

### 3. SHIPPING AND SHIPPING RELATED INDUSTRIES

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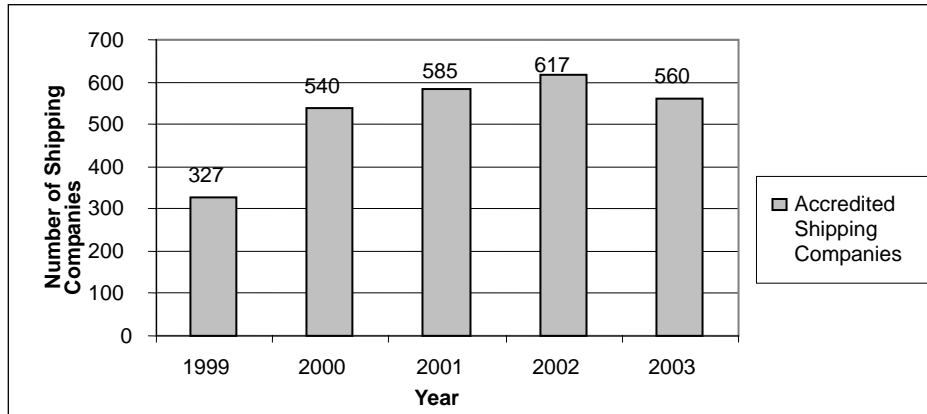
### 3. SHIPPING AND SHIPPING RELATED INDUSTRIES

#### 3.1 Shipping Industry

##### 3.1.1 The Industrial Structure

From the year 1999 to 2002, there has been an increasing trend in the number of new domestic shipping companies accredited by the MARINA (see figure 3.1.1).

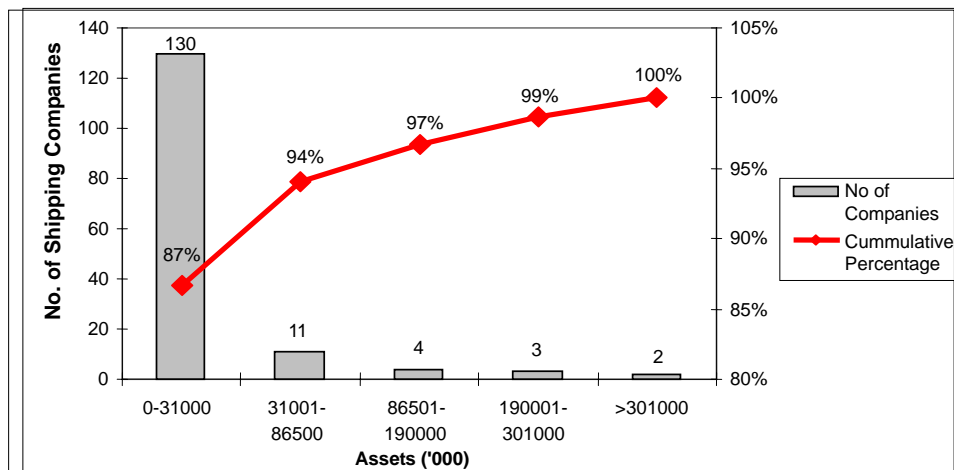
**Figure 3.1.1. Accreditation of Shipping Companies**



Source: MARINA Website

In terms of paid-up capital, it is quite apparent that the distribution is severely skewed towards a few companies owning a large share of the total paid up capital (See Figure 3.1.2 and Table 3.1.1). It is also pertinent to note that the youngest of the shipping companies in the current top ten was established in 1985. This indicates that for the last 20 years, no major player was able enter the market.

**Figure 3.1.2. Domestic Shipping Companies (in Terms of Paid-Up Capital), 2000**



Source: MARINA Website

**Table 3.1.1. Top Ten Domestic Shipping Companies  
(in Terms of Paid-up Capital and GT, 2000)**

Name of Company	Total Number of Vessel	Total GRT (000 tons)	Paid-up Capital (P' 000)	Year Established
1 Negros Navigation	21	65,500	3,637,635	1932
2 WG & A	28	173,900	1,496,599	1948
3 Lorenzo Shipping Corp	7	44,700	300,752	1973
4 Herma Shipping & Transport Corp	15	9,300	251,700	1985
5 Sulpicio Lines	31	147,300	213,252	1973
6 PNOG Shipping & Transport Corp.	9	18,150	190,000	1975
7 Solid Shipping Lines	10	37,350	125,000	1980
8 Phil. Fast Ferry Corp.	1	480	105,116	-
9 MIS Maritime Corp	6	13,000	100,000	-
10 NMC Container Lines, Inc	2	5,700	86,500	-

Source: MARINA-DSO

As shown in Table 3.1.2, the share of top ten companies accounts for almost half of the total GRT registered. The top ten companies accounts for around 0.5% of the total number of the domestic shipping companies, despite its huge share in total GRT at 48%. Thus, in the same vein as above, vessel capacity ownership is likewise skewed that most of the vessel capacity is owned by only a few companies (see Table 3.1.1).

Thus, despite the increase of the number of shipping companies shown earlier, trunk line operation remains rooted to a few companies, thereby in many forums, the Philippine domestic shipping industry is commonly referred to be oligopolistic in structure.

**Table 3.1.2. Top Ten Domestic Shipping Companies in Terms of GRT (2000)**

No	Name of Company	Total Number of Vessel	Total GRT (Thousand tons)	Place Registered
1	WG&A Philippines, Inc.	28	173,900	Cebu City
2	Sulpicio Lines, Inc.	31	147,300	Cebu City
3	Negros Navigation Co., Inc.	21	65,500	Iloilo
4	Lorenzo Shipping Corp.	7	44,700	Manila
5	Solid Shipping Lines	10	37,350	Manila
6	Asian Shipping Corp.	47	26,600	Manila
7	Trans-Asia Shipping Lines, Inc.	13	23,000	Cebu City
8	Loadstar Shipping Co., Inc.	19	21,500	Manila
9	Northern Mindanao Transport Corp.	25	19,800	Manila
10	Premier Shipping Lines	17	19,450	Manila
	Sub-total (A)	208	579,100	
	Others	2,945	620,900	
	Share of (A) in Total	6.5%	48.0%	

Source: MARINA website (Year 2000)

Note: Fishing companies are omitted from this list.

The major part of domestic shipping, however, is operated and managed by numerous small scale shipping companies mostly registered in cities other than Manila and Cebu. Most of these companies are of single owner – single ship type of operation, similar to that of jeepney ownership and operation in the land transport sector of the Philippines. The distribution of business opportunities among these large scale shipping companies and the rest of medium and small scale shipping companies are analyzed by type of operation in the subsequent section.

(1) SHIPPING COMPANIES BY TYPE OF SERVICE

Based on an updated MARINA database of vessel and companies (2003), an analysis was done to delineate the outlook of the domestic shipping industry in terms of tonnage owned by each company and by type of operation. In this report, a grouping of shipping companies is done by type of service as shown in Table 3.1.3.

**Table 3.1.3 Grouping of Type of Service**

Type of Service	Type of Ship Operated	
Cargo Freighter Service	Container	General Cargo
Passenger Cargo Service	Passenger Cargo	
Ferry Service	Passenger Ferry	Passenger
Liquid Carrier Service	Petroleum Tanker	Liquid Carrier

Source: MARINA 2003

Note: Category of service is referred with VES 2003 of MARINA

The ranking of shipping companies by type of services was analyzed to know the size of the share of top ten ranked companies in relevant service sector.

Table 3.1.4 shows the share of top ten companies in the cargo freight service in terms of GRT and the number of ships owned and operated in the group of companies for cargo freight service which is composed of full-container ship and general cargo ship having gear to handle containers. Only 1% of total number of shipping companies accounts for 10% of total number of ships owned and operated; and 40% of total GRT.

**Table 3.1.4 Top Ten Companies in Cargo Freight Service**

No	Name of Company	Service Area	Nos. of Vessel	Total GRT
1	Lorenzo Shipping	Manila	6	39,850
2	Solid Shipping Lines	Manila	10	37,350
3	Sulpicio Lines, Inc.	Cebu	11	28,850
4	Loadstar Shipping Co., Inc.	Manila	19	27,175
5	Asian Shipping Corporation	Manila	28	26,050
6	Candano Shipping Lines, Inc.	Legaspi	27	18,940
7	Northern Mindanao Transport	Iligan	17	17,380
8	Premier Shipping Lines	Cebu	14	14,420
9	W.G & A Philippines, Inc.	Manila	4	13,500
10	APO Cement Corporation	Cebu	1	11,650
	Sub-total (A)		137	235,160
	Others		1,275	347,320
	Share of (A) in Total		10%	40%

Source: MARINA 2003

Note: 1) Data of registered vessel is out and computed by the Study Team.

2) Several general cargo vessels are of geared vessel for container transport.

Table 3.1.5 shows the share of top ten companies in the passenger cargo service in terms of GRT and the number of ships owned and operated in the group of companies for passenger cargo service. Only 2.3% of total number of shipping companies account for 13% of total number of ships owned and operated; and 88% of total GRT.

**Table 3.1.5. Top Ten Companies in Passenger Cargo Service**

Nos	Name of Company	Service Area	Nos. of Vessel	Total GRT
1	W. G. & A. Philippines, Inc.	Cebu	21	148,920
2	Sulpicio Lines, Inc.	Cebu	20	114,650
3	Negros Navigation Co., Inc.	Iloilo	13	56,050
4	Trans-Asia Shipping Lines, Inc.	Cebu	12	22,260
5	MBRS Lines, Inc.	Manila	4	13,590
6	Sampaguita Shipping	Cebu	4	7,400
7	Viva Shipping Lines, Inc.	Batangas	12	7,250
8	Cokaliong Shipping Lines, Inc.	Cebu	5	6,100
9	Montenegro Shipping Lines, Inc.	Batangas	13	5,150
10	George & Peter Lines, Inc.	Cebu	4	2,900
	Sub-total (A)		108	384,280
	Others		728	49,430
	Share of (A) in Total		13%	88%

Source: MARINA 2003

Note: Data of registered vessel is sorted out and computed by the Study Team.

Table 3.1.6 shows the share of top ten companies in the passenger ferry service in terms of GRT and the number of ships owned and operated in the group of companies for passenger cargo service. Only 1.6% of total number of shipping companies accounts for 1.0% of total number of ships owned and operated; and 14.6% of total GRT.

**Table 3.1.6. Top Ten Companies in Passenger Ferry Service**

No	Name of Company	Service Area	Nos. of Vessel	Total GRT
1	Coco Explorer Inc.	Batangas	1	1,340
2	RN Hi-speed Ferries, Inc.	Batangas	1	1,140
3	Jetstream Holdings, Ltd.	Cebu	1	660
4	GT Ferry, Inc.	Cebu	1	590
5	Walker Dining Cruise, Inc.	Manila	1	490
6	Grand Seaway Ferries, Inc.	Manila	1	480
7	Negros Navigation Co., Ltd.	Iloilo	1	480
8	Water Jet Shipping Corporation	Cebu	2	480
9	Danilo Lines, Inc.	Cebu	1	480
10	Phil. Fast Ferry Corporation	Cebu	3	480
	Sub-total (A)		13	6,620
	Others		1268	38,620
	Share of (A) in Total		1.0%	14.6%

Source: MARINA 2000

Note: 1) Data of registered vessel is sorted out and computed by the Study Team.

2) Several general cargo vessels are of geared vessel for container transport.

Table 3.1.7 shows the share of top ten companies in the liquid carrier service in terms of GRT and the number of ships owned and operated for this type of service. As shown in this table, 11.5% of total number of shipping companies accounts for 65.0% of total number of ships owned and operated; and 63% of total GRT.

The client of liquid carriers is limited only to the refineries and they carry only petroleum products and LPG. Due to a substantial difference between other type of service and business, the GRT owned by shipping companies is evenly distributed among all companies rendering this type of service.

**Table 3.1.7. Top Ten Companies in Liquid Carrier Service**

Nos	Name of Company	Service Area	Nos. of Vessel	Total GRT
1	PNOG Shipping & Transport Corp	Manila	8	17,080
2	Flagship Petroleum Carriers	Manila	5	12,010
3	MIS Marine Corporation	Manila	5	11,450
4	Herma Shipping and Transport Corp	Manila	15	10,280
5	Supreme Marine Co., Inc.	Manila	3	6,890
6	Terban Marine Corporation	Manila	3	6,730
7	Grand Asian Shipping Lines, Inc.	Manila	10	6,320
8	Sun Marine Corporation	Manila	3	5,600
9	Core Marine Corporation	Manila	3	5,340
10	Safeway Maritime Bulkiers	Manila	2	4,940
	Sub-total (A)		57	86,670
	Others		110	50,650
	Share of (A) in Total		65%	63%

Source: MARINA 2003

Note: 1) Data of registered vessel is sorted out and computed by the Study Team.

2) Several general cargo vessels are of geared vessel for container transport.

Table 3.1.8 tabulates the summary of preceding tables which shows the skewed distribution of transport capacity.

**Table 3.1.8. Share of Top Ranking Companies**

Type of Service	A	B	C	D	E	F	G
Cargo Freighter	914	10	0.1%	1,412	137	10%	40%
Passenger Cargo	422	10	2.5%	836	108	13%	88%
Passenger Ferry	611	10	1.6%	1,281	13	1%	15%
Liquid Carrier	57	10	11.5%	167	57	65%	63%
Average	501	10	2.0%	924	79	12%	60

Source: Study Team based on MARINA's ship registration data

Note: A: Total number of shipping companies own and operate such type of service.

B: The number of shipping companies top ranked.

C: Share of top ranking companies.

D: Total number of vessel

E: Number of vessels owned and operated by top ranking shipping companies.

F: Share of top ranking companies in terms of number of vessels.

G: Share or top ranking companies in terms of GRT.

### 3.1.2 Categorization of Shipping Companies

#### (1) SHIPPING COMPANIES BY TYPE OF SERVICE

The size and management capability of domestic shipping companies can be categorized by the number and total GRT of ships owned and operated; as well as share in total of the same in respective type of service.

The distribution of number of company and ships owned and GRT by type of service is analyzed in weight as shown in Table 3.1.9. The companies are further grouped by category which reflects the size, capability and management level as a domestic shipping operator. The criteria used for the grouping of companies for categorization is shown in Table 3.1.9.

