

FISHERIES SITUATION REPORT

January-December 2001

Abstract

Total fish production in 2001 increased by 166,101 metric tons or an increment of 5.57 percent compared to last year's produce. The highest growth rate came from the aquaculture sector with 10.31 percent, followed by commercial sector with 3.18 percent and municipal sector with 2.49 percent. Increase in aquaculture production was brought by the expansion in operation of marine fishcages, availability of better quality fingerlings, and adoption of improved feeding practices by the fishfarmers. The abundant catch of migratory fishes, use of fish finders and the prevalent good weather that resulted in more frequent fishing operations contributed to the growth in the commercial sector. Similarly, municipal fishermen also improved their catch as a result of the increase in volume of unloadings of sardines, roundscad, big-eyed scads and other species from rehabilitated fish sanctuaries.

An increase of 5.57 percent in total fisheries production was realized in 2001 as compared to 2000. The volume of fish unloading from commercial and municipal landing centers went up by 3.18 percent and 2.49 percent, respectively. Similarly, a remarkable production growth of 10.31 percent was realized from aquaculture.

Of the total fisheries production, aquaculture accounted for 36 percent while commercial and municipal fisheries contributed an equal share of 32 percent. This shows the growing importance of aquaculture as a source of fish supply.

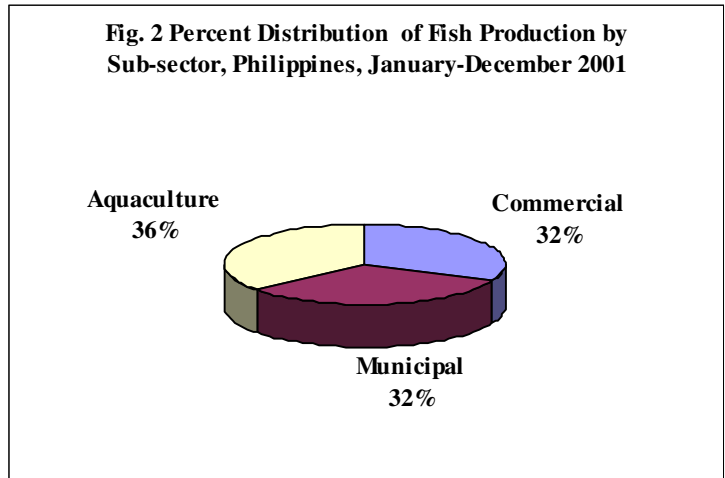
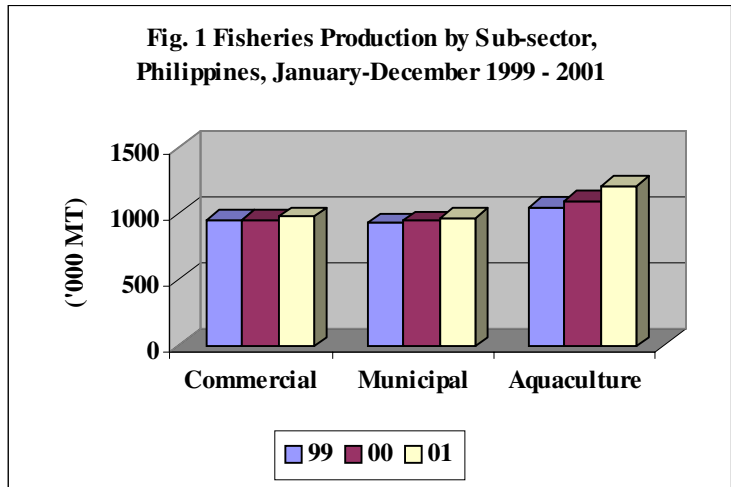


TABLE 1. FISHERIES PRODUCTION BY SECTOR, BY REGION AND BY QUARTER, PHILIPPINES, 1999 - 2001

(METRIC TONS)

REGION/ QUARTER	FISHERIES			% CHANGE 01/00	COMMERCIAL			% CHANGE 01/00	MUNICIPAL			% CHANGE 01/00	AQUACULTURE			% CHANGE 01/00
	1999	2000	2001		1999	2000	2001		1999	2000	2001		1999 R	2000	2001	
PHILIPPINES	2,918,779	2,983,058	3,149,159	5.57	948,754	946,485	976,539	3.18	926,339	945,945	969,535	2.49	1,043,686	1,090,628	1,203,085	10.31
CAR	2,951	3,034	3,567	17.57					1,071	1,075	1,150	6.98	1,880	1,959	2,417	23.38
I	52,972	55,489	57,531	3.68	1,863	2,250	2,525	12.22	23,006	23,392	22,414	(4.18)	28,103	29,847	32,592	9.20
II	30,342	35,035	38,203	9.04	12,660	14,130	14,297	1.18	15,056	17,636	19,157	8.62	2,626	3,269	4,749	45.27
III	116,138	136,810	181,364	32.57	10,950	12,286	14,091	14.69	10,220	11,176	12,795	14.49	94,968	113,348	154,478	36.29
NCR - M.M.	165,517	147,959	146,487	(0.99)	160,098	142,849	140,933	(1.34)	4,156	3,982	4,166	4.62	1,263	1,128	1,388	23.05
IV	613,106	643,295	620,108	(3.60)	145,143	134,849	128,408	(4.78)	259,580	257,835	241,882	(6.19)	208,383	250,611	249,818	(0.32)
V	111,947	115,065	150,514	30.81	22,364	21,732	32,585	49.94	72,393	73,805	87,478	18.53	17,190	19,528	30,451	55.94
VI	337,070	356,998	357,596	0.17	123,299	130,486	122,120	(6.41)	132,625	134,227	135,928	1.27	81,146	92,285	99,548	7.87
VII	159,243	164,545	191,531	16.40	62,547	64,109	61,361	(4.29)	45,323	47,482	44,736	(5.78)	51,373	52,954	85,434	61.34
VIII	76,200	78,728	91,318	15.99	30,688	32,497	36,169	11.30	37,639	37,915	42,270	11.49	7,873	8,316	12,879	54.87
IX	427,076	429,243	425,080	(0.97)	161,502	166,224	170,194	2.39	116,714	122,543	129,398	5.59	148,860	140,476	125,488	(10.67)
X	37,749	40,739	49,978	22.68	19,636	21,207	25,273	19.17	15,751	17,079	21,679	26.93	2,362	2,453	3,026	23.36
XI	207,748	213,632	219,644	2.81	142,644	147,592	151,401	2.58	48,707	48,187	49,974	3.71	16,397	17,853	18,269	2.33
XII	39,166	42,333	44,935	6.15	10,287	10,863	11,370	4.67	18,792	20,222	20,372	0.74	10,087	11,248	13,193	17.29
ARMM	461,012	431,889	478,099	10.70	40,361	40,586	61,038	50.39	61,012	62,790	68,095	8.45	359,639	328,513	348,966	6.23
CARAGA	80,542	88,264	93,204	5.60	4,712	4,825	4,774	(1.06)	64,294	66,599	68,041	2.17	11,536	16,840	20,389	21.07
QUARTER	2,918,779	2,983,058	3,149,159	5.57	948,754	946,485	976,539	3.18	926,339	945,945	969,535	2.49	1,043,686	1,090,628	1,203,085	10.31
1st	735,144	745,807	767,178	2.87	219,456	221,179	231,059	4.47	230,247	232,504	243,605	4.77	285,441	292,124	292,514	0.13
2nd	767,236	777,416	836,371	7.58	254,261	246,185	254,881	3.53	239,429	244,208	253,350	3.74	273,546	287,023	328,140	14.33
3rd	678,125	708,251	731,139	3.23	255,498	257,214	258,378	0.45	226,307	239,932	237,383	(1.06)	196,320	211,105	235,378	11.50
4th	738,274	751,584	814,471	8.37	219,539	221,907	232,221	4.65	230,356	229,301	235,197	2.57	288,379	300,376	347,053	15.54

