

## 7 Sea Trout 2008

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### 7.1 Nominal catch

The total sea trout catch in the Baltic Sea was 904 tonnes in 2007 which is 30 tonnes less than in 2006. Catches of sea trout gradually increased from 200 t in 1979 to 1,865 t in 1993. In 1994-1999 except for the years 1996-1997 catches have been at a level of 1,000-1,300 tonnes. Since year 2000, however, a decreasing trend has prevailed (Tables 7.1.1 and 7.1.2).

The Main Basin is still the most important area for sea trout catches. Total catches have decreased from 1,023 t in 2002 to 620 t in 2007. Of these, close to 85% were caught by Poland. Catches in the Gulf of Bothnia have from 1996-1998 until 2001 been around 200 -300 tons, since then have been decreasing to around 120-130, rising in 2007 to 196 tonnes. In the Gulf of Finland catches decreased from 100-150 tons in years 1996-1999 to 30-50 tonnes in 2002-2006 with an increase in 2007 to 87 tonnes (Tables 7.1.1 and 7.1.2).

#### 7.1.1 Sampling of sea trout

Sampling strategies for biological samples and procedures for sea trout are very similar to those of salmon and are described in section 2.6. In total just under 2000 sea trout were sampled (Table 7.1.1.1).

### 7.2 Status of wild and mixed sea trout populations

The development in the populations has varied between different parts of the Baltic sea.

In the northern part of the Baltic around Finland populations have been declining after the beginning of the 1990's and are at a low level much below estimated potential production, partly due to high sea mortalities because trout are caught as bycatch in coastal fisheries for whitefish (Heinemaa *et al.* 2007), and coastal herring fishery in Poland (Jokiel 1955). In most of the streams in Sweden the state of the populations is uncertain. In most other countries the production has also been declining and is estimated to be much below the potential maximum. There are several reasons for this, such as capture as bycatch, poor habitat conditions, and migration barriers.

#### 7.2.1 Monitoring methods

Monitoring sea trout populations in the Baltic area is carried out in all countries around the Baltic sea. The intensity and period during which monitoring has been going on varies between countries. Some countries started monitoring during recent years, while very long data series exist for a few streams (ICES 2008).

In all countries monitoring is carried out by surveying densities of parr in the nursery streams. This is in a couple of countries used to calculate the smolt production by a relation of parr to smolt survival either developed in the same stream or in different streams (ICES 2008).

In most countries (not in Denmark or Poland) this is supplemented with monitoring of smolt escapement by trapping and counting smolt numbers in one or more streams.

In only three rivers (all in Sweden) the number of spawners is monitored by trapping and inspection of the ascending sea trout. In another 12 rivers (one in Poland and the remaining in Sweden) the number of spawners is monitored by automatic fish counters, where accurate determination of species, size, sex etc. is not possible.

An indication on spawning intensity is collected in Poland and Lithuania by counting redds in a number of streams (ICES 2008).

### 7.2.2 Gulf of Bothnia

Sea trout populations existed previously in numerous small rivers and brooks and in most salmon rivers. Sea trout smolt production was estimated to be 10–20% of salmon smolt production in most salmon rivers. Presently a total of 56 rivers and brooks still exist in Gulf of Bothnia, of which 25 are wild and 31 are mixed populations (Table 7.2.2.1).

The condition in the sea trout populations in the 51 Swedish rivers with sea trout is very uncertain. Out of five Finnish rivers with sea trout the status in three of these populations is poor. Catches have declined considerably over a long time period, indicating reduction in population size. As an example catches in the River Torne are presented in Figure 7.2.2.1.

Population disappearance has to a large extent been caused by human activities affecting the freshwater habitats of sea trout, mostly by damming, dredging, pollution and siltation of rivers (Table 7.2.2.2).

It is also obvious that many small populations have been depleted or are threatened by a very effective gill net fishery during feeding and spawning migration in the sea.

Carlin tagging results of the northern populations in the Gulf of Bothnia show a large and increasing proportion, often the majority, of the sea trout to be caught during the first year in sea. The trout are caught as by-catch in the whitefish fishery by gill nets and fyke nets. Based on the tagging data, the proportion of fish caught undersized during the first sea year is still increasing even though the relative effort of gill net fishery by professional fishermen has been reduced only slightly during the past ten years (Figures 7.2.2.2, and 7.2.2.3). In the Gulf of Bothnia sea trout become mature mainly after 3 sea winters (SW) (>55 cm). According to the tagging data less than 5 % of the catch has been 3SW or older fish in the last 15 years. Particularly in the Finnish side of the Gulf gillnet fishing effort has increased over the last 15 years. In addition, the development of the net materials has improved the efficiency of gillnets, especially for the youngest age groups. The Finnish sea trout migrate partly to the Swedish side of the Gulf of Bothnia (ICES 2004). The Finnish tagging data indicate about 15% of the tags to be caught at the Swedish coast. Correspondingly Swedish sea trout have been caught at the Finnish coast (about 20 tag recoveries annually in the last few years). In some rivers even angling of sea trout parr as local brown trout may decrease parr and smolt production considerably. Knowledge of the status of the remaining populations is limited. Anyhow, all available data indicate that the larger part of the populations in the northern part of sub-division 31 is so small that only a few spawners enter these rivers annually.

The results of the electro fishing surveys indicate decreasing and very low densities of parr in many streams and the sea trout populations are thus in a precarious state on both the Swedish (sub-division 31) and the Finnish side of the Gulf of Bothnia (sub-divisions 30 and 31) and in the Gulf of Finland (sub-division 32) (Table 7.2.2.3 and 7.2.2.4).

Estimates of the historical annual wild smolt production in Sub-divisions 30 and 31 ranges between 120,000–170,000 individuals, but present smolt production is assumed to be much lower. Smolt trapping results from River Tornionjoki in 2004 suggested that the wild trout production was about 12,000 smolts in the whole river system.

### 7.2.3 Gulf of Finland

The situation of the sea trout populations in the Gulf of Finland is similar to that in the Gulf of Bothnia. The number of streams with sea trout has been revised and it is now estimated that there are 193 rivers and brooks in this region (Table 7.2.3.1 and Table 7.2.3.2), out of them 81 have wild stocks. The rest are supported by releases.

Status of populations in 32 rivers is unknown and status of 17 is very poor.

Main factors influencing the status of stocks are overexploitation and habitat degradation (Table 7.2.2.2 and 7.2.3.3). Another factor is that offshore fishery takes part of the fish before they have reached maturity. The natural reproduction is about 5,000 two-years-old trout per year (ICES 2003). Assuming that all reproduction areas in the present rivers are used, the total production capacity of all rivers could be of 100,000-150,000 two-year-old trout smolts annually.

The only available information on parr densities of sea trout in the Finnish rivers of the Gulf of Finland shows 4-38 individuals per 100 m<sup>2</sup> (Table 7.2.2.4).

The production of wild smolts in Estonian rivers was estimated a few years ago to be around 60,000 smolts and decreasing in later decades.

Sea trout populations exist in 41 Estonian rivers and brooks in the Gulf of Finland region out of them 32 have wild populations (Table 7.2.3.1). Parr densities in Estonian rivers in 1996–2007 varied highly between 0 to 98 0+ parr and between 0 to 54 1+ parr per 100 m<sup>2</sup> (Table 7.2.3.4). Rivers with higher smolt production are situated in the central part of the North Estonian coast.

Also in the Gulf of Finland sea trout are partly migrating to waters in neighbouring countries. Finnish tagging results show about 5-10% of the tag recoveries being returned from Estonia and some also from Russia. Correspondingly Estonian tagged sea trout has partly been recaptured at the Finnish coast.

The wild sea trout populations in the Finnish part of the Gulf of Finland are in a very poor condition (Table 7.2.3.1). The main threat is a high exploitation rate in the gillnet fishery, including by-catches in the effective whitefish and pikeperch fishery in the Gulf of Finland. The age structure of the catch has changed so that the proportion of young age groups has during last ten years considerably increased. To protect the sea trout populations, regional and/or local fisheries regulations should be carried out in order to decrease the exploitation. Also enhancement activities are necessary.

Sea trout is a protected species in the Russian waters discharging to Gulf of Finland. Wild sea trout populations are found in 46 Russian rivers or streams (Table 7.2.3.1 and Table 7.2.3.2). Out of 22 rivers with known status 12 of them is in poor state mainly due to human activity (Table 7.2.2.2 and Table 7.2.3.3). The majority of sea-trout rivers and brooks are situated in the north coast of Gulf of Finland, but the rivers with higher smolt production are in the southern area. The total smolt production was estimated to be minimum 10,000-15,000 smolts. Smolt trap experiments indicate that between 2,500 and 8,000 sea trout smolts of natural origin migrates to the sea from the largest Russian trout river Luga annually. The observed smolt number was in 2007 approx. 5,000 compared to 2,800 in 2006. Parr densities of sea trout in the

Russian rivers have in recent years been on average between approx. 5 and 14 parr per 100 m<sup>2</sup> (Table 7.2.3.5).

#### 7.2.4 Main Basin

In the Main Basin there are 789 rivers and streams with sea trout populations and of these 387 are wild.

The status of sea trout populations is known in 146 and unknown in 168 rivers with wild populations (Table 7.2.3.1 and Table 7.2.3.2). Status of 110 populations is poor, mainly due to habitat degradation and dam building (Table 7.2.2.2 and Table 7.2.3.3).

In the western part of the Baltic Sea, the trout populations have improved in recent years. This is the case in both Denmark and southern part of Sweden. While the situation in Denmark is still far from optimal, the main reason for the improvement is increased accessibility to spawning and rearing areas, improvements in spawning possibilities, habitat and water quality. This has been achieved by removal of impassable barriers and replacing non-functional fish passes with by-passes where other organisms can also pass (i.e. no cascades). In addition the area with useable spawning material has been increased by adding spawning gravel to many streams. Through restoration projects the habitat quality has been improved in some streams, either by restoration or by changes in stream maintenance.

At the same time the number of spawners has increased due to improved survival during the sea phase of the sea trout. This is believed to be a result of restrictions in both recreational fishing (minimum distance for gill nets is 100 m from the low water mark, in certain areas submersing the upper part of pound nets and use of grids in the entrance of fyke nets to prevent otter from entering the tackle, which also prevents large size fish such as adult sea trout in entering the trap), and by continued revision of closed areas around river mouths (Heinemaa *et al.* 2007). Thus, the Danish trout populations are improving, even if they are still not near the potential production if habitat conditions were optimal.

Specifically, erosion and bed-load transport of fine sediment (sand) affects the survival of trout eggs in spawning nests and also uniforms the physical shape of the streams.

In Estonia, sea trout occurs in 31 rivers and brooks discharging into the Main Basin. All of them are small and have mostly wild populations. The condition of populations in most cases is weak varying much between years. The Rivers Pidula and Öngu have dams close to the outlet. Below the dams are rearing stations taking water from reservoirs.

