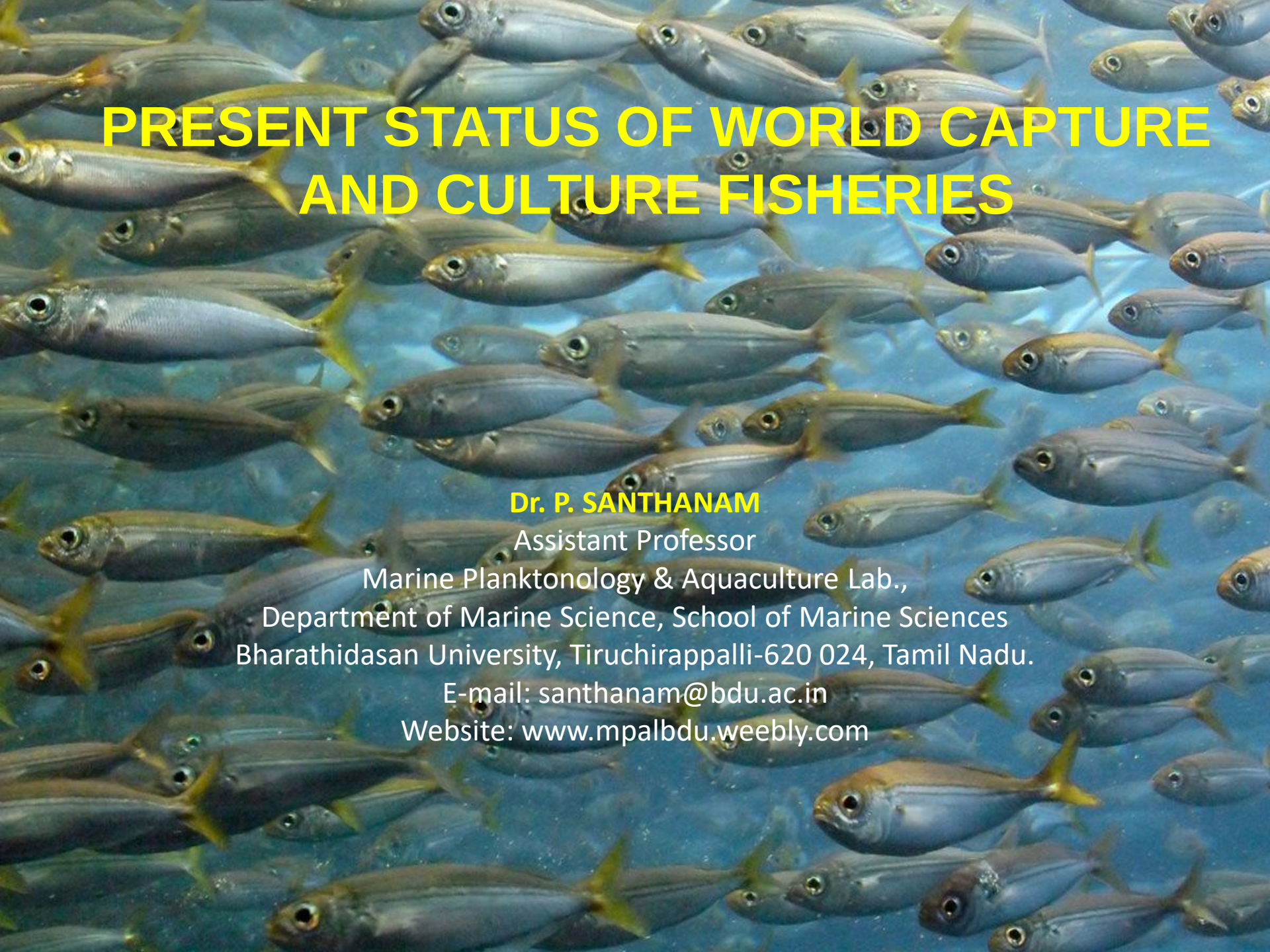


A large school of silver fish, possibly mullets, swimming in clear blue water. The fish are densely packed, moving in various directions, creating a dynamic and lively scene. Their silvery scales catch the light, and their yellowish tails are prominent.

PRESENT STATUS OF WORLD CAPTURE AND CULTURE FISHERIES

Dr. P. SANTHANAM

Assistant Professor

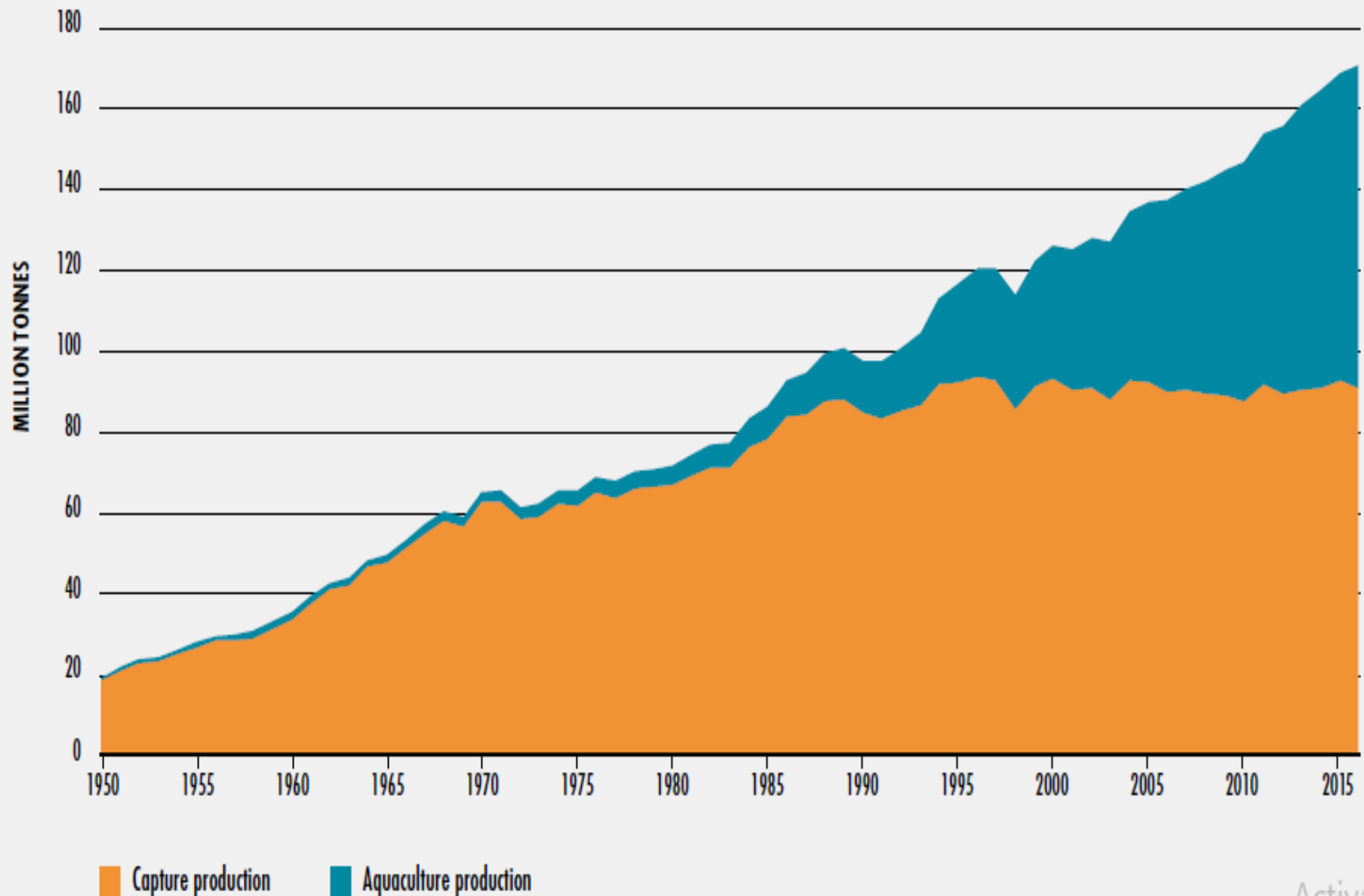
Marine Planktonology & Aquaculture Lab.,

Department of Marine Science, School of Marine Sciences
Bharathidasan University, Tiruchirappalli-620 024, Tamil Nadu.

E-mail: santhanam@bdu.ac.in

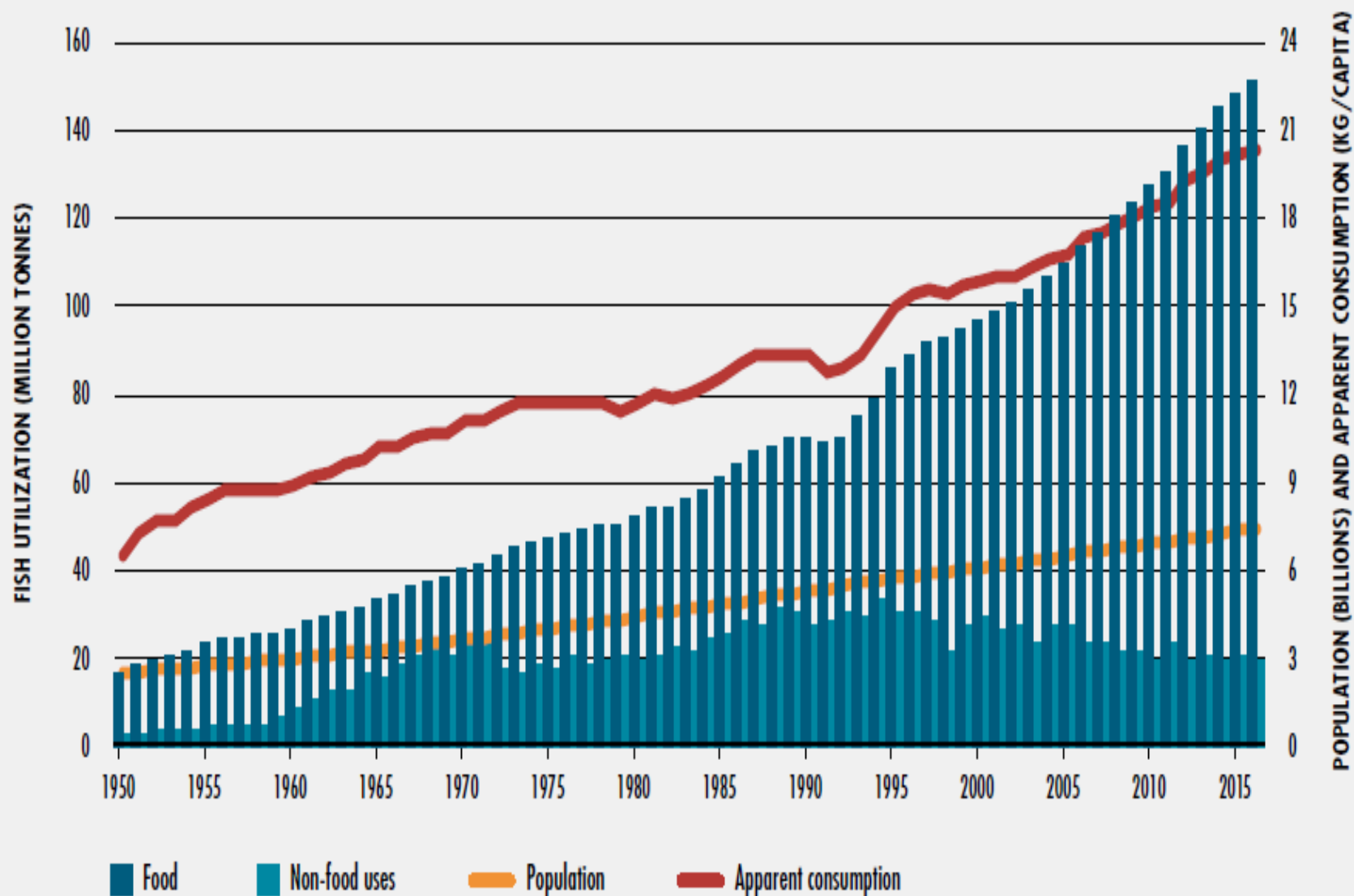
Website: www.mpalbdu.weebly.com

WORLD CAPTURE FISHERIES AND AQUACULTURE PRODUCTION



NOTE: Excludes aquatic mammals, crocodiles, alligators and caimans, seaweeds and other aquatic plants

WORLD FISH UTILIZATION AND APPARENT CONSUMPTION



NOTE: Excludes aquatic mammals, crocodiles, alligators and caimans, seaweeds and other aquatic plants

WORLD FISHERIES AND AQUACULTURE PRODUCTION AND UTILIZATION (MILLION TONNES)^a

Category	2011	2012	2013	2014	2015	2016
Production						
Capture						
Inland	10.7	11.2	11.2	11.3	11.4	11.6
Marine	81.5	78.4	79.4	79.9	81.2	79.3
Total capture	92.2	89.5	90.6	91.2	92.7	90.9
Aquaculture						
Inland	38.6	42.0	44.8	46.9	48.6	51.4
Marine	23.2	24.4	25.4	26.8	27.5	28.7
Total aquaculture	61.8	66.4	70.2	73.7	76.1	80.0
Total world fisheries and aquaculture	154.0	156.0	160.7	164.9	168.7	170.9
Utilization^b						
Human consumption	130.0	136.4	140.1	144.8	148.4	151.2
Non-food uses	24.0	19.6	20.6	20.0	20.3	19.7
Population (<i>billions</i>) ^c	7.0	7.1	7.2	7.3	7.3	7.4
Per capita apparent consumption (<i>kg</i>)	18.5	19.2	19.5	19.9	20.2	20.3

^a Excludes aquatic mammals, crocodiles, alligators and caimans, seaweeds and other aquatic plants.

^b Utilization data for 2014–2016 are provisional estimates.

^c Source of population figures: UN, 2015e.

