

**Agenda Item 5.4: Bycatch Issues**

**Fisheries Statistics. Data submitted by Parties and Range States**

**Submitted by: Secretariat**



**NOTE:**  
**IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING  
THEIR OWN COPIES OF THESE DOCUMENTS TO THE MEETING**



## Fisheries statistics from Finland

Finnish Game and Fisheries Research Institute

### Professional marine fishery

In the beginning of 2004 the Finnish fishing fleet numbered almost 3 500 registered vessels with capacity of 19 400 BT and power of 188 000kW. There has been some reduction in fleet size from the previous year. The fleet is divided into four segments: pelagic trawlers, demersal trawlers, offshore salmon vessels and vessels under 12 metres with passive gear. Most of the vessels ( 3 316) are less than 12 metres in length and used in inshore fishing. In the pelagic segment there are 163 registered vessels with a capacity of 9 200 GT and 46 000 kW. In the demersal trawler segment there are only a few vessels left. In the salmon fishery there are 57 vessels (capacity of 1 750 BT and power of 11 400 kW) using drift nets and longlines. There were some 2 700 professional fishermen but most of them were part-time.

The following figures concerning professional marine fishery in 2003 are preliminary. The final statistics is published in May 2004.

In 2003 the total fleet landings reached about 80 000 tonnes and the total catch value was about EUR 21 million.

#### a. Offshore fishery

Type of fishery:	Pelagic and bottom trawls, drift nets, long lines, bottom gillnets
Target species:	Baltic herring, sprat, cod, salmon
Reporting period:	2003
Fishing season:	Year round, target species dependent on season
Type of statistic:	Nominal catch
Fishing area:	III d
Number of vessels:	Total fleet in open sea fishery 190 vessels
Catch:	Pelagic trawl: 39000 tons (herring 30500 t., sprat 8000 t., roach 165 t., cod 18 t.) Bottom trawl: 27000 tons (herring 25000 t., sprat 940 t., cod 590 t., smelt 115 t., roach 40 t.) Drift net: 142 tons (salmon 140 t.) Long line: 16 tons (salmon 16 t.) Bottom gillnet: 680 tons (cod 550 t., herring 55 t., European whitefish 42 t.)
Landings:	See catch
By-catch:	Smelt (120 t.) and roach (40 t.) in bottom trawling, roach (170 t.) in pelagic trawling, otherwise relatively small bycatch of non-target species and undersized target species
Discard:	Circa 45 tons (salmon 25 t., herring 13 t.); Salmon mostly eaten by seals

b. Inshore fishery:

Type of fishery:	Trap nets, gillnets
Target species:	Baltic herring, salmon, European whitefish, perch, pikeperch, pike, etc.
Reporting period:	2003
Fishing season:	Year round, target species dependent on season
Type of statistic:	Nominal catch
Fishing area:	III d
Number of fishermen:	Circa 1700 fishing units (fishermen with their households etc.) in coastal fishery in total, every fishing unit owns at least one boat
Catch:	Trap net: 8400 tons (herring 7110 t., perch 280 t., smelt 260 t., salmon 190 t., European whitefish 160 t.). Gillnet: 3200 tons (pikeperch 810 t., perch 780 t., European whitefish 610 t., herring 460 t., pike 210 t.)
Landings:	See catch
By-catch:	Smelt (320 t.) especially in trap net fishery, otherwise relatively small bycatch of non-target species and undersized target species (see discard)
Discard	Circa 490 tons (bream 295 t., European whitefish 51 t., herring 45 t., salmon 44 t., roach 15 t., pikeperch 8 t.); Salmon, European whitefish and pikeperch mostly eaten by seals; bream and roach are mostly unwanted bycatch.

Recreational fisheries

In 2002, there were 1,9 million recreational fishermen in almost 1 million households in Finland. Forty-eight per cent of men and 27 per cent of women went fishing. About 200 000 of those who had been fishing had participated only by rowing or steering the boat. Most of the fishermen fished only in the inland waters.

The most commonly used tackle was the hook and line, which was used by two in three of fishermen. Next most common was the spinning rod, which was used by two in five fishermen. Other commonly used gears were jig, gill net, trolling gear, fish traps and trap nets.

