Sea trout (*Salmo trutta*) in subdivisions 22–32 (Baltic Sea)

ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, commercial and recreational fisheries for 2022 and 2023 in the southern parts of subdivisions (SDs) 22 and 24 and in subdivisions 25, 26, 27, 29 and 31 (which have negative trends or low recruitment indices) should be reduced to safeguard the remaining wild sea trout populations in the region. Existing fishing restrictions in subdivisions 23, 28, 30 and 32 (which have high recruitment indices) should be maintained.

Management measures to help achieve exploitation reductions include mesh size and water depth restrictions for gillnets, effort reductions, size restrictions, and temporal and spatial fishing closures in river mouths and certain coastal areas. Reductions in exploitation should also include fisheries that target other species but catch sea trout as bycatch.

The improvement of habitats through restoration in many Baltic Sea rivers as well as the improvement of accessibility to spawning and rearing areas is needed for the recovery of sea trout populations.

Stock development over time

Reported catches have declined over time until 2013 and have increased substantially since this time (Figure 1).

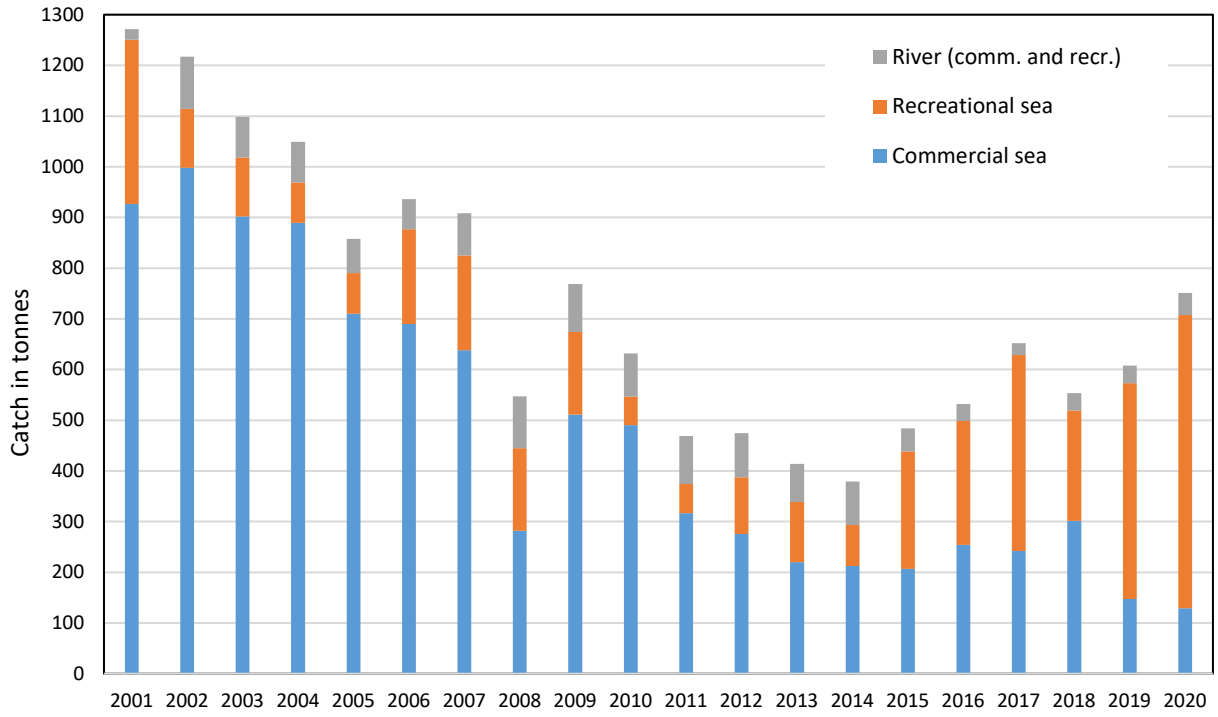

Figure 1 Sea trout in subdivisions 22–32 (Baltic Sea). Reported catches in the years 2001–2020: river catches (mainly recreational) and removals at sea (split into commercial and recreational reported landings). From 2009 the total commercial reported catch is divided according to estimated misreporting of salmon as sea trout in the Main Basin offshore fishery. Total removals from the stock equal the sum of all catches minus the misreported portion.

Parr densities

A decreasing trend is observed in the southern Baltic Sea (SDs 22–25; [Figure 2]). In the eastern Main Basin (SDs 26, 28, and the eastern part of 29), average parr densities have increased in Estonia during the last decade. In the Gulf of Bothnia

(SDs 30 and 31), average parr densities are low in sites located in Swedish salmon rivers but are better and with increasing trends in typical trout streams. In the Gulf of Finland (SD 32), average parr densities have increased in Estonia and Finland.

Recruitment indices

In order to be able to compare recruitment indices from various rivers or areas, a recruitment index has been defined as the observed recruitment (observed densities) relative to the potential expected recruitment based on a model taking into account the specific habitat qualities for the river. A value of 100 indicates that the observed recruitment is equal to the predicted expected potential.

Relative recruitment indices in 2020 relative to the average for 2018–2020 by SD are presented in Figure 3a and by SD and country in Figure 4. Assessed recruitment indices in SD 22 (Mecklenburg–Western Pommerania) are low and decreasing due to very low indices in German streams. This is probably mainly due to adverse climatic conditions but also due to sea fishing. The same is the case in German streams in SD 24 (Figures 3 and 4). In the rest of assessment area South (SD 23–SD 25), there is no clear trend in development (Figure 4).