MARINE CAPTURE PRODUCTION: MAJOR PRODUCER COUNTRIES

Country	Production (tonnes)			% Variation		Variation, 2015 to 2016 (tonnes)
	Average 2005–2014	2015	2016	2005–2014 (average) to 2016	2015 to 2016	
China	13 189 273	15 314 000	15 246 234	15.6	-0.4	-67 766
Indonesia	5 074 932	6 216 777	6 109 783	20.4	-1.7	-106 994
United States of America	4 757 179	5 019 399	4 897 322	2.9	-2.4	-122 077
Russian Federation	3 601 031	4 172 073	4 466 503	24.0	7.1	294 430
Peru	6 438 839	4 786 551	3 774 887	-41.4	-21.1	-1 011 664
Excluding anchoveta	989 918	1 016 631	919 847	-7.1	-9.5	-96 784
India	3 218 050	3 497 284	3 599 693	11.9	2.9	102 409
Japan*	3 992 458	3 423 099	3 167 610	-20.7	-7.5	-255 489
Viet Nam	2 081 551	2 607 214	2 678 406	28.7	2.7	71 192
Norway	2 348 154	2 293 462	2 033 560	-13.4	-11.3	-259 902
Philippines	2 155 951	1 948 101	1 865 213	-13.5	-4.3	-82 888
Malaysia	1 387 577	1 486 050	1 574 443	13.5	5.9	88 393
Chile	3 157 946	1 786 249	1 499 531	-52.5	-16.1	-286 718
Excluding anchoveta	2 109 785	1 246 154	1 162 095	-44.9	-6.7	-84 059
Morocco	1 074 063	1 349 937	1 431 518	33.3	6.0	81 581
Republic of Korea	1 746 579	1 640 669	1 377 343	-21.1	-16.0	-263 326
Thailand	1 830 315	1 317 217	1 343 283	-26.6	2.0	26 066
Mexico	1 401 294	1 315 851	1 311 089	-6.4	-0.4	-4 762
Myanmar*	1 159 708	1 107 020	1 185 610	2.2	7.1	78 590
Iceland	1 281 597	1 318 916	1 067 015	-16.7	-19.1	-251 901
Spain	939 384	967 240	905 638	-3.6	-6.4	-61 602
Canada	914 371	823 155	831 614	-9.1	1.0	8 459
Taiwan, Province of China	960 193	989 311	750 021	-21.9	-24.2	-239 290
Argentina	879 839	795 415	736 337	-16.3	-7.4	-59 078
Ecuador	493 858	643 176	715 357	44.9	11.2	72 181
United Kingdom	631 398	65 451 506	701 749	11.1	-0.4	-2 753
Denmark	735 966	868 892	670 207	-8.9	-22.9	-198 685
Total 25 major countries	65 451 506	66 391 560	63 939 966	-2.3	-3.7	-2 451 594
Total other 170 countries	14 326 675	14 856 282	15 336 882	7.1	3.2	480 600
World total	79 778 181	81 247 842	79 276 848	-0.6	-2.4	-1 970 994
Share of 25 major countries	82.0%	81.7%	80.7%			

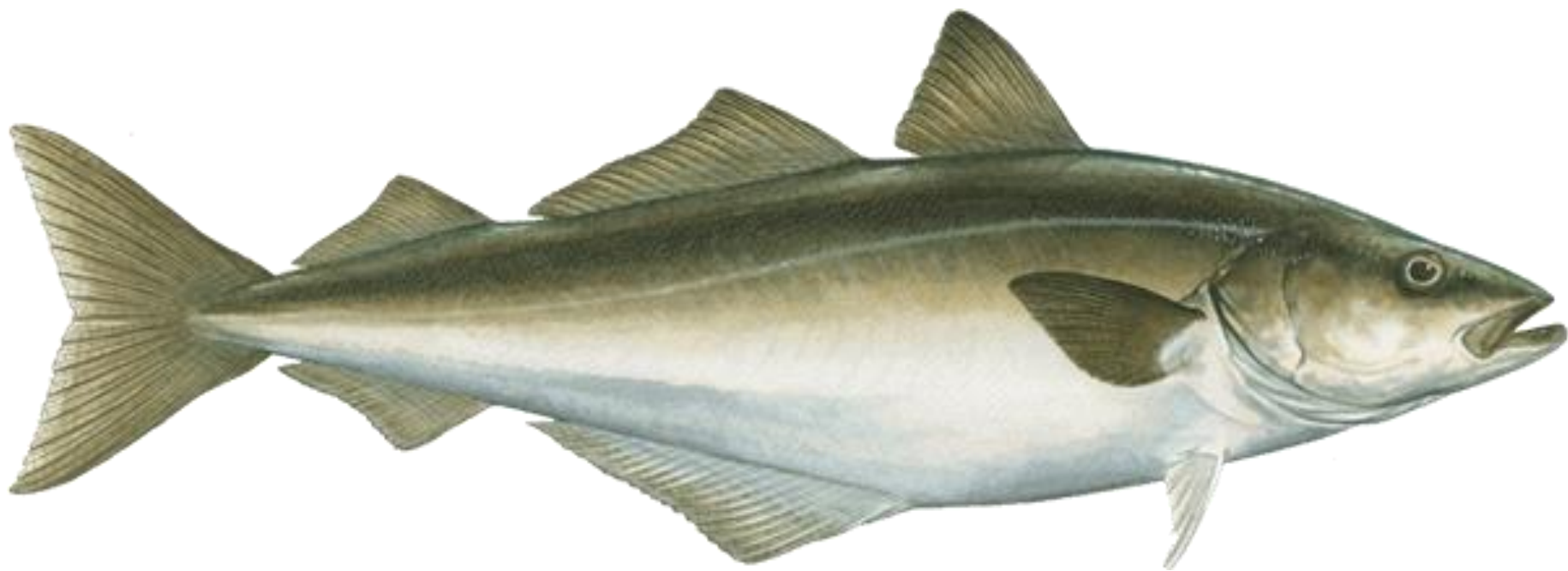
* Production figures for 2015 and 2016 are FAO estimates.

MARINE CAPTURE PRODUCTION: MAJOR SPECIES AND GENERA

Scientific name	FAO English name	Production (tonnes)			% Variation		Variation, 2015 to 2016 (tonnes)
		Average 2005–2014	2015	2016	2005–2014 (average) to 2016	2015 to 2016	
<i>Theragra chalcogramma</i>	Alaska pollock (=walleye pollock)	2 952 134	3 372 752	3 476 149	17.8	3.1%	103 397
<i>Engraulis ringens</i>	Anchovela (=Peruvian anchovy)	6 522 544	4 310 015	3 192 476	-51.1	-25.9%	-1 117 539
<i>Katsuwonus pelamis</i>	Skipjack tuna	2 638 124	2 809 954	2 829 929	7.3	0.7%	19 975
<i>Sardinella spp.*</i>	<i>Sardinella nei</i>	2 281 285	2 238 903	2 289 830	0.4	2.3%	50 927
<i>Trachurus spp.*</i>	Jack and horse mackerels nei	2 463 428	1 738 352	1 743 917	-29.2	0.3%	5 565
<i>Clupea harengus</i>	Atlantic herring	2 111 101	1 512 174	1 639 760	-22.3	8.4%	127 586
<i>Scomber japonicus</i>	Pacific chub mackerel	1 454 794	1 484 780	1 598 950	9.9	7.7%	114 170
<i>Thunnus albacares</i>	Yellowfin tuna	1 219 326	1 356 883	1 462 540	19.9	7.8%	105 657
<i>Gadus morhua</i>	Atlantic cod	995 853	1 303 726	1 329 450	33.5	2.0%	25 724
<i>Engraulis japonicus</i>	Japanese anchovy	1 323 022	1 336 218	1 304 484	-1.4	-2.4%	-31 734
<i>Decapterus spp.*</i>	Scads nei	1 394 772	1 186 555	1 298 914	-6.9	9.5%	112 359
<i>Sardina pilchardus</i>	European pilchard (=sardine)	1 098 400	1 174 611	1 281 391	16.7	9.1%	106 780
<i>Trichurus lepturus</i>	Largehead hairtail	1 315 337	1 269 525	1 280 214	-2.7	0.8%	10 689
<i>Micromesistius poutassou</i>	Blue whiting (=poutassou)	1 054 918	1 414 131	1 190 282	12.8	-15.8%	-223 849
<i>Scomber scombrus</i>	Atlantic mackerel	822 081	1 247 666	1 138 053	38.4	-8.8%	-109 613
<i>Scomberomorus spp.*</i>	Seerfishes nei	889 840	903 632	918 967	3.3	1.7%	15 335
<i>Dosidicus gigas</i>	Jumbo flying squid	855 602	1 003 774	747 010	-12.7	-25.6%	-256 764
<i>Nemipterus spp.*</i>	Threadfin breams nei	541 470	629 062	683 213	26.2	8.6%	54 151
<i>Brachyura patulus</i>	Gulf menhaden	464 165	536 129	618 719	33.3	15.4%	82 590
<i>Sprattus sprattus</i>	European sprat	567 697	677 048	584 577	3.0	-13.7%	-92 471
<i>Portunus trituberculatus</i>	Gazami crab	414 034	560 831	557 728	34.7	-0.6%	-3 103
<i>Acetes japonicus</i>	Akiami paste shrimp	582 763	543 992	531 847	-8.7	-2.2%	-12 145
<i>Sardinops melanostictus</i>	Japanese pilchard	257 346	489 294	531 466	106.5	8.6%	42 172
<i>Scomber colias</i>	Atlantic chub mackerel	314 380	467 796	511 618	62.7	9.4%	43 822
<i>Rastrelliger kanagurta</i>	Indian mackerel	324 049	498 149	499 474	54.1	0.3%	1 325
Total 25 major species and genera		34 858 465	34 065 952	33 240 958	-4.6%	-2.4	-824 994
Total other 1 566 species items		44 919 716	47 181 890	46 035 890	2.5%	-2.4	-1 146 000
World total		79 778 181	81 247 842	79 276 848	-0.6%	-2.4	-1 970 994
Share of 25 major species and genera		43.7%	41.9%	41.9%			

* Catches for single species have been added to those reported at the genus level when the latter account for at least 30 percent of the total for the whole genus.

Note: nei = not elsewhere included.





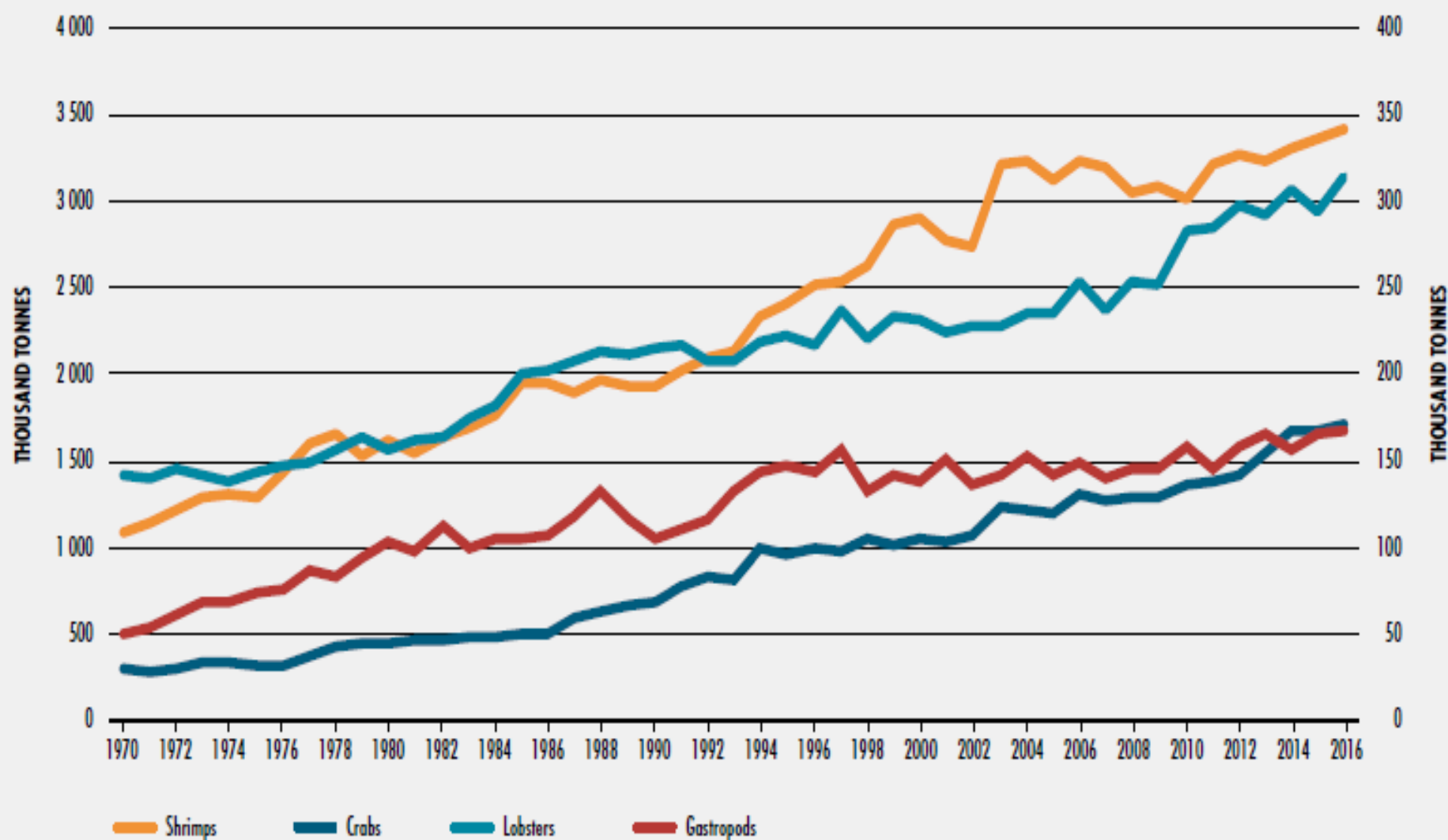








CATCH TRENDS OF VALUABLE SPECIES GROUPS



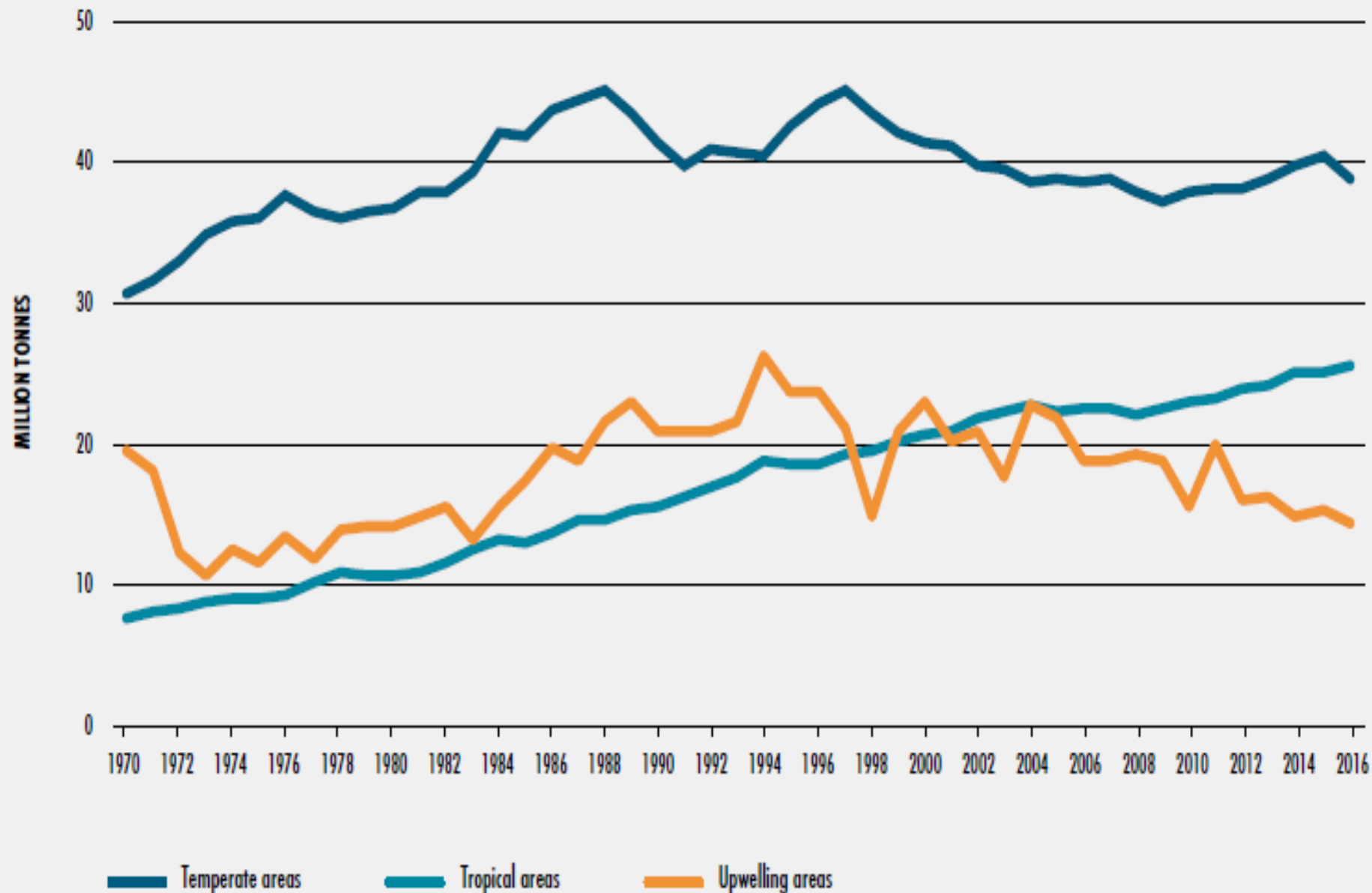
NOTE: Values for shrimps and crabs on the left axis, values for lobsters and gastropods on the right axis.

