



PART 1 - INTRODUCTION AND TABLES

Introduction

This paper gives the values of the yield of edible tissue and the protein and fat contents of the world's commercially more important fish and shellfish species, derived from a survey of published, and some unpublished, material. The information is intended to assist FAO in estimating the contribution of fish to the nutrition of individual countries from their data on catches, landings and disposal. Much of the data collected is insufficiently comprehensive, especially in relation to yield, to allow definitive estimates to be made: many of the selected values are considered provisional, or tentative.

Data of the yield and composition (as a percentage of the edible portion) of the species surveyed are presented in Table 1. Much of the published data on which Table 1 is based is of less value than it could be, because of the universal failure of authors to appreciate the many factors that can affect yield and composition. A high proportion of the individual measurements in the literature are from a small number of fish, sometimes only one, caught on a single occasion. The possible effects on both yield and composition of the date of catching, the location, the size of the fish and natural variability have seldom, if ever, been fully taken into account. Yield measurements are particularly variable: it is not impossible to find published yields for a species that vary by a factor of 2. Apart from the factors already mentioned as causing variability, all authors have failed to define exactly terms such as "fillet" and "edible portion".

The separate yields of skinless fillets and total edible flesh allow some flexibility in assessing the actual amount of fish tissue consumed in particular countries. In many developed countries a high proportion of fish is eaten in the filleted condition, with no bones or with pinbones only present, and often without skin. The remaining edible tissue is consigned with the bones, offal and possibly skin to fish meal manufacture, when it may contribute only indirectly to human nutrition. The extent to which skin is eaten is not addressed here since reliable information is lacking. In other countries, including most developing countries, fish is sold to the consumer either in the whole, gutted condition, or in some dressed or split form. In these circumstances nearly all the muscle tissue will be eaten and the "edible flesh" column in Table 1 is an estimate of such consumption. In any particular case a decision will need to be made on which yield figure is most suitable. (An intermediate figure could be appropriate.)

Yields are given to the nearest whole number, protein and fat contents to the first decimal place and energy values to the nearest whole number.

Energy values have been calculated using the factors:

Protein	4.27 kcal/g
Fat	9.02 kcal/g
Glycogen	4.11 kcal/g

$$1 \text{ kcal} = 4.185 \text{ kJ}$$

General notes on Table 1:

- a. Because of the inadequacy of the collected data many of the selected values of yield and some values of composition are considered tentative or provisional: these figures are in square brackets.
- b. For each listed species, the Monograph giving fuller details will be found in Part 3, either under the English name of the species or as indicated in a numbered footnote.
- c. The species or groups listed include, with a few exceptions such as species used mostly for reduction to fish meal, almost all those with an annual world catch exceeding 100,000 metric tons (MT) per year (together with some additional species that were considered at the same time.)
- d. Selected values of yields are given as percentages of the whole weight of the fish.

- e. Selected values of proteins and fat content are given as percentages of the edible tissue, muscle in the case of finfish, but including other organs in many shellfish.
- f. Where two or more figures are given in a single column, this is explained in a numbered footnote.
- g. The separate yields of skinless fillets and total edible flesh allow some flexibility in assessing the actual amount of fish tissue consumed in particular countries. In many developed countries a high proportion of fish is eaten in the filleted condition, with no bones or with pinbones only present, and often without skin. The remaining edible tissue is consigned with the bones, offal and possibly skin to fish meal manufacture, when it may contribute only indirectly to human nutrition. The extent to which skin is eaten is not addressed here since reliable information is lacking. In other countries, including most developing countries, fish is sold to the consumer either in the whole, gutted condition, or in some dressed or split form. In these circumstances nearly all the muscle tissue will be eaten and the 'edible flesh' column in Table 1 is an estimate of such consumption. In any particular case a decision will need to be made on which yield figure is most suitable. (An intermediate figure could be appropriate.)
- h. Yields are given to the nearest whole number, protein and fat contents to the first decimal place and energy values to the nearest whole number.
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Protein	4.27 kcal/g
Fat	9.02 kcal/g
Glycogen	4.11 kcal/g

$$1 \text{ kcal} = 4.184 \text{ kJ}$$

Comment on the exercise:

Much of the published data on which Table 1 is based, is of less value than it could be, because of the universal failure of authors to appreciate the many factors that can affect yield and consumption. A high portion of the individual measurements in the literature are from a small number of fish, sometimes only one, caught on a single occasion. The possible effects on both yield and composition of the date of catching, the location, the size of the fish and natural variability have seldom, if ever, been fully taken into account. Yield measurements are particularly variable: it is not impossible to find published yields for a species that vary by a factor of 2. Apart from the factors already mentioned as causing variability, all authors have failed to define exactly terms such as 'fillet' and 'edible portion'.

As far as possible, the data have been obtained from original sources, not from other compilations or from abstracts.

Table 1

Yield and composition of surveyed species, in order of English name

Species (see notes page 10)	Yield (as % of whole fish or shellfish weight)			Composition (as % of edible portion)			Energy Value	
	Skinless Fillet	Edible Flesh	Meats	Protein	Fat	Glycogen	Kcal	Kjoules
Akiami paste shrimp			[100]	[16.2]	[1.3]		[81]	[338]
Alaska pollack	36	41		16.6	0.6		76	319
Albacore (1)	[30]	58		23.7	4.6		143	597
Amberjacks nei	[46]	[53]		22.0	2.3		115	480
American cupped oyster(2)			10	8.5	1.8	2.7	64	266
American plaice (3)	34	49		17.6	1.6		90	375
Anchoveta (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)

Anchovies nei (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)
Argentine hake (5)	41	53		17.8	2.5		99	412
Argentine shortfin squid (6)			67	17.9	1.3		88	369
Atka mackerel	[34]	[54]		[17.5]	[4.0]		[111]	[464]
Atlantic cod	34	47		18.1	0.8		56	234
Atlantic herring (29)	46	61		17.8	13.8(14.2/6.1)		200(204/131)	839(854/548)
Atlantic horse mackerel (7)	[46]	52		19.7	5.8		136	571
Atlantic mackerel	54	61		18.7	11.4		183	764
Atlantic redfishes	29	45		18.4	2.7		103	431
Bali sardinella (8)	[53]	65		20.2	4.5		127	531
Banana prawn (9)			57	20.5	1.3		99	415
Bigeye tuna (1)	[30]	58		23.7	4.6		143	597
Black Sea sprat (10)	[50]	[56]		[17.1]	[8.1]		[146]	[611]
Blue mussel			24	11.2	1.8	2.5	74	311
Blue whiting	28	49		18.4	0.3		81	340
Bombay duck	-	[57]		[8.8]	[0.3]		[40]	[169]
Calico scallop (11,30)			[15], [6]	[16.0], 15.8	[0.8], 0.6	[2.9], 2.4	[87], 83	[366], 346
California pilchard (12)	50	53		18.9	7.9		152	636
Cape hakes (5)	41	53		17.8	2.5		99	412
Cape horse mackerel (7)	[46]	52		19.7	5.8		136	571
Capelin	[57]	[60]		14.9	5.9		117	489
Central Pacific anchoveta (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)
Characins	[38]	[57]		[17.6]	[10.5]		[170]	[711]
Chilean hake (5)	41	53		17.8	2.5		99	412
Chilean jack mackerel (7)	[46]	52		19.7	5.8		136	571
Chub mackerel	46	57		20.4	9.5		173	723
Chum salmon (13)	[50]	62		20.5	6.3		144	604
Chichlids nei (14)	[37]	37		17.6	2.1		94	394
Clams nei (15)	[18]		10.8	1.1		3.9	72	302
Coho salmon (13)	[50]	62		20.5	6.3		144	604
Common carp	36	[54]		17.5	4.7		117	490
Common scallop (11,30)			[15], [6]	[16.0], 15.8	[0.8], 0.6	[2.9], 2.4	[87], 83	[366], 346
Common squids (6)			67	17.9	1.3		88	369
Cunene horse mackerel (7)	[46]	52		19.7	5.8		136	571
Cupped oysters nei (2)			10	8.5	1.8	2.7	64	266
Cuttlefishes, bobtail squids (6)			[63]	17.9	1.3		88	369