In assessment area East (SDs 26 and 28), the index is considered to be low (but stable) in Lithuania (SD 26; Figure 4). This is believed to be caused in part by climatic conditions, although sea fishing is also likely to negatively influence populations. In the rest of the assessment area, trout populations seem to be in either good or reasonable states.

Most sea trout stocks in the Gulf of Bothnia (subdivisions 30 and 31) are still considered weak as a result of diminished spawning runs despite a relatively good index in SD 30. Although increasing spawner numbers have been observed in larger rivers over the last fifteen years, absolute numbers of ascending adults are still considered to be low. Bycatch of immature sea trout in sea fisheries (mainly coastal gillnets) continues to be high in the Gulf of Bothnia.

The trends in the in 0+ trout recruitment status in the last five years (Figure 5) show particularly negative trends in subdivisions 24, 25 and 31. While the estimate of the trend is also somewhat negative in subdivisions 27 and 29, there is more variability. In the Gulf of Finland (SD 32) the overall index is high relative to other subdivisions and the trend in development (Figure 5) positive. The index is higher in Estonia and Finland but lower in Russia (Figure 4).

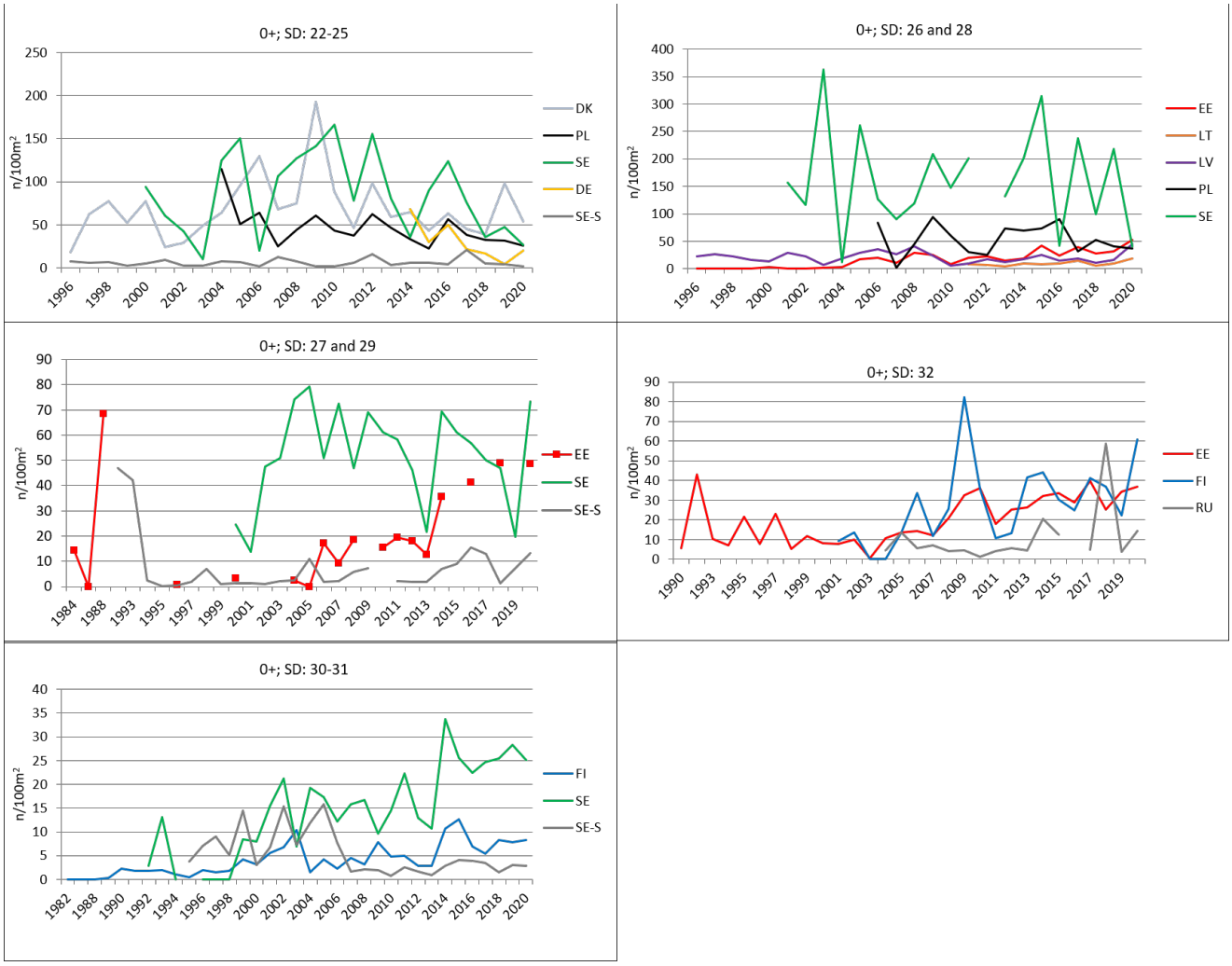

Figure 2 Sea trout in subdivisions 22–32 (Baltic Sea). Average densities of 0+ sea trout in (top left panel) Danish (DK), German (DE), Polish (PL), and Swedish (SE) rivers as well as Swedish salmon rivers (SE-S) in ICES subdivisions (SDs) 22–25; (top right) Estonian (EE), Lithuanian (LT), Latvian (LV), Polish (PL), and Swedish (SE) rivers in SDs 26 and 29; (middle left) Estonian (EE), Swedish (SE), and Swedish salmon rivers (SE-S) in SDs 27 and 29; (middle right) Estonian (EE), Finnish (FI), and Russian (RU) rivers in SD 32; and (bottom left) Finnish (FI), Swedish (SE) and Swedish salmon rivers (SE-S) in SDs 30–31. Note different scales on the *y*-axis. No density estimates were available from Poland (SDs 26–29) in 2005 and Russia (SD 32) in 2016.

