

Capture and Aquaculture Production Totals for Marine and Inland Fisheries

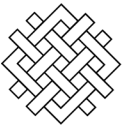
Sources: Food and Agriculture Organization of the United Nations, Fishery Information, Data, and Statistics Unit

EarthTrends Data Tables:
Coastal and
Marine
Ecosystems



	Total Capture and Aquaculture Production for all Species			Marine Aquaculture Production			Inland Aquaculture Production			Marine Capture Production			Inland Capture Production		
	(thousand metric tons)			(thousand metric tons)			(thousand metric tons)			(thousand metric tons)			(thousand metric tons)		
	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001
WORLD	72,900	99,449	129,429	2,136	5,020	14,240	2,632	8,025	21,372	63,018	80,101	85,153	5,114	6,303	8,665
ASIA (EXCL. MIDDLE EAST)	29,517	44,556	74,156	1,404	3,700	11,481	1,973	6,774	19,663	23,602	30,786	37,521	2,539	3,296	5,491
Armenia	..	7	2	..	..	..	..	4	1	..	..	..	..	..	2
Azerbaijan	..	45	17	..	..	..	..	2	0.1	..	..	..	..	..	44
Bangladesh	648	862	1,643	6	19	66	86	177	588	116	255	325	441	412	663
Bhutan	0.3	0.3	0.3	..	..	..	..	0.03	0.03	..	..	..	0.3	0.3	0.3
Cambodia	34	104	332	..	0	1	0.1	6	14	3	34	38	30	63	279
China	4,437	13,200	41,392	422	2,051	9,361	910	4,418	15,113	2,743	5,833	14,696	362	898	2,223
Georgia	..	105	2	..	..	..	..	1	0.1	..	103	2	..	0.1	0.02
India	2,412	3,830	5,752	4	34	94	363	1,048	1,999	1,493	2,258	2,784	552	490	875
Indonesia	1,812	3,072	4,889	25	115	147	164	373	654	1,366	2,291	3,775	256	292	313
Japan	10,377	10,279	5,738	461	700	714	94	97	60	9,691	9,374	4,896	131	107	68
Kazakhstan	..	86	35	..	..	..	..	11	1	..	..	..	..	76	34
Korea, Dem People's Rep	1,410	1,394	270	6	48	63	3	6	4	1,332	1,290	184	69	50	20
Korea, Rep	2,207	2,733	2,274	299	361	285	1	14	12	1,868	2,334	1,970	39	24	6
Kyrgyzstan	..	1	0.1	..	..	..	..	1	0.1	..	..	..	..	0.3	0.1
Lao People's Dem Rep	24	28	71	..	..	..	1	10	41	..	..	..	23	19	30
Malaysia	750	977	1,418	85	47	109	4	10	46	655	919	1,259	6	1	3
Mongolia	0.4	0.2	0.4	..	..	..	..	..	..	..	..	..	0.4	0.2	0.4
Myanmar	580	738	1,156	..	0	5	3	8	99	429	593	857	148	137	195
Nepal	4	14	30	..	..	..	1	9	15	..	..	..	2	5	15
Pakistan	299	480	643	0	0.04	0.1	5	11	17	251	369	446	43	101	179
Philippines	1,586	2,209	2,300	13	81	82	195	302	312	1,153	1,595	1,761	224	231	145
Singapore	16	13	10	0.2	2	4	0	0	1	16	11	5	1	0.1	0
Sri Lanka	186	191	294	0.01	1	5	1	5	4	164	158	252	21	27	33
Tajikistan	..	4	0.2	..	..	..	..	4	0.1	..	..	..	..	0.3	0.1
Thailand	1,914	2,822	3,631	74	198	445	44	104	271	1,691	2,389	2,709	105	131	206
Turkmenistan	..	47	11	..	..	..	..	2	0.1	..	..	..	..	45	11
Uzbekistan	..	27	8	..	..	..	..	22	5	..	..	..	..	4	3
Viet Nam	585	963	1,941	7	39	97	91	124	402	403	665	1,273	84	135	170
EUROPE	12,622	21,829	18,138	546	871	1,608	198	601	459	11,713	19,798	15,661	165	559	410
Albania	9	10	3	0.1	2	0.2	0.2	0.5	0.1	6	6	2	3	2	1
Austria	4	4	3	..	..	..	3	4	3	..	..	..	1	1	0.4
