

Aquaculture

In 2004, the EU-25 production was 19% of the total fisheries production

In 2004 the aquaculture sector of EU25 countries represented 18.8% of the total fisheries production. 78% of the aquaculture production was in marine waters: 63% from the Atlantic and 16% from the Mediterranean. 45% of the total aquaculture production was of fish and 55% of molluscs.

For the 4 candidate countries (BG, HR, RO and TR) aquaculture contributed 16.2% to the total fisheries production, 51% was from inland waters and 96% was of fish.

For Norway and Iceland combined, aquaculture accounted for 13.1% of the total fisheries production, with all but a very minor part (less than 1%) being from seawater and of fish.

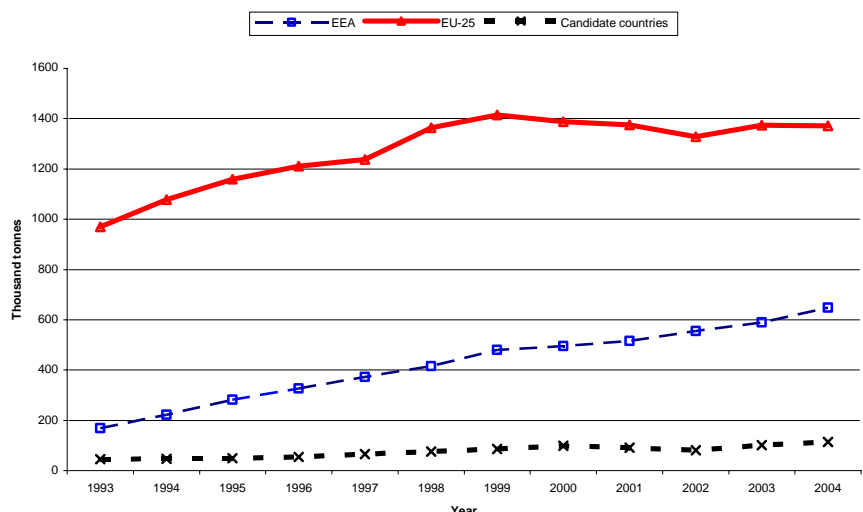
EU-25 production stable since 1999

In the period 1993–1999 the EU-25 aquaculture production rose by 46% from 970 thousand tonnes to 1.4 million tonnes (see Fig. 1). However, thereafter the production has remained relatively stable at 1.4 million tonnes.

By contrast the EEA countries (Norway and Iceland) have reported a steady increase from 169 thousand tonnes in 1993 to 648 thousand tonnes in 2004: a 3.8-fold increase.

Production in the Candidate Countries is relatively small but has increased 2.5 fold from 46 thousand tonnes in 1993 to 115 thousand tonnes in 2004.

Figure 1: Aquaculture production (000 tonnes live weight) by EU-25, EU Candidate Countries and EEA in the period 1993-2004



In 2004 aquaculture contributed 18.8% to the total fisheries production of EU-25 Member States (see table 1); an increase of nearly 2% over the situation in 2000. However, this was not due to an increase in aquaculture production, which, as noted above, has remained relatively stable since 2000, but due primarily to a decrease of nearly 10% in the total fisheries production.

Statistics in focus

AGRICULTURE AND FISHERIES

23/2006

Fisheries

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Table 1: Aquaculture production in 2000 and 2004 as a percentage of the total fisheries production.

(tonnes live weight)