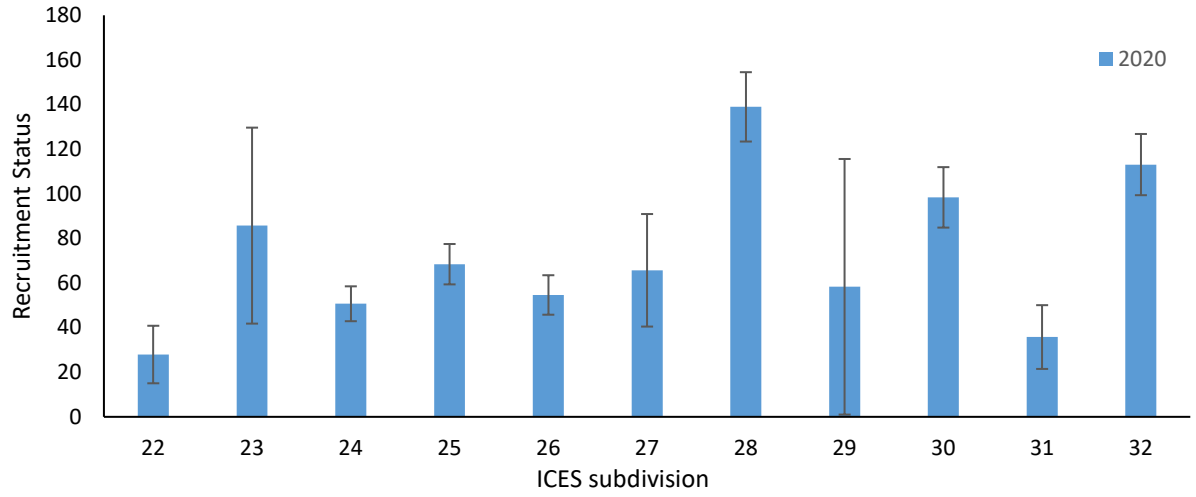

Figure 3a Sea trout in subdivisions 22–32 (Baltic Sea). The average relative recruitment index for 0+ sea trout parr in 2020 (with 95% confidence limits) by subdivision (SD). Recruitment index is calculated as observed parr densities compared to modelled expected parr densities by river system.

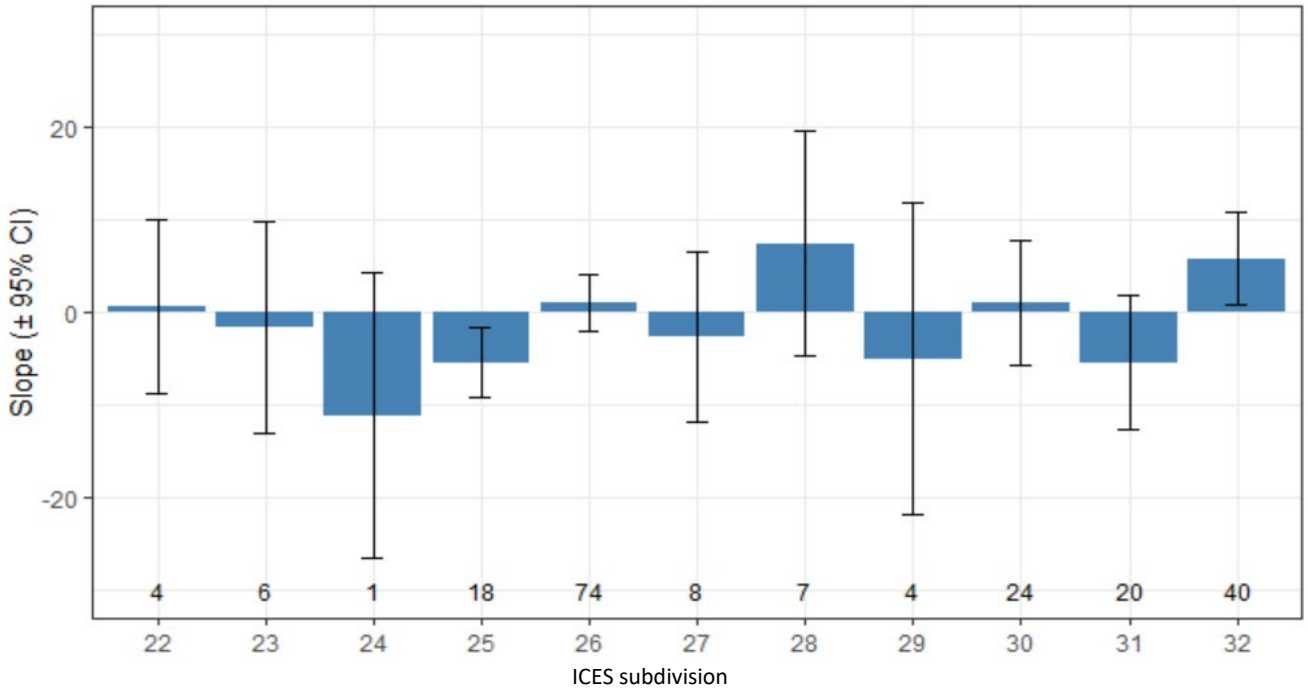

Figure 3b Sea trout in subdivisions 22–32 (Baltic Sea). The trend (linear regression slope with 95% CI) in 0+ trout recruitment status in the last five years by SD (number of sites is denoted above the *x*-axis). Note that trends are calculated by SD and not by individual sites.