Cyprinids nei (16)	36	[54]	17.5	4.7			117	490
Dagaas	-	[63]		[16.2]	[3.1]		[97]	[406]
Dentex seabreams, etc nei	40	54		19.9	2.2		105	439
European anchovy (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)
European hake (5)	41	53		17.8	2.5		99	412
European pilchard	[50]	62		20.0	8.1		158	663
European plaice	34	49		17.6	1.6		90	375
European sprat	[50]	[56]		[17.1]	[8.1]		[146]	[611]
Filefishes (17)	[33]	[36]		18.8	0.7		87	362
Flathead mullet (18)	34	50		19.8	4.0		121	505
Freshwater bream (16)	36	[54]		17.5	4.7		117	490
Frigate and bullet tunas (1)	[30]	58		23.7	4.6		143	597
Goldstripe sardinella (8)	[53]	65		20.2	4.5		127	531
Green mussel (19)			24	11.2	1.8	2.5	74	311
Greenland halibut (3)	34	49		13.0	13.7		179	749
Haddock	35	48		18.6	0.2		81	340
Hairtails, cutlassfishes	46	59		20.1	3.9		121	506
Hard clam (15)			[18]	10.8	1.1	3.9	72	302
Indian mackerel (20)	[45]	57		20.4	3.2		116	485
Indian mackerels nei (20)	[45]	57		20.4	3.2		116	485
Indian oil sardine (8)	[53]	65		20.2	4.5		127	531
Indian scad (21)	[52]	[52]		21.3	2.5		114	475
Jack and horse mackerels nei (7)	[46]	52		19.7	5.8		136	571
Jacks, crevalles nei	[33]	56		[19.8]	[1.7]		[100]	[418]
Japanese amberjack (22,31)	[46]	[53]		22.0	2.3(12.3)		115(205)	480(857)
Japanese anchovy (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)
Japanese Manila) clam ((15)			[18]	10.8	1.1	3.9	72	302
Japanese claim (15)			[18]	10.8	1.1	3.9	72	302
Japanese flying squid (6)			67	17.9	1.3		88	369
Japanese jack mackerel (7)	[46]	52		19.7	5.8		136	571
Japanese pilchard	50	53		18.9	7.91		52	636
Japanese scad (21)	[52]	[52]		21.3	2.5		114	475

Japanese scallop (11,30)			[15], [6]	[16.0],15.8	[0.8],0.6	[2.9],2.4	[87],83	[366],346
Japanese Spanish mackerel (23)	57	67		20.0	[4.4]		[125]	[523]
Jellyfishes	-	-		[0.8]	[0.1]		[4]	18]
Kawakawa (1)	[30]	58		23.7	4.6		143	597
Largehead hairtail (24)	46	59		20.1	3.9		121	506
Mediterranean horse mackerel (7)	[46]	52		19.7	5.8		136	571
Milkfish	[46]	61		21.1	4.7		132	554
Mulletts nei	34	50		19.8	4.0		121	505
Narrow-barred spanish king) mackerel (23)	57	67		20.0	[4.4]		[125]	[523]
Nile perch	[57]	[65]		[21.2]	[0.8]		[98]	[409]
North Pacific anchovy (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)
North Pacific hake (5)	41	53		17.8	2.5		99	412
Northern bluefin tuna (1)	[30]	58		23.7	4.6		143	597
Northern brown shrimp (9)			57	20.5	1.3		99	415
Northern prawn			[36]	16.8	1.0		81	338
Northern white strimp (9)			57	20.5	1.3		99	415
Ocean quahog (15)			[18]	10.8	1.1	3.9	72	302
Octopuses (6)			[79]	17.9	1.3		88	369
Pacific cod	30	41		17.3	0.7		80	335
Pacific cupped oyster			10	8.5	1.8	2.7	64	266
Pacific herring	[52]	60		17.8	11.6		181	756
Pacific saury	[52]	64		21.8	8.6		171	714
Penaeus shrimps nei			57	20.5	1.3		99	415
Pink salmon (13)	[50]	62		20.5	6.3		144	604
Ponyfishes (Slipmouths) nei	-	[36]		17.9	[1.0]		[85]	[358]
Round sardinella (8)	[53]	65		20.2	4.5		127	531
Saithe	34	47		18.3	0.5		83	346
Sardinellas nei (8)	[53]	65		20.2	4.5		127	531
Scads	[52]	[52]		21.3	2.5		114	475
Scallops nei (30)			[15], [6]	[16.0],15.8	[0.8],0.6	[2.9],2.4	[87],83	[366],346
Scorpionfishes, etc nei (25)	29	45		18.4	2.7		103	431
Sea mussels nei (19)			24	11.2	1.8	2.5	74	311