	2000			2004		
	Aquaculture production	Total production	%	Aquaculture production	Total production	%
EU-25	1 388 370	8 168 181	17.0	1 371 813	7 310 682	18.8
EU-15	1 311 976	7 462 015	17.6	1 294 891	6 653 192	19.5
EU-10	76 394	706 166	10.8	76 922	657 490	11.7
BE Belgium	1 871	31 678	5.9	1 200	27 774	4.3
CZ Czech Republic	19 475	24 129	80.7	19 384	23 912	81.1
DK Denmark	43 609	1 577 683	2.8	42 252	1 132 545	3.7
DE Germany	65 891	271 140	24.3	57 233	319 332	17.9
EE Estonia	225	113 384	0.2	252	88 156	0.3
EL Greece	95 418	194 762	49.0	97 068	190 145	51.0
ES Spain	312 171	1 382 040	22.6	363 181	1 217 326	29.8
FR France	266 802	970 241	27.5	243 907	912 421	26.7
IE Ireland	51 247	327 484	15.6	58 359	338 609	17.2
IT Italy	216 525	518 680	41.7	117 786	396 867	29.7
CY Cyprus	1 878	69 360	2.7	2 425	3 987	60.8
LV Latvia	325	136 728	0.2	545	125 936	0.4
LT Lithuania	1 996	80 985	2.5	2 697	160 837	1.7
LU Luxembourg	-	-	-	-	-	-
HU Hungary	12 886	19 987	64.5	12 744	19 986	63.8
MT Malta	1 746	2 820	61.9	868	1 935	44.9
NL Netherlands	75 339	571 113	13.2	78 925	600 561	13.1
AU Austria	2 847	3 286	86.6	2 267	2 667	85.0
PL Poland	35 795	253 481	14.1	35 258	227 365	15.5
PT Portugal	7 537	198 656	3.8	6 700	228 188	2.9
SI Slovenia	1 181	3 037	38.9	1 569	2 592	60.5
SK Slovakia	887	2 255	39.3	1 180	2 783	42.4
FI Finland	15 400	171 822	9.0	12 821	148 695	8.6
SE Sweden	4 834	343 374	1.4	5 989	275 925	2.2
UK United Kingdom	152 485	900 055	16.9	207 203	862 136	24.0
Candidate countries	99 086	637 879	15.5	114 783	708 773	16.2
BG Bulgaria	3 654	10 652	34.3	2 489	10 739	23.2
HR Croatia	6 674	27 742	24.1	10 147	40 319	25.2
RO Romania	9 727	17 099	56.9	8 137	13 223	61.5
TR Turkey	79 031	582 386	13.6	94 010	644 492	14.6
EEA	494 952	5 194 467	9.5	646 861	4 919 378	13.1
IS Iceland	3 623	2 003 603	0.2	8 868	1 758 422	0.5
NO Norway	491 329	3 190 864	15.4	637 993	3 160 956	20.2

The contribution of aquaculture to the EU-10 new Member States is considerable lower (11.7% in 2004) than for the EU-15 Member States (19.5%). For both of the groups of Member States this is an increase over the contribution in 2000 (10.8% and 17.6% respectively, but, as for the EU-25 total, the increase is primarily due to a reduction in the total fisheries production.

The contribution of aquaculture to the total fisheries production is particularly high in the land-locked Member States (Czech Republic, Hungary, Austria and Slovakia). Luxembourg has no activity in aquaculture nor in capture fisheries.

The contribution to the total production is low in the Member States where the capture fisheries are largely limited to the Baltic Sea (Estonia, Latvia, Lithuania, Finland and Sweden).

Spain, with 363 thousand tonnes in 2004, made the major contribution (26%) to the EU-25 aquaculture production followed by France (244 thousand tonnes, 18%) and the United Kingdom (207 thousand tonnes, 15%). The EU-15 Member States were responsible for 94% of the EU-25 production.

Table 2: Aquaculture production in 2004 by region of the activity

(tonnes live weight)

	Region			
	Inland waters	NE Atlantic	Medit. & Black Seas	Total
EU-25	297 841	859 790	214 182	1 371 813
EU-15	224 394	859 790	210 707	1 294 891
EU-10	73 447	-	3 475	76 922
BE Belgium	1 200	-	-	1 200
CZ Czech Republic	19 384	-	-	19 384
DK Denmark	33 356	8 896	-	42 252
DE Germany	44 552	12 681	-	57 233
EE Estonia	252	-	-	252
EL Greece	3 031	-	94 037	97 068
ES Spain	31 119	331 883	179	363 181
FR France	45 242	166 351	32 314	243 907
IE Ireland	889	57 470	-	58 359
IT Italy	33 609	-	84 177	117 786
CY Cyprus	91	-	2 334	2 334
LT Latvia	545	-	-	545
LV Lithuania	2 697	-	-	2 697
LU Luxembourg	-	-	-	-
HU Hungary	12 744	-	-	12 744
MT Malta	-	-	868	868
NL Netherlands	8 450	70 475	-	78 925
AU Austria	2 267	-	-	2 267
PL Poland	35 258	-	-	35 258
PT Portugal	822	5 878	-	6 700
SI Slovenia	1 296	-	273	1 569
SK Slovakia	1 180	-	-	1 180
FI Finland	2 235	10 586	-	12 821
SE Sweden	3 238	2 751	-	5 989
UK United Kingdom	14 384	192 819	-	207 203
Candidate countries	58 020	-	56 763	114 783
BG Bulgaria	2 371	-	118	2 489
HR Croatia	3 397	-	6 750	10 147
RO Romania	8 137	-	-	8 137
TR Turkey	44 115	-	49 895	94 010
EEA	1 451	645 410	-	646 861
IS Iceland	1 451	7 417	-	8 868
NO Norway	-	637 993	-	637 993