R - Revised

Commercial Fishing

Commercial fish production grew 3.18 percent from 946,485 metric tons in 2000 to 976,539 metric tons in 2001 (Table 2). Commercial fish catch landed in private landing centers, Philippine Fort Development Authority (PFDA) and traditional landing centers surpassed previous year's production performance by 1.14 percent, 1.87 percent and 4.24 percent, respectively.

Majority of the regions (10 regions) managed to outdo their 2000 production performance. Regions V and ARMM showed remarkable production performance in 2001 as compared to previous year's production level. Total commercial fish catch in Region V reached 32,585 metric tons in the year 2001 posting a 49.94 percent increase from 2000 level. This was largely a result of a bigger number of transient boats that unloaded bigger sizes of tuna in Albay and a strikingly noticeable increase in unloadings in the private landing centers in Camarines Sur during the 1st quarter. Likewise, many repaired boats that resumed fishing operation during the second quarter and abundant catch in commercial fishing fleets of in season species like roundscad and big eyed scad during the third quarter and fourth quarter contributed to the increase. ARMM dominated the growth in commercial fish catch at a remarkable 50.39 percent increase due to the absence of commercial fishing boats coming from other regions and fish caught were unloaded mostly in the region during the 3rd and 4th quarters, respectively. Generally, fair weather that prevailed during the two quarters also enabled the fishermen to increase their fishing activities and commercial fishing fleets had more catch of roundscads, tamban and small cavallas. Other regions which indicated improved production are Regions X (19.17%), Region III (14.69%), Region I (12.22%) and Region VIII (11.30%). These regions attributed the increase in production to more frequent fishing operations due to favorable weather condition, abundant catch of migratory fishes such as moonfish, more prevalent use of fish finders, additional fishing gear used and the Bantay-Dagat Program of BFAR.

On the other hand, commercial fish catch in Regions VI, IV and VII dropped by 6.41 percent, 4.78 percent and 4.29 percent, respectively. The decline in production in these regions was attributed to the occurrence of typhoons and early onset of gusty northeast monsoon that caused strong wind and rough seas during the 4th quarter.

Region IX dominated the commercial fish catch supplying 170,194 metric tons or 17 percent of the total commercial fish catch. Region XI (16%) ranked second while NCR-M.M. (14%) ranked third.

Municipal Fishing

For the year 2001, the combined production of municipal marine and inland municipal fisheries reached 969,535 metric tons or an equivalent of 2.49 percent increase over the previous year. Marine fisheries posted a positive growth rate of 4.96 percent which more than offset the recorded negative growth of inland fishing at 10.37 percent as shown in Table 3.

TABLE 2. COMMERCIAL FISH PRODUCTION BY REGION AND BY TYPE OF LANDING CENTER, PHILIPPINES, 1999 - 2001

(METRIC TONS)

REGION	COMMERCIAL			% CHANGE 01/00	PRIVATE			% CHANGE 01/00	PFDA			% CHANGE 01/00	TRADITIONAL			% CHANGE 01/00
	1999	2000	2001		1999	2000	2001		1999	2000	2001		1999	2000	2001	
PHILIPPINES	948,754	946,485	976,539	3.18	151,488	168,696	170,623	1.14	230,211	205,177	209,024	1.87	567,055	572,612	596,892	4.24
CAR																
I	1,863	2,250	2,525	12.22					603	967	990	2.38	1,260	1,283	1,535	19.64
II	12,660	14,130	14,297	1.18									12,660	14,130	14,297	1.18
III	10,950	12,286	14,091	14.69									10,950	12,286	14,091	14.69
NCR - M.M.	160,098	142,849	140,933	(1.34)					152,713	135,739	133,744	(1.47)	7,385	7,110	7,189	1.11
IV	145,143	134,849	128,408	(4.78)					10,057	9,162	5,040	(44.99)	135,086	125,687	123,368	(1.85)
V	22,364	21,732	32,585	49.94	571	655	10,019	1,429.62					21,793	21,077	22,566	7.06
VI	123,299	130,486	122,120	(6.41)	4,751	5,938	4,912	(17.28)	8,865	10,584	9,941	(6.08)	109,683	113,964	107,267	(5.88)
VII	62,547	64,109	61,361	(4.29)									62,547	64,109	61,361	(4.29)
VIII	30,688	32,497	36,169	11.30									30,688	32,497	36,169	11.30
IX	161,502	166,224	170,194	2.39	56,836	59,415	52,878	(11.00)	10,058	8,454	15,606	84.60	94,608	98,355	101,710	3.41
X	19,636	21,207	25,273	19.17	1,726	2,365	2,352	(0.55)					17,910	18,842	22,921	21.65
XI	142,644	147,592	151,401	2.58	87,604	100,323	100,462	0.14	47,915	40,271	43,703	8.52	7,125	6,998	7,236	3.40
XII	10,287	10,863	11,370	4.67									10,287	10,863	11,370	4.67
ARMM	40,361	40,586	61,038	50.39									40,361	40,586	61,038	50.39
CARAGA	4,712	4,825	4,774	(1.06)									4,712	4,825	4,774	(1.06)