The total catch amounted to 39 million kg, of which 80 per cent was taken in inland waters. Perch or pike made up over half of the catch. Fifty-five per cent of the total fish catch was taken with gill nets, fish traps and trap nets, and 43 per cent with rod and line.

References

Statistical databases of the Finnish Game and Fisheries Research Institute.

Professional Marine Fishery 2002. Finnish Game and Fisheries Research Institute. SVT - Official Statistics of Finland. Agriculture, Forestry and Fishery 2003:55.

Recreational Fishing 2002. Finnish Game and Fisheries Research Institute. SVT - Official Statistics of Finland: Agriculture, Forestry and Fishery 2004:51.

## FRENCH FISHING EFFORT STATISTICS IN THE ASCOBANS AREA

**Table 1 : Effort data for French pelagic trawl in 1992**

Area (ICES)	Fishing target	Season	Number of boats	Tow duration (h)	Number of tows/day	Sources
7 E	Sea bass	Feb-March	50 - 60	6	4	Morizur et al. 1997*
7 D - 4 C	Industrial fishing	all year	1			
English Channel	Blade sea breams	Winter and all year	14	3	3 (night time)	
4 A, A B	No French pelagic trawl in these areas					

\* Morizur y., Tregenza, N., Heessen, H., Berrow, S . and Pouvreau, S. 1997

By-eatch and discarding in pelagic trawl fisheries. Final report contract DGXIV -C-1, Study Bioeco/93/017,122 p + appendix

**Table 2 : Effort data for French bottom set net fisheries in 1994**

Area (ICES)	Fishing target	Season	Number of boats	Max. net length (km) hauled per boat per day	Typical scale time (h)	Max. effort per trawling day	Sources
7 E	Spider crab	Feb-July	150	5	120	600 km.hours	Pouvreau and Morizur 1995 **
7 D - E	Sole	Feb-Sept	250	15	18	270 km. hours	
7 E	Anglerfish, rays, turbot, brill	all year	150	15	72	1080 km.hours	
7 E - F	Halee	all year	20	8	9	72 km. hours	
7 D	Cob	Nov-April	190	10	24	240 km. hours	
7 E	Pollack	all year	20	5	15	75 km. hours	
4 C							
4 A, 4 B	No French bottom set net in these areas						IFREMER-Boulogne. 2002

\*\* Pouvreau S, and Morizur, Y. 1995. Les métiers du filet fixe en France (Degions 1, 2 et 3). Rapport IFREMER-RH-Brest- Direction des pêches, juin 1995, 48 pp.

**FRENCH OBSERVERS PROGRAMMES IN THE IN THE ASCOBANS AREA (1994 - 1996)**

Area (ICES)	Fishing gear	Fishery target	Effort sampled: hours (trawl) km (net)	Annual effort sampled (%)	By catch	Sources
7 E	pelagic trawl	Black bream	9 h	0.1	0	Morizur et al. 1999*
7 E	pelagic trawl	Sea bass	22 h	1	0	
7 E	bottom set net	anglerfish	379 km	will be estimated	0	Morizur et al. 1996**
7 E	bottom set net	pollack, sea bass	31 km	will be estimated	0	
7 D	(gill net experiment)	Sole	40 km	will be estimated	0	Brabant et al. 1994***
7 D	(gill net experiment)	Sole	21 km	will be estimated	0	Morizur et al. 1996**

\* Morizur, Y., Berrow, S.D., Tregenza, N.J.C., Couperus, A.S. and Pouvreau, S. 1999.

Incidental catches of marine mammals in pelagic trawl fisheries of the north east Atlantic. Fisheries Research 41 : 297 - 307

\*\* Morizur, Y., Pouvreau, S. and Guenole, A. 1996

Les rejets dans la pêche artisanale française de Manche occidentale - Editions IFREMER, France. 127 p

\*\*\* Brabant, J.C., Fontaine, B., George, J.P., Jacqueline, F., Mortreux, S and Sacchi, J. 1994

Selectivity of gill nets in the North Sea, English Channel and Bay of Biscay ; Periodic Rapport n°1, EU AIR 2 - CT 93 - 1122 (SC), nov 193 - nov 1994. Rapport IFREMER DITI/NPA n° 094.044., 34 p + appendix