Belarus	..	19	6	..	..	..	..	16	6	..	..	..	..	2	1
Belgium	47	41	32	..	..	..	0.1	1	2	47	40	29	0.00	1	1
Bosnia and Herzegovina	..	..	3	..	..	..	..	..	..	..	..	0	..	..	3
Bulgaria	108	73	12	0	0	0.04	11	9	4	95	62	6	1	2	2
Croatia	..	..	29	..	..	4	..	..	4	..	..	21	..	..	0.02
Czech Rep	..	..	24	..	..	..	..	..	19	..	..	..	..	..	4
Denmark	1,878	1,747	1,526	0.4	6	7	19	33	36	1,858	1,707	1,483	0.2	0.4	0.2
Estonia	..	377	110	..	0.1	0	..	1	0.3	..	372	107	..	4	3
Finland	157	159	171	2	14	13	3	5	3	99	91	120	53	49	35
France	787	854	867	174	197	207	24	45	54	586	608	603	2	4	2
Germany	579	371	285	9	23	25	25	45	42	526	293	196	21	9	23
Greece	105	143	197	0.02	7	89	2	2	3	94	131	101	9	3	3
Hungary	35	31	20	..	..	..	24	18	13	..	..	..	12	13	7
Iceland	1,534	1,354	1,904	0.03	2	3	0.02	0.2	1	1,533	1,350	1,900	0.5	1	0.2
Ireland	145	237	358	5	24	51	0.5	1	1	140	208	305	0.1	4	1
Italy	498	548	512	52	109	164	24	42	49	413	385	293	8	13	5
Latvia	..	479	129	..	..	..	..	4	0	..	474	128	..	0.3	1
Lithuania	..	416	103	..	..	..	..	5	2	..	407	99	..	4	2
Macedonia, FYR	..	..	2	..	..	..	..	..	1	..	..	..	..	..	0.2
Moldova, Rep	..	8	1	..	..	..	..	6	1	..	..	..	..	1	0.3
Netherlands	381	499	588	95	86	73	0.1	1	6	285	408	507	2	3	2
Norway	2,540	1,945	3,166	9	142	493	..	..	..	2,530	1,803	2,672	0.4	1	1
Poland	625	498	261	..	..	..	11	27	35	603	456	210	10	15	16
Portugal	260	327	203	0.1	5	6	0.5	2	1	259	321	196	0	0	0
Romania	182	159	17	..	..	..	36	37	10	129	107	2	16	15	5
Russian Federation	..	7,733	3,992	..	0.3	1	..	179	77	..	7,196	3,646	..	358	269
Serbia and Montenegro	..	..	4	..	..	0.01	..	..	3	..	..	0.4	..	..	1
Slovakia	..	..	2	..	..	..	..	..	1	..	..	..	..	..	1
Slovenia	..	..	3	..	..	0.1	..	..	1	..	..	2	..	..	0.2
Spain	1,371	1,378	1,415	198	196	282	11	21	33	1,144	1,151	1,091	18	10	9
Sweden	230	254	340	0.2	5	3	1	4	3	226	244	332	2	2	1
Switzerland	4	5	3	..	..	..	0.2	1	1	..	..	..	4	3	2
Ukraine	0	1,016	416	0	0.5	0.04	0	77	32	..	901	379	..	38	5
United Kingdom	867	856	936	1	38	146	2	15	13	862	800	773	1	3	4
MIDDLE EAST & N. AFRICA	1,407	2,148	3,432	0.1	4	76	45	111	385	1,220	1,765	2,535	141	268	437
Afghanistan	1	1	1	..	..	..	..	..	..	..	..	..	1	1	1
Algeria	48	90	101	..	0.03	0.04	..	0.3	0.2	48	90	101	0	0	0
Egypt	140	302	701	0	0.5	30	19	61	273	34	79	140	86	162	258
Iran, Islamic Rep	60	268	414	..	..	4	9	24	40	47	201	256	4	42	114
Iraq	45	21	23	..	..	..	4	2	2	27	2	13	14	17	9
Israel	29	24	25	..	0.1	3	12	15	17	13	7	4	4	2	2
Jordan	0.04	0.4	1	..	..	..	..	0.05	1	0.04	0.01	0.2	0	0.4	0.4
Kuwait	3	5	6	..	0	0.2	..	0	0.04	3	5	6	0	0	0
Lebanon	2	2	4	..	..	..	0.05	0.1	0.3	2	2	4	0	0.01	0.02
Libyan Arab Jamahiriya	10	24	33	..	..	..	..	0.1	0.1	10	24	33	0	0	0
Morocco	335	562	910	0.1	0.4	1	0.01	0.05	1	335	560	907	1	2	2
Oman	80	118	121	..	0	2	..	..	..	80	118	119	0	0	0
Saudi Arabia	26	44	55	0	0.1	3	..	2	4	26	43	48	0	0	0
Syrian Arab Rep	4	6	14	..	..	..	1	3	6	1	2	3	2	2	5
Tunisia	60	90	97	0.1	1	1	0	0.1	1	60	89	95	0	0	1
Turkey	417	401	605												