CAPTURE PRODUCTION: FAO MAJOR FISHING AREAS

Fishing area code	Fishing area name	Production (tonnes)			% Variation		Variation, 2015 to 2016 (tonnes)
		Average 2005–2014	2015	2016	2005–2014 (average) to 2016	2015 to 2016	
Inland							
01	Africa – inland waters	2 609 727	2 804 629	2 863 916	9.7	2.1	59 287
02	America, North – inland waters	178 896	207 153	260 785	45.8	25.9	53 632
03	America, South – inland waters	384 286	362 670	340 804	–11.3	–6.0	–21 866
04	Asia – inland waters	6 959 783	7 584 414	7 708 776	10.8	1.6	124 362
05	Europe – inland waters*	373 523	431 179	440 790	18.0	2.2	9 611
06	Oceania – inland waters	17 978	18 030	17 949	–0.2	–0.4	–81
Marine							
21	Atlantic, Northwest	2 041 599	1 842 787	1 811 436	–11.3	–1.7	–31 351
27	Atlantic, Northeast	8 654 911	9 139 199	8 313 901	–3.9	–9.0	–825 298
31	Atlantic, Western Central	1 344 651	1 414 318	1 563 262	16.3	10.5	148 944
34	Atlantic, Eastern Central	4 086 427	4 362 180	4 795 171	17.3	9.9	432 991
37	Mediterranean and Black Sea	1 421 025	1 314 386	1 236 999	–13.0	–5.9	–77 387
41	Atlantic, Southwest	2 082 248	2 427 872	1 563 957	–24.9	–35.6	–863 915
47	Atlantic, Southeast	1 425 775	1 677 969	1 688 050	18.4	0.6	10 081
51	Indian Ocean, Western	4 379 053	4 688 848	4 931 124	13.9	5.2	242 276
57	Indian Ocean, Eastern	5 958 972	6 359 691	6 387 659	7.2	0.4	27 968
61	Pacific, Northwest	20 698 014	22 057 759	22 411 224	7.7	1.6	353 465
67	Pacific, Northeast	2 871 126	3 164 604	3 092 529	7.7	–2.3	–72 075
71	Pacific, Western Central	11 491 444	12 625 068	12 742 955	10.9	0.9	117 887
77	Pacific, Eastern Central	1 881 996	1 675 065	1 656 434	–12.0	–1.1	–18 631
81	Pacific, Southwest	613 701	551 534	474 066	–22.8	–14.0	–77 468
87	Pacific, Southeast	10 638 882	7 702 885	6 329 328	–40.5	–17.8	–1 373 557
18, 48, 58, 88	Arctic and Antarctic areas	188 360	243 677	278 753	48.0	14.4	35 076
World total		90 302 377	92 655 917	90 909 868	0.7	–1.9	–1 746 049

* Includes the Russian Federation.

TRENDS IN THREE MAIN CATEGORIES OF FISHING AREAS

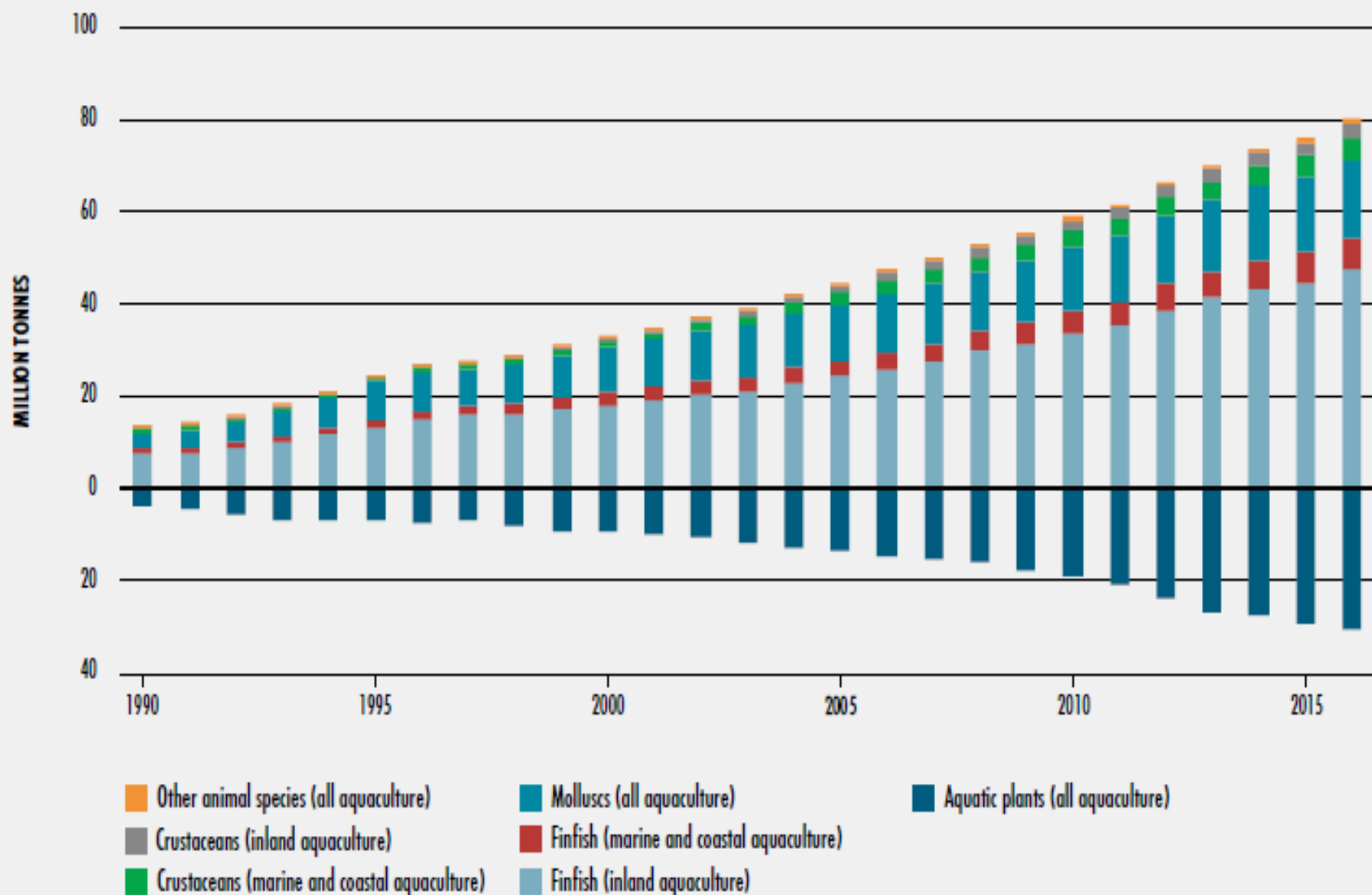


INLAND WATERS CAPTURE PRODUCTION: MAJOR PRODUCER COUNTRIES

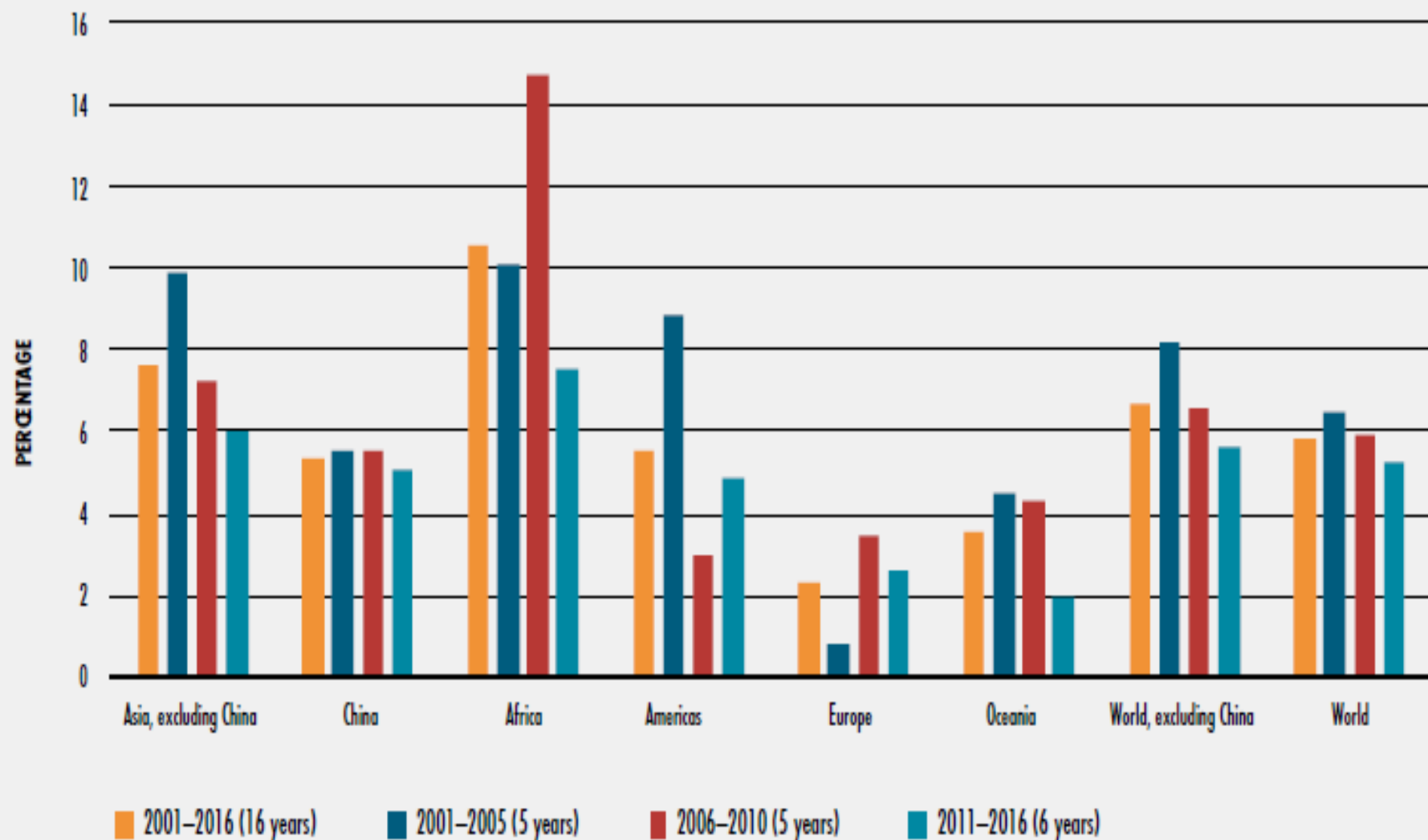
Country	Production (tonnes)			% Variation		Variation, 2015 to 2016 (tonnes)
	Average 2005–2014	2015	2016	2005–2014 (average) to 2016	2015 to 2016	
China	2 252 368	2 277 299	2 318 046	2.9	1.8	40 747
India*	1 088 082	1 346 104	1 462 063	34.4	8.6	115 959
Bangladesh	1 018 987	1 023 991	1 048 242	2.9	2.4	24 251
Myanmar*	745 483	863 450	886 780	19.0	2.7	23 330
Cambodia	422 801	487 905	509 350	20.5	4.4	21 445
Indonesia	346 722	472 911	432 475	24.7	-8.6	-40 436
Uganda	417 016	396 205	389 244	-6.7	-1.8	-6 961
Nigeria	287 937	337 874	377 632	31.2	11.8	39 758
United Republic of Tanzania	305 635	309 924	312 039	2.1	0.7	2 115
Russian Federation	243 337	285 065	292 828	20.3	2.7	7 763
Egypt	248 141	241 179	231 959	-6.5	-3.8	-9 220
Democratic Republic of the Congo	224 263	227 700	229 300	2.2	0.7	1 600
Brazil*	243 213	225 000	225 000	-7.5	0.0	0
Mexico	113 854	151 416	199 665	75.4	31.9	48 249
Thailand	211 927	184 101	187 300	-11.6	1.7	3 199
Philippines	182 205	203 366	159 615	-12.4	-21.5	-43 751
Total 16 major countries	8 351 970	9 033 490	9 261 538	10.9	2.5	228 048
Total other 136 countries	2 172 222	2 374 585	2 371 482	9.2	-0.1	-3 103
World total	10 524 192	11 408 075	11 633 020	10.5	2.0	224 945
Share of 16 major countries	79.4%	79.2%	79.6%			

* Production figures for 2015 and 2016 are FAO estimates.

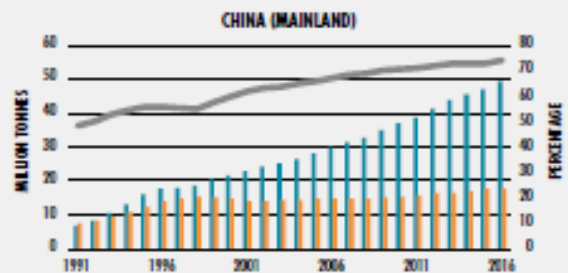
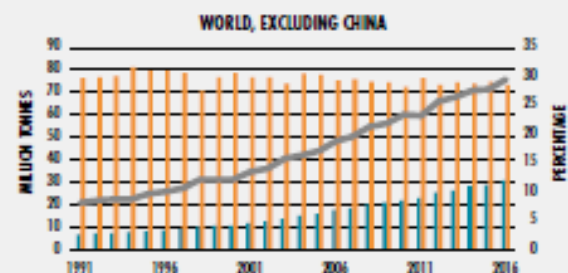
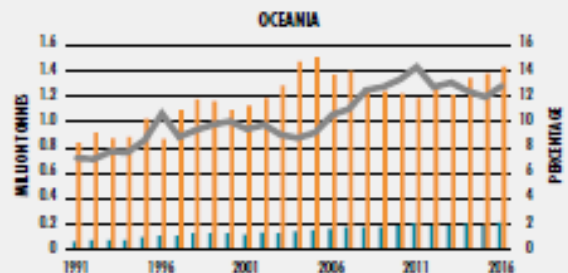
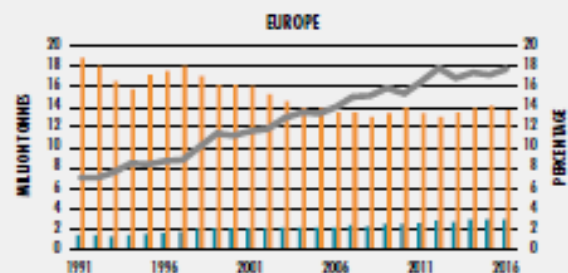
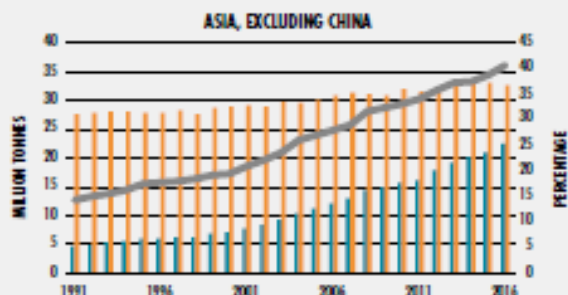
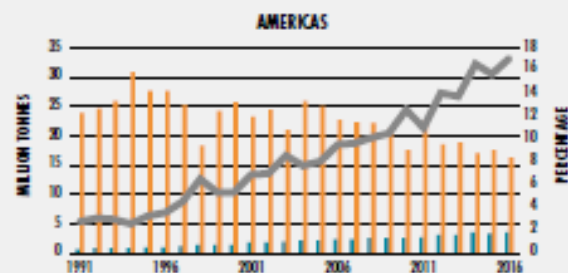
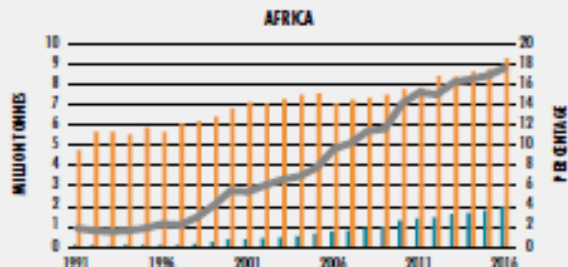
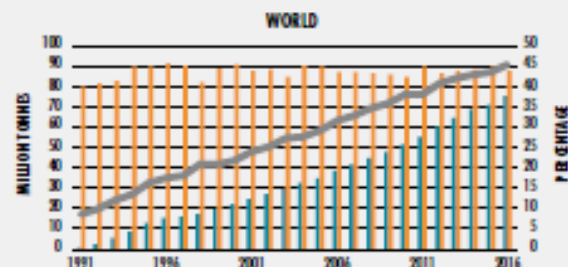
WORLD AQUACULTURE PRODUCTION OF FOOD FISH AND AQUATIC PLANTS, 1990–2016



