FISHERIES SITUATION REPORT
January – December 2002

Overall performance of the fisheries sector in 2002 grew by 6.38 percent, from last year's production of 3,166,530 metric tons to 3,368,519 metric tons. Of the three (3) fisheries sub-sectors, highest production increment was observed on aquaculture with 9.65 percent. Volume of production of commercial and municipal sub-sectors improved by 6.64 percent and 2.00 percent, respectively.

Fisheries production grew by 6.38 percent mainly from increments in Regions I, II, IV-B, NCR and IX. The improved marine fish production in these regions was attributed to the increase number of fishing trips during the year. Moreover, there was additional wharf in Ilocos Sur and expansion of seaweeds areas in Palawan. Remarkable production increment at the NCR was attributed to the rehabilitation of fish cages and pens as well as the abundance of natural food in the area which allowed fishes to grow faster.

Aquaculture contributed the highest 40 percent share of total fish production followed by commercial fishing with 31 percent and municipal fishing, the least with 29 percent.

Fig 1. Fisheries Production by Sub-sector, Philippines, Jan-Dec., 2002

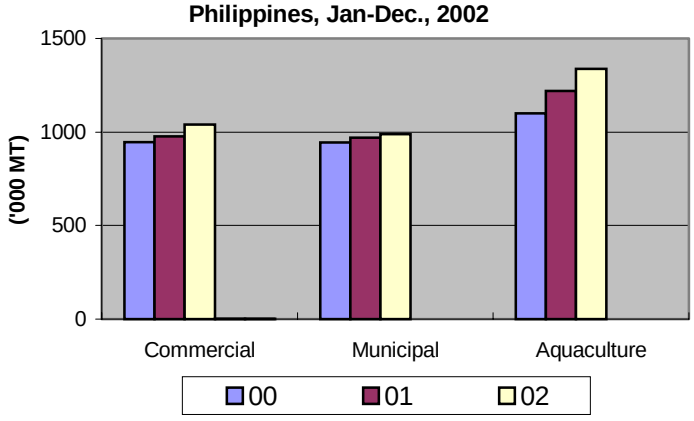


Fig. 2. Percent Distribution of Fish Production by Sub-sector, Philippines, Jan-Dec, 2002

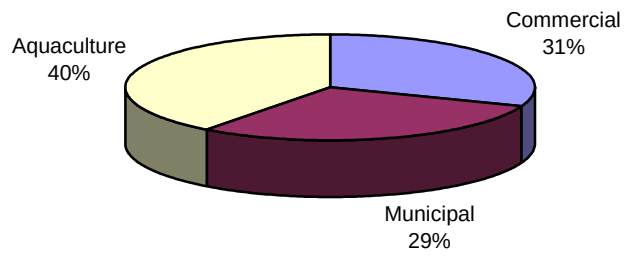


TABLE 1. FISHERIES PRODUCTION BY SECTOR, BY REGION AND BY QUARTER, PHILIPPINES, 2000 - 2002

(METRIC TONS)

REGION/ QUARTER	FISHERIES			% CHANGE	COMMERCIAL			% CHANGE	MUNICIPAL			% CHANGE	AQUACULTURE			% CHANGE
	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01
PHILIPPINES	**2,993,332**	**3,166,530**	**3,368,519**	**6.38**	**946,485**	**976,539**	**1,041,360**	**6.64**	**945,945**	**969,535**	**988,938**	**2.00**	**1,100,902**	**1,220,456**	**1,338,221**	**9.65**
CAR	3,279	3,572	3,516	(1.57)					1,075	1,150	1,090	(5.22)	2,204	2,422	2,426	0.17
I	60,805	63,617	73,358	15.31	2,250	2,525	3,470	37.43	23,392	22,414	26,895	19.99	35,163	38,678	42,993	11.16
II	35,202	38,417	43,053	12.07	14,130	14,297	16,151	12.97	17,636	19,157	21,601	12.76	3,436	4,963	5,301	6.81
III	140,168	185,246	182,253	(1.62)	12,286	14,091	11,506	(18.35)	14,127	16,082	18,202	13.18	113,755	155,073	152,545	(1.63)
NCR	147,959	146,487	167,210	14.15	142,849	140,933	159,718	13.33	3,982	4,166	2,767	(33.58)	1,128	1,388	4,725	240.42
IV-A	354,102	326,728	310,715	(4.90)	100,368	94,967	92,631	(2.46)	155,764	135,542	121,071	(10.68)	97,970	96,219	97,013	0.83
IV-B	285,855	289,246	363,464	25.66	34,481	33,441	36,149	8.10	99,120	103,053	130,766	26.89	152,254	152,752	196,549	28.67
V	115,065	150,514	158,510	5.31	21,732	32,585	35,520	9.01	73,805	87,478	92,233	5.44	19,528	30,451	30,757	1.00
VI	356,998	357,596	349,928	(2.14)	130,486	122,120	117,924	(3.44)	134,227	135,928	127,406	(6.27)	92,285	99,548	104,598	5.07
VII	164,545	191,531	203,069	6.02	64,109	61,361	59,918	(2.35)	47,482	44,736	51,673	15.51	52,954	85,434	91,478	7.07
VIII	78,728	91,318	96,233	5.38	32,497	36,169	37,668	4.14	37,915	42,270	42,519	0.59	8,316	12,879	16,046	24.59
IX	407,220	398,083	441,470	10.90	152,261	156,008	196,313	25.84	115,289	120,923	120,440	(0.40)	139,670	121,152	124,717	2.94
X	67,745	84,187	89,841	6.72	29,773	34,264	37,397	9.14	21,832	27,477	28,619	4.16	16,140	22,446	23,825	6.14
XI	45,170	49,180	52,265	6.27	9,762	11,355	12,472	9.84	26,838	27,927	28,362	1.56	8,570	9,898	11,431	15.49
XII	188,316	192,508	200,177	3.98	140,127	142,425	143,708	0.90	36,818	36,621	37,145	1.43	11,371	13,462	19,324	43.54
ARMM	453,912	505,096	539,065	6.73	54,549	75,224	76,146	1.23	70,044	76,570	76,241	(0.43)	329,319	353,302	386,678	9.45
CARAGA	88,263	93,204	94,392	1.27	4,825	4,774	4,669	(2.20)	66,599	68,041	61,908	(9.01)	16,839	20,389	27,815	36.42
QUARTER	**2,993,332**	**3,166,530**	**3,368,519**	**6.38**	**946,485**	**976,539**	**1,041,360**	**6.64**	**945,945**	**969,535**	**988,938**	**2.00**	**1,100,902**	**1,220,456**	**1,338,221**	**9.65**
1st	748,083	770,228	812,917	5.54	221,179	231,059	244,957	6.01	232,504	243,605	258,060	5.93	294,400	295,564	309,900	4.85
2nd	780,619	840,285	886,244	5.47	246,185	254,881	295,331	15.87	244,208	253,350	257,096	1.48	290,226	332,054	333,817	0.53
3rd	711,492	735,344	774,691	5.35	257,214	258,378	262,718	1.68	239,932	237,383	234,051	(1.40)	214,346	239,583	277,922	16.00
4th	753,138	820,673	894,667	9.02	221,907	232,221	238,354	2.64	229,301	235,197	239,731	1.93	301,930	353,255	416,582	17.93

