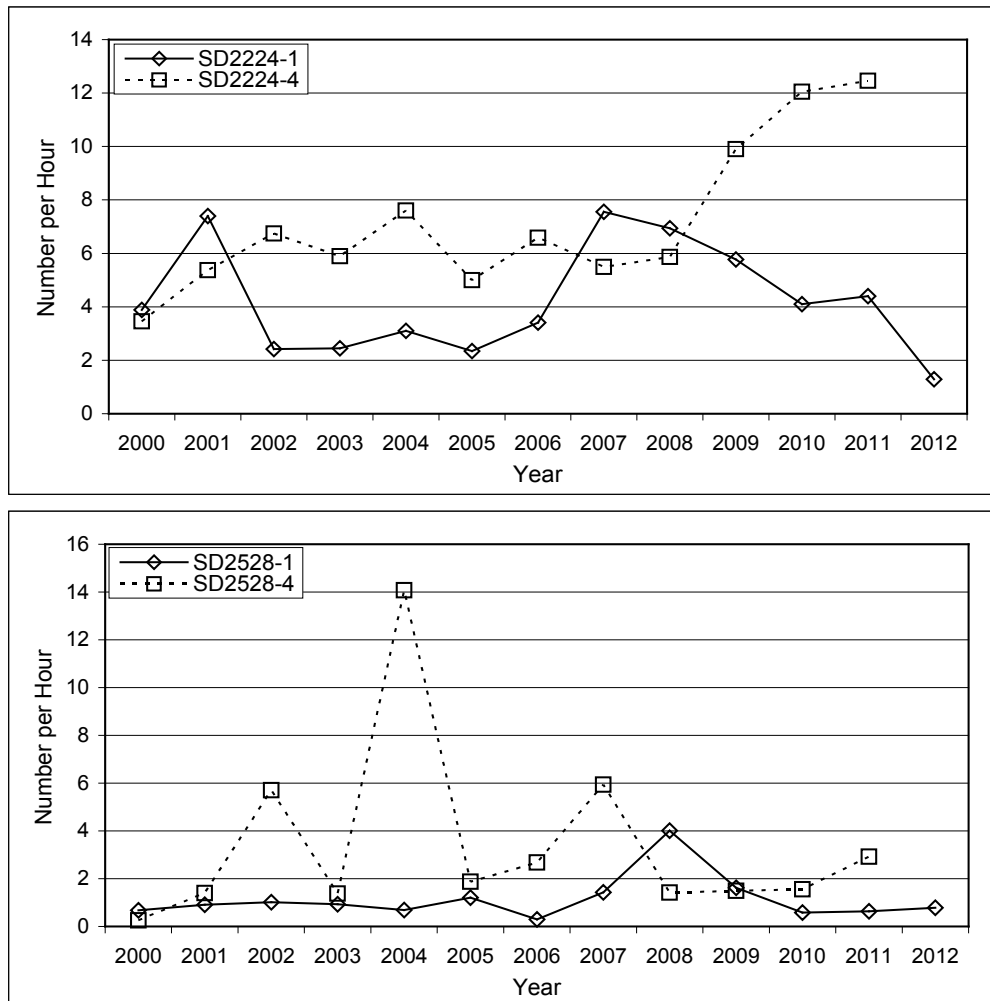


Figure 5.2 Turbot in Subdivisions 22–32 (Baltic Sea). Catch per unit of effort (number/hour) of fish  $\geq 20$  cm from Q1 and Q4 BITS survey SD22-SD24 (upper) and SD25-28 (lower), from ICES DATRAS database. Averages from all (incl. 0 catch) daytime hauls standardised to gear TVL (1.4 \* TVS) and weighted by depth stratum area (stratum 8: area 10-19m only).