TABLE 3. MUNICIPAL FISH PRODUCTION BY REGION, PHILIPPINES, 1999 - 2001

(METRIC TONS)

REGION	MUNICIPAL			% CHANGE 01/00	MARINE			% CHANGE 01/00	INLAND			% CHANGE 01/00
	1999	2000	2001		1999	2000	2001		1999	2000	2001	
	PHILIPPINES	926,339	945,945		969,535	2.49	779,820		793,824	833,188	4.96	
CAR	1,071	1,075	1,150	6.98					1,071	1,075	1,150	6.98
I	23,006	23,392	22,414	(4.18)	22,482	22,844	21,583	(5.52)	524	548	831	51.64
II	15,056	17,636	19,157	8.62	11,776	13,809	14,176	2.66	3,280	3,827	4,981	30.15
III	10,220	11,176	12,795	14.49	8,213	8,867	9,893	11.57	2,007	2,309	2,902	25.68
NCR - M.M.	4,156	3,982	4,166	4.62	4,156	3,982	4,166	4.62				
IV	259,580	257,835	241,882	(6.19)	154,893	153,004	154,247	0.81	104,687	104,831	87,635	(16.40)
V	72,393	73,805	87,478	18.53	72,002	73,247	86,408	17.97	391	558	1,070	91.76
VI	132,625	134,227	135,928	1.27	131,191	132,838	134,247	1.06	1,434	1,389	1,681	21.02
VII	45,323	47,482	44,736	(5.78)	45,268	47,424	44,653	(5.84)	55	58	83	43.10
VIII	37,639	37,915	42,270	11.49	36,922	37,199	41,640	11.94	717	716	630	(12.01)
IX	116,714	122,543	129,398	5.59	116,448	122,225	129,040	5.58	266	318	358	12.58
X	15,751	17,079	21,679	26.93	15,490	16,840	21,483	27.57	261	239	196	(17.99)
XI	48,707	48,187	49,974	3.71	47,811	47,197	48,930	3.67	896	990	1,044	5.45
XII	18,792	20,222	20,372	0.74	6,245	6,295	7,436	18.13	12,547	13,927	12,936	(7.12)
ARMM	61,012	62,790	68,095	8.45	45,408	44,344	50,350	13.54	15,604	18,446	17,745	(3.80)
CARAGA	64,294	66,599	68,041	2.17	61,515	63,709	64,936	1.93	2,779	2,890	3,105	7.44

Quarterly output shows that the marine sector has maintained its positive performance over the year. On the other hand, inland fishing shows a declining catch from first to fourth quarters of the year as compared to year 2000. But despite these negative increments from inland fishing, the municipal sector still managed to attain an over all increase of 2.49 percent. Production level of municipal fishing reached its peak during the second quarter with 253,350 metric tons and the lowest was during the fourth quarter with 235,197 metric tons. The frequent occurrence of typhoons in some regions resulted in a revised production at negative 1.06 percent in the third quarter. The lowest output was in the fourth quarter but grew at 2.57 percent from same quarter last year.

Regional production of marine sub sector shows that almost all regions experienced remarkable increases with the exception of Regions I and VII. In terms of growth, the top four (4) regions were X, V, III and VIII with corresponding increases of 26.93 percent, 18.53 percent, 14.49 percent and 11.49 percent, respectively.

The abundant catch of sardines, slipmouth, roundscad, big-eyed scad, and tuna from payaws throughout the year contributed to the increase in volume of unloadings of municipal boats. Some regions increased their unloadings thru additional fishing trips and fishing effort. The rehabilitation of fish sanctuaries also contributed to the improvement of catch of municipal fishermen.

Looking at the absolute values of changes in production, Region V obtained the highest contribution at 13,673 metric tons followed by Regions IX and ARMM with 6,855 and 5,305 metric tons, respectively. The strict implementation of banning commercial fishing vessels from operating in San Miguel Bay benefited municipal fishermen in Camarines Sur resulting in a significant increase in Region V production. The huge volume of unloadings of assorted species intended for fish meal also positively affected output for the year.

The only two regions that recorded decreased volume of unloadings of marine species for the year 2001 were Regions I and VII with 5.52 percent and 5.84 percent decrease, respectively. Annual estimated catch of Cebu and Bohol provinces showed decreasing volume due to alleged encroachment of commercial fishing boats in municipal waters, the effects of typhoons Nanang and Quedan and transfer of unloading of some boats to nearby provinces.

Meanwhile, Ilocos Norte and Ilocos Sur exhibited small unloadings during the past year compared to the previous year due to the occurrence of series of typhoons that hit the region during the third and fourth quarters of the year which adversely affected fishing activities of municipal fishermen.

The unabated pollution of lakes, rivers and other inland bodies of water resulted in declining production of freshwater species. Added to this was the implementation of ordinance banning gathering of shells in Laguna Lake, thus, affecting production of Rizal and Laguna. The polluted water and lack or absence of saline water in Taal Lake in Batangas contributed to the drop in production in inland fishing of Region IV by 16.40 percent.

The unstable political condition in Mindanao especially in Lanao provinces and other Muslim territories also hampered and hindered fishing in Liguasan Marsh, Lake Lanao and Buluan Lake resulting in 7.12 percent and 3.80 percent negative growth rates for Regions XII and ARMM, respectively. Meanwhile, Region X blamed the quarrying and flooding in Misamis Oriental as the reasons for the 17.99 percent decrease in catch from rivers and lakes.

Aquaculture

The production from aquaculture registered a positive growth of 10.31 percent in 2001 compared with 2000. The growth was noted in all types of aquaculture except for freshwater and marine fish pens. The percent changes of different types of aquaculture are as follows:

Type of Aquafarm	Percent Change
Brackishwater Fishpond	10.17
Freshwater Fishpond	25.54
Freshwater Fishcage	11.03
Freshwater Fishpen	(13.08)
Marine Fishcage	55.37
Marine Fishpen	(10.03)
Mariculture	10.24

The increment of 10.17 percent from brackishwater fishpond and 25.54 percent from freshwater fishponds were realized due to availability of better quality fingerlings that allowed operators to increase stocking density. This was coupled with improved feeding practices. Similarly, production increase of 11.03 percent and 55.37 percent from freshwater and marine fishcage, respectively, were attained due to aggressive drive and support of BFAR in Cagayan Valley and the loan assistance extended by the LGU to fisher folk's cooperative in Ifugao. These supports encouraged farmers to venture in fish culture while those who were already in aquaculture increased their areas. The production from the newly opened areas along Liguasan Marsh in Sultan Kudarat contributed to the production increment from fishcages. Also, production from the newly opened areas in Davao del Sur and Negros Occidental contributed to the increase in production. Mariculture registered an increment of 10.24 percent which was contributed by seaweed and oyster farmers. The increase in the production of seaweeds was attained since farmers were encouraged to increase their area due to high demand and favorable weather. On the other hand, operators from Bulacan produced more oysters since they used productive spats that enabled them to harvest bigger sizes of oyster. The decline of production from freshwater and marine fishpens of 13.08 percent and 10.03 percent, respectively, was mainly due to the destruction of pens caused by typhoons. These pens were not yet rehabilitated.

