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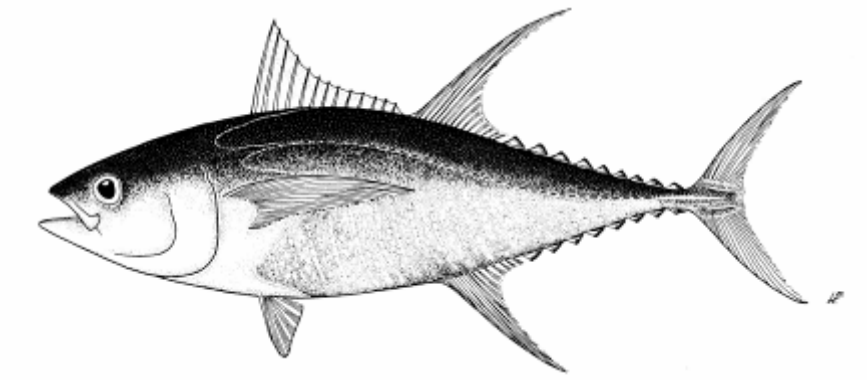
Philippines Fishery Report



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FISHERY REPORT – PHILIPPINES

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1. INTRODUCTION

The Republic of the Philippines has long been a major tuna producer in the Western and Central Pacific Ocean (WCPO), both for domestic food security and on an industrial scale. With a productive EEZ approximately 2.2 million km^2 in extent, and a population approaching 80 million, Philippines tuna fisheries initially developed to supply local demand. Tunas continue to contribute over 20% of marine fisheries production in most years, and the domestic catch of oceanic species has been over 150,000t in most years since the early 1990s. As local catch rates have declined, tuna fisheries have expanded since the mid 1980s to operate increasingly in adjacent areas of the WCPO, notably Indonesia, Papua New Guinea and in high seas areas, primarily supplying a large local export-oriented processing sector which has developed in association with this geographic expansion.

Domestic tuna fisheries are concentrated in the southern regions, where a variety of gears are used to catch both oceanic (skipjack, yellowfin, and bigeye) and neritic (frigate and bullet tunas, little tuna) tunas, often in association with other small pelagic species. Significant landings however occur throughout the country at a large number of sites. There is also some unloading by foreign longline vessels in an approved Philippines port (Davao).

Overseas operations involve large purse seine vessels, but also wide-ranging handline vessels (pump boats or bancas) and a small distant water longline fleet, all targeting oceanic tunas which are, for the most part, landed in Philippine ports. Most of these vessels remain under Philippines flag, and Philippines thus has both coastal state and flag state status in the WCPO.

2. FLEET STRUCTURE

The fishing sector consists of municipal and commercial components, with the former involving vessels less than 3 GT in size, and under the jurisdiction of Local Government Units (LGUs). The number of municipal vessels is not well documented in most areas, and also currently includes handline vessels, many of which are considerably larger than 3 GT[1].

The larger commercial vessels are required to fish outside municipal waters ie beyond 15km of the shoreline. They are required to initially register with the Maritime Industry Authority (MARINA), then require a certificate of inspection by the Philippine Coast Guard (PCG) and registration of homeport, before finally going to the Bureau of Fisheries and Aquatic Resources (BFAR for the issue of the Certificate of Fishing Vessel and Gear License (CFVGL) and IFP (International Fishing Permit), where necessary. In

[1] Moves are currently underway to introduce a separate registration system for handline vessels, these then constituting a third class of vessel, in addition to municipal and commercial.

practice, not all vessels seek CFVGLs, and the BFAR CFVGL records are incomplete. A moratorium on the issue of further licenses was imposed in late 2004, in association with efforts to carry out an inventory of all commercial fishing vessels in the Philippines. This is currently underway.

The main vessel types involved in the tuna fishery are handline bancas (up to 60 GT in size), ring netters (usually < 100 GT), small purse seiners (< 250 GT) and large purse seiners, or "superseiners" (> 250 GT), with significant catches also taken by trolling, gillnet and artisanal gears, and a small number of domestic longline vessels.

Industry sources in 2004 suggest the following numbers of vessels, by category, are currently fishing.