**Table 3.1.9. Criteria Applied for Categorization of Shipping Companies**

Category	III	II	I
<b>Cargo Freighter</b>			
Total GRT of ship(s) owned and operated	>5000	≥3000	<3000
Number of ships owned and operated	≥3	≤2	=1
<b>Liquid Carrier</b>			
Total GRT of ship(s) owned and operated	>5000	≥2000	<2000
Number of ships owned and operated	≥3	≤2	=1
<b>Passenger Cargo</b>			
Total GRT of ship(s) owned and operated	>2500	≥1500	<1500
Number of ships owned and operated	≥3	≤2	=1
<b>Passenger Ferry</b>			
Total GRT of ship(s) owned and operated	>250	≥5	<5
Number of ships owned and operated	≥3	≤2	=1

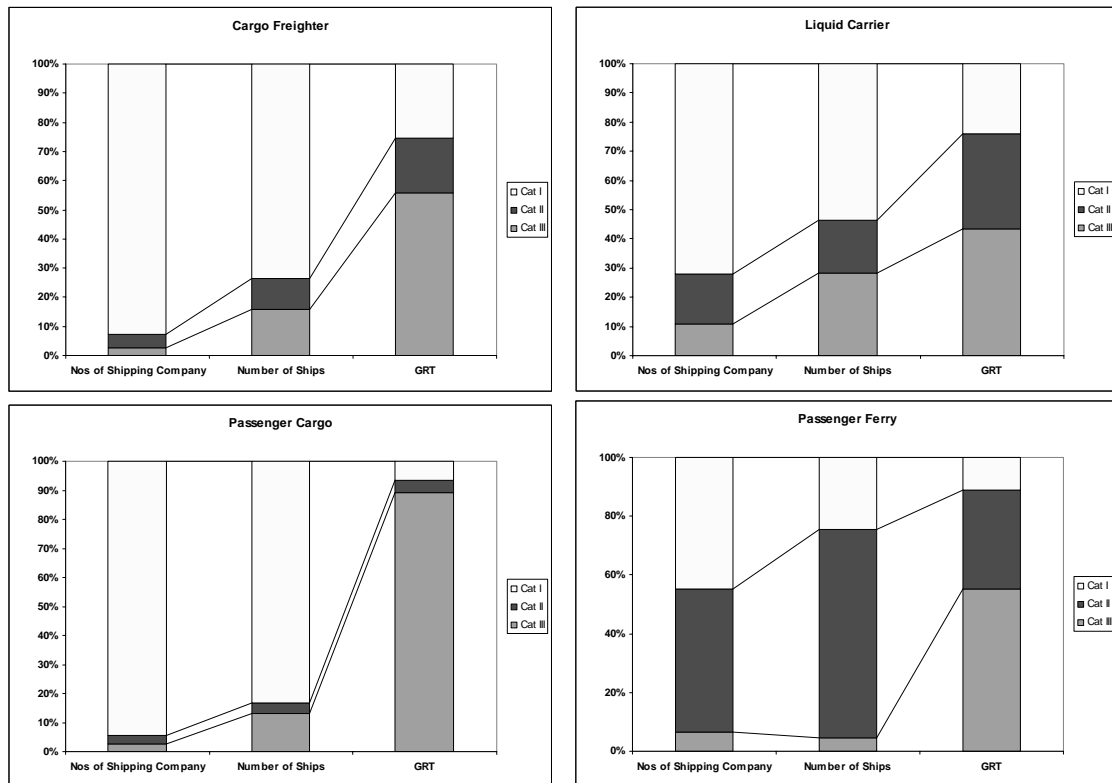
As a result of the categorization, the domestic shipping companies were grouped by type of service and by category. Table 3.1.10 summarizes the percentage of shipping companies and its composition by type of service and illustrates the structure of domestic shipping business in terms of distribution of resources.

**Table 3.1.10. Distribution of Company, GRT and Ships by Type of Service**

Type of Service	Category	Cargo Freighter	Liquid Carrier	Passenger Cargo	Passenger Ferry
Percentage of Shipping Company	I	92.7%	70.9%	94.5%	45.5%
	II	4.0%	16.6%	2.9%	48.0%
	III	3.3%	12.5%	2.6%	6.5%
	Total	100.0%	100.0%	100.0%	100.0%
GRT	I	25.4%	24.0%	6.6%	11.1%
	II	18.7%	32.6%	4.2%	33.7%
	III	55.9%	43.4%	89.2%	55.2%
	Total	100.0%	100.0%	100.0%	100.0%
Number of Ships	I	73.7%	52.8%	83.3%	24.5%
	II	10.6%	18.9%	3.5%	69.9%
	III	15.7%	0.0%	13.2%	5.6%
	Total	100.0%	71.7%	100.0%	100.0%

Figure 3.1.3 below illustrates the structure of domestic shipping business in terms of distribution of resources.

**Figure 3.1.3. Distribution of the Number of Company, Ship and GRT by Type of Service**



The above analysis on the industry structure per type of service, clearly demonstrates the oligopolistic nature of service, is more particular in cargo and passenger cargo service. Passenger ferry and liquid cargo service is much more competitive in the sense that vessel capacity ownership is much more dispersed.

### 3.1.3 Ship Operation and Management Practices

#### (1) ISSUES IN RELATION WITH THE INSTITUTIONAL FRAMEWORK

The institutional framework directly or indirectly affects actual ship operation and management practices. This section raises some ship operation and management issues identified by the Study Team in relation with the relevant institutional framework.

##### 1) Ship Classification

The Philippine Register of Shipping (PRS) founded in 1988 once served as the solo domestic classification society to class Philippine vessels for a long time. Although PRS is the most experienced and widely operated one, i.e., 466 classed ships by PRS as of March 2004, today, seven other domestic societies also provide the same service. As results, domestic ship owners have a wide range of choice while many including financial institutions question their service quality. On the other hand, IACS members such as ABS, BV, LR and DnV provide services to many of domestic vessels as the condition to apply for DBP finance and marine insurance.

In order to improve the class surveys by domestic societies, it is necessary to impose clear assessment criteria on surveyed ships with adequate training of class surveyors. When facing difficulties in examination, for instance, it is advisable to use a set of camera and cellular phone to communicate with their headquarters and/or MARINA.



## 2) ISM Code

MARINA has seriously adopted the ISM/NSM Code to Philippine flagged vessels in order to enhance ship safety. A monitoring arm was established through Administrative Order No. 06-2003 which requires the Central Office and the Regional Offices to submit a monthly report of the status of compliance with the ISM/NSM Code by all shipping companies and ships, and take legal actions against non-compliance with the Code. MARINA has also made efforts to upgrade the current pool of NSM Auditors to become ISM Auditors.

MARINA has made efforts to adapt the Safety Management System (SMS) even to small vessels through simplified forms to fill up. MARINA's statutory surveys, the ISM/NSM audits, and the class surveys have their own distinct areas of concern. However, there is still a need to improve the system, e.g. preparing suitable manuals, guidelines and checklists based on actual shipping conditions in terms of ship type and size, assigned route and area.

## 3) Capability for Ship Management

Seafarers should be responsible for onboard maintenance. According to the onboard survey, however, they conduct only ocular surveys without understanding technical criteria sufficiently. In principle, satisfactory ship-management practice can be put into practice through a combination of daily onboard maintenance by seafarers with regular ship inspection by professional superintendents. In this sense, ship-management has not been rooted in the Philippine domestic shipping.

## (2) ONBOARD SURVEY FOR SHIP MANAGEMENT PRACTICES

The Study Team has conducted an onboard survey on 10 domestic vessels in collaboration with the MARINA counterparts. In conclusion, the situations are far from satisfactory. Identified problems on ship-management are summarized in the following table while the ship-wise onboard survey results are recorded in the Appendix 1A:

**Table 3.1.11 Summary of the Problems from the Onboard Survey**

Category	Identified Problems	Anticipated Problems
Defective Safety Facilities and Equipment	<ul style="list-style-type: none"> <li>• <u>Fire Prevention:</u> <ul style="list-style-type: none"> <li>- Inadequate structure of fire shelters</li> <li>- Inadequate design of air vents (no dampers)</li> </ul> </li> <li>• <u>Life Saving:</u> <ul style="list-style-type: none"> <li>- no lighting for life raft and releasing device</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Obstruct to prevent the spread of the fire</li> <li>• Obstruct to evacuate passengers from ship</li> </ul>
Inadequate Ship Operation	<ul style="list-style-type: none"> <li>• Inadequate control of engine operation</li> <li>• Inadequate implementation of ISM Manual</li> <li>• No training on emergency passenger evacuation, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Fire disaster</li> <li>• Engine damage</li> </ul>
Poor Passenger Services	<ul style="list-style-type: none"> <li>• Inadequate quality of running water</li> <li>• No hot shower</li> <li>• Insufficient room cleaning and noise control</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease of passengers</li> </ul>

**Figure 3.1.4. Photos from Onboard Surveys**

	<p>Air Ventilators and entrance doors Name should be painted.</p>		<p>Packing of W/T door must be repaired.</p>
	<p>Fire Control plan at Gangway  Red color and mark must be painted.</p>		<p>Rope guide for rain protection canvas. In case of emergency, can't abandon ship. System should be changed.  Oil spill tanks for F.O.T. must be installed.  Color paint and name for AEH must be identified.</p>
	<p>Lobby floor Heavy luggage must be tightened.</p>		<p>Life Jacket stores No. of jacket for adult and children to be identified.  Grip handles to be installed.</p>
	<p>Bad design of extended wing bridge. Big dead angle for running fix of other ships</p>		

Existing poor ship management could cause serious maritime incidents, particularly due to inadequate control of engine operation and insufficient implementation of ISM Manual.

A case in point is a serious incident that happened to the MV Princess of the World (10,799 GT Ropax-type vessel), off Dulunguan Point near Siocon town of Zamboanga del Norte on July 19, 2005 when it was en route to Zamboanga City from Iloilo City. Fire took place at starboard scavenging air trunk of the main engine by combustion gas blow-by and fire spread through the engine room and accommodation area. Fortunately, all 249 passengers and crew aboard were safely evacuated.

MARINA and the Study Team inspected the vessel (after the incident) and as a result, a lot of non-conformities were found and are described below. Details are recorded in the Appendix 1B:

- No record at engine log book regarding the first fire and second fire;
- Duty engineer did not report to the chief engineer and the crew has no standing instructions;

- Duty engineer did not report the first fire incident to next duty engineer, and subsequently to another next duty engineer;
- Check for normal running of critical machinery was not done by Engineer and Company;
- Non conformity on Ship Equipment Maintenance Plan;
- Non conformity on SMS books, such as Result of Sea-Trial record;
- Non conformity on Internal Audit; and,
- Manpower and materials are not sufficient: Non conformity on education, training, and drills.

**Figure 3.1.5. Marine Incident of the MV Princess of the World on July 19, 2005**



Source: Philippine Navy

### **3.1.4 Shipping Company Interview Survey**

#### **(1) PROFILE OF THE RESPONDENTS**

The survey of shipping companies was conducted last January to March 2005 using field survey and direct interview. There are 55 firms who participated in the survey representing three (3) regions: Luzon (14 respondents), Visayas (20 respondents) and Mindanao (21 respondents). All of the respondents are from wholly Filipino-owned companies except for one tanker operator that has 40% foreign ownership. Shipping services provided by the respondents vary and includes operation of passenger cargo vessels, passenger ferries, general cargo vessels, container vessels, tug-boats, barges and tankers. The respondents are a mixture of small to medium sized companies, though some respondents can be considered as large companies. About half of the respondents own 5 or fewer vessels, and nine respondents own only one vessel (mostly from Mindanao). Attempts to analyze the results, by the size of the company yielded to nearly homogeneous responses, thus answers are presented in a general way which can be considered as reflective of the opinion of the industry as a whole. It is possible that respondents responded from a general shipping industry point of view, rather from the viewpoint of the respondent's company, thereby resulting in homogeneous answers among various sizes of companies.

## (2) BUSINESS OUTLOOKS AND OPTIONS

### 1) Assessment for the Past Three Years and Outlook in the Next Three Years

The general assessment of the last three years is that of lowered profitability. Reasons cited are varied, but most notable ones are: (1) higher fuel cost; (2) limited increase in cargo and passenger traffic; and (3) severe competition within the industry and against airlines.

In the coming three years, most of the respondents are projecting limited growth in profitability. The continuing increase in fuel price is most often noted, while rates will remain low.

### 2) Expansion Plan for the Next Three Years

Majority of the respondents are adopting a “wait-and-see” stance. However, many stated that they will probably acquire more vessels. Several respondents are considering expanding their service to non-traditional routes – in particular routes between Visayas and Mindanao (e.g. Cebu-CDO). Trans-Visayas routes are also noted – such as Iloilo-Negros.

## (3) PROBLEMS AND ISSUES

### 1) Financing (Acquiring Loans)

Surveyed respondents raised several strong points on issues in acquiring loans from DBP. Respondents state that DBP mostly entertain and accept big companies only with good cash flow while giving low priority to small companies. Furthermore, respondents complained about the varying standards being imposed on treatment of applications, age and classification requirements based IACS standards, high interest rates, slow processing for appraisal/approval and too much requirements on insurance and collateral – all of which discouraged most of the applicants. With regard to commercial banks, participants pointed out the same issues and problems they experience with DBP but pointed out that commercial banks impose a higher interest rate compared to DBP.

### 2) Operations (Ports and Logistics)

Most of the respondents stated that most of the ports are too congested, imposing high rate of charges on services, lack of standards, do not implement 24-hour operations and lack proper handling equipment. Arrastre handlers lack skills in cargo handling and it results to damage of cargo. They feel that the government through PPA does not allot enough budgets for ports improvement and development. They also added that forwarders are not organized, thus cargo is not consolidated properly.

### 3) Regulation

Respondents complained of the difficulty of government procedures (e.g. issuances of licenses) and requested for a “one-stop-shop” to streamline bureaucratic procedures. Credibility of the government is also problematic, and many respondents noted corrupt practices in the government. There is also a lack of a clear-cut policy and direction that creates uncertainty in business – most notable is the lack of a clear policy on double-hull tankers.

### 4) Most Pressing Issue

The most pressing issue for shipping companies mainly focuses on the increasing cost of fuel which is taking a major cut in their revenue. The high cost of repair and maintenance are cutting into their profits. Another pressing issue is too much government regulations, overlapping responsibility of agencies, including MARINA.

Respondents feel that freight rates should be increased to recover their high cost of operation.

