

2 Salmon fisheries data

2.1 Catches

The catch tables cover both commercial and non-commercial fisheries from sea, coast and rivers. However, Table 2.2.1 does not include river catches. Discards and unreported catches are not calculated in the nominal catch figures, as they are not included in the quota.

The catches in weight from 1972–2008 by country including separate columns for non-commercial catches, discards and unreported catches from 1994 and onwards are presented in Table 2.1.1. The catches in numbers are presented in Table 2.1.2, where also the share of discards and unreported catches from 1994 and onwards are presented in separate columns. Catches by area and country are presented in Table 2.1.3 and by Sub-division in Table 2.1.5. Values on discards and unreported catches (Tables 2.1.1, 2.1.2.) are calculated using conversion factors presented in previous years reports and are reported in terms of most likely value and 95% probability interval (PI). An overview of management areas and rivers are shown in Figures 5.3.1.1 and 5.3.1.3. The recreational share of the catches by country is shown in Table 2.1.6. There has been a decline of the total nominal catches in the Baltic Sea starting in 1990 from 5636 t decreasing to 1011 t in 2008. This is the lowest catch registered since 1970. The decline in the total nominal catches are in overall caused by declining effort in the commercial fishery, which means that the non-commercial fishery in percent is becoming a growing part of the total nominal catches. In 1994 the non-commercial catches was 9.5% of the total nominal catches, in 2008 this share was 35.0%. The percent of the non-commercial parts of the total catches (including river catches) from 2004 and onwards are presented in Figure 2.1.2.

Catches by type of gear are presented in Figure 2.1.1. Due to the total driftnets ban being enforced in 2008 the proportion of the total catches by driftnet in 2008 was 0%. During the period the proportion of the catch in trapnets has gradually increased and in 2008 it was 31% in numbers of the total nominal catches.

Denmark: The Danish salmon fishery is a typical open sea fishery. Apart from recreational catches of 3000 individuals in 2008, and a small unknown amount of salmon caught by non-professional fishermen along the coast, all salmon were caught by longline in the open sea. As usual the longline fishery took place in the cold months, when the water temperature is below 10 degrees C, and the Garfish are not active.

The catches in 2008, including the non-commercial fishery, were 34 tonnes (2007: 79 tonnes), and 7363 individuals (2007: 16 145 individuals). The decrease in numbers from 2007 to 2008 was 54%. The decrease in number of caught salmons was caused by the total stop in the driftnet fishery. The prohibition of trade with salmon above respectively 4.4/6.0 kilos, because of high dioxin levels, has caused large decreases in the salmon catches in the latest years. The number of salmon caught by the recreational trolling boats is based on information collected from sport fishermen, from the ferry company servicing Bornholm and from boat rental companies. The estimated number was 3000 salmon in 2008 equivalent to approximately 15 tonnes.

This estimate is the same as in the years 2003–2007. Except for the trolling fishery, it is not possible to give any kind of estimates for other kinds of non-professional salmon fishery.

All catches, including the recreational fishery, were caught in ICES Subdivision 24–25, very close to Bornholm, as the salmon fishery was very limited and the vessels targeting salmon are quite small to operate in open Baltic.

Estonia: For 2008 separately commercial and recreational catches in the sea are now available. In sea recreational catch is taken by fishermen who have legal right to fish with only 1 gillnet. In 2008 the open sea catch was below 1 tonnes as in previous years. Coastal commercial catch was about the same as in latest year. At Põlula rearing station 141 salmon (648 kg) in 2008, 225 (1074 kg) in 2007, 222 in 2006 and 119 in 2005 were caught.

Finland: In 2008 Finnish fishermen caught 76 982 salmon (430 t) from the Baltic Sea, which was about 1910 salmon (22 t) more than in year 2007, but still one of the lowest catches in years 1972–2008. Commercial catch was 57 874 salmon (312 t) and recreational catch including river catches was 19 108 salmon (118 t). About 15% (9222 salmon, 46 t) of the commercial catch was landed to Swedish and Danish harbours. Catch data from year 2008 are provisional. Commercial off-shore catches decreased 70% and coastal catches increased 50%. River catches (recreational) were about two-fold compared to 2007. The estimates of recreational salmon catches in sea for years 2006–2008 are based on the results of National survey 2006. The recreational salmon catch in sea was assumed being the same in years 2006–2008, which may misestimate the catches in 2007 and 2008. The river catches has been estimated by the annual surveys in rivers Tornionjoki and Simojoki, and by interviews and voluntary riverside catch statistics in other rivers.

Latvia: In 2008 the total catch was only 1410 salmon (5.2t) in coastal fisheries. In 2008 Latvian fishing vessels were not engaged in salmon offshore fisheries.

In commercial fisheries in the rivers 3.7 t (approx.460) salmon were caught, in broodstock fisheries in the rivers Daugava and Venta 449 salmon were caught for hatcheries. Angling results in the rivers Salaca and Venta was estimated to be 157 salmon kelts.

Lithuania: In 2008 Lithuanian fishermen caught 539 salmon (1717 t) all most the same level as last year. 280 (0,863 t) salmon were from coastal fishery and also 238 (0,785 t) salmon were caught in Curonian lagoon. In addition, for scientific purposes 13 salmon individuals were caught in Curonian lagoon, at migration period. 21 salmon were caught in the River Neris for artificial rearing.

Poland: Overall offshore and coastal catch was 8650 fish (43.6 t). It was a drastic drop (220%) compared to previous year's catch and TAC for Poland was realized with only 38%.

The reported river catch of 1034 fish (5.5 t) originated mostly from Vistula River and Pomeranian rivers, and maintained at the same level as in 2007. Most of this salmon catch was made for obtaining spawning material.

Russia: In 2008 Russian fishermen caught 1382 salmon (6.2 t) from the Baltic Sea. The total offshore and coastal catch was from the commercial fishery. About 50% of all catches came from offshore fishing grounds in Sub-division 26. 220 salmon (0.85 t) were caught as a bycatch in the Gulf of Finland. 465 spawners were caught in the rivers during brood stock fishing.

Sweden: The Swedish salmon catch in year 2008 of 460 tonnes, was 5% lower than in 2007 (484 t.) The main difference between the two years was a dramatic drop in offshore fisheries due to the new driftnet ban and increases in coastal and river catches. Landings in 2008 were 24% lower than the 5-year average 2003–07. This difference is

explained mainly by the high catches in 2004, 879 tonnes, and to a smaller extent also in 2005. The offshore catch in the Main Basin (Sub-division 22–29) decreased from 216 tonnes in 2007 to 88 tonnes in 2008, a decrease of 59%. In 2008 there was no recorded offshore catch in the Gulf of Bothnia (Sub-division 30–31). The coastal catch in this area was 198 tonnes, an increase of 23% compared to 2007. The coastal catch in the Main Basin was estimated to 5 tonnes. River catches increased from 103 tonnes in 2007 to 169 tonnes in 2008. This was 68%, higher than the five-year-average of 100 tonnes and it was the highest catch recorded in the ICES series going back to 1972.

The salmon catch in numbers in 2008, decreased by 5% from 2007. Offshore catches constituted 20% only of the total catch in numbers, the coastal catch about 45%, and the river catch about 35%. This can be compared with 47, 34 and 19% in 2007. In three rivers commercial trapnet fishery occurs inside the freshwater border and they made up 30 tonnes or 7193 fish in 2008, almost double the figures in 2007 of 17 tonnes and 3485 fish. River catches are not included in the Swedish catch. The catch quota that should be included in the TAC is taken at sea or along the coast and it made up 58 890 fish in 2008. A decrease of 24% compared to 2007.

Distribution of catches by countries in comparison with the TAC

Until 1992 the TAC was given in tonnes, but from 1993 the TAC was given in numbers. The landings in numbers (excluding river catches) compared to TAC by fishing nations and by areas in 1993–2008 are given in Table 2.1.7.

Unreported catches and discards are not included in the utilisation of the TAC, but total catches of salmon inclusive unreported catches and discards are presented in % of TAC in Figure 2.1.3.

In 2008 35% of the TAC in Sub-division 22–31 was utilised. (Total TAC was 364 392 individuals). In the Gulf of Finland 98% of the EC TAC of 15 419 individuals was utilised. The Russian catches of 220 salmon are not included in this 98%. It should be noted, that there occasionally is some exchange of TAC between countries, which may result in exceeded TAC's. The total TAC for salmon was allocated to countries and utilized (exclusive river catches from Table 2.1.7) in the following manner:

Contracting party	Quota	SUB-DIVISION 22–31		SUB-DIVISION 32		
		Sea/Coast Catch	Utilized %	Quota	Catch	Utilized %
Denmark	74 076	7363	9.9			
Estonia	7528	432	5.7	1581	1114	70.5
Finland	94 157	49808	51.3	13 836	14 009	101.3
Germany	8241	3458	42.0			
Latvia	47 116	1410	3.0			
Lithuania	5539	518	9.4			
Poland	22 472	7616	33.9			
Sweden	100 129	58 890	58.8			
Total EU	364 392	129 495	35.5	15 419	15 123	98.0
Russia ¹⁾	-	697	-	-	222	-
TOTAL	371 315	130 192	35.1		15 565	

¹⁾ No international agreed quota between Russia and EC.

The major part of the salmon catch in the Baltic Sea was caught by professional fishermen with longlines in the offshore areas, or by trap- and gillnets in the coastal areas. The catches in the recreational fishery using commercial gear-types are for self-consumption. These catches are usually not reported through the official channels

and therefore the figures have to be estimated. Table 2.1.6 and Figure 2.1.2 gives an estimate of the magnitude of this fishery and it appears from the table that non-commercial fisheries constitute a considerable and growing part of the total catch of salmon. In 2008 these catches (from coast and sea) constituted 18% of the total reported salmon catches from coast and sea.

2.2 Discards, misreporting and unreporting of catches

In general, data on discards, misreporting and unreporting of salmon from different fisheries in the Baltic Sea are incomplete and fragmentary. An adjustment factor based on the experts' opinion of the unreported discarded catches has therefore been developed. These opinions are based on the reported knowledge presented here and other background information available for each country. This conversion factor has been applied to obtain probabilistic estimates for the total number of salmon caught, including discarded catches. The magnitude of the present discard and unreported salmon catch is presumed to vary between regions and generally to account for 21–64% of the total salmon catch in numbers (Tables 2.1.1 and 2.1.2).

As main reasons for salmon discard in the Baltic fisheries is the seal damages and bycatch of undersized young salmon in different fisheries. Salmon discard due to seal damages occurs only in the Northern part of Baltic Sea, i.e., in the main distribution area of the grey seal; Gulf of Riga, Gulf of Finland and Gulf of Bothnia. Bycatch of undersized young salmon occurs in all the Baltic Sea and in different types of but mostly in longline fisheries. With the reduced catches bycatch of undersized salmon is also reduced.

Misreporting of catches probably occurs in all different types of fisheries, fisheries zones and countries. In fact this phenomenon displays in many forms. Catch in the traditional small scale fishery as traditional direct selling fish from the boat, self-consuming of salmon or discard of dead fish without catch report, etc. Reporting of salmon as a sea trout or rainbow trout or even marine rainbow trout, creates additional source of unreported salmon. There is no data on larger scale misreporting of catches. As the TAC is very low utilised in most countries, misreporting due to catch restrictions is likely to be low.

However, inexplicable inadequacies of basic data exist: i.e. significant differences of tagged fish recapture compared to total catch of salmon by country, significant differences in catch composition in same fisheries by different countries (proportion of sea trout and salmon in same fisheries and sub-division).

Denmark has not any longer information from which it is possible to estimate trustworthy discard percentages. As the quota for salmon only was utilized by less than 6% in 2008, it is very unlikely that there are any unreported catches in the Danish salmon fishery. The bycatch of salmon in other fisheries is believed to be at a quite low level. Observers from the Danish Marine Institute have participated in the herring and sprat fishery in the Baltic in the winter 2007/2008 for about 50 days, and only bycatches of very few salmon was observed in this fishery.

In **Estonia** the seal damages are a serious problem in the salmon and sea trout gillnet fishery. Information from fishermen shows that damages by seals are increasing from year to year. Quantitative assessment of damages is not available as fishermen in most cases did not present claims for gear compensation.

In **Finland** about 5626 salmon (28 t) salmon were discarded due to seal damages according to recorded data. This was about 30% less than in previous year. Seals caused several damages to all fisheries mainly in Sub-divisions 29–32 where seal damages

comprised 10% of the total commercial catch in the region. Other discards were insignificant (155 salmon, 1 t).

In **Latvia** a small number of fishermen reported the number of salmon damaged by seals. The total estimation of catch losses is impossible. In 2005 the restrictions of landing and selling of Baltic salmon due to dioxin content was established in Latvia. As result the part of salmon landed in coastal and river fisheries would not be declared. However, as Latvia's salmon quota in 2008 was utilized only by 3%, unreporting of catches seems not to be a problem.

In **Lithuania** information on discard, misreporting and unreporting is not available.

In **Poland** present use of longlines only, which are a highly unselective gear, increases the catch of undersized salmon. Observations made in 2009 shows that the discard percent can be up to 5–10%.

A number of young salmon (30–40 cm) can sometimes be caught in bottom and pelagic trawling. Also feeding adult salmon (up to 50 fish per haul) can be caught as a bycatch in pelagic trawling targeting for sprat and herring and most frequently this bycatch is not recorded, because fish are immediately pumped into tanks onboard. The magnitude of pelagic sprat catches increases year by year and causes increase of unreported salmon catches.

In the coastal spring gillnet herring fishery from March-May, in Sub-divisions 25 and 26, a number of smolts are frequently caught. Especially tagged ones are caught because they are trapped in the meshes by the tag wire.

Adding together all sources of unreported and discarded salmon, the overall amount of unreported salmon which can be added to the reported catch, can achieve yearly over 70%.

In **Russia** information on discard, misreporting and unreporting is not available. Unofficial information indicates significant poaching.

In **Sweden** total percentage of the salmon catch in trapnets that is discarded due to damage by seals is estimated to be about 15% and this leads to an estimated discard in 2008 of 35 tonnes of salmon.

2.3 Fishing Effort

The total fishing effort by drifting gear in the offshore fishery in the Main Basin since 1987 is presented in Table 2.3.1. which includes Baltic salmon at sea, at the coast and in the river in 1987–2008 in Sub-division 22–31, excluding Gulf of Finland. The fishing effort in the offshore fishery in The Main Basin is presented in Figure 2.3.1 and the fishing effort in the coastal fisheries is presented in Figure 2.3.2. The fishing efforts are expressed in number of gear days (number of fishing days times the number of gear) and are reported per half year (HYR). The coastal fishing effort on stocks of assessment area 1 (Section 5) refers to the total Finnish coastal fishing effort. The coastal fishing effort on stocks in assessment area 2 refers to the Finnish coastal fishing effort in area 3 and the Swedish coastal fishing effort in area 2. The coastal fishing effort on stocks of area 3 refers to the Finnish and Swedish coastal fishing effort in area 3. Because sea trout in Poland are fished with the same gear type as salmon, effort from the Polish fishery targeting sea trout was included in the table before 2003.

An overview of the number of fishing vessels engaged in the offshore fishery for salmon during the last 10 years period is presented in Table 2.3.2. Data are missing from Lithuania and Russia, but as the catches by these countries are small, it seems

unlikely that their boats have been engaged more than occasionally in salmon fishery. Germany has no fishery targeting salmon directly, and is only catching salmon as a bycatch in other fisheries.

In 2008 47 vessels were engaged in the offshore fishery and this was a further decrease compared to the level in 2007 (77 vessels). In 2008 32 vessels fished less than 20 days and only 8 vessels were fishing more than 40 days.

In overall there was no major change in the effort in the driftnet fishery in the Main Basin since mid 1990s, until the effort in this fishery was totally stopped in 2008 because of the driftnet ban. The effort in the longline fishery in 2008 increased more than 53% to 1 362 021 compared to 722 270 in 2007.

The introduction of national fishing zones in the 1980s and the adoption of a TAC in the 1990s combined with low market prices affected the fishing effort. In recent years effort is restricted by limitation in the number of gear used in the fishery and rules for dioxin contents (Section 4.3.1).

2.4 Catch per Unit Effort

In the same way as biological sampling of salmon, the EU member states fisheries data collection programmes includes cpue data.

The seasonal average cpue's information was collected since 1980/1981 for Danish, Finnish, Latvian and Swedish fisheries in various combinations of sub-divisions in the Main Basin, the Gulf of Bothnia and the Gulf of Finland. Cpue values are presented in Table 2.4.1.

From the year 2000 all the information available on cpue is obtainable from the WGBAST salmon Catch Database.

Available information on cpue for countries, fisheries and sub-divisions is presented in the table below:

COUNTRY	SUB-DIVISION	OFFSHORE FISHERIES, GEAR		COASTAL FISHERIES, GEAR		PERIOD FROM
		LL	DN (stopped in 2008)	GN/DN	TN	
Denmark	22-25; 26-29	X	X			1983
Estonia	28-29; 32		X			1980-1988
Finland	22-31; 32	X	X		X*	1980
Latvia	26, 28		X		X*	1980
Poland	25/26	X	X	X		2000
Russia	26		X			2000
Sweden	22-29	X	X			1985

*- data series from 2000, LL: Long-lines, GN: Gillnets, TN: Traps.

The cpue is presented as number of salmon per 100 nets (driftnet), as number of salmon per 1000 hooks (logline) and number of salmon per trapnet day in coastal fisheries.

From the fishing season 1983/1984 and onwards, the cpue in the driftnet fishery has increased significantly compared to preceding years, however with somewhat lower levels in the mid-1990s. In 2006 (as also in 2005), the cpue in both driftnet and

longline fishery decreased substantially in the Main Basin, and stayed at this level until 2007. From 2008 when all driftnet fishery was stopped the series of cpues from this fishery also ends. The cpue in the longline fishery stayed at a low level in 2008.