Category	Number	Operational area
Handline bancas	3,000 ?	Philippines, Indonesia, Palau, high seas, PNG ?
Tuna ringnet*	100	Mostly Philippine waters
Small purse seine	110	Philippine waters, Indonesia
Large purse seine	54	PNG, Indonesia, high seas, other PIN
Domestic longline	14 ?	Mostly Philippine waters
DW longline	25	Pacific, Indian and Atlantic Oceans

* Other ringnet vessels target sardines and other small pelagics

3. ANNUAL TUNA CATCH IN THE PHILIPPINE EEZ

Since 1987, the official fishery statistics for the Philippines have been compiled by the Bureau of Agricultural Statistics (BAS), based on probability (stratified random sampling by data collectors) and non-probability (interviews by regular BAS staff) surveys, supplemented by secondary data from administrative sources e.g. landings sites and ports (Vallesteros, 2002). Annual Fisheries Statistics for commercial, municipal, inland and aquaculture sectors are published for three year time frames, most recently for 2001-2003 inclusive (BAS, 2005), and include volume and value of production by region, information on fish prices and foreign trade statistics.

Catch breakdown by the 30 main marine species is available[2], although estimates of annual bigeye and yellowfin catches for all years have been reported as a combined catch. In addition, most catches are multi-species, so species composition is as hailed, usually in terms of the predominant species. Some species composition data are available from NSAP sampling (Williams, 2004, and see later) and earlier LCEM sampling in 2003-2004. These data have been used to provide adjusted estimates of yellowfin and bigeye, by gear, for the SPC Yearbook catch estimates for the Philippines (Lawson and Williams, 1998).

The available BAS estimates for the tuna catch by species for the period 2000-2004 inclusive are given in Table I below. The estimates for 2004 are provisional. The total catch has risen by 40% between 2000 and 2003, with an increase of 63,000t during this period attributable to the catch of the oceanic species, nearly all by commercial vessels.

[2] Around 20% of the municipal catch and 6-8% of the commercial landings are not captures by these 30 species

Small quantities of longtail tuna (*Thunnus tonggol)* and Pacific bluefin tuna (*Thunnus orientalis)* are also taken but separate catch estimates are not available.

Table 1. Total tuna catch, by species, for 2000-2004
Source: BAS Annual Fisheries Statistics; 2004 figures are provisional

Year	Skipjack	Yellowfin/ bigeye	**TOTAL OCEANIC**	Frigate/bullet tuna	Eastern little tuna	**TOTAL**
2000	113,011	90,328	**203,339**	112,227	27,963	**343,529**
2001	105,484	83,560	**189,044**	111,719	27,280	**328,043**
2002	109,977	99,794	**209,771**	163,132	34,681	**407,584**
2003	138,319	127,240	**265,559**	179,086	38,675	**483,320**
2004[P]	143,143	129,553	**272,696**	208,108	44,875	**525,679**

Estimates of the billfish catch have been extracted by BAS and are listed below (Table 2). The great majority of the catch is taken by municipal gears (including handline), with sailfish the dominant species. The swordfish catch may include marlins in some cases.

Table 2. Total billfish catch, by species, for 2000-2004

Year	Marlin (blue and black)	Swordfish	Sailfish	**TOTAL**
2000	2,229	3,621	4,969	**10,819**
2001	2,503	4,433	6,196	**13,132**
2002	2,350	4,706	6,378	**13,434**
2003	1,742	5,236	5,178	**12,156**
2004[P]	1,091	4,964	3,856	**9,911**

Tuna catch breakdown by gear is also not available form the BAS statistics. The SPC Fishery Yearbook has however provided an estimated breakdown of catch by gear (see Table 3), based on extrapolations from the last year when catch-by-gear data were available (1996) but this is probably no longer accurate. A breakdown of the yellowfin/bigeye catch based on sampling during the 1993-94 period is also included.

Appendix 1 provides a breakdown of the catch by region for municipal and commercial fisheries for 2003. The commercial catch for all species is now over twice that of the municipal catch, with oceanic species comprising 59% of the commercial catch, and 55% of the total tuna catch of 483,000t. Nearly 70% of the commercial catch of oceanic species is landed in two Mindanao regions (Region 12 - General Santos, Region 9 - Zamboanga), with a similar proportion of the catch of neritic species also landed in Mindanao. The municipal catch landings, on the other hand, are more widely distributed, with Mindanao landings accounting for around one third of both oceanic and neritic species. Oceanic tunas make up less than 50% of the municipal landings.