TABLE 4. AQUACULTURE PRODUCTION BY CULTURE ENVIRONMENT AND BY REGION, PHILIPPINES, 1999 - 2001

(METRIC TONS)

REGION	AQUACULTURE			BRACKISHWATER FISHPOND			FRESHWATER FISHPOND			FRESHWATER FISHCAGE			% CHANGE 01/00
	% CHANGE			% CHANGE			% CHANGE			% CHANGE			
	1999 R	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001	
PHILIPPINES	1,043,686	1,090,628	1,203,085	207,698	236,029	260,035	39,754	45,922	57,650	35,166	38,350	42,581	11.03
CAR	1,880	1,959	2,417				455	470	510	1,425	1,489	1,907	28.07
I	28,103	29,847	32,592	15,473	17,096	18,792 *	1,555	1,635	2,503	7	7	9	28.57
II	2,626	3,269	4,749	650	756	1,025 **	1,511	1,726	2,215	458	779	1,483	90.37
III	94,968	113,348	154,478	59,652	71,987	98,073	33,317	38,282	48,058	60	59	59	0.00
NCR - M.M.	1,263	1,128	1,388	509	450	635	664	1,247	1,447	134	56	77	37.50
IV	208,383	250,611	249,818	15,536	15,464	17,224	72	92	129	26,711	28,886	30,250	4.72
V	17,190	19,528	30,451	3,970	3,850	3,862	179	263	290	3,958	4,189	4,595	9.69
VI	81,146	92,285	99,548	51,520	61,538	57,934	7	9	28				
VII	51,373	52,954	85,434	8,704	8,413	8,279	63	57	66				
VIII	7,873	8,316	12,879	1,691	1,812	1,967	61	65	87				
IX	148,860	140,476	125,488	22,196	25,268	21,053	187	208	198	1,982	1,782	1,763	(1.07)
X	2,362	2,453	3,026	2,135	2,178	2,681	864	945	955	408	1,062	2,387	124.76
XI	16,397	17,853	18,269	12,266	12,896	13,144	741	848	1,035				
XII	10,087	11,248	13,193	8,753	9,148	9,360	30	36	37	23	25	36	44.00
ARMM	359,639	328,513	348,966	2,182	2,039	2,126	48	39	92				
CARAGA	11,536	16,840	20,389	2,461 **	3,134 **	3,880 **							(6.25)

REGION	FRESHWATER FISHPEN			MARINE FISHPEN			MARINE FISHCAGE			MARICULTURE			% CHANGE 01/00
	% CHANGE			% CHANGE			% CHANGE			% CHANGE			
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001	
PHILIPPINES	30,103	27,529	23,927	2,918	2,913	4,526	6,049	6,379	5,759	721,998	733,506	808,627	10.24
CAR													
I				2,258	2,299	3,186	5,581	5,549	4,745		3,229	3,357	2.94
II				20		8	62	82	70		7	8	125.00
III	12	28	27	(3.57)		26							
NCR - M.M.	620	622	676	8.68									
IV	29,464	26,862	23,196	80	20	2		11	22	135,928	178,121	177,677	(0.25)
V				b/	2	42				9,190	11,395	21,823	91.51
VI				22	16	19			45	29,425	30,468	41,260	35.42
VII				12	57	300		2	47	42,650	44,473	76,780	72.64
VIII				19	23	26		44	46	6,100	6,424	10,820	68.43
IX				18	62	53	26	44	46	126,559	115,037	104,249	(9.38)
X				18	23	29	2	6	12	20	38	106	178.95
XI				428	377	807	368	642	723	489	1,211	877	(27.58)
XII										185	190	411	116.32
ARMM	7	17	28	64.71						357,397	326,396	346,739	6.23
CARAGA				43	34	28	10	43	29	8,974	13,574	16,345	20.41

R - Revised

* Includes brackishwater fishpen

*** Includes production from brackishwater fishpen and fishcages

b/ less than 1 metric ton

Milkfish. The increase in production of milkfish by 6.17 percent as compared to 2000 was realized from brackishwater fishpond and fishcages from marine and freshwater environment. The increment was attributed to availability of quality fingerlings that encouraged operators in Bulacan to rehabilitate their damaged ponds coupled with improved feeding practices in Pampanga. However, production in Negros Occidental and Aklan decreased due to flashfloods that resulted to overflowing of ponds.

The increase in milkfish production by 3.59 percent from freshwater fishcage was attained from newly opened areas along Liguasan Marsh in Sultan Kudarat. Similarly, production from newly opened marine fishcages in Pangasinan, Davao del Sur and Negros Occidental contributed an increase of almost 58 percent.

On the contrary, production of milkfish from fishpens in marine and freshwater environment declined by 8.92 percent and 79.16 percent, respectively. The reduction was attributed mainly to destruction of pens caused by typhoons in Rizal and Pangasinan.