AVERAGE ANNUAL GROWTH RATE OF AQUACULTURE PRODUCTION BY VOLUME (excluding aquatic plants)



AQUACULTURE CONTRIBUTION TO TOTAL FISH PRODUCTION (excluding aquatic plants)



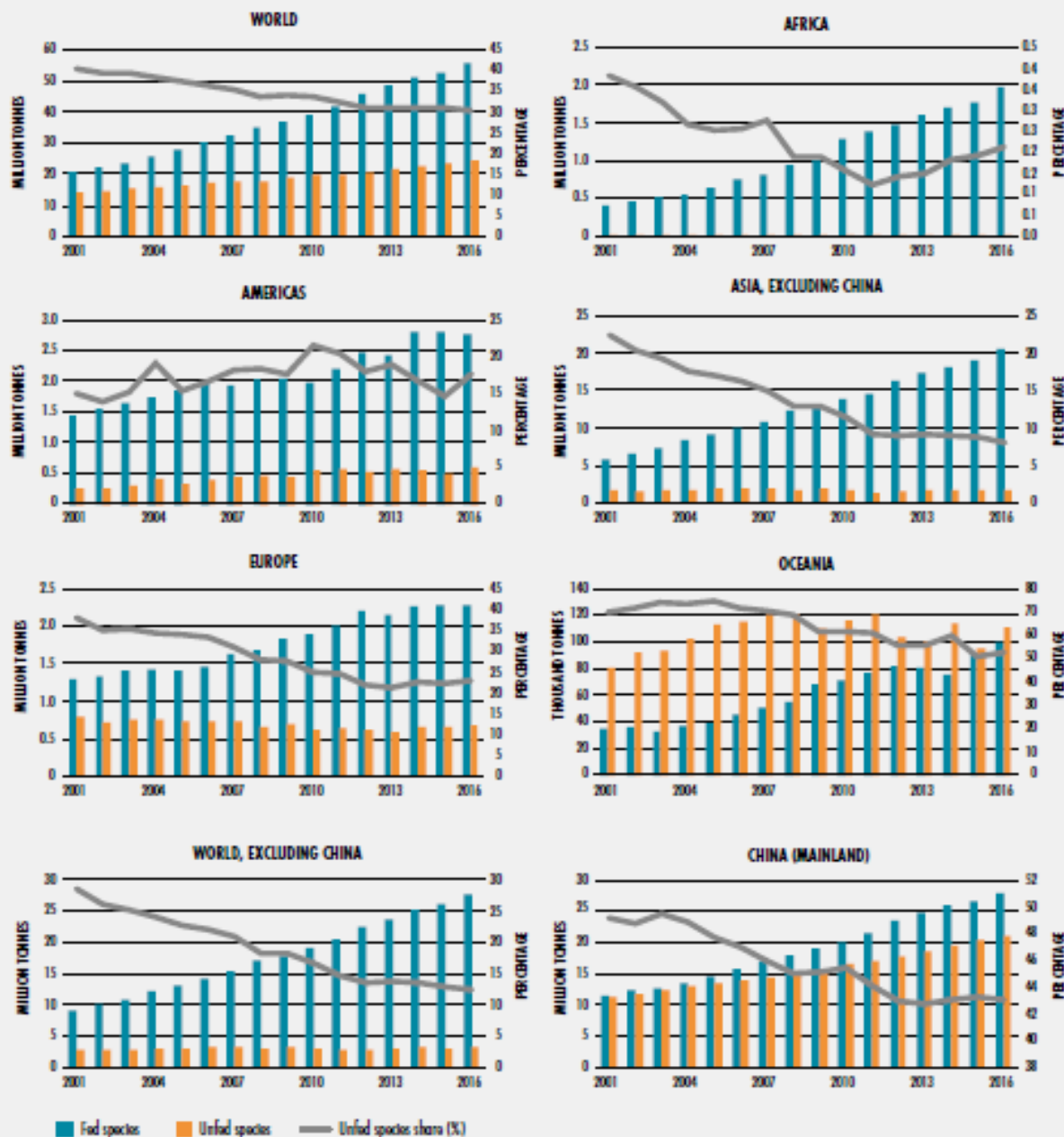
■ Aquaculture ■ Capture — Aquaculture share (%)

AQUACULTURE PRODUCTION OF MAIN GROUPS OF FOOD FISH SPECIES BY CONTINENT, 2016

(thousand tonnes, live weight)

Category	Africa	Americas	Asia	Europe	Oceania	World
Inland aquaculture						
Finfish	1 954	1 072	43 983	502	5	47 516
Crustacea	0	68	2 965	0	0	3 033
Molluscs			286			286
Other aquatic animals		1	531			531
Subtotal	1 954	1 140	47 765	502	5	51 367
Marine and coastal aquaculture						
Finfish	17	906	3 739	1 830	82	6 575
Crustacea	5	727	4 091	0	6	4 829
Molluscs	6	574	15 550	613	112	16 853
Other aquatic animals	0		402	0	5	407
Subtotal	28	2 207	23 781	2 443	205	28 664
All aquaculture						
Finfish	1 972	1 978	47 722	2 332	87	54 091
Crustacea	5	795	7 055	0	7	7 862
Molluscs	6	574	15 835	613	112	17 139
Other aquatic animals	0	1	933	0	5	939
Total	1 982	3 348	71 546	2 945	210	80 031

FED AND NON-FED FOOD FISH AQUACULTURE PRODUCTION, 2001–2016



MAJOR SPECIES PRODUCED IN WORLD AQUACULTURE

Species item	2010	2012	2014	2016	% of total, 2016
Finfish					
Grass carp, <i>Ctenopharyngodon idellus</i>	4 362	5 018	5 539	6 068	11
Silver carp, <i>Hypophthalmichthys molitrix</i>	4 100	4 193	4 968	5 301	10
Common carp, <i>Cyprinus carpio</i>	3 421	3 753	4 161	4 557	8
Nile tilapia, <i>Oreochromis niloticus</i>	2 537	3 260	3 677	4 200	8
Bighead carp, <i>Hypophthalmichthys nobilis</i>	2 587	2 901	3 255	3 527	7
Carassius spp.	2 216	2 451	2 769	3 006	6
Catla, <i>Catla catla</i>	2 977	2 761	2 770	2 961	6
Freshwater fishes nei, <i>Osteichthyes</i>	1 378	1 942	2 063	2 362	4
Atlantic salmon, <i>Salmo salar</i>	1 437	2 074	2 348	2 248	4
Roho labeo, <i>Labeo rohita</i>	1 133	1 566	1 670	1 843	3
Pangas catfishes nei, <i>Pangasius</i> spp.	1 307	1 575	1 616	1 741	3
Milkfish, <i>Chanos chanos</i>	809	943	1 041	1 188	2
Tilapias nei, <i>Oreochromis (=Tilapia)</i> spp.	628	876	1 163	1 177	2
Torpedo-shaped catfishes nei, <i>Clarias</i> spp.	353	554	809	979	2
Marine fishes nei, <i>Osteichthyes</i>	477	585	684	844	2
Wuchang bream, <i>Megalobrama amblycephala</i>	652	706	783	826	2
Rainbow trout, <i>Oncorhynchus mykiss</i>	752	883	796	814	2
Cyprinids nei, <i>Cyprinidae</i>	719	620	724	670	1
Black carp, <i>Mylopharyngodon piceus</i>	424	495	557	632	1
Snakehead, <i>Channa argus</i>	377	481	511	518	1
Other finfishes	5 849	6 815	7 774	8 629	16
Finfish total	38 494	44 453	49 679	54 091	100
Crustaceans					
Whiteleg shrimp, <i>Penaeus vannamei</i>	2 688	3 238	3 697	4 156	53
Red swamp crawfish, <i>Procambarus clarkii</i>	616	598	721	920	12
Chinese mitten crab, <i>Eriocheir sinensis</i>	593	714	797	812	10
Giant tiger prawn, <i>Penaeus monodon</i>	565	672	705	701	9
Oriental river prawn, <i>Macrobrachium nipponense</i>	226	237	258	273	4
Giant river prawn, <i>Macrobrachium rosenbergii</i>	198	211	216	234	3
Other crustaceans	700	606	654	767	10
Crustaceans total	5 586	6 277	7 047	7 862	100

(CONTINUED)

Species item	2010	2012	2014	2016	% of total, 2016
Molluscs					
Cupped oysters nei, <i>Crassostrea</i> spp.	3 678	3 972	4 374	4 864	28
Japanese carpet shell, <i>Ruditapes philippinarum</i>	3 605	3 775	4 014	4 229	25
Scallops nei, <i>Pectinidae</i>	1 408	1 420	1 650	1 861	11
Marine molluscs nei, Mollusca	630	1 091	1 135	1 154	7
Sea mussels nei, <i>Mytilidae</i>	892	969	1 029	1 100	6
Constricted tagelus, <i>Sinonovacula constricta</i>	714	720	787	823	5
Pacific cupped oyster, <i>Crassostrea gigas</i>	641	609	624	574	3
Blood cockle, <i>Anadara granosa</i>	466	390	450	439	3
Chilean mussel, <i>Mytilus chilensis</i>	222	244	238	301	2
Other molluscs	1 808	1 683	1 748	1 795	11
Molluscs total	14 064	14 874	16 047	17 139	100
Other animals					
Chinese softshell turtle, <i>Trionyx sinensis</i>	270	336	345	348	37
Japanese sea cucumber, <i>Apostichopus japonicus</i>	130	171	202	205	22
Aquatic invertebrates nei, Invertebrata	223	128	111	97	10
Frogs, <i>Rana</i> spp.	82	86	97	96	10
Other miscellaneous animals	112	118	139	193	21
Other animals total	818	839	894	939	100

WORLD AQUACULTURE PRODUCTION OF AQUATIC PLANTS (thousand tonnes, live weight)

Species item	2005	2010	2011	2012	2013	2014	2015	2016
Eucheuma seaweeds nei, <i>Eucheuma</i> spp.	987	3 481	4 616	5 853	8 430	9 034	10 190	10 519
Japanese kelp, <i>Laminaria japonica</i>	4 371	5 147	5 257	5 682	5 942	7 699	8 027	8 219
Gracilaria seaweeds, <i>Gracilaria</i> spp.	933	1 691	2 171	2 763	3 460	3 751	3 881	4 150
Wakame, <i>Undaria pinnatifida</i>	2 440	1 537	1 755	2 139	2 079	2 359	2 297	2 070
Elkhorn sea moss, <i>Kappaphycus alvarezii</i>	1 285	1 888	1 957	1 963	1 726	1 711	1 754	1 527
Nori nei, <i>Porphyra</i> spp.	703	1 072	1 027	1 123	1 139	1 142	1 159	1 353
Seaweeds nei, Algae	1 844	3 126	2 889	2 815	2 864	449	775	1 049
Laver (nori), <i>Porphyra tenera</i>	584	564	609	691	722	674	686	710
Spiny eucheuma, <i>Eucheuma denticulatum</i>	172	259	266	288	233	241	274	214
Fusiform sargassum, <i>Sargassum fusiforme</i>	86	78	111	112	152	175	189	190
Spirulina nei, <i>Spirulina</i> spp.	48	97	73	80	82	86	89	89
Brown seaweeds, Phaeophyceae	30	23	28	17	16	19	30	34
Others	20	28	27	28	18	15	14	17
Total	13 503	18 992	20 785	23 555	26 863	27 356	29 365	30 139

MAJOR FARMED SEAWEED PRODUCERS (thousand tonnes, live weight)

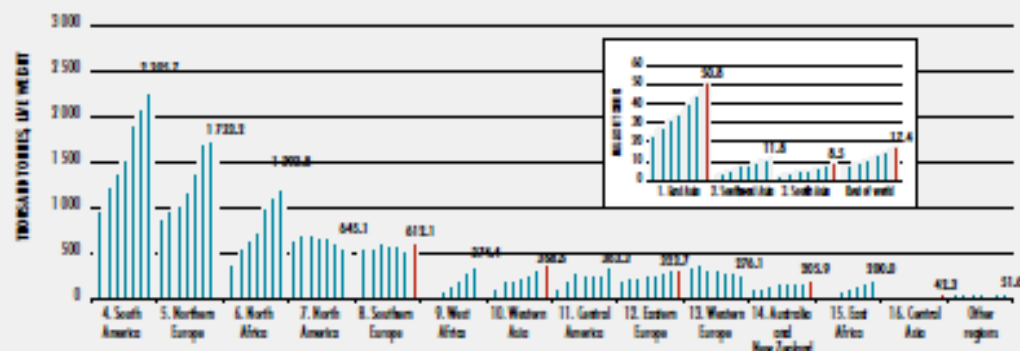
Country	2005	2010	2011	2012	2013	2014	2015	2016	% of total, 2016
China	9 446	10 995	11 477	12 752	13 479	13 241	13 835	14 387	47.9
Indonesia	911	3 915	5 170	6 515	9 299	10 077	11 269	11 631	38.7
Philippines	1 339	1 801	1 841	1 751	1 558	1 550	1 566	1 405	4.7
Republic of Korea	621	902	992	1 022	1 131	1 087	1 197	1 351	4.5
Democratic People's Republic of Korea	444	444	444	444	444	489	489	489	1.6
Japan	508	433	350	441	418	374	400	391	1.3
Malaysia	40	208	240	332	269	245	261	206	0.7
Tanzania	77	132	137	157	117	140	179	119	0.4
Madagascar	1	4	2	1	4	7	15	17	0.1
Chile	16	12	15	4	13	13	12	15	0
Solomon Islands	3	7	7	7	12	12	12	11	0
Viet Nam	15	18	14	19	14	14	12	10	0
Papua New Guinea	0	0	0	1	3	3	4	4	0
Kiribati	5	5	4	8	2	4	4	4	0
India	1	4	5	5	5	3	3	3	0
Others	25	14	15	16	13	12	16	8	0
Total	13 450	18 895	20 712	23 475	26 780	27 270	29 275	30 050	

AQUACULTURE FOOD FISH PRODUCTION BY REGION AND SELECTED MAJOR PRODUCERS
(thousand tonnes; percentage of world total)