In Latvia, sea trout occur in 15 rivers and in a few small rivers and brooks discharging into the Gulf of Riga and Baltic Main Basin. The Salaca, Gauja and Venta rivers have the highest wild smolt production in Latvia. Sea trout populations were supported by releases of reared fry, parr and smolt mostly into the upper sections of dammed rivers. Wild sea trout parr were monitored by electrofishing surveys (the rivers Salaca, Gauja, Venta, Saka, Vitrupe, Riva basins) and by smolt trapping (the river Salaca). Estimated production in all Latvian rivers in 2007 was about 61 thousand smolts.

In Sweden 207 sea trout rivers are found in the Main Basin. Out of them 200 have natural sea trout populations, and seven were supported by releases. Data on status of most of Swedish rivers are not available. In the rivers Mörrumsån and Emån, the

densities of parr increased considerably in 2007 compared to previous years (Table 7.2.4.1).

In Lithuania there are nine sea trout rivers, six of them belong to the Nemunas drainage basin. In two rivers there are wild populations. The current total natural smolt production is estimated to be about 26,000 smolts. The parr densities obtained from electrofishing survey in general increased from previous years (Table 7.2.4.2).

Most of Polish rivers had larger populations of sea trout than salmon in the past. All Polish sea trout are of the widely-migrating type. Currently they occur in 23 rivers, mainly in Pomerania (10) but also in Vistula R.(4) and Odra R. (7) systems. All are mixed due to stocking for many years.

River catch totalled of 15,133 fish (38,6 t). Main source of river sea trout catch are Vistula R. and Pomeranian rivers. In other rivers only recreational and brood stock fishery exists. Spawning areas in all rivers are reduced by many impassable dams. After construction of a hydro power station in the Vistula (Wloclawek) the catch of ascending sea trout in this part of the river was reduced, and remained at a lower level than prior to dam construction (Figure 7.2.4.1). An inventory of spawning nests have been done in a few Pomeranian rivers: the numbers of nests were from very few in Drawa R. (Odra) to 389 in Leba R. Numbers of nests were in all rivers, except Leba, much lower than within last few years. The density of parr was estimated for only a few sites in Pomeranian rivers (Table 7.2.4.3). Electrofishing on spawning areas of some rivers shows that the densities of both 0+ and older parr vary with years but in some places is still very high.

In recent years predators such as cormorants (*Phalacrocorax carbo*) have increased dramatically in the Baltic area. Studies have shown that cormorants can have severe effects on fish stocks (Leopold *et al.* 1998). Where large cormorant colonies occur in the vicinity of important salmonid rivers, there are good reasons to investigate whether cormorants have a significant negative impact on the stock.

In 2007 a massive occurrence of Ulcerative Dermal Necrosis (UDN) was observed during October-November in sea trout spawners from Pomeranian rivers: Slupia, Parseta, Rega and in Gulf of Gdansk. In previous years this disease occurred very seldom and in much less scale. Due to UDN over 1000 spawners were sent to utilization as a food for animals from river Slupia. . In the Gulf of Gdansk daily catches of sea trout in coastal fisheries in many cases was affected to 100% by UDN and these were also used for animal feed.

The probably reasons were higher than normal water temperature in rivers and/or effluents of unknown origin. However, eggs obtained from the spawners are developing well in the hatchery.

In Denmark, due to improvements in habitat and water quality resulted in an increased smolt production in recent years. It is estimated that the number of wild smolts produced in Danish rivers is approx. 215,000 smolts annually. Available information on parr densities from the Danish island Bornholm shows some of the highest parr densities in the Baltic Sea area, however these fluctuates considerably between years (Table 7.2.4.4). The variation in these populations is in general caused by varying water flows.

### 7.3 Reared smolt production

In Finland, about half of the releases have been made straight to the coast independent of any rivers. The other half are more or less releases to dammed rivers

like in Sweden. The sea trout fishery in the Gulf of Bothnia and in the northern part of the Gulf of Finland therefore primarily exploits feeding fish or fish on their spawning run. Due to continuous releases of hatchery-reared fish, the sea trout fishery is almost independent of natural reproduction. On the other hand, at least the wild sea trout populations in Sub-division 31 are so weak, that they do not support any fishery. In the other areas, the situation is better, but there also exist populations, which are near to extinction.

In Finnish rivers spawners are scarce, but the eggs obtained from nature are sufficient to supplement hatchery spawners and to avoid the effects of inbreeding, since smolt production is totally based on reared brood stocks. Enhancement with eggs, fry and parr is conducted annually into several rivers with natural production (Tables 7.3.1., 7.3.2 and 7.3.3). Stocking with reared sea trout smolts was rather stable during the last two years (Table 7.3.3).

In Swedish rivers in the Gulf of Bothnia, the number of spawners varied among rivers but in most of them the number of sea trout spawners was sufficient for brood stock purposes. Stocking with smolts since 80's was on average level of 400,000 - 600,000 smolts (Tables 7.3.2 and 7.3.3).

In Estonia sea trout is produced in two hatcheries: in Ongu (Hiiumaa Island) and in Polula (northern Estonia). The number of spawners obtained was sufficient for rearing in both hatcheries. The production consists mostly of two-year-old smolts which are released into coastal waters. Releases were kept on level of 30,000 until 2003, and then they dropped to a level of 20,000 (Tables 7.3.2 and 7.3.3).

All Polish sea trout rivers are dammed and the spawning grounds are small, requiring the sea trout population to be supported by stocking. Juvenile fish are reared from spawners caught in each river separately. Tagging experiments showed that many smolts released to lower parts of Pomeranian rivers stray and their sea trout population can be mixed, though. Annually about 2.5 mill. Vistula sea trout eggs and 5-8 million sea trout eggs are collected from Pomeranian rivers; which is enough for rearing purposes. More than 6 million alevins and fry, and 1.4 million of smolts were released to Polish river in 2007 (Table 7.3.1, 7.3.2 and 7.3.3).

Danmark and Sweden released 400,000 and 170,000 smolts in 2007. Latvian releases since 1999 have increased up to 230,000 in 2007 (Table 7.3.3).

Latvian, Polish and Swedish releases of smolts are carried out in rivers and river mouths, but a majority of Finnish smolts and part of Estonian smolts are released directly into the sea. Future releases in Denmark will take place only in river mouths.

Enhancement releases with eggs, alevins, fry and parr carried out in 2007 will give additional smolt production in 2008-2010 years in whole Baltic Sea (Sub-div 24-32) of 175,000 smolts, of which 119,000 will migrate in 2010 into the Main Basin, mainly (Table 7.3.1). Total number of smolts in 2008 from enhancement releases in past years is estimated to about 200,000 which is still less than in the very beginning of 2000<sup>th</sup> (Table 7.3.2).

Total number of reared smolts released in sub-div 22-32 in 2007 was 3,910,000 and was on similar level as in 2006. Out of this 2,500,000 smolts were released into the Main Basin, 1 100,000 into the Gulf of Bothnia and 300,000 into the Gulf of Finland (Table 7.3.3).

## 7.4 Tagging

Data on numbers of adipose fin-clipped sea trout are given in Table 7.4.1. In almost all cases fin-clippings were aimed at distinguishing between reared/enhanced sea trout from the wild production. There is a continuous increasing trend in number of fin-clipped parr and smolt since 2003.

In 2007 31% of all reared sea trout smolt production was fin-clipped, which was more comparing to 2006.

The total number of fin-clipped sea trout smolt was 1 200,000 and was 33% lower than in 2006.

Most fin-clippings (in numbers) were carried out in Sub-divisions 30 and 31.

Starting in 2005 it is mandatory in Sweden to fin-clip all reared salmon and sea trout.

The majority of the Estonian sea trout smolts were not fin-clipped in 2007. In Latvia only 2 year old smolts, constituting about half of the smolt releases were fin clipped. In Poland all released sea trout smolts were adipose fin clipped.

### 7.4.1 External Tagging

In 2007 the total number of tagged sea trout was 79,500 (Table 7.4.1.1).

The recapture rate of both salmon and sea trout shows rather decreasing trend in last years in the Gulf of Bothnia, Gulf of Finland and Main Basin (Figures 7.4.1.1 and 7.4.1.2), however, recapture rate has been even lower in the Baltic Main Basin (0.2–7.0%). In the Gulf of Bothnia recapture rate was at similar level in Swedish and Finnish tagging in 1980–2002. Based on Finnish data, there a lower recapture rate of salmon and sea trout in the Gulf of Bothnia than in Gulf of Finland is observed. Tagging results indicates a long-term variation in the survival and the fluctuation seems to follow the same path in all countries. According to tagging data the survival of the released smolts is at present lower than a long-term average.

There is a need to increase tag reporting rates in most of countries since increased returns will substantially improve the quality of salmon assessments.

## 7.5 Recommendations for management actions

### 7.5.1 Gulf of Bothnia and Gulf of Finland

The Working Group recommends urgent restrictions for the sea trout fishery, where trout are caught both purposely and as a by-catch. A spatial fishing restriction, minimum mesh size for gillnets and effort limitations should be implemented for the fisheries in the sea and rivers in each region. At present, a ban of nearshore (< 3 m depth) fishing has been enforced in Sweden for Bothnian Bay during spring (1 April – 10 June) and fall (1 October – 31 December) and the minimum size allowed to catch has been increased to 50 cm. In Finland the minimum size is also 50 cm and in the Gulf of Finland mesh size (bar length 65 mm) in gill net fishing of sea trout has been enforced off the private near shore waters and in many private waters. The restoration of rearing habitats and building of new fish ways are recommended. The present situation is very alarming and these populations are considered to be at the risk of extinction. Therefore the Group recommends the national and regional agencies to take immediate actions to safeguard the remaining wild sea trout populations in the region.

At present, the fishing is directed towards too young age groups and the proportion of sea trout caught undersized has increased, i.e. a large portion does not reach sexual maturity. The Group recommends that the minimum size of sea trout should be 65 cm to match the spawning size of female fish and for allowing them to spawn at least once. Adequate fishing regulations should be enforced locally in sub-divisions 29-32 for reducing the fishing mortality of sea trout. Principally the use of mesh sizes 31-49 mm (bar length) should be prohibited to reduce the number of undersized sea trout caught as by-catch in the gill net fishing of whitefish and pikeperch but allowing the fishing of perch and small sized sea spawning whitefish, which are locally important target species. The use of special technical devices such as "escape windows" (a structure provided with large mesh size) in the trapnet fishery could also be promoted. Gill net fishing should be totally prohibited or strictly restricted in the sea trout rivers and at the river mouth. Alternative local and temporal measures for reducing by-catch of undersized sea trout in the sea fishery are urgently needed. The Swedish regulations enforced in gillnet fishery of the Bothnian Bay serve as an example of such management action.

At the present an evaluation of the existing management in the Swedish rivers is carried out with the aim to improve the situation for the sea trout.

#### **7.5.2 Main Basin**

Sea trout have been managed on a national level, but with long migrating strains (as in Sweden and Poland and to a certain extent also Denmark) this may not always be sufficient. Management on a national level means that each nation must take responsibility for protection of sea trout rivers and adopt strategies for the protection and development of sea trout rivers, as well as fishing regulations.

Monitoring of the trout populations takes place with varying intensity between countries. In order to insure sufficient knowledge on the trout populations a standardized minimum programme of sampling should exist in all countries, making it possible to provide comparable information on the trout populations. To be able to follow development in populations index rivers should be established with geographic coverage of the entire Baltic.