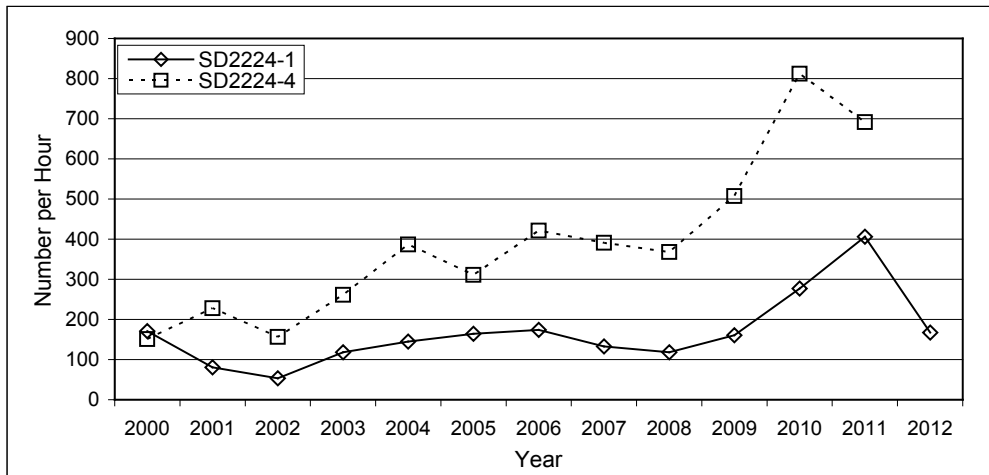


Figure 5.3 Dab in Subdivisions 22-32 (Baltic Sea). Catch per unit of effort (number/hour) of fish  $\geq$  20 cm from Q1 and Q4 BITS survey SD22-SD24, from ICES DATRAS database. Averages from all (incl. 0 catch) daytime hauls standardised to gear TVL (1.4 \* TVS) and weighted by depth stratum area (stratum 8: area 10-19m only).

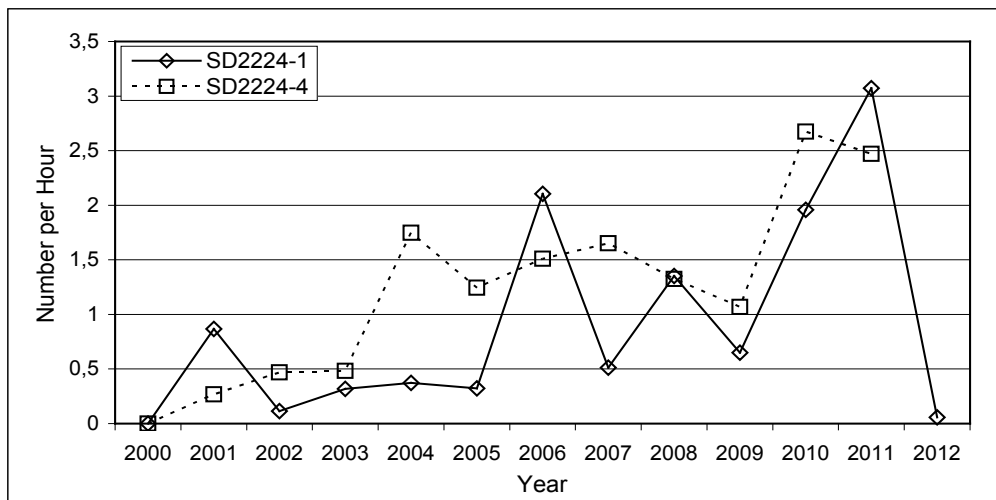


Figure 5.4 Brill in Subdivisions 22-32 (Baltic Sea). Catch per unit of effort (number/hour) of fish  $\geq$  20 cm from Q1 and Q4 BITS survey SD22-SD24, from ICES DATRAS database. Averages from all (incl. 0 catch) daytime hauls standardised to gear TVL (1.4 \* TVS) and weighted by depth stratum area (stratum 8: area 10-19m only).