TABLE 5. AQUACULTURE: MILKFISH PRODUCTION OF TOP PRODUCING PROVINCES, BY CULTURE ENVIRONMENT, PHILIPPINES, 1999 - 2001 (METRIC TONS)

CULTURE ENVIRONMENT/ PROVINCE	1999	2000	2001	% CHANGE 01/00
PHILIPPINES	180,715	204,668	217,289	6.17
Brackishwater Fishpond	155,797	181,230	203,575	12.33
Pangasinan	13,813	15,395	16,789	9.05
Bulacan	17,333	28,110	45,513	61.91
Pampanga	8,867	9,373	13,463	43.64
Bataan	6,315	6,564	8,646	31.72
Quezon	10,805	10,835	12,500	15.37
Negros Occidental	18,498	16,851	14,351	(14.84)
Iloilo	13,037	16,024	16,369	2.15
Capiz	9,498	15,755	15,897	0.90
Aklan	7,955	9,758	7,706	(21.03)
Other Provinces*	49,676	52,565	52,341	(0.43)
Freshwater Fishpen	15,973	13,605	2,835	(79.16)
Rizal	15,353	12,983	2,159	(83.37)
Metro Manila	620	622	676	8.68
Freshwater Fishcage	253	918	951	3.59
Sultan Kudarat	253	917	951	3.71
Other Provinces		1		
Marine Fishpen	5,966	6,213	5,659	(8.92)
Pangasinan	5,524	5,443	4,739	(12.93)
Other Provinces	442	770	920	19.48
Marine Fishcage	2,726	2,702	4,269	57.99
Pangasinan	2,251	2,292	3,174	38.48
Other Provinces	475	410	1,095	167.07

*Includes brackishwater fishcages and pens

Tilapia. An increment of 16.16 percent from tilapia production was noted in 2001 compared with 2000. This was observed from different culture environment except from freshwater fishpen. The increment was achieved due to availability of better quality fingerlings that allowed operators from Pampanga, Bulacan, Tarlac and Pangasinan to increase stocking density and improved feeding practices. These provinces accounted for 73.3 percent of brackishwater and freshwater fishpond production. Farmers in Isabela converted their small paddies to fishponds to avail of the government fingerlings dispersal.

The growth from freshwater fishcage production of 10.49 percent was contributed by Batangas, Isabela and Ifugao. Fishcage operators in Batangas intensified their feeding and increased their stocking due to availment of quality fingerlings. On the other hand, the aggressive drive and support of BFAR and the extension of loan assistance to fisherfolk's cooperative encouraged fisherfolks in Ifugao to venture in fish culture.

However, a reduction of 45.96 percent in the tilapia produce of Rizal fishpen operators was noted. The reduction of tilapia produce from Rizal was an effect of shifting from tilapia to carp culture.

TABLE 6. AQUACULTURE: TILAPIA PRODUCTION OF TOP PRODUCING PROVINCES, BY CULTURE ENVIRONMENT, PHILIPPINES, 1999-2001

(METRIC TONS)

CULTURE ENVIRONMENT/ PROVINCE	1999	2000	2001	% CHANGE 01/00
PHILIPPINES	83,462	92,330	107,250	16.16
Brackishwater Fishpond	7,828	8,032	9,486	18.10
Bataan	495	561	994	77.18
Bulacan	1,635	1,226	1,260	2.77
Pampanga	2,540	2,724	3,310	21.51
Other Provinces	3,158	3,521	3,922*	10.34
Freshwater Fishpond	36,705	43,184	54,318	25.78
Pangasinan	1,016	1,064	1,878	76.50
Isabela	701	686	787	14.72
Bulacan	965	2,845	8,750	207.56
Pampanga	25,055	27,001	29,344	8.68
Nueva Ecija	3,941	4,930	5,195	5.38
Tarlac	1,157	1,669	2,208	32.29
South Cotabato	602	445	489	9.89
Other Provinces	3,268	4,544	5,667	24.71
Freshwater Fishcage	34,840	37,377	41,299	10.49
Isabela	432	758	1,438	89.71
Batangas	21,785	20,643	22,918	11.02
Laguna	2,968	6,178	5,707	(7.62)
Quezon	1,049	1,255	799	(36.33)
Rizal	851	758	285	(62.40)
Camarines Sur	3,321	3,459	3,538	2.28
South Cotabato	1,978	1,779	1,759	(1.12)
Ifugao	1,238	1,280	1,689	31.95
Other Provinces	1,218	1,267	3,166	149.88
Freshwater Fishpen	4,059	3,688	2,147	(41.78)
Rizal	3,850	3,301	1,784	(45.96)
Laguna	190	342	308	(9.94)
Other Provinces	19	45	55	22.22
Marine Fishpen	30	49		
La Union	30	49		

*Includes brackishwater fishpen

Tiger Prawn. Production of tiger prawn registered a meager increase of 0.26 percent in 2001. The increase in production was realized in Bataan, Pampanga and Lanao del Norte due to low mortality rate, intensive feeding, good management and maintenance of farms. Fishpond operators in Pampanga were encouraged to increase their area due to conducive weather for prawn culture. The decline of tiger prawn production in Bohol at 32.15 percent and Zamboanga del Sur at 30.57 percent was caused by overflowing of ponds, repair of damaged dikes and insufficient working capital.

Mudcrab. The overall production of mudcrab registered a decrease of 7.31 percent. The decrease in production from Bulacan was caused by shifting from mudcrab to milkfish and tiger prawn culture. On the other hand, growers in Sorsogon were not able to sustain the growth of mudcrab due to high cost of feeds. On the contrary, the positive growth of 109.72 percent attained by Pangasinan fisher folks was due to availability of crablets.

Endeavor Prawn and White Shrimp. Increased production of endeavor prawn was noted in the provinces of Masbate, Quezon and Lanao del Norte. About 59 percent of the total endeavor prawn production was contributed by these provinces. The proliferation of endeavor prawn was caused by the natural entry of this species in the fishponds. Similarly, more white shrimps were harvested in 2001 due to its natural entry. Natural entry occurred during the water exchange of the fishponds.

TABLE 7. AQUACULTURE: BRACKISHWATER FISHPOND PRODUCTION OF SELECTED SPECIES BY PROVINCE, PHILIPPINES, 1999-2001

(METRIC TONS)

SPECIES/PROVINCE	1,999	2,000	2,001	% CHANGE 01/00
Tiger Prawn	37,896	40,468	40,574	0.26
Bataan	2,498	2,607	2,767	6.14
Pampanga	15,866	16,379	16,638	1.58
Bohol	1,622	1,611	1,093	(32.15)
Lanao del Norte	4,769	4,936	5,102	3.36
Zamboanga del Sur	6,532	8,047	5,587	(30.57)
Other Provinces	6,609*	6,888*	9,387	36.44
Mudcrab	4,820	4,965	4,602	(7.31)
Pangasinan	72	72	151	109.72
Bulacan	199	113	42	(62.83)
Pampanga	2,039	2,139	2,158	0.89
Sorsogon	1,834	1,856	1,424	(23.28)
Other Provinces	676**	785**	827	5.74
Endeavor Prawn	337	329	411	24.92
Cagayan	57	64	55	(14.06)
Quezon	59	79	119	50.63
Masbate	42	22	40	81.82
Lanao del Norte	56	59	82	38.98
Other Provinces	123	105	115	9.52
White Shrimp	1,038	1,014	1,281	26.33
La Union	74	70	93	32.86
Quezon	71	95	102	7.37
Zamboanga del Sur	473	501	463	(7.58)
Surigao del Sur	116	112	112	-
Other Provinces	304	236	511	116.53

* Includes marine cage

Carp. Production of carp in 2001 increased by 83.17 percent as compared to 2000. The growth in the production of carp was remarkable from fishcages in Rizal and Metro Manila. Fishpen and fishcage operators in these areas were encouraged to culture carp since this species is easier to manage and resistant to water turbidity of the area. Moreover, they thought that it would be a good substitute for source of protein at a lower cost to the consumers.