Commercial Fishing

Commercial fishing grew by 6.64 percent or an increase of 64,821 metric tons, from 976,539 to 1,041,360 metric tons in 2001. The production gain was attributed to good and generally fair weather which was suitable for fishing activities. The increase in fish catch was likewise a result of increased number of fishing trips due to seasonally abundant supply of slipmouth, fimbriated sardines, roundscad, sardines, mackerel, anchovies, indian sardines, etc. in commercial fishing waters. Also, most fishermen opted to concentrate in deep sea fishing, there are newly operating commercial fishing vessels and those which were repaired were back in operation in 2002. Other reasons for the growth in production were the strict implementation of fishery laws on illegal fishing and the improved peace and order situation in some critical areas in Mindanao particularly in South Cotabato and Sarangani.

Fish catch unloaded in private landing centers contributing 15.71 percent served as the major source of growth. The remarkable gain in private landing centers was largely due to the continuous operation of canning factories in Zamboanga City bringing about increased demand for fish during the 2nd and 3rd quarters of 2002. Commercial fish catch unloaded at the ports operated by the Philippine Fisheries Development Authority (PFDA) went up to almost 10 percent boosting the performance of commercial fishing. Heavy unloadings were attributed to more fishing trips due to abundant supply of anchovies, roundscad, threadfin bream and frigate tuna especially during the 2nd quarter of 2002. Fish catch unloaded at the traditional landing centers likewise increased by 2.87 percent.

Majority of the regions (11 regions) surpassed last year's production performance. Region I indicated improved production by 37.43 percent due to increased number of fishing trips during the year and the establishment of additional wharf in Sual Fishing Port. Region IX posted production gain by 25.84 percent brought about by heavy unloadings in private landing centers. The other nine regions fared well due to favorable weather condition that enabled the fishermen to intensify their fishing operations.

On the other hand, fish catch in five regions exhibited a downward trend. Production in Region III went down by 18.35 percent as more unloadings were undertaken outside the region. Regions IV-A, VI, VII and CARAGA experienced minimal decline in fish catch due to decreased fishing activities brought about by weather disturbances like rainfalls and strong winds. The decline was likewise attributed to lesser catch of major species like roundscads, indo-pacific mackerel and anchovies.

TABLE 2. COMMERCIAL FISH PRODUCTION BY REGION AND BY TYPE OF LANDING CENTER, PHILIPPINES, 2000 - 2002

(METRIC TONS)

REGION	COMMERCIAL			% CHANGE	PRIVATE			% CHANGE	PFDA			% CHANGE	TRADITIONAL			% CHANGE
	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01
PHILIPPINES	**946,485**	**976,539**	**1,041,360**	**6.64**	**167,425**	**171,078**	**197,951**	**15.71**	**203,548**	**207,950**	**228,725**	**9.99**	**575,512**	**597,511**	**614,684**	**2.87**
CAR																
I	2,250	2,525	3,470	37.43					967	990	1,273	28.59	1,283	1,535	2,197	43.13
II	14,130	14,297	16,151	12.97									14,130	14,297	16,151	12.97
III	12,286	14,091	11,506	(18.35)									12,286	14,091	11,506	(18.35)
NCR	142,849	140,933	159,718	13.33					134,612	133,125	154,021	15.70	8,237	7,808	5,697	(27.04)
IV-A	100,368	94,967	92,631	(2.46)					9,162	5,040	6,366	26.31	91,206	89,927	86,265	(4.07)
IV-B	34,481	33,441	36,149	8.10									34,481	33,441	36,149	8.10
V	21,732	32,585	35,520	9.01	655	10,019	9,005	(10.12)					21,077	22,566	26,515	17.50
VI	130,486	122,120	117,924	(3.44)	6,440	5,367	7,272	35.49	10,082	9,486	10,373	9.35	113,964	107,267	100,279	(6.51)
VII	64,109	61,361	59,918	(2.35)									64,109	61,361	59,918	(2.35)
VIII	32,497	36,169	37,668	4.14									32,497	36,169	37,668	4.14
IX	152,261	156,008	196,313	25.84	59,415	52,878	79,199	49.78	8,454	15,606	11,363	(27.19)	84,392	87,524	105,751	20.83
X	29,773	34,264	37,397	9.14	592	2,352	2,083	(11.44)					29,181	31,912	35,314	10.66
XI	9,762	11,355	12,472	9.84	34	60	1,373	2,188.33	3,694	5,084	4,164	(18.10)	6,034	6,211	6,935	11.66
XII	140,127	142,425	143,708	0.90	100,289	100,402	99,019	(1.38)	36,577	38,619	41,165	6.59	3,261	3,404	3,524	3.53
ARMM	54,549	75,224	76,146	1.23									54,549	75,224	76,146	1.23
CARAGA	4,825	4,774	4,669	(2.20)									4,825	4,774	4,669	(2.20)

Municipal Fisheries

Municipal fisheries sector contributed 29 percent to the total fish production of the country. The sector attained a growth rate of 2.00 percent for the year 2002 or an additional 19,403 metric tons from last year's 969,535 metric tons. Of the total municipal fish production of 988,938 metric tons, 87 percent or 857,294 metric tons came from the marine sub-sector and the remaining 13 percent or 131,644 metric tons came from inland sub-sector.

Municipal fishermen were able to unload 857,294 metric tons of marine fish during the year or an increase of 2.89 percent over last year's 83,188 metric tons. Based on quarterly output, growth in municipal fisheries normally increase during the first and fourth quarters owing to the seasonal increase in demand for fish during the holiday season. Fish landed grew by 5.93 percent in January to March, 1.48 percent in April to June, down by 1.40 percent in July to September and bounced back to 1.93 percent in October to December. Marine fishing situation improved considerably towards the end of the year.

