

Agenda Item 4.5: Bycatch Issues

Fisheries Statistics: Data submitted by Parties

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 Belgium (2003, 2004)

Submitted to ASCOBANS in 2005

Compiled by Jan Haelters, MUMM/RBINS

Belgium has the smallest fishing fleet of all North Sea states. In 2003 the Belgian fishing fleet numbered 125 vessels with an average engine power of 535kW, and an average Gross Tonnage of 190GT. Over the years the number of vessels has diminished, while average engine power and gross tonnage have increased (eg. in 1993 the number of vessels was 170, while average engine power and Gross Tonnage were respectively 411kW and 142GT). The Belgian fishing fleet consists mainly of bottom trawlers. Bottom set gill nets are only deployed by a very small number of vessels, and also purse-seining and twin trawling is marginal.

1. Bottom set gill nets

Type of fishery:	Bottom set gill nets
Target species:	Sole, plaice, turbot, cod,...
Reporting period:	2003, 2004
Fishing season:	Year round, target species dependent on season
Type of statistic:	Landing
Fishing area:	IVc, VIId, IVb
Number of vessels:	3 vessels, one of these is almost exclusively active in territorial waters (12 nautical mile zone - IVc), one is active in Belgian waters (territorial sea and EEZ - IVc), and to a lesser extent in VIId and the other areas of IVc, the third vessel is active in the Belgian EEZ and in IVc and VIId, and to a lesser extent in IVb.
Total length of gear:	Approximately 20 kms
Catch:	See landings for 2003
Landings:	Included in the statistics of the total fleet (2003); 1% of all catches
By-catch:	Relatively small bycatch of non-target species (both commercial and non commercial) and undersized target species. Very limited bycatch of benthic invertebrates. A limited bycatch of marine mammals is reported by one of these fishermen (' <i>a couple of harbour porpoises in 2004</i> '), but evidence from stranded animals indicate that more than a couple of porpoises might be caught and discarded. Bycatch of birds is limited (common scoter, divers, guillemot, cormorant,...). The bycatch of a minke whale <i>Balaenoptera acutorostrata</i> occurred in 2004, but the

fishing gear in which it was taken is unknown, neither is the fishing vessel (probably bottom set gill nets).

Discards: See bycatch.

2. Trawling

Type of fishery: Beam- and otter trawl for demersal fish, shrimp and norway lobster

Target species: Demersal fish species (sole, plaice, cod, rays,...), shrimp (*Crangon crangon*), Norway lobster (*Nephrops norvegicus*),...

Reporting period: 2003

Fishing season: Year round, fishing area and target species depend on the season.

Type of statistic: Landing, effort

Fishing area: Effort data: including all fisheries; total fishing days: 25.696

IVb: 15% of effort

IVc: 36%

VIIa: 7%

VIIId: 22%

VIIe: 1%

VIIIf: 7%

VIIg: 9%

VIII: 3%

This effort is in most areas not distributed evenly over the year; eg. VIIId: November to March, VIIe: February to April, VIIIf: January to April, VIIIf,b: June to August,...

Number of vessels: 122

Total length of gear: -

Catch: See landings.

Landings: Beamtrawling: 90% of all landings
Otter trawling: 2.5%
Shrimp trawling: 5%
Norway lobster trawling: 1.5%

Data include bottom set gill net fishery. Total: 23.637 tons; plaice: 6.143 tons (26%), cod: 1.566 tons (7%), sole: 4.877 tons (21%), brill + turbot + dab + lemon sole: 2.511 tons, ray: 1.757 tons, brown shrimp: 909 tons (4%),...

By-catch: In comparison to bottom set gill net fishery, a very high bycatch of non target species: benthic invertebrates, undersized target and non target

fish, non-commercial fish species, protected fish (fish for which no quota exists (anymore)). No bycatch of marine mammals was reported in 2003 and 2004.

Discards: See by-catch.