Sea trout densities are in general below possible values in this part of the Baltic. Habitat improvements by restoration is needed and accessibility to spawning and rearing areas should be improved. This strategy should include a list of sea trout rivers where the rearing habitat and migration routes should be protected against negative changes and improved.

**Table 7.1.1.** Nominal catches ( in tonnes round fresh weight) of sea trout in the Baltic Sea by country in 1979-2007 in sub-divisions 22-32

Year	Country								Total
	Denmark <sup>1,4</sup>	Estonia	Finland <sup>2</sup>	Germany <sup>4</sup>	Latvia	Lithuania	Poland <sup>9</sup>	Sweden	
1979	3	na	89	na	na	na	105 <sup>3</sup>	3	200
1980	3	na	173	na	na	na	74 <sup>3</sup>	3	253
1981	6	2	310	na	5	na	66 <sup>3</sup>	3	392
1982	17	4	326	1	13	na	111	3	475
1983	19	3	332	na	14	na	133	3	504
1984	29	2	387	na	9	na	185	3	617
1985	40	3	368	na	9	na	166	13	599
1986	18	2	349	na	8	na	140	49	566
1987	31	na	373	na	2	na	200	47	653
1988	28	3	582	na	8	na	170	112	903
1989	39	3	666	18	10	na	184	169	1,089
1990	48 <sup>3</sup>	4	841	21	7	na	488	154	1,563
1991	48 <sup>3</sup>	3	829	7	6	na	309	171	1,373
1992	27 <sup>3</sup>	9	837	na	6	na	281	249	1,409
1993	59 <sup>3</sup>	15	1250 <sup>7</sup>	14	17	na	272	138	1,865
1994	33 <sup>8,3</sup>	8	1,150	15 <sup>8</sup>	18	na	222	161	1,607
1995	69 <sup>8,3</sup>	6	502	13	13	3	262	125	993
1996	71 <sup>8,3</sup>	16	333	6	10	2	240	166	844
1997	53 <sup>8,3</sup>	10	297	+	7	2	280	156	805
1998	60 <sup>8,3</sup>	8	460	4	7	na	468	145	1,158
1999	110	10	440	9	10	1	626	115	1,321
2000	58	14	445	9	14	1	812	99	1,452
2001	54	10	363	10	12	1	716	85	1,252
2002	35	16	196	12	13	2	863	76	1,215
2003	40	9	183	9	6	+.+	823	65	1,136
2004	46	10	145	12	7	1	764	61	1,045
2005	14	10	159	15	9	2	586	61	855
2006	44	20	260	12	7	1	530	60	934
2007 <sup>5</sup>	26	17	263	9	8	1	525	55	904

<sup>1</sup>Additional sea trout catches are included in the salmon statistics for Denmark until 1982 (table 3.1.2).

<sup>2</sup>Finnish catches include about 70 % non-commercial catches in 1979 - 1995, 50 % in 1996-1997, 75% in 2

<sup>3</sup>Rainbow trout included.

<sup>4</sup>Sea trout are also caught in the Western Baltic in Sub-divisions 22 and 23 by Denmark, Germany and Sw

<sup>5</sup> Preliminary data.

<sup>6</sup>Catches reported by licensed fishermen and from 1985 also catches in trapnets used by nonlicensed fishe

<sup>7</sup>Finnish catches include about 85 % non-commercial catches in 1993.

<sup>8</sup>ICES Sub-div. 22 and 24.

+ Catch less than 1 tonne.

<sup>9</sup>Catches in 1979-1997 included sea and coastal catches

**Table 7.1.1.1 Overview of sea trout samples collected for biological sampling in 2007.**

Country	TIME PERIOD / month number	Fisheries	Gear	Number of sampled fish by subdivision					
				22-28	29	30	31	32	Total
Denmark <sup>1</sup>									
Estonia	1-12	Coastal	Gillnet					320	320
Finland	4-9	Coastal, River	All gears			x	x	x	~100
Latvia	6-11	Coast	Gillnet						465
Lithuania	Autumn	Coast							?
Poland	1-4, 9-12	Offshore, Coastal	Driftnet, Gillnet	782					782
Russia	8-11	River	Trapnet					72	72
Russia	9-11	Coast	Gillnet					60	60
Sweden	6-7	Coast	Trapnet			1	12		13
Sweden	4	River Angling		29					29
Sweden	6	River trap				45	45		90
Germany <sup>1</sup>									
Total									1931

1) no sampling.

**Table 7.1.2** Nominal catches (in tonnes round fresh weight) of sea trout in the Baltic Sea. S=Sea, C=Coast and R=River.

Year	Baltic Sea															Total Main Basin	Gulf of Bothnia						Total Gulf of Bothnia	Gulf of Finland			Total Gulf of Finland	Grand Total			
	Denmark <sup>1</sup>		Estonia		Finland <sup>2</sup>			Germany <sup>4</sup>		Latvia		Lith.		Poland			Sweden <sup>4</sup>			Finland <sup>2</sup>				Finland <sup>2</sup>							
	S + C	C	S	S + C	R	C	S + C	R	C	R	S <sup>9</sup>	S + C	R	S <sup>5</sup>	C <sup>6</sup>		R	S	C	R	S <sup>6</sup>	C <sup>6</sup>		R	C	S			C	R	
1979	3	na		10		na	na		na		na	81 <sup>3</sup>	24	na	na	3	121		6	na	na	na	na	6	na		73	0	73	200	
1980	3	na		11		na	na		na		na	48 <sup>3</sup>	26	na	na	3	91		87	na	na	na	na	87	na		75	0	75	253	
1981	6	na		51		na	na	5	na		na	45 <sup>3</sup>	21	na	na	3	131		131	na	na	na	na	131	2		128	0	130	392	
1982	17	na		52		1	13		na		na	80	31	na	na	3	197		134	na	na	na	na	134	4		140	0	144	475	
1983	19	na		50		na	14		na		na	108	25	na	na	3	219		134	na	na	na	na	134	3		148	0	151	504	
1984	29	na		66		na	9		na		na	155	30	na	na	5	294		110	na	na	na	na	110	2		211	0	213	617	
1985	40	na		62		na	9		na		na	140	26	na	na	13	290		103	na	na	na	na	103	3		203	0	206	599	
1986	18	na		53		na	8		na		na	91	49	7	9	8	243		118	na	1	24	na	143	2		178	0	180	566	
1987	31	na		66		na	2		na		na	163	37	6	9	5	319		123	na	1	26	na	150	na		184	0	184	653	
1988	28	na		99		na	8		na		na	137	33	7	12	7	331		196	na	na	44	42	282	3		287	0	290	903	
1989	39	na		156		18	10		na		na	149	35	30	17	6	460		215	na	1	78	37	331	3		295	0	298	1,089	
1990	48 <sup>3</sup>	na		189		21	7		na		na	388	100	15	15	10	793		318	na	na	na	71	43	432	4		334	0	338	1,563
1991	48 <sup>3</sup>	1		185		7	6		na		na	272	37	26	24	7	613		349	na	na	60	54	463	2		295	0	297	1,373	
1992	27 <sup>3</sup>	1		173		na	6		na		na	221	60	103	26	1	618		350	na	na	71	48	469	8		314	0	322	1,409	
1993	59 <sup>3</sup>	1		386		14	17		na		na	202	70	125	21	2	897		160	na	na	47	43	250	14		704 <sup>7</sup>	0	718	1,865	
1994	33 <sup>8,3</sup>	2		384		15 <sup>8</sup>	18		+		na	152	70	76	16	3	769		124	na	na	24	42	190	6		642	0	648	1,607	
1995	69 <sup>8,3</sup>	1		226		13	13		3		na	187	75	44	5	11	647		162	na	na	33	32	227	5		114	0	119	993	
1996	71 <sup>8,3</sup>	2		76		6	10		2		na	150	90	93	2	9	511		151	25	na	20	42	238	14		78	3	95	844	
1997	53 <sup>8,3</sup>	2		44		+	7		2		na	200	80	72	7	7	474		156	12	na	16	54	238	8		82	3	93	805	
1998	60	8		103		4	7		na		208	184	76	88	3	6	747		192	12	0	9	39	252	6		150	3	159	1,158	
1999	110 <sup>8,3</sup>	2		84		9	10		1		384	126	116	51	2	3	898		248	12	0	18	41	319	8		93	3	104	1,321	
2000	58	4		64		9	14		1		443	299	70	42	4	3	1011		197	12	0	14	36	259	10		56	3	69	1,339	
2001	54	2	5	57		10	12		1		486	219	11	23	1	3	884	2	221	7	0	14	44	288	8		68	3	79	1,251	
2002	35	5	2	75		12	13		2		539	272	53	11	1	3	1023	0	78	7	0	23	38	147	11		31	3	45	1,215	
2003	40	2	1	71		9	6		+		583	169	72	3	1	0	958	0	70	11	0	15	30	127	7		27	2	36	1,121	
2004	46	3	1	35	0	12	7		1		606	122	36	9	2	3	883	1	62	11	0	18	29	120	7	0	33	2	43	1,045	
2005	14	4	1	37	0	15	7		1	0	480	86	20	5	2	2	675	0	69	11	0	22	31	133	6	0	37	3	46	855	
2006	44	10	1	38	0	12	7		1	0	419	94	17	6	2	1	652	1	139	5	0	19	33	197	10	0	72	3	86	934	
2007 <sup>5</sup>	26	4	2	36	0	9	8		1	0	357	130	39	6	2	1	620	1	141	8	0	14	32	196	13	0	71	3	87	904	

<sup>1</sup>Additional sea trout catches are included in the salmon statistics for Denmark until 1982 (table 3.1.2).

<sup>2</sup>Finnish catches include about 70 % non-commercial catches in 1979 - 1995, 50 % in 1996-1997, 75% in 2000-2001.

<sup>3</sup>Rainbow trout included.

<sup>4</sup>Sea trout are also caught in the Western Baltic in Sub-divisions 22 and 23 by Denmark, Germany and Sweden.

<sup>5</sup> Preliminary data.

<sup>6</sup>Catches reported by licensed fishermen and from 1985 also catches in trapnets used by nonlicensed fishermen.

<sup>7</sup>Finnish catches include about 85 % non-commercial catches in 1993.

<sup>8</sup>ICES Sub-div. 22 and 24.

+ Catch less than 1 tonne.