Top gainers in terms of volume of marine production were Regions IV-B, I, VII and II which grew by 27.00 percent, 17.40 percent, 15.47 percent and 12.88 percent, respectively. Ilocos Sur, Cebu, Palawan, Camarines Sur, Misamis Occidental and Masbate were among the provinces that surpassed last year's output by 51.49 percent, 32.52 percent, 32.34 percent, 21.40 percent, 19.25 percent and 7.02 percent, respectively. Weather condition that prevailed during the year was generally favorable encouraging fishermen to fish lengthily. Large volume of roundscad, anchovies, big-eyed scad, skipjack, frigate tuna, sardines, squid were unloaded in most parts of the country almost throughout the year. The closer monitoring of Bantay Dagat Program on fishermen engaged in illegal fishing and lesser competition from commercial fishing vessels operating in municipal waters also benefited sustenance fishermen. Regions with decreased volume of fish landed blamed it on occurrence of typhoons, monsoon rains, the "habagat" and rough sea.

Meanwhile, inland fisheries situation has been deteriorating for the past three years. An annual production of 131,644 metric tons was recorded this year or a drop of 3.45 percent from last year's 136,347 metric tons. Regions with dwindling catch from freshwater were CALABARZON, Western Visayas and CAR with negative growth rates of 12.76 percent, 11.18 percent and 5.22 percent, respectively. Performance of inland fisheries is heavily affected by the reduced shell gathering activities in Rizal and Laguna provinces. The importance of "suso" to inland fisheries could not be overlooked since it contributed almost 50 percent to the total annual inland production. However, quantity of shells gathered at the Laguna Lake in 2002 declined significantly due to lesser demand from duck raisers and fishpond operators who utilized "suso" as supplemental feeds. Despite the big increases in catch of freshwater species like hito, dalag, ayungin, biya and carpa in most regions, these were not enough to compensate for the big reduction in shell output in Region IV-A. The diminishing fish catch of sustenance fishermen was just enough to sustain the need of the household for food consumption.

TABLE 3. MUNICIPAL FISH PRODUCTION BY REGION, PHILIPPINES, 2000 - 2002

(METRIC TONS)

REGION	MUNICIPAL			% CHANGE	MARINE			% CHANGE	INLAND			% CHANGE
	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01
PHILIPPINES	**945,945**	**969,535**	**988,938**	**2.00**	**793,824**	**833,188**	**857,294**	**2.89**	**152,121**	**136,347**	**131,644**	**(3.45)**
CAR	1,075	1,150	1,090	(5.22)					1,075	1,150	1,090	(5.22)
I	23,392	22,414	26,895	19.99	22,844	21,583	25,338	17.40	548	831	1,557	87.36
II	17,636	19,157	21,601	12.76	13,809	14,176	16,002	12.88	3,827	4,981	5,599	12.41
III	14,127	16,082	18,202	13.18	11,770	13,071	11,925	(8.77)	2,357	3,011	6,277	108.47
NCR	3,982	4,166	2,767	(33.58)	3,982	4,166	2,767	(33.58)				
IV-A	155,764	135,542	121,071	(10.68)	51,607	48,637	45,254	(6.96)	104,157	86,905	75,817	(12.76)
IV-B	99,120	103,053	130,766	26.89	98,494	102,432	130,085	27.00	626	621	681	9.66
V	73,805	87,478	92,233	5.44	73,247	86,408	90,839	5.13	558	1,070	1,394	30.28
VI	134,227	135,928	127,406	(6.27)	132,838	134,247	125,913	(6.21)	1,389	1,681	1,493	(11.18)
VII	47,482	44,736	51,673	15.51	47,424	44,653	51,563	15.47	58	83	110	32.53
VIII	37,915	42,270	42,519	0.59	37,199	41,640	41,708	0.16	716	630	811	28.73
IX	115,289	120,923	120,440	(0.40)	114,980	120,574	120,043	(0.44)	309	349	397	13.75
X	21,832	27,477	28,619	4.16	20,953	26,616	27,412	2.99	879	861	1,207	40.19
XI	26,838	27,927	28,362	1.56	26,628	27,705	28,114	1.48	210	222	248	11.71
XII	36,818	36,621	37,145	1.43	22,751	23,528	23,917	1.65	14,067	13,093	13,228	1.03
ARMM	70,044	76,570	76,241	(0.43)	51,589	58,816	57,978	(1.42)	18,455	17,754	18,263	2.87
CARAGA	66,599	68,041	61,908	(9.01)	63,709	64,936	58,436	(10.01)	2,890	3,105	3,472	11.82

Aquaculture

The volume of production from aquaculture rose from 1,220,456 metric tons in 2001 to 1,338,221 metric tons in 2002. The 9.65 percent growth was a combined contribution from the harvests in brackishwater and marine fish pens and cages, all aquafarms from freshwater environment and seaweeds farming. On the contrary, harvests from brackishwater fishponds, oyster and mussel farms went down during the year. Of the total aquaculture production, seaweeds had a share of 66.87 percent while fish and shell fishes contributed 33.13 percent in 2002.

The production increment of 240.42 percent in Metro Manila was a consequence of fish cages rehabilitation and reconstruction. Moreover, the good water condition and the abundance of natural food in the area allowed the fishes to grow faster. The positive performance of 43.55 percent in Region XII and 15.49 percent in Region XI could be attributed to additional freshwater and marine fish cages in Sultan Kudarat and Davao del Sur, respectively. Thus, fishermen were able to meet the market demand and availed of better price. Other regions that exhibited significant upward fish production in 2002 were Regions IV-B, VIII and CARAGA. The production growth from these regions was realized from the expansion of seaweed farming area.

On the contrary, the performance of aquaculture in Region III went down by 1.63 percent this year as against last year. The output decline in Region III was attributed to the stunted growth and high mortality of fish species from brackishwater fishponds as an effect of high salinity of water brought about by intense heat during the first semester of 2002. The overflowing of ponds in the third quarter of the year prompted some operators to shift to tilapia culture.