Because of a historically low effort in the Danish salmon fishery for the last three years, Danish cpue do not show a realistic picture of the catchability.

2.5 Description of basic collection of catch data

The countries participating in the salmon fishery in the Baltic are asked to deliver data on catch of salmon and sea trout, area for catch (economical zone, ICES Sub-division), type of fishery (offshore, coastal, river, commercial, recreational), information on discard, unreported catch and seal damage. Furthermore the catch effort and cpue in weight and number of catch in different gears (driftnet, logline, trapnet, non-commercial catches or other). The effort in terms of number of days each gear was deployed is also asked for.

Logbooks provide only preliminary information taken on board the vessels, where real count and weight estimates are normally difficult to obtain. The catch statistics in different countries are obtained by combination of data included in logbooks, landing declarations, first sales notes and fisheries companies catch reports.

From 2005 EU type logbooks were implemented in new member states Latvia, Estonia, Poland and Lithuania.

The catch statistics provided for ICES WGBAST are mainly based on logbooks and/or sales notes. Non-commercial catches are mainly estimated by questionnaires or special issues. In total, direct information on catch represented approximately 66% of total catch. Extrapolated and estimated catch (partly based on solid information) provides information given below on approx. 34% of the total catch. The table below provides an overview of the origin of the information.

FISHERY TYPE	LOGBOOK ¹⁾	EXTRAPOLATED	ESTIMATED	GUESTIMATED	TOTAL	%
Commercial	125 824	5479			131 303	66.1
Discard	219				219	0.1
Non-commercial		8950	52 562		61 512	31.0
Seal Damage	5626				5626	2.8
	131 669	14 429	52 562		198 660	100.0
%	66.3	7.3	26.5		100.0	

¹⁾ Includes all fisheries documentation, sales notes, logbooks, and landing declarations.

Catch tables are constructed by extracts from the resulting database. Because of a delay in the delivery of data from some countries, part of the information is preliminary. These data must be corrected the following year.

Effort data are shown in Table 2.4.1. The effort data are calculated separately for 3 different stock assessment management areas (see Chapter 5). Basic data for these calculations are found in the catch database, but needs to be divided into the three stock assessment areas before calculations are made. From the year 1981 Table 2.1.1 and from 1993 Table 2.1.2 show estimated discard and unreported catches.

Collection of catch statistics by country

Denmark: The catch statistics are based on official landing reports and logbooks, combined with additional information from logbooks, e.g. type of gear for all catches, and from 2007 effort for 100% of the catches, (before 2007 only 60–70%) collected in a

database at DIFRES, and from this the total catches and effort are estimated. As no Danish salmon rivers discharges into the Baltic Sea and salmon therefore migrate into the close coastal areas, sports' fishing for salmon is only possible by offshore trolling. This catch was earlier extremely scarce, but the trolling has developed in the last few years and in the period from 2004 to 2008 an estimated 3000 salmon per year were caught near Bornholm. The estimates of recreational catches are calculated from information from sports fishermen, information from the ferry company servicing Bornholm, and from boat rental companies.

Estonia: The catch statistics are based on logbooks from the offshore and coastal fisheries. Data on river catches are from brood stock fishery and anglers questionnaires.

Finland: Catch statistics in the commercial fishery has been collected in logbooks from the offshore and coastal fishery. Catch statistics of the commercial salmon fishery for 2008 are preliminary.

To obtain more accurate estimates on catches in rivers Tornionjoki and Simojoki, extensive inquiries are conducted every year among fishermen who have bought a fishing licence. Catches of the recreational salmon fishing were updated based on the Finnish survey of the recreational fishing 2006.

Latvia: The Latvian salmon catch and landing statistics are based on the logbooks and landing declarations from the offshore and logbooks from coastal and inland fisheries. Catch data from a small scale recreational fishing in the River Salaca and River Venta is based on questionnaires. These data are not included in catch statistics.

Lithuania: Catch statistics are based on logbook data. All data storing and processing are provided by the Fisheries department of Ministry of Agriculture.

Poland: Commercial offshore and coastal catch statistics are based on logbooks of vessels over 10 m and on monthly reports of vessels smaller than 10 m. All raw data are sent through Regional Fisheries Inspectorates for input to the database, which is run by the Ministry of Agriculture and Rural Development in Warsaw and is linked to VMS centre, located in Gdynia. Estimated catch data from rivers is provided by Polish Anglers Union.

Russia: The catch statistics are based on landing reports, logbooks and direct observation from the offshore and coastal commercial fisheries and broodstock fisheries in the rivers. Catches could be grossly underestimated.

Sweden: Swedish catch statistics are based on logbooks of licensed fishermen in coastal and offshore fisheries. Catches by non-licensed fishermen in coastal areas are estimated from the total number of gears in each coastal region and the catch in the licensed fishery in the area.

On the basis of different kinds of circumstantial data, angling and trolling in the coastal and offshore areas are believed to be of small, but increasing, magnitude. Estimates of the trolling catch are based on a survey carried out in the Main Basin in 2003. Catch statistics are collected for all Swedish salmon rivers, but the quality depends on local conditions, size of the river and on how the river fishery is organised.

2.6 Biological sampling from the catch of salmon

Since 2004–2005 all EU Baltic sea countries follow the Fisheries data collection programme including the salmon catch age, length and weight composition. The national data collection programmes mostly include different fisheries regions (offshore, coastal, river), different fisheries (commercial, angling, broodstock), differ-

ent origin (wild, reared) fish. Only Russia provides data collection according to state research programme.

The number of sampled and analysed fish varies between countries; mostly the national sampling programmes exceed the precision requirements of EC 1639/2001. Annually at least 3–4 thousand salmon are sampled from different fisheries. Data on age, length and weight composition of salmon catches are available from year indicated and onward:

COUNTRY	FISHERIES	PARAMETERS			
		Length	Weight	Age	Sex
Denmark ⁽¹⁺²⁾	Offshore	2002	1973	1973	-
Estonia	Coastal	2005	2005	2005	2005
Finland	Offshore	1986	1986	1986	
	Coastal	1986	1986	1986	
	River	1974	1974	1974	1974
Latvia	Offshore2	1974	1974	1974	-
	Coastal	1978	1978	1978	1978
Lithuania	Coastal	na	na	na	na
Russia	River	na	na	na	na
Sweden ⁽²⁾	Offshore	2002	2002	2002	2006
	Coastal	1990	1990	1990	1990
	River	1991	1991	1991	1991
Poland	Offshore	2003	2003	2003	2003

¹⁾ no sampling in 2007.

²⁾ no sampling in 2008.

There are some problems in comparing the previous year's data by the differently stated salmon birthday. For this reason there will be a significant shift between age readings, so the data should be recalculated concerning one date of the annual year.

Overview of samples collected for biological sampling in 2008:

Country	TIME PERIOD	FISHERIES	Gear	NUMBER OF SAMPLED FISH BY SUBDIVISION					Total
				22–28	29	30	31	32	
Estonia	/ month number 1–12	Coastal	Gillnet					116	116
Finland	1–4 and 9–12	Offshore	Longline	370					370
Finland	5–8	Offshore	Trapnet		252	460	300	371	1383
Finland	5–9	River	Trapnet				745		745
Latvia	6–11	Coastal	Trapnet	790					790
Lithuania	9–10	river	Gillnet	68					68
Poland	1–4 and 11–12	Offshore	Longline	400					400
Russia	8–11	River	Trapnet					417	417
Sweden	5–8	Coastal	Trapnet			129	567		696
Sweden	4–9	River	Trapnet	18		145	123		286
Total				1646	252	734	1735	904	5271

Denmark: There was no biological sampling of salmon in Denmark in 2008 due to extreme small catches.

Estonia: Starting in 2005 Estonia follows the EU sampling programme. Sampling takes place occasionally, carried out by fishermen with about 100 salmon per year from the coastal fishery. In addition 120–200 salmon have been sampled annually in the river brood-stock fishery for some years. In 2008 totally 116 samples were taken from only the coastal fishery.

Finland: In 2008 catch sampling brought in about 2500 salmon scale samples from the Finnish commercial salmon fisheries. The samples represented fisheries in terms of time and space. The whole pool of samples was resampled by stratifying according to appeared catches. The final amount of analysed samples was optimally adjusted to meet the quality criteria of DCR. Finally the total numbers of samples were analysed by scale reading and part of these (about 1200) also by DNA micro satellite techniques. Part of these samples were collected and analysed by the national funding.

Germany: There is no information available on biological sampling in Germany.

Latvia: From 2008 Latvia's vessels were not engaged in salmon offshore fisheries. In coastal fisheries salmon biological sampling is carried out from June till November in two coastal locations: near the rivers Daugava (reared population) and Salaca (wild population) outlets. In total 790 salmon were sampled in coastal fisheries.

Lithuania: From 2005 sampling will follow the EU Minimum programme. Lithuanian fishermen did not carry out specialized salmon fishing. In 2008 a total 68 samples were taken in the coastal zone.

Poland: Sampling was conducted on landed fish from off-shore catches. According to DCR total number of sampled fish should be 100 for the whole Polish salmon fishery, but in fact 400 fish was sampled for age, length and weight in 2008. Age was estimated on base of scale readings. Due to logistic problems data collection was conducted mainly in ICES Sub-area 26 and covered only longline fishery. Sub-sample of salmon scales was sent to RKTL, Helsinki for genetic investigations.

Russia: There is no biological sampling programme in Russia. However in 2008 417 fish collected in the river brodstock (the rivers Neva, Narva and Luga) fishery are aged, and lengths and weights are recorded.

Sweden: Biological salmon samples were collected in accordance with the EU minimum programme. The sampling also followed the Swedish National Programme for collection of fisheries data from 2003. The relevant geographic area is the ICES Sub-areas IIIb, c and d. Swedish salmon fishery takes place in ICES Sub-division 23–31 and it includes river, coastal and offshore fisheries.

The offshore long-line fishery takes place mainly in the 1st and 4th quarters of the year. In 2008 no samples was collected from this fishery.

As salmon from the offshore fishery is already gutted when landed, sex and gonadal maturity-by-age are not available from offshore samples taken in ports. In addition to sampling in ports some sampling is carried out on board commercial vessels. Sexing of fish is carried out in a proper manner by some coastal fishermen. At the same time when ageing of fish takes place by scale reading, it is also determined if the fish is of wild or reared origin. As a preparation of studies on stock proportions in the fishery, genetic samples were taken both in the offshore and coastal fishery.

The coastal trapnet salmon fishery covers several quarters. In 2008 982 samples were collected from this fishery. The samples were taken by the fishermen at two different locations in the Gulf of Bothnia (ICES Sub-division 30–31); Skellefteå and outside

Nordmaling, and by the Board of Fisheries in the archipelago of Haparanda. All data are stored in a database at the Institute of Freshwater Research.

2.7 Estimation of proportions of wild salmon and individual salmon stocks in catches based on genetic studies and scale readings

A combination of DNA and smolt age data was used to estimate stock and stock group proportions of catch samples. The baseline data included 33 stocks and for most of them 17 loci genetic baseline data were available (Table 2.7.1). The inclusion of smolt age data to the analyses was adopted already in the last year WG report, and improved especially the distinction between genetically very similar stocks in two wild and hatchery stock pairs: Tornionjoki wild- and hatchery stocks and Umeälven (hatchery), Vindelälven (wild) stocks.

Similar to last year analyses, the smolts were divided into two classes based on age-data: 'one and two-year-old smolts' and 'older smolts'. One and two-year-old smolts could originate either from wild or hatchery stocks, and hatchery stocks consisted exclusively of these younger smolts. Smolts older than two years were assumed to originate from wild stocks. The prior information on the smolt age distributions used in this year analyses to describe the age structure of wild and reared smolts in the baseline stocks (Table 2.7.2) differs somewhat from those priors used for analyses of catch samples from previous years. In general, the probability intervals for the smolt age distribution are wider in the new baseline, giving less weight to the smolt age data as compared to genetic data. For most of the wild stocks, a typical smolt age distribution reflecting the average over the years has been used. However, for Tornionjoki wild, Vindelälven and Simojoki annual smolt age distribution data was available and thus it was possible to weight the smolt year class distributions with the observed proportions of smolt year classes in these stocks, and thus get more precise distributions. Applying these two baselines, with somewhat different prior information on smolt age distribution, on the Åland Sea sample from 2007 gives very similar results (data not shown) indicating that results might be comparable across years.

For Bothnian Sea and Gulf of Finland, no catch samples from 2008 have been analysed. For the other areas (Bothnian Bay, Åland Sea and Main Basin) both stock group proportions (Table 2.7.3, Figure 2.7.1) and proportions of individual stocks (Table 2.7.4) in catch samples from 2008 are presented. In addition, the proportions of wild and reared-origin fish based only on scale reading are presented for comparison (Table 2.7.5).

In the Åland Sea catch samples, the proportion of wild fish was the lowest since year 2000 (Table 2.7.3, Figure 2.7.1). The most pronounced change from 2007 to 2008 was that Tornionjoki wild contributed less in 2008, whereas reared stocks from Sweden (mainly Luleälven, but also Ångermanälven and Indalsälven) contributed more in catch samples from 2008 (Table 2.7.4). Other stocks that contributed significantly in the catch samples include reared salmon from Tornionjoki and wild salmon from Kalixälven, Byskeälven and Vindelälven.

The Bothnian Bay catch samples from 2000 to 2005 are solely from the Finnish fishery, whereas the catch samples from 2006 and onwards consist of pooled Finnish and Swedish samples. The proportion of wild fish has been higher in the pooled samples (57–74%), than in pure Finnish samples (16–43%). This difference is partly due to the gradual increase in the proportion of wild salmon during the study period, but is also explained by a higher contribution of wild salmon in Swedish catches. The contribution of wild salmon in combined catch samples from 2008 was the highest so far (Table 2.7.3, Figure 2.7.1), mostly due to an increased contribution of wild salmon from

Kalixälven, Vindelälven and Lögdeälven as compared to 2007. In the Bothnian Bay, Finnish coastal fishery mainly harvest wild salmon from Tornionjoki and Kalixälven, and reared salmon from Tornionjoki, Iijoki and Oulujoki. The Swedish fishery mainly harvest wild salmon from Tornionjoki, Kalixälven, Byskeälven and Lögdeälven, and reared salmon from Luleälven (data not shown).

In the Main Basin catch samples the proportion of wild salmon has been over 50% in 2006–2008. The 2008 catch samples included about the same proportion of wild salmon as compared to 2007 (Table 2.7.3, Figure 2.7.1). In 2006, the Finnish and Swedish hatchery stocks contributed evenly, but in 2007 and 2008 the proportion of Swedish hatchery stocks was higher (Tables 2.7.3 and 2.7.4).

The potential use of stock proportion estimates in catches to improve the assessment model has been discussed previously and was also highlighted in the last year Technical minutes. However, before stock proportion estimates could be used as an input in the assessment model, a further evaluation of the DNA approach must be undertaken including reanalyses of historic catch samples using the latest baseline; both to evaluate the precision in the analyses and to compare smaller scale temporal and spatial variation in stock proportions estimates in order to evaluate the representativeness of catch samples (see also 8.2 and Annex 2 “Recommendations”).

2.8 Description of gears used in salmon fisheries

A description of the gears used in the different fisheries is found in ICES 2003. This report includes extensive descriptions of presently used gears in Sweden, Finland, Estonia, Latvia, Poland and Denmark, as well as historical gear development in the Baltic salmon fisheries.

In the coastal fishery trapnets and anchored floating gillnets are more commonly used. Some regional differences and development of the gear used was also described in ICES (2003). In the offshore fisheries some of the Finnish and Polish fishermen in the 1980s started to use deeper driftnets with total depth of 10–15 m in comparison with traditional driftnets (6.4 m). In the Gulf of Bothnia and Gulf of Finland, trapnet fisheries has been developed using new netting material that the seal cannot bite through as well as fixed fences at the entrance of the traps preventing the seal from entering the traps has been developed. In Sweden a new type of trap has been developed in recent years, the so called ‘push-up trap’, with fixed walls that protect the catch from seals.

With continued and increasing problems from seal predating on salmon captured in fishing gear, the use of traps that protect the salmon from seal predation was raised in 2004 compared to previous years. In Sweden the number of seal-safe traps has continued to increase. An inventory of the number of both traditional and seal-safe traps will be carried out in 2007. In Finland the government has been giving support to coastal fishermen to change from traditional traps to seal-safe traps. In 2006 the number of these traps in operation in Finland was more than 100.

2.9 Present tagging and marking

2.9.1 Fin-clipping

Data on numbers of adipose fin-clipped salmon are given in Tables 2.9.1.1 and 2.9.1.2. In almost all cases fin clippings were aimed at distinguishing between reared/enhanced salmon or from the wild production. There is continuous increasing trend in number of fin clipped parr and smolt since 2003.

In 2008 total number of fin clipped salmon parr and smolt increased 11% comparing to 2007 and was 2,546,758. Out of this 95,984 were parr and 2,450,774 were smolt. Comparing to 2007, the number of fin clipped salmon parr decreased but number of fin clipped salmon smolt increased about 13%.

In 2008 43% of all reared salmon smolt production was fin clipped, which was 4% more as in 2007.

Most fin clippings (in numbers) were carried out in Subdivisions 30 and 31.

Starting in 2005 it is mandatory in Sweden to fin clip all salmon. All Estonian salmon smolts were fin clipped in 2008. In Poland all salmon released into Rivers, Reda, Leba, Slupia, Wieprza and Parseta were adipose fin clipped. In Russia all salmon smolts released by the Luga hatchery were fin clipped.