<sup>9</sup>Catches in 1979-1997 included sea and coastal catches, since 1998 coastal (C) and sea (S) catches are registered separately

na=Data not available

Table 7.2.2.1 Status of wild and mixed sea trout populations in 2007

Area	Country	Potential smolt production	Smolt production (% of potential production)										
			<5 %		5-50 %		> 50 %		Uncertain		Total		
			wild	mixed	wild	mixed	wild	mixed	wild	mixed	wild	mixed	
Gulf of Bothnia	Finland	< 1	0	0	0	0	0	0	0	0	0	0	0
		1-10	0	3	0	1	0	0	0	0	0	0	4
		11-100*	0	0	0	1	0	0	0	0	0	0	1
		> 100	0	0	0	0	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	0	0	0	0	0
	Total	0	3	0	2	0	0	0	0	0	0	0	5
	Sweden*	< 1	0	0	0	0	0	0	0	0	0	0	0
		1-10	0	0	0	0	0	0	0	0	0	0	0
		11-100	0	0	0	0	0	0	0	0	0	0	0
		> 100	0	0	0	0	0	0	0	0	0	0	0
Uncertain		0	0	0	0	0	0	0	25	26	25	26	
Total	0	0	0	0	0	0	0	25	26	25	26		
Total		0	3	0	2	0	0	25	26	25	31		
Gulf of Finland	Estonia	< 1	0	0	2	4	3	1	14	0	19	5	
		1-10	0	1	5	2	6	3	0	0	11	6	
		11-100	0	0	0	0	0	0	0	0	0	0	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	0	0	0	0	
	Total	0	1	7	6	9	4	14	0	30	11		
	Finland	< 1	2	2	0	0	0	0	0	0	2	2	
		1-10	1	0	1	2	0	0	0	0	2	2	
		11-100	0	0	0	2	0	0	0	0	0	2	
		> 100	0	0	0	0	0	0	0	0	0	0	
Uncertain		0	0	0	0	0	0	1	0	1	0		
Total	3	2	1	4	0	0	1	0	5	6			
Russia	< 1	1	0	3	0	2	0	2	0	8	0		
	1-10	7	0	2	0	0	0	2	0	11	0		
	11-100*	1	1	1	0	0	0	0	0	2	1		
	> 100	0	0	0	0	0	0	0	0	0	0		
	Uncertain	0	0	0	0	0	0	19	0	19	0		
Total	9	1	6	0	2	0	23	0	40	1			
Total		12	4	14	10	11	4	38	0	75	18		
Main Basin	Denmark	< 1	4	100	25	28	56	15	27	142	112	285	
		1-10	1	6	5	4	14	46	0	0	20	56	
		11-100	0	0	1	1	1	10	0	0	2	11	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	0	0	0	0	
	Total	5	106	31	33	71	71	27	142	134	352		
	Estonia	< 1	4	0	4	2	5	0	9	0	22	2	
		1-10	0	0	4	0	1	1	1	0	6	1	
		11-100	0	0	0	0	0	0	0	0	0	0	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	0	0	0	0	
	Total	4	0	8	2	6	1	10	0	28	3		
	Latvia	< 1	0	0	0	0	0	0	0	0	0	0	
		1-10	0	0	0	2	11	0	2	11	13	13	
		11-100	0	1	0	0	1	0	1	1	2	2	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	7	0	0	7	7	7	
	Total	0	1	0	2	19	0	3	19	22	22		
	Lithuania	< 1	0	0	0	0	0	0	0	0	0	0	
		1-10	0	0	0	2	0	0	0	0	0	2	
11-100		0	1	0	0	0	0	0	0	0	1		
> 100*		0	0	0	1	0	0	0	0	0	1		
Uncertain		0	0	0	0	0	0	0	0	0	0		
Total	0	1	0	3	0	0	0	0	0	4			
Poland	< 1	0	1	0	1	0	4	0	0	0	6		
	1-10	0	0	0	1	0	2	0	0	0	3		
	11-100*	0	0	0	4	0	1	0	0	0	5		
	> 100	0	0	0	0	0	0	0	0	0	0		
	Uncertain	0	0	0	0	0	0	0	0	0	0		
Total	0	1	0	6	0	7	0	0	0	14			
Russia	< 1	0	0	0	0	0	0	0	0	0	0		
	1-10	0	0	0	0	0	0	0	0	0	0		
	11-100	0	0	0	0	0	0	0	0	0	0		
	> 100	0	0	0	0	0	0	0	0	0	0		
	Uncertain	0	0	0	0	0	0	3	0	3	0		
Total	0	0	0	0	0	0	3	0	3	0			
Sweden*	< 1	0	0	0	0	0	0	0	0	0	0		
	1-10	0	0	0	0	0	0	0	0	0	0		
	11-100	0	0	0	0	0	0	0	0	0	0		
	> 100	0	0	0	0	0	0	0	0	0	0		
	Uncertain	0	0	0	0	0	0	200	7	200	7		
Total	0	0	0	0	0	0	200	7	200	7			
Total		9	109	39	46	96	79	243	168	387	402		
Grand total		21	116	53	58	107	83	306	194	487	451		

\* includes large river systems, see Table 7.2.1 \*\* data from 2006

**Table 7.2.2.2** Factors influencing status of sea trout populations

Area	Country	Potential smolt production	Number of populations					Other	Uncertain
			Over exploitation	Habitat degradation	Dam building	Pollution			
Gulf of Bothnia*	Finland	< 1	0	0	0	0	0	0	0
		1-10	4	4	2	1	0	0	0
		11-100	1	1	0	0	0	0	0
		> 100	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	0
	Total		5	5	2	1	0	0	
Total			5	5	2	1	0	0	
Gulf of Finland	Finland	< 1	4	4	4	0	0	0	
		1-10	4	2	2	1	0	0	
		11-100	2	2	1	0	0	0	
		> 100	0	0	0	0	0	0	
		Uncertain	0	1	1	0	0	0	
	Total		10	9	8	1	0	0	
	Russia	< 1	5	5	0	4	0	0	
		1-10	11	9	2	7	0	0	
		11-100	3	3	1	3	0	0	
		> 100	0	0	0	0	0	0	
		Uncertain	11	11	3	8	0	0	
	Total		30	28	6	22	0	0	
	Estonia	< 1	1	5	0	0	0	0	
		1-10	6	3	1	4	0	0	
		11-100	0	0	0	0	0	0	
		> 100	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	
	Total		7	8	1	4	0	0	
Total			47	45	15	27	0	0	
Main Basin*	Estonia	< 1	0	1	0	0	0	0	
		1-10	0	0	0	0	0	0	
		11-100	0	0	0	0	0	0	
		> 100	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	
	Total		0	1	0	0	0	0	
	Latvia	< 1	0	1	0	0	0	0	
		1-10	5	3	3	0	2	0	
		11-100	0	0	1	0	0	0	
		> 100	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	
	Total		5	4	4	0	2	0	
	Lithuania	< 1	0	0	0	0	0	0	
		1-10	0	4	5	2	0	0	
		11-100	0	1	2	1	0	0	
		> 100**	0	1	1	1	1	0	
		Uncertain	0	0	0	0	0	0	
	Total		0	5	8	4	1	0	
	Poland	< 1	2	3	3	1	0	0	
		1-10	2	2	3	0	0	0	
		11-100**	2	3	5	2	0	0	
		> 100	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	
	Total		6	8	11	3	0	0	
	Russia	< 1	0	0	0	0	0	0	
		1-10	0	0	0	0	0	0	
		11-100	0	0	0	0	0	0	
> 100		0	0	0	0	0	0		
Uncertain		3	2	0	2	0	0		
Total		3	2	0	2	0	0		
Denmark	< 1	0	0	0	0	0	397		
	1-10	0	0	0	0	0	76		
	11-100	0	0	0	0	0	13		
	> 100	0	0	0	0	0	0		
	Uncertain	0	0	0	0	0	0		
Total		0	0	0	0	0	486		
Total			14	20	23	9	3	486	
Grand total			66	70	40	37	3	486	

\* data from Sweden were unavail;\*\* includes large river systems, see Table 7.2.1.6.

**Table 7.2.2.3** Densities of sea trout parr in electrofishing surveys in Swedish tributaries in the Gulf of Bothnia, Sub-div. 31, in 1982-2007.

River	0+													>0+												
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Torneälven tributaries <sup>1)</sup>	0.36	0.62	0.66	2.03	5.89	3.82	8.50	4.73	11.07	1.33	3.14	0.00	0.00	1.74	1.61	0.00	1.02	1.46	0.00	2.78	7.26	9.55	4.50	4.40	0.70	0.70
Kalixälven tributaries	0.18	0.43	0.18	0.38	1.09	0.78	0.85	2.30	4.51	1.27	2.54	8.70	na	0.93	0.45	0.95	0.55	1.02	1.08	0.98	1.46	2.13	1.16	1.23	7.10	na
Råneälven tributaries	0.26	0.00	0.00	0.00	0.19	0.04	2.53	0.76	na	0.10	0.10	0.00	0.00	4.10	0.00	0.00	0.35	0.00	0.38	1.92	0.45	na	0.02	0.10	0.20	0.04
Piteälven tributaries								1.44	1.81	0.40	1.29	2.20	1.10	0.50	1.05	0.87	0.66	1.40	1.00							
Äbyälven tributaries	0.00	0.00	0.00	na	6.35	0.50	1.47	1.22	0.00	na	5.48	1.90	na	5.00	0.00	1.18	na	6.73	2.28	3.13	0.58	2.03	na	1.40	5.70	na
Byskeälven tributaries	1.74	0.12	0.00	1.60	1.86	0.75	1.30	0.40	0.65	na	14.30	0.80	0.90	1.14	0.64	0.62	1.25	0.98	1.00	2.72	0.72	0.20	na	1.66	5.20	11.20
Kågeälven tributaries	0.00	0.00	0.00	na	1.57	na	0.00	na	na	na	70	na	na	14.2	0.40	0.00	na	5.83	na	2.80	na	na	na	1.15	na	na
Rickleån tributaries	21.9	0.00	13.8	16.6	35.2	1.50	na	28.6	26.0	20.6	na	19.5	na	10.0	0.00	0.35	7.55	5.00	7.80	na	17.5	7.10	1.95	na	18.1	na
Sävarån tributaries	4.66	2.21	7.15	1.98	16.2	5.63	8.01	17.9	5.59	6.87	na	11.1	na	15.4	4.78	9.12	5.13	8.24	8.54	6.80	16.6	11.6	9.01	na	21.1	na
Vindelälven tributaries	1.56	11.3	12.2	8.58	44.3	4.69	26.5	66.2	0.59	15.4	2.35	7.90	6.50	16.6	11.0	11.6	11.9	13.1	17.7	9.39	14.2	13.3	4.06	0.00	9.80	4.2
Öreälven tributaries	0.80	56	1.46	0.00	1.12	4.74	5.24	12.3	7.92	4.03	2.70	13.80	1.70	9.88	2.75	11.5	7.60	3.46	3.30	6.92	3.72	7.12	7.18	5.55	23.50	3.9
Lögdeälven tributaries	9.31	7.22	64.2	14.9	45.0	6.95	13.8	33.8	13.9	56.7	56.0	17.8	1.54	15.9	6.91	7.52	16.2	24.8	21.7	15.2	13.8	15.0	7.87	19.0	16.3	0.39

<sup>1)</sup> Finnish and Swedish sites combined

**Table 7.2.2.4** Densities of 0+ sea trout parr (individuals/100m<sup>2</sup>) in Finnish rivers in 1995-2007

River	0+																			
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Pakajoki*	0.1	3.2	5.3	4.6	3.3	0	0	0	1.2	0.7	3.6	7.7	19.7	13	26.7	2.7	4	2.6	7.9	
Äkäsjoki*	0.7	5.5	3.4	1.1	1.7	4.6	0	0	0.7	4.2	16.6	2.1	6.8	4.9	15.4	1.5	7.7	2.8	13.6	
Lestijoki	-	0.1	0.2	0.4	1.1	0.1	0	0	0	0	0	0.2	0.1	1	0.1	0.2	1.1	0	0.2	
Isojoki	-	-	-	-	-	-	1	7.5	7.6	2.9	4.9	2.7	2.7	11.8	1.4	2.6	1.3	3.8	4.3	
Ingarskilanjoki	-	-	-	-	-	-	-	-	-	-	-	-	9.4	13.6	0	0.2	13.6	33.5	11.7	