TABLE 4. AQUACULTURE PRODUCTION BY CULTURE ENVIRONMENT AND BY REGION, PHILIPPINES, 2000 - 2002

(METRIC TONS)

REGION	AQUACULTURE			% CHANGE	BRACKISHWATER FISHPONI			% CHANGE	BRACKISHWATER FISHCAGE			% CHANGE	BRACKISHWATER FISHPENS			% CHANGE	FRESHWATER FISHCAGE			% CHANGE	FRESHWATER FISHPENS			% CHANGE
	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01
PHILIPPINES	**1,100,902**	**1,220,456**	**1,338,221**	**9.65**	**235,729**	**261,268**	**246,397**	**(5.69)**	**2,485**	**2,943**	**3,328**	**13.08**	**3,241**	**3,909**	**4,437**	**13.51**	**38,595**	**42,061**	**49,649**	**18.04**	**27,529**	**23,927**	**27,468**	**14.80**
CAR	2,204	2,422	2,426	0.17													1,734	1,907	1,965	3.04				
I	35,163	38,678	42,993	11.16	17,096	18,661	18,670	0.05	2,150	2,310	2,582	11.77	3,241	3,909	4,437	13.51	7	9	12	33.33				
II	3,436	4,963	5,301	6.81	756	879	899	2.28	15	146	142	(2.74)					779	1,483	1,706	15.04				
III	113,755	155,073	152,545	(1.63)	72,068	98,179	87,534	(10.84)									59	59	46	(22.03)	28	27	6	(77.78)
NCR - M.M	1,128	1,388	4,725	240.42	450	635	497	(21.73)									56	77	471	511.69	622	676	3,757	455.77
IV-A	97,970	96,219	97,013	0.83	11,794	13,462	14,455	7.38									28,886	30,000	30,639	2.13	26,862	23,196	23,665	2.02
IV-B	152,254	152,752	196,549	28.67	3,609	3,656	3,975	8.73			3													
V	19,528	30,451	30,757	1.00	3,850	3,862	3,726	(3.52)									4,189	4,595	4,866	5.90				
VI	92,285	99,548	104,598	5.07	61,538	57,934	53,914	(6.94)																
VII	52,954	85,434	91,478	7.07	8,413	8,279	8,396	1.41																
VIII	8,316	12,879	16,046	24.59	1,812	1,967	2,371	20.54											8				8	
IX	139,670	121,152	124,717	2.94	24,888	20,544	18,546	(9.73)																
X	16,140	22,446	23,825	6.14	10,764	11,797	11,700	(0.82)																
XI	8,570	9,898	11,431	15.49	5,897	7,332	7,474	1.94									3	4	3	(25.00)				
XII	11,371	13,462	19,324	43.54	7,562	8,053	7,805	(3.08)									2,841	3,876	9,765	151.93				
ARMM	329,319	353,302	386,678	9.45	2,419	2,635	2,846	8.01									25	36	94	161.11	17	28	32	14.29
CARAGA	16,839	20,389	27,815	36.42	2,813	3,393	3,589	5.78	320	487	601	23.41					16	15	74	393.33				

REGION	FRESHWATER FISHPOND			% CHANGE	MARINE FISHCAGE			% CHANGE	MARINE FISHPEN			% CHANGE	OYSTER			% CHANGE	MUSSEL			% CHANGE	SEAWEEDS			% CHANGE
	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01	2000	2001	2002	02/01
PHILIPPINES	**45,909**	**57,678**	**70,272**	**21.84**	**2,900**	**4,582**	**8,520**	**85.95**	**6,296**	**5,738**	**9,079**	**58.23**	**14,222**	**19,042**	**12,569**	**(33.99)**	**16,957**	**13,513**	**11,646**	**(13.82)**	**707,039**	**785,795**	**894,856**	**13.88**
CAR	470	515	461	(10.49)																				
I	1,635	2,503	2,477	(1.04)	2,299	3,185	5,555	74.41	5,474	4,744	6,263	32.02	3,261	3,357	2,658	(20.82)			337				2	
II	1,726	2,215	2,269	2.44		8	9	12.50					160	232	276	18.97								
III	38,608	48,547	60,678	24.99		26	516	1884.62	82	70		(100.00)	2,910	8,165	3,765	(53.89)								
NCR - M.M.																								
IV-A	541	576	537	(6.77)	20	2	52	2500.00	11	22	266	1,109.09	2,737	1,722	164	(90.48)	6,628	4,322	1,938	(55.16)	20,491	22,917	25,297	10.39
IV-B	380	380	511	34.47																	148,265	148,716	192,060	29.15
V	92	129	229	77.52	2	42	66	57.14					37	35	52	48.57	611	710	686	(3.38)	10,747	21,078	21,132	0.26
VI	263	290	246	(15.17)	16	19	64	236.84		45	1,236	2,646.67	4,046	4,557	4,644	1.91	7,243	5,943	6,241	5.01	19,179	30,760	38,253	24.36
VII	9	28	51	82.14	57	300	431	43.67	2	47	30	(36.17)	127	133	166	24.81					44,346	76,647	82,404	7.51
VIII	57	66	87	31.82	23	26	37	42.31									2,462	2,524	2,438	(3.41)	3,962	8,296	11,097	33.76
IX	65	87	86	(1.15)	62	52	21	-59.62	41	41	27	(34.15)	247	232	220	(5.17)	13	14	6	(57.14)	114,354	100,182	105,811	5.62
X	559	582	576	(1.03)	23	29	22	-24.14	6	12	3	(75.00)									4,788	10,026	11,524	14.94
XI	477	520	575	10.58	348	444	1,173	164.19	634	721	1,235	71.29	697	609	624	2.46					514	268	347	29.48
XII	952	1,111	1,210	8.91	16	420	544	29.52		2		(100.00)												
ARMM	36	37	94	154.05		1			3	5	4	(20.00)									326,819	350,560	383,608	9.43
CARAGA	39	92	185	101.09	34	28	30	7.14	43	29	15	(48.28)									13,574	16,345	23,321	42.68

Milkfish. Milkfish production in 2002 registered a modest increase of 2.62 percent compared with 2001. Harvests from both marine and freshwater pens and cages showed a positive performance while produce from brackishwater fishponds suffered a setback of 4.39 percent.

About 87 percent of milkfish produce came from brackishwater fishponds. Most provinces with brackishwater fishponds registered losses in 2002. During the first semester of 2002, Bulacan operators observed high salinity of water brought about by intense heat causing stunted growth and high mortality of the species. This was also experienced by operators in Pangasinan, Pampanga, Capiz and Iloilo. The production of milkfish was further aggravated by the overflowing of ponds in the rainy months of third quarter. This prompted some operators to shift in either tilapia or prawn culture while other ponds in Negros Occidental were left idle. The production increase of 8.96 percent during the year in Quezon was attributed to good growth of the milkfish.