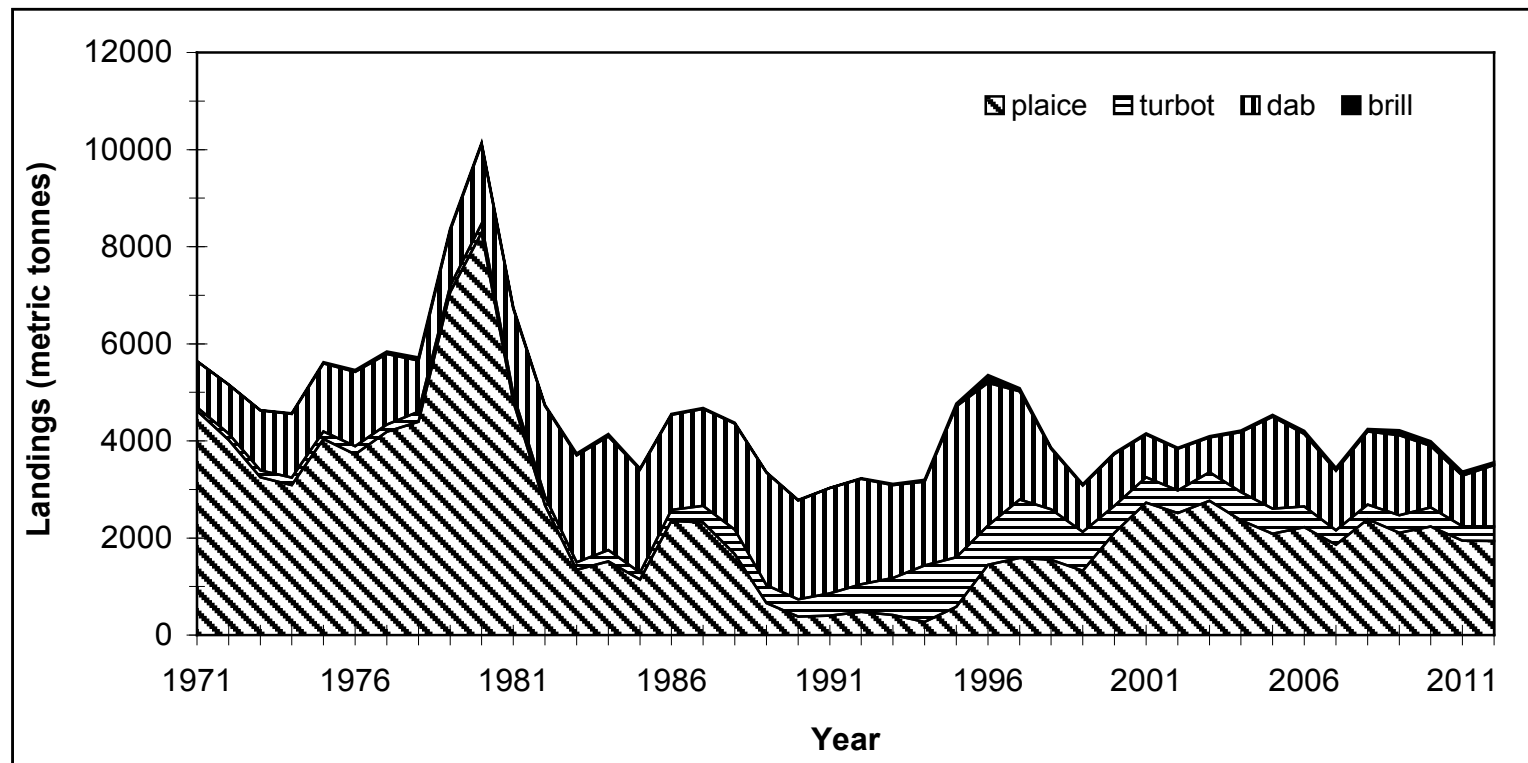


Figure 5.5. Landings of brill, dab, turbot, and plaice in ICES Sub-divisions 22-32 (1970-2011)