Sea scallop (11,30)			[15], [6]	[16.0],15.8	[0.8],0.6	[2.9],2.4	[87],83	[366],346
Seerfishes nei	57	67		20.0	[4.4]		[125]	[523]
Short neck clams (15)			[18]	10.8	1.1	3.9	72	302
Silver hake (5)	41	53		17.8	2.5		99	412
Silver seabream (26)	40	54		19.9	2.2		1.5	439
Skipjack tuna	[46]	62		24.2	3.8		138	576
Snoek (24)	46	59		20.1	3.9		121	506
Sockeye salmon (13)	[50]	62		20.5	6.3		144	604
South American pilchard (12)	50	53		18.9	7.9		152	636
Southern African anchovy (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)
Southern African pilchard (12)	50	53		18.9	7.9		152	636
Southern blue whiting (27)	28	49		18.4	0.3		81	340
Southern bluefin tuna (1)	[30]	58		23.7	4.6		143	597
Squids nei (6)			67	17.9	1.3		88	369
Stolephorus anchovies (4,28)	[51]	62		18.0(20.2)	2.8(4.2)		102(124)	427(519)
Striped venus (15)			[18]	10.8	1.1	3.9	72	302
Surf clam (15)			[18]	10.8	1.1	3.9	72	302
Threadsail filefish (17)	[33]	[36]		18.8	0.7		873	62
Tilapias nei	[37]	37		17.6	2.1		94	394
Toli shad	[50]	[60]		19.8	[12.6]		[198]	[829]
Triggerfishes, durgons	[33]	[36]		18.8	0.7		87	362
Whiting	32	[49]		18.2	[0.4]		[81]	[340]
Yellowfin sole (3)	34	49		17.6	1.6		90	375
Yellowfin tuna (1)	[30]	58		23.7	4.6		143	597

nei = not elsewhere included

Notes to Table 1

1	Monograph	entitled	TUNAS
2	"	"	PACIFIC CUPPED OYSTER
3	"	"	EUROPEAN PLAICE
4	"	"	ANCHOVIES
5	"	"	HAKES
6	"	"	SQUIDS, ETC
7	"	"	JACK AND HORSE MACKERELS
8	"	"	SARDINELLAS
9	"	"	PENAEUS SHRIMPS NEI

10	"	"	EUROPEAN SPRAT
11	"	"	SCALLOPS NEI
12	"	"	JAPANESE PILCHARD
13	"	"	PACIFIC SALMON
14	"	"	TILAPIAS NEI
15	"	"	CLAMS
16	"	"	COMMON CARP
17	"	"	TRIGGERFISHES, DURGONS
18	"	"	MULLETS NEI
19	"	"	BLUE MUSSEL
20	"	"	INDIAN MACKERELS
21	"	"	SCADS
22	"	"	AMBERJACKS NEI
23	"	"	SEERFISHES NEI
24	"	"	HAIRTAILS, CUTLASSFISHES
25	"	"	ATLANTIC REDFISHES
26	"	"	DENTEX, SEABREAMS, ETC, NEI
27	"	"	BLUE WHITING
28	First figure in composition and energy columns is for whole fish, figure in brackets for flesh		
29	First figure in fat and energy columns is the weighted mean of the second and third figures; the second figure is for Atlantic-caught and third figure for Baltic-caught fish		
30	First figure refers to meat including roe, second figure to meat excluding roe		
31	First figure in fat and energy column is for wild, second figure for farmed fish		