Table 3. Estimated catch of oceanic tuna species, by gear type, for 2000 – 2004.

Source: SPC Tuna Fishery Yearbook, 2003; preliminary 2004 data from BAS and SPC. "Hook" includes small and large fish handline, and troll; "longline" includes domestically based longliners only; catches by species were estimated by the method of Lawson and Williams (1998) and the proportions by gear type for 1996.

	Gillnet	Hook	Longline	P/seine	Ringnet	Unclass	TOTAL
2000							
Skipjack	1,234	11,962	776	62,797	31,987	4,255	**113,011**
Yellowfin	2,213	48,300	1,799	19,859	5,144	4,753	**82,068**
Bigeye	246	4,545	169	2,207	565	528	**8,260**
	3,693	68,500	2,744	85,045	37,696	9,536	**203,339**
2001							
Skipjack	1,152	11,166	724	58,614	29,857	3,971	**105,484**
Yellowfin	2,047	44,682	1,663	18,372	4,758	4,397	**75,919**
Bigeye	227	4,204	157	2,041	523	489	**7,641**
	3,426	60,052	2,544	79,027	35,138	8,857	**189,044**
2002							
Skipjack	1,201	11,641	755	61,111	31,128	4,141	**109,977**
Yellowfin	2,444	53,362	1,987	21,941	5,683	5,252	**90,669**
Bigeye	272	5,021	187	2,438	624	584	**9,126**
	3,917	70,024	2,929	85,490	37,435	9,977	**209,772**
2003							
Skipjack	1,510	14,641	949	76,860	39,150	5,209	**138,319**
Yellowfin	3,117	68,038	2,534	27,975	7,246	6,696	**115,606**
Bigeye	346	6,402	238	3,108	796	744	**11,634**
	4,973	89,081	3,721	107,943	47,192	12,649	**265,559**
2004							
Skipjack	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Yellowfin	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Bigeye	N/a	N/a	N/a	N/a	N/a	N/a	N/a

It unclear how much of the overseas tuna catch landed in the Philippines is included in the current statistics, but probably very little in most regions until 2003.

The total estimated catch of tunas and billfish in the Philippines EEZ by Philippines vessels has thus been in range of 341,000 – 536,000t in recent years, with oceanic tuna contributing 189,000 – 273,000t (over 50%) to this catch.

No other fishing by foreign flag vessels is permitted in the Philippines EEZ, but a considerable amount of IUU fishing, based on the regularity of apprehensions of vessels illegally fishing in Philippine waters, would seem to occur, much of it involving tuna vessels. A desk study carried out in 1995 (PTRP, 1995) concluded that IUU longline catches of up to 10,000t (40% yellowfin) may have been taken in some years.

Landings/ transhipments by foreign longline vessels are permitted in Davao (Toril) port, where around 5,000t of mostly tuna is landed annually (see later). Over half of this is retained for processing and consumption, with the rest exported by air. It is assumed that all of this catch is taken outside Philippine waters.

4. ANNUAL CATCHES IN THE CONVENTION AREA

In addition to the estimated catch by Philippines vessels in the EEZ (see above), to this must be added catches by Philippines flag vessels taken outside the EEZ and elsewhere in the Convention area. The extra - EEZ catches are assumed to include those made by purse seine and ring net vessels in adjacent areas and based in overseas ports, distant water longliners operating in the Convention area, and catches by the wide-ranging handline vessels. There is generally no logsheet coverage for much of this activity, and details of catch, catch rates and catch by area are very incomplete.

The Fisheries Code of the Philippines (1998) requires that official estimates of the Philippines catch should include landed catches by both Philippines-based and Philippine overseas-based vessels caught outside Philippine waters eg PNG, Indonesia and high seas. This is currently happening to an unknown degree, as domestic and overseas components are not separated in the catch statistics. It is believed that up to 80,000t of overseas catch i.e. taken outside the Philippines EEZ may be captured by the 2003 BAS statistics. This primarily includes catch by small purse seiners and ring netters (fished in Indonesia but landed in Philippines) and catch by handliners fishing outside Philippines waters, and landing their catch in Philippine ports.