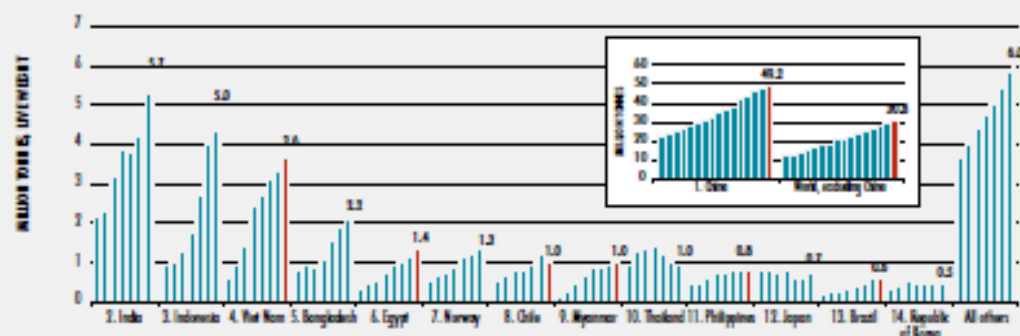
Region/selected countries	1995	2000	2005	2010	2015	2016
Africa	110	400	646	1 286	1 772	1 982
	0.5%	1.2%	1.5%	2.2%	2.3%	2.5%
Egypt	72	340	540	920	1 175	1 371
	0.3%	1.1%	1.2%	1.6%	1.5%	1.7%
Northern Africa, excluding Egypt	4	5	7	10	21	23
	0%	0%	0%	0%	0%	0%
Nigeria	17	26	56	201	317	307
	0.1%	0.1%	0.1%	0.3%	0.4%	0.4%
Sub-Saharan Africa, excluding Nigeria	17	29	43	156	259	281
	0.1%	0.1%	0.1%	0.3%	0.3%	0.4%
Americas	920	1 423	2 177	2 514	3 274	3 348
	3.8%	4.4%	4.9%	4.3%	4.3%	4.2%
Chile	157	392	724	701	1 046	1 035
	0.6%	1.2%	1.6%	1.2%	1.4%	1.3%
Rest of Latin America and the Caribbean	284	447	785	1 154	1 615	1 667
	1.2%	1.4%	1.8%	2.0%	2.1%	2.1%
North America	479	585	669	659	613	645
	2.0%	1.8%	1.5%	1.1%	0.8%	0.8%
Asia	21 678	28 423	39 188	52 452	67 881	71 546
	88.9%	87.7%	88.5%	89.0%	89.3%	89.4%
China (mainland)	15 856	21 522	28 121	36 734	47 053	49 244
	65.0%	66.4%	63.5%	62.3%	61.9%	61.5%
India	1 659	1 943	2 967	3 786	5 260	5 700
	6.8%	6.0%	6.7%	6.4%	6.9%	7.1%
Indonesia	641	789	1 197	2 305	4 343	4 950
	2.6%	2.4%	2.7%	3.9%	5.7%	6.2%
Viet Nam	381	499	1 437	2 683	3 438	3 625
	1.6%	1.5%	3.2%	4.6%	4.5%	4.5%
Bangladesh	317	657	882	1 309	2 060	2 204
	1.3%	2.0%	2.0%	2.2%	2.7%	2.8%
Rest of Asia	2 824	3 014	4 584	5 636	5 726	5 824
	11.6%	9.3%	10.4%	9.6%	7.5%	7.3%
Europe	1 581	2 051	2 135	2 523	2 941	2 945
	6.5%	6.3%	4.8%	4.3%	3.9%	3.7%
Norway	278	491	662	1 020	1 381	1 326
	1.1%	1.5%	1.5%	1.7%	1.8%	1.7%
EU-28	1 183	1 403	1 272	1 263	1 264	1 292
	4.9%	4.3%	2.9%	2.1%	1.7%	1.6%
Rest of Europe	121	157	201	240	297	327
	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%
Oceania	94	122	152	187	186	210
	0.4%	0.4%	0.3%	0.3%	0.2%	0.3%
World	24 383	32 418	44 298	58 962	76 054	80 031

AQUACULTURE PRODUCTION OF MAJOR PRODUCING REGIONS AND MAJOR PRODUCERS OF MAIN SPECIES GROUPS, 2001–2016

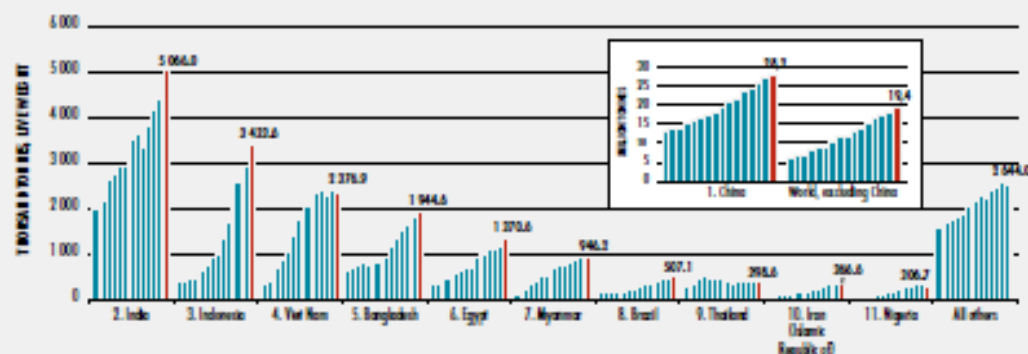
AQUACULTURE PRODUCTION DISTRIBUTION AMONG GEOGRAPHIC REGIONS (EXCLUDING AQUATIC PLANTS)



PRODUCTION OF MAJOR AQUACULTURE PRODUCERS (THOSE PRODUCING IN EXCESS OF 500 000 TONNES IN 2016, EXCLUDING AQUATIC PLANTS)

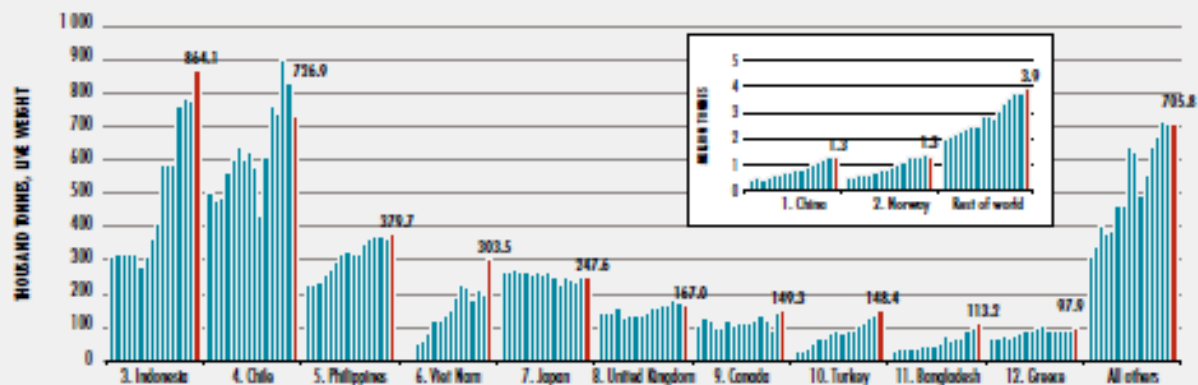


FINFISH PRODUCTION FROM INLAND AQUACULTURE BY MAJOR PRODUCERS

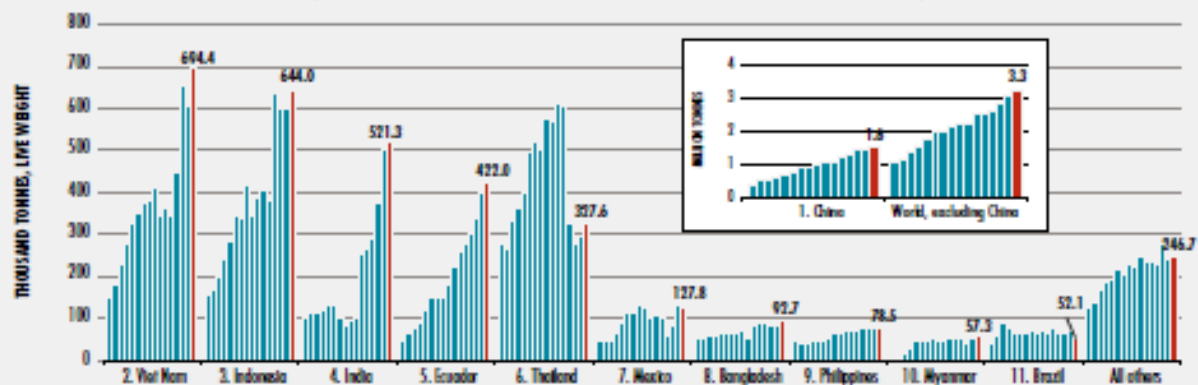


NOTE: Bars for each entry represent production for the years from 2001 to 2016.

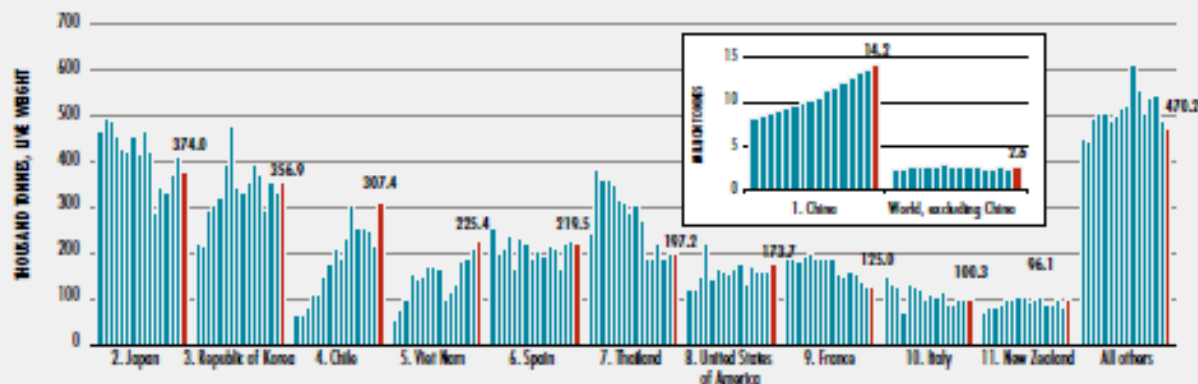
FINFISH PRODUCTION FROM MARINE AND COASTAL AQUACULTURE BY MAJOR PRODUCERS



AQUACULTURE PRODUCTION OF MARINE CRUSTACEANS BY MAJOR PRODUCERS (EXCLUDING MARINE SHRIMP SPECIES PRODUCED FROM INLAND AQUACULTURE)



AQUACULTURE PRODUCTION OF MARINE MOLLUSCS BY MAJOR PRODUCERS



WORLD EMPLOYMENT FOR FISHERS AND FISH FARMERS BY REGION (thousands)

Region	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016
Fisheries and aquaculture										
Africa	2 392	4 175	4 430	5 027	5 250	5 885	6 009	5 674	5 992	5 671
Asia	31 296	39 646	43 926	49 345	48 926	49 040	47 662	47 730	50 606	50 468
Europe	530	779	705	662	656	647	240	394	455	445
Latin America and the Caribbean	1 503	1 774	1 907	2 185	2 231	2 251	2 433	2 444	2 482	2 466
North America	382	346	329	324	324	323	325	325	220	218
Oceania	121	126	122	124	128	127	47	46	343	342
Total	36 223	46 845	51 418	57 667	57 514	58 272	56 716	56 612	60 098	59 609
Fisheries										
Africa	2 327	4 084	4 290	4 796	4 993	5 587	5 742	5 413	5 687	5 367
Asia	23 534	27 435	29 296	31 430	29 923	30 865	29 574	30 190	32 078	31 990
Europe	474	676	614	560	553	544	163	328	367	354
Latin America and the Caribbean	1 348	1 560	1 668	1 937	1 966	1 982	2 085	2 092	2 104	2 085
North America	376	340	319	315	315	314	316	316	211	209
Oceania	117	121	117	119	122	121	42	40	334	334
Total fishers	28 176	34 216	36 304	39 157	37 872	39 411	37 922	38 379	40 781	40 339
Aquaculture										
Africa	65	91	140	231	257	298	267	261	305	304
Asia	7 762	12 211	14 630	17 915	18 373	18 175	18 088	17 540	18 528	18 478
Europe	56	103	91	102	103	103	77	66	88	91
Latin America and the Caribbean	155	214	239	248	265	269	348	352	378	381
North America	6	6	10	9	9	9	9	9	9	9
Oceania	4	5	5	5	6	6	5	6	9	8
Total fish farmers	8 049	12 632	15 115	18 512	19 015	18 861	18 794	18 235	19 316	19 271

NUMBER OF FISHERS AND FISH FARMERS IN SELECTED COUNTRIES AND TERRITORIES AND WORLDWIDE (thousands)

Fishery	1995	2000	2005	2010	2012	2013	2014	2015	2016
World									
Fisheries + aquaculture	36 223	46 845	51 418	57 667	58 272	56 780	56 632	60 098	59 609
Index	70	91	100	112	113	110	110	117	116
Fisheries	28 174	34 213	36 304	39 155	39 412	37 962	37 879	40 781	40 338
Index	78	94	100	108	109	105	104	112	111
Aquaculture	8 049	12 632	15 115	18 512	18 861	18 818	18 753	19 316	19 271
Index	53	84	100	122	125	125	124	128	127
China									
Fisheries + aquaculture	11 429	12 936	12 903	13 992	14 441	14 282	14 161	14 588	14 506
Index	89	100	100	108	112	111	110	113	112
Fisheries	8 759	9 213	8 389	9 013	9 226	9 090	9 036	9 484	9 484
Index	104	110	100	107	110	108	108	113	113
Aquaculture	2 669	3 722	4 514	4 979	5 214	5 192	5 124	5 103	5 022
Index	59	82	100	110	116	115	114	113	111
Taiwan, Province of China									
Fisheries + aquaculture	302	314	352	330	329	374	331	326	322
Index	86	89	100	94	93	106	94	93	91
Fisheries	204	217	247	247	238	285	244	236	229
Index	83	88	100	100	97	115	99	95	93
Aquaculture	98	98	105	84	90	89	87	90	93
Index	93	93	100	79	86	85	83	86	88
Iceland									
Fisheries	7	6	5	5	5	4	5	5	5
Index	137	120	100	104	96	78	90	88	88
Indonesia									
Fisheries + aquaculture	4 568	5 248	5 097	5 972	6 093	5 984	6 011	6 047	5 946
Index	90	103	100	117	120	117	118	119	117
Fisheries	2 463	3 105	2 590	2 620	2 749	2 640	2 667	2 703	2 602
Index	95	120	100	101	106	102	103	104	100
Aquaculture	2 105	2 143	2 507	3 351	3 344	3 344	3 344	3 344	3 344
Index	84	85	100	134	133	133	133	133	133
Japan									
Fisheries	301	260	222	203	174	181	173	167	160
Index	136	117	100	91	78	82	78	75	72
Mexico									
Fisheries + aquaculture		262	279	272	266	273	271	295	294
Index		94	100	97	95	98	97	106	105
Fisheries	250	244	256	241	210	216	215	239	238
Index	98	96	100	94	82	84	84	93	93
Aquaculture		18	24	31	56	56	56	56	56
Index		78	100	131	239	234	234	234	234
Morocco									
Fisheries	100	106	106	107	114	103	110	105	108
Index	94	100	100	102	108	98	103	99	102
Norway									
Fisheries + aquaculture	28	24	19	19	18	18	18	18	19
Index	151	130	100	99	96	93	93	95	99
Fisheries	24	20	15	13	12	12	11	11	11
Index	163	138	100	89	83	77	75	74	75
Aquaculture	5	4	4	6	6	6	6	7	8
Index	109	102	100	131	139	142	151	164	179

NOTE: Index relative to 100 in 2005.