Table 7.2.3.1 Status of wild and mixed sea trout populations in 2007

Area	Country	Potential smolt production	Smolt production (% of potential production)										
			<5 %		5-50 %		> 50 %		Uncertain		Total		
			wild	mixed	wild	mixed	wild	mixed	wild	mixed	wild	mixed	
Gulf of Bothnia	Finland	< 1	0	0	0	0	0	0	0	0	0	0	0
		1-10	0	3	0	1	0	0	0	0	0	0	4
		11-100*	0	0	0	1	0	0	0	0	0	0	1
		> 100	0	0	0	0	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	0	0	0	0	0
	Total	0	3	0	2	0	0	0	0	0	0	0	5
	Sweden*	< 1	0	0	0	0	0	0	0	0	0	0	0
		1-10	0	0	0	0	0	0	0	0	0	0	0
		11-100	0	0	0	0	0	0	0	0	0	0	0
		> 100	0	0	0	0	0	0	0	0	0	0	0
Uncertain		0	0	0	0	0	0	25	26	25	26	26	
Total	0	0	0	0	0	0	25	26	25	26	26		
Total		0	3	0	2	0	0	25	26	25	31		
Gulf of Finland	Estonia	< 1	0	0	2	4	3	1	14	0	19	5	
		1-10	0	1	5	2	6	3	0	0	11	6	
		11-100	0	0	0	0	0	0	0	0	0	0	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	0	0	0	0	
	Total	0	1	7	6	9	4	14	0	30	11		
	Finland	< 1	2	2	0	0	0	0	0	0	2	2	
		1-10	1	0	1	2	0	0	0	0	2	2	
		11-100	0	0	0	2	0	0	0	0	0	2	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	1	0	1	0	
	Total	3	2	1	4	0	0	1	0	5	6		
	Russia	< 1	1	0	3	0	2	0	2	0	8	0	
		1-10	7	0	2	0	0	0	2	0	11	0	
		11-100*	1	1	1	0	0	0	0	0	2	1	
> 100		0	0	0	0	0	0	0	0	0	0		
Uncertain		0	0	0	0	0	0	19	0	19	0		
Total	9	1	6	0	2	0	23	0	40	1			
Total		12	4	14	10	11	4	38	0	75	18		
Main Basin	Denmark	< 1	4	100	25	28	56	15	27	142	112	285	
		1-10	1	6	5	4	14	46	0	0	20	56	
		11-100	0	0	1	1	1	10	0	0	2	11	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	0	0	0	0	
	Total	5	106	31	33	71	71	27	142	134	352		
	Estonia	< 1	4	0	4	2	5	0	9	0	22	2	
		1-10	0	0	4	0	1	1	1	0	6	1	
		11-100	0	0	0	0	0	0	0	0	0	0	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	0	0	0	0	0	0	
	Total	4	0	8	2	6	1	10	0	28	3		
	Latvia	< 1	0	0	0	0	0	0	0	0	0	0	
		1-10	0	0	0	2	11	0	2	11	13	13	
		11-100	0	1	0	0	1	0	1	1	2	2	
		> 100	0	0	0	0	0	0	0	0	0	0	
		Uncertain	0	0	0	0	7	0	0	7	7	7	
	Total	0	1	0	2	19	0	3	19	22	22		
	Lithuania	< 1	0	0	0	0	0	0	0	0	0	0	
		1-10	0	0	0	2	0	0	0	0	0	2	
		11-100	0	1	0	0	0	0	0	0	0	1	
		> 100*	0	0	0	1	0	0	0	0	0	1	
		Uncertain	0	0	0	0	0	0	0	0	0	0	
	Total	0	1	0	3	0	0	0	0	0	4		
	Poland	< 1	0	1	0	1	0	4	0	0	0	6	
		1-10	0	0	0	1	0	2	0	0	0	3	
		11-100*	0	0	0	4	0	1	0	0	0	5	
> 100		0	0	0	0	0	0	0	0	0	0		
Uncertain		0	0	0	0	0	0	0	0	0	0		
Total	0	1	0	6	0	7	0	0	0	14			
Russia	< 1	0	0	0	0	0	0	0	0	0	0		
	1-10	0	0	0	0	0	0	0	0	0	0		
	11-100	0	0	0	0	0	0	0	0	0	0		
	> 100	0	0	0	0	0	0	0	0	0	0		
	Uncertain	0	0	0	0	0	0	3	0	3	0		
Total	0	0	0	0	0	0	3	0	3	0			
Sweden*	< 1	0	0	0	0	0	0	0	0	0	0		
	1-10	0	0	0	0	0	0	0	0	0	0		
	11-100	0	0	0	0	0	0	0	0	0	0		
	> 100	0	0	0	0	0	0	0	0	0	0		
	Uncertain	0	0	0	0	0	0	200	7	200	7		
Total	0	0	0	0	0	0	200	7	200	7			
Total		9	109	39	46	96	79	243	168	387	402		
Grand total		21	116	53	58	107	83	306	194	487	451		

\* includes large river systems, see Table 7.2.1 \*\* data from 2006

**Table 7.2.3.2** Status of wild and mixed sea trout populations in large river systems in 2007

Country	River (Area)	Potential smolt production	Smolt production (% of potential production)									
			<5 %		5-50 %		> 50 %		Uncertain		Total	
			wild	mixed	wild	mixed	wild	mixed	wild	mixed	wild	mixed
Lithuania	Nemunas (Main Basin)	< 1	0	0	0	0	0	0	0	0	0	0
		1-10	0	0	0	0	0	0	0	0	0	0
		11-100	1	0	1	3	0	1	0	0	2	4
		> 100	0	0	0	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	0	0	0	0
Total		1	0	1	3	0	1	0	0	2	4	
Poland	Odra (Main Basin)	< 1	0	0	0	2	0	0	0	3	0	5
		1-10	0	0	0	2	0	0	0	0	0	2
		11-100	0	0	0	0	0	0	0	0	0	0
		> 100	0	0	0	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	4	0	0	0	3	0	7	
Poland	Vistula (Main Basin)	< 1	0	0	0	1	0	0	0	2	0	3
		1-10	0	0	0	1	0	0	0	0	0	1
		11-100	0	0	0	0	0	0	0	0	0	0
		> 100	0	0	0	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	2	0	0	0	2	0	4	
Russia	Luga (Gulf of Finland)	< 1	1	0	1	0	0	0	0	0	2	0
		1-10	1	0	1	0	0	0	0	0	2	0
		11-100	1	0	0	1	0	0	0	0	1	1
		> 100	0	0	0	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	1	0	1	0
Total		3	0	2	1	0	0	1	0	6	1	
Finland	Tornionjoki (Gulf of Bothnia)	< 1	0	0	0	0	0	0	0	0	0	0
		1-10	1	4	2	0	0	0	0	0	3	4
		11-100	1	0	0	1	0	0	0	0	1	1
		> 100	0	0	0	0	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0	0	0	0	0
Total		2	4	2	1	0	0	0	0	4	5	

**Table 7.2.3.3** Factors influencing status of sea trout populations in large river systems

Country	River	Potential smolt production	Number of populations					
			Overexploitation	Habitat degradation	Dam building	Pollution	Other	No influence
Lithuania	Nemunas (Main Basin)	< 1	0	0	0	0	0	0
		1-10	0	0	1	0	0	0
		11-100	0	2	4	1	1	0
		> 100	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0
Total		0	2	5	1	1	0	
Poland	Odra (Main Basin)	< 1	5	3	3	4	0	0
		1-10	2	1	2	1	0	0
		11-100	0	0	0	0	0	0
		> 100	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0
Total		7	4	5	5	0	0	
Poland	Vistula (Main Basin)	< 1	0	2	2	2	1	0
		1-10	1	1	1	1	0	0
		11-100	0	0	0	0	0	0
		> 100	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0
Total		1	3	3	3	1	0	
Russia	Luga (Gulf of Finland)	< 1	2	1	0	0	0	0
		1-10	2	1	1	1	0	0
		11-100	2	2	0	2	0	0
		> 100	0	0	0	0	0	0
		Uncertain	1	0	0	0	0	0
Total		7	4	1	3	0	0	
Finland	Tomionjoki (Gulf of Bothnia)	< 1	0	0	0	0	0	0
		1-10	7	6	0	0	0	0
		11-100	2	1	0	0	0	0
		> 100	0	0	0	0	0	0
		Uncertain	0	0	0	0	0	0
Total		9	7	0	0	0	0	

Table 7.2.3.4 Densities of wild sea trout parr (individuals/100 m<sup>2</sup>) in Estonian rivers of the Gulf of Finland and Main Basin in 1997-2007