# Fisheries Statistics from Germany

## 1. Bottom set gill nets

Type of fishery:	Bottom set gill nets														
Target species:	Anglerfishes, Atlantic Cod, Common Dab, Herring, Common Sole, Turbot														
Reporting period:	2003														
Fishing season:	Year round, target species dependent on season														
Type of statistic:	Catch														
Fishing area:	3A, 3B, 3C, 3D, 4A, 4B, 4 C														
Number of vessels:	103 vessels														
Total length of gear:	12 - 13 km														
Catch:	See landings.														
Landings:	<table><tr><td>Total:</td><td>4,970 tons</td></tr><tr><td>Anglerfishes</td><td>42 tons</td></tr><tr><td>Atlantic Cod</td><td>1,304 tons</td></tr><tr><td>Common Dab</td><td>22 tons</td></tr><tr><td>Herring</td><td>3,173 tons</td></tr><tr><td>Common Sole</td><td>69 tons</td></tr><tr><td>Turbot</td><td>22 tons</td></tr></table>	Total:	4,970 tons	Anglerfishes	42 tons	Atlantic Cod	1,304 tons	Common Dab	22 tons	Herring	3,173 tons	Common Sole	69 tons	Turbot	22 tons
Total:	4,970 tons														
Anglerfishes	42 tons														
Atlantic Cod	1,304 tons														
Common Dab	22 tons														
Herring	3,173 tons														
Common Sole	69 tons														
Turbot	22 tons														
By-catch:	<table><tr><td>Other species</td><td>338 tons</td></tr></table> Relatively small bycatch of non -target species. Bycatch of birds: No information. No bycatch of marine mammals was reported by the German fishermen.	Other species	338 tons												
Other species	338 tons														
Discards:	No information.														

## 2. Trawling

Type of fishery: Beam and other trawl for demersal fish and shrimp

Target species: Atlantic Cod, Common Shrimp, Common Dab, European Flounder, Haddock, Herring, Jack and Horse Mackerel, Atlantic Mackerel, Blue Mussel, European Plaice, Saithe, Common Sole, Sprat, Turbot, Whiting

Reporting period: 2003

Fishing season: Year round or on season

Type of statistic: Catch

Fishing area: 3A, 3B, 3C, 3D, 4A, 4B, 4C

Number of vessels: 424 vessels (beamtrawl for shrimps: 288)

Total length of gear: -

Catch: See landings.

Landings:	Total:	156,888 tons
	Atlantic Cod	7,422 tons
	Common Shrimp	16,240 tons
	Common Dab	1,105 tons
	European Flounder	1,392 tons
	Haddock	1,680 tons
	Herring	55,582 tons
	Jack and Horse Mackerel	3,048 tons
	Atlantic Mackerel	4,858 tons
	Blue Mussel	31,056 tons
	European Plaice	3,912 tons
	Saithe	8,960 tons
	Common Sole	682 tons
	Sprat	18,023 tons
	Turbot	310 tons
	Whiting	515 tons

By-catch: Other species 2,103 tons  
Relatively small bycatch of non-target species.  
Bycatch of birds: No information.  
No bycatch of marine mammals was reported by the German fishermen.

Discards: No information.

### 3. Recreational fishery

Type of fishery:	Recreational fishery (use of rod and line from small vessels)	
Target species:	Atlantic Cod, European Eel, European Flounder, European Perch, Northern Pike, Pike Perch, Roach, Garfish, Herring, European Smelt.	
Reporting period:	2003	
Fishing season:	Year round	
Type of statistic:	Catch	
Fishing area:	3A, 3B, 3C, 3D, 4A, 4B, 4C	
Number of vessels:	51 vessels	
Total length of gear:	-	
Catch:	See landings.	
Landings	Total:	129 tons
	Atlantic Cod	17 tons
	European Eel	18 tons
	European Flounder	4 tons
	European Perch	5 tons
	Northern Pike	6 tons
	Pike Perch	9 tons
	Roach	4 tons
	Garfish	3 tons
	Herring	51 tons
	European Smelt	7 tons
By-catch:	Other species	5 tons
	Relatively small bycatch of non -target species.	
	Bycatch of birds: No information.	
	No bycatch of marine mammals was reported by the German fishermen.	
Discards:	No information.	