3. Recreational fisheries

Recreational fishery: use of rod and line (from the beach and from small vessels) and set nets of different types (from the beach)

From the beach, especially in spring and autumn, a large number of nets of different types are set during low tide. The main target species are sole (spring) and cod (autumn). Bycatch of harbour porpoise, common seal and diving birds has been reported from bottom set gill nets ('tremail' and other types). Due to bycatches of protected species, the recreational fishery with bottom set gill nets was banned below the low water mark in 2001. However, a relatively high bycatch of harbour porpoises in 2004 (at least 4, but bycatch in unknown fishing gear was recorded for 10+ other animals that were found on the beach) indicates that this measure is not sufficient.

Fisheries data from:

WELVAERT, M.; TESSENS, E & VELGHE, M, 2004. De Belgische zeevisserij: aanvoer en besomming 2003. Rapport Dienst Zeevisserij, Ministerie van de Vlaamse Gemeenschap, Administratie Land- en Tuinbouw, 111 p.

Fisheries Statistics from Germany

1. Bottom set gill nets

Type of fishery:	Bottom set gill nets																		
Target species:	Atlantic Cod, Common Dab, European Flounder, Garfish, Herring, Lefteye Flounder, Common Sole, Turbot																		
Reporting period:	2004																		
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:	94 vessels																		
Total length of gear:	12 - 13 km																		
Catch:	See landings.																		
Landings:	<table><tr><td>Total:</td><td>5.729 tons</td></tr><tr><td>Atlantic Cod</td><td>828 tons</td></tr><tr><td>Common Dab</td><td>38 tons</td></tr><tr><td>European Flounder</td><td>185 tons</td></tr><tr><td>Garfish</td><td>44 tons</td></tr><tr><td>Herring</td><td>4.465 tons</td></tr><tr><td>Lefteye Flounder</td><td>10 tons</td></tr><tr><td>Common Sole</td><td>53 tons</td></tr><tr><td>Turbot</td><td>8 tons</td></tr></table>	Total:	5.729 tons	Atlantic Cod	828 tons	Common Dab	38 tons	European Flounder	185 tons	Garfish	44 tons	Herring	4.465 tons	Lefteye Flounder	10 tons	Common Sole	53 tons	Turbot	8 tons
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By-catch:	<table><tr><td>Other species</td><td>98 tons</td></tr><tr><td colspan="2">Relatively small bycatch of non-target species.</td></tr><tr><td colspan="2">Bycatch of birds: No information.</td></tr><tr><td colspan="2">No bycatch of marine mammals was reported by the German fishermen.</td></tr></table>	Other species	98 tons	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	98 tons																		
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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: 2004

Fishing season: Year round or on season

Type of statistic: Catch

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

Number of vessels: 408 vessels (beamtrawl for shrimp: 285)

Total length of gear: -

Catch: See landings

Landings:	Total:	152.438 tons
	Atlantic Cod	8.735 tons
		19.191 tons
	Common Shrimp	tons
	Common Dab	1.457 tons
	European Flounder	1.465 tons
	Haddock	1.310 tons
		46.287 tons
	Herring	tons
	Jack and Horse Mackerel	5.101 tons
	Atlantic Mackerel	4.639 tons
		16.240 tons
	Blue Mussel	tons
	European Plaice	3.826 tons
	Saithe	9.589 tons
Common Sole	866 tons	
	28.489 tons	
Sprat	tons	
Turbot	301 tons	
Whiting	863 tons	

By-catch: Other Species 4.079 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, Atlantic Salmon, European Smelt.

Reporting period: 2004

Fishing season: Year round

Type of statistic: Catch

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

Number of vessels: 47 vessels

Total length of gear: -

Catch: See landings

Landings	Total:	188 tons
	Atlantic Cod	29 tons
	European Eel	20 tons
	European Flounder	6 tons
	European Perch	6 tons
	Northern Pike	4 tons
	Pike Perch	13 tons
	Roach	1 tons
	Garfish	4 tons
	Herring	99 tons
	Atlantic Salmon	2 tons
	European Smelt	3 tons

By-catch: Other species 1 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.