River	0+											>0+										
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Pada	-	-	1	-	1.9	48.8	5.3	7.8	19.3	7.6	-	-	-	18	-	18.6	1.4	1.3	4.4	15.6	10.2	-
Purtse	0	0	0	0	0	0	0	0	1.2	7.9	0	0	0	0	0	0	0	0	0	0	0.2	0.26
Kunda	7	16	1	15	0.9	12.2	0.3	23.8	1.2	11	7.2	21	2	11	3	4.3	1.2	1	0.3	6.5	1.1	4.3
Toolse	-	-	3	-	-	-	0	0.5	21.4	20.6	-	-	-	4	-	3.4	-	1.9	1.1	8.4	8.5	-
Seija	0	0	+	23	9.3	3.4	0	0.4	7.4	0.3	0.3	<1	+	+	7	0.8	10	0.5	0.4	1.1	0.2	0.15
Vainupea	44	2	34	9	0	22.3	0	10.9	15.5	2.7	-	13	13	15	9	0	0	4.2	0	15.5	8	-
Mustoja	22	+	8	7	2.1	6.3	0.4	0.6	19.6	35.5	-	+	+	9	2	5	2	11.9	2.4	4.8	2.0	-
Alija	88	16	84	1	46.3	32.9	0.4	2	6.6	2.0	-	5	5	15	2	6.6	6.1	1.9	0.5	0	1.0	-
Vosu	-	-	52	-	-	-	0.2	8.7	39.1	47.2	-	-	-	19	-	-	-	3.3	3.5	8.6	15.0	-
Loobu	16	+	12	1	3.1	5.1	1.3	4.8	9.6	8.4	2.6	+	+	21	2	1.3	6	0.7	1.2	1	1.5	0
Valgejõgi	<1	0	0.1	0	0.3	-	0	1.6	1	3.2	6.7	0	0	0.1	1	0.4	-	0.2	0.8	1.1	0.7	5
Rudisoo	-	4	-	-	4.2	5.5	1	26.3	21.5	0.8	-	2	2	-	-	5.1	2	0.5	0	14.9	15.4	-
Loo	-	20	-	-	-	-	0	1.1	3.4	10.2	-	2	2	-	-	-	-	11.7	0	6.9	0.0	-
Kaberla	-	2	-	-	21.6	-	0	0	53.5	0.0	-	4	4	-	-	2.3	-	1	0	0	0.0	-
Valka	-	1	-	-	-	-	0	-	-	21.3	-	-	8	8	-	-	-	-	-	-	-	1.3
Jägala	0	0	0	0	0.4	0	0	0	0	0.0	+	0	0	0	0	0	0	0	0	0	+	0
Prita	-	0	0.6	0.1	1.5	0.5	0	0	0.4	1.6	2.2	+	+	0.6	0.1	0.7	2.1	0.3	0	0.1	0.4	1.8
Vääna	-	4	0.2	4	25.1	6.7	0	2.5	2.4	14.3	0.0	-	4	5	0.2	3.9	6	3.5	0.2	0.8	4.1	0.6
Kela	7	+	1	1.4	2.6	1.1	0	7.4	1.8	0.4	15.4	+	+	1	2	0.7	1.1	1.1	0	0.5	0.0	2.8
Vasalemma	10	2	15	9	5.6	4.8	0	1.9	10.8	3.0	4.8	9	9	6.9	-	11.6	2.6	4	1	3.8	4.6	0.3
Kloostri	0	0	0	0	0	0	0	0	0	15.1	-	0	0	0	0	0	0	0	0	0	1.3	-
Vihterpalu	-	2	+	-	2.5	-	0	0.3	2.4	8.9	-	2	2	0.5	-	3.7	-	2.3	0.3	8	2.0	-
Veskijõgi	-	-	0	-	0	11	0	0	3.2	0.0	-	-	-	0	9	1.1	-	2.3	23.6	6.4	3.0	-
Nõva	-	0	0.5	-	0	9	1	0.7	1.1	2.8	-	-	0	0.5	-	0	2.1	2.2	1.2	1.6	0.2	-
Riguldi	-	-	7	-	-	-	0	0	9.4	6.8	-	-	-	0	-	-	-	1	0.9	4.4	1.9	-
Hõbringi	0	0	0	0	0	0	0	0	0	0.5	-	0	0	0	0	0	0	0	0	0	3.8	-
Mägara	-	-	-	-	-	-	-	-	23.1	-	-	-	-	-	-	-	-	-	-	0	-	-
Timmkanal	-	-	-	-	-	-	7.3	-	19.8	8.4	-	-	-	-	-	-	-	0.8	-	-	2.9	-
Haademeeste	-	-	-	-	-	-	0.4	-	-	4.4	-	-	-	-	-	-	-	3.1	-	-	3.8	-
Kadaka	-	-	-	-	-	-	0	-	-	3.8	-	-	-	-	-	-	-	13.4	-	-	53.9	-
Priviltsa	-	-	-	-	-	-	3.3	-	-	4.9	-	-	-	-	-	-	-	1.3	-	-	9.0	-
Lemme	-	-	-	-	-	-	1.8	-	-	1.6	-	-	-	-	-	-	-	1.8	-	-	34.7	-
Loode	-	-	-	-	-	-	0.5	-	-	6.1	-	-	-	-	-	-	-	4	-	-	15.2	-
Treimani	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
Kolga	-	-	-	-	-	-	0	-	43.8	98.0	-	-	-	-	-	-	-	3.4	-	-	0.0	-
Männiku	-	-	-	-	-	-	0*)	-	24.1	4.4	-	-	-	-	-	-	-	0*)	-	14.6	18.8	-
Pärnu	-	-	-	-	-	-	-	-	0	0.0	-	-	-	-	-	-	-	-	-	0	0.0	-
Taalku	-	-	-	-	-	-	-	-	-	2.4	-	-	-	-	-	-	-	-	-	-	19.8	-
Tirtsu	-	-	-	-	-	-	-	-	0	0.0	-	-	-	-	-	-	-	-	-	-	1	1.5
Kiruna	-	-	-	-	-	-	-	-	17.7	17.9	-	-	-	-	-	-	-	-	-	-	6.4	44.3
Ridula	-	-	-	-	-	-	-	-	-	10.2	-	-	-	-	-	-	-	-	-	-	-	23.0
Runapea	-	-	-	-	-	-	-	-	17	38.5	-	-	-	-	-	-	-	-	-	-	6.5	0.6
Nuutri	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-
Vanajõgi	-	-	-	-	-	-	-	-	19.6	-	-	-	-	-	-	-	-	-	-	-	11.3	-
Jamaja	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Õngu	-	-	-	-	-	-	-	-	1.1	1.0	-	-	-	-	-	-	-	-	-	-	1.1	7.8

- - no electrofishing su+ - high water level, counting impossible \*) - river dry

Table 7.2.3.5 Densities of sea trout parr (number/100 m<sup>2</sup>) in the Russian rivers ) discharging to Gulf of Finland (sub-div 32)

River	0+				>0+			
	2004	2005	2006	2007	2004	2005	2006	2007
Vidon	-	0.3	1	-	-	2.7	4.5	-
Lemovzha		5.5	3.5	23.1	-	2	5.6	2.3
Ukhora	10.7	-	0.7	6.8	9.3	-	17.7	1.5
Azika	-	0	2	0	-	1	1	6.3
Solka	-	2.8	9.5	1.1	-	9.4	8	13.5
Khabolovka	3.1	1.3	9.4	0.8	9.4	4.2	3.9	4.5
Sista	-	1.2	1	4.1	-	2.9	2.9	7.8
Voronka	-	0	0	0.8	-	0.7	3.7	4.5
Sestra	-	-	1	-	-	-	0.3	-
Kuokkalan	-	-	1.9	-	-	-	5.7	-
Huumosen-oja	1.6	0	-	-	5.8	10.7	-	-
Zelenogorsky	0.4	0.5	-	-	0.4	1	-	-
Bystryi	8.3			21.8	10.8			7.3
Uschkovsky	0.5	16.3	-	0	2.8	7.5	-	6.4
Smolyakov	-	-	-	0.5	-	-	-	0.1
Pikku Vammeljoki	-	-	15	-	-	-	60	-
Gladyshevka	0.8	1	5.8	0.4	1.3	1	6.7	4.7
Puro (Repino)	-	-	-	0	-	-	-	80
Roschinka	5.4				2.5			
Privetnaya	0	7.6	0.8	0.3	0.7	6.7	1.2	1.4
Notkopuro	-	-	53	-	-	-	31.8	
Jukkola east	32.2	30	-	58	67.8	60	-	58
Jukkola middle	16	0	-	-	3.6	25.5	-	-
Jukkola west	-	14	-	-	-	32.7	-	-
Toivola	0	90	-	-	9.1	25	-	-
Lososinka	0.2	4	-	-	1.2	6.5	-	-
Kello-oja	0.2	0.2	-	0	2.5	3.3	-	1.8
Penttilan-oja	21.1	60	-	8	14.7	27.5	-	28
Koivistonpuro	-	70.5	-	0	-	18.1	-	35
Melichnyi	-	4.1	-	-	-	2.3	-	-
Rompotinpuro	-	78.8	-	-	-	43.5	-	-
Gorohovka	0	0	-	-	0	0.2	-	-
Petrovka	0	-	0.3	-	-	0.2	1.3	-
Malinovka	0	-	0.2	0.3	0	-	0	1.5
Gusinaya	3.2	-	-	-	0	-	-	-
Seleznevka	12	1.9	3	-	0	2.1	3.9	-
Polevaya	4.4	6.3	0	-	1.5	7.3	0	-
Velikaya	0.7	0	0.3	-	0	0.4	0.6	-
Peschanaya	0	2.3	1.7	-	0	0.2	4.3	-
Serga	0	1.2	1.2	-	0	2.3	1.8	-
Kanan-oja	-	-	11	-	-	-	7.9	-

Table 7.2.4.1 Densities of sea trout parr in electrofishing surveys in the rivers Emån

River	0+																>0+															
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Emån	47.0	42.0	2.5	0.2	0.3	1.9	6.9	0.9	1.2	1.4	1.0	2.0	2.3	11.0	1.9	36.0	2.0	3.1	0.6	0.6	0.2	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.1	1.7
Mörrumsån	11.0	19.0	18.0	6.0	8.0	6.0	7.0	3.0	5.0	9.0	3.0	3.0	8.0	7.0	2.0	54.0	3.0	1.0	7.0	2.0	2.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0	10.0

**Table 7.2.4.2.** Densities of sea trout parr (number/100 m<sup>2</sup>) in electrofishing survey in Lithuanian rivers, Main Basin (sub-div. 26) in 2004-207

River	0+ and >0+ combined*				>0+			
	2004	2005	2006	2007	2004	2005	2006	2007
Neris	3.3	1.8	1.6	2.3				
Žeimena	1	0	3.1	4.7				
Šventoji	3.4	4	1.5	2.5				
Minija	5.1	9.06	8.8	7.1				
Jūra	2.3	3.13	2.6	1.7				
Dubysa	7.5	11.6	7.9	18.1				
Bartuva	2.7	2.69	4.8	8.5				
Akmena	10.2	24.3	10.4	28.8				
Šyša	8.4	14.6	15.5	12.5				
Baltic Šventoji basin		11.36	8.8	5.6				

\* parr of age 0+ and >0+ were counted together and reported as a one value

**Table 7.2.4.3.** Densities of sea trout parr(number/100m<sup>2</sup>) in electrofishing survey in Polish rivers in 2004-2007

River	0+				>0+			
	2004	2005	2006	2007	2004	2005	2006	2007
Parsęta	69	33	83.5	46.6	5.2	3.9	8.9	3.7
Wieprza	27	27	14	5.4	4.8	7.1	1.8	6.3
Słupia	19	-	13.8	22.2	2.4	-	3.4	10.2
Łeba	271	89	138.2	-	6.5	64	35.3	-
Drwęca	18	-	-	-	0.2	-	-	-
Reda	14	-	36.5	1.8	15	-	7	4

**Table 7.2.4.4** Densities (N parr /100 m<sup>2</sup> stream) of sea trout parr in Danish electrofishing surveys in streams of the island Bornholm.

River	0+														>0+															
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Bornholm area	0.0	19.6	621.1	24.0	181.2	351.7	232.1	185.4	102.4	192.0	141.4	257.0	163.0	-	436.8	218.4	12.7	94.4	89.6	29.4	92.4	128.8	68.8	37.9	24.0	34.6	34.5	65.5	-	10.0

**Table 7.3.1** Release of sea trout eggs, alevins, fry and parr into Baltic rivers in 2007 (' 000).  
The number of smolts is added to Table 7.3.2 as enhancement.