Purse seine catches in the Indonesian EEZ

Under an agreement reached with the Republic of Indonesia in 2002, a number of Philippine tuna vessels (75 catcher vessels, 10 single seiners, 20 longliners and support vessels - lightboats and carriers) were allowed access to Indonesian waters and ports, an agreement which expires in December 2005. Fifty-four (54) catcher vessels (38 under 250 GT) and 11 single purse seiners (all > 250 GT) have been endorsed since 2002 to fish in Indonesian waters. No catch data are required to be supplied under the agreement and no logsheet data are thus available. Most of the catch by these vessels is unloaded in Philippine ports, but with some going to Philippine-operated canneries in Bitung, Sulawesi (see later).

Purse seine catches in the PNG EEZ

Data on the catch by PNG-based Philippines flag vessels, and Philippines vessels fishing in PNG under access agreements are available from the SPC Regional Database, and are summarized for the period 2000-2004 below. A small proportion of the catch taken in Indonesia and in other PIN waters eg FSM, Kiribati under access agreements is included in these figures.

Table 4. Catch by Philippines purse seine bilateral access vessels in PNG waters, 2000-2004

Source: Regional Tuna Fishery Database; bracketed figures are provisional.

Year	No. of vessels	Skipjack	Yellowfin	Other	TOTAL
2000	9	27,677	7,008	768	35,453
2001	10	15,138	9,684	429	25,252
2002	11	18,891	6,968	778	26,723
2003	10	24,339	7,099	487	(31,926)
2004	11	(27,288)	(5,748)	(817)	(33,853)

Table 5. Catch by PNG-based Philippine purse seine vessels in PNG waters, 2000-2004.

Source: Regional Tuna Fishery Database; note that this includes 6 vessels operated by Philippine companies which fish under PNG flag; their total catch in 2004 was around 18,000t. Estimates for 2004 are expected to be close to 100%; estimates for 2000-2003 are expected to be high, but less than 100%.

Year	No. of vessels	Skipjack	Yellowfin	Other	TOTAL
2000	13	28,508	9,125	1,720	39,353
2001	15	26,984	16,846	346	44,176
2002	17	40,461	22,242	422	63,125
2003	18	46,600	17,913	339	64,852
2004	19	44,455	13,234	164	57,852

Purse seine and ring net catches in other areas

No data are similarly available on the catch by Philippines purse seine and ring net vessels in other waters within the Convention area, including high seas areas, the Palau EEZ, South China Sea etc.

Handline catches are not covered by logsheet**,** and are not well estimated. Vessels fishing for larger tunas, primarily for export or local processing, are wide-ranging as catch rates have declined in adjacent waters, nowadays often undertaking four-week trips. It is generally accepted that 50% or more of the estimated catch of 35,000t is taken outside the Philippines, in Indonesia (south to Banda Sea and east to Irian Jaya/Papua), Palau and even PNG.

Distant water longline catches in the Convention area

Distant water operations by Philippines joint-venture companies, fishing in all three oceans, seem to have commenced in 1998. Catches believed to have been taken in the Pacific Ocean, by tuna species of interest, are shown in Table 6 below. No detailed information is available on the number of vessels involved, or the spatial distribution of the catch, but up to 25 vessels are believed to be fishing at various times, with most activity in temperate high seas areas. The WCPO catch has gradually declined with a shift of operations to the other two oceans, combined with a shift seen in 2001 to targeting bigeye tuna. The catch by these vessels in other oceans is reported to the relevant RFMOs (IOTC and ICCAT) but not as yet to the emerging WCPFC for the WCPO. A small number of these vessels also fishes in equatorial high seas areas.

Table 6. Catch by Philippine distant water longline vessels, 2000-2004

Source: industry; catches of SBT not included, and no details of catch by area.

Year	Yellowfin	Bigeye	Albacore	Total
2000	146.815	227.016	1,221.735	**1,673.546**
2001	355.892	1,067.460	629.041	**2,052.393**
2002	213.392	1,188.112	289.049	**1,690.553**
2003	133.196	615.117	0*	**837.913**
2004	0	0	0	No fishing

* plus 85.9 t Swordfish, 93.7t Other species

In attempting to estimate a total catch by Philippine vessels in the Convention area, in addition to the information presented above, the biggest gap relates to the catch by large purse seine vessels (virtually all of which is now taken outside the Philippines) in areas other than the PNG EEZ ie Indonesia and the high seas. For the 27 vessels involved, it is assumed that an average annual catch of 3,800t is taken, or approximately 100,000t. The table below then summarizes the allocation is estimated by area. In summary, the catch in Philippine waters may be around 130,000t, or one-third, with the balance (270,000t) now taken outside the Philippines, mostly by large purse seiners (196,500t).