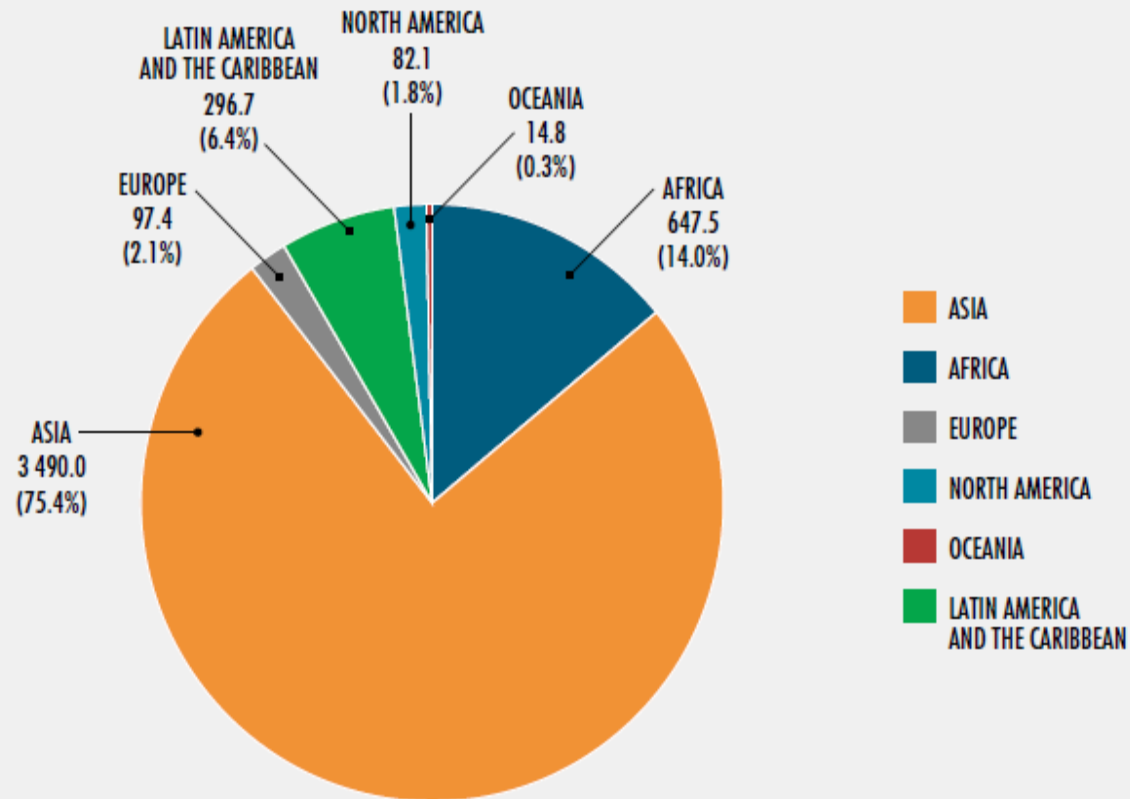
REPORTING OF SEX-DISAGGREGATED EMPLOYMENT (WOMEN, MEN AND UNSPECIFIED) IN FISHERIES AND AQUACULTURE, BY REGION, 2016

Region	Women		Men		Unspecified	
	No. ('000)	%	No. ('000)	%	No. ('000)	%
Fisheries						
Africa	585.1	11	4 249.3	79	532.6	10
Latin America and the Caribbean	394.4	19	1 383.6	66	306.7	15
North America	<0.1	0	37.9	18	171.1	82
Asia	4 843.9	15	25 020.5	78	2 125.2	7
Europe	6.4	2	115.3	33	232.0	66
Oceania	49.1	15	150.0	45	134.7	40
Aquaculture						
Africa	33.1	11	211.8	70	58.6	19
Latin America and the Caribbean	29.3	8	229.8	60	122.3	32
North America		0		0	9.3	100
Asia	2 764.3	15	14 068.5	76	1 645.5	9
Europe	16.7	18	56.7	62	17.5	19
Oceania	1.5	19	5.2	68	1.0	13

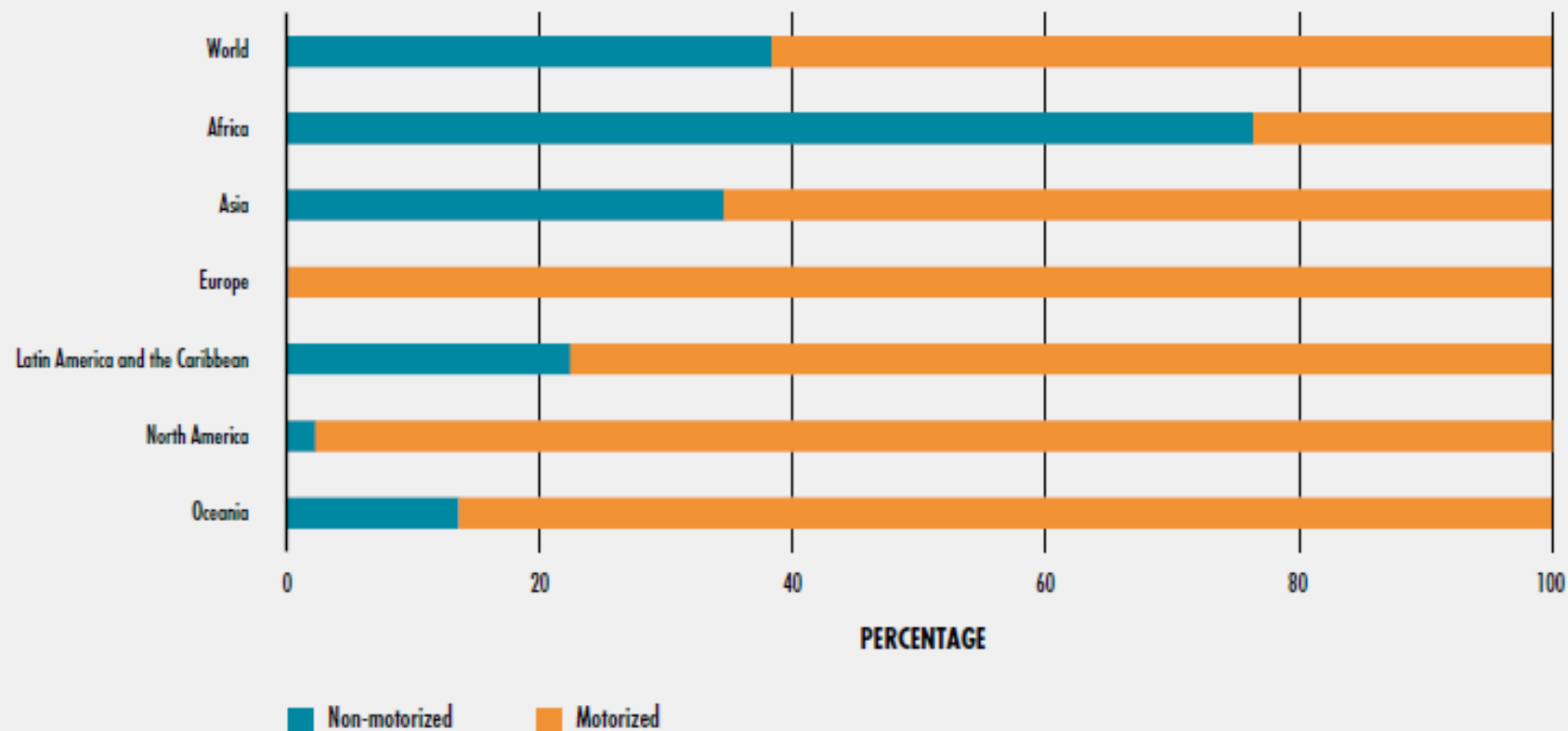
SEX-DISAGGREGATED ENGAGEMENT IN THE PRIMARY SECTOR OF FISHERIES AND AQUACULTURE IN SELECTED COUNTRIES (thousands)

Country/sex	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Australia												
Female	2.9	1.7	2	1.7	1.2	2.2	1	1.3	1.3	15.3	2.6	2.4
Male	9.4	8.1	11.7	7.5	10.2	9.4	9.6	7.3	7.4	80.8	11.6	10.5
Chile												
Female	4.8	5.9	8.2	10.8	12.9	15.7	21.3	22.5	23.7	29.4	25.8	31.7
Male	52.2	54.6	57.4	59.9	62.9	66.5	92.4	95.8	88.9	87.3	86.7	91.3
Unspecified	20.6	20.7	20.3	20.8	50.5							
Ireland												
Female		0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.3	0.3
Male		1.8	1.7	3.6	3.6	3.1	3.1	3.1	1.7	1.7	3.2	3.3
Unspecified	7.6	11.3	4.5	6.8	10.9	6.3	8	7.8	8	7.9	6.1	6.1
Japan												
Female	36.1	34.5	33.2	34.1	32.5	30	25.2	24.4	23.9	22.6	21.9	20.5
Male	186	178	171.1	187.8	179.4	172.9	152.7	149.3	157.1	150.5	144.7	139.5
Mauritius												
Female	0.6	0.8	0.8	0.8	0.8	1.1	1	1	1.1	1.1	1.1	1.1
Male	26	25.9	26.8	25.8	26.1	28.1	28.1	28.1	28.2	28.3	28.2	28.0
Saint Lucia												
Female	0	0	0	0	0	0	0.1	0.1	0.2	0.2	0.1	0.2
Male	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.7	2.8	2.9	3.0
Sri Lanka												
Female	1.5	1.6	3.1	12.2	10	17.6	20.9	16.5	10.7	14.2	19.4	21.9
Male	160.6	167	185.3	196.4	189.2	218.9	248	243.4	257.3	276.5	276.5	291.2

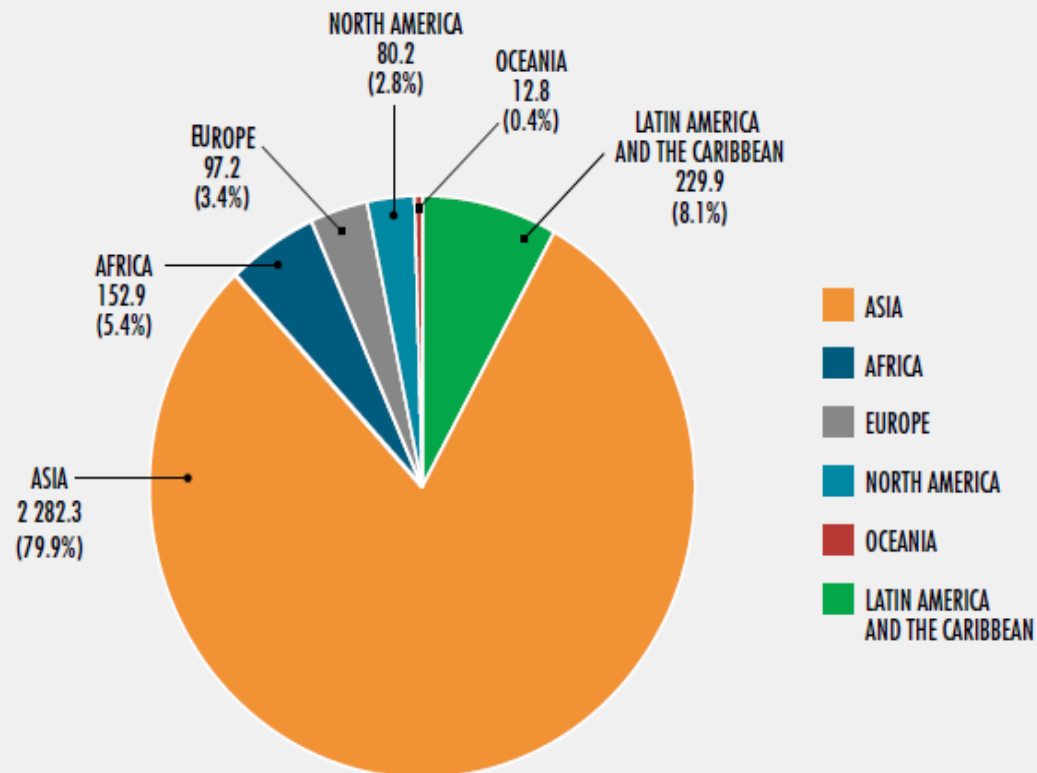
DISTRIBUTION OF MOTORIZED AND NON-MOTORIZED FISHING VESSELS BY REGION, 2016 (thousands)