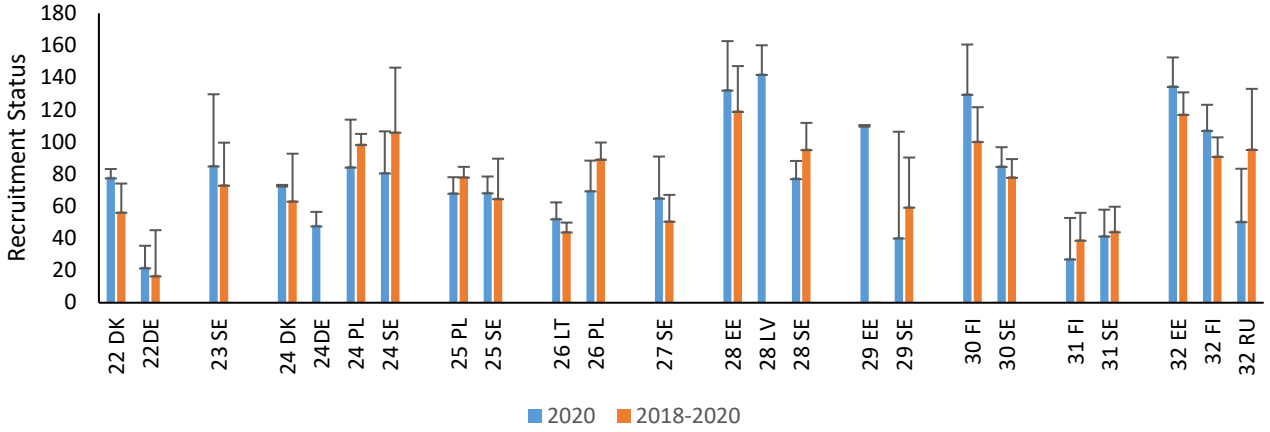

Figure 4 Sea trout in subdivisions 22–32 (Baltic Sea). Average relative recruitment index for 0+ sea trout parr in 2020 (with 95% confidence limits, only upper limit shown) by subdivision (SD) and country. Recruitment index is calculated as observed parr densities compared to modelled expected parr densities by river system. DK = Denmark, DE = Germany, EE = Estonia, FI = Finland, LT = Lithuania, LV = Latvia, PL = Poland, SE = Sweden, and RU = Russia. Note that values for Denmark, Poland, and Sweden in SD 24, and Sweden in SD 28, are based on a single observation, preventing the calculation of confidence limits. The value for Sweden in SD 24 is zero, whereas no data existed in 2018 for Estonia in SD 29.

Catch scenarios

No quantitative assessment or forecast could be provided.

Basis of the advice

Table 1 Sea trout in subdivisions 22–32 (Baltic Sea). The basis of the advice.

Advice basis	Precautionary approach
Management plan	There is no management plan for sea trout in the Baltic Sea

Quality of the assessment

The assessment of sea trout index is based on electrofishing surveys, habitat data, expert knowledge, and other available information (e.g. spawner and smolt counts and sea ages of sea trout caught as bycatch).

Sampling intensity (number of electrofishing sites) varies considerably between countries, with a complete lack of information from Schleswig-Holstein (Germany) and only few sites sampled in Denmark. Data collection could be improved by having indices from more rivers.

In recent years recreational catches have increased, and the assessment would benefit from more accurate information on recreational sea catches.

Issues relevant for the advice

Parr densities are low in some areas and mostly decreasing in the southern areas; total exploitation (recreational and commercial) is considered to be too high to allow recovery, or at least delay the recovery of local populations. Therefore, exploitation rates should be reduced in SDs 30 and 31, the eastern part of SD 26, and the southern parts of SDs 22 and 24.

Despite many years of advice for a reduction in fishery, ICES notes that catches have increased in recent years.

Most of the sea trout in the Baltic Sea migrate to coastal areas near their home rivers and are therefore exploited locally; however, there are stocks, subpopulations, and individuals with much longer migrations. Recent genetic studies indicate that long-distance migrations are more common than previously recognized. This migratory behaviour necessitates international cooperation in management for sea trout stocks.

There is a large variability in the habitat quality of sea trout rivers. Although many rivers should be suitable habitats for sea trout, many populations are reported to be limited by poor habitat conditions and migration obstacles. Habitat restoration and improved connectivity should be promoted where needed, and accessibility to spawning and nursery areas should be secured.

There is growing evidence that increased predation pressure on sea trout, mainly from seals and birds (Jepsen *et al.*, 2018), in some areas constitutes a high mortality factor that may be much higher than mortality due to human exploitation.

Reference points

No reference points are available for sea trout.