Table 2

Species items included in Survey, in order of taxonomic codes

Taxonomic Code	Scientific Name	English Name	1985 catch (metric tons)
1,21(05)xxx,xx	Stolothrissa, Limnothrissa spp	Dagaas	116,397
1,21(05)001,05	Clupea harengus	Atlantic herring	1,519,202
1,21(05)001,07	Clupea pallasii	Pacific herring	292,723
1,21(05)012,xx	Sardinella spp	Sardinellas nei	847,767
1,21(05)012,03	Sardinella gibbosa	Goldstripe sardinella	108,543
1,21(05)012,04	Sardinella longiceps	Indian oil sardine	290,229
1,21(05)012,10	Sardinella aurita (= anchovia)	Round sardinella	162,169
1,21(05)012,23	Sardinella lemuru	Bali sardinella	54,058
1,21(05)013,01	Sardinops melanosticta (-us)	Japanese pilchard	4,722,862
1,21(05)013,02	Sardinops caerulea (-us)	Californian pilchard	372,344
1,21(05)013,03	Sardinops sagax	South American pilchard	5,814,448
1,21(05)013,05	Sardinops ocellata (-us)	Southern African pilchard	89,798
1,21(05)034,04	Hilsa toli (= Tenulosa toli)	Toli shad	146,754
1,21(05)059,01	Clupeonella delicatula (= cultriventris)	Black Sea sprat (Clupeonella)	402,889
1,21(05)064,01	Sardina pilchardus	European pilchard	921,061
1,21(05)066,01	Sprattus sprattus	European sprat	266,829
1,21(06)xxx,xx	Engraulidae	Anchovies	183,902
1,21(06)002,01	Engraulis encrasicolus	European anchovy	598,798

