

Agenda Item 4.3: By-catch issues

Fisheries Statistics - Data Submitted by Parties and Range States

Submitted by: Secretariat



ASCOBANS

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

Secretariat's Note

At its 7th Meeting, held in March 2000 in Bruges, Belgium, the ASCOBANS Advisory Committee requested that Parties and Range States should collect data on fishing effort (AC7 Report, P 2, P. 14, Item 5.8). It was agreed that future reporting should be modelled on the summary style of the report submitted to AC7 by Belgium (AC7/Doc. 15).

Four Parties and one Range State submitted data in response to this request.

Fisheries Statistics from Finland

Finnish Game and Fisheries Research Institute

Professional marine fishery

In the beginning of 2003 the Finnish fishing fleet numbered almost 3 550 registered vessels with capacity of 19 600 BT and power of 189 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 (3 325) 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 about 60 vessels (capacity of 1 800 GT and power of 11 650 kW) using drift nets and longlines. There were some 2 600 professional fishermen but most of them were part-time.

The following figures concerning professional marine fishery in 2002 are preliminary. The final statistics is published in May 2003.

In 2002 the total fleet landings reached about 98 400 tonnes and the total catch value was about EUR 22 million.

a) Offshore fishery

Type of fishery:	Pelagic and bottom trawls, drif nets, long lines, bottom gillnets
Target species:	Baltic herring, sprat, cod, salmon
Reporting period:	2002
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 205 vessels
Catch:	Pelagic trawl: 53000 tons (herring 39000 t., sprat 14000 t., roach 70 t., cod 35 t.) Bottom trawl: 37000 tons (herring 33000 t., sprat 3200 t., cod 690 t., smelt 120 t., roach 39 t.) Drift net: 180 tons (salmon 178 t.) Long line: 49 tons (salmon 48 t.) Bottom gillnet: 430 tons (cod 290 t., herring 80 t., European whitefish 50 t.)
Landings:	See catch

By-catch: Smelt (120 t.) and roach (39 t.) in bottom trawling, roach (70 t.) in pelagic trawling, otherwise relatively small bycatch of non-target species and under-sized target species

Discard: Circa 50 tons (salmon 25 t., herring 19 t., roach 10 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: 2002

Fishing season: Year round, target species dependent on season

Type of statistic: Nominal catch

Fishing area: III d

Number of fishermen: Circa 1650 fishing units (fishermen with their households etc.) in coastal fishery in total, every fishing unit owns at least one boat

Catch: Trap net: 4500 tons (herring 3200 t., smelt 400 t., perch 210 t., salmon 200 t., European whitefish 140 t.).
Gillnet: 2800 tons (European whitefish 540 t., perch 640 t., pikeperch 590 t., herring 450 t., pike 190 t.)

Landings: See catch

By-catch: Smelt (400 t.) especially in trap net fishery, otherwise relatively small by-catch of non-target species and undersized target species (see discard)

Discard Circa 180 tons (salmon 40 t., European whitefish 25 t., bream 60 t, roach 13 t., herring 9 t., pikeperch 8 t., smelt 8 t.);
Salmon, European whitefish and pikeperch mostly eaten by seals;
smelt, roach and bream are mostly unwanted bycatch.

Recreational fisheries

In 2000, there were 2 million recreational fishermen in almost 1 million households in Finland. Fifty per cent of men and 28 per cent of women went fishing. About 250 000 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 gill net, jig and trolling gear.

The total catch amounted to 41 million kg, of which 70 per cent was taken in inland waters. Perch or pike made up over half of the catch. Sixty-one per cent of the total fish catch was taken with gill nets, fish traps and trap nets, and 36 per cent with rod and line.

References

Statistical databases of the Finnish Game and Fisheries Research Institute.

Professional Marine Fishery 2001. Finnish Game and Fisheries Research Institute. SVT - Official Statistics of Finland. Agriculture, Forestry and Fishery 2002:57.

Recreational Fishing 2000. Finnish Game and Fisheries Research Institute. SVT - Official Statistics of Finland: Agriculture, Forestry and Fishery 2002:54. 29 p.

Fisheries Statistics from France

Table 1 : Effort data for French pelagic trawl

Area (ICES)	Fishery target	Season	Number of boats	Tow duration (h)	Number of tows/day	Sources
7 E	Sea bass	Feb-March	50 - 60	6	4	
7 D - 4 C	Industrial fishing	all year	1			Morizur et al. 1997* (data 1992)
English Channel	Black bream	Winter and all year	14	3	3 (night time)	
4 A - B	Herring, mackerel, hors mackerel		3			IFREMER Boulogne (data 2002)

* Morizur y., Tregenza, N., Heessen, H., Berrow, S. and Pouvreau, S. 1997. By-catch 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