Production increment from freshwater and marine pens and cages offset the losses from brackishwater fishponds. The fish pens in Rizal became operational and the fisherfolk observed that the entry of marine water to the lake induced growth of milkfish resulting in a robust increase of 109.22 percent. The milkfish harvested in Metro Manila increased by hefty 455.77 percent in 2002 as against 2001 harvest. Operators were encouraged to expand their area in freshwater fish pens due to good water condition and the abundance of natural food which allowed their stocks to grow faster. Similarly, expansion of freshwater fish cages was noted in Lake Lutayan, Sultan Kudarat. In addition, the usage of quality fingerlings and better management paved the way for a 183.49 percent increase in their produce.

Milkfish harvested from marine fish pens and cages increased by 59.76 percent and 93.16 percent, respectively in 2002 as compared with 2001. The operators from Pangasinan noted minimal floods during the year, thus encouraging them to increase their stocks to augment the losses they incurred in 2001 brought about by fish kill. Meanwhile, operators from Davao del Sur, Zambales, Sarangani and other provinces increased their area for more harvest and also to avail of good price opportunity.

TABLE 5. AQUACULTURE: MILKFISH PRODUCTION FROM TOP PRODUCING PROVINCES, BY CULTURE ENVIRONMENT, PHILIPPINES, 2000 - 2002

(METRIC TONS)

CULTURE ENVIRONMENT/ PROVINCE	2000	2001	2002	% CHANGE 02/01
PHILIPPINES	**204,326**	**218,589**	**224,326**	**2.62**
Brackishwater Fishpond	**180,931**	**204,862**	**195,877**	**(4.39)**
Bulacan	28,110	45,513	42,404	(6.83)
Pangasinan	15,395	16,789	16,588	(1.20)
Capiz	15,755	15,897	15,863	(0.21)
Iloilo	16,024	16,369	14,553	(11.09)
Negros Occidental	16,851	14,351	14,043	(2.15)
Quezon	10,835	12,500	13,620	8.96
Pampanga	9,373	13,463	13,012	(3.35)
Bataan	6,564	8,646	7,542	(12.77)
Aklan	9,758	7,706	6,838	(11.26)
Other Provinces	52,266	53,628	51,414	(4.13)
Freshwater Fish pen	**13,605**	**2,835**	**8,274**	**191.85**
Rizal	12,983	2,159	4,517	109.22
Metro Manila	622	676	3,757	455.77
Freshwater Fish cage	**918**	**951**	**2,863**	**201.05**
Sultan Kudarat	917	951	2,696	183.49
Other Provinces	1		167	
Marine Fish pen	**6,182**	**5,659**	**9,041**	**59.76**
Pangasinan	5,443	4,739	6,261	32.12
Davao del Sur	598	693	1,206	74.03
Other Provinces	141	227	1,574	593.39
Marine Fish cage	**2,690**	**4,282**	**8,271**	**93.16**
Pangasinan	2,292	3,174	5,537	74.45
Davao del Sur	279	404	913	125.99
Zambales		26	516	1,884.62
Sarangani	12	265	451	70.19
Negros Oriental	53	274	355	29.56
Other Provinces	54	139	499	258.99

Tilapia. Table 6 shows that the overall production of tilapia grew by 14.68 percent in 2002 against 2001. The major source of tilapia was from freshwater fishpond that contributed about 57 percent to the total tilapia production. Similarly, tilapia produced from freshwater fish cages shared 38 percent. Output from brackishwater fishpond and freshwater fish pens contributed seven percent and one percent, respectively.

Tilapia harvested from freshwater fishponds registered a growth of 21.46 percent. This was attributed to the huge increment of 47.94 percent that was realized in Pampanga due to improved feeding practices and the absence of destructive floods this year. On the other hand, Isabela production increased by 23.89 percent as a result of massive fingerlings dispersal from the Office of the Provincial Agriculturist and conducive weather for tilapia culture.

The production of tilapia from freshwater fish cages grew from 40,779 metric tons in 2001 to 46,330 metric tons in 2002. Additional cages were put up in Lutayan Lake, Sultan Kudarat. The use of quality fingerlings and better management enabled the operators to achieve a 275.07 percent increase. Fisherfolk in Camarines Sur, South Cotabato, Isabela, and Quezon took advantage of favorable weather which was conducive for tilapia culture and thus, encouraged them to increase their stocks. On the contrary, Batangas lost 2.30 percent in 2002 compared with 2001 due to financial constraints while other operators shifted to milkfish culture.

Meanwhile, tilapia production from brackishwater fishponds went down by 11.90 percent due to fish kill in the third quarter of 2002 as a result of sudden change in water temperature. Likewise, operators in Bulacan shifted to prawn culture due to high water salinity which caused skin ulcers to tilapia. The 25.45 percent reduction in tilapia harvested from freshwater fishpens in Rizal was attributed to the stunted growth of the species caused by water pollution.

TABLE 6. AQUACULTURE: TILAPIA PRODUCTION FROM TOP PRODUCING PROVINCES, BY CULTURE ENVIRONMENT, PHILIPPINES, 2000 - 2002

(METRIC TONS)

CULTURE ENVIRONMENT/ PROVINCE	2000	2001	2002	% CHANGE 02/01
PHILIPPINES	**92,517**	**106,621**	**122,277**	**14.68**
Freshwater Fishpond	**43,174**	**54,312**	**65,968**	**21.46**
Pampanga	27,001	29,344	43,411	47.94
Bulacan	2,845	8,750	5,900	(32.57)
Nueva Ecija	4,930	5,195	5,241	0.89
Tarlac	1,669	2,208	2,217	0.41
Pangasinan	1,064	1,878	1,820	(3.09)
Isabela	686	787	975	23.89
Cagayan	385	545	516	(5.32)
Other Provinces	4,594	5,605	5,888	5.05
Freshwater Fish cage	**37,622**	**40,779**	**46,330**	**13.61**
Batangas	20,643	22,918	22,391	(2.30)
Laguna	6,178	5,707	6,191	8.48
Sultan Kudarat	145	1,436	5,386	275.07
Camarines Sur	3,459	3,538	3,901	10.26
Ifugao	1,525	1,689	1,729	2.37
South Cotabato	1,779	1,489	1,683	13.03
Isabela	758	1,438	1,671	16.20
Quezon	1,255	799	1,032	29.16
Other Provinces	1,880	1,765	2,346	32.92
Brackishwater Fishpond	**8,033**	**9,383**	**8,266**	**(11.90)**
Pampanga	2,724	3,310	2,700	(18.43)
Bulacan	1,226	1,260	1,142	(9.37)
Cagayan	340	406	425	4.68
Zamboanga del Sur	538	803	414	(48.44)
Other Provinces	3,205	3,604	3,585	(0.53)
Freshwater Fish pen	**3,688**	**2,147**	**1,713**	**(20.21)**
Rizal	3,301	1,784	1,330	(25.45)
Laguna	342	308	337	9.42
Other Provinces	45	55	46	(16.36)

Tiger Prawn. Production of tiger prawn declined from 40,698 metric tons in 2001 to 35,489 metric tons in 2002. It was observed that some operators in Pampanga, Bataan, Lanao del Norte and Zamboanga del Sur did not utilize their ponds due to high cost of production. The poor quality of post larvae and high mortality rate also attributed to the decline in production. However, Bohol registered an increase of 5.86 percent with the resumption of tiger prawn culture in the area.