Catfish. An increase of 60.94 percent in the production of catfish was realized in 2001 as compared in 2000 due to higher stocking and improved feeding practices in top producing province of Bulacan. Decrease in production, however, was experienced by fishpond operators in Isabela at 2.94 percent and Nueva Ecija at 8.37 percent due to insufficient supply of fingerlings.

TABLE 8. AQUACULTURE: FRESHWATER FISHPOND/PEN/CAGE PRODUCTION OF CARP AND CATFISH BY PROVINCE, PHILIPPINES, 1999 – 2001

(METRIC TONS)

SPECIES/PROVINCE	1999	2000	2001	% CHANGE 01/00
CARP	10,575	10,682	19,566	83.17
Fishpond	432	391	290	(25.83)
Nueva Ecija	158	155	104	(32.90)
Tarlac	78	39		(100.00)
Quezon	12	8	6	(25.00)
Pampanga	16	18	17	(5.56)
Lanao Norte	100	108	117	8.33
Other Provinces	68	63	46	(26.98)
Fishpen	10,071	10,236	18,945	85.08
Rizal	10,071	10,236	18,945	85.08
Fishcage	72	55	331	501.82
Rizal	51	45	286	535.56
Quezon	7	7	5	(28.57)
Metro Manila	14	3	40	1,233.33
CATFISH ^{1/}	1,112	937	1,508	60.94
Isabela	133	170	165	(2.94)
Bulacan	401	145	789	444.14
Nueva Ecija	270	203	186	(8.37)
Other Provinces	308	419	368	(12.17)

1/ From freshwater fishpond

Seaweeds. The total production of seaweeds in 2001 rose by 10.51 percent. The 239.01 percent increase in production was realized by Camarines Norte farmers due to high price of seaweeds in the area that encouraged them to increase their area. Likewise, the provinces of Palawan, Antique, Bohol, Zamboanga del Sur, Zamboanga del Norte and Sulu registered a positive growth due to favorable weather and high demand that encouraged farmers in these provinces to increase area for seaweed culture. On the other hand, a reduction of produce in the major producing provinces of Tawi-Tawi and Zamboanga City was noted due to occurrence of ice-ice disease caused by water pollution and financial problems of the fisher folks to sustain seaweed culture.

Oyster. The production of oyster rose to 33.89 percent due to the contribution of Bulacan fisher folks by using productive spats that enabled them to harvest bigger sizes of oyster. On the contrary, Cavite suffered a decline in production of 37.08 percent this year due to siltation of farms as an effect of flashfloods.

Mussel. Production of mussel was registered at a decrease of 20.31 percent. The reduction of 34.79 percent in the produce of Cavite operators was caused by stunted growth of mussel due to poor quality spats coming from the river. The reduction in the produce of Aklan was attributed to reduced area harvested due to siltation and the strict implementation of an ordinance limiting the areas for mussel culture to clear ways for bancas along the rivers. Likewise, some growers in Capiz stopped operation as a consequence of flashfloods. The siltation of Himamaylan River affected the growth of mussel in Negros Occidental.

TABLE 9. AQUACULTURE: MARICULTURE PRODUCTION BY SPECIES, BY PROVINCE, PHILIPPINES, 1999 – 2001

(METRIC TONS)

SPECIES/PROVINCE	1999	2000	2001	% CHANGE 01/00
SEAWEEDES	691,671	702,475	776,286	10.51
Palawan	123,386	144,950	145,839	0.61
Camarines Norte	5,018	5,012	16,991	239.01
Antique	17,222	18,831	30,502	61.98
Bohol	41,099	43,134	74,753	73.30
Zamboanga del Sur	19,816	20,500	24,908	21.50
Zamboanga City	98,131	81,947	62,785	(23.38)
Zamboanga del Norte	8,010	11,907	12,489	4.89
Sulu	168,205	157,386	184,868	17.46
Tawi-Tawi	189,192	168,398	156,583	(7.02)
Other Provinces	21,592	50,410	66,568	32.04
OYSTER	14,804	14,222	19,042	33.89
Cavite	5,143	2,737	1,722	(37.08)
Pangasinan	2,952	2,974	3,099	4.20
Bulacan	1,845	2,910	8,165	180.58
Capiz	2,250	2,304	2,620	13.72
Negros Occidental	1,230	1,147	1,225	6.80
Other Provinces	1,384	2,150	2,211	2.84
MUSSEL	15,654	16,957	13,513	(20.31)
Cavite	5,100	6,628	4,322	(34.79)
Capiz	4,237	4,449	3,677	(17.35)
Western Samar	2,381	2,462	2,524	2.52
Negros Occidental	2,024	1,615	1,497	(7.31)
Aklan	1,204	1,169	757	(35.24)
Other Provinces	708	634	736	16.09

Wholesale Prices of Selected Fish Species

The wholesale price of milkfish and tilapia decreased by 0.99 percent and 2.03 percent, respectively, in 2001 as compared in 2000. The monthly price exhibited a decreasing movement almost throughout the year. It was only from the months of September to November that wholesale price of milkfish increased from 2.90 percent to 4.23 percent. The percentage decrease in the wholesale price of milkfish was more pronounced in April while the increase was in October. On the other hand, wholesale price of tilapia registered an increment during the months of June, July, September and November. The percentage decrease in the wholesale price of tilapia during the first semester was higher than the second semester.

On the other hand, wholesale prices of marine fish species exhibited an upward movement. Wholesale price of indian mackerel rose by 6.08 percent, roundscad at 7.11 percent and frigate tuna at 10.65 percent from 2000 prices. The pronounced wholesale price change was noted during the months of August (16.41%) and September (12.79%) for indian mackerel; August (15.38%), June (11.76%) and July (10.76%) for roundscad and for frigate tuna, the months of March (21.63%), April (20.92%) and August (18.34%).