Basis of the assessment

Table 2 Sea trout in subdivisions 22–32 (Baltic Sea). The basis of the assessment and advice.

ICES stock data category	3 (ICES, 2021a)
Assessment type	Evaluation of the recruitment index of stocks by comparing the observed parr densities to model-predicted expected parr densities (ICES, 2021b)
Input data	Parr densities from most of the rivers, smolt and spawner counts in some rivers (1990–2020). Catches 1979–2020; international landings, tag returns, age composition
Discards and bycatch	Not included in the assessment, but bycatch is known to be high in some areas. There is no available information on discards.
Indicators	None
Other information	None
Working group	Assessment Working Group on Baltic Salmon and Trout (WGBAST)

History of the advice, catch, and management

Table 3 Sea trout in subdivisions 22–32 (Baltic Sea). ICES advice, management, and landings. All values are in tonnes.

Year	ICES advice	Predicted catch corresponding to advice	Agreed TAC	Reported commercial landings*
2003	No advice	-	-	934
2004	No advice	-	-	926
2005	Implement spatial restrictions, min. mesh size, and effort limitation	-	-	196
2006	Implement spatial restrictions, min. mesh size, and effort limitation. Urgent need to reduce exploitation in SDs 30–32.	-	-	199
2007	Implement spatial restrictions, min. mesh size, and effort limitation. Urgent need to reduce exploitation in SDs 30–32.	-	-	227
2008	Framework for advice under revision. No new advice.	-	-	209
2009	Reduce exploitation in SDs 30–32 and implement fishing restrictions. In SDs 22–29, improve river habitats.	-	-	206
2010	Reduce exploitation in SDs 30–32 and enforce fishing restrictions. In SDs 22–29, improve river habitats and maintain current restrictions.	-	-	158
2011	In SDs 30–32 enforce fishing restrictions, implement min. mesh size and effort limitations, and increase protective areas. In SDs 22–29, improve river habitats and maintain current restrictions.	-	-	139
2012	No new advice, same as for 2011.	-	-	174
2013	Reduce exploitation in SDs 30–32 and maintain current fishing restrictions in SDs 22–29. Improve river habitats.	-	-	137
2014	No new advice, same as for 2013	-	-	131

Year	ICES advice	Predicted catch corresponding to advice	Agreed TAC	Reported commercial landings*
2015	No new advice, same as for 2014	-	-	115
2016	Reduce exploitation in SDs 30–31, eastern parts of SD 26, and southern parts of SDs 22 and 24. Maintain current fishing restrictions in other Baltic Sea areas. Improve river habitats.	-	-	128
2017	Same as for 2016	-	-	99
2018	Reduce exploitation in SDs 30–31, eastern parts of SD 26, and southern parts of SDs 22 and 24. Reduce bycatch of sea trout in fisheries targeting other species. Maintain current fishing restrictions in other Baltic Sea areas. Improve river habitats.	-	-	110
2019	Same as for 2018	-	-	141
2020	Precautionary approach (same as for 2018–2019)			**126
2021	Same as for 2020			
2022	Reduce exploitation in SDs 30–31, eastern parts of SD 26, and southern parts of SDs 22 and 24. Reduce bycatch of sea trout in fisheries targeting other species. Maintain current fishing restrictions in other Baltic Sea areas. Improve river habitats.			

* Total sea trout catches are expected to be much larger, as there are also recreational catches, discards, and potential unreporting.
** Preliminary.

History of catch and landings

Historically, commercial catches have been much larger than present catches. There has been a significant decrease in the commercial catch from 2004 to 2013. The Main Basin is the most important area for the commercial fisheries.

Data on recreational catches are incomplete, but the trend is increasing in recent years (Table 6). Recreational catches at present are more than four times the size of commercial catches.

There is no specific sea trout fishery in the Gulf of Bothnia and the Gulf of Finland, but sea trout are caught as bycatch in fisheries targeting whitefish, pikeperch, and perch. A significant part of this fishery is recreational.

Table 4 Sea trout in subdivisions 22–32 (Baltic Sea). Reported (i.e. nominal) catches (commercial + recreational, and in tonnes round fresh weight) of sea trout in the Baltic Sea in the years 1979–2000. Commercial catches after 2000 are presented in Table 5 and recreational catches after 2000 in Table 6. S = sea, C = coast, and R = river.