Aquaculture production in 2004 was relatively unimportant in the 4 Candidate Countries; at only 8% compared with the EU-25 production. The major part of this production (82%) was in only one of the countries, Turkey.

By far the largest single producer of aquaculture products of the countries included in this study was Norway, with 638 thousand tonnes in 2004.

78% of EU-25 production in marine areas

In 2004, marine waters accounted for 78% of the 1.4 million tonnes production from aquaculture in the EU-25 Member States: 63% from the Atlantic Ocean and 16% from the Mediterranean Sea (see Table 2). Inland waters accounted for only 22% of the production.

For the EU-10 new Member States the major proportion of the aquaculture production in 2004 (73 447 tonnes, 95% of the total) was in inland waters and all the production in marine areas was in the Mediterranean.

For the four Candidate countries the production was split fairly evenly between marine and inland areas.

For Iceland and Norway the production was almost exclusively in the waters of the Northeast Atlantic (over 99% of the total).

55% of EU-25 production of molluscs

In 2004, 55% of the EU-25 production was of molluscs (primarily bi-valve molluscs – mussels and oysters) and 45% of fish species (see Table 3). Crustaceans are barely represented in the EU-25 aquaculture production. This contrasts with a world production of crustaceans of 3.3 million tonnes, 6% of the total production.

The United Kingdom had the greatest fish production in the European Community in 2004. At 175 thousand tonnes this was 28% of the EU-25 fish production and 32% of the EU-15 fish production. Spain (302 thousand tonnes) and France 192 thousand tonnes made the major contributions to the EU-25 mollusc production (40% and 25% respectively).

Fish are by far the major component of the EU-10 aquaculture production (over 99% of the total).

For the Candidate Countries and the EEA fish (at 96% and over 99% respectively) are also the major component of the aquaculture production.

Blue mussels and rainbow trout are the major EU-25 species

EU-25 Member States have reported nearly 100 species as being the subject of aquaculture. However most of these species are produced in small quantities: the major production is of a relatively small number of species. The major species at EU-25 level are the blue mussel (*Mytilus edulis*) and the rainbow trout (*Onchorynchus mykiss*) which together make up 52% of the total production (see Table 4). Culture of these two species is not concentrated in any one small group of countries: one or both of these two species figure among the top two species in 16 of the EU Member States.

More generally two species from a limited number constitute over 60% of the production of all but one (Portugal) of the EU-25 countries. Rainbow trout, the common carp (*Cyprinus carpio*) and the gilthead seabream (*Sparus aurata*) are the most frequently encountered fish species and the blue mussel, the Mediterranean mussel (*Mytilus galloprovincialis*) and the Pacific cupped oyster (*Crassostrea gigas*) are the molluscs.

As noted above, aquaculture production in the EU-10 Member States concentrates on fish species with the common carp and the rainbow trout being the most frequently reared.

Trouts (*Salmo* spp) and seabasses (*Dicentrarchus* spp) account for a major part (62%) of the production in the Candidate Countries

The Atlantic salmon (*Salmo salar*) is by far the major species in the EEA countries with 98% of the 572 526 tonnes being produced in Norway.