2.9.2 External tagging

The number of Carlin tagged reared salmon was 89,814 in 2008 (Table 2.9.2.1), which was 11% more than in 2007. The share of tagged salmon in all releases was the same as in the 2007 (approx. 2%). About 2,200 wild smolts in Latvia (Salaca River) and about 8,000 wild smolts in Finland (River Tornionjoki) were tagged with Streamer tags. A smaller amount of reared salmon parr in Lithuania were tagged with Floy tags. Limited numbers of salmon were also tagged with PIT tags and radio tags.

The recapture rate of salmon smolts shows rather decreasing trend in last years in the Gulf of Bothnia, Gulf of Finland and Main Basin (Figures 2.9.2.1, 2.9.2.2, 2.9.2.4), however, recapture rate of 1-y Carlin tagged salmon in the Gulf of Finland in Estonian experiments increase slightly since 2001 (2.9.2.3). In general the recapture rate in the Baltic Main Basin comparing with others part of Baltic has been even lower (less than 0.6%). In the Gulf of Bothnia recapture rate was at similar level in Swedish and Finnish tagging in 1980–2002. Based on Finnish data, there was observed lower recapture rate of salmon in the Gulf of Bothnia than in Gulf of Finland until 2000. Tagging results indicates the 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 quality of salmon assessments.

2.9.3 Tag reporting rate

Tagging in Baltic salmon monitoring programs is mostly based on Carlin type of tags relying on tag recoveries being reported by the public. Therefore it is vital that fishermen find and report all tags. Some studies to estimate the reporting rate has been carried out in the Baltic Sea and their results indicate an obvious unreporting.

Backiel and Bartel(1967), working on sea trout, assumed that the increased mortality, tag loss and incomplete discovery and/or return brought about an underestimation of recaptures by ca. 15%. Debowski and Bartel, 1996, based on analysis of tagging experiments in 1961 through 1986, estimated that underestimation of stocking efficiency, which was caused by not reported tags and increased mortality of tagged smolts was up to 40%.

The number of reported salmon tags has dropped in Poland since 2001 and only in years 2005–2006 the rate has exceeded beyond 0.4%. Comparing the yearly recapture tags (excluded in reporting rate) with reported tags, no increase in the number of former ones was noted.

Decreasing trend in returns can be to some extent explained also bycatch limits and the attitude of fishermen, which are afraid to return tags because they think, those tags can prove, to some extent, exceeded catch limits. In Poland, increase of reward paid to fishermen does not affect seriously returning rates and it is believed that there will be observed continue decrease in number of returning tags in future, because of tax obligation associated with received reward that was enforced in 2007.

In Denmark two high rewarded-tag sea trout release experiments were conducted in 1988. Increase in return rates were 10.2% and 62.5% respectively, depending on local awareness and local fishing patterns. It is, however, doubtful if these results can be extrapolated to the whole Baltic salmon fishery.

A larger Swedish dataset exists from the offshore fishery in the Main Basin. A fisherman at Gotland, assumed to be reliable on the basis of earlier experiences, agreed to report all tags he found in the catches. When comparing the number of Swedish tags that he found in his catches, to the total number of Swedish tags reported, some underreporting from this fishery was indicated.

Observations from the offshore driftnet fishery in the Main Basin in 2002, involving observers on board two salmon fishing boats suggest that slightly less than 1% of salmon caught is tagged with Carlin tags. This number may be compared to results from other analysis, assuming equal number of recaptures of tagged salmon in all samples of salmon.

Reporting rate may vary between countries. Comparison of reporting rates from two countries fishing in the Baltic Main Basin indicates, that one country can report significantly less than the other.

An experiment with different rewards for different tags (electronic Data Storage Tags: DST's) and conventional Carlin tags, was conducted in the coastal fishery in the Gulf of Bothnia in 1995–1997. For the DST tags it was clearly stated that a substantial reward was offered. Clear differences in recapture rates were observed. However, it was not ascertained that the two tag types were mixed, and the results should be taken with caution. Nonetheless substantial differences in reporting were observed.

Comparing reporting rate from anglers in the Dalälven to observations in the brood stock fishery data from Dalälven suggests that the reporting rate by anglers in the river is about 80%.

In the Gulf of Finland studies from the late 1980s suggested that the reporting rate varied between 40–75% (median 55%).

2.10 Tagging data in the Baltic salmon stock assessment

Tagging data in combination with the tag reporting rates have been used within the assessment of Baltic salmon in order to estimate the population parameters as well as the exploitation rates by the different fisheries (Section 5.3.8). Table 2.10.1 gives an overview of the number of tagged hatchery-reared and wild salmon released in rivers of assessment areas 1, 2 or 3 and used as an input data in the assessment (Section 5). No reliable Swedish tagging data have been after 2005 hence the large decrease in the tagging data used in the assessment for salmon in areas 2 and 3. For wild salmon only salmon from area 1 have been tagged and not every year.

Table 2.1.1 Nominal catches, discards (incl. seal damaged salmon) and unreported catches of Baltic Salmon in tonnes round fresh weight, from sea, coast and river by country in 1972-2008 in sub-division 22-32. (mode = most likely value, 95% PI = probability interval)

Year	Reported catches by country										Reported catches total	Non commercial catch. included in tot. catch.	Discard		Unreported catches		Total catches	
	Denmark	Estonia	Finland	Germany	Latvia	Lithuania	Poland ¹⁾	Russia	Sweden	USSR			mode	95% PI	mode	95% PI	mode	95% PI
1972	1045	na	403	117	na	na	13	na	477	107	2162		na	na	na	na	na	
1973	1119	na	516	107	na	na	17	na	723	122	2604		na	na	na	na	na	
1974	1224	na	703	52	na	na	20	na	756	176	2931		na	na	na	na	na	
1975	1210	na	697	67	na	na	10	na	787	237	3008		na	na	na	na	na	
1976	1410	na	688	58	na	na	7	na	665	221	3049		na	na	na	na	na	
1977	1011	na	699	77	na	na	6	na	669	177	2639		na	na	na	na	na	
1978	810	na	532	22	na	na	4	na	524	144	2036		na	na	na	na	na	
1979	854	na	558	31	na	na	4	na	491	200	2138		na	na	na	na	na	
1980	886	na	668	40	na	na	22	na	556	326	2498		na	na	na	na	na	
1981	844	25	663	43	184	36	45	61	705		2606		318	192-495	460	138-1100	3474	3051-4063
1982	604	50	543	20	174	30	38	57	542		2058		246	147-384	355	105-864	2731	2401-3199
1983	697	58	645	25	286	33	76	93	544		2457		301	181-467	434	130-1037	3277	2877-3833
1984	1145	97	1073	32	364	43	72	88	745		3659		428	256-673	620	181-1533	4836	4254-5673
1985	1345	91	963	30	324	41	162	84	999		4039		457	270-729	660	180-1690	5304	4661-6244
1986	848	76	1000	41	409	57	137	74	966		3608		436	262-680	629	186-1520	4798	4216-5618
1987	955	92	1051	26	395	62	267	104	1043		3995		463	277-730	659	184-1673	5262	4625-6188
1988	778	79	797	41	346	48	93	89	906		3177		380	226-596	561	170-1339	4226	3713-4944
1989	850	103	1166	52	523	70	80	141	1416		4401		541	325-842	789	240-1865	5880	5161-6874
1990	729	93	2294	36	607	66	195	148	1468		5636		798	477-1239	1104	323-2549	7745	6734-9091
1991	625	86	2171	28	481	62	77	177	1096		4803		651	377-1030	942	278-2170	6572	5713-7719
1992	645	32	2121	27	278	20	170	66	1189		4548		637	349-1040	919	253-2175	6290	5414-7466
1993 ²⁾	575	32	1626	31	256	15	191	90	1134		3966		558	336-861	776	234-1778	5442	4740-6377
1994	737	10	1209	10	130	5	184	45	851		3181	302	408	244-632	599	188-1368	4295	3762-5011
1995	556	9	1324	19	139	2	133	63	795		3040	331	421	252-651	599	186-1357	4166	3634-4875
1996	525	9	1316	12	150	14	125	47	940		3138	532	473	280-735	645	196-1476	4375	3791-5153
1997	489	10	1357	38	170	5	110	27	824		3030	563	449	256-715	636	192-1466	4233	3657-5011
1998	495	8	850	42	125	5	118	36	815		2494	332	351	212-539	504	167-1116	3436	3000-4009
1999	395	14	720	29	166	6	135	25	672		2162	296	318	189-492	445	141-1001	3003	2609-3526
2000	421	23	757	44	149	5	144	27	771		2342	360	240	133-390	470	158-1036	3131	2735-3652
2001	443	16	606	39	136	4	180	37	616		2076	355	310	187-474	427	136-957	2887	2511-3385
2002	334	16	509	29	108	11	197	66	572		1841	267	290	176-442	381	118-864	2582	2241-3035
2003	454	10	410	29	47	3	198	22	454		1627	208	250	157-373	329	108-728	2260	1975-2634
2004	370	7	654	35	34	3	88	16	879		2087	353	324	187-511	434	122-1023	2928	2522-3480
2005	214	8	616	24	23	3	114	15	719		1736	359	266	153-422	368	111-853	2439	2103-2894
2006	178	8	370	18	14	2	117	5	497		1208	207	194	115-302	254	74-590	1703	1469-2018
2007	79	7	408	15	26	2	95	6	484		1123	232	155	86-248	239	78-535	1557	1350-1836
2008	34	9	430	17	9	2	44	6	460		1011	355	156	74-275	228	54-583	1439	1206-1773

All data from 1972-1994 includes sub-divisions 24-32, while it is more uncertain in which years sub-divisions 22-23 are included. The catches in sub-divisions 22-23 are normally less than one ton. From 1995 data includes sub-divisions 22-32.
 Catches from the recreational fishery are included in reported catches as follows: Finland from 1980, Sweden from 1988, Denmark from 1998. Other countries have no or very low recreational catches.
 Danish, Finnish, German, Polish and Swedish catches are converted from gutted to round fresh weight w by multiplying by 1.1.
 Estonian, Latvian, Lithuanian and Russian catches before 1981 are summarized as USSR catches.
 Estonian, Latvian, Lithuanian and Russian catches are reported as whole fresh weight.
 Sea trout are included in the sea catches in the order of 3 % for Denmark (before 1983), 3% for Estonia, Germany, Latvia, Lithuania, Russia, and about 5% for Poland (before 1997).
 Estimated non-reported coastal catches in Sub-division 25 has from 1993 been included in the Swedish statistics.
 Danish coastal catches are non-professional trolling catches.
 1) Polish reported catches are recalculated for assessment purposes (see Section 5)
 2) In 1993 fishermen from the Faroe Islands caught 16 tonnes, which are included in total Danish catches.
 In 2008 data from Finland, Russia and Sweden are preliminary.

Table 2.1.2 Nominal catches, discards (incl. seal damaged salmon) and unreported catches of Baltic Salmon in numbers from sea, coast and river by country in 1993-2008. Sub-divisions 22-32. (mode = most likely value, 95% PI = probabilistic interval)

Year	Country									reported total	Discard		Unreported catches		Total catches	
	Denmark	Estonia	Finland	Germany	Latvia	Lithuania	Poland ¹⁾	Russia	Sweden		mode	95% PI	mode	95% PI	mode	95% PI
1993 ²⁾	111840	5400	248790	6240	47410	2320	42530	9195	202390	676115	95162	57550-146900	132503	40010-302900	927969	807900-1087000
1994	139350	1200	208000	1890	27581	895	40817	5800	158871	584404	74979	45150-116300	110144	34620-251200	789450	691200-920400
1995	114906	1494	206856	4418	27080	468	29458	7209	161224	553113	76541	46060-118500	109104	34050-246900	758247	661100-886500
1996	105934	1187	266521	2400	29977	2544	27701	6980	206577	649821	97938	58360-152200	133970	40930-305800	906180	785200-1067000
1997	87746	2047	245945	6840	32128	879	24501	5121	147910	553117	81897	46910-130500	116494	35500-267800	773051	667700-914400
1998	92687	1629	154676	8379	21703	1069	26122	7237	166174	479676	67571	41080-103800	97225	32400-214800	661033	577200-770700
1999	75956	2817	129276	5805	33368	1298	27130	5340	139558	420548	61785	36980-95760	86722	27590-194800	584328	507800-685500
2000	84938	4485	144260	8810	33841	1460	28925	5562	165016	477297	71015	39450-115200	102447	30980-238100	670160	576700-797400
2001	90388	3285	115756	7717	29002	1205	35606	7392	149391	439742	63751	38690-97930	89731	28860-201000	608976	530200-712500
2002	76122	3247	104641	5762	21808	3351	39374	13230	138255	405790	64397	39840-97460	83527	26360-188200	568346	494100-666300
2003	108845	2055	99149	5766	11339	1040	40870	4413	115347	388824	60998	38170-91640	79294	25560-177300	542809	473100-634400
2004	81425	1452	132105	7087	7700	704	17650	5480	192856	446459	68762	40400-107700	92478	26700-215900	625358	539600-740500
2005	42491	1618	115068	4799	5629	698	22896	3069	144584	340852	51874	30100-81960	72042	21920-165900	478070	412800-565800
2006	33723	1516	64501	3551	3195	488	22207	1002	97285	227468	35597	21470-54840	47567	14930-108000	319031	276600-375500
2007	16145	1378	75072	3086	5318	537	18988	1408	95241	217173	30445	17280-48760	46042	14820-103800	301807	261400-355800
2008	7363	1890	76982	3458	2016	539	8650	1382	90584	192864	30485	14790-53290	42980	10040-110600	273116	228800-336800

All data from 1993-1994, includes sub-divisions 24-32, while it is more uncertain in which years sub-divisions 22-23 are included.

The catches in sub-divisions 22-23 are normally less than one tonnes.

From 1995 data includes sub-divisions 22-32.

Catches from the recreational fishery are included in reported catches as follows: Finland from 1980, Sweden from 1988, Denmark from 1998.

Other countries have no, or very low recreational catches.

1) Polish reported catches are recalculated for assessment purposes (see Section 5)

2) In 1993 Fishermen from the Faroe Islands caught 3200 individuals, which is included in the total Danish catches.

In 2008 data from Finland, Russia and Sweden are preliminary.

Table 2.1.3 Nominal catches of Baltic Salmon in tonnes round fresh weight, from sea, coast and river by country and region in 1972 - 2008. S=sea, C=coast, R=river.

Year	Main Basin (Sub-divisions 22-29)											
	Denmark		Finland	Germany	Poland		Sweden		USSR		Total	
	S	S+C	S	S	S	R	S	C+R	S	C+R	GT	
1972	1034	122	117	13	277	0	0	107	1563	107	1670	
1973	1107	190	107	17	407	3	0	122	1828	125	1953	
1974	1224	282	52	20	403	3	21	155	2002	158	2160	
1975	1112	211	67	10	352	3	43	194	1795	197	1992	
1976	1372	181	58	7	332	2	84	123	2034	125	2159	
1977	951	134	77	6	317	3	68	96	1553	99	1652	
1978	810	191	22	4	252	2	90	48	1369	50	1419	
1979	854	199	31	4	264	1	167	29	1519	30	1549	
1980	886	305	40	22	325	1	303	16	1881	17	1898	

Year	Main Basin (Sub-divisions 22-29)																									
	Denmark		Estonia		Finland			Germany	Latvia			Lithuania		Poland			Russia		Sweden			Total				
	S	C	S	C	S	C	R	S	S	C	R	S	C	S	C	R	S	C	S	C	R	S	C	R	GT	
1981	844	*	23	0	310	18	0	43	167	17	0	36	na	45	na	na	56		401	0	1	1925	35	1	1961	
1982	604	*	45	0	184	16	0	20	143	31	0	30	na	38	na	na	57		376	0	1	1497	47	1	1545	
1983	697	*	55	0	134	18	0	25	181	105	0	33	na	76	na	na	93		370	0	2	1664	123	2	1789	
1984	1145	*	92	0	208	29	0	32	275	89	0	43	na	72	na	na	81		549	0	4	2497	118	4	2619	
1985	1345	*	87	0	280	26	0	30	234	90	0	41	na	162	na	na	64		842	0	5	3085	116	5	3206	
1986	848	*	52	0	306	38	0	41	279	130	0	57	na	137	na	na	46		764	0	4	2530	168	4	2702	
1987	955	*	82	0	446	40	0	26	327	68	0	62	na	267	na	na	81		887	0	4	3133	108	4	3245	
1988	778	*	60	0	305	30	0	41	250	96	0	48	na	93	na	na	74		710	0	6	2359	126	6	2491	
1989	850	*	67	0	365	35	0	52	392	131	0	70	na	80	na	na	104		1053	0	4	3033	166	4	3203	
1990	729	*	68	0	467	46	1	36	419	188	0	66	na	195	na	na	109		949	0	9	3038	234	10	3282	
1991	625	*	64	0	478	35	1	28	361	120	0	62	na	77	na	na	86		641	0	14	2422	155	15	2592	
1992	645	*	19	4	354	25	1	27	204	74	0	20	na	170	na	na	37		694	0	7	2170	103	8	2281	
1993	591	*	23	4	425	76	1	31	204	52	0	15	na	191	na	na	49		754	7	5	2283	139	6	2428	
1994	737	*	2	4	372	80	1	10	97	33	0	5	na	184	na	na	29		574	11	8	2010	128	9	2147	
1995	556	*	4	3	613	86	1	19	100	39	0	2	na	121	12	na	36		464	13	6	1915	153	7	2075	
1996	525	*	2	4	306	53	1	12	97	53	0	14	na	124	1	na	na	35		551	8	5	1631	154	6	1791
1997	489	*	1	5	359	44	0	38	106	64	0	1	4	110	0	0	na	23		354	9	7	1458	149	7	1614
1998	485	10	0	4	324	14	0	42	65	60	0	1	4	105	9	4	na	33		442	3	7	1464	137	11	1612
1999	385	10	0	4	234	108	0	29	107	59	0	1	5	122	9	4	na	22		334	2	7	1212	219	11	1442
2000	411	10	1	7	282	87	0	44	91	58	0	0	5	125	13	6	23	0		461	2	8	1439	182	14	1635
2001	433	10	0	4	135	76	0	39	66	71	0	1	4	162	12	6	33	0		313	2	7	1181	178	13	1373
2002	319	15	0	6	154	59	0	29	47	61	0	1	9	178	9	10	64	0		228	2	6	1021	161	16	1198
2003	439	15	0	3	115	41	0	29	33	14	0	0	3	154	22	22	20	0		210	3	3	999	102	25	1126
2004	355	15	0	3	169	108	0	35	19	13	2	0	2	83	na	5	14	0		433	5	3	1108	145	11	1264
2005	199	15	0	1	188	92	0	24	15	8	0	0	2	104	5	5	12	0		314	5	2	856	129	8	993
2006	163	15	0	1	105	28	0	18	9	5	0	0	2	100	11	6	3	0		220	3	1	618	66	7	691
2007	64	15	0	2	158	18	0	15	16	3	7	0	2	75	15	5	4	0		216	4	2	548	59	14	621
2008	19	15	0	2	45	25	0	17	0	5	4	0	2	30	8	6	4	0		88	5	2	204	62	11	277