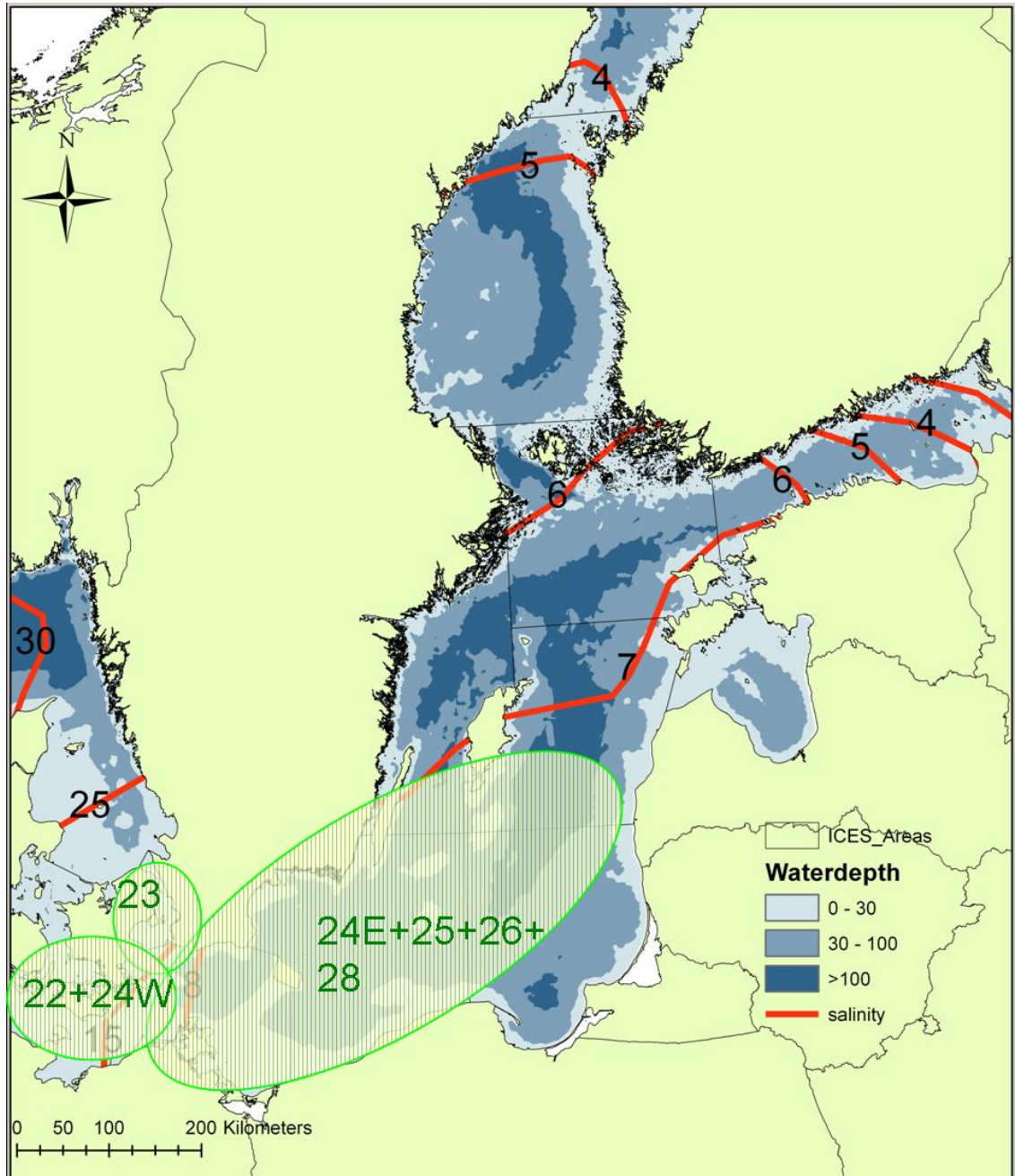


Figure.5.6. Approximate location of three identified stocks of plaice in the Baltic Sea. Numbers within circles refers to ICES SD.