Table 3: Aquaculture production in 2004 by major groups of species
(tonnes live weight)

	Fish	Crustaceans	Molluscs	Aquatic plants	Total
EU-25	615 587	208	755 977	37	1 371 813
EU-15	538 845	192	755 813	37	1 294 891
EU-10	76 742	16	164	-	76 922
BE Belgium	1 200	-	-	-	1 200
CZ Czech Republic	19 384	-	-	-	19 384
DK Denmark	42 197	-	55	-	42 252
DE Germany	44 674	-	12 559	-	57 233
EE Estonia	251	1	-	-	252
EL Greece	68 265	-	28 803	-	97 068
ES Spain	60 893	107	302 181	-	363 181
FR France	52 060	60	191 750	37	243 907
IE Ireland	15 263	-	43 092	-	58 359
IT Italy	47 410	19	70 357	-	117 786
CY Cyprus	2 410	15	-	-	2 425
LV Latvia	545	-	-	-	545
LT Lithuania	2 697	-	-	-	2 697
LU Luxembourg	-	-	-	-	-
HU Hungary	12 744	-	-	-	12 744
MT Malta	868	-	-	-	868
NL Netherlands	8 525	-	70 400	-	78 925
AU Austria	2 267	0	-	-	2 267
PL Poland	35 258	-	-	-	35 258
PT Portugal	4 019	-	2 681	-	6 700
SI Slovenia	1 405	-	164	-	1 569
SK Slovakia	1 180	-	-	-	1 180
FI Finland	12 821	-	-	-	12 821
SE Sweden	4 548	6	1 435	-	5 989
UK United Kingdom	174 703	-	32 500	-	207 203
Candidate countries	110 152	-	4 631	-	114 783
BG Bulgaria	2 371	-	118	-	2 489
HR Croatia	7 147	-	3 000	-	10 147
RO Romania	8 137	-	-	-	8 137
TR Turkey	92 497	-	1 513	-	94 010
EEA	643 708	-	3 153	-	646 861
IS Iceland	8 858	-	10	-	8 868
NO Norway	634 850	-	3 143	-	637 993

Table 4: Aquaculture production by major species (tonnes live weight)

	English name	Scientific name	3-alpha identifier	Production	% of total
EU-25	Blue mussel	<i>Mytilus edulis</i>	MUS	499 579	36
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	213 422	16
EU-15	Blue mussel	<i>Mytilus edulis</i>	MUS	499 579	39
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	196 074	15
EU-10	Common carp	<i>Cyprinus carpio</i>	FCP	47 718	62
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	17 348	23
BE Belgium	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	400	33
	Common carp	<i>Cyprinus carpio</i>	FCP	400	33
CZ Czech Republic	Common carp	<i>Cyprinus carpio</i>	FCP	16 996	88
	Bighead carp	<i>Hypophthalmichthys nobilis</i>	BIC	564	3
DK Denmark	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	39 858	94
	European eel	<i>Anguilla anguilla</i>	ELE	1 752	4
DE Germany	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	22 023	38
	Common carp	<i>Cyprinus carpio</i>	FCP	16 044	28
EE Estonia	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	194	77
	Common carp	<i>Cyprinus carpio</i>	FCP	47	19
EL Greece	Gilthead seabream	<i>Sparus aurata</i>	SBG	37 394	39
	Mediterranean mussel	<i>Mytilus galloprovincialis</i>	MSM	28 781	30
ES Spain	Blue mussel	<i>Mytilus edulis</i>	MUS	294 286	81
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	30 810	8
FR France	Pacific cupped oyster	<i>Crassostrea gigas</i>	OYG	113 750	47
	Blue mussel	<i>Mytilus edulis</i>	MUS	55 575	23
IE Ireland	Blue mussel	<i>Mytilus edulis</i>	MUS	37 315	64
	Atlantic salmon	<i>Salmo salar</i>	SAL	14 067	24
IT Italy	Mediterranean mussel	<i>Mytilus galloprovincialis</i>	MSM	42 588	36
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	30 227	26
CY Cyprus	Gilthead seabream	<i>Sparus aurata</i>	SBG	1 356	57
	European seabass	<i>Dicentrarchus labrax</i>	BSS	698	28
LV Latvia	Common carp	<i>Cyprinus carpio</i>	FCP	526	97
	Freshwater fishes nei	<i>Osteichthyes</i>	FRF	7	1
LT Lithuania	Common carp	<i>Cyprinus carpio</i>	FCP	2 618	97
	Northern pike	<i>Esox lucius</i>	FPI	29	1
HU Hungary	Common carp	<i>Cyprinus carpio</i>	FCP	8 688	68
	Silver carp	<i>Hypophthalmichthyes militrix</i>	SVC	1 401	11
MT Malta	Gilthead seabream	<i>Sparus aurata</i>	SBG	743	86
	European seabass	<i>Dicentrarchus labrax</i>	BSS	125	14
NL Netherlands	Blue mussel	<i>Mytilus edulis</i>	MUS	67 200	85
	European eel	<i>Anguilla anguilla</i>	ELE	4 500	6
AT Austria	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	1 640	72
	Common carp	<i>Cyprinus carpio</i>	FCP	306	13
PL Poland	Common carp	<i>Cyprinus carpio</i>	FCP	18 300	52
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	14 647	42
PT Portugal	Grooved carpet shell	<i>Tapes decussatus</i>	CTG	2 011	30
	Gilthead seabream	<i>Sparus aurata</i>	SBG	1 685	25