Report from Poland

1. Bottom set gill nets

Type of fishery: driftnets, set gill nets
Target species: salmon, salmon trout, rainbow trout, cod, flatfish, herring
Reporting period: 2003, 2004
Fishing season: all year, excluding period 01.06 – 15.09. for trout and salmon
all year, excluding period 15.02 – 15.05. for plaice and flatfish
all year, excluding period 01.06 – 31.07. for turbot and brill
all year, excluding period 01.06 – 31.08. for cod
Type of statistic: landings
Fishing area: ICES Subarea 26
Number of vessels: 251 vessels of length to 15m
174 vessels of length from 15m to 30m
5 vessels above 30m
Total length of gear: 12km for vessels of length to 12m
24 km for vessels of length above 12m
Catch: statistics
Landings: statistics
By-catch:
cod: no more than 3 % of herring, sprat catches
cod: no more than 10 % of others catches
others catches: no more than 20 % of mass of species unregulated catches
cetaceans: no data
birds: no data
Discards: no data

2. Trawling

Type of fishery: pelagic and bottom trawl
Target species: herring, sprat, herring, cod,
Reporting period: 2003, 2004
Fishing season: pelagic trawl: all year, excluding period 01.06 – 31.08. for cod
Type of statistic: landings
Fishing area: ICES Subarea 26
Number of vessels: 251 vessels of length to 15m
174 vessels of length from 15m to 30m
5 vessels above 30m
Total length of gear: -
Catch: statistics
Landings: statistics

By-catch: cod: no less than 3 % of herring, sprat catches
cod: no less than 10 % of others catches
others catches: no less 20 % of mass of species unregulated catches
cetaceans: no data
birds: no data
Discards: no data

3. Recreational fisheries

were conducted by angler and cross-bow from the coast, vessels or using two anglers at the same time or one angler on spinning, without using light for localization and decoy of fish.

Fishing permits only for individuals. No fishing gears for sea fisheries could be used in the recreational fisheries. It is acceptable to trawl bait during fishing by vessel.

The main species are: cod (all year, excluding recovery periods), herring (spring and autumn), flatfish (excluding recovery periods for each of species).

Fisheries statistics from Sweden

H Westerberg

1. Bottom set gillnets

Type of fishery	Bottom set gillnet
Target species	Varied species
Reporting period	2004
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	35 965 080
3AS	115 647 660
3B	136 284 930
3C	0
3DN	33 078 210
3DS	1 671 210 500
Totalt	1 992 186 380

Catch	unit kg							
SPECIES	3AN	3AS	3B	3C	3DN	3DS	Sum	
			388			3 904	4 369	
Cod	40 658	13 986	117	284	12 347	872	098	
			300		1 164		1 543	
Herring	32 491	7 836	323		983	33 096	575	
Salmon		16	131		4 960	225 250	230 862	
Lumpfish	25 517	60 499	76 144			5 091	169 285	
Whitefish	450	7			127 226	16 026	144 079	
	141							
Spiny dogfish	337	635	0				142 012	
Flounder	158	7 384	30 439		133	89 132	130 084	
Plaice	17 778	42 785	29 758			3 460	93 952	
Perch	35		16		48 059	16 147	64 326	
Mackerel	47 570	1 162	22			1	48 755	
Edible crab	7 150	28 901	185				36 371	
Rockfishes	24 423	3 671	1 440				29 535	
Zander (Pikeperch)					18 482	9 134	27 686	
Pike			10		13 565	12 719	26 294	
Turbot	155	2 694	433		14	19 984	23 990	
Vendace (Cisco)					23 970		23 970	
Sprat	15 529						15 529	
Pollack	11 907	2 447	0				14 354	
Trout	58	392	346		4 790	6 485	12 221	
Saithe	7 042	2 179	5				9 226	
Bream					3 286	54	7 340	
Brill	1 975	3 735	670			5	6 385	
Unknown Catches	3 500	30	30			9	6 250	
Silver eel		15			138	5 964	6 151	
Lemon Sole	84	3 155	1 617			14	4 890	
Whiting	637	106	341			3 647	4 731	
Sole	52	2 278	0			11	3 503	
Haddock	8	2 594	0				2 602	
Dab	0	1 481	480			309	2 272	
	380	189	830		1 423	4 353	7 207	
TOTAL	309	641	587	284	600	990	902	

Bycatch

Discard 29 ton of fish. No harbour porpoise recorded in logbook.