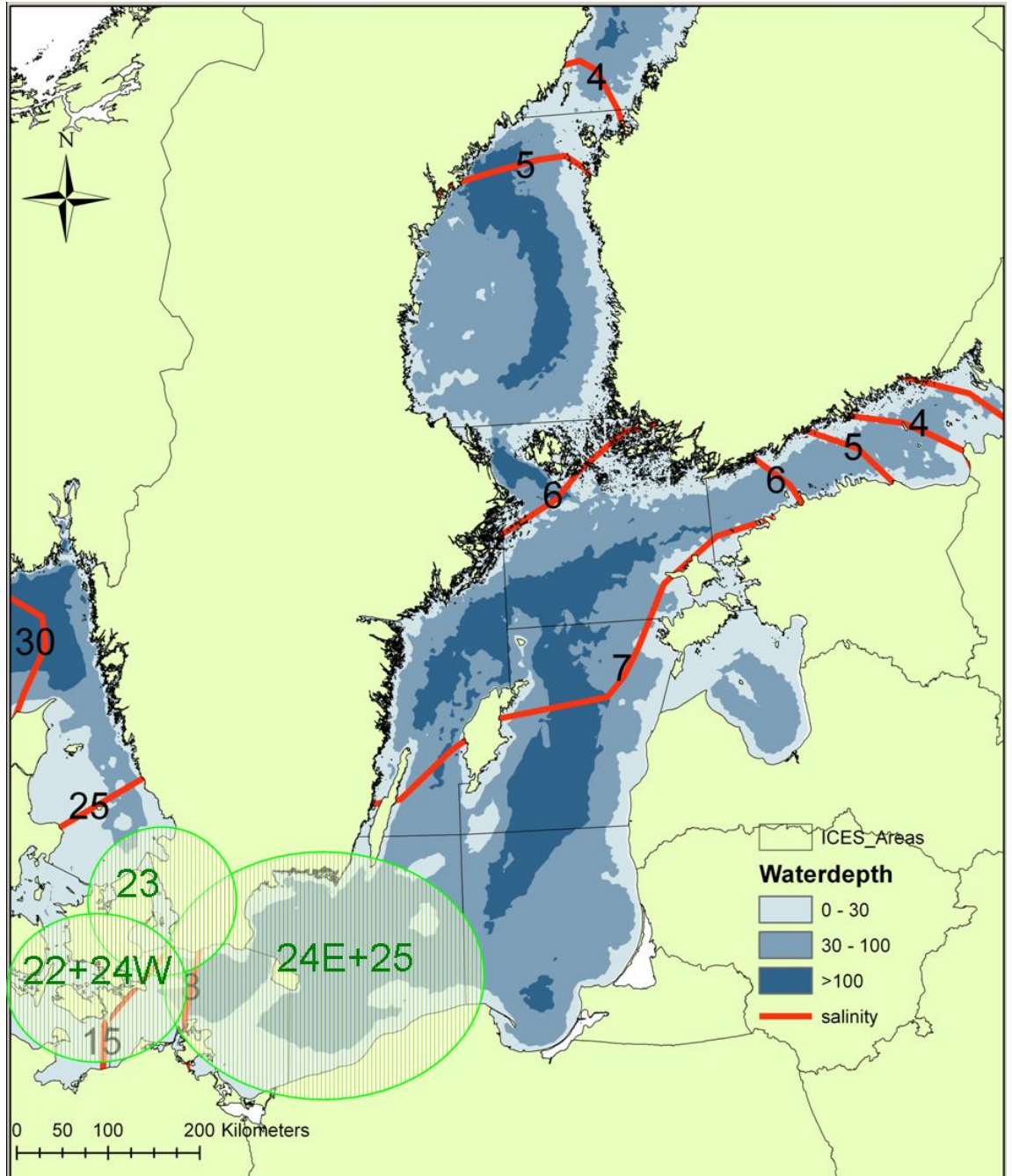


Figure 5.7. Approximate location of three identified stocks of dab in the Baltic Sea. Numbers within circles refers to ICES SD.