5) Human Resources under the Ship Management Program

Shipping companies are positive towards a shipping modernization loan program that has a condition attached to it wherein the ships are overseen by the professional managers, if they see it as reasonable. Reasonable in a sense that it can enhance operation and profitability under agreed conditions, as well as if it is only to oversee operations and not to manage it. On the other hand, some pointed out that there is no need to hire professional ship managers because the market is limited and they are currently training professional-ship managers.

**Table 3.1.12. Issues and Problems on Shipping Industry**

<b>Financing (Acquiring Loans)</b>	DBP entertain only those big companies with good cash flow and low priority for small loans.
	Releasing/approval of loans are too long, too much requirements including collateral and high interest rate which discourage applicants.
	Varying standards and treatment on applications, age and classification (IACS) requirement, high interest rates and insurance conditions is not so attractive.
	Interest rates for commercial bank id higher than the DBP.
<b>Operations (ports and logistics)</b>	Most of the ports are too congested and lack of the proper handling equipment that hinders in attaining efficient cargo handling.
	No "one-stop-shop" for shipping industry in processing of documentation which is under the umbrella of one regulating body
	Some arrastre handlers lack skills in cargo handling causing damage to cargo.
	Ports do not implement 24-hour operations and wrong policy on security implementation.
	No maintenance budget from PPA or City Government for port's improvement and development.
	High cost of ancillary services and cargo handling.
	Monopoly operation and no improvements whatsoever in terms of services rendered
<b>Regulation</b>	Government is imposing changes on fees which are continuing every time a new memorandum circular is implemented but there is no improvement being done for the shipping industry
	Lack of "one stop-shop" for the processing and submission of requirements which lead to increase of fees to be paid.
	No clear cut policy and unclear direction regarding local implementation of IMO regulations on double hull
	Conflicting regulations and standards for barges from MARINA and PRC
	Shipping is a highly regulated business wherein "dagdag" system is present.

Column 3-1	PPA's Response and Initiative
<p>Based on the DSDP shipping company Interview Survey, PPA gave its response and explained their related actions on a comment paper dated 15 November 2005. Since they are worthwhile to facilitate, mutual understanding between the shipping and port sector, the following PPA's comments are noted in this column.</p> <p><u>Overall Development, Maintenance and Operation of Port Facilities</u></p> <p>As the JICA-MARINA Study itself has recognized, the underdevelopment of the domestic ports is mainly attributable to the lack of budget or government funding. With 114 ports officially under PPA supervision, development of ports has always been dependent on the availability of Corporate funds while the prioritization of port development projects is based on market demand and financial viability. Thus, ports in highly urbanized cities and the major business centers are the ones that generate more income and have greater opportunity to be developed and maintained.</p> <p>It is important to note that the bulk of PPA's annual budget is allocated for Capital Investment Projects, Repair and Maintenance Program, and Maintenance Dredging. During the last five years (i.e. CY 2000-2004), the Port Authority spent at least P1.2 billion pesos annually for these development and maintenance programs, excluding foreign financing, e.g. for Batangas Port Project.</p> <p>While the problems and issues presented in the JICA Study are based on the survey conducted nationwide, it is noteworthy to consider the following underlying issues and concerns in order to fully address the present problems confronting the domestic port facilities and services.</p> <ul style="list-style-type: none"> <li>A. While the administration of ports is mainly guided by the PPA Charter, PPA is obliged to pursue port projects regardless of their financial viability i.e., subsidizing non-viable ports so the needs of other port users/public could be served;</li> <li>B. The need for PPA to accommodate requests from politicians coupled with other requirements of LGUs for assistance in improving their ports consumed PPA funds for port infrastructure as well as affects the overall programming and implementation of port infrastructure projects;</li> <li>C. PPA has been consistently contributing 50 percent of its annual net income to the national government hence, only 50 percent is retained to port development, maintenance and management; and</li> <li>D. The privatization of ports has been considered as an alternative which the Government is seriously looking into however, as the Study pointed out, the feasibility of this undertaking depends on the active participation and eagerness of private investors and stakeholders.</li> </ul> <p><u>Productivity and Efficiency major Ports like North Harbor</u></p> <p>Similarly, one of the major findings of the Study is the underdevelopment of ports insofar as the berth length/depth of major domestic ports is concerned particularly the Manila North Harbor which is the center of the inter-island traffic. For this reason, shipping operators are considered to upgrade and acquire new and bigger vessels that would increase productivity and instead, with only small vessels available, productivity is low and inter-island shipping costs are relatively high.</p> <p>Again, expansion of berth depth and other related port development in Manila North Harbor and other ports would entail massive infrastructure and high costs for the Government, which the Authority could not afford to shoulder alone at this point in time. However, it must be noted that PPA has taken significant steps towards the rehabilitation of the said port through the proposed</p>	

Manila North Harbor Modernization Project (MNHMP) which will be implemented through BOT law or the PPA Charter, whichever is legally expedient. To jumpstart this Project, PPA already completed a major component of this Project consisting of reclamation of 12,000 sq.m. of back-up area, construction of 218 linear meter of berth and rehabilitation of the breakwater using corporate funds.

#### Cargo Handling Operations

With regards to handling services, the problems raised by the respondents refer to the limited number of cargo handling operators and their inability to meet the demands of the shipping operators, particularly in adopting a 24-hour operation for more operation for more efficient and timely shipping of cargoes.

PPA is implementing a twenty-four hour work schedule by cargo handling contractors/operators as contained in its memo circular numbers 34-96 and 26-99. Furthermore, PPA conducts regular performance and compliance audit of CHOs and their unsatisfactory performance or non-compliance to standards is being dealt with accordingly.

In connection with the findings that the cargo handling for container vessels at the Manila/North Harbor is not satisfactory, the JICA-MARINA Study recommends the transfer of such functions of the said port to other regional ports such as the South Harbor, Harbor center, Batangas Port and/or Subic Port. The issue however, could be properly addressed as soon as the MNHMP is finalized and implemented. Finally, PPA is currently reviewing and assessing the implementation of all existing rules and regulations on cargo handling operations and is expected to come up with an Omnibus Regulation on cargo Handling Operations by 2006.

#### Bureaucratic Procedures and Corrupt Practices at the Ports

As to the problem on complex bureaucratic procedures and corrupt practices at the ports, it should be mentioned that once the PPA-MIS computerization Project becomes fully operational, all transactions and procedure in all the major ports under PPA will be automated and streamlined and is expected to minimize irregularly and corrupt practices.



## 3.2 Shippers and Forwarders

This section firstly overviews the market conditions and shipping modalities of selected commodities. Secondly, shippers' comments on shipping are presented.

### 3.2.1 Commodity Wise Analysis

The following is a presentation of the overall production and consumption as well as shipping modalities of selected key commodities in the Philippines, which have been classified into perishable and non-perishable goods, namely:

#### Perishable

- Fish
- Fruits and Vegetables
- Livestock and Poultry

#### Non-Perishable

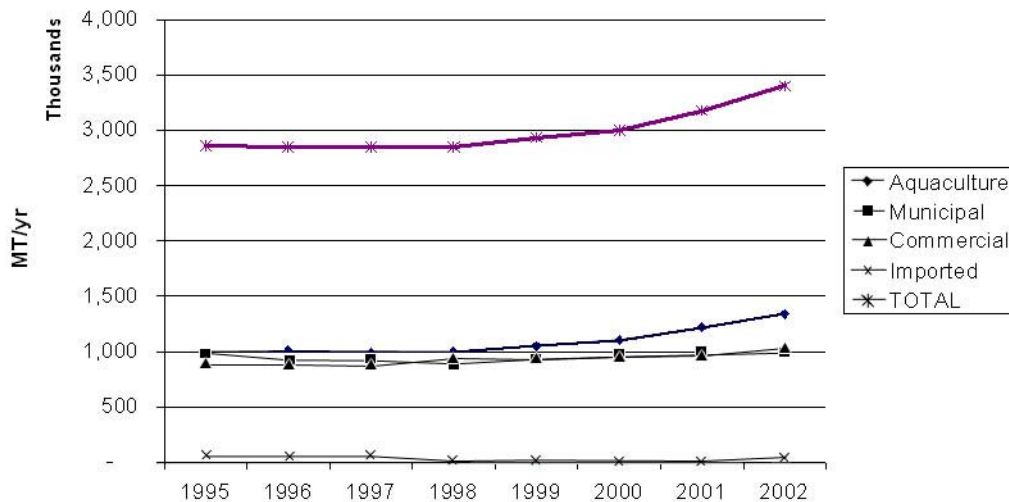
- Animal Feeds
- Cement
- Corn
- Fertilizer
- Rice
- Sugar
- Petroleum

#### (1) PERISHABLE

##### 1) Fish

Fish production and consumption has been increasing in the last few years. Recent data from the Bureau of Agricultural Statistics, pegged fish production at about 4 million MT/yr and this is due to the sharp increase in aquaculture production which grew by 8% in the period 2003-04. Commercial and municipal fishing has not increased significantly. The primary regions of fish production are: Region IV, Region VI, Region IX and ARMM.

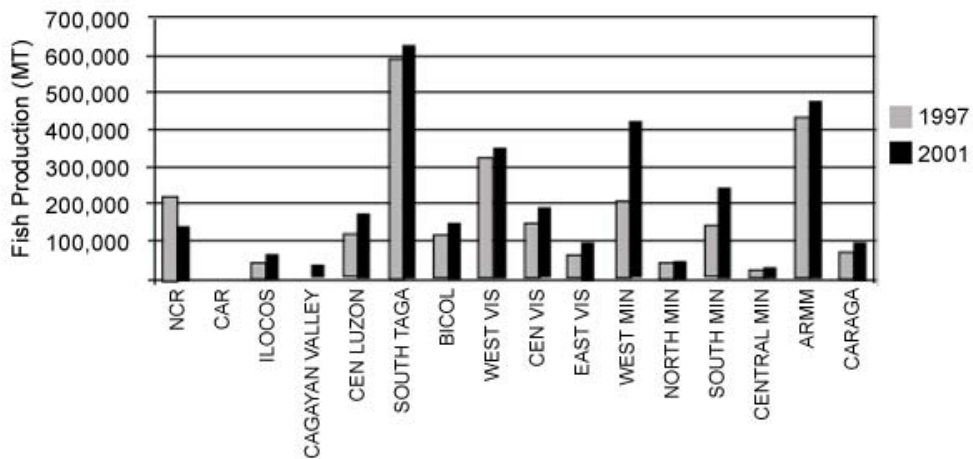
**Figure 3.2.1. Fish Production**



Source: Bureau of Agricultural Statistics



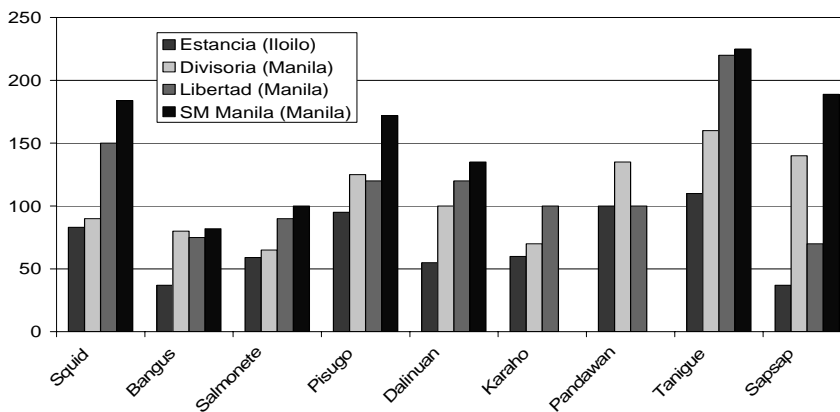
**Figure 3.2.2. Regional Fish Production**



Source: The Countryside in Figures, NSCB

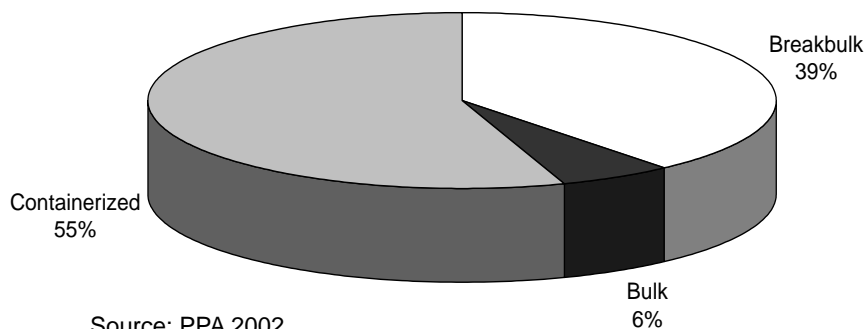
The price of fish at the source and at the retail market diverges significantly, at the order of 2 to 3. The following is the landed price of fish in Panay compared with prices at selected retail outlets in Metro Manila.