2. Driftnet

Type of fishery	Driftnets
Target species	Salmon in the Baltic
Reporting period	2004
Fishing season	salmon year round
Type of statistics	catch per area and gear type from logbooks
Fishing area	III d
Number of vessels	37
Total effort	unit m of net*hour

DIVISION	Totalt
3DN	404 000
	90 963
3DS	510
	91 367
Totalt	510

Catch	Unit kg		
SPECIES	3DN	3DS	Sum
Salmon	2 383	221 741	224 458
Rainbow Trout		0	0
Trout		2 232	2 232
Unknown			
Catches		716	716
TOTAL	2 383	224 689	227 406

Bycatch 333 kg fish discard, no mammal bycatch recorded

3 Trawling

Type of fishery	bottom otter trawl and pelagic trawls
Target species	sprat, herring, sandeel, cod ...
Reporting period	2004
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	338
Total effort	unit trawling hours

DIVISION	Totalt
2A	3 535
3AN	128 604
3AS	33 737
3B	977
3DN	9 902
3DS	98 569
4A	11 265
4B	11 995
4C	110
3C	10
Totalt	298 704

Catch unit kg

SPECIES	3AN	3AS	3B	3DN	3DS	4A	4B	Sum
Sprat	771 200	2 021 715	57 000	22 000	80 987 548	0	55 000	83 914 463
Herring	14 747 509	9 154 139	15 000	4 321 483	38 000 237	2 224 000	1 569 000	74 721 868
Sandeels	76 000	50 000					33 245 500	33 371 500
Blue Whiting	2 599 700	131 000			0	532 400	27 000	19 098 020
Cod	433 969	435 237	124 955	2	8 452 850	43 239	181 255	9 809 129
Shrimp	2 156 509	3 466			0	151 221		2 311 486
Saithe	697 925	10 643			6	414 246	1 110 465	2 244 385
Mackerel	407 484	22 058			2 195	1 503 460	115 000	2 050 197
Vendace (Cisco)				1 733 965				1 733 965
Norway lobster	444 786	269 705	1 220		0	684	73	716 468
Horse Mackerel	189 019	379 000				96 500	7 000	671 519
Witch	533 081	4 486			0	2 301	545	540 413
Haddock	131 485	17 180	58		18	43 646	143 509	336 616
Plaice	133 978	94 546	5 436		39 039	212	1 103	274 314
Anchovy		209 300						209 300
Whiting	21 340	51 450	1 105		46 084	1 468	275	125 907
Unknown Catches	42 467	17 852	301	1 407	411	20 112	27 432	122 200
Spiny dogfish	87 907	10 648			0	175	0	98 730
Flounder	407	5 950	120		62 890			73 057
Hake	47 220	2 647			0	10 179	5 337	65 382
Monkfish	54 461	248			0	4 679	936	60 324
Pilchard, Sardine	0	56 000						56 000
Garfish	41	45 450						45 491
Pollack	12 589	6 601	1 150		0	6 133	9 803	36 276
Rockfishes	14 312	4 321	184			6 639	10 034	35 490
Ling	28 912	1 382	13		0	1 721	1 341	33 439
Salmon			375	0	28 251			28 626
Lemon Sole	17 680	7 105	63		0	984	1 776	27 608
Sole	2 703	10 562	118				0	25 262
Lumpfish	13 966	8 509			15	0	30	22 520
Skates, rays	18 282	506	10			20		18 818
Brill	4 397	6 745	207		48	0	0	11 397
Turbot	1 284	2 426	121		5 197	3	6	9 037
Greater Weever	10	7 590						7 600
Tusk	5 818	42			0	58	0	5 918
Grey Gurnard	51	1 942			0	0	2 558	4 551
Halibut	4 112	28			60	92	10	4 302
slätrock	3 668	20				37		3 725
Norway Pout							2 475	2 475
Whitefish				1 740	302			2 042
TOTAL	23 708 711	13 052 942	207 475	6 080 851	127 625 641	5 064 450	36 517 897	232 939 161