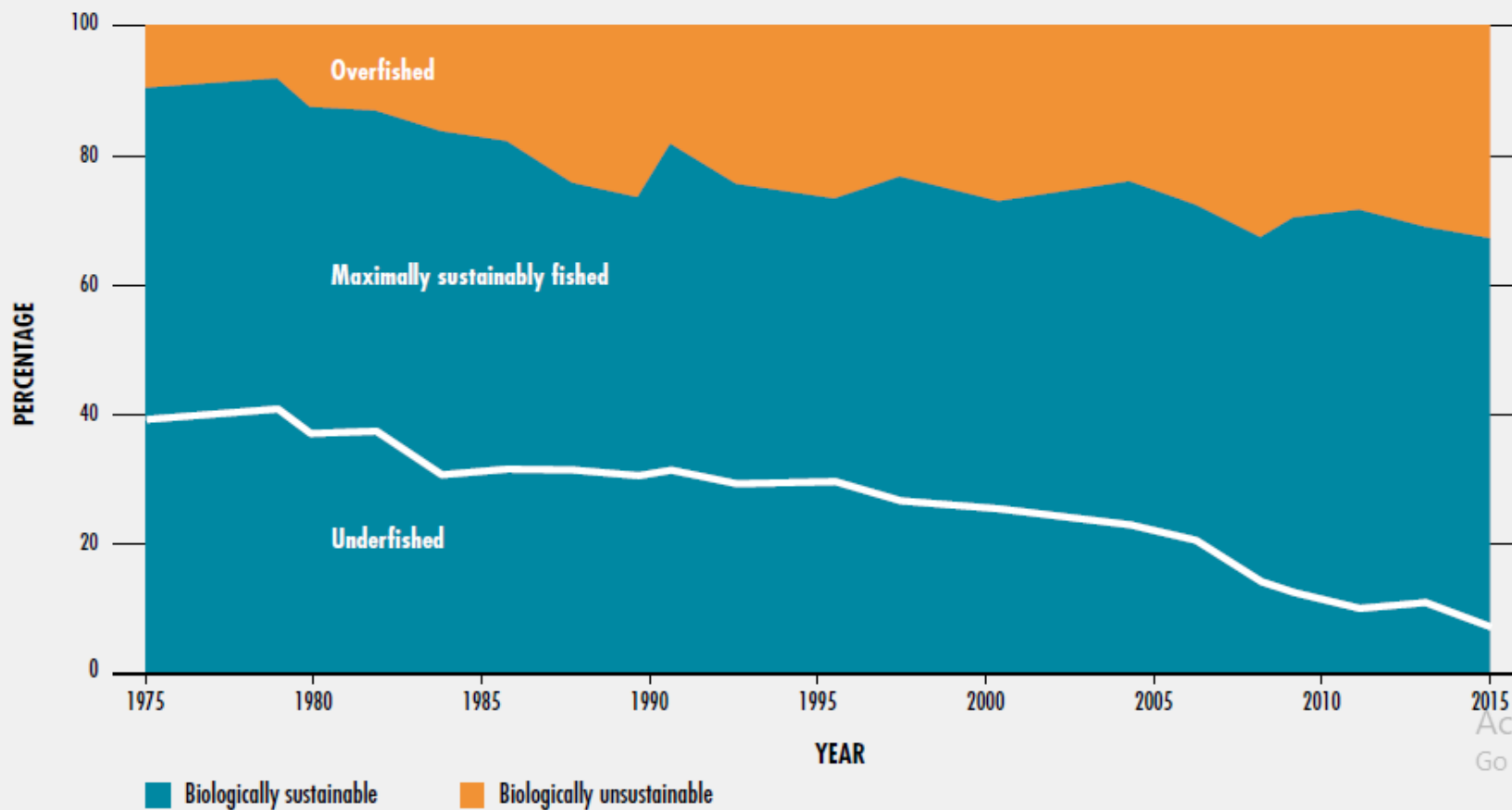
PROPORTION OF FISHING VESSELS WITH AND WITHOUT ENGINE, BY REGION, 2016



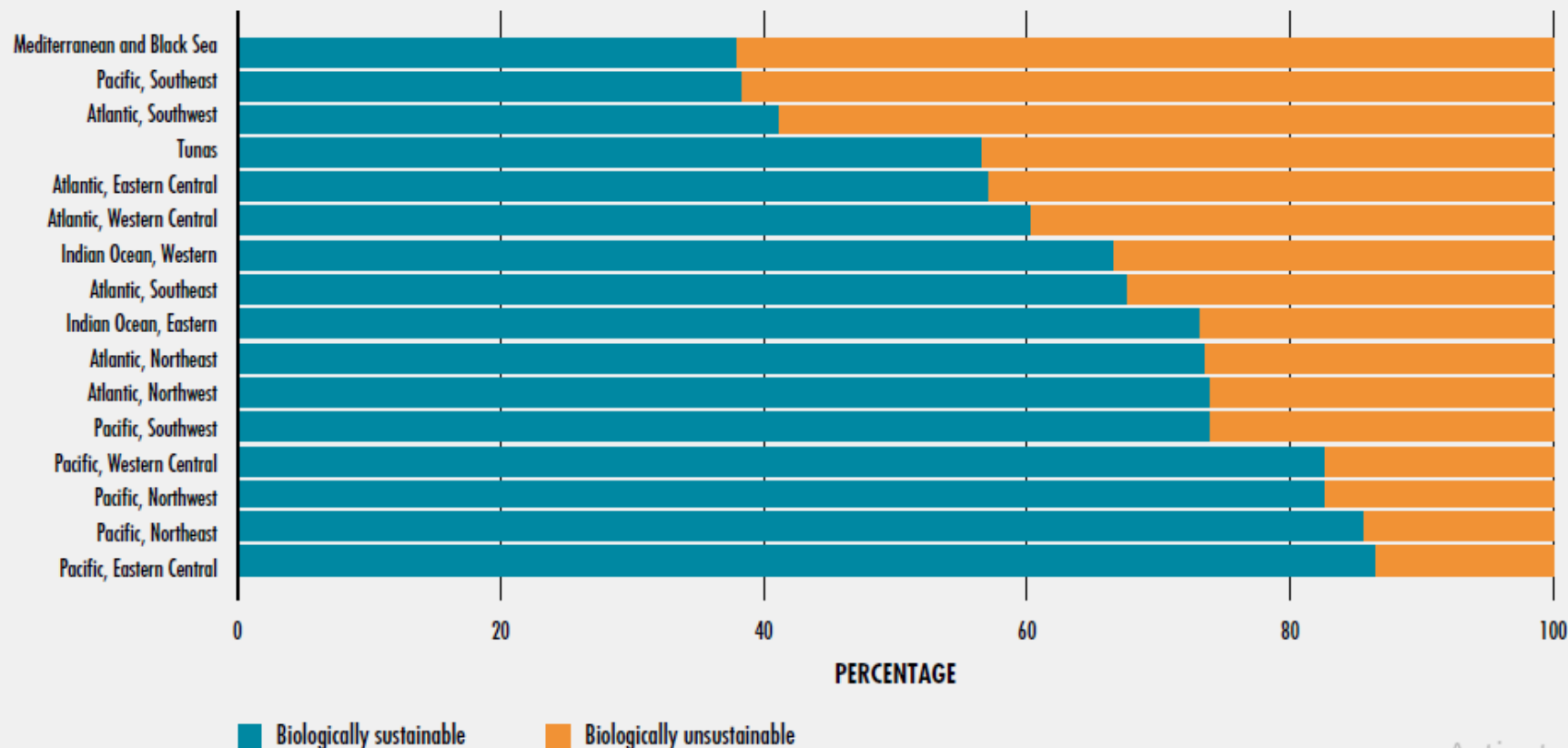
DISTRIBUTION OF MOTORIZED FISHING VESSELS BY REGION, 2016 (thousands)



GLOBAL TRENDS IN THE STATE OF THE WORLD'S MARINE FISH STOCKS, 1974–2015

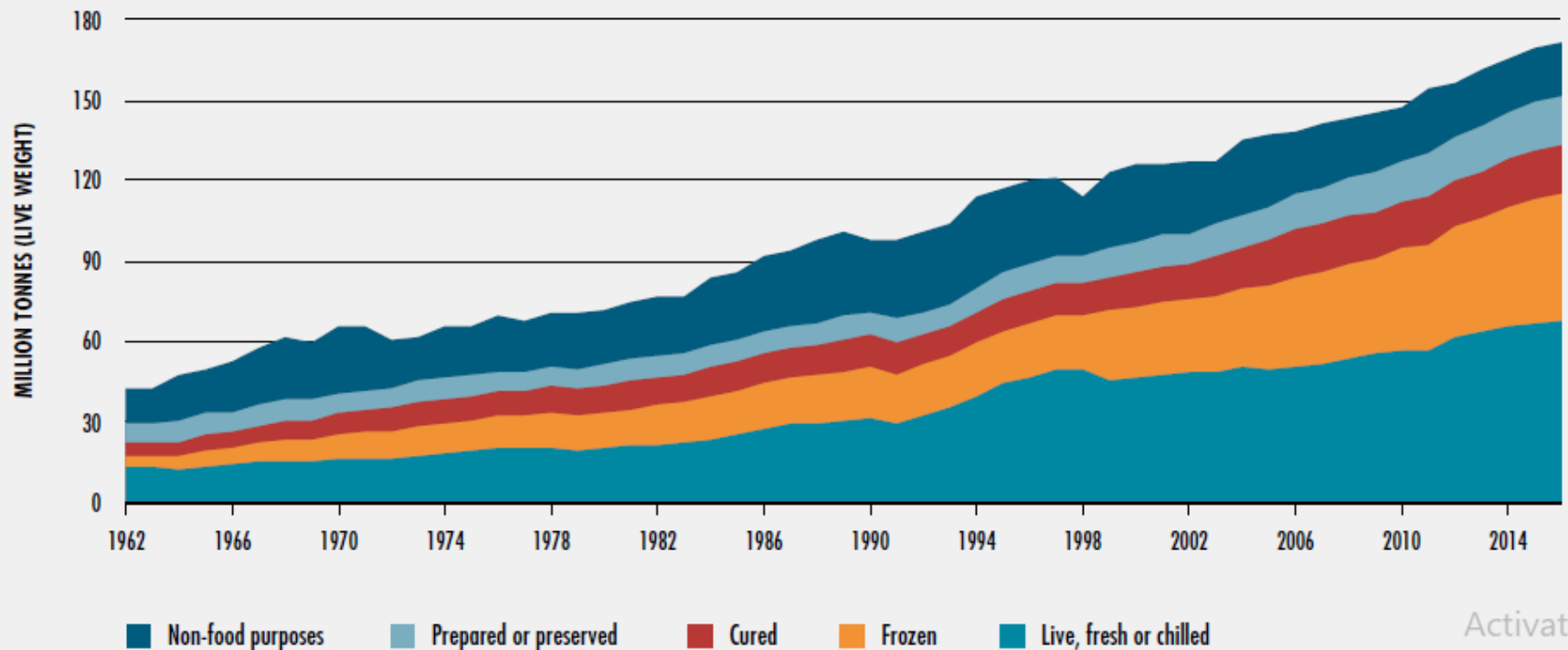


PERCENTAGES OF STOCKS FISHED AT BIOLOGICALLY SUSTAINABLE AND UNSUSTAINABLE LEVELS BY FAO STATISTICAL AREA, 2015

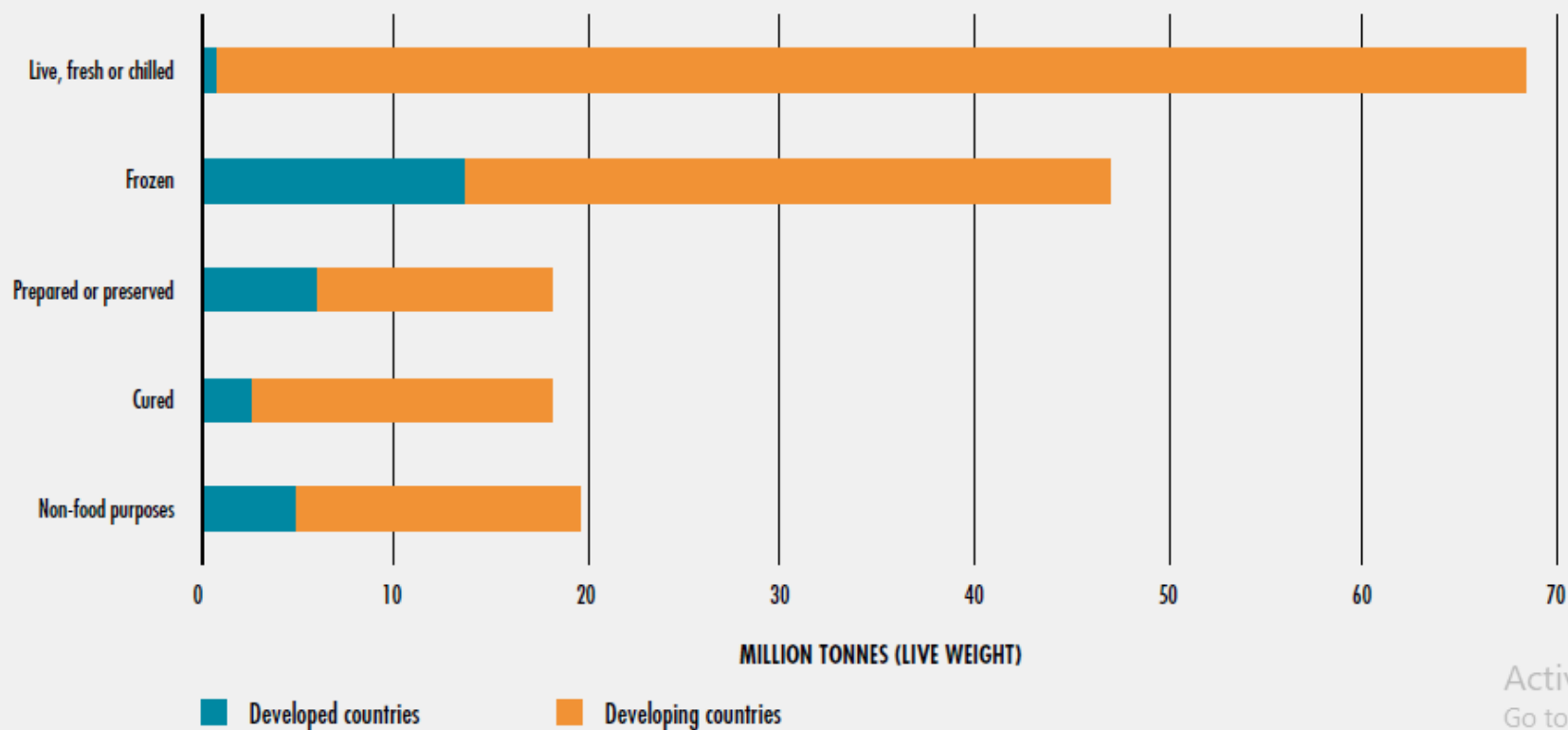


NOTE: Tuna stocks are singled out as they are largely migratory and straddling across statistical areas.

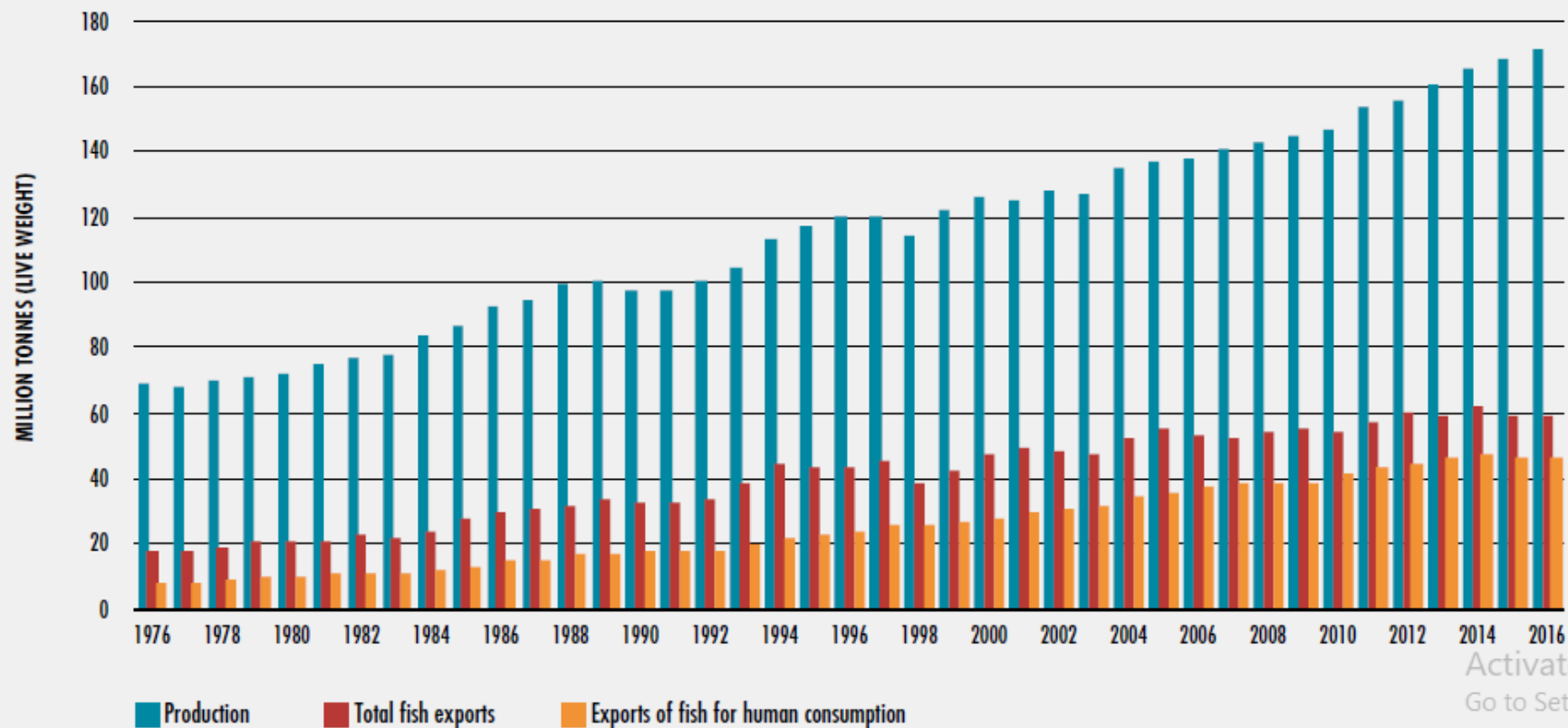
UTILIZATION OF WORLD FISHERIES PRODUCTION, 1962–2016