**Figure 3.2.3. Price of Fish at Production Site and Market (P/kg)**



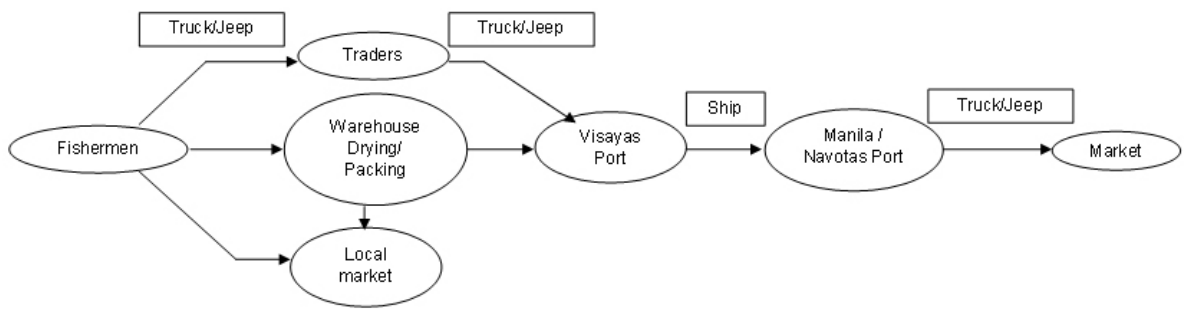
Source: DSDP Study market survey Dec. 2004

**Figure 3.2.4. Shipping Modality of Fish**



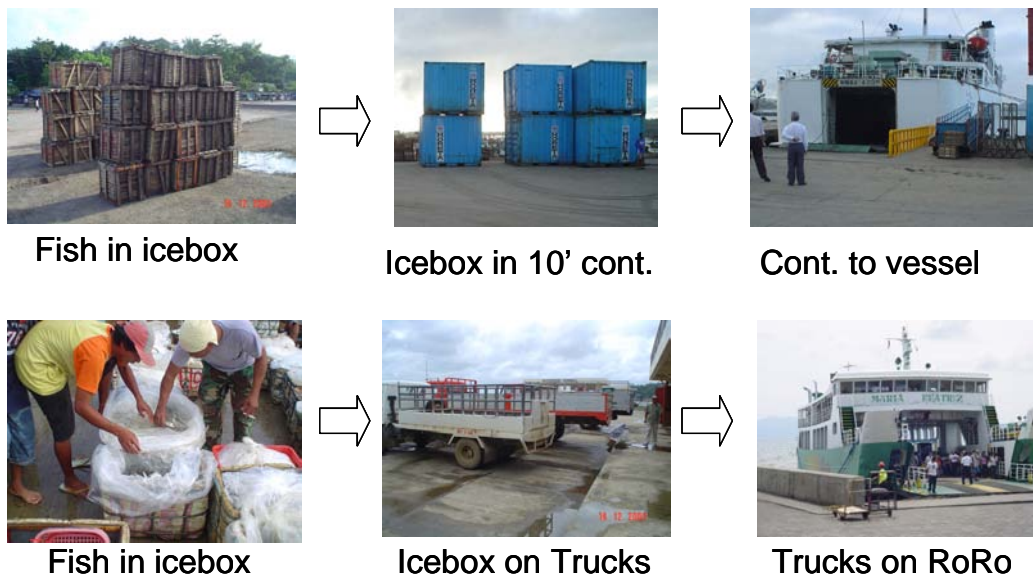
Source: PPA 2002

**Figure 3.2.5. Typical Fish Logistics**



Fish is primarily transported in ice-box, either through break bulk, container or RoRo. In the case of Panay fish, a trader spends about 18,000 pesos for a round trip RoRo trip from Estancia, Iloilo to Divisoria, Manila using a 200 box-truck and with an empty backhaul – resulting in about 6 peso per kilo transport cost. The marketing of fish is dependent on traders, which buys fish from fisher folks at whole sale prices at the landing port and transports and sells in retail and/or wholesale.

**Figure 3.2.6. Mode of Transportation of Fish from Panay to Metro Manila**

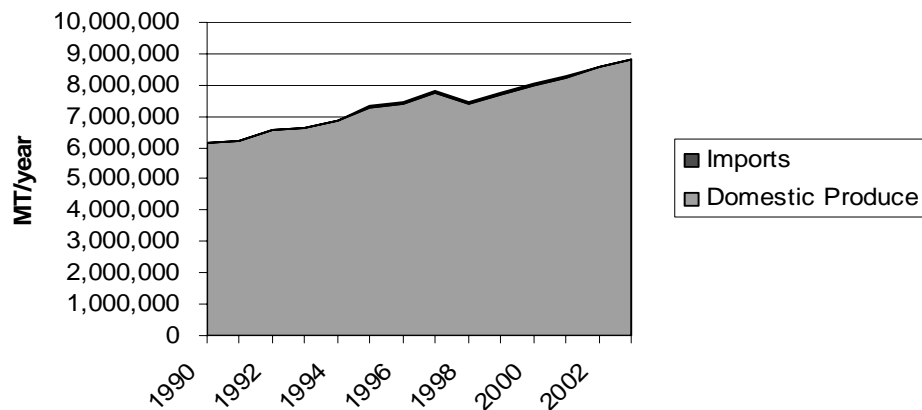


2) Fruits and Vegetables

The production of fruits in the Philippines has increased from about 6.2 million MT in 1991 to 8.8 million MT in 2003, or about 2.7% p.a. on average. There are some imports but is very limited. From the total production of Philippines, nearly 2 million MT of fruits per year is exported, mostly bananas.

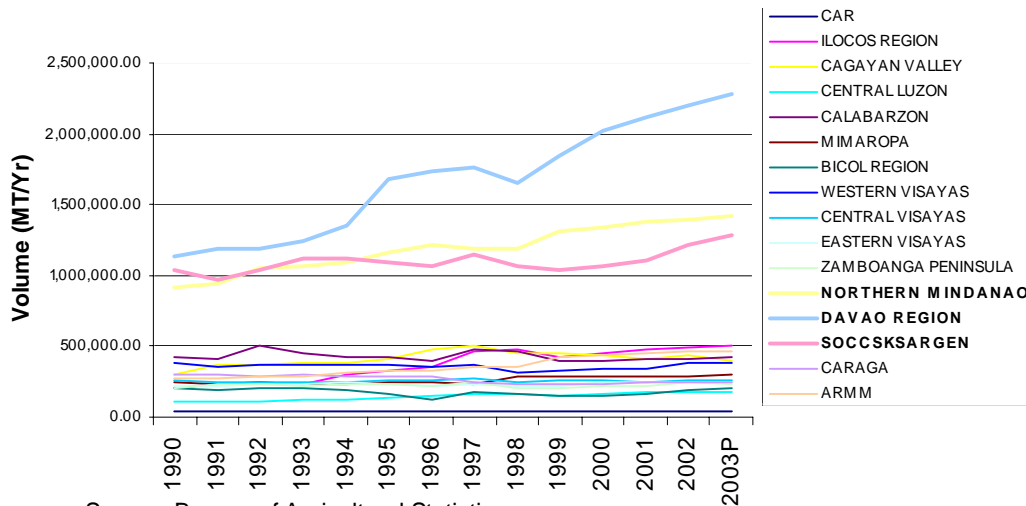
The primary regions or the production of fruits are Davao Region, Northern Mindanao and Socksargen. Growth in fruit production in the Davao Region is very significant.

**Figure 3.2.7. National Fruit Consumption**



Source: Bureau of Agricultural Statistics

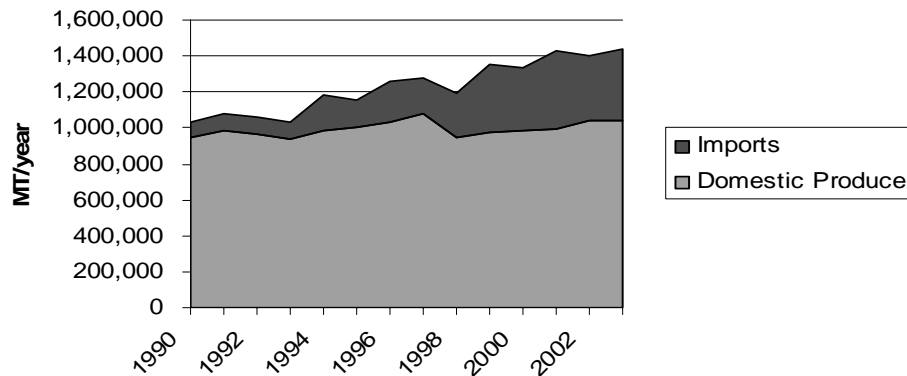
**Figure 3.2.8. Regional Fruit Production**



Source: Bureau of Agricultural Statistics

Vegetable consumption has increased at about 2.4% p.a. and is currently about 1.4 million MT/yr. However, domestic production has been very laggard, primarily due to the downturn of outputs right after the financial crisis. However, in recent years, domestic production has again picked up. Importation picked up the slack of domestic production and has increased from about 100,000 MT in 1991 to nearly 400,000 MT in 2003.

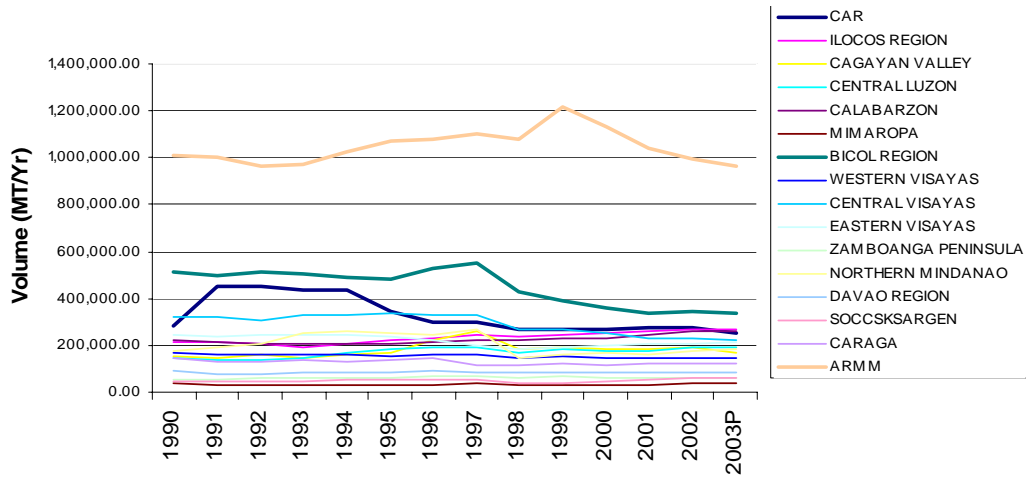
**Figure 3.2.9. National Vegetable Consumption**



Source: Bureau of Agricultural Statistics

The biggest producer of vegetable is ARMM, and other main producers are the Bicol Region, CAR, and Central Visayas. The drop in domestic production is due to the significant reduction of production in these regions.

**Figure 3.2.10. Regional Vegetable Production**



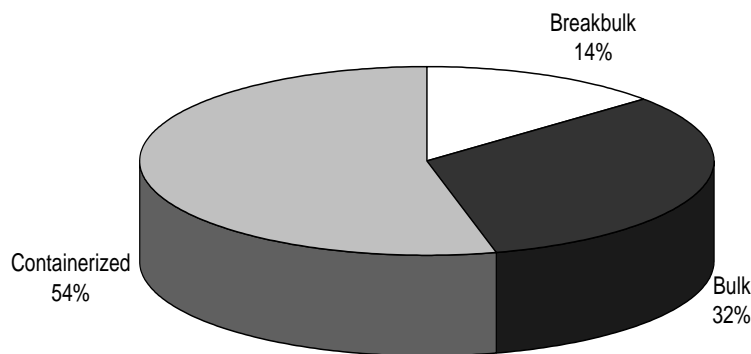
Source: Bureau of Agricultural Statistics

**Figure 3.2.11. Typical Fruits and Vegetable Logistics Chain**



Note: Fruits and vegetables are primarily transported in container (not reefers).

**Figure 3.2.12. Shipping Modality of Fruits and Vegetables**

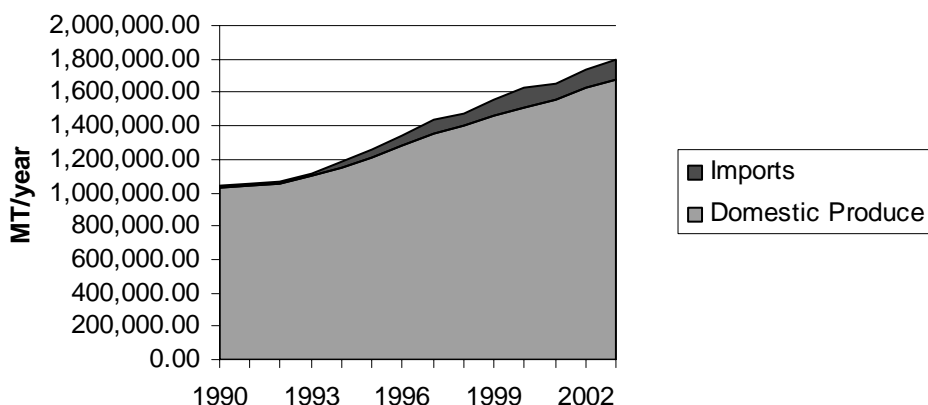


Source: PPA 2002

### 3) Livestock and Poultry

Livestock consumption is growing steadily at a rate of 4.3% p.a. on average from 1990 to 2003. However, domestic production has not been able to keep up and as a result imported livestock has been increasing, but still, the relative volume of imported meat (primarily beef) is limited.

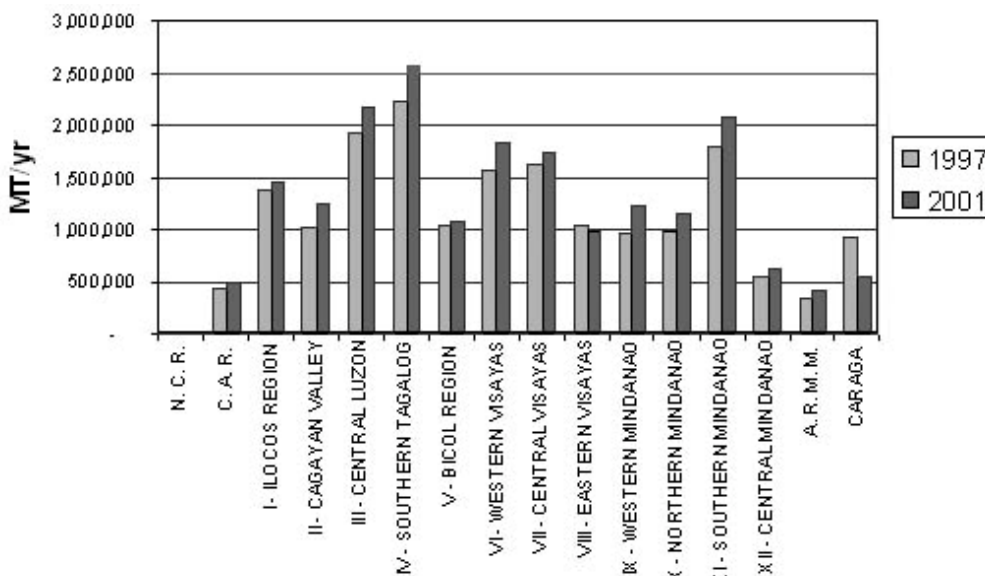
**Figure 3.2.13. National Livestock Consumption**



Source: Bureau of Agricultural Statistics  
 1/ includes cattle, carabao, goat and hog

Production areas of livestock are spread across the country. This is probably due to the nature of the industry which is fundamentally backyard in nature – 86% of output is from backyard farming and only 14% is from commercial farming.