Region	Egg	Alevin	Fry	Parr				Smolt					
				1-s old	1-y old	2-s old	3-s old	2008	2009	2010	Total		
<b>Sub-divs. 22-29</b>	(1)	(1)	(4)	(6)	(9)	(10)	(10)						
Denmark			220	99				0	13			13	
Estonia								0	0			0	
Finland								0	0			0	
Latvia				114				0	7			7	
Poland		5475	883	1				0	81			81	
Sweden	5		72					0	2			2	
Lituania			107	77	65			8	8			16	
<b>Total</b>	5	5475	1282	291	65	0	0	8	111	0		119	
<b>Sub-divs. 30-31</b>	(2)	(3)	(5)	(7)	(8)	(8)	(10)						
Finland		270		7	220	1		0	26	4		31	
Sweden	150		305	66	61			0	7	11		18	
<b>Total</b>	150	270	305	73	280	1	0	0	34	15		49	
<b>Sub-div. 32</b>	(1)	(1)	(4)	(6)	(9)	(10)	(10)						
Estonia								0	0			0	
Finland		11			51	5		7	0			7	
Russia				5				0	0			0	
<b>Total</b>	0	11	0	5	51	5	0	7	0	0		7	
<b>Grand total</b>													
<b>Sub-divs. 24-32</b>	155	5755	1587	369	396	6	0	15	145	15		175	

	Rate of survival to smolt	Time to smoltification		Rate of survival to smolt	Time to smoltification
(1)=	1.0%	2 years	(6)=	6.0%	2 years
(2)=	0.5%	3 years	(7)=	6.0%	3 years
(3)=	1.5%	3 years	(8)=	12.0%	2 years
(4)=	3.0%	2 years	(9)=	12.0%	1 year
(5)=	2.0%	3 years	(10)=	15.0%	1 year

**Table 7.3.2** Estimated number of sea trout smolts originating from eggs, alevins, fry and parr releases in 1997-2007.

Area	Country	1997 <sup>1</sup>	1998 <sup>2</sup>	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008 <sup>3</sup>	2009 <sup>4</sup>	2010 <sup>4</sup>
<b>Sub-divs. 22-29</b>	Denmark	8664	56415	55284	30858	25555	45759	7912	17790	17508	13695	13695	13704	13	0
	Estonia	0	1500	2616	0	0	2100	1200	400	1110	0	0	0	0	0
	Finland	809	147	55	440	22670	33965	19550	18735	160	0	0	0	0	0
	Latvia	1932	142454	17467	13815	8644	11007	960	5340	15227	6462	3189	19015	7	0
	Poland	3918	153918	146000	167496	148500	84240	68400	91000	63236	77690	61459	107686	81	0
	Sweden	9676	19655	14756	13129	39333	42690	5320	29335	2055	27700	4425	1623	2	0
	Lituania	0	0	0	0	0	0	0	1670	2400	4350	7440	10388	8	0
<b>Total</b>		24999	374089	236178	225738	244702	219761	103342	164270	101696	129897	90208	152415	111	0
<b>Sub-divs. 30-31</b>	Finland	720	43708	57481	54268	80662	26523	42828	36670	1890	31362	11787	22704	3434	3412
	Sweden	0	104376	55862	84237	78440	43614	24092	22921	36170	20207	22756	24561	9437	9441
	<b>Total</b>	720	148084	113343	138505	159102	70137	66920	59591	38060	51569	34543	47265	12872	12853
<b>Sub-div. 32</b>	Estonia	0	0	0	0	0	0	2412	2532	4407	2100	420	0	0	0
	Finland	0	1861	3623	20910	5500	2049	419	340	3429	345	11574	2207	0	0
	Russia	0	0	708	3882	3630	7800	200	1630	1281	6690	3924	0	0	0
	<b>Total</b>	0	1861	4331	24792	9130	9849	3031	4502	9117	9135	15918	2207	0	0
<b>Sub-divs. 24-32</b>	<b>Grand total</b>	25719	524034	353852	389035	367576	299747	173293	228363	148873	190601	140669	201886	12983	12853

<sup>1</sup>Without 1994 and 1995 releases

<sup>2</sup>Without 1995 releases

<sup>3</sup>Without 2008 releases

<sup>4</sup>Without 2008 and 2009 releases

**Table 7.3.3** Sea trout smolt releases (x1000) to the Baltic Sea by country and sub-division in 1988-2007.

area	country	age	year																				
			1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Main Basin 22-29	DK	1yr														634	614	562	562	398	398		
		2yr															30	30	30	30	21	21	
	EE	2yr															30	23	25	2	21	20	
		FI	1yr		25	11	33	66	54	1	57	106	131	181	199	148	255	131	125	151	93	128	136
			2yr		133	169	166	123	103	170	144	181	153	182	168	258	197	131	138	244	303	287	187
	3yr		35	16	0		26	1	8	0	13	18	25	35	34	24	9	16	16	16			
	LV	1yr														114	160	170		74	91	113	
		2yr														2	10	67		116	177	112	
PL	1yr														151	211	30	16	46	322	455	188	
	2yr														845	733	739	804	765	843	968	1260	
SE	1yr	13	9	8	19	41	18	6		4	23	19	90	7	10	108	10	116	11	131	15		
	2yr	32	51	78	61	44	46	84	90	60	95	87	76	100	93	40	48	103	44	36	63		
Main Basin	Total		45	253	282	279	274	246	262	300	352	416	486	559	1544	1648	2066	2053	2057	2415	2730	2513	
Gulf of Bothnia 30-31	FI	1yr		7	13	22	38	26	33	8	37	7		421	49	67	1	27	7	5	9	51	
		2yr		288	526	586	564	455	451	451	578	527	382	462	393	365	434	301	239	273	313	499	
		3yr		99	27	7	18	30	9	0	28	12	5	11	11	5	27	11	15	6	1	1	
	SE	1yr			19	7				6			1										
GoB Total		445	392	406	406	413	376	460	642	554	429	407	372	405	424	380	428	361	413	569	530		
Gulf of Finland 32	EE	1yr																14	6	8	9	12	
		2yr																					
	FI	1yr		19	3	33	10	11	4	33	28	18	51	112	43	95	1	37	14	4		1	
		2yr		192	260	244	306	323	284	342	128	228	278	386	355	372	367	290	281	190	279	286	
		3yr			0		24	6		1	33	92	40	7	24	18	6	16					
RU	1yr																4	3		13	5		
GoF Total			210	264	277	340	341	287	376	189	337	369	504	422	484	373	363	305	202	301	319		
<b>Grand Total</b>		<b>490</b>	<b>1248</b>	<b>1535</b>	<b>1583</b>	<b>1646</b>	<b>1474</b>	<b>1502</b>	<b>1782</b>	<b>1737</b>	<b>1727</b>	<b>1649</b>	<b>2328</b>	<b>2825</b>	<b>2993</b>	<b>3281</b>	<b>3182</b>	<b>2983</b>	<b>3314</b>	<b>3922</b>	<b>3913</b>		

**Table 7.4.1** Adipose and pelvic finclipped sea trout released in the Baltic Sea area in 2007.

Country	Species	Stock	Age	Number		River	Sub-division	Other tagging
				parr	smolt			
Estonia	sea trout	Pudisoo	1		4,400	Pudisoo	32	
		Pudisoo	1		1,000	Loo	32	
		Pudisoo	1		4,400	Pirita	32	
		Pudisoo	1		2,000	Kaberla	32	
		Pudisoo	1		3,500	Puhajõgi	32	
		Pudisoo	2		6,700	Pudisoo	32	500 Carlin
		Õngu	2		1,000	Valgejõgi	29	1000 Carlin
		Õngu	2		2,000	Nõva	29	400 Carlin
		Õngu	2		2,000	Riguldi	29	
		Õngu	2		20,000	costal	29	
Sweden	sea trout	Luleälven	0	22,852		Luleälven	31	
		Luleälven	2		82,006	Luleälven	31	2000 Carlin
		Skellefteälven	2		29,028	Skellefteälven	31	1000 Carlin
		Umeälven	2		23,411	Umeälven	31	1000 Carlin
		Skellefteälven	2		7,000	Gideälven	30	1000 Carlin
		Ångermanälven	2		47,405	Ångermanälven	30	1000 Carlin
		Indalsälven	0	30,000		Ljustorpsån	30	
		Indalsälven	2		65,011	Indalsälven	30	1986 Carlin
		Ljungan	2		36,200	Ljungan	30	2000 Carlin
		Ljusnan	0	5,672		Hamångersån	30	
		Ljusnan	2		163,734	Ljusnan	30	3000 Carlin
		Dalälven	2		1,435	Gavleån	30	
		Ljusnan	2		1,000	Kustutsätningar	30	
		Dalälven	1	3,224		Kustutsätningar	30	
		Vistula, Dalälven	2		57,094	Dalälven	30	2500 Carlin, pel. fin clip.
		Åvaån	2		1,500	Åkersström	27	
		Åvaån, Indalsälven	2		15,800	Stockholms St.	27	
		Åvaån	2		7,800	Övriga vattendrag	27	
		Indal, Åvaån	2		14,500	Kustutsätningar	27	1263 Carlin
		Åvaån	1		1,500	Nyköpingsån	27	
		Åvaån	2		4,416	Nyköpingsån	27	
		Gullspång	2		12,000	Motala ström	27	
		Ljungbyån	2		3,500	Ljungbyån	27	
		Marströmmen	2		3,000	Marströmmen	27	
		Mörum	1		10,200	Mörumsån	25	
		Mörum	1		3,400	Kustutsätningar	25	
		Poland	sea trout	Vistula	2		9,000	Reda
Łeba	1				45,520	Łeba	25	1000 Carlin
Łeba	1				2,000	Łupawa	25	
Ślupia	2				145,016	Ślupia	25	4000 Carlin
Wieprza	2				188,620	Wieprza	25	3000 Carlin
Parsęta	2				29,470	Parsęta	25	2000 Carlin
Latvia	sea trout	Rega	2		36,364	Rega	25	
		Dougava	2		41,600	Dougava	28	
		Gauja	2		62,000	Gauja	28	
<b>Total sea trout</b>					<b>61,748</b>	<b>1,197,530</b>		

**Table 7.4.1.1** Number of Carlin-tagged sea trout released into the Baltic Sea in 2007.

Country	22	24	25	26	27	28	29	30	31	32	Total
Estonia										1,900	1,900
Finland							2492	4597	8176	5500	20,765
Sweden								14,804	9,000		23,804
Latvia						2,000					2,000
Poland			10,000	21,000							31,000
Total	0	0	10,000	21,000	0	2,000	2,492	19,401	17,176	7,400	79,469

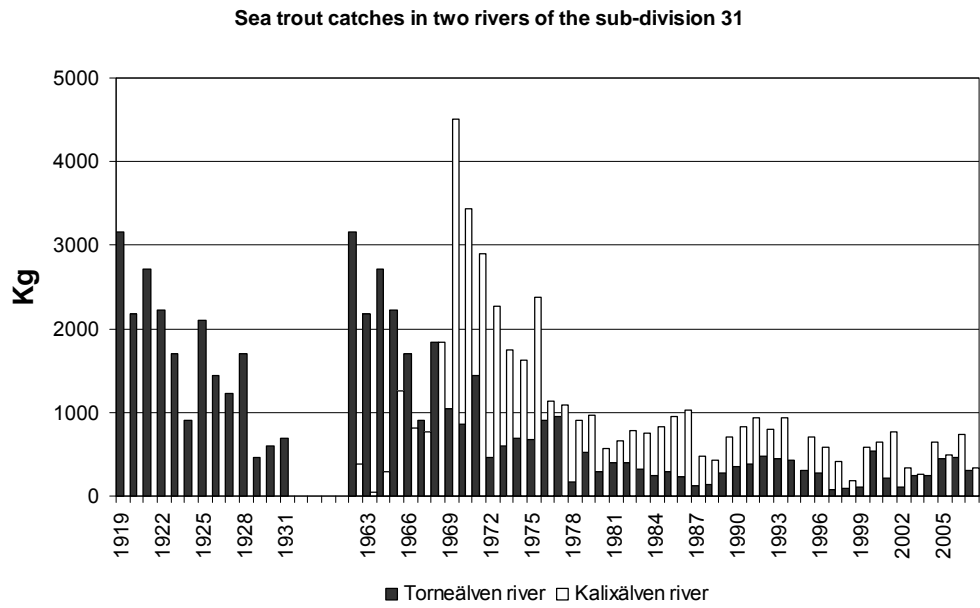


Figure 7.2.2.1  
 Sea trout catches in two rivers of the sub-division 31 between 1919 - 2007  
 (The Swedish Board of Fisheries, Fisheries Research Office in Lulea, unpub. data)