Year	Main basin																Total Main Basin	Gulf of Bothnia						Total Gulf of Bothnia	Gulf of Finland				Total Gulf of Finland	Grand total
	Denmark[1]	Estonia	Finland[2]			Germany[4]	Latvia		Lithuania		Poland			Sweden[4]				Finland[2]			Sweden				Estonia	Finland[2]				
	S + C	C	S	S + C	R	C	S + C	R	C	R	S[8]	S + C	R	S[5]	C[5]	R		S	C	R	S[5]	C[5]	R		C	S	C	R		
1979	3	n/a		10		n/a	n/a		n/a		n/a	81[3]	24	n/a	n/a	3	121		6	n/a	n/a	n/a	n/a	6	n/a		73	0	73	200
1980	3	n/a		11		n/a	n/a		n/a		n/a	48[3]	26	n/a	n/a	3	91		87	n/a	n/a	n/a	n/a	87	n/a		75	0	75	253
1981	6	n/a		51		n/a	5		n/a		n/a	45[3]	21	n/a	n/a	3	131		131	n/a	n/a	n/a	n/a	131	2		128	0	130	392
1982	17	n/a		52		1	13		n/a		n/a	80	31	n/a	n/a	3	197		134	n/a	n/a	n/a	n/a	134	4		140	0	144	475
1983	19	n/a		50		n/a	14		n/a		n/a	108	25	n/a	n/a	3	219		134	n/a	n/a	n/a	n/a	134	3		148	0	151	504
1984	29	n/a		66		n/a	9		n/a		n/a	155	30	n/a	n/a	5	294		110	n/a	n/a	n/a	n/a	110	2		211	0	213	617
1985	40	n/a		62		n/a	9		n/a		n/a	140	26	n/a	n/a	13	290		103	n/a	n/a	n/a	n/a	103	3		203	0	206	599
1986	18	n/a		53		n/a	8		n/a		n/a	91	49	7	9	8	243		118	n/a	1	24	n/a	143	2		178	0	180	566
1987	31	n/a		66		n/a	2		n/a		n/a	163	37	6	9	5	319		123	n/a	1	26	n/a	150	n/a		184	0	184	653
1988	28	n/a		99		n/a	8		n/a		n/a	137	33	7	12	7	331		196	n/a	n/a	44	42	282	3		287	0	290	903
1989	39	n/a		156		18	10		n/a		n/a	149	35	30	17	6	460		215	n/a	1	78	37	331	3		295	0	298	1089
1990	48[3]	n/a		189		21	7		n/a		n/a	388	100	15	15	10	793		318	n/a	n/a	71	43	432	4		334	0	338	1563
1991	48[3]	1		185		7	6		n/a		n/a	272	37	26	24	7	613		349	n/a	n/a	60	54	463	2		295	0	297	1373
1992	27[3]	1		173		n/a	6		n/a		n/a	221	60	103	26	1	618		350	n/a	n/a	71	48	469	8		314	0	322	1409
1993	59[3]	1		386		14	17		n/a		n/a	202	70	125	21	2	897		160	n/a	n/a	47	43	250	14		704[6]	0	718	1865
1994	33[3,7]	2		384		15[7]	18		+		n/a	152	70	76	16	3	769		124	n/a	n/a	24	42	190	6		642	0	648	1607
1995	69[3,7]	1		226		13	13		3		n/a	187	75	44	5	11	647		162	n/a	n/a	33	32	227	5		114	0	119	993
1996	71[3,7]	2		76		6	10		2		n/a	150	90	93	2	9	511		151	25	n/a	20	42	238	14		78	3	95	844
1997	53[3,7]	2		44		+	7		2		n/a	200	80	72	7	7	474		159	12	n/a	16	54	238	8		82	3	93	805
1998	60	8		103		4	7		n/a		208	184	76	88	3	6	747		192	12	0	9	39	252	6		150	3	159	1158
1999	110[3,7]	2		84		9	10		1		384	126	116	51	2	3	898		248	12	0	18	41	319	8		93	3	104	1321
2000	58	4		64		9	14		1		443	299	70	42	4	3	1011		197	12	0	14	36	259	10		56	3	69	1339

[1] Additional sea trout catches are included in the salmon statistics for Denmark until 1982.

[2] Finnish catches include about 70% non-commercial catches in 1979–1995, 50% in 1996–1997, and 75% in 2000–2001.

[3] Rainbow trout included.

[4] Sea trout are also caught in the Western Baltic in subdivisions 22 and 23 by Denmark, Germany, and Sweden.

[5] Catches reported by licensed fishermen and from 1985 also catches in trapnets used by non-licensed fishermen.

[6] Finnish catches include about 85% non-commercial catches in 1993.

[7] ICES subdivisions 22 and 24.

[8] Catches in 1979–1997 included sea and coastal catches; since 1998, coastal (C) and sea (S) catches are registered separately.

n/a = Data not available.

\+ = Catch less than one tonne.

Table 5 Sea trout in subdivisions 22–32 (Baltic Sea). Reported commercial catches (in tonnes round fresh weight) of sea trout in the Baltic Sea (2001–2020). S = sea, C = coast, and R = river.