Capture and Aquaculture Production Totals for Marine and Inland Fisheries



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	(thousand metric tons)			(thousand metric tons)			(thousand metric tons)			(thousand metric tons)			(thousand metric tons)					
	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001	1979-1981	1989-1991	1999-2001			
	1981	1991	2001	1981	1991	2001	1981	1991	2001	1981	1991	2001	1981	1991	2001			
SUB-SAHARAN AFRICA	3,173	3,929	5,122	0.4	3	8	7	23	44	1,999	2,309	3,296	1,166	1,594	1,775			
Angola	110	129	222	..	..	..	..	..	..	102	122	216	7	8	6
Benin	37	38	37	..	..	..	..	..	..	4	8	8	33	30	29
Botswana	1	1	0.1	..	..	..	..	..	..	..	..	..	1	1	0.1
Burkina Faso	7	7	8	..	..	..	0	0.01	0.01	..	..	..	7	7	8
Burundi	13	16	12	..	..	..	..	0.04	0.1	..	..	..	13	16	12
Cameroon	81	70	111	..	..	..	0.04	0.1	0.1	61	48	59	20	22	53
Central African Rep	13	13	15	..	..	..	0.1	0.1	0.1	..	..	..	13	13	15
Chad	62	65	84	..	..	..	..	..	..	..	..	..	62	65	84
Congo	30	47	43	..	..	..	0	0.2	0.2	19	21	18	11	26	25
Congo, Dem Rep	107	165	209	..	..	..	..	1	0.4	1	3	4	106	162	205
Côte d'Ivoire	88	92	76	..	..	..	..	0.2	1	71	68	64	18	24	11
Equatorial Guinea	3	4	5	..	..	..	..	..	..	3	3	4	0	0.4	1
Eritrea	..	..	10	..	..	..	..	..	..	..	..	10	..	..	0
Ethiopia	3	5	16	..	..	..	..	0.04	0	0.2	1	0	3	4	16
Gabon	20	21	47	..	..	..	0	0	0.4	19	19	36	2	2	10
Gambia	13	22	31	..	0.1	..	..	0	0	10	19	29	3	3	3	
Ghana	237	374	468	..	..	..	0.3	0.4	5	197	316	389	40	58	75
Guinea	20	45	90	..	..	..	..	0	0	19	42	86	1	3	4
Guinea-Bissau	4	5	5	..	..	..	..	..	..	4	5	5	0.01	0.2	0.2
Kenya	53	183	196	0.0	0.1	0	0.2	1	1	5	9	7	47	173	189			
Lesotho	0.02	0.03	0.04	..	..	..	0.02	0.02	0.01	..	..	..	0	0.01	0.03
Liberia	13	10	13	..	..	..	0	0	0.02	9	6	9	4	4	4
Madagascar	56	100	139	..	0.02	5	0.1	0.2	2	17	71	102	39	29	30			
Malawi	59	70	44	..	..	..	0.1	0.2	1	..	..	..	59	69	43
Mali	82	70	103	..	..	..	..	0.02	0.05	..	..	..	82	70	103
Mauritania	35	70	80	..	..	..	..	..	..	29	64	75	6	6	5
Mozambique	34	32	35	..	..	..	..	0.02	0	31	29	25	4	4	10
Namibia	10	163	573	..	0.02	0.04	..	..	0.01	10	162	571	0.1	1	2	
Niger	9	4	16	..	..	..	..	0.03	0.02	..	..	..	9	4	16
Nigeria	263	295	474	0.2	1	..	6	15	24	149	192	308	108	86	142			
Rwanda	1	3	7	..	..	..	0.02	0.1	0.3	..	..	..	1	2	7
Senegal	228	307	407	0.1	..	..	0	0.01	0.2	213	290	381	15	18	25	
Sierra Leone	52	58	70	..	..	..	0	0.02	0.03	38	43	56	14	15	14
Somalia	12	23	20	..	..	..	..	..	..	12	22	20	0.1	0.4	0.2
South Africa	905	639	666	0.01	2	3	..	2	2	904	635	661	1	1	1			
Sudan	28	32	55	..	..	..	..	0.2	1	1	1	5	27	30	48
Tanzania, United Rep	213	373	327	..	..	..	..	0.4	0.2	37	54	52	176	319	274
Togo	9	15	23	..	..	..	..	0.02	0.1	6	10	18	4	5	5