Area (ICES)	Fishing target	Season	Number of boats	Max. net length (km) hauled per boat per day	Typical soak time (h)	Max. effort per hauling day	Sources
7 E	Spider crab	Feb-July	150	5	120	600 km. hours	
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	Pouvreau and Morizur 1995** (data 1994)
7 E - F	Hake	All year	20	8	9	72 km. hours	
7 D	Cod	Nov-april	190	10	24	240 km. hours	
7 E	Pollack	All year	20	5	15	75 km. hours	
4 C4	Sole , cod	All year	51	10	24	240 km. hours	Goupe de travail "filet" 1995 *** (data 1992/1993)
4 A - B	No French bottom set net in these areas						IFREMER- Boulogne (data 2002)

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

*** Groupe de travail "filet". 1995. Etats régionaux de la ressource halieutique, novembre 1992-juin 1993, document de synthèse, IFREMER Boulogne et Port en Bessin

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:	2002	
Fishing season:	Year round, target species dependent on season	
Type of statistic:	Catch	
Fishing area:	3A, 3B, 3C, 3D, 4A, 4B, 4C	
Number of vessels:	112 vessels	
Total length of gear:	12 - 13 km	
Catch:	See landings.	
Landings:	Total:	7.704 tons
	Anglerfishes	69 tons
	Atlantic Cod	959 tons
	Common Dab	20 tons
	Herring	6.216 tons
	Common Sole	58 tons
	Turbot	16 tons
Bycatch:	Other species	366 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.	

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:	2002	
Fishing season:	Year round or on season	
Type of statistic:	Catch	
Fishing area:	3A, 3B, 3C, 3D, 4A, 4B, 4C	
Number of vessels:	421 vessels (beam trawl for shrimps: 288)	
Total length of gear:	-	
Catch:	See landings.	
Landings:	Total:	97.841 tons
	Atlantic Cod	8.683 tons
	Common Shrimp	15.944 tons
	Common Dab	724 tons
	European Flounder	1.907 tons
	Haddock	1.096 tons
	Herring	34.165 tons
	Jack and Horse Mackerel	2.671 tons
	Atlantic Mackerel	3.901 tons
	Blue Mussel	9.779 tons
	European Plaice	4.134 tons
	Saithe	11.007 tons
	Common Sole	688 tons
	Sprat	950 tons
	Turbot	308 tons
	Whiting	563 tons
Bycatch:	Other species	1.321 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:	2002	
Fishing season:	Year round	
Type of statistic:	Catch	
Fishing area:	3A, 3B, 3C, 3D, 4A, 4B, 4C	
Number of vessels:	55 vessels	
Total length of gear:	-	
Catch:	See landings.	
Landings:	Total:	136 tons
	Atlantic Cod	14 tons
	European Eel	20 tons
	European Flounder	5 tons
	European Perch	6 tons
	Northern Pike	8 tons
	Pike Perch	11 tons
	Roach	11 tons
	Garfish	6 tons
	Herring	42 tons
	European Smelt	11 tons
Bycatch:	Other species	2 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	2002
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	666
Total effort	unit m of net*hours

Summa av NÄT*TIM	
DIVISION	Totalt
3AN	35 301 490
3AS	100 893 400
3B	155 457 920
3C	680 200
3DN	17 244 630
3DS	1 833 049 020
Totalt	2 142 626 660

Catch unit kg

SPECIES	3AN	3AS	3B	3C	3DN	3DS	
Cod	19 076	26 854	451 455	1 680	13 328	4 739 970	5 273 636
Herring	3 304	19 908	256 446	443	1 302 917	42 392	1 629 941
Flounder	685	8 295	41 074		5 811	160 361	236 825
Lumpfish	21 959	47 825	129 205			5 584	209 654
Whitefish, Houting, Powan					121 162	14 443	138 000
Plaice	4 702	49 284	40 518		34	9 097	104 024
Spurdog / spiny dogfish	101 545	263					101 808
Perch			38		40 074	15 845	55 981
Mackerel	46 883	1 371	9				48 333
Turbot	292	2 458	4 965		52	39 281	47 386
Edible crab	7 217	25 013	122				33 057
Pike					16 358	11 641	28 015
Vendace (Cisco)					22 522		24 072
Zander (Pikeperch)					11 092	12 414	23 979
Unknown Catches	4 006	2 502	623			25	23 244
Rockfishes	9 986	5 792	715				16 493

Total catch 8 097 619 kg
 Bycatch 76 343 kg discard, no harbour porpoise recorded

2. Driftnet

Type of fishery Driftnets
 Target species Salmon in the Baltic
 Reporting period 2002
 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

3DN	1 540 000
3DS	102 330 700
Totalt	103 870 700

Catch unit kg

SPECIES	3DS	3DS	
Salmon	5 202	121 779	126 981
Rainbow Trout		3	3
Trout		4 836	4 836

Bycatch 3 625 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	2002
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,c II b
Number of vessels	358
Total effort	unit trawling hours

DIVISION	Total
2A	126
2B	130
3AN	37 150
3AS	8 278
3B	278
3C	4
3DN	1 482
3DS	31 635
4A	3 194
4B	5 358
4C	20
Total	87 655