Table 2.1.3 Continued

Year	Gulf of Bothnia (Sub-divisions 30-31)											Main Basin+Gulf of Bothnia (Sub-divs. 22-31) Total		
	Denmark	Finland			Sweden			Total				S	C+R	GT
	S	S	S+C	C	S	C	R	S	C	R	GT			
1972	11	0	143	0	9	126	65	163	126	65	354	1726	298	2024
1973	12	0	191	0	13	166	134	216	166	134	516	2044	425	2469
1974	0	0	310	0	15	180	155	325	180	155	660	2327	493	2820
1975	98	0	412	0	33	272	127	543	272	127	942	2338	596	2934
1976	38	271	0	155	22	229	80	331	384	80	795	2365	589	2954
1977	60	348	0	142	49	240	60	457	382	60	899	2010	541	2551
1978	0	127	0	145	18	212	40	145	357	40	542	1514	447	1961
1979	0	172	0	121	20	171	35	192	292	35	519	1711	357	2068
1980	0	162	0	148	23	172	35	185	320	35	540	2066	372	2438

Year	Gulf of Bothnia (Sub-divisions 30-31)										Main Basin + Gulf of Bothnia (Sub-divisions 22-31) Total			
	Finland			Sweden			Total				S	C	R	GT
	S	C	R	S	C	R	S	C	R	GT				
1981	125	157	6	26	242	35	151	399	41	591	2076	434	42	2552
1982	131	111	3	0	135	30	131	246	33	410	1628	293	34	1955
1983	176	118	4	0	140	32	176	258	36	470	1840	381	38	2259
1984	401	178	5	0	140	52	401	318	57	776	2898	436	61	3395
1985	247	151	4	0	114	38	247	265	42	554	3332	381	47	3760
1986	124	176	5	11	146	41	135	322	46	503	2665	490	50	3205
1987	66	173	6	8	106	38	74	279	44	397	3207	387	48	3642
1988	74	146	6	1	141	48	75	287	54	416	2434	413	60	2907
1989	225	207	6	10	281	68	235	488	74	797	3268	654	78	4000
1990	597	680	14	12	395	103	609	1075	117	1801	3647	1309	127	5083
1991	580	523	14	1	350	90	581	873	104	1558	3003	1028	119	4150
1992	487	746	14	7	386	95	494	1132	109	1735	2664	1235	117	4016
1993	279	426	16	10	267	91	289	693	107	1089	2572	832	113	3517
1994	238	269	14	0	185	73	238	454	87	779	2248	582	96	2926
1995	66	302	20	0	214	97	66	516	117	699	1981	669	124	2774
1996	96	350	93	5	261	110	101	611	203	915	1732	765	209	2706
1997	44	360	110	1	295	158	45	655	268	968	1503	804	275	2582
1998	57	225	43	2	224	137	59	449	180	688	1523	586	191	2300
1999	17	175	23	1	195	133	18	370	156	544	1230	589	167	1986
2000	11	170	30	0	167	133	11	337	163	511	1450	519	177	2146
2001	9	218	26	1	175	117	10	393	143	546	1191	571	157	1919
2002	5	193	20	1	233	101	6	426	121	554	1027	588	137	1752
2003	1	167	25	2	164	73	3	331	98	432	1002	433	123	1558
2004	3	274	32	0	352	86	3	627	118	748	1111	772	129	2012
2005	6	204	37	1	275	123	6	479	160	644	862	608	167	1637
2006	1	140	17	6	195	71	7	335	88	431	625	401	95	1122
2007	3	126	27	1	161	101	4	287	128	419	552	346	142	1040
2008	0	183	77	0	198	167	0	380	244	624	204	442	255	901

Table 2.1.3 Continued

Year	Gulf of Finland (Sub-division 32)					Sub-division 22-32		
	Finland			USSR		Total		
	S	S+C	C	S	C+R	S	C+R	GT
1972	0	138	0	0	0	1864	298	2162
1973	0	135	0	0	0	2179	425	2604
1974	0	111	0	0	0	2438	493	2931
1975	0	74	0	0	0	2412	596	3008
1976	81	0	0	0	14	2446	603	3049
1977	75	0	0	0	13	2085	554	2639
1978	68	0	1	0	6	1582	454	2036
1979	63	0	3	0	4	1774	364	2138
1980	51	0	2	0	7	2117	381	2498

Year	Gulf of Finland (Sub-division 32)												Sub-division 22-32			
	Estonia			Finland			Russia			Total			Total			
	S	C	R	S	C	R	C	R	S	C	R	GT	S	C	R	GT
1981	0	2	0	46	1	0	5	0	46	8	0	54	2122	442	42	2606
1982	0	5	0	91	7	0	0	0	91	12	0	103	1719	305	34	2058
1983	0	3	0	163	32	0	0	0	163	35	0	198	2003	416	38	2457
1984	0	5	0	210	42	0	7	0	210	54	0	264	3108	490	61	3659
1985	0	4	0	219	34	2	20	0	219	58	2	279	3551	439	49	4039
1986	24	0	0	270	79	2	28	0	294	107	2	403	2959	597	52	3608
1987	10	0	0	257	61	2	23	0	267	84	2	353	3474	471	50	3995
1988	19	0	0	122	112	2	15	0	141	127	2	270	2575	540	62	3177
1989	36	0	0	181	145	2	37	0	217	182	2	401	3485	836	80	4401
1990	25	0	0	118	369	2	35	4	143	404	6	553	3790	1713	133	5636
1991	22	0	0	140	398	2	88	3	162	486	5	653	3165	1514	124	4803
1992	6	3	0	77	415	2	28	1	83	446	3	532	2747	1681	120	4548
1993 1)	3	1	1	91	309	3	39	2	94	349	6	449	2666	1181	119	3966
1994	3	1	0	88	141	6	15	1	91	157	7	255	2339	739	103	3181
1995	1	1	0	32	200	5	25	2	33	226	7	266	2014	895	131	3040
1996	0	3	0	83	324	10	10	2	83	337	12	432	1815	1102	221	3138
1997	0	4	0	89	341	10	4	0	89	349	10	448	1592	1153	285	3030
1998	0	4	0	21	156	10	0	3	21	160	13	194	1544	746	204	2494
1999	0	10	0	29	127	7	0	3	29	137	10	176	1259	726	177	2162
2000	0	14	1	37	130	11	0	4	37	144	16	196	1486	663	193	2342
2001	0	10	2	19	111	11	0	3	19	122	16	157	1211	693	173	2076
2002	1	10	0	17	46	15	0	2	18	56	16	90	1044	643	154	1841
2003	0	7	0	3	50	8	0	1	3	57	9	69	1006	489	132	1627
2004	0	4	0	2	57	9	1	1	3	62	11	75	1114	834	139	2087
2005	0	6	0	3	72	15	1	2	3	79	17	99	865	687	184	1736
2006	0	5	1	3	65	10	1	2	3	70	13	86	628	471	108	1208
2007	0	4	1	3	64	9	0	1	3	69	11	83	555	415	153	1123
2008	0	6	1	2	91	7	1	2	2	97	10	109	205	539	265	1011

All data from 1972-1994, includes sub-divisions 24-32, while it is more uncertain in which years sub-divisions 22-23 are included. The catches in sub-divisions 22-32 are normally less than one tonnes. From 1995 data includes

Catches from the recreational fishery are included as follows: Finland from 1980, Sweden from 1988, Denmark from 1998.

Other countries have no, or very low recreational catches.

Danish, Finnish, German, Polish and Swedish catches are converted from gutted to round fresh weight by multiplying by 1.1.

Estonian, Latvian, Lithuanian and Russian catches before 1981 are summarized as USSR catches.

Estonian, Latvian, Lithuanian and Russian catches are reported as whole fresh weight.

Sea trout are included in the sea catches in the order of 3% for Denmark (before 1983), 3% for Estonia, Germany, Latvia, Lithuania, Russia, and about 5% for Poland (before 1997).

Estonian sea catches in Sub-division 32 in 1986-1991 include a small quantity of coastal catches.

Estimated non-reported coastal catches in Sub-division 25 has from 1993 been included in the Swedish statistics.

Danish coast catches are non-professional trolling catches.

1) In 1993 fishermen from the Faroe Islands caught 16 tonnes, which are included in total Danish catches.

In 2008 data from Finland, Russia and Sweden are preliminary.

Table 2.1.4 Nominal catches of Baltic Salmon in numbers, from sea, coast and river by country and region in 1996-2008.
S=sea, C=coast, R=river.

Year	Main Basin (Sub-divisions 22-29)																									
	Denmark		Estonia		Finland			Germany	Latvia			Lithuania			Poland			Russia	Sweden				Main Basin (sub-divisions 22-29) Total			
	S	C	S	C	S	C	R	S	S	C	R	S	C	R	S	C	R	S	S	C	R	SEA	COAST	RIVER	GT	
1996	105934	0	263	528	58844	8337	200	2400	19400	10577	0	1485	1059		27479	222	0	5199	121631	1322	633	342635	22045	833	365513	
1997	87746	0	205	1023	61469	7018	0	6840	20033	12095	0	214	665		24436	0	65	4098	68551	1415	810	273592	22216	875	296683	
1998	90687	2000	0	770	60248	2368	0	8379	13605	8098	0	288	781		23305	1927	890	6522	99407	573	940	302441	16517	1830	320788	
1999	73956	2000	28	741	45652	15007	0	5805	24309	9059	0	166	1132		24435	1835	860	4330	74192	408	876	252873	30182	1736	284791	
2000	82938	2000	129	1190	56141	12747	0	8810	24735	9106	0	78	1382		25051	2679	1195	4648	107719	400	1005	310249	29504	2200	341954	
2001	88388	2000	122	819	26616	10706	0	7717	18194	10808	0	152	1053		33017	1764	825	6584	78873	407	890	259663	27557	1715	288935	
2002	73122	3000	0	1171	32870	9503	0	5762	11942	9781	85	363	2988		35636	1804	1934	12804	60242	462	699	232741	28709	2718	264168	
2003	105845	3000	16	681	24975	6521	0	5766	8843	2496	0	74	966		30886	4282	5702	3982	54201	498	469	234588	18444	6171	259203	
2004	78425	3000	na	594	35567	17824	50	7087	4984	2316	400	49	655		16539	na	1111	4983	99208	849	441	246842	25238	2002	274082	
2005	39491	3000	na	286	36917	14736	25	4799	2787	2054	788	na	691	7	20869	1025	1002	2433	66527	698	337	173823	22490	2159	198472	
2006	30723	3000	na	291	19958	4326	20	3551	1705	1490	0	9	474	5	20050	1274	883	552	45685	542	180	122233	11397	1088	134718	
2007	13145	3000	na	325	30390	2742	20	3086	2960	1478	880	0	529	8	14984	3038	966	888	44844	576	243	110297	11688	2117	124102	
2008	4363	3000	na	432	9149	3873	35	3458	0	1410	606	0	518	21	6074	1542	1034	697	17883	915	317	41624	11690	2013	55327	

Year	Gulf of Bothnia (Sub-divisions 30-31)										Main Basin + Gulf of Bothnia (Sub-divisions 22-31) Total			
	Finland			Sweden			Total							
	S	C	R	S	C	R	S	C	R	GT	SEA	COAST	RIVER	GT
1996	22196	84940	14000	1181	61239	20571	23377	146179	34571	204127	366012	168224	35404	569640
1997	8205	76683	17000	251	49724	27159	8456	126407	44159	179022	282048	148623	45034	475705
1998	11105	46269	5100	329	41487	23438	11434	87756	28538	127728	313875	104273	30368	448516
1999	3529	35348	3100	89	38447	25546	3618	73795	28646	106059	256491	103977	30382	390850
2000	2423	37755	4150	13	32588	23291	2436	70343	27441	100219	312685	99847	29641	442173
2001	1904	49497	3750	122	44077	25022	2026	93574	28772	124373	261690	121131	30487	413308
2002	864	42433	3900	174	55261	21417	1038	97694	25317	124050	233779	126403	28035	388218
2003	166	51922	4500	293	43047	16839	459	94969	21339	116767	235047	113413	27510	375970
2004	604	60368	5900	0	75151	17207	604	135519	23107	159230	247446	160757	25109	433312
2005	1045	39983	6700	99	55174	21749	1144	95157	28449	124750	174967	117647	30608	323222
2006	162	24776	2620	1144	34544	15190	1306	59320	17810	78436	123539	70716	18898	213153
2007	600	25871	3570	195	31712	17671	795	57583	21241	79619	111092	69271	23358	203721
2008	11	36775	12030	0	40092	31377	11	76867	43407	120285	41635	88557	45420	175612

Year	Gulf of Finland (Sub-division 32)								Sub-divisions 22-32 Total							
	Estonia			Finland			Russia		Total							
	S	C	R	S	C	R	C 1)	R	S	C	R	GT	SEA	COAST	RIVER	GT
1996	0	396	0	20664	55840	1500	1485	296	20664	57721	1796	80181	386676	225945	37200	649821
1997	0	819	0	19577	54493	1500	1023	0	19577	56335	1500	77412	301625	204958	46534	553117
1998	22	761	76	4210	23876	1500	65	650	4232	24702	2226	31160	318107	128975	32594	479676
1999	12	1904	132	6234	19306	1100	95	915	6246	21305	2147	29698	262737	125282	32529	420548
2000	79	2833	254	8105	21040	1900	79	835	8184	23952	2989	35124	320869	123799	32630	477297
2001	62	1965	317	3804	17578	1900	82	726	3866	19625	2943	26434	265556	140756	33430	439742
2002	108	1968	0	3652	8219	3200	18	408	3760	10205	3608	17573	237540	136608	31643	405790
2003	17	1341	0	553	8812	1700	75	356	570	10228	2056	12854	235617	123641	29566	388824
2004	36	822	0	480	9811	1500	183	314	516	10816	1814	13147	247962	171573	26923	446459
2005	34	1298	0	536	12326	2800	213	423	570	13837	3223	17630	175537	131484	33831	340852
2006	48	955	222	506	10433	1700	121	329	554	11509	2251	14315	124093	82225	21149	227468
2007	64	764	225	451	10033	1395	120	400	515	10917	2020	13452	111607	80188	25378	217173
2008	0	1114	344	368	13641	1100	220	465	368	14975	1909	17252	42003	103532	47329	192864

Data from the recreational fishery are included in Swedish and Finnish data. Recreational fishery are included in Danish data from 1998. Other countries have no, or very low recreational catches.

In 1996 sea trout are included in the Polish catches in the order of 5%.

1) Russian coastal catches have in earlier reports been recorded as sea catches.

In 2008 data from Finland, Russia and Sweden are preliminary.

Table 2.1.5 Nominal catches of Baltic Salmon in tonnes round fresh weight and numbers from sea, coast and river, by country and sub-divisions in 2008. Sub-divisions 22-32. S=sea, C=coast, R=river

Sub-division	Fishery	-	COUNTRY									Total
			DK	EE	FI	DE	LV	LT	PL	RU	SE	
200	S	Weight									29	29
		Number									5381	5381
22	S	Weight				6						6
		Number				1233						1233
23	S	Weight									0	0
		Number									65	65
24	S	Weight	1		2	2			0		3	8
		Number	300		304	333			30		725	1692
	C	Weight							1			1
		Number							177			177
25	S	Weight	18		41	9			2		37	107
		Number	4063		8218	1892			443		7348	21964
	C	Weight	15		1				1		5	21
		Number	3000		128				154		864	4146
	R	Weight							0		2	2
		Number							104		302	406
26	S	Weight			3			0	28	4	19	53
		Number			509			0	5601	697	4325	11132
	C	Weight						2	6			8
		Number						518	1211			1729
	R	Weight						0	5			5
		Number						21	930			951
27	S	Weight									0	0
		Number									36	36
	C	Weight									0	0
		Number									51	51
	R	Weight									0	0
		Number									15	15
28	S	Weight			0						0	0
		Number			64						2	66
	C	Weight		1			5					6
		Number		220			1410					1630
	R	Weight					4					4
		Number					606					606
29	S	Weight			0						0	0
		Number			54						1	55
	C	Weight		1	24							25
		Number		212	3745							3957
	R	Weight			0						0	0
		Number			35							35
30	S	Weight			0							0
		Number			11							11
	C	Weight			52					71		123
		Number			8649						13280	21929
	R	Weight			2					67		69
		Number			330						11413	11743
31	C	Weight			131						126	257
		Number			28126						26812	54938
	R	Weight			77						100	176
		Number			11700						19964	31664
32	S	Weight			2							2
		Number			368							368
	C	Weight		6	91					1		97
		Number		1114	13641					220		14975
	R	Weight		1	7					2		10
		Number		344	1100					465		1909
TOTAL 22-31	S	Weight	19	0	45	17	0	0	30	4	88	175
		Number	4363	0	9160	3458	0	0	6074	697	17883	41635
	C	Weight	15	2	207	0	5	2	8	0	203	442
		Number	3000	432	40648	0	1410	518	1542	0	41007	88557
	R	Weight	0	0	78	0	4	0	6	0	169	256
		Number	0	0	12065	0	606	21	1034	0	31694	45420
TOTAL 22-31	S,C,R	Weight	34	2	331	17	9	2	44	4	460	902
		Number	7363	432	61873	3458	2016	539	8650	697	90584	175612
TOTAL 32	S,C,R	Weight	0	7	99	0	0	0	0	3	0	109
		Number	0	1458	15109	0	0	0	0	685	0	17252
GRAND TOTAL	S	Weight	19	0	47	17	0	0	30	4	88	205
		Number	4363	0	9528	3458	0	0	6074	697	17883	42003
	C	Weight	15	8	298	0	5	2	8	1	203	539
		Number	3000	1546	54289	0	1410	518	1542	220	41007	103532
	R	Weight	0	1	85	0	4	0	6	2	169	267
		Number	0	344	13165	0	606	21	1034	465	31694	47329
NATIONAL TOTAL	S,C,R	Weight	34	9	430	17	9	2	44	6	460	1011
		Number	7363	1890	76982	3458	2016	539	8650	1382	90584	192864

Data from the recreational fishery are included in Danish, Swedish and Finnish data. Other countries have no, or very low recreational catches. In 2008 data from Finland, Russia and Sweden are preliminary.