1,21(06)002,02	Engraulis japonicus	Japanese anchovy	349,336
1,21(06)002,07	Engraulis mordax	North Pacific anchovy	153,723
1,21(06)002,08	Engraulis ringens	Anchoveta (Peruvian anchovy)	986,796
1,21(06)002,12	Engraulis capensis	Southern African anchovy	323,239
1,21(06)015,03	Cetengraulis mysticetus	Central Pacific anchoveta	245,264
1,21(06)050,xx	Stolephorus spp	Stolephorus anchovies	244,181
1,22(02)001,01	Chanos chanos	Milkfish	336,518
1,23(01)009,02	Oncorhynchus gorbuscha	Pink (Humbuck) salmon	301,086
1,23(01)009,03	Oncorhynchus keta	Chum (Keta, Dog) salmon	267,612
1,23(01) 009,06	Oncorhynchus nerka	Sockeye (Red) salmon	150,794
1,23(01) 009,08	Oncorhynchus kisutch	Coho (Silver) salmon	48,185
1,23(04) 002,01	Mallotus villosus	Capelin	2,215,527
1,32(11) 001,02	Harpadon nehereus	Bombay duck	119,229
1,38(01) xxx,xx	Characidae	Characins	154,452
1,40(02) xxx,xx	Cyprinidae	Cyprinids nei	186,018
1,40(02) 001,02	Abramis brama	Freshwater bream	58,020
1,40(02) 002,01	Cyprinus carpio	common carp	490,438
1,47(02) 001,01	Cololabis saira	Pacific saury	273,760
1,48(04) 002,02	Gadus morhua	Atlantic cod	1,947,291
1,48(04) 002,11	Gadus macrocephalus	Pacific cod	409,598
1,48(04) 010,01	Melanogrammus aeglefinus	Haddock	377,548
1,48(04) 015,01	Pollachius virens	Saithe (pollock)	504,948
1,48(04) 016,01	Theragra chalcogramma	Alaska pollack	6,132,334
1,48(04) 033,01	Micromesistius poutassou	Blue whiting	660,619
1,48(04) 033,02	Micromesistius australis	Southern blue whiting	106,199
1,48(04) 034,01	Merlangius merlangus	whiting	157,049
1,48(05) 004,xx	Merluccius capensis, paradoxus	Cape hakes	541,815
1,48(05) 004,01	Merluccius merluccius	European hake	131,774
1,48(05) 004,04	Merluccius bilinearis	Silver hake	99,135
1,48(05) 004,05	Merluccius gayi	Chilean hake	47,064
1,48(05) 004,06	Merluccius hubbsi	Argentine hake	371,690
1,48(05) 004,07	Merluccius productus	North Pacific hake	99,297
1,65(01) xxx,xx	Mugilidae	Mullets nei	162,348
1,65(01) 001,02	Mugil cephalus	Flathead mullet	47,734
1,70(01)167,07	Lates niloticus	Nile perch	152,568
1,70(23)004,xx	Trachurus spp	Jack and horse mackerels nei	390,374
1,70(23)004,01	Trachurus trachurus	Atlantic horse mackerel	209,440
1,70(23)004,03	Trachurus japonicus	Japanese jack mackerel	173,775
1,70(23)004,05	Trachurus murphyi	Chilean jack mackerel	2,148,841
1,70(23)004,08	Trachurus mediterraneus	Mediterranean horse mackerel	120,319
1,70(23)004,13	Trachurus capensis	Cape horse mackerel	455,421
1,70(23)004,14	Trachurus trecae	Cunene horse mackerel	56,766
1,70(23)043,xx	Decapterus spp	Scads	318,669
1,70(23)043,07	Decapterus maruadsi	Japanese scad	71,666
1,70(23)043,08	Decapterus russelli	Indian (Russell's) scad	55,201
1,70(23)044,xx	Caranx spp	Jacks, crevalles, nei	102,318
1,70(23)048,xx	Seriola spp	Amberjacks nei	42,035
1,70(23)048,02	Seriola quinqueradiata	Japanese amberjack	150,961
1,70(35)xxx,xx	Leiognathidae	Ponyfishes (slipmouths)nei	159,471
1,70(39)xxx,xx	Sparidae	Dentex (Porgies), seabreams, etc nei	102,866
1,70(39)121,08	Chrysophrys major	silver seabream	44,299