**Figure 3.2.14. Regional Livestock Production**

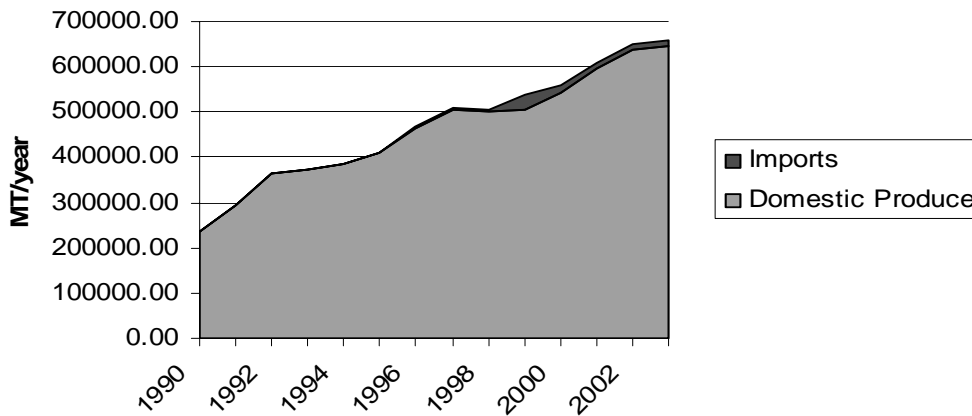


Source: The Countryside in Figures, NSCB

Poultry consumption has been increasing very significantly at 8.3% p.a. on average from 1990 to 2003. Philippines imports about 2% of national consumption. Export, so far has been limited.

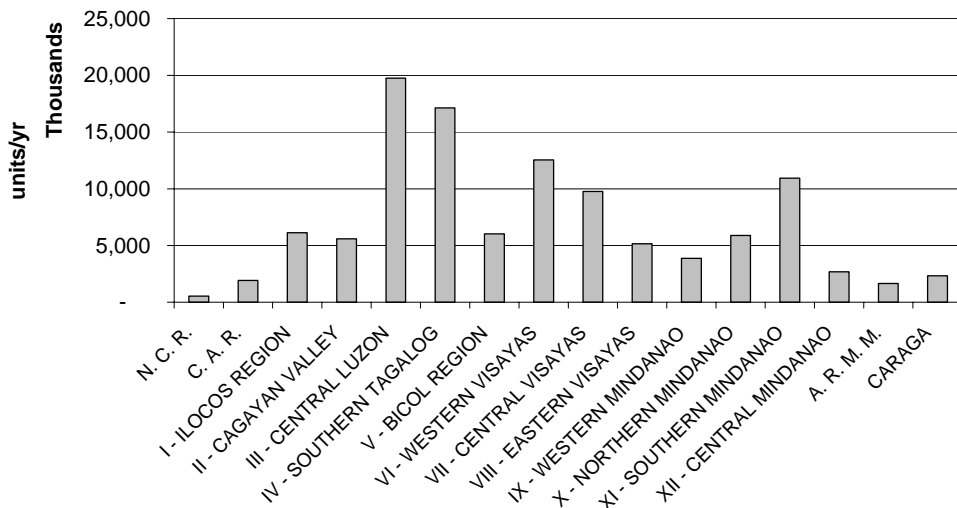
Chicken production is more or less distributed across the country. However, primary production areas are Central Luzon and Southern Tagalog.

**Figure 3.2.15. National Poultry Consumption**



Source: Bureau of Agricultural Statistics

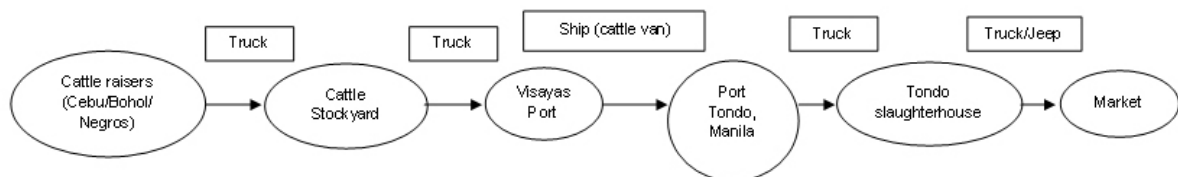
**Figure 3.2.16. Regional Poultry Production**



Source: The Countryside in Figures, NSCB 2001  
 1/ includes chicken and ducks

For the shipping of livestock and poultry, transporting frozen meat is being practiced by some progressive traders, such as members of the Meat Importers and Traders Association. However, the transport of live animals is still prevalent – it is estimated that about 338,000 MT of live animals are being transported compared to 295,000 MT of meat and meat preparations, which are transported in reefers. The cost of transporting meat in reefers is about 4 pesos per kilo (Mindanao to Manila via 20' reefers).

**Figure 3.2.17. Typical Live Animal Logistics Chain**



(2) NON-PERISHABLE

1) Animal Feeds

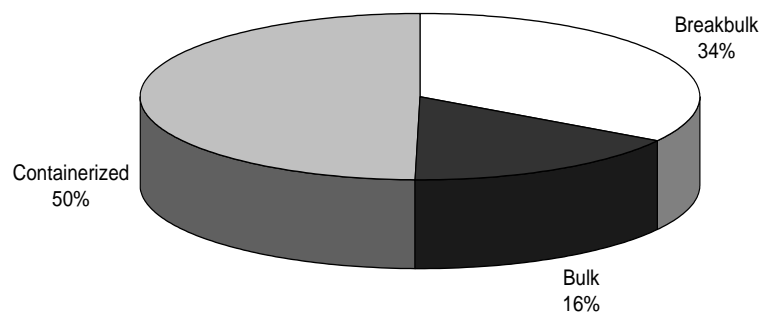
According to the Philippine Association of Feed Millers, domestic production of animal feeds is about 8 million MT per year and has continually been increasing at an average rate of 3% p.a. Based on PPA statistics, about 290,000 MT of animal feeds are imported in 2003.

There are about 70 feed mills all over the country. Feed mills, comprises about 50% corn (other main ingredient is soy beans, 20%), thus feed mills tend to locate near corn production areas.

The demand for feeds is divided between Luzon and Vis-Min at a proportion of 60:40. The demand for feeds at the Vis-Min area is further divided at 30:70 respectively.

Animal feeds are typically transported from feed mills in chartered 1,000 DWT vessels or in containers. Large shipments are typically transported via conventional vessels, while smaller shipments are transported through liners. However, sometimes buyers are organized by the feed millers to coordinate their shipments to allow for a bigger order and minimize transport cost. Warehouses typically hold 30-day inventories. The ex-plant price of feeds is about 650-700 pesos/50-kg bag and retails at less than 1,000 pesos/bag.

Figure 3.2.18. Shipping Modality of Animal Feeds



Source: PPA 2002

Figure 3.2.19. Typical Animal Feeds Logistics Chain

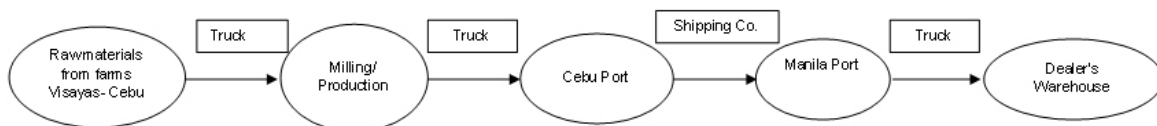
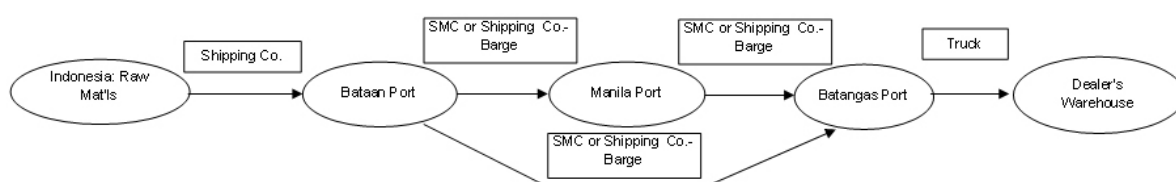


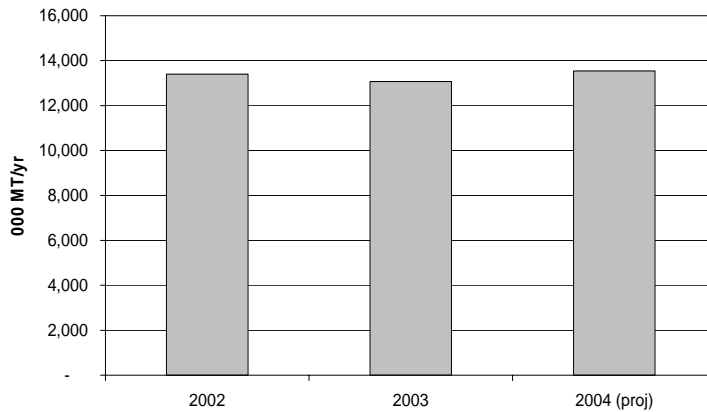
Figure 3.2.20. SMC-BMEG Logistics Chain



2) Cement

Cement production in the last three years is between 13 to 13.5 million MT/yr and, according to the Cement Manufacturers Association of the Philippines, it is roughly distributed as follows: Luzon (45%), Visayas (35%) and Mindanao (20%). Some amount of less than 2 million MT is exported abroad.

**Figure 3.2.21. National Cement Production**



Source: UNESCAP homepage  
 /1 2004 is projected based on Jan-Sept data

There are about 17 manufacturers in the country: 9 in Luzon, 3 in Visayas and 5 in Mindanao:

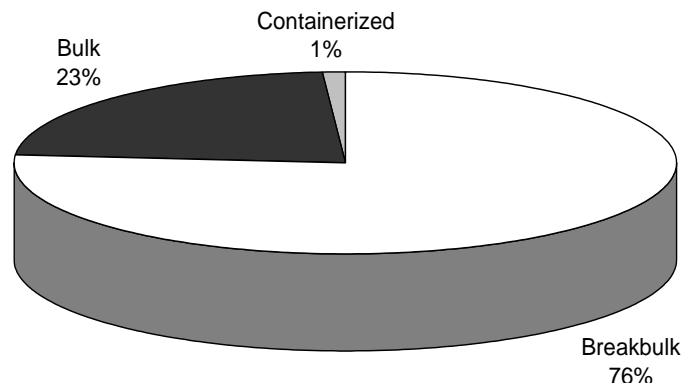
**Table 3.2.1. Geographical Location of Cement Plants**

Luzon	Visayas	Mindanao
Batangas (1)	Cebu (3)	Misamis Oriental (1)
Pangasinan (1)		Iligan City (2)
La Union (1)		Davao City (1)
Bulacan (3)		Surigao City (1)
Rizal (2)		
Bicol (1)		

Source: CeMAP Interview

Cement is typically transported in break bulk (i.e. 40-kg bags) using general cargo vessels, ranging from 5,000 to 10,000 MT capacity. The retail price of cement is about 150 pesos/bag.

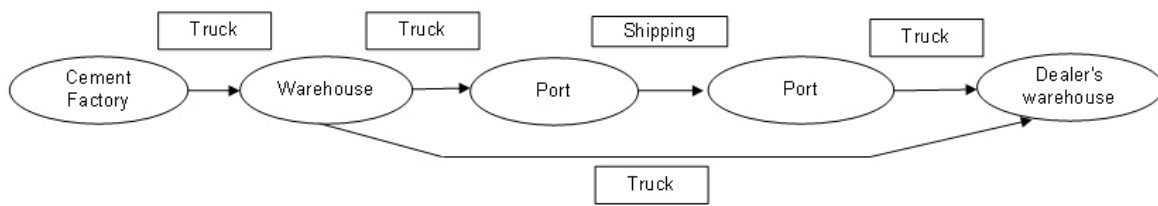
**Figure 3.2.22. Shipping Modality of Cement**



Source: PPA 2002



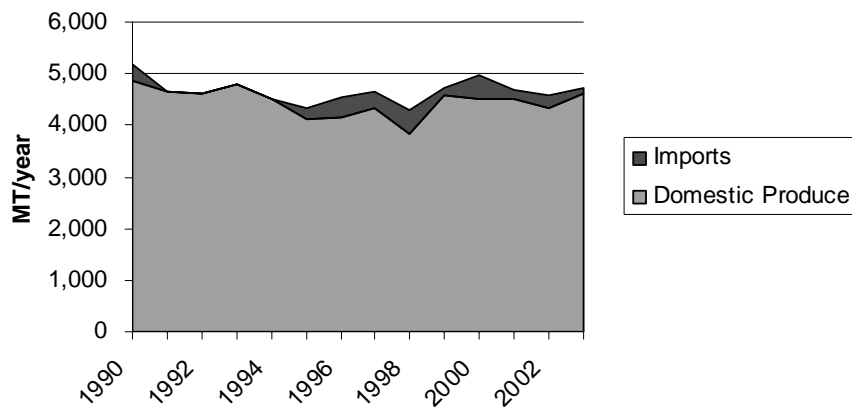
**Figure 3.2.23. Typical Cement Logistics Chain**



3) Corn

Corn consumption has been more or less flat during the last ten years, at about 4.5M MT. Most of the corn consumed in the country is domestically produced, with some limited importation of corn, 100M MT in year 2003. Corn is primarily used for the manufacturing of animal feeds.

**Figure 3.2.24. National Corn Consumption**



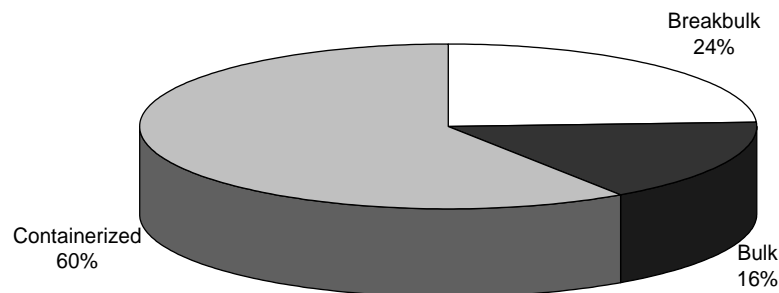
Source: Bureau of Agricultural Statistics

Mostly, corn is being produced in the Mindanao area and in the Cagayan Valley. In the last five years, the production of Mindanao has more or less remained static, while there is a notable increase of corn production in the Cagayan Valley.

A feed miller interviewed in Luzon indicated the cost effectiveness of using Cagayan Valley corn, because of the added cost of shipping, AS corn is usually shipped in containers.