Table 2.1.6. Non-commercial catches of Baltic Salmon in numbers from sea, coast and river by country in 1997-2008 in sub-division 22-31 and sub-division 32. (S = Sea, C = Coast).

Sub-divisions 22-31																			
Year	Denmark	Estonia		Finland		Germany	Latvia		Lithuania		Poland		Russia		Sweden		S+C	River	Grand
	S+C	S+C	River	S+C	River	S+C	S+C	River	S+C	River	S+C	River	S+C	River	S+C	River	Total	Total	Total
1997	na	na	na	na	17000	0	na	na	na	na	na	65	na	na	na	27969	na	45034	45034
1998	2000	na	na	na	5100	0	na	na	na	na	na	890	na	na	na	24378	2000	30368	32368
1999	2000	0	132	5100	400	0	0	0	0	0	0	100	0	0	9350	18529	16450	19161	35611
2000	2000	0	0	11667	4150	0	0	0	0	0	0	0	0	0	na	na	13667	4150	17817
2001	2000	0	0	11667	3750	0	0	0	0	0	na	0	0	0	14443	22216	28110	25966	54076
2002	3000	0	0	3500	3900	0	0	85	0	0	0	na	0	0	17906	16945	24406	20930	45336
2003	3000	0	0	3500	4500	0	0	0	0	0	0	na	0	0	14889	13424	21389	17924	39313
2004	3000	0	0	17200	5950	0	0	0	0	0	0	na	0	0	22939	14687	43139	20637	63776
2005	3000	0	0	17200	6725	0	0	0	0	0	0	na	0	0	17931	15260	38131	21985	60116
2006	3000	0	0	6000	2640	0	0	0	0	0	0	na	0	0	12757	12229	21757	14869	36626
2007	3000	0	0	6000	3590	0	0	0	0	0	0	na	0	0	11928	14429	20928	18019	38947
2008	3000	136	0	6000	11826	0	0	157	0	0	0	na	0	0	13809	24501	22945	36484	59429

Year	Sub-division 32							Sub-division 22-32				
	Estonia		Finland		Russia		S+C	River	Grand	S+C	River	GT
	S+C	River	S+C	River	S+C	River	Total	Total	Total	Total	Total	
1997	na	na	na	17000	na	na	na	17000	17000	na	62034	62034
1998	na	na	na	5100	na	na	na	5100	5100	2000	35468	37468
1999	0	132	10000	1100	0	0	10000	1232	11232	26450	20393	46843
2000	0	na	9300	1900	0	0	9300	1900	11200	22967	6050	29017
2001	0	na	9300	1900	0	0	9300	1900	11200	37410	27866	65276
2002	0	na	2500	3200	0	0	2500	3200	5700	26906	24130	51036
2003	0	na	2500	1700	0	0	2500	1700	4200	23889	19624	43513
2004	0	na	3400	1500	0	0	3400	1500	4900	46539	22137	68676
2005	206	na	3400	2800	0	0	3606	2800	6406	41737	24785	66522
2006	138	na	182	1700	0	0	320	1700	2020	22077	16569	38646
2007	0	na	182	1395	0	0	182	1395	1577	21110	19414	40524
2008	294	268	182	1100	0	0	476	1368	1844	23421	37852	61273

In 2008 data from Finland and Sweden are preliminary.

Table 2.1.7 Nominal catches of Baltic Salmon in numbers from sea and coast, excluding river catches, by country in 1993-2008 and in comparison with TAC. Sub-divisions 22-32.

Year	Baltic Main Basin and Gulf of Bothnia (Sub-divisions 22-31)										Total	TOTAL TAC	Landing in % of TAC
	Fishing Nation												
	Denmark	Estonia	Finland	Germany	Latvia	Lithuania	Poland	Russia	Sweden				
1993 1)2)	111840	5400	248790	6240	47410	2320	42530	9195	202390	676115	650000	104	
1994	139350	1200	208000	1890	27581	895	40817	5800	158871	584404	600000	97	
1995	114906	1494	206856	4418	27080	468	29458	7209	161224	553113	500000	111	
1996	105934	791	174317	2400	29977	2544	27701	5199	185373	534236	450000	119	
1997	87746	1228	153375	6840	32128	879	24436	4098	119941	430671	410000	105	
1998 3)	92687	770	119990	8379	21703	1069	25232	6522	141796	418148	410000	102	
1999	75956	769	99536	5805	33368	1298	26270	4330	113136	360468	410000	88	
2000	84938	1319	109066	8810	33841	1460	27730	4648	140720	412532	450000	92	
2001	90388	941	88724	7717	29002	1205	34781	6584	123479	382821	450000	85	
2002	76122	1171	85671	5762	21723	3351	37440	12804	116139	360183	450000	80	
2003	108845	697	83584	5766	11339	1040	35168	3982	98039	348460	460000	76	
2004	81425	594	114363	7087	7300	704	16539	4983	175208	408203	460000	89	
2005	42491	286	92681	4799	4841	691	21894	2433	122498	292614	460000	64	
2006	33723	291	49222	3551	3195	483	21324	552	81915	194256	460000	42	
2007	16145	325	59603	3086	4438	529	18022	888	77327	180363	437437	41	
2008	7363	432	49808	3458	1410	518	7616	697	58890	130192	371315	35	

Year	Gulf of Finland (Sub-division 32)					
	Fishing Nation		Total	EC TAC	Landing % of TAC	Russia
	Estonia	Finland				
1993 1)	874	98691	99565	120000	83	8200
1994	800	53487	54287	120000	45	3200
1995	338	32935	33273	120000	28	5035
1996	396	76504	76900	120000	64	1485
1997	819	74070	74889	110000	68	1023
1998	783	28086	28869	110000	26	65
1999	1916	25540	27456	100000	27	95
2000	2912	29144	32056	90000	36	79
2001	2027	21382	23409	70000	33	82
2002	2076	11871	13947	60000	23	18
2003	1358	9365	10723	50000	21	75
2004	858	10292	11150	35000	32	183
2005	1332	12862	14194	17000	83	213
2006	1003	10940	11943	17000	70	121
2007	828	10484	11312	15419	73	120
2008	1114	14009	15123	15419	98	220

All data from 1993-1994, includes sub-divisions 24-32, while it is more uncertain in which years sub-divisions 22-23 are included. Russia are not included in the TAC in Sub-division 31.

The catches in sub-divisions 22-23 are normally less than one tonnes. From 1995 data includes sub-divisions 22-32.

Estonia: Offshore catches reported by numbers, coastal catches converted from weight. Catches from the recreational fishery are included as follows: Finland from 1980, Sweden from 1988, and Denmark from 1998. Other countries have no, or very low recreational catches.

Estimated non-reported coastal catches in sub-division 25, have from 1993 been included in the Swedish catches.

Sea trout are included in the sea catches in the order of 5% for Poland before 1997.

1) In 1993 Polish, Russian and Faroe Islands numbers are converted from weight.

2) In 1993 Fishermen from Faroe Islands caught 3100 salmon included in the total Danish catches.

3) In 1998 German numbers are converted from weight.

In 2008 data from Finland, Russia and Sweden are preliminary.

Table 2.3.1 Fishing efforts of Baltic salmon at sea, at the coast and in the river in 1987-2008 in subdivision 22-31 (excluding Gulf of Finland). The fishing efforts are expressed in number of gear-days (number of fishing days times the number of gear) and are reported per half year (HYR). The coastal fishing effort on stocks of assessment area 1 refers to the total Finnish coastal fishing effort. The coastal fishing effort on stocks of assessment area 2 refers to the Finnish coastal fishing effort in area 3 and the Swedish coastal fishing effort in area 2. The coastal fishing effort on stocks of area 3 refers to the Finnish and Swedish coastal fishing effort in area 3.

Effort		Area 1			Area 2			Area 3		
		Offshore driftnet	Offshore longline	Commercial Coastal driftnet	Commercial coastal trapnet	Commercial coastal other gear	Commercial coastal trapnet	Commercial coastal other gear	Commercial coastal trapnet	Commercial coastal other gear
1987	I	1523587	1447789	233703	16044	99171	8574	67956	9634	88375
	II	2122115	2142495	95009	52544	164084	31948	175555	30097	437726
1988	I	1914340	1568397	240296	27916	126509	15375	127284	16826	423237
	II	1623306	1173796	16092	53025	118718	35370	132120	36463	374801
1989	I	1833110	1216741	320879	29708	197177	17110	132953	17414	154266
	II	1956293	829833	57311	36146	148415	21852	251729	20063	308801
1990	I	1487996	1517064	339960	49910	120228	28512	105160	27503	135350
	II	1515556	1050816	24366	57341	140541	37504	128380	36231	144260
1991	I	1763644	1138104	398447	40493	185839	25898	139274	31492	178861
	II	1397820	534334	32973	57640	275215	39038	221086	35203	225466
1992	I	1553470	1174250	448853	54219	179395	29192	135902	29157	191465
	II	1556474	555475	24726	58910	172123	35648	146772	30569	147919
1993	I	1649367	835887	595034	53813	162849	32483	61293	35783	70857
	II	774882	288516	26783	62134	125396	39576	100180	39086	144853
1994	I	1380558	753481	538689	31158	116753	16923	110042	18667	133865
	II	1363667	217771	42617	48484	77930	37318	100885	32188	71983
1995	I	1756044	633759	394522	21277	68728	11861	66889	12847	67961
	II	954980	78073	58336	46370	83800	29051	80370	26112	73944
1996	I	828908	854241	48742	9198	46687	6418	44996	5032	41991
	II	606402	314326	29944	45965	53723	31844	47610	22809	48254
1997	I	681679	937311	87216	9875	51848	7552	43644	6452	43555
	II	549884	516218	30991	49927	55584	33020	38279	25712	41084
1998	I	1173608	1054785	89338	6288	3636	3322	2123	3861	1974
	II	710037	182425	23055	20374	4755	14458	3327	10374	3247
1999	I	1026458	965912	101733	10669	4792	5740	2976	5460	2470
	II	629706	570516	24849	29086	4532	21725	2739	13240	2601
2000	I	1014465	1298280	85034	8949	3227	4956	1571	5468	1375
	II	1052352	721174	21974	23670	5096	15599	4016	12697	3996
2001	I	824956	1286600	98962	10704	2088	6100	1451	6647	1305
	II	887163	602809	3695	27188	1791	18611	1210	15468	1208
2002	I	930922	1208473	82572	14050	1330	8632	487	9332	440
	II	500824	967825	3785	27303	2448	19463	2764	16920	2712
2003	I	579069	860564	92732	14171	3612	9581	2908	5918	3017
	II	657034	604798	2290	29284	5181	12757	4237	21303	4803
2004	I	672460	841713	93460	11281	2155	6378	982	6631	2073
	II	608695	241929	10190	25429	2032	15902	721	12104	661
2005	I	735893	545005	77607	12397	2327	7651	1777	6584	1899
	II	555388	280851	6616	26798	2130	18936	3713	15344	4307
2006	I	823374	874218	73979	11549	3014	7797	2767	5171	3000
	II	381054	294680	3936	18019	927	11383	625	8822	1080
2007	I	796348	550930	41857	13636	3740	9033	2687	5554	2999
	II	413622	77680	3850	17589	760	9828	437	9681	1641
2008	I	0	562795	0	10460	5214	5745	2873	4828	2844
	II	0	349719	0	17563	7635	9691	3650	11448	4775

In 2008 data from Finland are preliminary.

Table 2.3.2 Number of fishing vessels in the offshore fishery for salmon by country and area from 1999-2008. Number of fishing days divided in 4 groups, from 1-9 fishing days, from 10-19 fishing days, from 20-39 fishing days and more than 40 fishing days (from year 2001 also from 60 to 80 and > 80 days, total 6 groups). Sub-divisions 22-31 and Sub-division 32.

Year	Area	Country	Effort in days per ship				
			>40	20-39	10-19	1-9	Total
1999	Sub-divisions 22-31	Denmark	5	7	4	4	20
		Estonia	0	0	0	na	na
		Finland	13	13	11	20	57
		Germany	na	na	na	na	na
		Latvia	4	5	6	13	28
		Lithuania	na	na	na	na	na
		Poland	23	23	8	33	87
		Russia	2	1	2	7	12
		Sweden	10	8	9	38	65
		Total	57	57	40	115	269
	Sub-div. 32	Finland	2	3	3	39	47
	Sub-divs 22-32	Total	59	60	43	154	316

Year	Area	Country	Effort in days per ship				
			>40	20-39	10-19	1-9	Total
2000	Sub-divisions 22-31	Denmark	8	9	2	9	28
		Estonia	0	0	0	4	4
		Finland	15	8	14	12	47
		Germany	na	na	na	na	na
		Latvia	3	4	10	14	31
		Lithuania	na	na	na	na	na
		Poland	40	23	12	22	97
		Russia	na	na	na	na	na
		Sweden	11	12	7	29	59
		Total	77	56	45	90	266
	Sub-div. 32	Estonia	0	0	1	0	1
		Finland	3	6	7	20	36
Sub-divs 22-32	Total	80	62	53	110	305	

Year	Area	Country	Effort in days per ship						
			>80 days	60-80	40-59	20-39	10-19	1-9	Total
2001	Sub-divisions 22-31	Denmark	3	2	4	2	2	9	22
		Estonia	0	0	0	0	0	2	2
		Finland	2	1	5	12	7	10	37
		Germany	na	na	na	na	na	na	na
		Latvia	0	1	0	3	2	24	30
		Lithuania	na	na	na	na	na	na	na
		Poland	7	9	18	11	12	12	69
		Russia	na	na	na	na	na	na	na
		Sweden	4	1	2	11	8	25	51
		Total	16	14	29	39	31	82	211
	Sub-div. 32	Finland	0	0	0	4	3	15	22
	Sub-divs 22-32	Total	16	14	29	43	34	97	233

Table 2.3.2 Continued

Year	Area	Country	Effort in days per ship						
			>80 days	60- 80	40-59	20-39	10-19	1-9	Total
			Number of fishing vessels						
2002	Sub-divisions 22-31	Denmark	3	3	2	3	5	12	28
		Estonia	0	0	0	0	0	2	2
		Finland	na	na	na	na	na	na	0
		Germany	na	na	na	na	na	na	na
		Latvia	0	0	1	3	4	20	28
		Lithuania	na	na	na	na	na	na	0
		Poland	na	na	na	na	na	na	50
		Russia	na	na	na	na	na	na	0
		Sweden	2	0	1	11	11	29	54
	Total	5	3	4	17	20	63	162	
	Sub-div. 32	Finland	0	0	0	5	5	19	29
	Sub-divs 22-32	Total	5	3	4	22	25	82	191
2003	Sub-divisions 22-31	Denmark	1	2	8	2	6	11	30
		Finland	0	3	5	10	16	21	55
		Germany	na	na	na	na	na	na	na
		Latvia	0	0	0	1	4	27	32
		Lithuania	na	na	na	na	na	na	0
		Poland	1	0	1	21	12	46	81
		Russia	na	na	na	na	na	na	0
		Sweden	1	0	1	7	8	24	41
		Total	3	5	15	41	46	129	239
		Sub-div. 32	Estonia	0	0	0	0	1	0
		Finland	0	0	0	3	2	12	17
	Sub-divs 22-32	Total	3	5	15	44	49	141	257
2004	Sub-divisions 22-31	Denmark	0	0	1	9	1	16	27
		Finland	0	1	6	12	10	24	53
		Germany	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Latvia	0	0	0	1	1	15	17
		Lithuania	0	0	0	0	0	0	0
		Poland	0	1	10	26	15	44	96
		Russia	na	na	na	na	na	na	n.a.
		Sweden	1	2	4	7	8	24	46
		Total	1	4	21	55	35	123	239
		Sub-div. 32	Estonia	0	0	0	0	0	1
		Finland	0	0	0	0	1	14	15
	Sub-divs 22-32	Total	1	4	21	55	36	138	255