1,70(59)xxx,xx	Cichlidae	Cichlids nei	101,805
1,70(59)052,xx	Sarotherodon, Tilapia spp	Tilapias nei	278,837
1,74(03)001,01	Thyrsites (= Leionura)atun	snoek	57,669
1,74(04)xxx,xx	Trichiuridae	Hairtails, cutlassfishes	119,796
1,74(04)003,02	Trichiurus lepturus	Largehead hairtail	710,280
1,75(01)002,01	Scomber japonicus	chub mackerel	1,739,889
1,75(01)002,05	Scomber scombrus	Atlantic mackerel	600,556
1,75(01)014,xx	Rastrelliger spp	Indian mackerels nei	342,237
1,75(01)014,03	Rastrelliger kanagurta	Indian mackerel	176,824
1,75(01)015,xx	Scomberomorus spp	Seerfishes nei	68,551
1,75(01)015,03	Scomberomorus commerson	Narro-barred Spanish (king) mackerel	114,316
1,75(01)015,12	Scomberomorus niphonius	Japanes Spanish mackerel	121,135
1,75(01)023,xx	Auxis thazard, rochei	Frigate and bullet tunas	146,794
1,75(01)024,06	Euthnnus affinis	Kawakawa	92,597
1,75(01)025,01	Katsuwonus pelamis	Skipjack tuna	884,235
1,75(01)026,01	Thunnus thynnus	Northern bluefin tuna	36,993
1,75(01)026,05	Thunnus alalunga	Albacore	176,922
1,75(01)026,08	Thunnus maccoyil	Southern bluefin tuna	35,212
1,75(01)026,10	Thunnus albacares	Yellowfin tuna	713,293
1,75(01)026,12	Thunnus obesus	Bigeye tuna	243,653
1,78(01)xxx,xx	Scorpaenidae	Scorpionfishes, etc nei	61,042
1,78(01)001,xx	Sebastes spp	Atlantic redfishes	400,680
1,78(07)014,02	Pleurogrammus azonus	Atka mackerel	139,155
1,83(02)004,05	Pleuronectes platessa	European plaice	203,308
1,83(02)005,01	Reinhardtius hippoglossoides	Greenland halibut	80,236
1,83(02)014,01	Hippoglossoides platessoides	American plaice (= Long rough dab)	80,911
1,83(02)024,02	Limanda aspera	Yellowfin sole	203,149
1,89(03)xxx,xx	Balistidae	Triggerfishes, durgons	39,746
1,89(03)004,xx	Cantherines (= Navodon) spp	Filefishes	272,979
1,89(03)010,01	Stephanolepis cirrifer	Thread sail filefish	256,529
2,28(01)001,xx	Penaeus spp	Penaeus shrimps nei	412,879
2,28(01)001,01	Penaeus aztecus	Northern brown shrimp	70,858
2,28(01)001,03	Penaeus merguensis	Banana prawn	61,421
2,28(01)001,22	Penaeus setiferus	Northern white shrimp	44,596
2,28(04)002,03	Pandalus borealis	Northern prawn	193,191
2,28(07)009,03	Acetes japonicus	Akiami paste shrimp	222,608
3,16(07)008,xx	Crassostrea spp	Cupped oysters nei	168,024
3,16(07)008,01	Crassostrea gigas	Pacific cupped oyster	562,866
3,16(07)008,03	Crassostrea virginica	American cupped oyster	271,925
3,16(08)xxx,xx	Pectinidae	Scallops nei	75,191
3,16(08)003,07	Pecten yessoensis	Japanese scallop	229,924
3,16(08)003,09	Pecten maximus	Common scallop	20,224
3,16(08)014,04	Placopecten magellanicus	Sea scallop	104,929
3,16(08)030,01	Argopecten gibbus	Calico scallop	125,609
3,16(10)xxx,xx	Mytilidae	Sea mussels nei	135,454
3,16(10)001,05	Mytilus edulis	Blue mussel	554,756
3,16(10)001,10	Mytilus smaragdinus	Green mussel	61,623
3,17(04)045,01	Arctica islandica	Ocean guahog	195,173
3,17(10)020,01	Spisula solidissima	Surf clam	182,834
3,17(11)004,05	Venus gallina	Striped venus	27,348

3,17(11)018,01	Venerupis japonica	Japanese(= Manila) clam	166,134
3,17(11)041,xx	Paphia spp	Short neck clams	86,060
3,17(11)075,01	Mercenaria mercenaria	Hard clam	32,460
3,17(21)025,02	Corbicula japonica	Japanese clam	53,873
3,21(02)xxx,xx	Sepia spp, Sepiola spp	Cuttlefishes, bobtail squids	214,642
3,21(04)001,xx	Loligo spp	Common squide	119,570
3,21(05)010,03	Illex argentinus	Argentine shortfin squid	43,706
3,21(05)058,03	Todarodes pacificus	Japanese flying squid	192,466
3,21(09)xxx,xx	Octopodiade	Octopuses	210,102
3,21	Loliginidae, Ommastrephidae	Squids nei	852,553
3,99	Bivalvia	Clams nei	648,774
6,17(41)007,xx	Rhopilema spp	Jellyfishes	63,700

Source: FAO Yearbook of Fishery Statistics, Catches and Landings, Volume 64