**TABLE 10. MONTHLY WHOLESALE PRICES OF MILKFISH AND TILAPIA,
PHILIPPINES, 1999 - 2001**

(PER KILOGRAM)

SPECIES/ MONTH	WHOLESALE			% CHANGE 01/00
	1999	2000	2001	
MILKFISH				
January	72.35	70.66	70.4	(0.37)
February	72.36	72.63	69.57	(4.21)
March	70.7	70.33	68.08	(3.20)
April	68.01	72.17	68.27	(5.40)
May	64.36	69.79	67.36	(3.48)
June	60.86	66.84	64.42	(3.62)
July	59.314	64.7	63.63	(1.65)
August	60.83	66.09	66.06	(0.05)
September	64.17	63.66	65.63	3.09
October	64.36	61.95	64.57	4.23
November	66.48	63.4	65.24	2.90
December	65.75	67.36	67.1	(0.39)
Average Price	65.75	67.36	66.69	(0.99)
TILAPIA				
January	57.85	48.8	44.5	(8.81)
February	59.67	47.44	43.67	(7.95)
March	50.28	47.5	44.42	(6.48)
April	50.16	50.33	44.57	(11.44)
May	46.48	47.98	42.96	(10.46)
June	48.01	47.83	51.63	7.94
July	53.04	47.78	52.94	10.80
August	49.31	47.91	46.58	(2.78)
September	48.94	42.89	45.54	6.18
October	46.07	43.7	43.08	(1.42)
November	48.36	43.9	45.08	2.69
December	49.08	44.69	44.37	(0.72)
Average Price	50.16	46.75	45.8	(2.03)

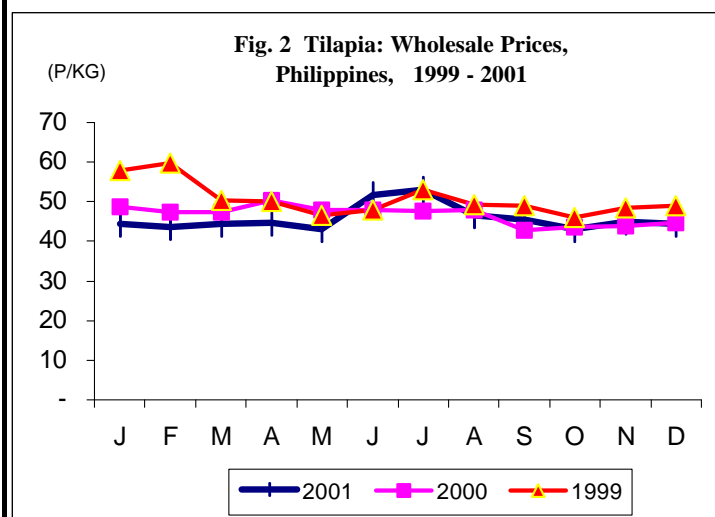
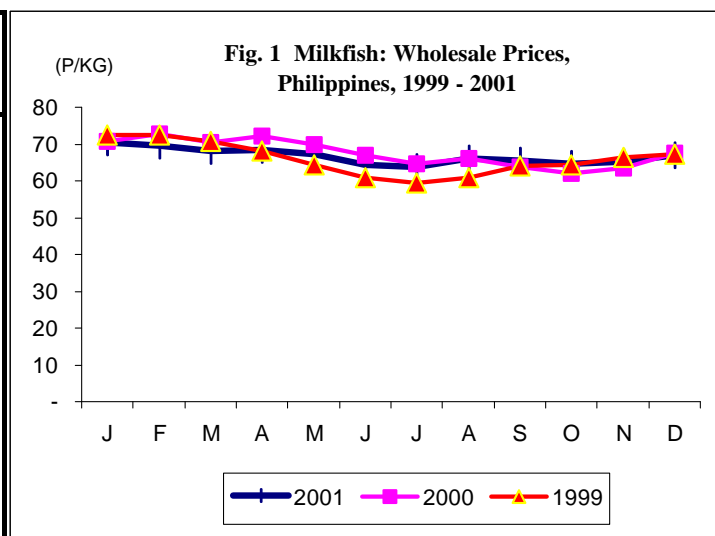
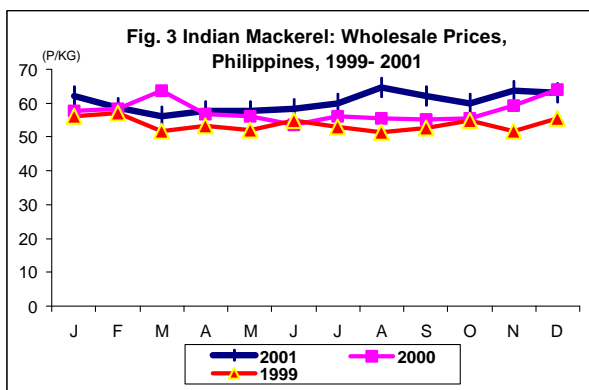
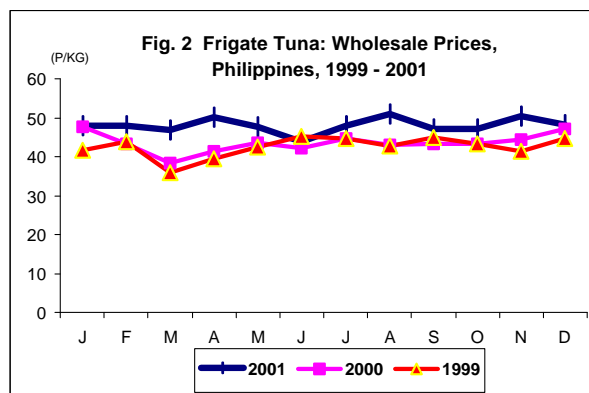
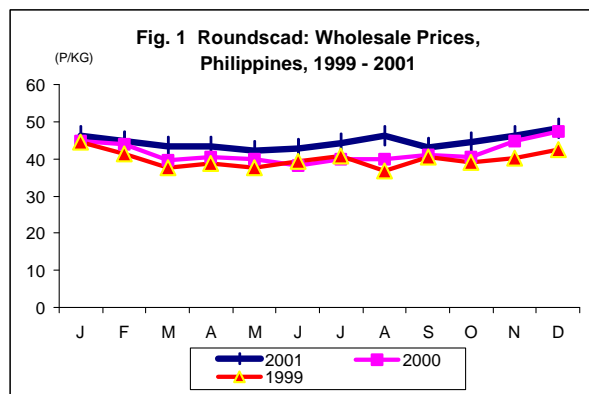