Table 2.3.2 Continued

Year	Area	Country	Effort in days per ship						
			>80 days	60- 80	40-59	20-39	10-19	1-9	Total
			Number of fishing vessels						
2005	Sub-divisions 22-31	Denmark	0	0	3	2	5	6	16
		Finland	0	1	6	12	8	18	45
		Germany	na	na	na	na	na	na	na
		Latvia	0	0	0	0	0	12	12
		Lithuania	0	0	0	0	0	0	0
		Poland	1	3	9	25	2	16	56
		Russia	na	na	na	na	na	na	na
		Sweden	5	2	3	8	6	14	38
		Total	6	6	21	47	21	66	167
	Sub-div. 32	Estonia	na	na	na	na	na	na	na
Finland	0	0	0	0	2	6	8		
Sub-divs 22-32	Total	6	6	21	47	23	72	175	

Year	Area	Country	Effort in days per ship						
			>80 days	60- 80	40-59	20-39	10-19	1-9	Total
			Number of fishing vessels						
2006	Sub-divisions 22-31	Denmark	2	1	0	3	0	3	9
		Finland	0	3	5	8	6	5	27
		Germany	na	na	na	na	na	na	na
		Latvia	0	0	0	0	3	6	9
		Lithuania	0	0	0	0	0	0	0
		Poland	na	na	na	na	na	na	na
		Russia	na	na	na	na	na	na	na
		Sweden	4	8	0	8	5	12	37
		Total	6	12	5	19	14	26	82
	Sub-div. 32	Estonia	na	na	na	na	na	na	na
Finland	0	0	0	1	1	14	16		
Sub-divs 22-32	Total	6	12	5	20	15	40	98	

Year	Area	Country	Effort in days per ship						
			>80 days	60- 80	40-59	20-39	10-19	1-9	Total
			Number of fishing vessels						
2007	Sub-divisions 22-31	Denmark	0	1	0	4	2	5	12
		Finland	0	4	4	7	4	9	28
		Germany	na	na	na	na	na	na	na
		Latvia	0	0	0	1	2	1	4
		Lithuania	0	0	0	0	0	0	0
		Poland	na	na	na	na	na	na	na
		Russia	na	na	na	na	na	na	na
		Sweden	4	2	3	2	3	11	25
		Total	4	7	7	14	11	26	69
	Sub-div. 32	Estonia	na	na	na	na	na	na	na
Finland	0	0	0	0	1	7	8		
Sub-divs 22-32	Total	4	7	7	14	12	33	77	

Year	Area	Country	Effort in days per ship						
			>80 days	60- 80	40-59	20-39	10-19	1-9	Total
			Number of fishing vessels						
2008	Sub-divisions 22-31	Denmark	0	1	0	3	3	5	12
		Finland	0	1	4	4	0	8	17
		Germany	na	na	na	na	na	na	na
		Latvia	0	0	0	0	0	0	0
		Lithuania	0	0	0	0	0	0	0
		Poland	na	na	na	na	na	na	na
		Russia	na	na	na	na	na	na	na
		Sweden	0	1	1	0	2	4	8
		Total	0	3	5	7	5	17	37
	Sub-div. 32	Estonia	na	na	na	na	na	na	na
Finland	0	0	0	0	0	10	10		
Sub-divs 22-32	Total	0	3	5	7	5	27	47	

Table 2.4.1 Catch per unit effort (cpue) in number of salmon caught per 100 nets and per 1,000 hooks by fishing season in the Danish, Estonian, Finnish, Latvian, Russian and Swedish offshore fisheries in the Main Basin, in the Gulf of Bothnia, and in the Gulf of Finland from 1980/1981 (Denmark from 1983/84) to 2008.

Fishing season	Denmark			
	Sub-divisions 22-25		Sub-divisions 26-29	
	Driftnet	Longline	Driftnet	Longline
1983/1984	10.3	26.5	11.9	52.3
1984/1985	11.7	na	18.9	35.9
1985/1986	11.4	na	24.4	30.8
1986/1987	8.8	na	22.1	44.3
1987/1988	12.9	23.6	19.8	35.6
1988/1989	11.9	51.7	12.3	30.7
1989/1990	16.4	69.9	14.2	30.0
1990/1991	13.7	80.8	13.8	49.2
1991/1992	14.7	48.7	7.2	11.5
1992/1993	19.8	49.7	7.5	32.4
1993/1994	33.7	110.1	10.5	45.6
1994/1995	17.6	75.2	8.3	64.1
1995/1996	18.8	101.5	30.3	123.6
1996/1997	13.2	109.9	47.2	135.5
1997/1998	5.6	56.6	41.4	51.7
1998/1999	19.5	138.9	39.6	121.3
1999/2000	19.2	56.5	23.2	41.5
2000/2001	12.8	50.4	26.3	36.9
2002	11.9	69.7	18.3	63.3
2003	27.6	106.3	27.2	0.0
2004	18.3	236.4	46.7	108.8
2005	9.2	136.4	22.2	67.4
2006	15.3	71.7	22.9	0.0
2007	7.3	64.7	0.0	0.0
2008	0.0	44.8	0.0	0.0

Fishing season	Finland					
	Sub-divisions 22-29		Sub-divisions 30-31		Sub-division 32	
	Driftnet	Longline	Driftnet	Longline	Driftnet	Longline
1980/1981	6.6	27.1	5.3	18.4	na	5.5
1981/1982	8.0	43.5	5.2	28.4	na	12.1
1982/1983	9.2	34.5	6.6	21.9	na	14.3
1983/1984	14.4	46.9	12.4	53.2	na	20.5
1984/1985	12.5	43.7	11.0	34.1	na	13.5
1985/1986	15.9	34.5	10.3	17.9	na	15.7
1986/1987	18.9	63.9	5.3	14.7	na	25.6
1987/1988	8.0	42.0	4.0	9.0	na	17.0
1988/1989	7.0	36.0	4.0	6.0	na	10.0
1989/1990	15.0	57.0	13.0	41.0	na	16.0
1990/1991	16.8	42.4	13.3	50.7	na	21.2
1991/1992	8.5	24.5	9.0	21.1	na	30.8
1992/1993	9.1	16.6	8.0	23.1	na	16.6
1993/1994	5.9	20.0	6.5	12.7	na	23.9
1994/1995	7.9	21.0	4.3	10.2	5.7	26.7
1995/1996	22.1	41.6	10.2	0.0	5.6	19.7
1996/1997	19.2	56.9	9.7	0.0	9.7	32.2
1997/1998	14.1	29.3	6.7	0.0	6.7	24.0
1998/1999	15.7	39.7	5.7	0.0	5.7	25.7
1999/2000	13.3	29.1	5.7	0.0	3.1	25.5
2000/2001	20.4	23.0	5.8	0.0	0.0	28.2
2002	11.0	43.4	3.3	0.0	7.8	22.0
2003	11.0	55.4	4.3	0.0	5.3	8.0
2004	18.0	101.6	5.8	0.0	4.9	13.6
2005	15.1	58.4	4.1	0.0	4.4	17.3
2006	7.3	38.0	0.0	0.0	5.7	12.7
2007	9.7	44.7	0.0	0.0	5.1	18.7
2008	0.0	37.4	0.0	0.0	0.0	23.2

Table 2.4.1 Continued.

Fishing season	Estonia		Latvia		Russia		Sweden	
	Sub-divisions 28-29 32		Sub-divisions 26 and 28		Sub-division 26		Sub-divisions 22-29	
	Driftnet	Driftnet	Driftnet	Longline	Driftnet	Longline	Driftnet	Longline
1980/1981	na	na	5.0	31.7	na	0.0	na	na
1981/1982	na	na	5.3	26.0	na	0.0	na	na
1982/1983	na	na	4.0	15.6	na	0.0	na	na
1983/1984	na	na	9.4	55.0	na	0.0	na	na
1984/1985	na	na	6.1	27.0	na	0.0	na	na
1985/1986	na	na	10.6	13.8	na	0.0	10.2	41
1986/1987	na	na	13.2	0.0	na	0.0	16.8	44.4
1987/1988	na	na	11.5	0.0	na	0.0	14.0	42
1988/1989	na	na	8.6	0.0	na	0.0	12.6	41.7
1989/1990	na	na	25.7	0.0	na	0.0	22.4	88.3
1990/1991	na	na	15.5	0.0	na	0.0	21.0	74.3
1991/1992	na	na	9.3	0.0	na	0.0	14.4	32
1992/1993	9.1	3.7	11.8	0.0	na	0.0	18.2	24.5
1993/1994	11.1	12.4	8.5	0.0	na	0.0	25.0	73.7
1994/1995	6.8	7.6	11.6	0.0	na	0.0	14.0	0.0
1995/1996	15.3	6.9	18.5	0.0	na	0.0	16.7	114.7
1996/1997	5.6	0.0	21.1	0.0	na	0.0	22.2	63.2
1997/1998	2.8	1.4	15.3	0.0	na	0.0	15.6	36.8
1998/1999	0.0	0.0	19.9	0.0	23.9	0.0	18.1	92.7
1999/2000	0.0	0.0	18.7	0.0	16.5	0.0	16.9	52.1
2000/2001	na	na	30.3	0.0	30.4	0.0	27.7	33.6
2002	na	na	20.9	0.0	24.7	0.0	13.9	80.9
2003	na	na	37.4	0.0	12.7	0.0	na	na
2004	na	na	20.7	22.0	22.1	0.0	24.6	120.6
2005	na	na	16.9	0.0	19.2	0.0	16.1	87.3
2006	na	na	11.8	0.0	9.3	0.0	8.3	35.9
2007	na	na	9.0	0.0	na	0.0	11.0	45.9
2008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.6

All data from 1980/1981-1993/1994 includes sub-divisions 24-32, while it is more uncertain which years sub-divisions 22-23 are included. The catches in sub-division 22-23 are normally less than one ton. From 1995 data includes sub-divisions 22-32. Estonian data from sub-div. 28-29 has earlier been given as sub-div. 24-29. In 2008 data from Finland and Sweden are preliminary.

Table 2.7.1. Baseline genetic data used in the catch analysis.

	STOCK	SAMPLING YEAR	LOCI	COUNTRY	PROPAGATION	N
1	Tornionjoki, W	2000	17	Finland, Sweden	Wild	117
2	Tornionjoki, H	2006	17	Finland	Hatchery	108
3	Simojoki	2006	17	-"	Wild	110
4	Iijoki	2006	17	-"	Hatchery	105
5	Oulujoki	2006	17	-"	Hatchery	110
6	Kalixälven	2002	17	Sweden	Wild	110
7	Råneälven	2003	17	-"	Wild	35
8	Luleälven	2006	17	-"	Hatchery	120
9	Åbyälven	2003, 2005	17	-"	Wild	77
10	Byskeälven	2003	17	-"	Wild	107
11	Skellefteälven	2006	17	-"	Hatchery	120
12	Vindelälven	2003	17	-"	Wild	150
13	Umeälven	2006	17	-"	Hatchery	118
14	Öreälven	2003	17	-"	Wild	25
15	Lögdeälven	1995, 2003	17	-"	Wild	49
16	Ångermanälven	1995,2006	17	-"	Hatchery	120
17	Indalsälven	2006	17	-"	Hatchery	120
18	Ljungan	1998, 2003	17	-"	Wild	82
19	Ljusnan	2006	17	-"	Hatchery	120
20	Dalälven	2006	17	-"	Hatchery	119
21	Emån	1999, 2003	17	-"	Wild	109
22	Mörrumsån	2003	17	-"	Wild	136
23	Neva, Fi	2006	17	Russia	Hatchery	102
24	Neva, Rus	1995	8	-"	Hatchery	50
25	Luga	2003	17	-"	Wild	67
26	Narva	1999, 2001	8	Estonia, Russia	Hatchery	65
27	Kunda	1996	8	Estonia	Wild	60
28	Keila	1997	8	-"	Wild	53
29	Pärnu	1997	8	-"	Wild	26
30	Gauja	1998	17	Latvia	Hatchery	70
31	Daugava, Lat	1996	17	-"	Hatchery	68
32	Venta	1996	17	-"	Wild	66
33	Neumunas	2004	17	Lithuania	Hatchery	10
	Total					2904

Table 2.7.2. Prior information on smolt age distributions used in addition to genetic information in stock proportion estimation of Baltic salmon catches from 2008. Information on young smolts (i.e. proportion of 1 or 2 years old smolts in the stocks) is shown in the table. Information on annual variation in smolt age distributions is utilised for Tornionjoki wild, Simojoki and Vindelälven stocks. For the other stocks, average values over several years are used. No prior information was available for Pärnu River salmon.

STOCK	MEAN	SD	2.50 %	MEDIAN	97.50 %
Tornionjoki, W	5.0	0.6	4.0	5.0	6.2
Tornionjoki, H	100.0	0.0	99.9	100.0	100.0
Simojoki	34.5	1.7	31.0	34.4	37.9
Iijoki	100.0	0.0	99.9	100.0	100.0
Oulujoki	100.0	0.0	99.9	100.0	100.0
Kalixälven	5.1	1.0	3.5	5.1	7.2
Råneälven	5.6	1.6	3.0	5.4	9.3
Luleälven	100.0	0.0	99.9	100.0	100.0
Åbyälven	30.5	4.5	21.7	30.3	40.2
Byskeälven	30.5	4.6	21.9	30.3	39.8
Skellefteälven	100.0	0.0	99.9	100.0	100.0
Vindelälven	31.4	2.1	27.3	31.4	35.4
Umeälven	100.0	0.0	99.9	100.0	100.0
Öreälven	21.5	4.1	13.7	21.3	30.3
Lögdeälven	29.3	4.6	20.5	29.2	38.5
Ängermanälven	100.0	0.0	99.9	100.0	100.0
Indalsälven	100.0	0.0	99.9	100.0	100.0
Ljungan	37.5	4.8	28.1	37.5	46.4
Ljusnan	100.0	0.0	99.9	100.0	100.0
Dalälven	100.0	0.0	99.9	100.0	100.0
Emån	78.7	4.2	70.1	78.8	86.4
Mörrumsån	79.1	4.1	70.7	79.2	86.7
Neva, Fi	98.9	2.0	92.5	99.7	100.0
Neva, Rus	89.9	1.9	85.8	90.0	93.6
Luga	95.9	1.3	92.9	96.0	98.1
Narva	100.0	0.1	99.8	100.0	100.0
Kunda	99.0	0.5	97.8	99.0	99.7
Keila	98.9	0.5	97.9	99.0	99.7
Pärnu	73.2	31.9	4.0	90.0	100.0
Gauja	100.0	0.0	99.9	100.0	100.0
Daugava, Lat	100.0	0.0	99.9	100.0	100.0
Venta	100.0	0.0	99.9	100.0	100.0
Neumunas	100.0	0.0	99.9	100.0	100.0

Table 2.7.3. Medians of the stock group proportion estimates (% of catch) in Atlantic salmon catch samples from 2000–2008 based on microsatellite and smolt age data. The proportion of wild salmon estimated by scale reading of the same samples is also given.

	Gulf of Bothnia, wild			G. of Bothnia, hatchery, FIN			G. of Bothnia, hatchery, SWE			Gulf of Finland, wild			Gulf of Finland, hatchery			Western Main B., wild, SWE			Others / Eastern Main Basin			Sample size	Scale reading - wild %
	2.5 %	97.5 %		2.5 %	97.5 %		2.5 %	97.5 %		2.5 %	97.5 %		2.5 %	97.5 %		2.5 %	97.5 %		2.5 %	97.5 %			
Aland Sea																							
2000	20	16	24	41	33	48	39	32	46	-	-	-	-	-	-	-	-	-	1	0	2	412	22
2002	66	59	74	22	15	29	10	6	15	-	-	-	-	-	-	-	-	-	1	0	3	218	58
2003	69	62	76	23	16	31	7	3	13	-	-	-	-	-	-	-	-	-	0	0	1	209	64
2004	72	65	78	15	9	21	13	9	18	-	-	-	-	-	-	-	-	-	0	0	1	258	65
2005	69	63	74	24	19	29	7	4	10	-	-	-	-	-	-	-	-	-	0	0	1	315	64
2006	75	66	82	18	11	26	6	2	12	-	-	-	-	-	-	-	-	-	1	0	3	133	68
2007	78	73	83	14	9	19	8	5	11	-	-	-	-	-	-	-	-	-	0	0	1	398	78
2008	63	56	69	14	10	20	22	17	28	-	-	-	-	-	-	-	-	-	1	0	3	252	56
Mean	64	57	70	21	15	28	14	10	19										1	0	2		
Bothnian Bay																							
2000	16	12	21	71	64	76	13	8	19	-	-	-	-	-	-	-	-	-	0	0	1	300	14
2002	31	24	39	61	52	69	8	4	14	-	-	-	-	-	-	-	-	-	0	0	1	180	32
2003	41	34	49	50	42	58	9	5	15	-	-	-	-	-	-	-	-	-	0	0	1	203	37
2004	43	34	53	53	43	62	4	0	9	-	-	-	-	-	-	-	-	-	0	0	2	135	38
2005	39	33	47	60	53	66	0	0	2	-	-	-	-	-	-	-	-	-	0	0	1	262	34
2006 ^{FS}	57	52	63	29	24	34	14	10	18	-	-	-	-	-	-	-	-	-	0	0	1	481	55
2007 ^{FS}	64	58	69	16	12	23	20	17	24	-	-	-	-	-	-	-	-	-	0	0	0	629	66
2008 ^{FS}	74	70	78	21	17	25	5	3	7.3	-	-	-	-	-	-	-	-	-	0	0	1	600	66
Mean	42	35	49	48	41	55	10	6	14										0	0	1		
Main Basin																							
2002 ^F	45	33	58	17	6	32	20	9	34	6	0	15	4	1	12	2	0	7	3	0	13	71	52
2003 ^F	49	42	56	15	10	22	22	16	29	0	0	1	4	2	8	4	2	8	3	1	6	215	49
2004 ^D	37	20	59	42	22	59	15	6	26	1	0	4	3	1	7	1	0	3	0	0	1	111	-
2006 ^{FSDP}	62	57	67	16	12	20	15	11	18	1	0	2	3	2	5	1	0	2	3	1	4	521	-
2007 ^{FSP}	60	55	65	8	5	11	21	18	25	1	0	3	4.3	2.7	6.4	1	0	2	4	2	6	486	59
2008 ^P	67	61	72	8	5	12	15	11	19	1	0	2	3.1	1.6	5.1	1	0	3	5	3	8	367	58
Mean	53	45	63	18	10	26	18	12	25	2	0	4	4	2	7	2	1	4	3	1	6		

^F Finnish, ^S Swedish, ^D Danish, ^P Polish catch

Table 2.7.4 continues. Medians of stock proportion estimates in Atlantic salmon catches.