Bycatch Discard of fish 198 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, dogfish, hake...
Reporting period:	2004
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:	320
Total length of gear:	2 - 8km average per vessel
Catch:	See landings.
Landings('000 tonnes):	Monks and anglers; 1.6, Dogfish; 1.5, Pollack; 1.4, Gulper Shark 1.3 Spurdog 1.1 Hake 0.8
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:	2004
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: 1357

Total length of gear: -

Catch: See landings.

Landings:('000 tonnes) Mackerel; 121.9, Herring; 76.3, Blue Whiting; 58.5, Nephrops (Norway Lobster); 28.7, Haddock; 22.8, Cod; 16.8, Plaice; 16.6, Monks or Anglers; 910.0, Saithe; 8.5, Horse Mackerel; 5.0

By-catch: Observations on the 2004 bass pair trawl fishery recorded 169 dolphins caught in 186 hauls. Of these 157 were observed in 67 hauls between mid November 2003 and February 2004 and 29 observed in 84 hauls between March and April. Total bycatch for the UK bass pair trawl fishery is estimated at 439 animals.

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

Fisheries statistics from Finland

Finnish Game and Fisheries Research Institute

Professional marine fishery

In the beginning of 2004 the Finnish fishing fleet numbered almost 3500 registered vessels with capacity of 19 400 BT and power of 188 000 kW. 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 2 400 professional fishermen but most of them were part-time.

The following figures concerning professional marine fishery in 2004 are preliminary. The final statistics is published in may 2005.

In 2004 the total fleet landings reached about 90 000 tonnes and the total catch value was about EUR 23 million.

a. Offshore fishery

Type of fishery: Pelagic and bottom trawls, drif nets, long lines, bottom gillnets.

Note: In this connection midwater trawl without a heavy ground rope, is classified as a bottom trawl, when fishing near bottom.

Target species: Baltic herring, sprat, cod, salmon

Reporting period: 2004

Fishing season: Year round, target species dependent on season

Type of statistic: Nominal catch

Fishing area: IIIId

Number of vessels: Total fleet in open sea fishery 170 vessels

Catch: Pelagic trawl: 48000 tons (herring 34000 t., sprat 14000 t., smelt 60 t., cod 45 t.)

Bottom trawl: 32000 tons (herring 29000 t., sprat 2700 t., cod 330 t., roach 50 t., smelt 40 t.)

Drift net: 215 tons (salmon 210 t.)

Long line: 80 tons (salmon 40 t., cod 40 t.)

Bottom gillnet: 560 tons (cod 480 t., herring 30 t., European whitefish 40 t.)

Landings: See catch

By-catch: Smelt (40 t.) and roach (50 t.) in bottom trawling, Smelt (60 t.) and roach (10 t.) in pelagic trawling, otherwise relatively small bycatch of non-target species and undersized target species

Discard: Circa 45 tons (salmon 26 t., herring 12 t.);
Salmon mostly eaten by seals

b. Inshore fishery:

Type of fishery: Trap nets, gillnets

Target species: Baltic herring, European whitefish, perch, pikeperch, salmon, pike, etc.

Reporting period: 2004

Fishing season: Year round, target species dependent on season

Type of statistic: Nominal catch

Fishing area: IIIId

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: 7400 tons (herring 6200 t., salmon 240 t., perch 215 t., smelt 210 t., European whitefish 140 t.).
Gillnet: 2500 tons (European whitefish 620 t., perch 530 t., pikeperch 520 t., herring 370 t., pike 180 t.)

Landings: See catch

By-catch: Smelt (230 t.) especially in trap net fishery, otherwise relatively small bycatch of non-target