Mudcrab. A meager 3.08 percent increase in mudcrab production was realized in 2002, specifically in Pampanga, Capiz and Camarines Sur. The operators from these provinces maximized their areas to increase their stocks, improved their technology and observed proper management to meet the demand of the consumers. On the contrary, fisherfolk from Sorsogon experienced a 13.69 percent reduction in output due to financial constraints.

Endeavor Prawn. Endeavor prawn produce during the year increased by 7.21 percent as against lasts year's level. This was attributed to the increase in the natural entry of post larvae to the ponds due to high water level. The provinces that contributed to the increase in production were Quezon, Cagayan and Masbate. Lanao del Norte posted production decline by 3.66 percent for the reason that some ponds were kept idle in 2002.

White Shrimp. White shrimp production in 2001 rose from 1,276 to 1,541 metric tons in 2002. The output gain was noted in La Union, Quezon and other provinces. Similar reason for the increase as in the natural entry of post larvae to the ponds due to high water level was reported. On the other hand, reduction in harvest by 30.63 percent in Zamboanga del Sur was the result of non-utilization of other ponds during the year.

Carp. The production of carp declined from 19,568 metric tons in 2001 to 18,151 metric tons in 2002 (Table 8). The decrease of 7.73 percent was incurred from fish pens in Rizal on account of the shifting to milkfish and tilapia culture due to the entry of marine water in the lake that prompted the growth of these species. Carp flourish mainly on freshwater environment. However, carp produced from fishponds in Lanao del Norte increased by 11.11 percent due to consumers' preference in the province. The operators from other provinces which recorded reduction in carp production from fishponds decided to delay their stocking and postponed their harvest to the first quarter of 2003.

The harvest of carp from fish cages showed a positive performance of 37.16 percent. The increment came from Rizal and Metro Manila since the rehabilitation and reconstruction of cages were already done. Moreover, some fish pen operators in Rizal shifted to fish cages.

Catfish. A significant increase of 72.82 percent in the production of catfish was registered in 2002 against 2001. This output gain was realized in Bulacan, Pampanga, Iloilo and other provinces (notably in Cagayan, Antique, Sultan Kudarat, Lanao del Norte, Maguindanao and Davao City) due to the expansion in area coverage. The weather condition that prevailed in 2002 was favorable to catfish culture encouraging the operators in these areas to produce more to meet the demand from restaurants and bars.

TABLE 7. AQUACULTURE: PRODUCTION OF SELECTED SPECIES FROM BRACKISHWATER FISHPONDS BY PROVINCE, PHILIPPINES, 2000 - 2002

(METRIC TONS)

SPECIES/PROVINCE	2000	2001	2002	% CHANGE 02/01
Tiger Prawn	**40,459.0**	**40,698.0**	**35,489.0**	**(12.80)**
Pampanga	16,379.0	16,638.0	13,082.0	(21.37)
Lanao del Norte	4,936.0	5,102.0	4,973.0	(2.53)
Zamboanga del Sur	8,047.0	6,516.0	2,948.0	(54.76)
Bataan	2,607.0	2,767.0	1,677.0	(39.39)
Bohol	1,611.0	1,093.0	1,157.0	5.86
Other Provinces	6,879.0	8,582.0	11,652.0	35.77
Mudcrab	**4,945.0**	**4,585.0**	**4,726.0**	**3.08**
Pampanga	2,139.0	2,158.0	2,360.0	9.36
Sorsogon	1,856.0	1,424.0	1,229.0	(13.69)
Capiz	124.0	75.0	145.0	93.33
Camarines Sur	85.0	91.0	119.0	30.77
Other Provinces	741.0	837.0	873.0	4.30
Endeavor Prawn	**329.0**	**416.0**	**446.0**	**7.21**
Quezon	79.0	119.0	121.0	1.68
Lanao del Norte	59.0	82.0	79.0	(3.66)
Cagayan	64.0	55.0	58.0	5.45
Masbate	22.0	40.0	48.0	20.00
Other Provinces	105.0	120.0	140.0	16.67
White Shrimp	**1,014.0**	**1,276.0**	**1,541.0**	**20.77**
Zamboanga del Sur	501.0	568.0	394.0	(30.63)
Maguindanao	113.0	118.0	118.0	-
Quezon	95.0	102.0	105.0	2.94
La Union	70.0	93.0	103.0	10.75
Other Provinces	235.0	395.0	821.0	107.85

TABLE 8. AQUACULTURE: CARP AND CATFISH PRODUCTION FROM FRESHWATER FISHPOND/PEN/CAGE BY PROVINCE, PHILIPPINES, 2000 - 2002

(METRIC TONS)

SPECIES/PROVINCE	2000	2001	2002	% CHANGE 02/01
CARP	**10,682**	**19,568**	**18,151**	**(7.24)**
Fishpond	**391**	**292**	**216**	**(26.03)**
Lanao del Norte	108	117	130	11.11
Other Provinces	283	175	86	(50.86)
Fishpen	**10,236**	**18,945**	**17,481**	**(7.73)**
Rizal	10,236	18,945	17,481	(7.73)
Fishcage	**55**	**331**	**454**	**37.16**
Rizal	45	286	380	32.87
Metro Manila	3	40	72	80.00
Quezon	7	5	2	(60.00)
CATFISH	**935**	**1,523**	**2,632**	**72.82**
Fishpond	**935**	**1,523**	**2,632**	**72.82**
Bulacan	145	789	1,648	108.87
Nueva Ecija	203	186	152	(18.28)
Pampanga	10	13	138	961.54
Iloilo	103	102	108	5.88
Isabela	170	165	105	(36.36)
Other Provinces	304	268	481	79.48

On the other hand, some operators in Nueva Ecija and Isabela experienced inadequate supply of fingerlings such that they utilized their pond for tilapia culture.

Table 9 shows the production of mariculture from 2000-2002. The species cultured include seaweeds, oyster and mussel. Of the three species, only seaweeds production registered an upward trend. On the contrary, oyster and mussel harvested showed a downswing movement.