	Tornionj. Wild	Tornionj. Hatch.	Simojoki	Iijoki	Oulujoki	Kalixälven	Råneälven	Luleälven	Åbyälven	Byskeälven	Skellefteälven	Vindelälven	Umeälven	Öreälven	Lögdeälven	Angermanälven	Indalsälven	Ljungan	Ljusnan	Dalälven	Emån	Mörrumsån	Neva-FI	Neva-RU	Luga	Narva	Kunda	Keila	Parnu	Gauja	Daugava	Venta	Neumunas	Sample size	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33		
Main Basin																																			
2002 ^F	43	11	-	3	-	-	-	11	-	-	-	-	2	-	-	-	-	-	-	1	0	-	4	-	5	-	-	-	-	-	2	-	-	-	71
2003 ^F	16	10	4	5	-	19	-	10	-	5	1	3	1	-	-	5	-	-	4	-	0	4	4	-	-	-	-	-	-	-	-	2	0	215	
2004 ^D	11	42	0	-	-	-	-	-	7	-	-	13	-	-	-	6	4	0	-	2	-	0	3	-	1	-	-	-	-	-	-	-	-	111	
2006 ^{FSDP}	27	11	2	4	1	22	1	5	-	2	-	4	-	0	1	4	4	3	1	1	-	1	3	0	1	-	-	-	-	2	-	-	0	521	
2007 ^{FSP}	32	4	4	2	0	14	0	11	3	2	1	5	0	-	1	4	6	-	0	-	-	1	4	-	1	-	-	-	-	2	1	-	1	486	
2008 ^P	37	6	2	0	1	17	1	5	1	4	2	4	1	-	-	2	4	-	-	1	-	1	3	-	1	-	-	-	3	1	-	1	367		
<i>Mean</i>	<i>28</i>	<i>14</i>	<i>2</i>	<i>2</i>	<i>0</i>	<i>12</i>	<i>0</i>	<i>7</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>5</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>3</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>3</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>			

^F Finish, ^S Swedish, ^D Danish, ^P Polish catch

Table 2.7.5. Results from sampling and scale reading of the proportion of wild salmon, years 2008 and total 2002-2008 (W=wild, R=reared).

Sampling date/period	Fishing nation	Subdiv	Area	Gear	Age 1			Age 2			Age>2			Total	%wild	Season
					W	R	Total	W	R	Total	W	R	Total			
2008 06-07	Fi	29	Coast	Trap net	10	58	68	116	46	162	14	3	17	247	57%	Summer 2008
2008 06-07	Fi	30	Coast	Trap net	23	132	155	188	91	279	12	10	22	456	49%	Summer 2008
2008 06-07	Fi	31	Coast	Trap net	56	106	162	119	43	162	5	2	7	331	54%	Summer 2009
2008 05-06	Fi	32	Coast	Trap net	1	3	4	246	89	335	17	11	28	367	72%	Summer 2008
2008	SW	31	Coast	Trap net	1	1	1	5	6	1		1	8	10	60%	Summer 2008
2008	SW	31	Coast	Trap net		1	3	1	4	3	1	4	9	15	13%	Summer 2008
2008	SW	30	River		21	21		24	24		5	5	50	50	100%	Summer 2008
2008	SW	30	Coast	Trap net			2	1	3	4	1	5	8	14	14%	Summer 2008
2008	SW	25	River		1	1	4	1	5		4	4	10	14	43%	Summer 2008
2008	SW	31	River		2	2	5	9	14	4	7	11	27	36	50%	Summer 2008
Total																
2002	All	25-29	Sea	All	95	97	192	75	119	194	8	12	20	406	44%	All
2003	All	25-29	Sea	All	206	331	537	286	401	687	107	104	211	1435	42%	All
2004	All	25-29	Sea	All	298	443	741	456	408	864	117	93	210	1815	48%	All
2005	All	25-29	Sea	All	41	16	57	172	79	251	114	49	163	471	69%	All
2006	All	25-29	Sea	All	179	144	323	188	127	315	68	37	105	743	58%	All
2007	All	25-29	Sea	All	5	44	49	31	54	85	26	10	36	170	36%	All
2008	All	25-29	All	All	11	59	72	117	51	162	18	7	27	261	56%	
2002 06-08	All	30-31	All	All	28	52	80	72	78	150	9	12	21	251	41%	All
2003 06-08	All	30-31	All	All	244	422	666	1037	467	1504	221	99	320	2490	62%	All
2004 06-07	All	30-31	All	All	127	292	419	591	304	895	141	71	212	1526	56%	All
2005 06-07	All	30-31	All	All	150	487	637	1018	828	1846	247	196	443	2926	48%	All
2006 06-07	All	30-31	All	All	24	20	44	281	82	363	93	21	114	521	76%	All
2007 06-07	All	30-31	All	All	266	275	541	420	257	677	172	31	203	1421	60%	All
2008 06-07	All	30-31	All	All	103	263	328	347	185	453	31	38	131	912	53%	All
2003 06-07	All	32	All	All	46	290	336	187	399	586	14	50	64	986	25%	All
2004 06-07	All	32	All	All	61	181	242	120	224	344	20	51	71	657	31%	All
2005 06-07	All	32	All	All	69	315	384	38	170	208	8	59	67	659	17%	All
2006 06-07	All	32	All	All	4	96	100	18	131	149	1	10	11	260	9%	All
2007 06-07	All	32	All	All	30	29	59	15	100	115	5	15	20	194	26%	All
2008 05-06	All	32	All	All	1	3	4	246	89	335	17	11	28	367	72%	All

Table 2.9.1.1 Releases of adipose fin clipped salmon in the Baltic Sea and the number of adipose fin clipped salmon registered in Latvian (sub-divisions 26 and 28) offshore catches.

Year	Releases of adipose fin clipped salmon, Sub-divs. 24-31		Latvian offshore catches Sub-divs. 26 and 28	
	Parr	Smolt	Adipose fin clipped salmon in %	Sample N
1984			0.6	1,225
1985			1.0	1,170
1986			1.2	1,488
1987	43,149	69,000	0.6	1,345
1988	200,000	169,000	1.2	1,008
1989	353,000	154,000	1.5	1,046
1990	361,000	401,000	0.8	900
1991	273,000	319,000	1.4	937
1992	653,000	356,000	5.0	1,100
1993	498,000	288,000	7.8	900
1994	1,165,000	272,000	1.6	930
1995	567,470	291,061	2.0	855
1996	903,584	584,828	0.6	1,027
1997	1,626,652	585,630	4.4	1,200
1998	842,230	254,950	4.8	543
1999	1,004,266	625,747	4.4	1100
2000	1,284,100	890,774	7.2	971
2001	610,163	816,295	6.0	774
2002	536,800	733,191	2.5	883
2003		324,002	2.4	573
2004	10,000	648,563	3.2	621
2005	794,500	2,124,628	3.0	546
2006	258,714	1,753,543	2.4	250
2007	148224	2,126,906	0.0	100
2008	95,984	2,450,774	---	---

Table 2.9.1.2 Adipose finclipped salmon released in the Baltic Sea area in 2008.

Country	Species	Stock	Age	Number		River	Sub-division	Other tagging
				parr	smolt			
Estonia	salmon	Neva	2		10,700	Loobu	32	700 Carlin
		Neva	1		75,800	Narva	32	
		Neva	1		5,000	Selja	32	
		Neva	2		10,700	Selja	32	
		Neva	1		48,000	Purtse	32	
		Neva	2		10,200	Valgejõgi	32	
		Neva	2		5,400	Jägala	32	
		Neva	2		11,600	Pirita	32	
Sweden	salmon	Luleälven	1		55,740	Luleälven	31	5000 Carlin 2000 Carlin 2000 Carlin 1000 Carlin 5000 Carlin 5500 Carlin 4050 Carlin 4000 Carlin
		Luleälven	2		547,118	Luleälven	31	
		Skellefteälven	2		119,624	Skellefteälven	31	
		Umeälven	1		28,066	Umeälven	31	
		Umeälven	2		116,885	Umeälven	31	
		Skellefteälven	2		6,000	Gide älv	30	
		Ångermanälven	2		128,526	Ångermanälven	30	
		Indalsälven	1	63084		Indalsälven	30	
		Indalsälven	1		241,153	Indalsälven	30	
		Indalsälven	2		241,153	Indalsälven	30	
		Ljusnan	1	2700		Söderhamnsån	30	
		Ljusnan	1	30200		Ljusnan	30	
		Ljusnan	1		106,800	Ljusnan	30	
		Ljusnan	2		89,200	Ljusnan	30	
		Dalälven	2		2,255	Gavleån	30	
		Ljusnan	2		1,000	Kustsättning	30	
		Dalälven	1		152,825	Dalälven	30	
		Dalälven	2		113,939	Dalälven	30	
		Indalsälven	2		5,000	Stockholms Ström	27	
		Gullspång	2		3,000	Motala ström	27	
Poland	salmon	Dougava	1		6,000	Reda	26	2000 Carlin 3000 Carlin
		Dougava	1		7,750	Łeba	25	
		Dougava	1		122,330	Stupia	25	
		Dougava	1		18,710	Wieprza	25	
		Dougava	2		28,400	ParseŃa	25	
		Dougava	1		35,000	Rega	25	
Russia	salmon	Luga	1		96,400	Luga	32	1000 Carlin
		Luga	2		500	Luga	32	
Total salmon				95,984	2,450,774			

Table 2.9.2.1 Number of Carlin-tagged salmon released into the Baltic Sea in 2008.

Country	24	25	26	27	28	29	30	31	32	Total
Estonia									3,500	3,500
Finland						2000	4297	26031	6,936	39,264
Sweden							19,550	9,000		28,550
Latvia					1,000					1,000
Poland	2,000	5,000	6,500							13,500
Russia									4,000	4,000
Total	2,000	5,000	6,500	0	1,000	2,000	23,847	35,031	14,436	89,814

Table 2.10.1 Number of tagged hatchery-reared and wild salmon smolts released in assessment units 1, 2 or 3 and used in the salmon assessment. No Swedish tagging data have been available for recent years hence the large decrease in tagged salmon in areas 2 and 3.

YEAR	Reared salmon stocked in rivers without natural reproduction			Reared salmon stocked in rivers with natural reproduction			Wild salmon
	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3	Unit 2
1987	22809	13258	23000	6900	1987	1994	629
1988	20251	13170	31366	4112	1989	2983	771
1989	11813	13157	36851	4432	2910	0	0
1990	9825	12824	30677	6469	3995	1996	0
1991	7974	13251	36158	6987	3990	1997	1000
1992	8920	12657	33450	4081	1996	1999	574
1993	6862	12656	33825	4969	1999	1991	979
1994	7081	12964	28717	4101	1997	2000	1129
1995	6988	12971	21877	4987	2000	0	0
1996	7967	13480	22429	5991	1000	1000	0
1997	4970	13403	23788	6984	1982	1997	0
1998	6929	13448	22052	2998	1974	994	1364
1999	7908	13445	22703	7927	2005	1996	2759
2000	6662	12018	25805	8484	2000	1000	3770
2001	7904	13498	16993	8419	2000	1000	4534
2002	7458	13992	17999	4986	2000	0	3148
2003	7233	13495	20488	6964	1997	1000	6299
2004	4982	12994	19992	5923	1981	1000	9604
2005	5970	13250	17980	9994	2000		6607
2006	7933		5255	10644			8034
2007	6982		2000	6970			7069
2008	3999		3997	9929			7105

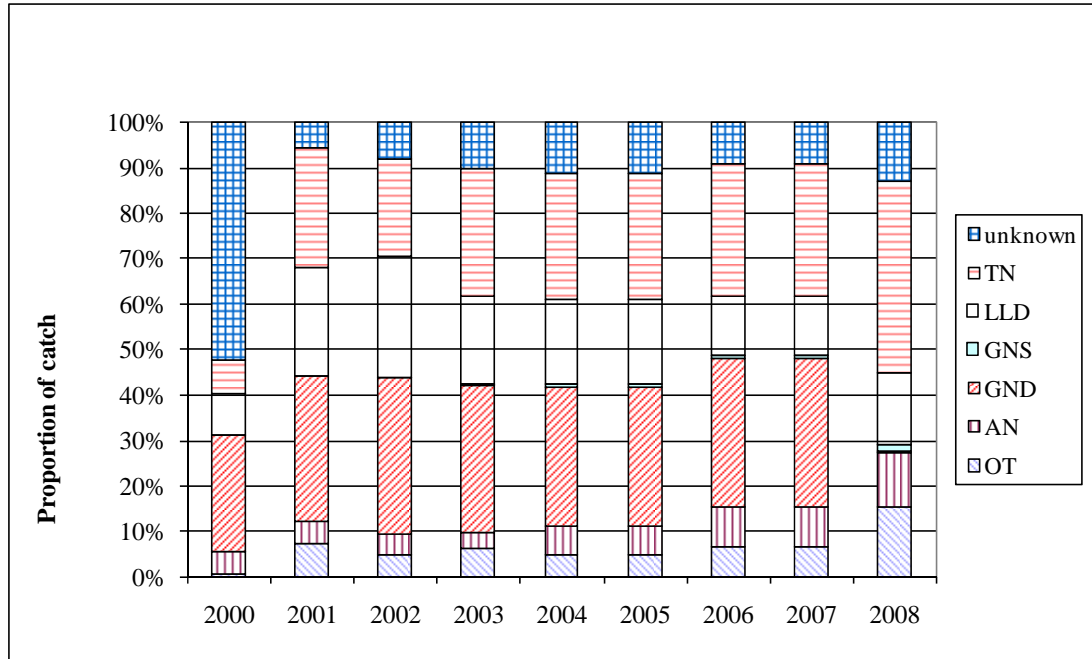


Figure 2.1.1 Proportion of catch of Baltic salmon by weight in different types of tackle 2000–2008. Variables: GNG=drftnet, AN=angling, GNS=gillnet, LLD=longline, OT=other, TN=trapnet

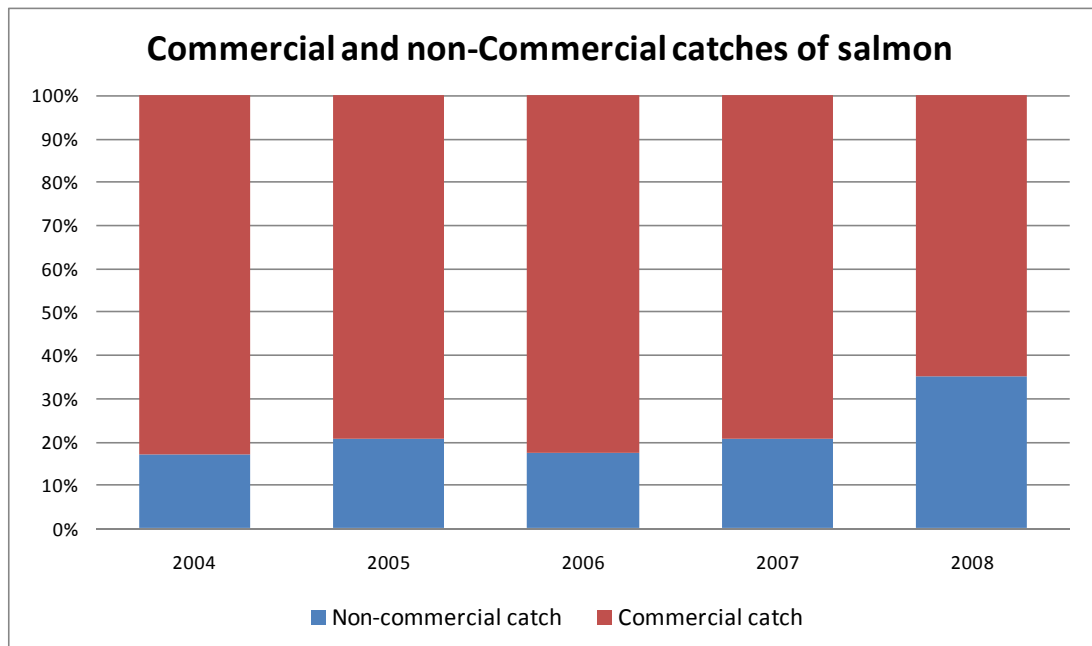


Figure 2.1.2 Commercial and non-commercial catches in percent (weight) in 2004–2008 in Sub-division 22–32 from sea, coast and river.