Year	Main Basin																Total Main Basin	Gulf of Bothnia				Total Gulf of Bothnia	Gulf of Finland				Total Gulf of Finland	Grand total	Estimated misreported catch*
	Denmark	Estonia	Finland		Germany	Latvia			Lithuania		Poland			Sweden				Finland		Sweden			Estonia	Finland		Russia			
	S	C	S	C	C	S	C	R	S	R	S	C	R	S	C	R		S	C	C	R		C	S	C	R			
2001	54	2	5	14	10	1	11			2	486	219	11	23	2	3	844	2	54	16	44	115	8	0	17		25	984	
2002	35	5	2	8	12	0	13			2	539	272	53	11	2		954	0	49	25		74	11	0	11		23	1051	
2003	40	2	1	4	9	1	5				583	169	32	8	3		858	0	41	21	0	62	7	0	7		14	934	
2004	46	3	1	5	12	0	7			1	606	122	36	9	3		851	1	39	21	0	61	7	0	7		14	926	
2005	14	4	1	7	14	0	7	1		1	480	86	20	5	3		644	0	46	24	0	70	6	0	11		18	732	
2006	44	10	1	10	12	0	7			1	414	98	17	6	2		623	1	40	20	0	61	9	0	13		23	707	
2007	26	4	2	8	9	0	8			1	354	133	39	6	3		592	0	45	15	0	61	13	0	12		26	678	
2008	18	4	1	11	13	0	8	0	0	2	34	90	48	4	3		236	0	47	19	0	67	8	0	18		26	328	
2009	12	7	1	8	4	0	10	0	0	2	259	103	26	3	3		439	0	46	17	1	64	11	0	17		28	530	−266
2010	8	5	0	6	3	0	5	0	0	2	343	81	30	2	3		489	0	37	20	1	58	11	0	10		22	568	−299
2011	6	5	0	5	3	0		6	0	2	139	65	39	1	2		275	0	33	18	1	53	12	0	10		22	350	−148
2012	11	8	0	5	18	0	4	1	0	3	37	74	26	0	3		191	0	41	18	2	61	14	0	16	0	29	281	−70
2013	4	7	0	6	14	0	5	1	0	11	43	44	8	0	3		148	0	29	14	1	44	12	0	9	0	21	212	−60
2014	10	5	0	6	14	0	5	1	0	5	21	72	28	0	3		170	0	22	11	0	33	10	0	7	0	17	220	−54
2015	8	5	0	4	14	0	4	0	0	6	13	83	7	0	2		145	0	16	13	1	30	11	0	6	0	17	192	−66
2016	1	6	0	3	12	0	5	0	0	4	62	86	3	0	2		184	0	18	10	0	29	14	0	6	0	20	232	−104
2017	6	5	0	3	9	0	4	0	0	1	111	41	1	0	3		184	0	16	9	16	41	13	0	6	0	19	244	−128
2018	3	7	0	1	10	0	6	1	0	7	179	55	3	0	2	0	274	0	13	9	0	22	10	0	6	0	16	312	−170
2019	3	6	0	2	10	0	4	1	0	8	3	82	3	0	1	0	123	0	12	7	0	19	11	0	6	0	17	159	−2
2020	2	6	0	7	2	0	2	0	0	6	1	77	8	0	1	0	116	0	10	6	0	16	11	0	5	0	16	148	−1

Table 6 Sea trout in subdivisions 22–32 (Baltic Sea). Reported recreational catches (in tonnes round fresh weight) of sea trout in the Baltic Sea (2001–2020). S = sea, C = coast, and R = river.

Year	Main Basin									Total Main Basin	Gulf of Bothnia			Total Gulf of Bothnia	Gulf of Finland		Total Gulf of Finland	Whole of the Baltic	Grand total
	Denmark	Estonia	Finland	Germany	Latvia		Lithuania	Poland	Sweden		Finland	Sweden			Estonia	Finland		Finland	
	C+R	C	R	C	C	R	C	R	R		R	C	R		C	R		C	
2001	n/a			n/a			n/a			0.0	7.0			7.0		3.0	3.0	324	334
2002	n/a		0.2	n/a			n/a		2.8	3.0	6.5		38.4	44.9		2.6	2.6	116	166.5
2003	n/a		0.2	n/a			n/a		3.6	3.8	11.1		31.5	42.6		1.6	1.6	116	164
2004	n/a		0.5	n/a			n/a		2.6	3.1	10.6		28.2	38.8		2.1	2.1	80	123.9
2005	n/a		0.5	n/a			n/a		1.5	2.0	10.6		30.9	41.5		2.7	2.7	80	126.2
2006	n/a		0.1	n/a			n/a		1.3	1.4	5.3		32.5	37.8		3.3	3.3	187	229.4
2007	n/a		0.3	n/a			n/a		1.3	1.6	8.2		31.5	39.6		3.1	3.1	187	231.3
2008	n/a		0.2	n/a			n/a		2.6	2.7	8.9		39.7	48.6		2.3	2.3	163	216.6
2009	n/a		0.4	n/a			n/a		2.3	2.7	10.6		45.8	56.4		5.5	5.5	163	227.6
2010	346		0.4	n/a		0.1	n/a	1.6	3.3	351.3	7.3		39.1	46.4		1.2	1.2	56	454.9
2011	224		0.4	n/a			n/a	1.7	2.2	228.3	7.5	1.7	39.3	48.5		2.2	2.2	56	335
2012	260		0.3	n/a			n/a	2.4	2.2	264.9	10.6	2.5	38.9	51.9		3.8	3.8	109	429.6
2013	301	1.4	0.2	n/a	3.0		n/a	n/a	1.3	306.9	10.6	1.5	46.2	58.3	3.3	3.8	7.1	109	481.3
2014	521	1.5	0.3	n/a	3.8		n/a	n/a	0.7	527.3	5.2	1.4	43.0	49.6	3.1	2.2	5.3	71	653.3
2015	395.7	1.7	0.3	151.1	2.9		n/a	n/a	0.6	552.3	1.7		27.6	29.3	4.6	1	5.6	71	658.2
2016	323.1	2.3	0.2	151.1	5.0	0.1	n/a	n/a	0.4	482.3	1.8		21.7	23.6	4.9	0.5	5.4	232	743.2
2017	202.7	1.9	0.3	151.1	3.7		n/a	144.6	0.1	504.5	3.9		15.5	19.4	4.3	0.3	4.6	232	760.5
2018	178.5	0	0	151.1	7.7		n/a	92.4	0.0	429.7	3.0		15.5	18.5	6.4	0.7	7.0	64	519.3
2019	161.7	3	0	151.1	0	0.5	5.5	169.6	0.2	491.7	2.6		26	28.6	4.8	0.3	5.1	64	589.4
2020	179.1	2.3	n/a	151.1	2.3	1.8	8	215.3	2.3	563.1	n/a		24.2	24.2	4.1	0.4	4.5	64	655.7

Summary of the assessment

Assessment results are presented at the beginning of the advice document (Figures 1–4).