Uganda	171	224	223	..	..	..	..	0.1	1	..	..	..	171	224	222
Zambia	47	68	71	..	..	..	0.03	2	4	..	..	..	47	66	66
Zimbabwe	13	24	13	..	..	..	0.1	0.2	0.2	..	..	..	13	24	13
NORTH AMERICA	5,225	7,485	6,596	100	142	242	83	248	345	4,926	7,005	5,939	116	91	69			
Canada	1,395	1,608	1,160	3	35	118	1	5	13	1,340	1,519	990	51	48	39			
United States	3,718	5,713	5,270	97	107	123	82	242	333	3,474	5,321	4,784	65	42	30			
C. AMERICA & CARIBBEAN	1,742	1,912	1,972	1	16	63	10	28	92	1,676	1,721	1,703	54	147	115			
Belize	2	2	44	..	0.3	4	..	0	..	2	2	40	0.03	0	0			
Costa Rica	18	18	43	..	0.3	2	0.03	1	8	17	17	32	0.3	0.4	1			
Cuba	168	184	114	1	2	1	1	6	53	160	161	55	6	14	5			
Dominican Rep	10	20	13	..	0.1	0.3	0	0.3	2	8	18	10	2	1	1			
El Salvador	16	10	15	..	0.5	0.2	..	0.01	0.1	14	6	12	2	4	2			
Guatemala	4	6	27	..	1	2	0.01	0.2	3	4	4	16	0.5	2	7			
Haiti	5	5	5	..	..	..	..	..	..	5	5	5	0.3	0.4	0.5
Honduras	7	19	19	0.1	3	8	0.01	0.2	1	6	16	11	0.1	0.04	0.1			
Jamaica	9	12	11	..	0	0	0.03	3	4	9	8	6	0.2	0.4	0.5			
Mexico	1,280	1,416	1,367	0	6	39	9	16	21	1,228	1,269	1,210	43	125	97			
Nicaragua	7	5	30	0	0.1	5	0	0	0.01	7	4	24	0.1	0.2	1			
Panama	175	162	196	0.2	3	2	0	0.3	1	175	158	193	0	0.02	0.02			
Trinidad and Tobago	4	9	10	..	..	..	..	0	0.01	4	9	10	0	0	0
SOUTH AMERICA	8,237	15,274	17,226	10	123	549	5	32	208	7,960	14,810	16,124	262	309	345			
Argentina	438	561	973	..	0	0.02	0.1	0.3	1	427	550	944	11	10	27			
Bolivia	5	6	6	..	..	..	..	0.4	0.4	..	..	..	5	6	6
Brazil	801	814	923	0.2	2	37	4	19	139	630	601	552	167	193	195			
Chile	2,948	5,885	4,793	1	28	409	0.1	4	2	2,947	5,853	4,383	0	0.02	0.00			
Colombia	78	113	184	0.03	5	11	0.2	4	49	30	74	98	48	30	26			
Ecuador	595	496	645	9	84	79	0.4	1	7	585	410	559	0.2	1	0.4			
Guyana	33	38	53	..	0.02	0.2	0	0.03	0.4	32	37	51	1	1	1			
Paraguay	3	12	25	..	..	..	..	0.1	0.1	..	..	..	3	12	25
Peru	3,027	6,878	9,033	1	4	4	0.5	2	4	3,011	6,837	8,990	15	35	35			
Suriname	3	7	18	..	..	0.2	..	0	0.1	3	6	17	0.1	0.4	0.2	
Uruguay	125	119	108	..	..	0	..	0	0.04	125	118	106	0.4	0.3	2	
Venezuela	179	335	405	0	0.3	8	0.3	0.5	5	167	313	364	12	21	28			
OCEANIA	419	788	1,246	11	47	124	1	2	4	396	718	1,095	11	22	22			
Australia	136	215	240	8	12	37	1	1	3	126	199	199	1	2	2			
Fiji	21	30	43	..	0.01	1	0	0.02	0.3	21	26	35	1	4	6			
New Zealand	149	379	654	3	35	84	..	0.2	0.5	146	344	568	1	1	1			
Papua New Guinea	42	26	95	..	0	0	..	0.01	0.01	34	12	81	8	14	14			
Solomon Islands	35	51	38	..	0	0.01	..	0	0	35	51	38	0	0	0			
DEVELOPED	29,330	41,007	31,968	1,118	1,762	2,689	387	1,011	894	27,407	37,300	27,765	418	935	620			
DEVELOPING	33,012	56,915	95,919	954	3,145	11,459	1,935	6,808	20,306	26,087	41,612	56,110	4,035	5,350	8,044			