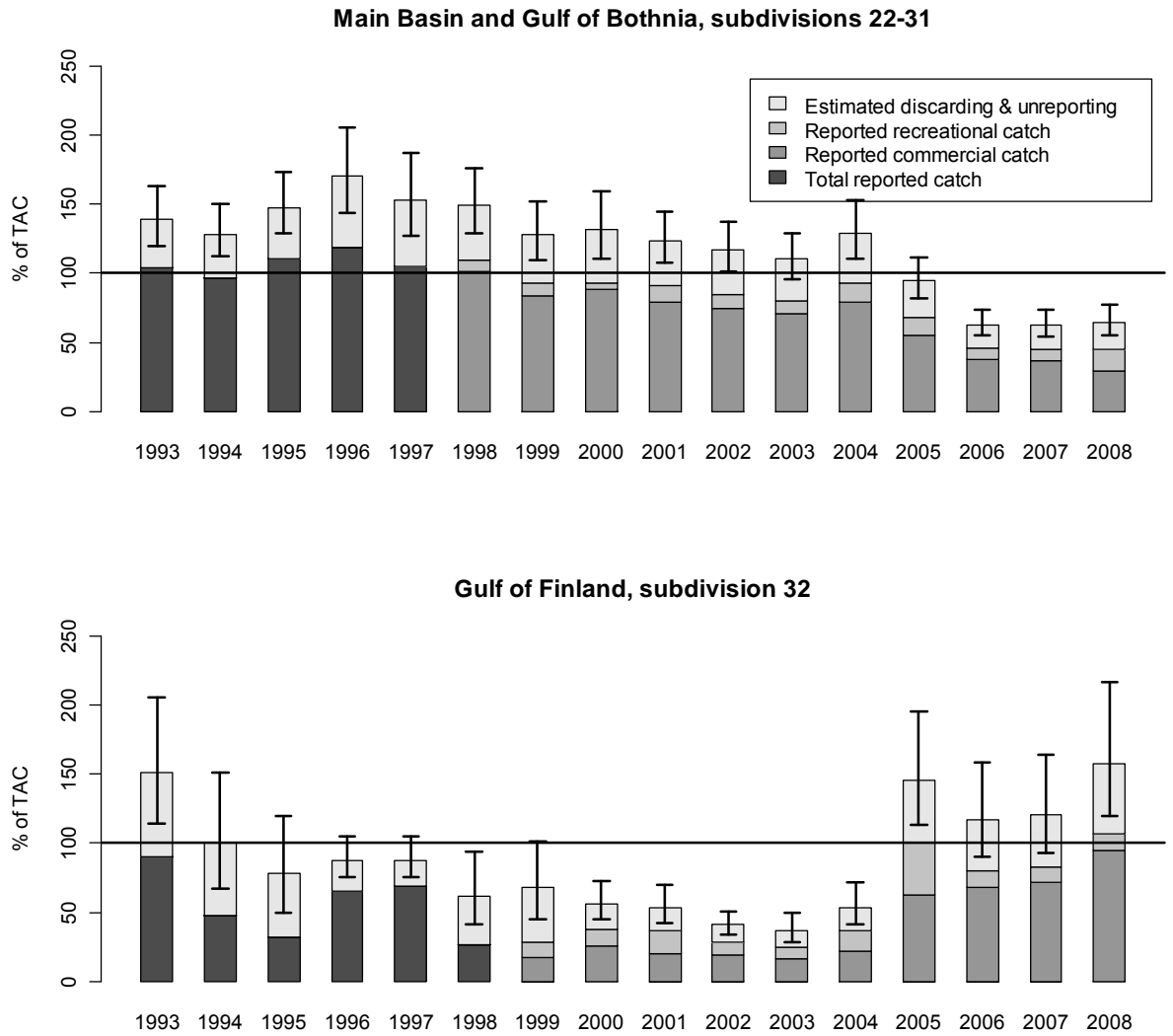


Figure 2.1.3 Catches of salmon in % of TAC. For years 1993–1997 (1993–1998 in Gulf of Finland) it is not possible to divide the total reported catch into commercial and recreational catches. Estimates of discards and unreported catches are presented separately in Table 2.1.2.

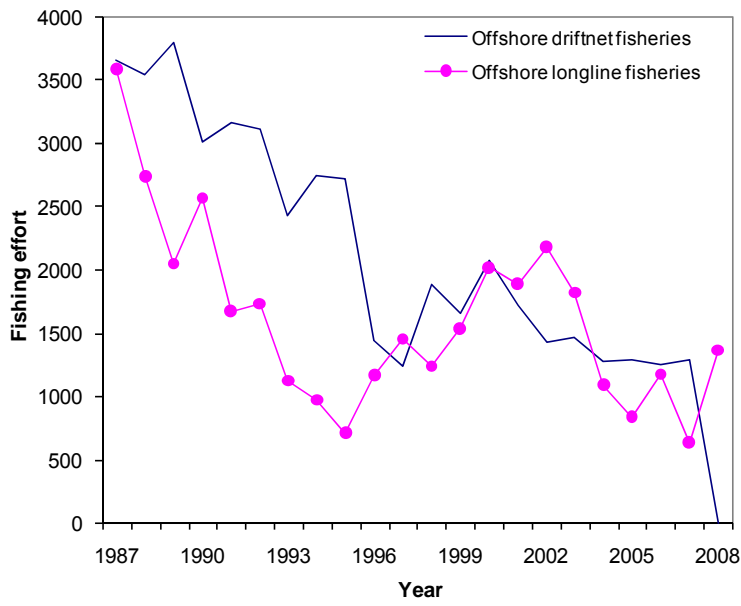


Figure 2.3.1 Fishing effort in Main Basin offshore fisheries (x 1000 gear-days).

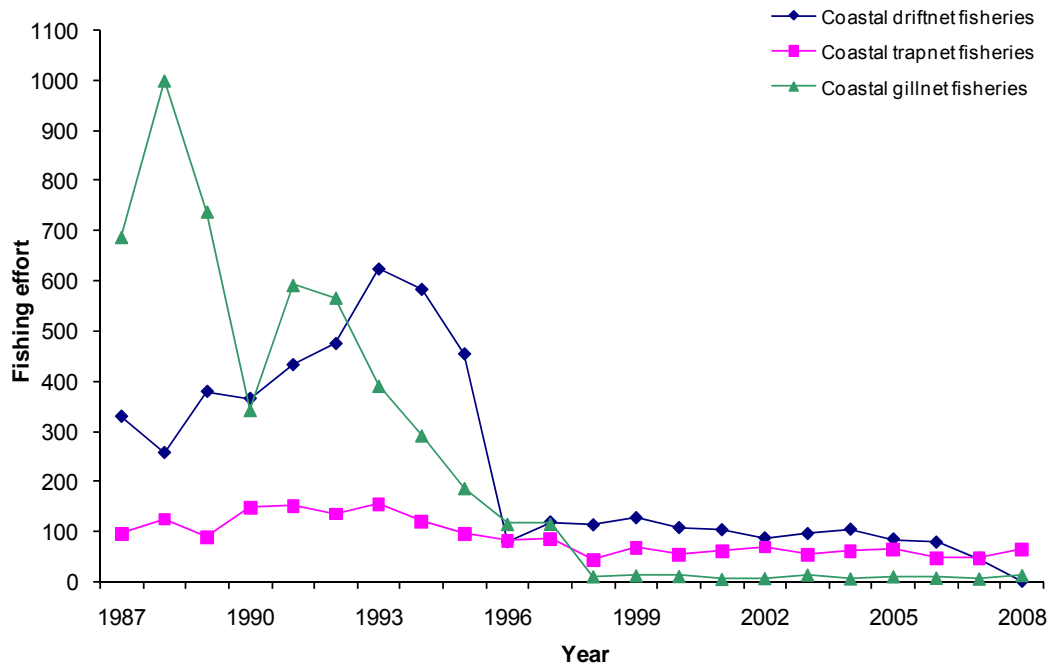
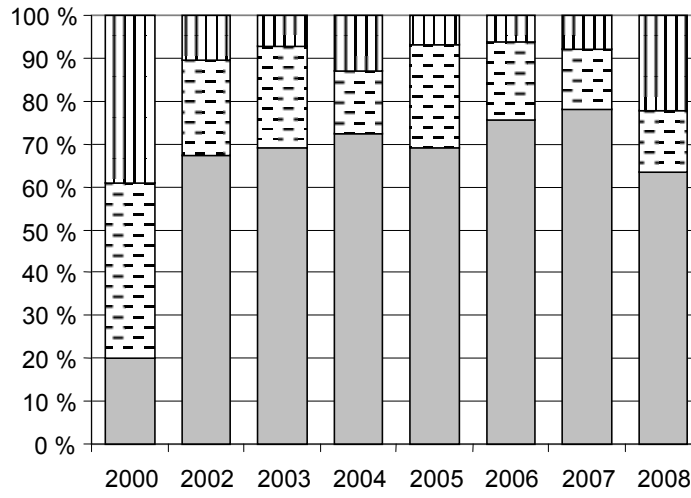
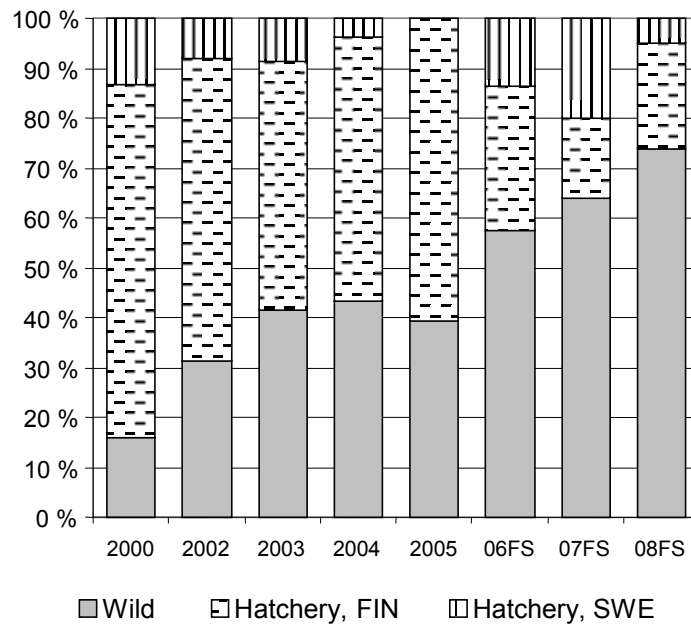


Figure 2.3.2 Effort in Main Basin and Gulf of Bothnia coastal fisheries (x 1000 gear-days).

Åland Sea catches



Bothnian Bay catches



Wild
 Hatchery, FIN
 Hatchery, SWE

Baltic Main Basin catches

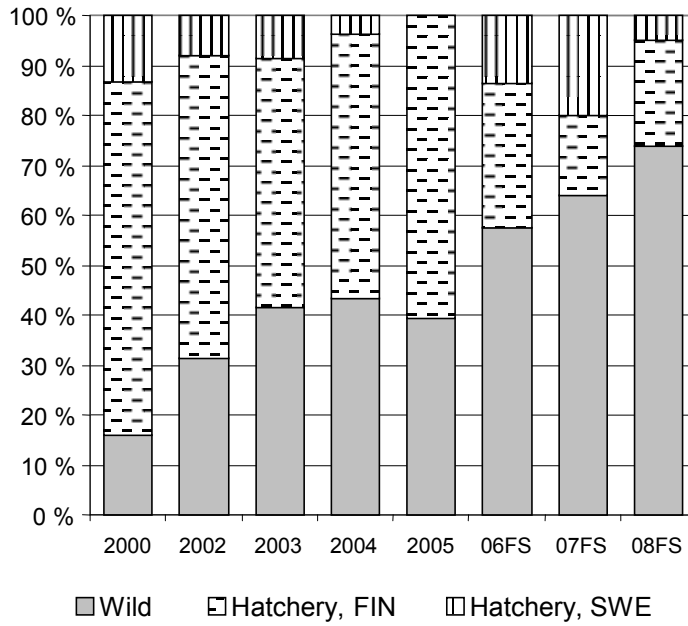


Figure 2.7.1. Stock group proportions in Atlantic salmon catch samples from Åland Sea, Bothnian Bay and Main Basin.

COUNTRY|FI|species|SAL

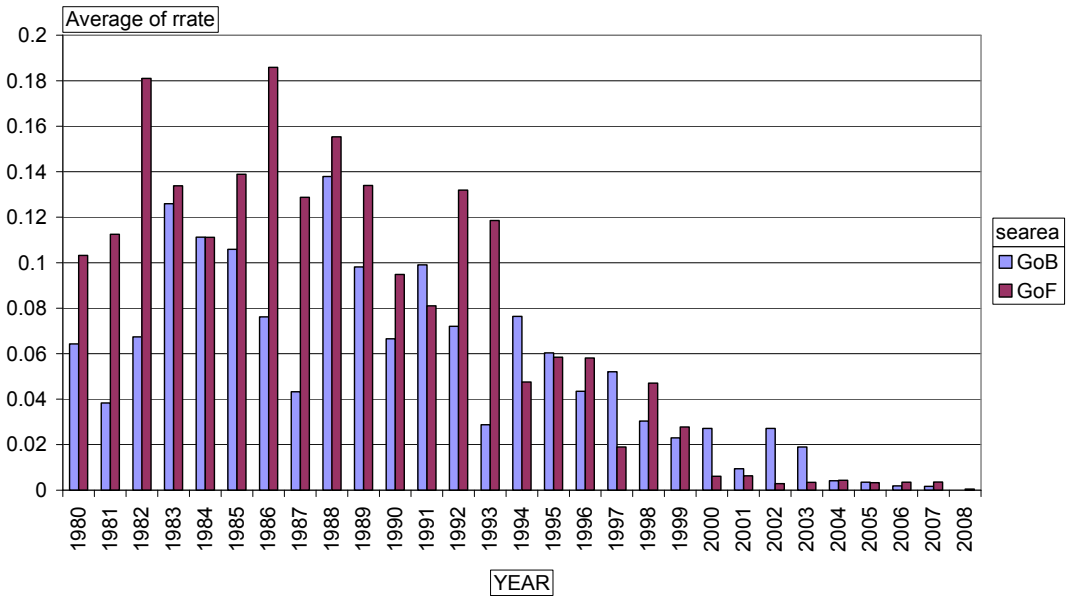


Figure 2.9.2.1. Return rates of Carling tagged salmon released in Gulf of Bothnia and Gulf of Finland in 1980–2008.



Figure 2.9.2.2. Recapture rate of two-year-old Carlin tagged salmon in the Gulf of Finland in Estonian experiments.

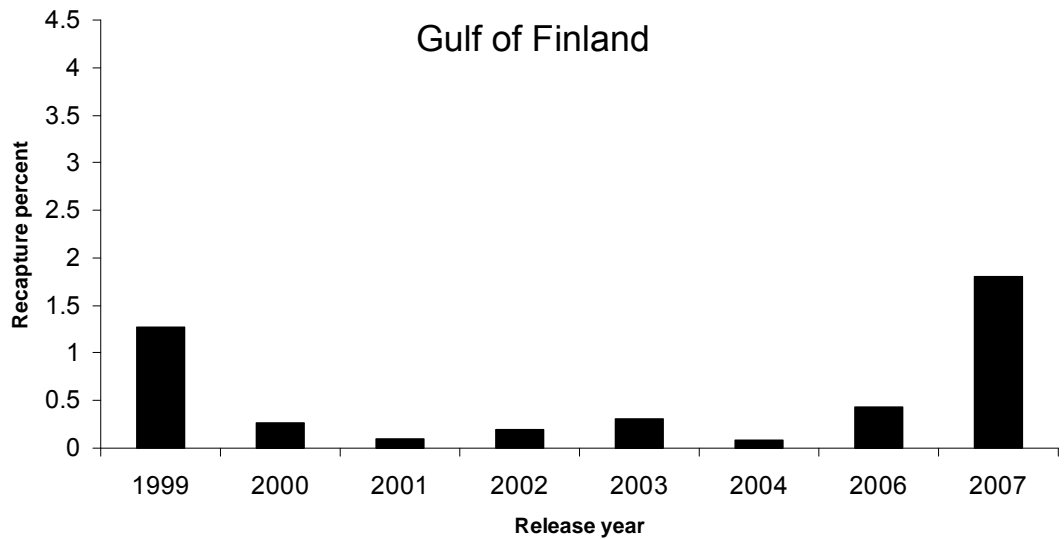


Figure 2.9.2.3. Recapture rate of one-year-old Carlin tagged salmon in the Gulf of Finland in Estonian experiments.

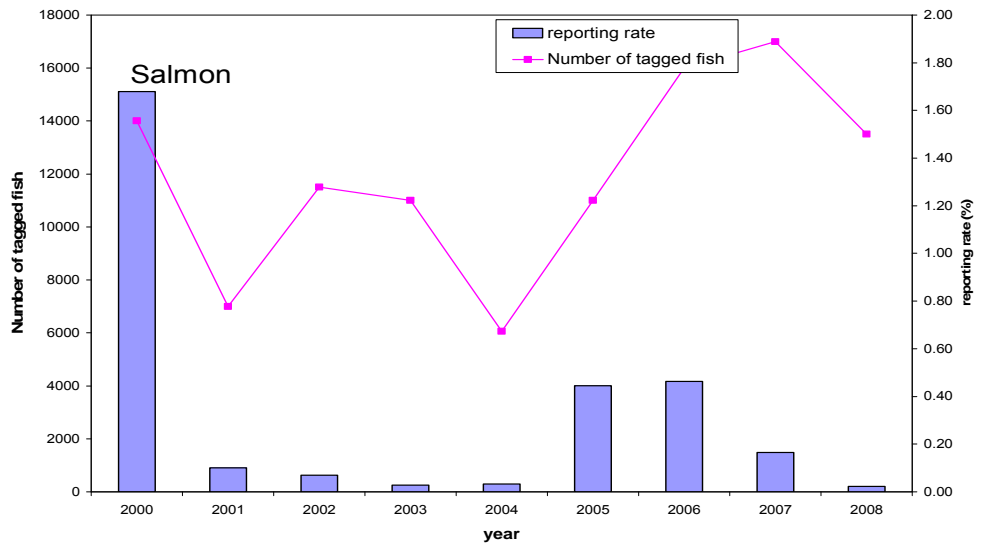


Figure 2.9.2.4. Reporting rates for salmon in 2000–2008 in Poland.