Table 4 (continued): Aquaculture production by major species (tonnes live weight)

	English name	Scientific name	3-alpha identifier	Production	% of total
SI Slovenia	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	1 000	64
	Common carp	<i>Cyprinus carpio</i>	FCP	198	13
SK Slovakia	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	818	69
	Common carp	<i>Cyprinus carpio</i>	FCP	345	29
FI Finland	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	12 335	96
	European whitefish	<i>Coregonus lavaretus</i>	PLN	426	3
SE Sweden	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	4 111	69
	Blue mussel	<i>Mytilus edulis</i>	MUS	1 435	24
UK United Kingdom	Atlantic salmon	<i>Salmo salar</i>	SAL	158 099	76
	Blue mussel	<i>Mytilus edulis</i>	MUS	30 699	15
Candidate countries	Troouts nei	<i>Salmo spp</i>	TRO	45 082	39
	Seabasses nei	<i>Dicentrarchus spp</i>	BSE	26 297	23
BG Bulgaria	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	1 175	47
	Common carp	<i>Cyprinus carpio</i>	FCP	626	25
HR Croatia	European seabass	<i>Dicentrarchus labrax</i>	BSS	3 000	30
	Mediterranean mussel	<i>Mytilus galloprovincialis</i>	MSM	2 800	28
RO Romania	Common carp	<i>Cyprinus carpio</i>	FCP	1 726	21
	Silver carp	<i>Hypophthalmichthys molitrix</i>	SVC	1 588	20
TR Turkey	Troouts nei	<i>Salmo spp</i>	TRO	45 082	48
	Seabasses nei	<i>Dicentrarchus spp</i>	BSE	26 297	28
EEA	Atlantic salmon	<i>Salmo salar</i>	SAL	572 526	89
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	63 319	10
IS Iceland	Atlantic salmon	<i>Salmo salar</i>	SAL	6 624	75
	Arctic char	<i>Salvelinus alpinus</i>	ACH	1 338	15
NO Norway	Atlantic salmon	<i>Salmo salar</i>	SAL	565 902	89
	Rainbow trout	<i>Onchorhynchus mykiss</i>	TRR	63 177	10

ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

EU Member States, Iceland and Norway submit aquaculture production data to Eurostat under the terms of the Council Regulation no. 788/96 (*Official Journal L 108 of 1-5-1996*). Data for the EU Candidate Countries have been submitted to FAO on the FISHSTAT AQ questionnaire. Eurostat gratefully acknowledges FAO contribution of these data and indeed for its assistance in a quality control of all the data.

2004 is the most recent year for which complete data are available.

The production is reported in the live weight equivalent of the product. For molluscs this includes the weight of the shell.

The EU-15 Member States are Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom.

The EU-10 Member States (which acceded to the European Union in May 2004) are the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, and Slovak Republic.

The EU-25 Member States are the EU-15 and the EU-10 countries.

The EU Candidate Countries are Bulgaria, Croatia, Romania and Turkey.

The EEA countries are Iceland and Norway.

Further information:

Reference publications

Title [Pocketbook of Fishery Statistics \(2005 edition\)](#)
Catalogue No KS-DW-05-001-EN-C
Price EUR 10

Data:

[Agriculture, forestry and fisheries/Fisheries/Aquaculture production/Aquaculture production - Quantities \(Tonnes live weight\): 1984 onwards](#)

[Agriculture, forestry and fisheries/Fisheries/Aquaculture production/ Aquaculture production - Quantities \(Tonnes live weight\): 1950 - 1983](#)

[Agriculture, forestry and fisheries/Fisheries/Aquaculture production/Aquaculture production - Aquaculture production - Values \(1000 euro\)](#)

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