All figures are three year averages for the range of years specified. Numbers in this table are reported with varying precision: values greater than 0.5 thousand metric tons are rounded to the nearest whole number, values between 0.05 and 0.5 thousand metric tons are rounded to the nearest tenth (one decimal place), values between .005 and .05 are rounded to the nearest hundredth (two decimal places), and "0" represents a value of less than .005 thousand metric tons.

VARIABLE DEFINITIONS AND METHODOLOGY

Total Capture and Aquaculture Production for All Species includes both capture and aquaculture production of fish, crustaceans, molluscs, aquatic mammals, and other aquatic animals, taken for commercial, industrial, recreational and subsistence purposes from inland, brackish and marine waters. For each country, the four sub-categories of production (Marine Aquaculture, Inland Aquaculture, Marine Capture, and Inland Capture) listed in this table should sum to **Total Capture and Aquaculture Production for All Species**.

Marine Aquaculture Production data include fish, crustaceans, molluscs, aquatic mammals, and other aquatic animals, taken for commercial, industrial, recreational and subsistence purposes from marine and brackish environments. The harvest from inland waters is not included. Aquaculture production is defined by FAO as "the farming of aquatic organisms, including fish, molluscs, crustaceans, and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. [It] also implies ownership of the stock being cultivated." Aquatic organisms that are exploitable by the public as a common property resource are not included in the aquaculture production.

Inland Aquaculture production data include fish, molluscs, crustaceans, aquatic mammals, and other aquatic animals, taken for commercial, industrial, recreational and subsistence purposes from inland waters, such as lakes and rivers. The harvest from marine areas is not included. Some inland lakes are saltwater, thus the data include not only freshwater species but also saltwater species. Aquaculture production is defined by FAO as "the farming of aquatic organisms, including fish, molluscs, crustaceans, and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. [It] also implies ownership of the stock being cultivated." Aquatic organisms that are exploitable by the public as a common property resource are not included in the aquaculture production.