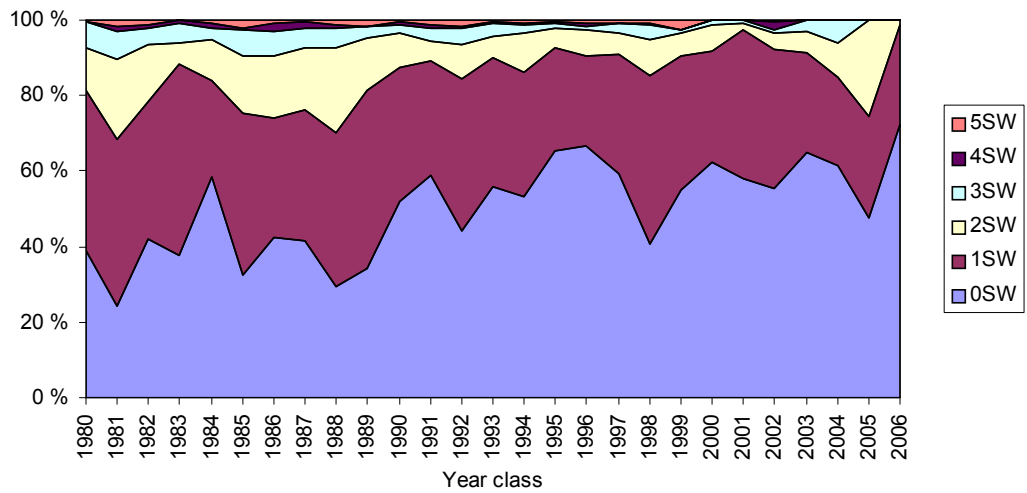


Figure 7.2.2.2. Age distribution of recaptured Carlin-tagged sea trout released in the Bothnian Bay (sub-division 31) area in Finland in 1984-2006.

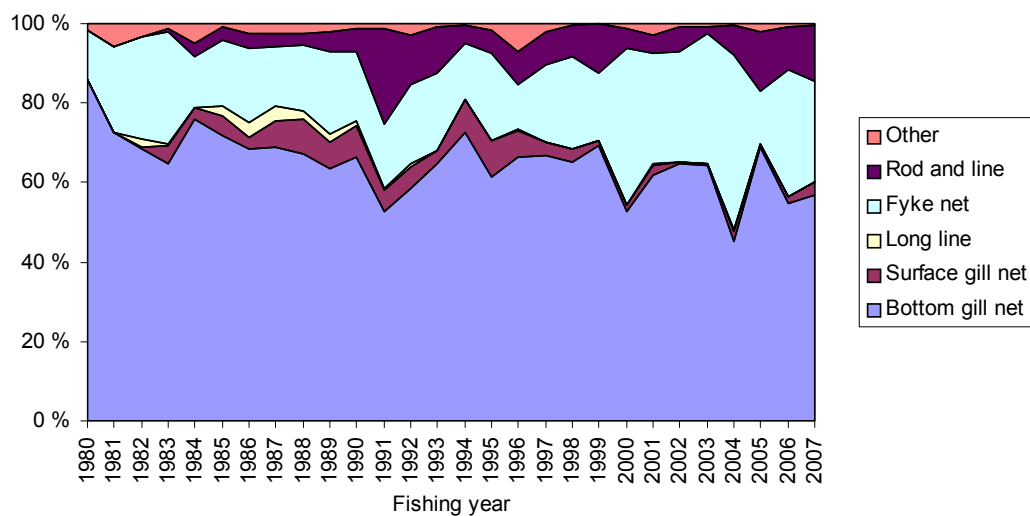


Figure 7.2.2.3 Distribution of fishing gear in recaptures of recaptured Carlin-tagged sea trout caught in the Bothnian Bay (sub-division 31) area in Finland in 1980-2007.

#### Sea trout catches in Vistula River in the Tczew area in the years 1953-1985

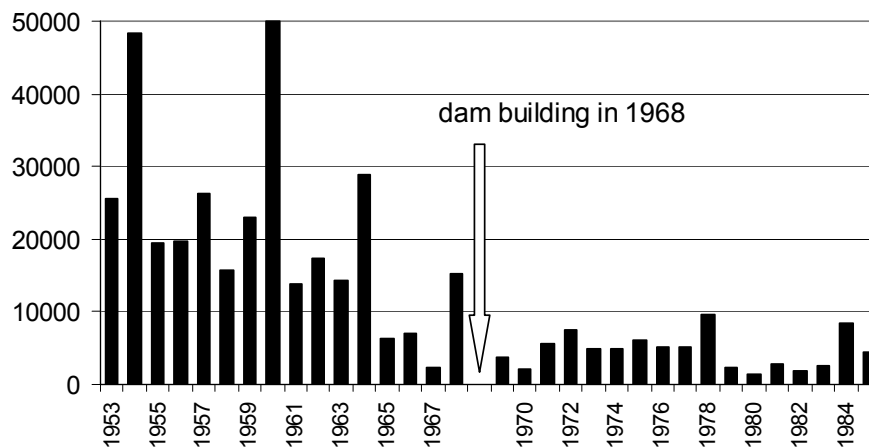


Figure 7.2.4.1

Sea trout catches (kg) in Vistula River in the Tczew area in the years 1953-1985  
(Department of Migratory Fish, Inland Fisheries Institute, unpub. data)

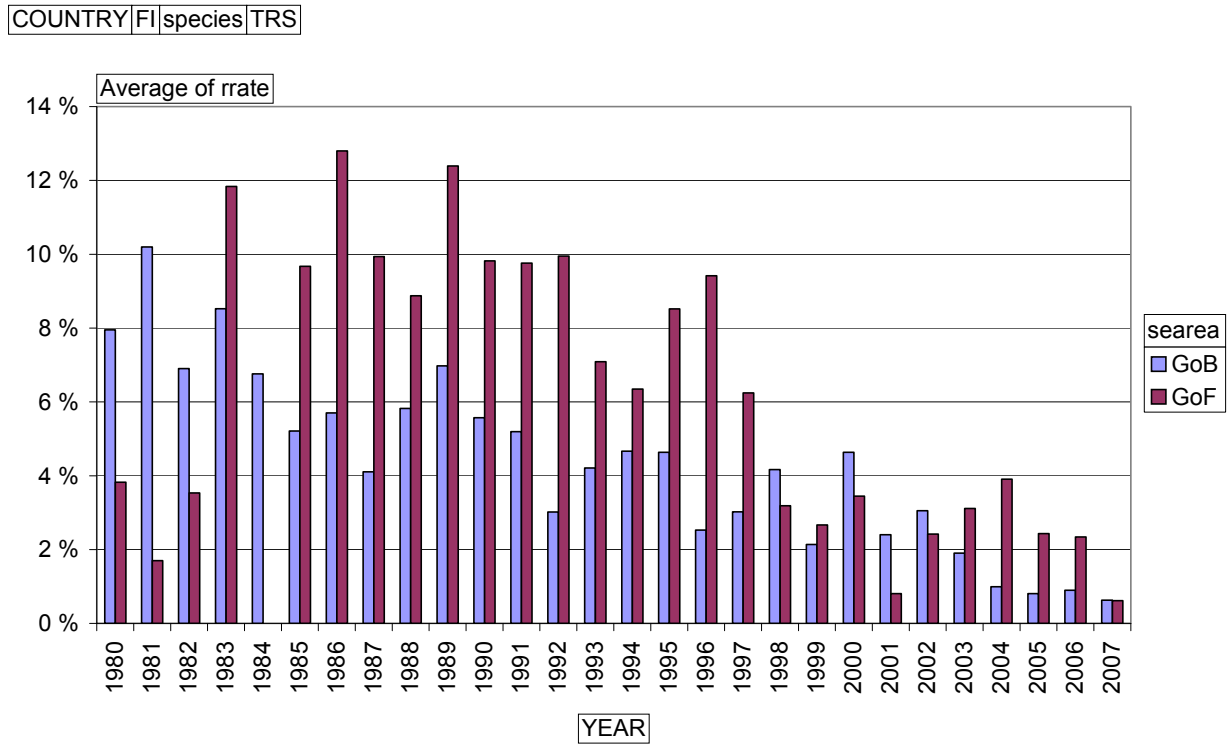


Figure 7.4.1.1. Return rates of Carling tagged sea trout released in Gulf of Bothnia and Gulf of Finland in 1980-2007.

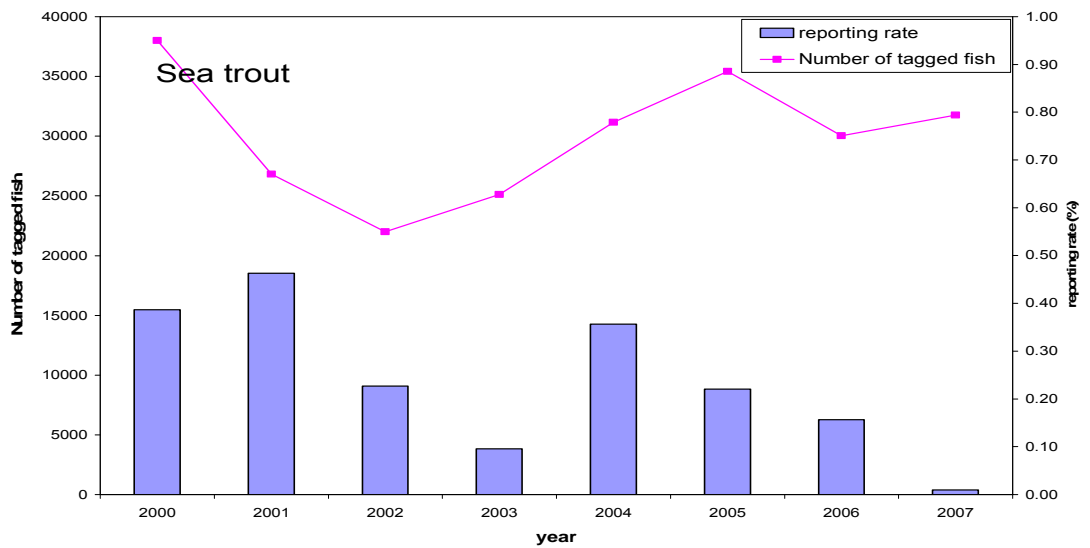


Figure 7.4.1.2 Reporting rates for sea trout in 1995-2007 in Poland