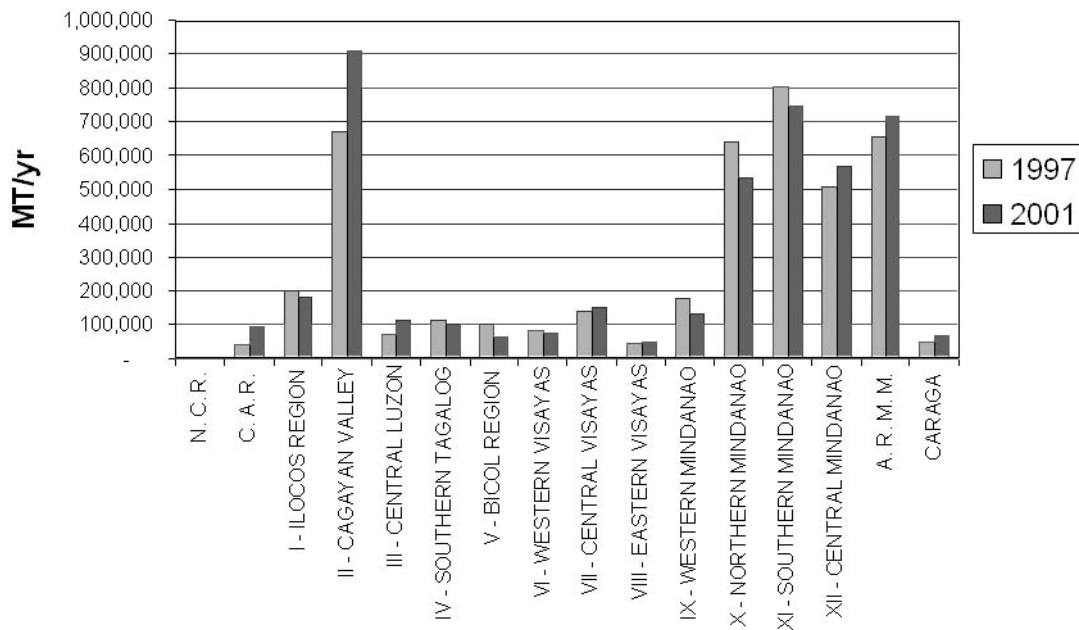
The landed price of corn from Isabela at a Manila factory is about 8.5 pesos per kilo. Transport cost from Mindanao to Luzon is about 0.6 to 0.8 pesos per kilo resulting in a 9.0 to 9.5 peso landed price of Mindanao corn.

**Figure 3.2.25. Shipping Modality of Corn**



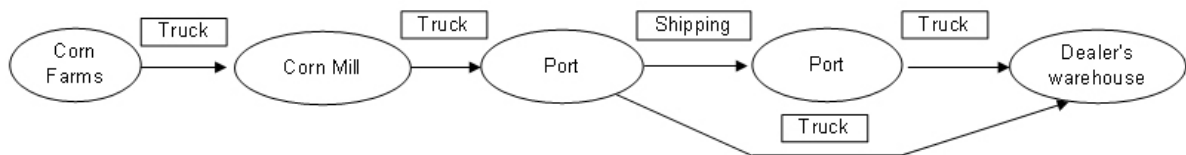
Source: PPA 2002

**Figure 3.2.26. Regional Corn Production**



Source: The Countryside in Figures, NSCB

**Figure 3.2.27. Typical Corn Logistics Chain**



4) Fertilizer

Currently sale volume of fertilizer products is about 1.8 million MT. Sales has been increasing but erratic especially during the Asian Financial Crisis. Nonetheless, for the period 1991-2002, fertilizer sales have grown 4.4% p.a. on the average.

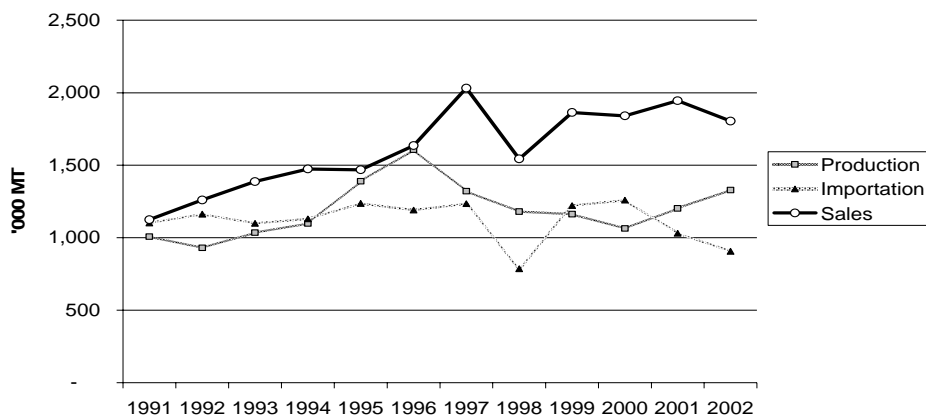
There are two kinds of suppliers of fertilizers: domestic producers and importers. Domestic manufacturers primarily produce and sell complex fertilizers, while importers are basically retailers of single-grade fertilizers. There are about four manufacturers in the country and are summarized in the Table below.

**Table 3.2.2. Location and Capacity of Fertilizer Plants**

Location	Full Capacity (MT/yr)	Operating Capacity (MT/yr)
Leyte	1.2 million	800,000
Cebu	300,000	300,000
La Union	120,000	120,000
Batangas	100,000	Not operating

Source: Fertilizer Manufacturers and Importers Association Interview

**Figure 3.2.28. Fertilizer Supply and Consumption**

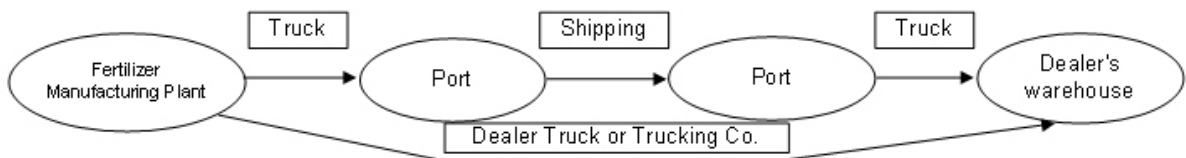


Source: Philippine Statistical Yearbook 2003

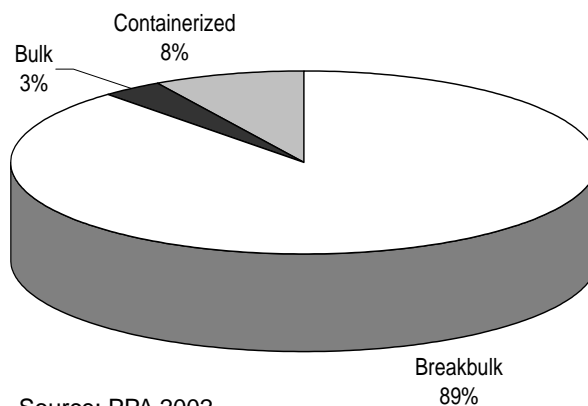
The general practice in transporting fertilizers is through bags. In the case of importers, fertilizer is imported in bulk, then bagged and distributed in bags. For larger shipments, the typical practice is to engage in voyage charter of a general cargo vessel. For cases wherein liners are available, fertilizer is transported in containers, especially when shipment volume is small.

Freight cost is about 30 pesos/50-kg bag while trucking cost is about 7 pesos/bag (from Cebu to Manila). When using conventional vessels, about 2~5% is lost due to spillage, but could be recovered and re-bagged. The price of fertilizer is about 600 pesos/bag.

**Figure 3.2.29. Typical Fertilizer Logistics Chain**



**Figure 3.2.30. Shipping Modality of Fertilizer**

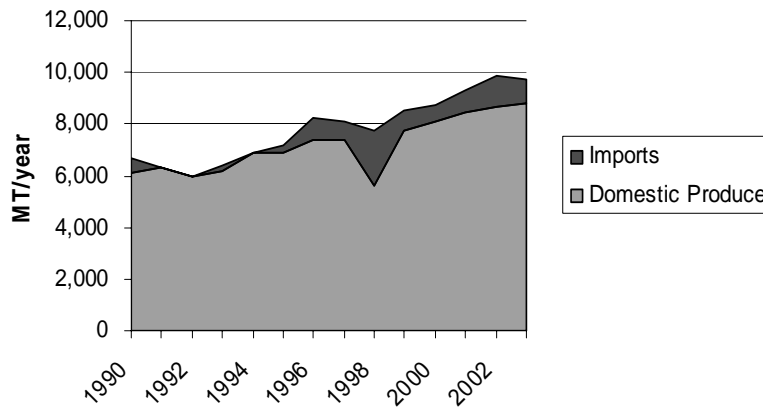


Source: PPA 2002

5) Rice

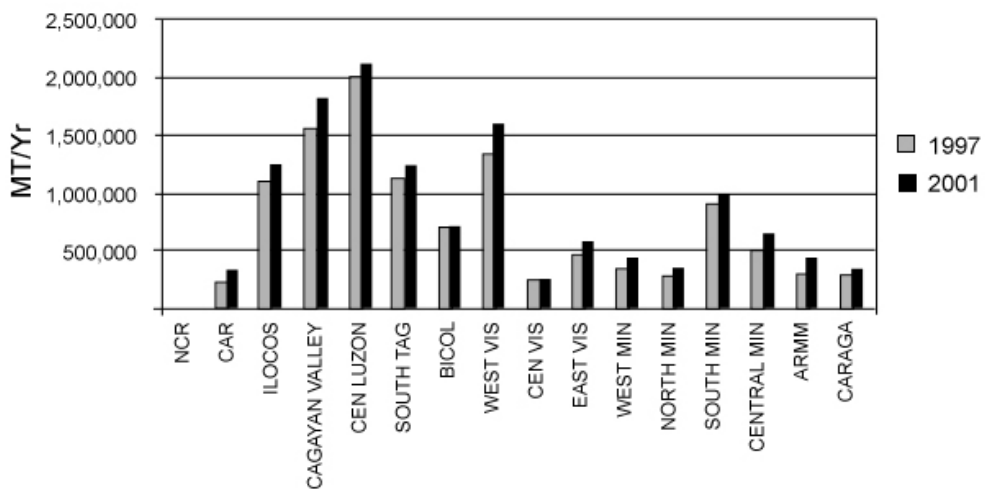
Rice consumption has been growing steadily at an average rate of 2.9% p.a. from 1990 to 2003. Currently, rice consumption is about 9.7 million MT, of which Philippines imports about 9%. Primary producers of rice are Central Luzon, Cagayan Valley, Western Visayas, Ilocos region and Southern Tagalog.

**Figure 3.2.31. National Palay Consumption**



Source: Bureau of Agricultural Statistics

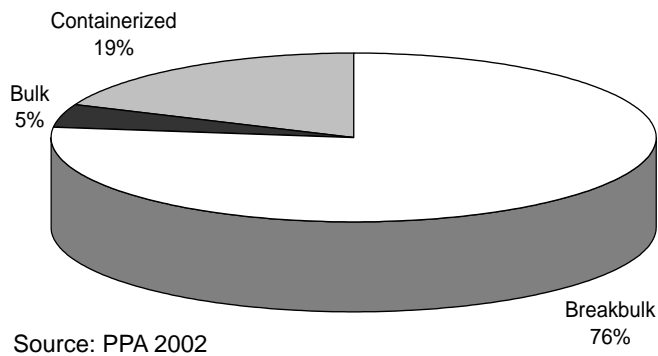
**Figure 3.2.32. Regional Palay Production**



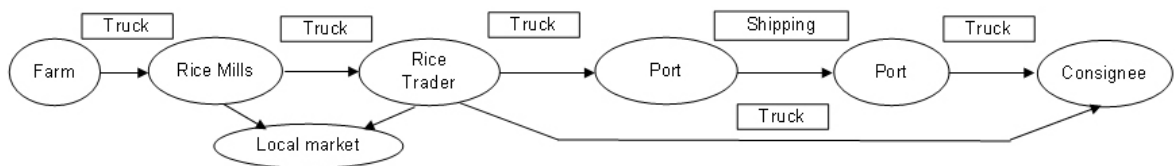
Source: The Countryside in Figures, NSCB

Rice is typically transported in break-bulk in the form of 50-kg sacks. The National Food Authority (NFA) is the primary trader of rice, and accounts for about 10% of total supply. NFA is mandated to provide a benchmark, such that the price of rice will stabilize. NFA typically transports rice using chartered conventional cargo vessels. NFA buys palay at 10 pesos/kilo and retails ex-mill at about 15-16 pesos/kilo. Shipping of rice will cost of about 0.5 to 1.0 peso/kilo. Finally, NFA retails rice at about 18 pesos per kilo.

**Figure 3.2.33. Shipping Modality of Rice**



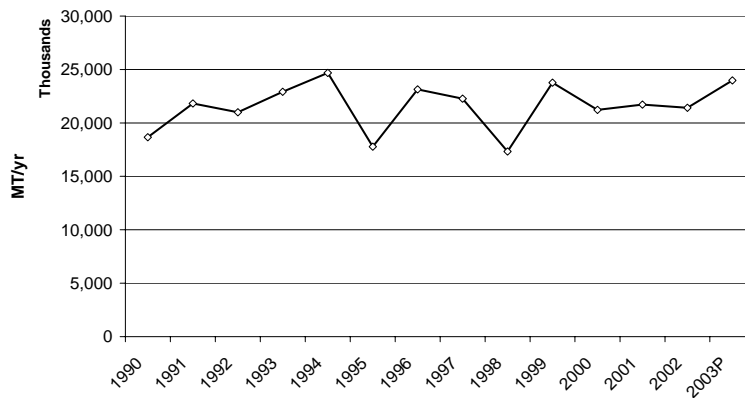
**Figure 3.2.34. Typical Rice Logistics Chain**



6) Sugar

From 1990 to 2003, sugar cane production has not significantly increased but has fluctuated especially during the mid-1990s. Average refined sugar production is about 2.2 million MT per year.