Table 7. Allocation of estimated catch by gear and area, 2003
Source: Lewis, 2004

Catch /area / GEAR	MUNICIPAL		COMMERCIAL		
	Philippines	Overseas	Philippines	O/seas included	Overseas prob not now included
Large handline	17,500	17,500			
Small handline	30,000				
Troll	5,000				
Longline (domestic)			3,000		
Longline (distant water)					1,700
Ring net			18,500	18,500	
Small p/ seine			43,500	43,500	
Large purse seine			1,300	50,000	146,500
Unclassified	10,000				
TOTAL	**62,500**	**17,500**	**66,300**	**113,000**	
	80,000		**179,300**		**148,200**
BAS figures (2003)	***64,000***		***202,000***		

5. MARKET DESTINATION OF CATCHES

Most of the **municipal** tuna catch (64,000t of oceanic tunas and 76,000t of neritic tunas in 2003) is landed as wet fish in thousands of landing sites all over the Philippines. BAS suggests there were over 8,000 municipal landing centers in 2001. Much of the municipal catch is processed by drying, salting, smoking etc. No data are available on the disposal of the municipal catch after landing, but little of the municipal tuna catch would enter large scale commercial processing, the exception being large handline-caught tuna exported as sashimi and processed by the frozen smoked process, mostly in General Santos (see later), and possibly small amounts of tuna sold as wet fish direct to canneries. Decreasing quantities of higher quality handline-caught tunas are exported fresh/chilled to the Japanese sashimi market (estimated less than 2,000t per year now, compared with over 7,000t in the past).

The **commercial** domestic tuna catch of oceanic tunas (200,000t in 2003) is increasingly directed towards processing by domestic canneries, based in the Philippines and elsewhere, with lesser amounts to frozen smoked operations. The estimated 250,000t

annual throughput of the 8 canneries is mostly supplied by landings from Philippines purse seiners and ring netters, both local vessels and via carriers from overseas operations. Overseas operations also supply canneries in PNG (30,000t p.a.) and Indonesia (currently 20,000t p.a.), whilst an unknown quantity of frozen tuna is exported to canneries elsewhere; some tuna is imported to supplement cannery supply.

Official figures for **exports of tuna products** for the period 2000-2004 are tabulated below. The first category includes chilled sashimi quality fish, frozen whole fish for canning and presumably frozen smoked tuna. The volume of canned exports continues to increase, whilst collective exports of fresh/chilled/frozen tuna are probably declining. There are suggestions that the value of exports is presently underestimated, and may be closer to USD 180 million.

Table 8. Tuna exports by commodity, 2000 –2004
Source: NSO data, in BAS Fisheries Statistics; 2004 figures are provisional

Tuna commodity, by volume (t)	2000	2001	2002	2003	2004[p]
Fresh/chilled/frozen	42,068	21,649	22,496	27,206	23,347
Dried/smoked	591	771	705	228	137
Canned	36,458	33,909	47,970	56,854	53,873
TOTAL VALUE (million USD)	120.18	115.25	139.05	153.10	150.78

6. ONSHORE DEVELOPMENTS

Transhipment by foreign vessels is permitted in only one port in the Philippines - Davao (Toril), as noted earlier. Table 9 below lists the details of these unloading by Taiwanese longliners. Over half of the landings are retained for local processing and consumption. There has been a gradual decline in the unloading volume, with a growing preference to unload in Indonesian ports e.g. Bitung.

Table 9. Port Calls and Unloading Volumes by Foreign Longline Vessels, Davao Fish Port Source: PFDA, 2004

YEAR	Port calls	Volume of unloading (t)	Transhipped (t)	Retained (t)
2000	897	3,399	2,643	760
2001	932	5,318	3,069	2,244
2002	786	5,146	2,255	2,910
2003	643	5,065	1,884	3,183
2004	621	4,210	1,792	1,460

Harbour infrastructure
The General Santos Fish Port Complex, the country's major tuna unloading port, with reported unloadings of 95,000t (mostly tunas) in 2004, is currently undergoing significant expansion, due for completion in May 2006. Several of the six other major fish ports in the country are proposed for rehabilitation in the near future. Navotas, in Metro Manila,

remains the largest fish port, with unloadings of around 200,000t annually, of which around 25,000t is tuna.