Seaweeds. The increase of 13.88 percent in the production of seaweeds in 2002 was noted compared with that of 2001. The increment was realized due to market demand, better price and good weather condition that encouraged farmers in Tawi-Tawi, Palawan, Antique, Bohol, Quezon and Zamboanga del Norte to expand their areas for seaweed culture. The other provinces that increased their coverage area for seaweeds culture were Camarines Sur, Eastern Samar, Surigao del Sur, Zamboanga Sibugay, Lanao del Norte and Maguindanao. Moreover, farmers in Zamboanga del Sur were also encouraged to venture in seaweed farming due to active participation of the local government unit and the provision of loan assistance from the Department of Trade and Industry (DTI).

On the contrary, a decline of 4.82 percent in production was noted in Sulu due to peace and order situation. The seaweeds production in Zamboanga City dropped by 26.16 percent in 2002 as against 2001. Some farmers in the area stopped farming due to water pollution and presence of too much algae while others ceased seaweed culture due to financial problem.

Oyster. The oyster produce declined to a hefty 33.99 percent from 19,042 metric tons in 2001 to 12,569 metric tons in 2002. Bulacan posted a downswing of 53.89 percent, largely contributing to the decrease in total oyster produce. Some operators in the province temporarily stopped oyster culture due to scarcity of spat. Furthermore, late propagation of spats was observed in Bulacan prompting operators to delay their harvest in the first quarter of 2003. Farmers in Pangasinan and Negros Occidental likewise experienced late propagation resulting in small-sized oyster harvest. The production dip of 14.45 percent in Negros Occidental was an effect of siltation in oyster farms caused by flashfloods in the later part of 2001. Cavite fisherfolk also experienced reduced oyster production due to stoppage of some operators since spats were scarce. The outbreak of red tide in Bataan and Las Pinas, Metro Manila also inhibited Cavite fisherfolk to produce oyster.

Meanwhile, farmers in Capiz and Davao del Sur produced 11.03 percent and 2.46 percent, respectively, more than last year's level. Farmers from these provinces were able to surpass their 2001 production due to demand from other provinces.

Mussel. The production of mussel continuously dropped over the three-year period. A decrease of 13.82 percent was observed in 2002 compared with 2001. The production growth in Capiz at 12.02 percent and in Aklan at 15.19 percent did not offset the reduction in Cavite, Negros Occidental and Western Samar.

TABLE 9. AQUACULTURE: PRODUCTION FROM MARICULTURE BY SPECIES, BY PROVINCE, PHILIPPINES, 2000 - 2002

(METRIC TONS)

SPECIES/PROVINCE	2000	2001	2002	% CHANGE 02/01
Seaweeds	**707,039**	**785,795**	**894,856**	**13.88**
Tawi-Tawi	168,398	156,583	196,682	25.61
Palawan	144,950	145,839	188,969	29.57
Sulu	157,386	184,868	175,951	(4.82)
Bohol	43,134	74,753	79,961	6.97
Zamboanga City	81,947	62,785	46,361	(26.16)
Antique	18,831	30,502	38,117	24.97
Zamboanga del S	20,500	24,908	30,010	20.48
Quezon	20,100	22,350	25,003	11.87
Zamboanga del N	11,907	12,489	16,928	35.54
Other Provinces	39,886	70,718	96,874	36.99
Oyster	**14,222**	**19,042**	**12,569**	**(33.99)**
Bulacan	2,910	8,165	3,765	(53.89)
Capiz	2,304	2,620	2,909	11.03
Pangasinan	2,974	3,099	2,381	(23.17)
Negros Occidenta	1,147	1,225	1,048	(14.45)
Davao del Sur	697	609	624	2.46
Other Provinces	4,190	3,324	1,842	(44.58)
Mussel	**16,957**	**13,513**	**11,646**	**(13.82)**
Capiz	4,449	3,677	4,119	12.02
Western Samar	2,462	2,524	2,438	(3.41)
Cavite	6,628	4,322	1,938	(55.16)
Negros Occidenta	1,615	1,497	1,242	(17.03)
Aklan	1,169	757	872	15.19
Other Provinces	634	736	1,037	40.90

Production decline in Cavite by 55.16 percent was attributed to the poor growth of stocks in Kawit and Bacoor brought about by the presence of stunted mussel, locally called "bahong", and polluted water. Likewise, Negros Occidental posted decrease in mussel production by 17.03 percent due to muddy water as an effect of flashflood and the depletion of old seedling stocks. The reduction of mussel produced in Western Samar was caused by red tide scare prompting the fisherfolk to delay their harvest.

Most operators in Capiz and Aklan were encouraged to produce more of this mollusk due to good market demand and the usage of quality spats. Farmers in Pangasinan ventured in mussel production during the last quarter of 2002. These farms were purely experimental and regularly monitored by the Bureau of Fisheries and Aquatic Resources (BFAR).

WHOLESALE FISH PRICES

The annual wholesale average prices per kilo of milkfish, tilapia and tiger prawn went down from 4.38 to 6.56 percent this year compared to last year's level.

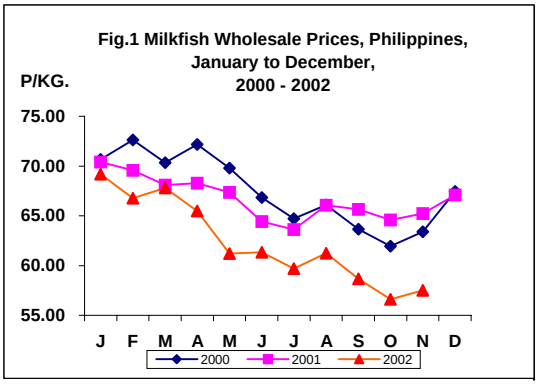
Milkfish quotations from January to November 2002 showed a declining trend. The big decreases of 10.60 to 12.34 percent was observed from September to October. The average wholesale price per kilo of milkfish was registered at P62.32 in 2002 as against P66.69 in 2001.