**Figure 3.2.35. National Sugar Cane Production**



Source: Bureau of Agricultural Statistics

**Table 3.2.3. Raw Sugar Production (MT)**

Mill District	Crop year '04-'05 as of 31 Oct. 2004	Crop year '03-'04 as of 02 Nov. 2003
Philippines	158,395 (100%)	164,788 (100%)
Luzon	13,408 (8%)	11,639 (7%)
Negros	140,497 (89%)	143,010 (87%)
Panay	4,490 (3%)	5,497 (3%)
Mindanao	-	4,642 (3%)

Source: Sugar Regulatory Authority

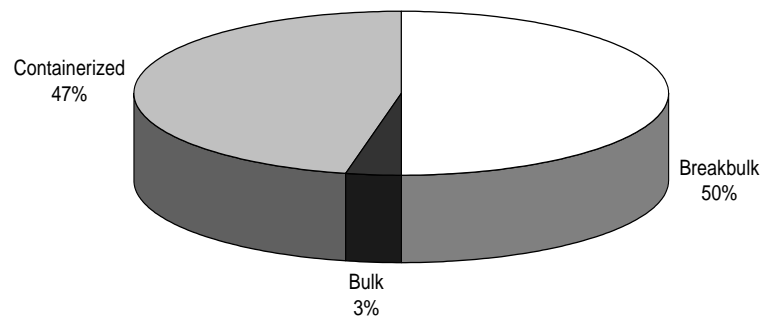
**Table 3.2.4. Refined Sugar Production (in 50 kg-Bag)**

Refinery	Crop year '04-'05 as of 31 Oct. 2004		Crop year '03-'04 as of 02 Nov. 2003	
Philippines	1,661,890	(100%)	2,577,490	(100%)
Luzon	603,309	(36%)	688,062	(27%)
Negros	1,058,581	(64%)	1,561,782	(61%)
E. Visayas	-	-	-	-
Mindanao	-	-	327,646	(13%)

Source: Sugar Regulatory Authority

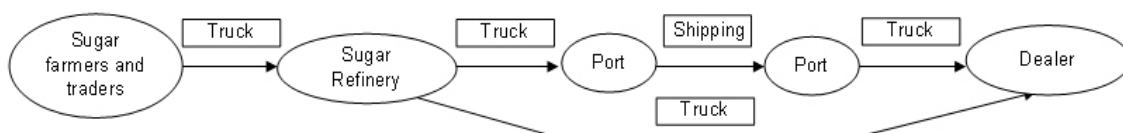
Raw sugar is primarily transported in break bulk in 50-kg bags and refined sugar in containers. Raw sugar is bought at about 800 peso per bag, and refined for a fee of 170 peso per bag. Sugar is then retailed at a price of about 1,170 to 1,200 peso per bag.

**Figure 3.2.36. Shipping Modality of Sugar**



Source: PPA 2002

**Figure 3.2.37. Typical Sugar Logistics Chain**



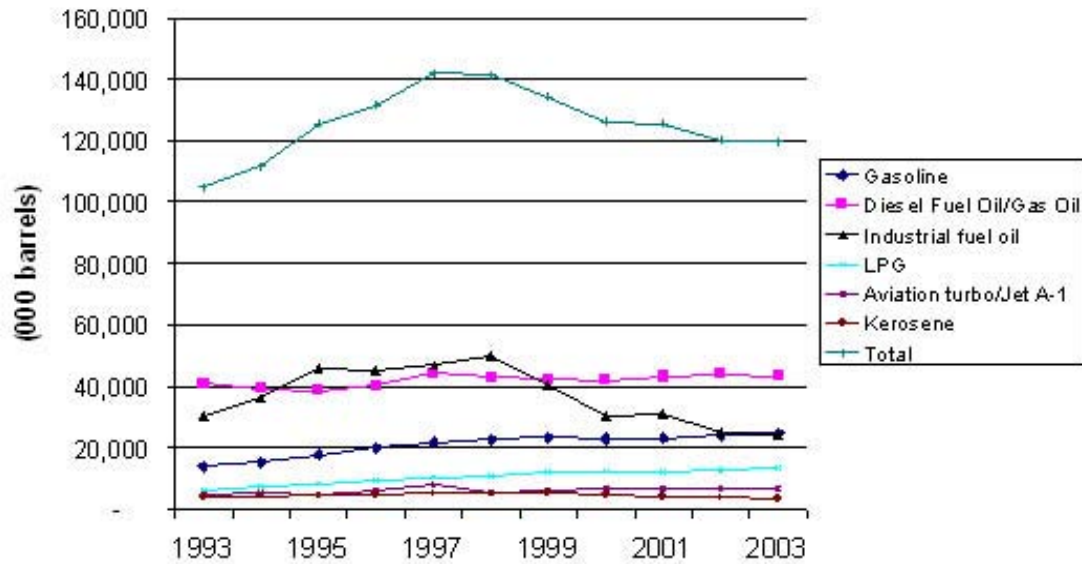
## 7) Petroleum

Total petroleum product consumption is about 120 million barrels per year. Since 1997, total consumption has been steadily decreasing and this is largely due to the sharp decline in industrial fuel oil. On the other hand, total energy consumption in the Philippines has been increasing, which means that there is a shift in the choice of energy use in the country – most notably coal, geothermal, and gas.

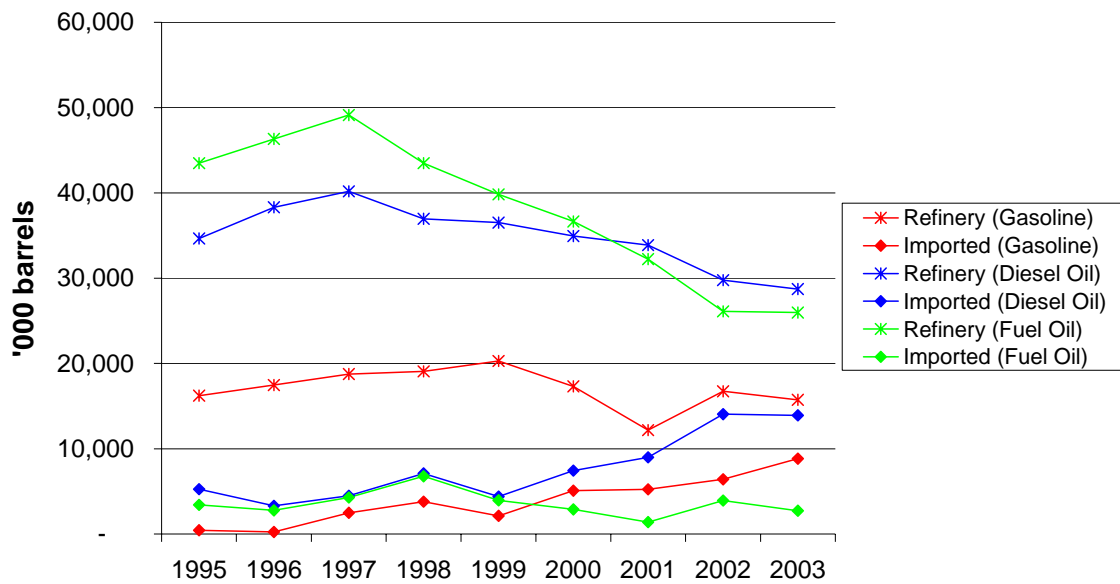
There is also a shifting in terms of the mode of sourcing petroleum products. Importation of refined products is steadily increasing, while refinery output (i.e. domestic refining of imported crude) is decreasing. In fact a major company has converted its 75,000 bbl/day refining plant into an import depot.

The Philippines has very limited oil production, instead crude oil is imported and refined, or refined products are directly imported. The primary gateways or point of origin of petroleum products is thereby either an import depot or a refinery. By and large, the points of origin are located in the Bataan and Batangas areas in Luzon – as shown in Figure 3.2.40.

**Figure 3.2.38. National Petroleum Consumption**

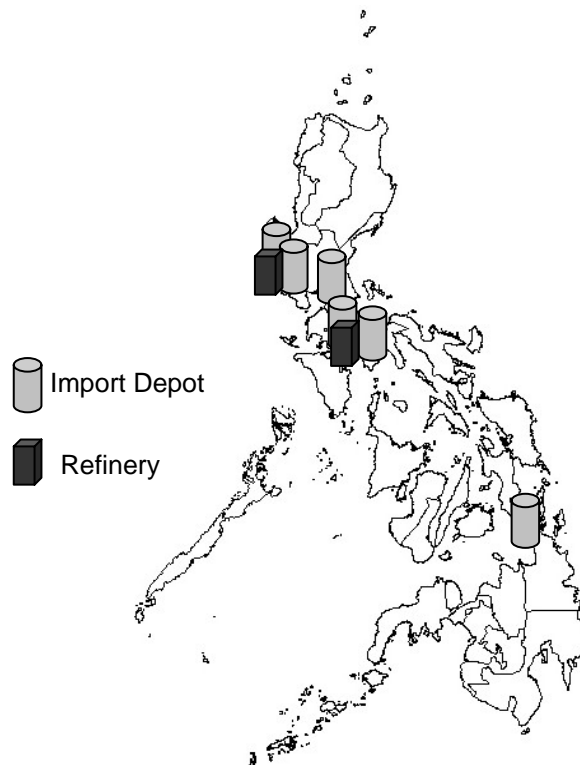


**Figure 3.2.39. Production of Key Petroleum Products by Source**



Source: Department of Energy

**Figure 3.2.40. Location of Import Depots and Refineries**

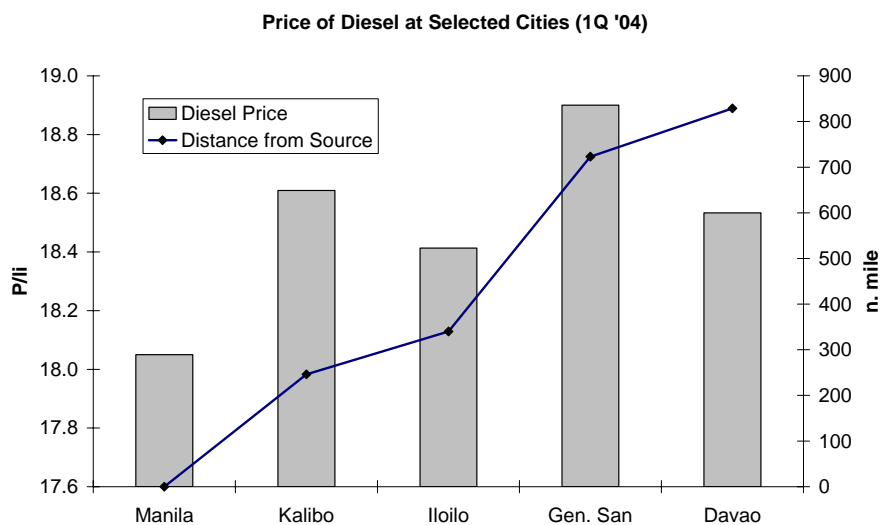


Source: Presentation of Magsaysay/ NMC Group of Companies (16 Feb. 2005)

Typically, oil companies in the Philippines do not own or operate their own tankers; instead they would charter domestic vessels on a per voyage basis.

Taking that petroleum product originates from Luzon, and is distributed across the country, the price of petroleum products is higher in cities farthest from Luzon – this is shown in the following figure.

**Figure 3.2.41. Price of Diesel at Selected Cities (1Q'04)**





### 3.2.2 Shippers and Forwarders Interview

It is recognized that shipping is for the purpose of meeting the needs of shippers: the “clients” of the industry. To account the concerns of shippers, a shippers and forwarders interview was conducted. The survey was conducted in the period of January up to March 2005. It covers stakeholders in 10 selected commodities, with 2 pre-selected inter-island corridors per commodity. The following is the result of the interview:

**Table 3.2.5. Survey Coverage for Shippers and Forwarders Interview**

<b>Commodity</b>	<b>Corridor (origin-destination)</b>
Animal feeds	Batangas – NCR South Cotabato – NCR
Cement	Misamis Oriental – Bataan Misamis Oriental – Iloilo
Corn	Misamis Oriental – Cebu South Cotabato – NCR
Fertilizer	Iloilo – Negros Occidental Batangas – NCR
Fish	Capiz – NCR Misamis Occidental – Cebu
Fruits and Vegetables	Davao del Sur – NCR South Cotabato – NCR
Live Animals	Misamis Oriental – NCR South Cotabato – NCR
Palay and Rice	Iloilo – Cebu South Cotabato – NCR
Sugar	Negros Occidental – NCR Negros Occidental – Batangas
Gen. Cargo	NCR – Cebu NCR – Davao del Sur

**Table 3.2.6. Ranking of the Requirements and Aspects of Transport Service**

<b>Ranking</b>	<b>Perishables</b>	<b>Non-Perishables</b>
Most Important-1	Cost	Cost
2	Speed	Reliability
3	Safety and Security	Speed
4	Reliability	Safety and Security
Least Important-5	Geographic coverage	Geographic coverage

**Table 3.2.7. Comments of Shippers of Perishable Goods on Maritime Transport**

<b>Perishable Goods</b>	
<b>Cost</b>	Empty backhauls increases unit cost of shipment.
	High cost of shipping and cargo handling
	High cost of reefer van shipment and live cargo shipment
	Port charges need to be more transparent
	A cold storage operator commented on the high cost of electricity and old and inefficient systems that need replacement
<b>Reliability of Schedule and Service</b>	Ship schedules are unreliable – delays cause spoilage
	Poor ship maintenance cause delays in shipments
	Theft – 1-5%
	Poor handling cause spoilage
	Irresponsible shipping crew causing lost cargo
	Delays causing problems in shipment of live animals
<b>Service Availability</b>	Lack of accessible ice plant for fish preservation
	Lack of vans
	Lack of vessels and service
	During peak season when there are many produce, service is not enough
	Unavailability of reefer vans
	Not enough hog vans
	Lack of berthing space
	Limited number of shipping companies accept live hogs for shipment
<b>Others</b>	Fisher folks not trained to deal with frozen tuna
	Red tape and “SOP”
	A fish trader using the RoRo, commented on illegal fees levied along the nautical highway
	Filipinos do not appreciate value of frozen goods – and prefer or are indifferent of goods sold in the wet market
	Mortality due to improper cargo handling (1~2 per shipment)



**Table 3.2.8. Comments of Shippers of Non-Perishable Goods on Maritime Transport**

<b>Non-Perishable</b>	
<b>Cost</b>	High cost of cargo handling service
	High cost of shipping
	Very expensive to ship loose cargo (i.e.LCL) – very difficult for SME's
	The margin of profit for rice is very small, thereby reduction in transport cost, especially shipping is most desired
<b>Reliability of Schedule and Service</b>	Too much delays in scheduling
	Loading gears are very poorly maintained – primary cause of delays
	Crew do not properly follow safety standards
	Poor port operations, hinder improvements in shipping
	Booked vans will sometimes be off-loaded due to lack of space and priority of other cargoes.
	Some clients given preferential treatment and they get priority – causing cargoes to be off-loaded
	Poor cargo handling efficiency and delays in cargo handling
	Traffic in van withdrawal and lost van due to lack of a good system and manpower
	Need for a system to track loose cargoes
<b>Service Availability</b>	Lack of domestic bulk carriers
	Lack of smaller, economical, vessels for small shipments – especially for 2,000~3,000 bags shipment. Most vessels are 10,000~20,000 bags capacity.
	Vessels are too old and un/loading equipment is very poor
	Poor sanitation of vans and vessels
	Lack of reefer vans
	Lack of equipment in government ports (e.g. conveyor belts for handling grains)
	Petroleum companies complain of the lack of tankers
	Many vessels are very old (70% are over 25 years old)
<b>Others</b>	Pulupandan port has limited depth and could not accommodate larger vessels.
	Lack of improvement in port facilities.
	Use of hooks to load cargo causing damage to sacks
	Shallow depth of ports
	Red tape and corruption
	Lack of port space causes pier congestion which results to delay.
	8am-5pm unloading operation of ports must be extended to 24 hour operation
	Theft and spillage

In the issue of high shipping cost, Table 3.2.9 shows the increased in shipping cost in the last five years.