Processing plants

There are currently 8 **tuna canneries** operational in the Philippines, 6 in General Santos and 2 in Zamboanga, although there have been nine or more in the past. The total pack in 2003 was reportedly 10.5 million cases (Tuna Canners Association of the Philippines (TCAP)), the equivalent of 250,000t of raw product, virtually all of which is oceanic tunas. Several canneries have recently announced plans to expand plants and others are committed to the development of new product lines eg pouch packs. Over 90% of the product is exported, with a small amount (<10%) for local consumption.

There is also a Philippines-owned and operated cannery in Madang, Papua New Guinea processing around 30,000t per year, and two Philippines-operated canneries in Bitung, Indonesia, processing around 20,000t of tuna per year.

Cannery production is increasing, with several General Santos canneries committed to increasing output, as well as expected increased throughput in the Indonesian canneries and construction of a second Philippines-owned cannery in PNG.

Whereas much of the handline catch in the past (1980s) was exported to sashimi markets in Japan, an estimated 70% of the catch, along with landings from foreign longliners in Davao, is now processed as **frozen smoked tuna** by at least 12 plants, 9 of which are located in General Santos. This industry now exports USD 33 million of product per year (88% to the US, 12% to other countries) and provides 1,500 factory jobs in the General Santos area. Supply of product is however becoming limiting as the handline fishery encounters increasing supply problems.

7. TUNA STATISTICS AND RESEARCH

The Philippines Tuna Fishery Data Collection Workshop was held at the headquarters of the Bureau of Fisheries and Aquatic Resources in Quezon City, Metro Manila, from 20 to 21 October 2004(SPC, 2004b.) The workshop was part of the Indonesia and Philippines Data Collection Project (IPDCP), which has been developed by the Preparatory Conference for the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (Anon. 2003), with the following objectives:

(1) to collect and compile data that can be used to reduce the uncertainty of the assessments of tuna stocks in the Western and Central Pacific Ocean, and
(2) to improve the monitoring of tuna fisheries in the Philippines and Indonesia so that both countries will be able to fulfill their future obligations in regard to the provision of fisheries data to the Commission.

Funding and technical support was committed to both BAS and the National Fisheries Research and Development Institute (NFRDI), with activities commencing in January 2005.

BAS will be expected, *inter alia,* to recruit additional enumerators to collect data on tuna landings, obtain landings data from sites not currently covered, compile separate statistics for oceanic tuna catches inside and outside Philippine waters, compile and report annual tuna statistics (with BFAR), develop procedures for the verification of survey data, and compile separate data for yellowfin, bigeye and billfish in the catch.

The National Stock Assessment Programme (NSAP) will continue to collect port sampling data (species composition, length frequency and vessel catch and effort information) as a priority activity. Support has been provided to the NSAP during from the IPDCP to better coordinate the collection and processing of data, through the activities of an Assistant National Tuna Coordinator, and by upgrading hardware and regional capacity. The NSAP port sampling data were summarized and reviewed by Williams (2004), and make an important contribution to the Regional Tuna Database.

A catch and effort logsheet system, initially for the 50 plus large purse seine vessels which may account for around 200,000t of catch, is in the process of implementation by BFAR, utilizing a modified version of the regional purse seine logsheet.

Several initiatives relevant to the tuna fishery are in progress – a Congress House Bill "re-defining commercial handlining fishing and vessel, and providing regulations for utilizations thereof", is under consideration. This would establish a third separate vessel category (cf. municipal and commercial) for handline vessels, and facilitate the collection of catch statistics via logsheets from such vessels. The moratorium on the issue of new commercial vessel and gear licenses was implemented in November 2004, and will allow an inventory of commercial vessels to be undertaken.

There are currently no plans to develop an observer programme for the Philippine tuna fishery, although some observer coverage of vessels fishing in the PNG EEZ is provided by PNG NFA.

8. FUTURE PROSPECTS

A Philippine National Tuna Management Plan was developed during 2004, and is in the final stage of approval by the National Tuna Industry Council, after which public hearings will follow. The Plan is expected to be implemented in 2006.