Marine Capture Production data include fish, crustaceans, molluscs, aquatic mammals, and other aquatic animals, taken for commercial, industrial, recreational and subsistence purposes from marine and brackish environments. The harvest from inland waters is not included. Capture production data refer to the nominal catch of fish, crustaceans, molluscs, aquatic mammals, and other aquatic animals, taken for commercial, industrial, recreational and subsistence purposes from marine, brackish, and inland waters. The harvest from aquaculture and other kind of farming are excluded.

Inland Capture Production data include fish, molluscs, crustaceans, aquatic mammals, and other aquatic animals, taken for commercial, industrial, recreational and subsistence purposes from inland waters, such as lakes and rivers. The harvest from marine areas is not included. Some inland lakes are saltwater, thus the data include not only freshwater species but also saltwater species. Capture production data refer to the nominal catch of fish, crustaceans, molluscs, aquatic mammals, and other aquatic animals, taken for commercial, industrial, recreational and subsistence purposes from marine, brackish, and inland waters. The harvest from aquaculture and other kind of farming are excluded.

Statistics for aquatic plants are excluded from country totals. For a more detailed listing of species groups represented in the table, please refer to the original source at <http://www.fao.org/waicent/faostat/agricult/fishitems-e-e.html>.

Data include all quantities caught for both food and feed purposes but exclude discards. The harvest of fish, crustaceans and molluscs are expressed in live weight, that is the nominal weight of the aquatic organisms at the time of capture.

Aquatic organisms included in the FAO FISHSTAT capture production database have been classified according to approximately 1290 commercial species items, further arranged within the 50 groups of species constituting the nine divisions of the FAO International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP). Most fisheries statistics are collected by FAO from official

national reports. When these data are missing or considered unreliable, FAO estimates fishery production based on regional fishery organizations, project documents, industry magazines, or statistical interpolations. Fishery production statistics were revised completely by FAO in the 1990s. At this time, FAO estimated missing data points, updated taxonomical classifications, and discriminated more clearly between aquaculture and capture fisheries production.

Fisheries production statistics typically refer to the calendar years (January 1 to December 31) with exception of data from Antarctic waters, which use a split year (July 1 to June 30).

FREQUENCY OF UPDATE BY DATA PROVIDERS

FAO publishes updated data sets annually for FishStat. This table represents data through the year 2001; data were acquired by WRI in May, 2003.

DATA RELIABILITY AND CAUTIONARY NOTES

While the FAO data set provides the most extensive, global time series of fishery statistics since 1970, there are some problems associated with the data. Funding for the development and maintenance of fisheries statistics at the national level has been decreasing in real terms since 1992, while the demand is growing for a variety of global statistics on discards, fish inventories, aquaculture, and illegal activities. Country-level data are often submitted with a 1-2 year delay, and countries are declaring an increasing percentage of their catch as "unidentified fish". As a result, species-item totals frequently underestimate the real catch of individual species. Stock assessment working groups can more accurately estimate the composition of a catch; however, due to financial constraints, these groups are rare, especially in developing countries. Statistics from smaller artisanal and subsistence fisheries are particularly sparse.

FAO states that "general trends are probably reliably reflected by the available statistics...but the annual figures and the assessments involve a certain degree of uncertainty and small changes from year to year are probably not statistically significant." These statistics provide a good overview of regional fisheries trends. However, when reviewing the state of fisheries stocks, evaluating food security, etc., these data should be used with caution and supplemented with estimates from regional organizations, academic literature, expert consultations, and trade data.

For more information, please consult *Fishery Statistics: Reliability and Policy Implications*, published by the FAO Fisheries Department and available on-line at http://www.fao.org/fi/statist/nature_china/30jan02.asp.

SOURCE

Fishery Information, Data and Statistics Unit, Food and Agriculture Organization of the United Nations (FAO). 2003. *FISHSTAT Plus: Universal software for fishery statistical time series*, Version 2.3 (available on-line at <http://www.fao.org/fi/statist/FISOFT/FISHPLUS.asp>); Total production dataset. Rome: FAO.