Catch unit kg

SPECIES	2A	3AN	3AS	3B	3C	3DN	3DS	4A	4B	4C	2B	
Herring	615 000	20 096 878	6 992 868	772 500		3 168 582	45 515 583	1 520 140	418 000			79 120 386
Sprat		568 500	1 295 610	228 060		205 500	73 670 987			50		75 969 407
Sandeels		18 541 000	490 000						36 842 000			55 878 000
Blue Whiting	850 000	16 662 122	830 940					56 762	11 000			18 477 889
		853 922	700 133	42 200	330		8 351 578	205 683	232 908			10 389 692
Capelin											3 380 000	3 380 000
Mackerel		86 010	707				5	2 436 000				2 522 722
Northern pink shrimp		2 038 517	4 464					143 186	450			2 187 202
Saithe		408 113	16 959	410			2 867	707 302	688 692			1 833 133
Vendace (Cisco)						969 740						969 740
Haddock		342 512	32 164	215			10	111 725	445 109			944 990
Norway lobster		656 038	218 906	11				12 492	984			889 011
Horse Mackerel		6 040	63					555 000		14 000		575 103
Witch		540 859	3 486					6 037	1 782			552 164
Argentines		475 800										476 800
Plaice		129 026	154 854	1 497			15 284	400	2 556			304 986
Round-nose Grenadier		261 500										301 680
Unknown Catches		75 693	28 858	153		10 994	446	43 482	29 054			209 432
Whiting		47 690	85 952	534			40 525	4 063	3 065			184 589
Spurdog / spiny dogfish		147 325	6 204						136			153 665
Pilchard, Sardine										142 000		142 000
Flounder		2 071	19 089	192		0	115 168					137 510
Monkfish		53 461	271					55 557	8 702			117 991
Pollack		32 028	2 457					40 825	26 631			101 941
Rockfishes		21 755	10 975	240				6 325	7 388			46 683
Hake		26 767	1 873					9 692	6 926			45 258
Ling		29 775	1 587	58				6 739	2 747			40 905
Lemon Sole		22 495	10 234	55				2 180	2 848			37 812

Bycatch

191 585 kg discard, no mammal bycatch recorded

Fisheries statistics from United Kingdom

1. Gill nets

Type of fishery:	gill nets
Target species:	Monk fish, anglerfish, pollack, ling, cod...
Reporting period:	2002
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:	265
Total length of gear:	Comprehensive data not collected but estimated to be an average of 13km for over 10m vessels and 2.5km for under 10m vessels.
Catch:	See landings.
Landings('000 tonnes):	Monks and anglers; 3.0, Pollack; 1.5, Ling; 1.5, Dogfish; 1.3, Cod; 1.0
By-catch:	Estimated total bycatch for 2002 not available. In 1995, bycatch of harbour porpoises by UK gillnet fisheries in ICES Division IVa- c and VIa estimated to be approximately 1000 porpoises, reducing (due to decline in fishing effort) to around 600 porpoises in 2000. Estimates of harbour porpoises taken in the Celtic Sea by gill net vessels in the 15m+ sector were approximately 740 per year between 1992 - 1994.
Discards:	Comprehensive data not available.

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:	2002
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:	1620

Total length of gear: -

Catch: See landings.

Landings:('000 tonnes) Mackerel: 191.1, Herring: 70.3, Haddock: 41.4, Cod: 27.4, Blue whiting: 27.2, Nephrops: 27.0, Plaice: 18.9, Anglerfish: 12.4, Horse Mackerel: 11.6, Saithe: 11.4, Whiting: 9.6, Pilchards: 9.3, Sprats: 5.7, Ling: 5.5, Skates and Rays: 5.1, Squid: 4.8, Silver Smelt: 4.4, Megrim: 4.3, Witch: 3.8, Sand eels: 3.7, Cuttlefish: 3.2, Blue Ling: 3.0, Spurdog: 3.0, Lemon Sole: 2.5, Sole: 2.2, Redfish: 2.0, Hake 1.5, Brown Shrimp: 1.4, Dabs: 1.3, Pollack: 1.1 and others.

By-catch: Between 2000 - 2001 observers placed on 13 UK vessels for a total of 190 days at sea, covered 206 trawling operations around the UK. The fisheries covered: herring, mackerel, sprat, pilchard, blue whiting, anchovy and bass. No cetacean bycatch observed, with the exception of the bass fishery. For the bass fishery, observations in 2001 were made during 71 days at sea, covering 116 hauls. A total of 53 common dolphins were observed caught in these operations. Total annual bycatch for 2001 unlikely to be higher than observations due to high sampling rate. Follow up work in the same fishery in 2002 recorded 8 common dolphins caught in 66 hauls observed.

Discards: Comprehensive data not available.

3. Recreational fisheries

No formal statistics are collected for these fisheries

Fisheries data from:

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