TABLE 11. MONTHLY WHOLESALE PRICES OF ROUNDSCAD, FRIGATE TUNA, AND INDIAN MACKEREL, PHILIPPINES, 1999 - 2001

(PER KILOGRAM)

SPECIES/MONTH	WHOLESALE			% CHANGE 01/00
	1999	2000	2001	
ROUNDSCAD				
January	44.42	44.90	46.25	3.01
February	41.31	43.99	44.79	1.82
March	37.55	39.60	43.32	9.39
April	38.74	40.37	43.47	7.68
May	37.68	39.88	42.18	5.77
June	39.38	38.19	42.68	11.76
July	40.69	39.86	44.15	10.76
August	39.63	39.99	46.14	15.38
September	40.35	40.98	43.18	5.37
October	39.11	40.40	44.37	9.83
November	40.16	44.75	46.21	3.26
December	42.40	47.27	48.34	2.26
Average Price	40.03	41.49	44.44	7.11
FRIGATE TUNA				
January	41.64	47.72	47.83	0.23
February	43.97	43.31	47.93	10.67
March	35.80	38.42	46.73	21.63
April	39.41	41.49	50.17	20.92
May	42.53	43.60	47.65	9.29
June	45.16	42.08	43.97	4.49
July	44.60	44.57	47.98	7.65
August	42.64	43.13	51.04	18.34
September	44.89	43.30	47.24	9.10
October	43.31	43.38	47.13	8.64
November	41.41	44.44	50.31	13.21
December	44.68	47.20	48.30	2.33
Average Price	42.41	43.37	47.99	10.65
INDIAN MACKEREL				
January	56.03	57.67	61.98	7.47
February	57.22	58.40	58.68	0.48
March	51.82	53.63	56.06	4.53
April	53.42	56.87	57.86	1.74
May	51.89	56.23	57.66	2.54
June	54.72	53.68	58.22	8.46
July	52.88	56.26	59.96	6.58
August	51.47	55.65	64.78	16.41
September	52.71	55.14	62.19	12.79
October	54.73	55.63	59.82	7.53
November	51.70	59.34	63.83	7.57
December	55.50	63.94	62.95	1.55
Average Price	53.60	56.79	60.24	6.08



National Fish Supply and Use

As shown in Table 12, the total supply of fish from 1999 to 2001, excluding that of seaweeds, ranged from 2.3 to 2.4 million metric tons. The apparent fish consumption was 1.98 to 2.06 million metric tons which equivalent to a decreasing per capita consumption from 26.80 to 26.43 kilos. The exported production increased over the three-year period 1999-2001 that ranged from 271.7 to 289.4 thousand metric tons. On the contrary, food fish import decline during the same period that ranged from 120.6 to 48.8 thousand metric tons. This left a fish net export from 151.12 to 240.6 thousand metric tons.

TABLE 12. FISH SUPPLY AND USE, PHILIPPINES, 1999 – 2001
(METRIC TONS)

ITEM	1999	2000 F	2001 Preliminary
TOTAL FISH SUPPLY	2,347,650	2,400,760	2,421,663
Production	2,227,064	2,280,579	2,372,873
Commercial	948,754	946,485	976,539
Municipal	926,339	945,945	969,535
Aquaculture ^{a/}	351,971	388,149	426,799
Food Fish Import	120,586	120,181	48,790
TOTAL FISH USE	2,195,649	2,400,760	2,421,663
Apparent Food Use	1,984,587	2,028,618	2,059,768
Kg. Per Capita	26.80	26.52	26.43
Exported Production	271,708	282,837	289,368
Non-food Use	91,355	89,305	72,527
POPULATION	74,045,637	76,498,735	77,925,894

a/Excluding seaweeds.

Regional Fish Production and Use

The preliminary estimates on regional fish production and use for 2001 is shown on Table 13. The total fish production, excluding seaweeds, was about 2.4 million metric tons. The apparent food consumption and non-food use were noted at 2,059,768 and 72,527 metric tons, respectively, resulting in a surplus of 240,578 metric tons. The surplus came from the six regions, namely: Western Mindanao (219,010 m.t.), Southern Tagalog (81,392 m.t.), Western Visayas (122,449 m.t.), Southern Mindanao (79,594 m.t.), ARMM (54,042 m.t.) and CARAGA (7,352 m.t.). The other regions had fish deficit that ranged from as low as 3,559 m.t. (Bicol Region) to as high as 82,752 m.t. (NCR).

TABLE 13. FISH: PRELIMINARY ESTIMATES ON PRODUCTION AND USE BY REGION, PHILIPPINES, 2001
(METRIC TONS)

REGION	PRODUCTION				CONSUMPTION		NON-FOOD USE	SURPLUS/ (DEFICIT) Preliminary
	Com-Mercial	Muni-cipal	Aqua-culture a/	Total	Total	Kg./Capita		
PHILIPPINES	976,539	969,535	426,799	2,372,873	2,059,768	26.43	72,527	240,578
NCR	140,933	4,166	1,388	146,487	229,239	23.08		(82,752)
CAR		1,150	2,417	3,567	23,240	17.02		(19,673)
Ilocos Region	2,525	22,414	32,592	57,531	102,387	24.38	11	(44,867)
Cagayan Valley	14,297	19,157	4,749	38,203	52,650	18.72	2	(14,449)
Central Luzon	14,091	12,795	154,478	181,364	199,665	24.86	23	(18,324)
Southern Tagalog	128,408	241,882	78,185	448,475	298,490	25.31	68,593	81,392
Bicol Region	32,585	87,478	9,373	129,436	132,908	28.43	87	(3,559)
Western Visayas	122,120	135,928	68,788	326,836	203,609	32.79	778	122,449
Central Visayas	61,361	44,736	8,787	114,884	178,079	31.24	566	(63,761)
Eastern Visayas	36,169	42,270	4,583	83,022	114,400	31.69	118	(31,496)
Western Mindanao	170,194	129,398	21,485	321,077	101,797	32.93	270	219,010
Northern Mindanao	25,273	21,679	2,920	49,872	72,365	26.34	50	(22,543)
Southern Mindanao	151,401	49,974	18,001	219,376	139,655	26.91	127	79,594
Central Mindanao	11,370	20,372	12,782	44,524	66,333	25.53	28	(21,837)
ARMM	61,038	68,095	2,227	131,360	76,422	31.68	896	54,042
CARAGA	4,774	68,041	4,044	76,859	68,529	32.70	978	7,352

a/Excluding seaweeds.