Table 7 Sea trout in subdivisions 22–32 (Baltic Sea). Summary of the assessment. Average densities of sea trout parr (age 0+) in rivers in subdivisions 22–32, by country: Denmark (DK), Poland (PL), Sweden (SE), Swedish salmon rivers (SE-S), Germany (DE), Estonia (EE), Lithuania (LT), Latvia (LV), Finland (FI), and Russia (RU). All values are in n × 100 m^{-2} (same data as in Figure 2).

Year	DK	PL	SE	SE-S	DE	EE	LT	LV	PL	SE	SE-S	FI	SE	SE-S	EE	FI	RU
	Subdivisions 22–25					Subdivisions 26–29						Subdivisions 30–31			Subdivision 32		
1990												2.2			5.5		
1991												1.8					
1992				11							47.0	1.8	2.8		43.1		
1993				19							42.0	1.9	13.1		10.4		
1994				18							2.5	1.0	0		7.2		
1995				6							0.2	0.4		3.7	21.7		
1996				8		0.9		22.8			0.3	2.0	0	7.1	7.6		
1997				6		0		26.6			1.9	1.5	0	9.1	23.1		
1998	29.7			7		0		21.9			6.9	1.7	0	5.1	5.3		
1999	7.3			3		0		16.7			0.9	4.2	8.5	14.4	11.8		
2000	20		79.1	5		3.1		13.3		24.5	1.2	3.2	8.1	2.9	8.1		
2001	1		79.1	9		0		29.5		67.4	1.4	5.6	15.5	6.8	7.8	9.4	
2002	9.4		88.1	3		0		22.2		58.1	1.0	6.7	21.2	15.4	9.9	13.6	
2003	34.8		73.2	3		1.6		6.4		117.6	2.0	10.3	6.9	7.2	0.4	0.0	
2004	41	114.5	130.6	8		3		18.3	14.2	68.6	2.3	1.5	19.2	11.9	10.8	0.2	4.6
2005	96.1	51.2	122.1	7		15.4		29.2		107.3	11.0	4.3	17.4	15.8	13.5	13.6	13.8
2006	129.8	64.1	59.8	2		19		36	83.8	63.5	1.9	2.3	12.2	7.6	14.3	33.5	5.6
2007	60.9	25.2	111	13		10.2		26.6	1.8	75.1	2.1	4.5	15.7	1.7	12.2	11.7	7.0
2008	79.2	43.8	130.9	7.7		25.2		40.4	45.1	57.2	5.7	3.1	16.7	2.1	20.8	25.7	4.2
2009	192.5	60.6	104.6	1.8		25		23.6	93.8	97.1	7.2	7.9	9.6	1.9	32.6	82.2	4.7
2010	90	43	139.5	1.8		11.1		6.1	59.8	78.4		4.8	14.4	0.8	36.3	35.9	1.3
2011	42.6	37.8	101.9	5.7		19.7	8.2	9.3	30.9	87.0	2.2	5.0	22.2	2.6	17.9	10.7	4.0
2012	95.2	62.2	117.4	16.2		20.1	6.6	17	24.6	46.0	1.9	2.8	12.9	1.7	25.1	13.3	5.6
2013	60.7	46.3	61.7	3.6		14.6	4.4	12.2	73.6	45.4	2	2.9	10.6	0.9	26.5	41.5	4.4
2014	65	33.4	96.7	5.7	68.1	25.8	9.6	17.2	69.2	88.1	7	10.7	33.7	2.8	32.3	44.1	20.6
2015	43.1	22.2	95.9	5.9	30.2	42.5	8.6	25.3	73.2	97.3	9	12.6	25.6	4	33.7	30.5	12.4
2016	63.4	56.6	101.6	4.5	50.3	33.9	10	14.7	90	53.7	15.4	7.0	22.5	3.9	28.8	25	
2017	45.3	38.2	61.8	21.1	22	39.2	14.6	18.8	32.1	90.3	12.9	5.4	24.7	3.5	39.9	41.2	4.8
2018	39.3	32.1	21.9	5.2	16.5	39.3	5	10.7	52.4	58.0	1.2	8.4	25.4	1.5	25.1	36.8	58.6
2019	98.2	31.8	105.6	4	3.9	31.7	8.9	16	40.9	65.4	7.2	7.8	28.4	3	34.4	22.3	3.9
2020	53.8	25.5	53.5	1.8	20.0	50	19.3	45.1	37.4	68.2	13.1	8.3	25.1	2.9	36.9	61.0	14.2

Sources

Jepsen, N., Flávio, H., and Koed, A. 2018. The impact of Cormorant predation on Atlantic salmon and Sea trout smolt survival. Fisheries Management and Ecology, 26: 183–186. https://doi.org/10.1111/fme.12329.

ICES. 2021a. Advice on fishing opportunities. *In* Report of the ICES Advisory Committee, 2021. ICES Advice 2021, section 1.1.1. https://doi.org/10.17895/ices.advice.7720.

ICES. 2021b. Sea trout. In Baltic Salmon and Trout Assessment Working Group (WGBAST), Section 5. In prep. Section 5 is available separately at the WGBAST Community site.

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