# Fisheries statistics from Sweden

H Westerberg

## 1. Bottom set gillnets

Type of fishery Bottom set gillnet

Target species Varied species

Reporting period 2003

Fishing season Year round depending on species

Type of statistics Catch per area and gear type from loggbook

Fishing areas ICES III a,b,c,d

Number of vessels 649

Total effort unit m of net\*hours

DIVISION	Totalt
3AN	32 363 420
3AS	126 182 300
3B	199 697 700
3C	704 000
3DN	23 232 100
3DS	1 884 816 070
Totalt	2 266 995 590

**Catch unit kg**

SPECIES	3AN	3AS	3B	3C	3DN	3DS	Sum
Cod	16655	35511	530542.5	517	10184	5023033	5621776
Herring	9438	21385	163296		1309002	35814	1542925
Lumpfish	34386	87432	100766			13834.5	236493.5
Flounder	875	2672	33004		204	122366	169329.5
Spiny dogfish	162314	148	36.5				162498.5
Whitefish	268	726			137763.2	16317.7	156465.9
Salmon	34	80.5	117		2129.8	136018.9	138515.2
Plaice	2799	67760	21306.4	115		7168.5	99154.9
Perch	15		2		40954.4	16434	57406.4
Mackerel	53570	1962	1.5			39	55573.5
Edible crab	5504.5	27135	20.5				34065
Zander (Pikeperch)					13123.1	20598.2	33721.3
Vendace (Cisco)					27843	4	27847
Pike			4		13328.7	12442	25779.7
Turbot	202.5	1783	405	1	82	19776.2	22912.2
Rockfishes	13888	5254					19142
Trout	200	398	147		4437.5	6921.6	12223.8
Saithe	9597	1533	179			6	11323
Unknown Catches	4036	510	73		600	1075	9190
Sprat	7360						7360
Eel					50	6484.2	6534.2
Bream					3316	524	6330
Lemon Sole	7	5635	287			5	5934
Pollack	4182	1203		7			5392
Sole	130	3895	23			10	4058
Whiting	791	111	279			2653	3834
Brill	1452.5	1882	15			10	3359.5
Dab	48	1800	616			67	2531
Haddock	2030	266					2296

Bycatch

Discard 31 ton. Bycatch of seals 30 individuals

## 2. Driftnet

Type of fishery            Driftnets  
Target species            Salmon in the Baltic  
Reporting period        2003  
Fishing season           salmon year round  
Type of statistics        catch per area and gear type from logbooks  
Fishing area             III d  
Number of vessels       45  
Total effort              unit m of net\*hour

DIVISION	Totalt
3DN	192 000
3DS	77 994 510
Totalt	78 186 510

Catch                      Unit kg

SPECIES	3DN	3DS	Sum
Salmon	7014	200381	207506
Rainbow Trout		4	4
Trout		4163	4163
Unknown Catches			102
Cod		6	6

Bycatch 223 kg discard, no mammal bycatch recorded

### 3 Trawling

Type of fishery	bottom otter trawl and pelagic trawls
Target species	sprat, herring, sandeel, cod ...
Reporting period	2003
Fishing season	Year round
Type of statistics	catch per area and type of gear from logbook
Fishing area	III a,b,c,d and IV a,b
Number of vessels	355
Total effort	unit trawling hours

DIVISION	Totalt
2A	8 698
3AN	143 695
3AS	48 542
3B	652
3DN	7 013
3DS	85 381
4A	7 385
4B	10 023
4C	20
3C	26
Totalt	311 435