UTILIZATION OF WORLD FISHERIES PRODUCTION: DEVELOPED VERSUS DEVELOPING COUNTRIES, 2016



WORLD FISHERIES AND AQUACULTURE PRODUCTION AND QUANTITIES DESTINED FOR EXPORT

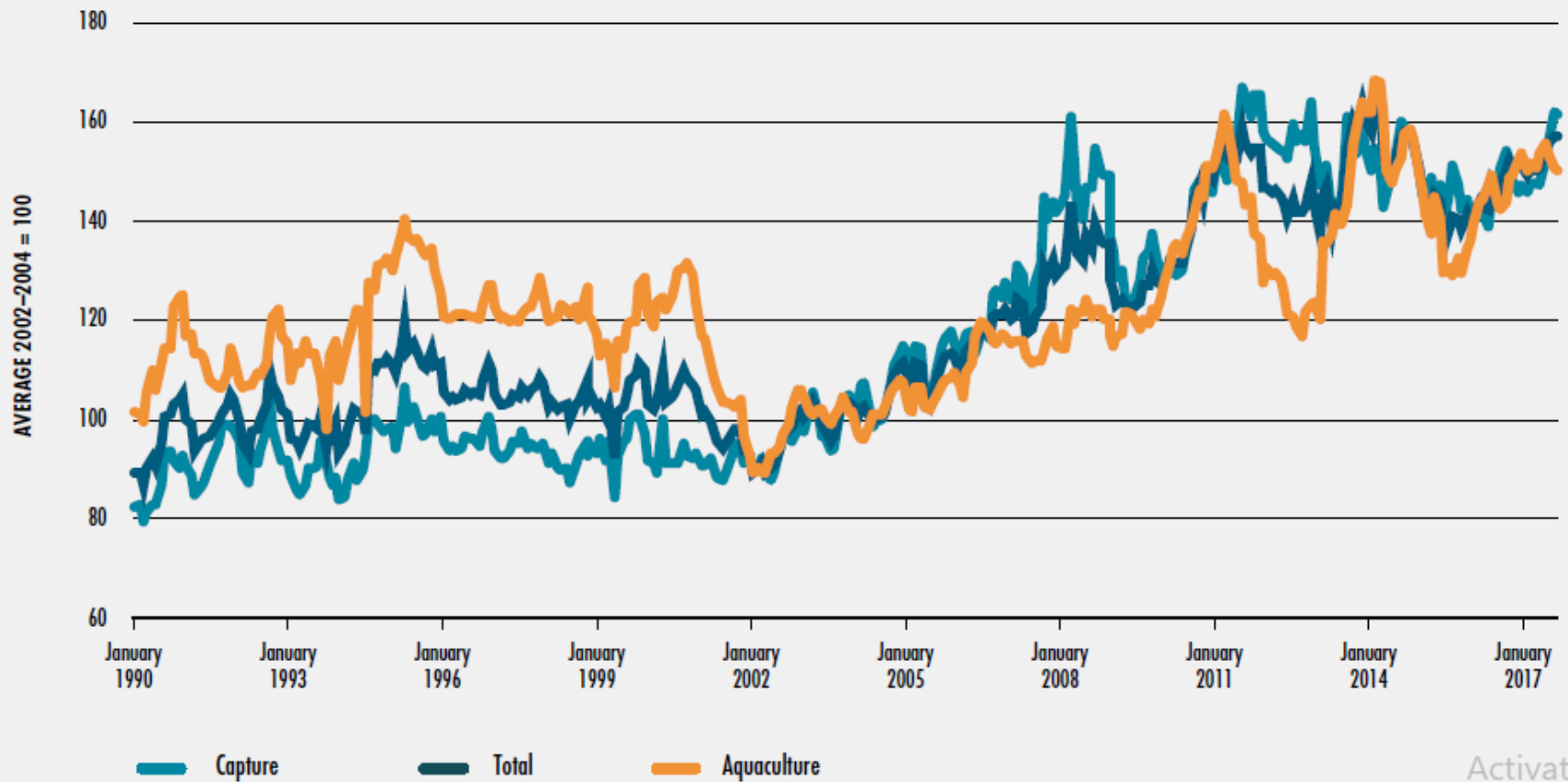


TOP TEN EXPORTERS AND IMPORTERS OF FISH AND FISH PRODUCTS

Country	2006		2016		APR* (%)
	Value (million USD)	Share (%)	Value (million USD)	Share (%)	
Exporters					
China	8 968	10.4	20 131	14.1	8.4
Norway	5 503	6.4	10 770	7.6	6.9
Viet Nam	3 372	3.9	7 320	5.1	8.1
Thailand	5 267	6.1	5 893	4.1	1.1
United States of America	4 143	4.8	5 812	4.1	3.4
India	1 763	2.0	5 546	3.9	12.1
Chile	3 557	4.1	5 143	3.6	3.8
Canada	3 660	4.2	5 004	3.5	3.2
Denmark	3 987	4.6	4 696	3.3	1.7
Sweden	1 551	1.8	4 418	3.1	11.0
Top ten subtotal	41 771	48.4	74 734	52.4	6.0
Rest of world total	44 523	51.6	67 796	47.6	4.3
World total	86 293	100.0	142 530	100.0	5.1
Importers					
United States of America	14 058	15.5	20 547	15.1	3.9
Japan	13 971	15.4	13 878	10.2	-0.1
China	4 126	4.5	8 783	6.5	7.9
Spain	6 359	7.0	7 108	5.2	1.1
France	5 069	5.6	6 177	4.6	2.0
Germany	4 717	5.2	6 153	4.5	2.7
Italy	3 739	4.1	5 601	4.1	4.1
Sweden	2 028	2.2	5 187	3.8	9.8
Republic of Korea	2 753	3.0	4 604	3.4	5.3
United Kingdom	3 714	4.1	4 210	3.1	1.3
Top ten subtotal	60 533	66.6	82 250	60.7	3.1
Rest of world total	30 338	33.4	52 787	39.3	5.7
World total	90 871	100.0	135 037	100.0	4.0

* APR: average annual percentage growth rate for 2006–2016.

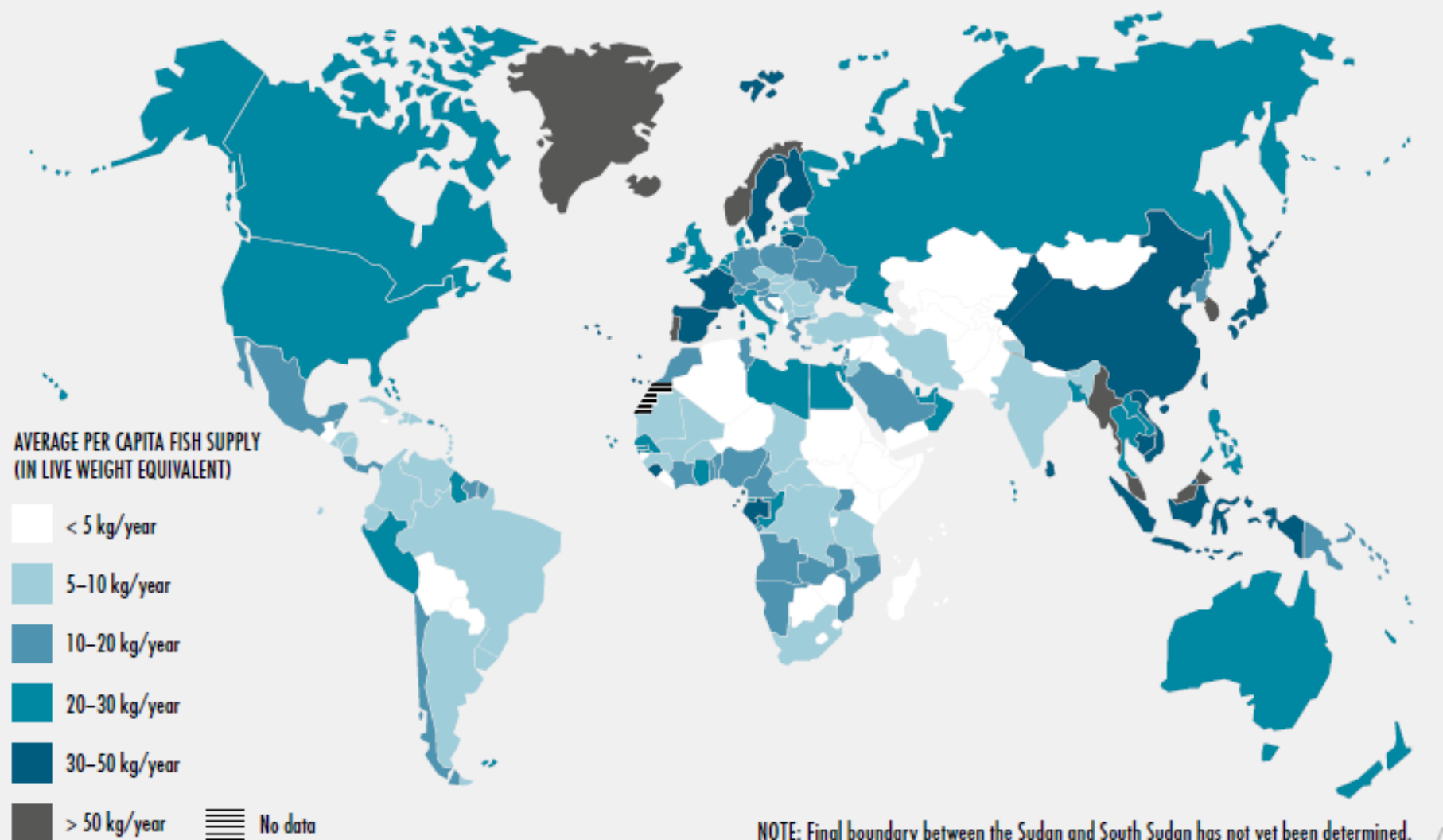
FAO FISH PRICE INDEX



SHARE OF MAIN GROUPS OF SPECIES IN WORLD TRADE OF FISH AND FISH PRODUCTS, 2016 (% live weight)

Species group	Share in value	Share in quantity
Fish	65.4	79.8
Salmons, trouts, smelts	18.1	7.4
Tunas, bonitos, billfishes	8.6	8.6
Cods, hakes, haddocks	9.6	14.0
Other pelagic fish	6.1	11.7
Freshwater fish	3.2	4.5
Flounders, halibuts, soles	2.1	1.6
Other fish	17.8	32.0
Crustaceans	23.0	8.3
Shrimps, prawns	16.1	6.2
Other crustaceans	6.9	2.1
Molluscs	11.0	11.1
Squids, cuttlefishes, octopuses	6.4	3.8
Bivalves	3.2	6.0
Other molluscs	1.4	1.3
Other aquatic invertebrates/animals	0.6	0.8
Total	100.0	100.0

APPARENT FISH CONSUMPTION PER CAPITA, AVERAGE 2013–2015

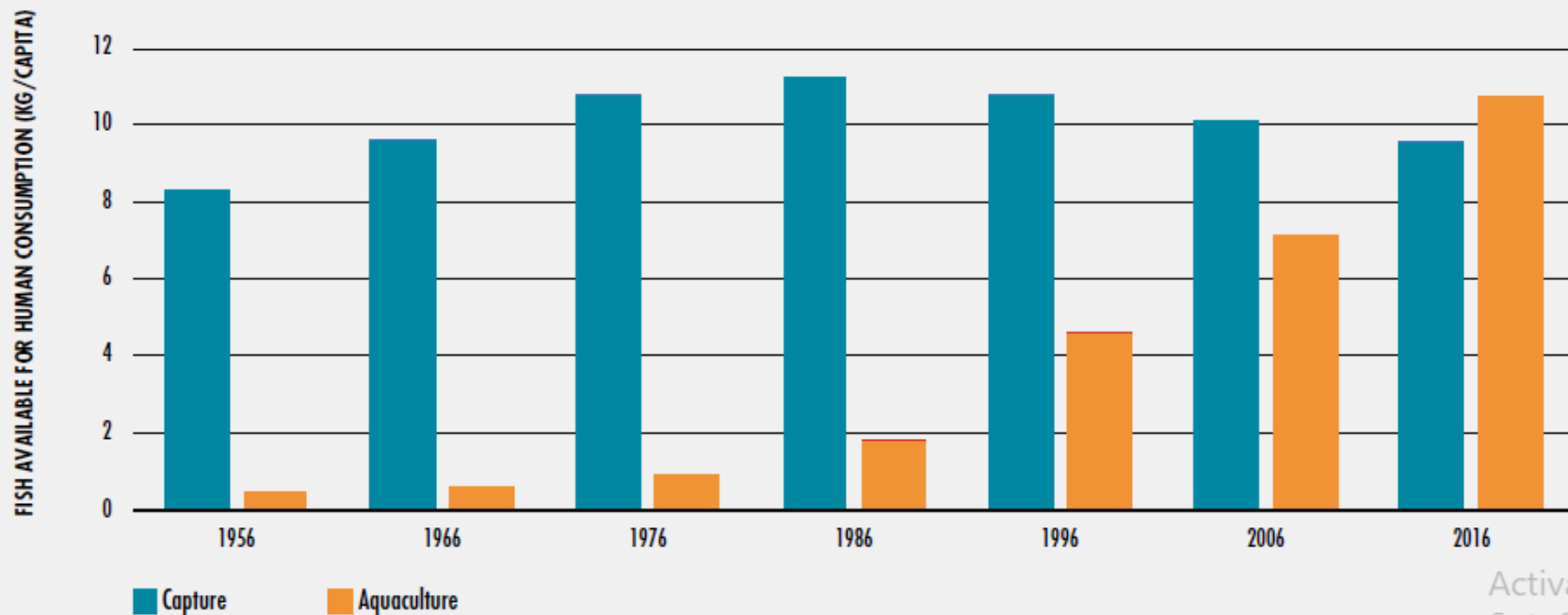


TOTAL AND PER CAPITA APPARENT FISH CONSUMPTION BY REGION AND ECONOMIC GROUPING, 2015

Region/economic grouping	Total food fish consumption (million tonnes live weight equivalent)	Per capita food fish consumption (kg/year)
World	148.8	20.2
World (excluding China)	92.9	15.5
Africa	11.7	9.9
North America	7.7	21.6
Latin America and the Caribbean	6.2	9.8
Asia	105.6	24.0
Europe	16.6	22.5
Oceania	1.0	25.0
Developed countries	31.4	24.9
Least-developed countries	12.0	12.6
Other developing countries	105.4	20.5
Low-income food-deficit countries	20.8	7.7

NOTE: Data are preliminary. Discrepancies with Table 1 in the Overview, page 4, are due to the impact of trade and stock data in the overall calculation of the FAO Food Balance Sheets (FAO, 2018d).

RELATIVE CONTRIBUTION OF AQUACULTURE AND CAPTURE FISHERIES TO FISH FOR HUMAN CONSUMPTION



ESTIMATED INCREASE IN GREENHOUSE GAS EMISSIONS IF INLAND FISHERIES WERE REPLACED BY OTHER FORMS OF FOOD PRODUCTION

CURRENT GHG EMISSIONS FROM

Inland fish

43 million tonnes

Mainly from gear construction and fuel use

Net increase in greenhouse gas emissions if inland fisheries were replaced with other forms of food production:



Aquaculture

+22.3 million tonnes

Average value for salmon, trout and tilapia



Beef

+0.82 billion tonnes

Feed production, methane release from cattle



Rice

+9.3 billion tonnes

High methane release from paddy fields

SOURCE: Ainsworth and Cowx, 2018



Thanks