The WCPF Convention was passed by the Senate on March 3rd and with subsequent passage through Congress, has now been ratified, making Philippines a member of the Commission.

Domestic tuna processing capacity continues to expand, with the cannery pack and exports increasing each year.

Overseas expansion of processing capacity continues, with the opening of a new cannery in Lae scheduled later this year. One cannery in Bitung, North Sulawesi, is fully operational, whilst another has yet to become fully operational after major renovation.

Philippines industry expects to participate fully in the forthcoming Vessel Days Scheme for the purse seine fishery in the waters of PNA countries.

Continued access to the waters of Indonesia beyond the end of existing agreements in December 2005 is critical to the future of the industry, and is being pursued under existing cooperative agreements between Philippines and Indonesia. The future of handline operations remains the most at risk, as these are not covered by existing arrangements.

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Appendix 1. Tuna catch, by species and region, for 2003, for commercial and municipal fisheries.

Source: BAS data; yellowfin includes bigeye; frigate tuna includes bullet tuna; ELT = eastern little tuna

Region / Species	I	II	III	IV-A	IV-B	V	VI	VII	VIII	IX	X	XI	XII	NCR	ARMM	C'GA	**TOTAL**
COMMERCIAL																	
Skipjack	299	162	2,517	5,407	1,688	916	1,613	1,208	571	46,347	391	149	39,287	10,344	3,096	82	**114,077**
Yellowfin	668	196	760	4,581	2,968	574	3,463	479	2,383	12,839	941	5,669	43,116	1,141	7,460	235	**87,473**
SUBTOTAL	967	358	3,277	9,988	4,656	1,490	5,076	1,687	2,954	59,186	1,332	5,818	82,403	11,485	10,556	317	**201,550**
Frigate	4	1,557	43	11,001	2,014	2,684	2,827	5,268	2,365	9,971	3,289	322	53,558	11,224	8,394	239	**114,760**
ELT	14	3	2	-	17	-	6,934	203	231	1,322	7,499	7	2,553	82	8,163	6	**27,036**
SUBTOTAL	18	1,560	45	11,001	2,031	2,684	9,761	5,471	2,596	11,293	10,788	329	56,111	11,306	16,557	245	**141,796**
TOTAL	985	1,918	3,322	20,989	6,687	4,174	14,837	7,158	5,550	70,479	12,120	6,147	138,514	22,791	27,113	562	**343,346**
MUNICIPAL																	
Skipjack	2,399	39	481	1,341	4,809	2,359	872	1,356	523	3,713	477	1,248	1,165	-	2,640	820	**24,242**
Yellowfin	4,075	613	1,188	991	10,829	2,792	2,164	2,152	2,467	5,857	565	1,452	777	-	1,510	2,335	**39,767**
SUBTOTAL	6,474	652	1,669	2,332	15,638	5,151	3,036	3,508	2,990	9,570	1,042	2,700	1,942		4,150	3,155	**64,009**
Frigate	663	623	432	1,311	8,131	4,737	773	4,774	2,807	18,969	2,595	1,512	3,974	-	5,903	7,122	**64,326**
ELT	133	7	25	94	2,637	555	3,701	955	169	469	1,007	50	69	-	671	1,097	**11,639**
SUBTOTAL	796	630	457	1,405	10,768	5,292	4,474	5,729	2,976	19,438	3,602	1,562	4,043		6,574	8,219	**75,965**
TOTAL	7,270	1,282	2,126	3,737	26,406	10,443	7,510	9,237	5,966	29,008	4,644	4,262	5,985	-	10,724	11,374	**139,974**
GRAND TOTAL	8,255	3,200	5,448	24,726	33,093	14,617	22,347	16,395	11,516	99,487	16,764	10,409	144,499	22,791	37,837	11,936	**483,320**

REGIONS: Luzon – I (Illocos), II (Cagayan), III (Central Luzon), IVA (Calbarzon); NCR (National Capital Region); Palawan – IVB (Mimaropa)
Visayas – V (Bicol), VI (Western Visayas), VII (Central Visayas), VIII (Eastern Visayas);
Mindanao – IX (Zamboanga Peninsula), X (Northern Mindanao), XI (Davao), XII (Socksargen), XIII (Caraga), ARMM (Autonomous Region of Muslim Mindanao)