Catch unit kg

SPECIES	2A	3AN	3AS	3B	3DN	3DS	4A	4B	Sum
Sprat		999650	2990123	9000		71179711		10	75179444
Herring	2205000	19520037	9337798	79000	2810748	34980566	2487880	400680	71822009
Blue Whiting	57201000	7386465	217040				722740		65624200
Sandeels		312487	9000				73000	21444000	21998487
Cod		473443	733557	44619		7234643	115957	123064	8744260
Northern pink shrimp		2088473	9597				144262	1000	2243562
Mackerel		10371	53172				1995000		2058543
Saithe	1500	624340	62325	85			556172	565697	1810284
Vendace (Cisco)					1499302				1499302
Horse Mackerel		270000	763665				39700		1073365
Norway lobster		471088	287183	851			716	84	759932
Haddock		146542	14259	100			122265	352685	637566
Witch		529724	8927				1498	495	540709
Plaice		95196	184028	4690		59842	833	965	345668
Round-nose Grenadier		82054							127429
Unknown Catches		51074	25366	221	498	485	16355	15452	125232
Flounder		788	13294	145		89582			121756
Whiting		25305	45410	1279		16756	6800	2804	118419
Spurdog / spiny dogfish		99044	13194					20	112258
Anchovy		29000	46500						75500
Monkfish		52512	206				6009	1095	59822
Hake		28107	9059				14077	2686	53929
Rockfishes		13707	11207	62			13571	9426	47973
Pollack		9662	2525				21604	13511	47332
Argentines		42010							42130
Ling		28392	3325			9	5486	2846	40276
Lemon Sole		12377	15886				2391	1658	32312
Turbot		286	1537	65		16724	10		18623
Brill		5303	7452	41		242			13037
Skates, rays		11911	785				45		12741
Sole		936	5922	15				10	10721
Pilchard, Sardine			10000						10000
Garfish		1651	6825						8476
Lumpfish		2176	5269	30		28		150	7653
Grey Gurnard		122	1234				10	5887	7253
Greater Weever		1	6931						6932
Salmon		11	9			5857			5877
Halibut		4672	36				373	162	5243
Tusk		4274	13				121		4408
Edible crab		507	2548	109					3164
Dab		502	1815	35		143		5	2500
Flatfishes		836	17				385	355	1593
Norway Pout		24					15	40	1129

Bycatch Discard 224 ton, no mammal bycatch recorded

## Fisheries statistics from United Kingdom

### 1. Bottom set gill nets

Type of fishery:	gill nets
Target species:	Monk fish, anglerfish, pollack, ling, cod...
Reporting period:	2003
Fishing season:	Year round, target species dependent on season
Type of statistic:	Landing
Fishing area:	IIa, IVa - c, Vb, VIa -b, VIIa-k, XII
Number of vessels:	247
Total length of gear:	2 - 8km average per vessel
Catch:	See landings.
Landings('000 tonnes):	Monks and anglers; 1.0, Pollack; 1.3, Ling; 0.5, Dogfish; 1.5, Cod; 0.7, Sole; 0.3
By-catch:	Bycatch of harbour porpoises by UK gillnet fisheries in ICES Division IVa- c and VIa estimated to be approximately 1000 animals in 1995, reducing to around 600 porpoises in 2000. Estimates of harbour porpoises taken in the Celtic Sea by gill net boats in the 15m+ sector are approximately 740 per year between 1992 - 1994.
Discards:	See bycatch.

### 2. Trawling

Type of fishery:	Beam- and otter trawl for demersal and pelagic fish and nephrops
Target species:	Demersal fish species (haddock, cod, whiting, saithe, plaice,...), pelagic fish species ( mackerel, herring, blue whiting, ...), Norway lobster ( <i>Nephrops norvegicus</i> ),...
Reporting period:	2003
Fishing season:	Year round target species dependent on season
Type of statistic:	Landing
Fishing area:	I, IIa, IVa - c, Va - b, VIa -b, VIIa-k, VIIIa, VIIIId, XII, XIV
Number of vessels:	1477
Total length of gear:	-
Catch:	See landings.

**Landings:( '000 tonnes)** Mackerel; 170.4, Herring; 86.9, Haddock; 32.5, Cod; 18.9, Blue whiting; 28.8, Nephrops; 25.3, Plaice; 15.7, Horse Mackerel; 7.4, Saithe; 8.1, Whiting; 6.8, Anglerfish; 9.4, Pilchards; 5.1, Sprats; 5.8, Ling; 3.5, Skates and Rays; 5.5...

**By-catch:** Observations on the 2003 bass pair trawl fishery were made during 84 days at sea. 30 dolphins caught in 131 hauls were observed. Of these 2 were caught in 82 hauls using nets incorporating a separator grid. Total annual bycatch for 2003 has not been estimated.

There are occasional records of cetacean bycatch in demersal trawling, but these are generally rare.

Discards: See by-catch.

### **3. Recreational fisheries**

No formal statistics are collected for these fisheries

#### **Fisheries data from:**

Fisheries Statistics Unit, Department for Environment, Food and Rural Affairs