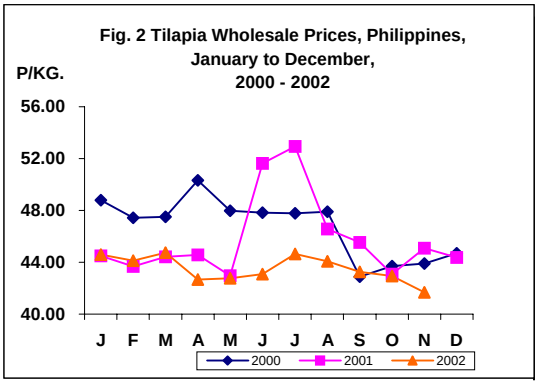
Likewise, tilapia wholesale prices exhibited negative changes from April to November 2002. The biggest drop in prices was noted in June, July and November with a decline of 16.56, 15.68 and 7.56 percent, respectively. These decreases brought down average price of tilapia from P45.78 per kilo in in 2001 to P43.51 last year.

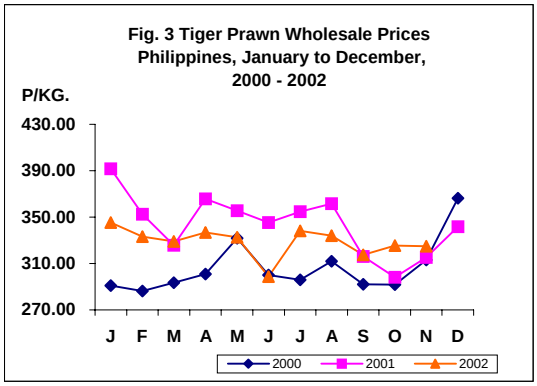
Meanwhile, monthly quotations of tiger prawn picked up from September to November 2002 from 0.37 to 9.17 percent. However, the large price decreases in previous months reduced the average wholesale price to P328.66 per kilo from 2001 level of P343.70.

Table 10. WHOLESALE PRICES OF MILKFISH, TILAPIA AND TIGER PRAWN, PHILIPPINES, JANUARY - DECEMBER, 2000-2002

SPECIES/MONTH	WHOLESALE PRICE (P/KG)			% CHANGE 02/01
	2000	2001	2002	
MILKFISH				
January	70.66	70.40	69.19	(1.72)
February	72.63	69.57	66.78	(4.01)
March	70.33	68.08	67.81	(0.40)
April	72.17	68.27	65.47	(4.10)
May	69.79	67.36	61.21	(9.13)
June	66.84	64.42	61.34	(4.78)
July	64.70	63.63	59.68	(6.21)
August	66.09	66.06	61.25	(7.28)
September	63.66	65.63	58.67	(10.60)
October	61.95	64.57	56.60	(12.34)
November	63.40	65.24	57.50	(11.86)
December	67.45	67.10		
Average Price	67.47	66.69	62.32	(6.56)
TILAPIA				
January	48.80	44.50	44.59	0.20
February	47.44	43.67	44.12	1.03
March	47.50	44.42	44.75	0.74
April	50.33	44.57	42.67	(4.26)
May	47.98	42.96	42.77	(0.44)
June	47.83	51.63	43.08	(16.56)
July	47.78	52.94	44.64	(15.68)
August	47.91	46.58	44.08	(5.37)
September	42.89	45.54	43.27	(4.98)
October	43.70	43.08	42.94	(0.32)
November	43.90	45.08	41.67	(7.56)
December	44.69	44.37		
Average Price	46.73	45.78	43.51	(4.96)
TIGER PRAWN				
January	291.06	391.71	345.19	(11.88)
February	286.36	352.62	333.22	(5.50)
March	293.53	325.67	329.04	1.03
April	300.77	365.85	336.67	(7.98)
May	331.82	355.59	332.50	(6.49)
June	299.99	345.40	298.66	(13.53)
July	295.81	354.61	338.01	(4.68)
August	312.04	361.53	334.04	(7.60)
September	291.96	316.18	317.34	0.37
October	291.70	298.19	325.53	9.17
November	313.13	315.31	325.03	3.08
December	366.23	341.71		
Average Price	306.20	343.70	328.66	(4.38)







Significant price decreases in February to June pulled down the average wholesale price of roundscad by 2.97 percent in 2002.. However, price increments that ranged from 0.09 to 5.19 percent were noted from July to October.

Similarly, the wholesale price of frigate tuna declined by 3.27 percent from P48.06 in 2001 to P46.49 per kilo in 2002. The significant reduction of 10.95 percent in February, 12.38 percent in April, and 11.51 percent in November were observed..

Average wholesale price of indian mackerel increased by 1.82 percent in 2002 at P61.45 per kilo from P60.35 in 2001. The price increments that ranged from 6.05 to 11.08 percent were observed from January to March, and July.

Table 11. WHOLESALE PRICES OF ROUNDSCAD, FRIGATE TUNA AND INDIAN MACKEREL, PHILIPPINES, JANUARY-DECEMBER, 2000-2002

SPECIES/MONTH	WHOLESALE PRICE (P/KG)			% CHANGE 02/01
	2000	2001	2002	
ROUNDSCAD				
January	44.90	46.25	47.82	3.39
February	43.99	44.79	43.00	(4.00)
March	39.60	43.32	40.96	(5.45)
April	40.37	43.47	38.71	(10.95)
May	39.88	42.18	36.82	(12.71)
June	38.19	42.68	40.69	(4.66)
July	39.86	43.66	45.70	4.67
August	39.99	46.14	46.18	0.09
September	40.98	43.18	45.42	5.19
October	40.40	44.37	46.45	4.69
November	44.75	46.21	45.07	(2.47)
December	47.27	49.85		
Average Price	41.68	44.68	43.35	(2.97)
FRIGATE TUNA				
January	47.72	47.83	53.52	11.90
February	43.31	47.93	42.68	(10.95)
March	38.42	46.73	46.83	0.21
April	41.49	50.17	43.96	(12.38)
May	43.60	47.65	43.23	(9.28)
June	42.08	43.97	44.02	0.11
July	44.57	47.98	51.14	6.59
August	43.13	51.04	47.70	(6.54)
September	43.30	47.24	48.30	2.24
October	43.38	47.13	45.47	(3.52)
November	44.44	50.31	44.52	(11.51)
December	47.20	48.74		
Average Price	43.55	48.06	46.49	(3.27)
INDIAN MACKEREL				
January	57.67	61.98	65.73	6.05
February	58.40	58.68	64.16	9.34
March	53.63	56.06	62.27	11.08
April	56.87	57.86	59.51	2.85
May	56.23	57.66	57.47	(0.33)
June	53.68	58.22	59.66	2.47
July	56.26	59.96	65.23	8.79
August	55.65	64.78	60.86	(6.05)
September	55.14	62.19	59.93	(3.63)
October	55.63	59.82	59.93	0.18
November	59.34	63.83	61.25	(4.04)
December	63.94	63.20		
Average Price	56.87	60.35	61.45	1.82