**Table 3.2.9. Comments of Shippers on Shipping Cost Increments**

<b>Shipping</b>		<b>Cargo Handling<sup>1</sup></b>	<b>Trucking</b>
+20%	(2000)	+10% (2000)	+10% (2000)
+6%	(2002)	+10% (2001)	+ 20% (2004)
+6%	(2003)		
+7.5%	(2003)		
+9%	(2004)		
+5.5%	(2005)		
<b>+67%</b>	<b>('00~'05)</b>	<b>+21% ('00~'05)</b>	<b>+32% (2000-2005)</b>

Note: 1 In year 1998 Arrastre increased 12% and Stevedoring 40%

The survey also gathered the shippers' request or opinion on how to improve shipping company's service which is listed below:

- Shipping lines prioritize door-to-door over pier-to-pier. It should be on a first-come-first-serve basis.
- It is very hard to send loose cargoes because of a very high rate imposed

compared to containerized cargoes. Consideration should be given to the medium sized entrepreneurs that cannot always afford to reserve or pay container vans.

- Lower rates.
- Increase load capacity of the container vans ( from 18 to 22 tons)
- Reconditioning the ships & facilities like crane & storage deck, and container vans
- Implement a more efficient way of cargo handling
- Inform all on ahead of time on delays/ problems.
- To have on-line booking/reservations thereby eliminating or minimizing red tape.
- Unloading should not be restricted to just 8 am to 5 pm. It should be a 24-hr operation.
- Improve the cargo monitoring system for faster information relay and develop the system of information of cargo whereabouts.
- Prioritize perishables.
- Increase the number of vans allocated for cattle and hogs.
- If the cargo is initially accepted and cannot be accommodated, they should at least facilitate its transfer to another ship of their own company without an added cost.
- Stop corruption. Those who suffer are the truck drivers who pay for the “lagay” and cannot reimburse them.
- Cater a schedule that can accommodate peak season demands.
- Vessels should be extremely clean.
- Hatch of ship should have tarpaulin to protect cargo.

The following are the highlights of the interview results:

- Almost all shippers considered shipping and cargo handling cost too high and unreasonable.
- Mindanao shippers complain for lack of service – especially during peak season. The coverage of service is also desired to be increased.
- Irregular and corrupt practices are causing high cost of shipment.
- Pilferage is estimated to be as high as 5%.
- Lack of vessels and lack of appropriate vessels
- Delays in vessel scheduling needs to be addressed. – causes spoilage.
- Insufficient vans including reefer vans.
- Perishable goods traders complain on cargo handling, in terms of efficiency and in terms of ensuring minimal spoilage.
- There are many complaints regarding booked cargoes being left behind.
- Port conditions are very poor – lack of equipment, security, shallow depth and port space.
- Small consignment cargo is very expensive.

### 3.2.3 Truckers Interview

Truckers are key players in the total logistics chain, thus the truckers interview was conducted in Luzon and in Mindanao. More than 20 trucking companies were interviewed in the period of January to March 2005.

Table 3.2.10 and Table 3.2.11 show the profile of trucking companies from Luzon and Mindanao and truckers' opinions and views affecting their service and their linkages to the shipping industry.

**Table 3.2.10. Profile of Surveyed Truckers**

	Luzon	Mindanao
<b>Truck units</b>	<b>Companies</b>	
1-5 units	20%	27%
6-20 units	50%	55%
above 21	30%	18%
<b>Rented Trucks</b>	<b>Companies</b>	
none	100%	86%
<b>Age of trucks</b>	<b>Truck units</b>	
0-5 yrs	17%	3%
6-15 yrs	13%	66%
above 16	1%	17%
<b>Type of Trucks</b>	<b>Truck units</b>	
Articulated truck	11%	52%
Reefer Van	42%	--
Container van only	21%	--
3 axle or more	21%	17%
Tank Lorry truck and Trailer	--	9%
<b>Cargo carried</b>	<b>Companies</b>	
Own	10%	43%
3rd party	90%	64%



**Table 3.2.11. Truckers Opinion and Views on Shipping**

ASPECT	Luzon Truckers	Mindanao Truckers
<b>Road Infrastructure</b>	<ul style="list-style-type: none"> <li>• Poor traffic conditions</li> <li>• Low electrical wires pose as road hazards</li> <li>• Poor road condition especially after NLEX and SLEX</li> <li>• Narrow streets/roads</li> <li>• High cost of towing services</li> </ul>	<ul style="list-style-type: none"> <li>• Poor traffic condition</li> <li>• Roads from Butuan to Agusan and from Surigao to Agusan are in poor condition</li> <li>• Portions of Gensan-Davao road w/c are prone to landslide delaying our delivery/poor road condition affecting our units</li> <li>• Narrow streets/roads</li> <li>• Un-cemented farm roads making it impassable to trucks</li> </ul>
<b>Port Infrastructure</b>	<ul style="list-style-type: none"> <li>• Congestion/ narrow roads leading to port</li> <li>• Poor lighting</li> <li>• Lack of loading/ unloading equipment causing delays</li> </ul>	<ul style="list-style-type: none"> <li>• Congestion delays unloading of trucks.</li> <li>• Lifting equipment is limited to 50 tons only, insufficient heavy equipment</li> <li>• Classification of cargo - advolorem should be line meter</li> <li>• Plug in facilities for reefer vans in shipping lines and shipping container yard</li> <li>• Provision of refueling facilities</li> <li>• Wider berthing space.</li> <li>• SCIPCI/PPA should provide better service</li> <li>• Poor sanitation due to shipment of live animals</li> </ul>
<b>Government Regulations</b>	<ul style="list-style-type: none"> <li>• Unavailability of cheap financing (loan facility)</li> <li>• Very high toll fee increase</li> <li>• Speed limit restriction and truck ban (5 am to 9 am) delays delivery</li> <li>• High diesel prices increase cost of trucking</li> <li>• Delays caused by Corruption of LTO</li> <li>• MMDA implementing tonnage limitation of containers passing through MacArthur Highway</li> </ul>	<ul style="list-style-type: none"> <li>• LTO corruption</li> <li>• BIR corruption</li> <li>• High price increase of fuel and lubricants</li> <li>• Too much tax, every municipality has their own policy upon entry.</li> <li>• Unnecessary fees for clearances</li> <li>• Obsolete rules and regulations</li> <li>• No actual weighing yet there is a weighing fee in your bill of loading.</li> </ul>
<b>Overall Logistics Management</b>	<ul style="list-style-type: none"> <li>• Worsening traffic situation delays shipment</li> <li>• Red tape</li> <li>• Lack of equipment</li> </ul>	<ul style="list-style-type: none"> <li>• High risk and high capital but low return</li> <li>• Financial capacity to improve and modernize equipment.</li> </ul>
<b>Linkages with Shipping Service</b>	<ul style="list-style-type: none"> <li>• High shipping rates</li> <li>• Early closing time of shipping lines</li> <li>• Corruption</li> </ul>	<ul style="list-style-type: none"> <li>• Schedules should be followed strictly to follow standardization</li> </ul>
<b>RoRo service</b>	<ul style="list-style-type: none"> <li>• Convenient only for small trucks</li> </ul>	<ul style="list-style-type: none"> <li>• No specific floater insurance coverage</li> <li>• OK, for general cargoes except for livestock because not all vessels accept livestock cargoes.</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>• High membership sticker cost</li> </ul>	<ul style="list-style-type: none"> <li>• Damaged products/ Poor handling</li> </ul>

### 3.3 Shipbuilding and Repairing Industry

#### 3.3.1 Shipyard in the Philippines

##### (1) MARINA REGISTERED SHIPYARDS

Maritime Industry Authority (MARINA) is in charge of the implementation of maritime industry development program, and also the accreditation of marine surveyors and maritime enterprises engaged in shipbuilding, ship repairing and ship breaking.

Table 3.3.1 shows the latest list of firms in the Philippines licensed by MARINA and

further analysis of the list of shipbuilder and repairer reveals that:

- Majority of shipyards are small scale
- Number of large/medium-scale shipyards have not changed much.

**Table 3.3.1. MARINA Licensed Shipbuilding and Repairing Firms, 1999-2003**

Category	1999	2000-2001	2002	2003	Average	%
Large shipyards	11	9	9	9	9.5	9.7
Medium shipyard	16	14	14	13	14	14.6
Small shipyards	73	90	49	84	74	75.7
Total	100	113	72	106	97.75	100.0

Source: MARINA

**Table 3.3.2. MARINA Licensed Shipbuilding and Repair Firms**

Category	Luzon	Visayas	Mindanao	Total	%
Large shipyards	3	5	1	9	8.5
Medium shipyards	6	4	3	13	12.3
Small shipyards	44	17	23	84	79.2
Total	53	26	27	106	
% Distribution	50.0	24.5	25.5	100.0	100.0

Source: MARINA

Note: Data as of Dec. 31, 2003

## (2) SHIPYARD SURVEYS

The Study Team conducted an investigation and interview survey at 15 shipyards (refer to Table 3.3.3). Several of them are outlined in Table 3.3.4 and it can be pointed out that most of them are engaged primarily in ship repair work to maintain the shipyard management despite of their installed facilities and equipments for new shipbuilding works. As a result, very few shipyards are concentrated in new shipbuilding business.

**Table 3.3.3. Profile of Surveyed Domestic Shipyards**

List of shipyards	Region	Category
Keppel Batangas Shipyard	Batangas	Large
Phil. Iron Construction & Marine	Cagayan de Oro	Large
Keppel Cebu Shipyard, Inc	Cebu	Large
Sandoval Shipyard	Cebu	Large
Tsuneishi Heavy Industries (Cebu)	Cebu	Large
Herma Shipyard	NCR	Large
Colorado Shipyard Corp	Cebu	Medium
Santiago Shipyard & Shipbuilding	Cebu	Medium
Dansyco Marine Works & Shipbuilding Corp	NCR	Medium
Elfa Shipyard Corp	NCR	Medium
Neptuna Shipyard Corp	NCR	Medium
R&LT Shipyard & Realty Development Corp	NCR	Medium
Ultra Shipyard Corp	NCR	Medium
Fortuna Shipworks Inc	NCR	Medium
Josefa Slipways Inc	NCR	Medium

Note: The survey period is from December 2004 to March 2005

- **Phil. Iron Construction & Marine Works, Inc.**  
The company is categorized as a large shipyard; however, it is pre-occupied with repairing works. Although, the yard has a synchrolift capacity of 1,500 tons for new shipbuilding, it may face a series of difficulties in drawing, facility and management system when getting a new building order.
- **R&LT Shipyard & Reality Development Corp**  
The company is classified as a medium category shipyard and concentrates on repair works. Existing facilities such as track crane needs to be improved and the working space beside the building/repairing berth is too narrow compromising safety and efficiency. Although, it has shipbuilding records in the past, it is questionable if the yard can organize itself and do a drastic shift in new shipbuilding for a short period.
- **Dansyco Marine Works & Shipbuilding Corp**  
The shipyard falls under the medium category but already experienced delivering a 5,000 DWT tanker in the past. However, the construction method used in that tanker may be different from the one used at present. Today, the yard receives ship repairing and ship conversion orders and the president has established a reputation as an experienced ship conversion designer. Besides drawing and other technical performance, the yard has identified many facility and management related problems.
- **Elfa Shipyard Corp**  
A medium-scale shipyard that mainly caters to repair works and occasional ship conversion. Records show no shipbuilding done in recent five years. There are two berths in a sufficiently confined space. On the survey day, the yard was active with well performing equipments.
- **Ultra Shipyard Corp**  
It is a medium-scale shipyard presently doing ship repairs. Although, there are two building/ repairing berths, it seems that berth occupancy is not high. The yard needs more safety awareness to manage its narrow and small working space. Due to site limitation, it would be difficult to expand its business scope to new shipbuilding.
- **Neptuna Shipyard Corp**  
The shipyard falls under the category of medium shipyards. The yard has done mostly ship repairing. On the survey day, no ship was docked so the Study Team cannot comment on operational issues.
- **Herma Shipyard**  
This is a large-scale shipyard with a graving dock capable of accommodating a 35,000 DWT vessel. Currently, the yard devotes most of its works on ship repairing. Although facilities and equipments are outdated, the company will be able to show good shipbuilding performance by reorganizing the large yard site through modern and efficient ways.
- **Keppel Batangas Shipyard**  
It is a large-scale shipyard with 80% of its operation is dedicated to ship repairing and 20% in new shipbuilding. The yard is located in a large site with a large synchrolift capacity of 2,000 tons which enables efficient repairing in dock. This yard has the most potential when the country decides to promote domestic shipbuilding. The yard shows a large dependency on Keppel Singapore in terms of ship design, material procurement and workers' training.



- Keppel Cebu Shipyard, Inc.  
Under the same Keppel Group as Keppel Batangas, it also falls into large-scale category. Current works are ship repairs and conversions. Like Keppel Batangas, the yard is capable of expanding its operation to new shipbuilding due to site spaciousness. However, it must reinforce its facilities and technical staff.
- Colorado Shipyard Corp  
It is a medium-scale shipyard serving mainly for ship repairing. According to the interview with the yard owner, the yard is expanding its business scope to include new shipbuilding. It is observed that the site is large enough but financial and designing capabilities are not sufficient. In fact, the yard is looking for second-hand facilities and equipments.
- Santiago Shipyard & Shipbuilding Corp.  
The shipyard falls under the category of medium shipyards. Although it was not confirmed by a yard manager, the Study Team observed that the yard was installing facilities and equipments for new shipbuilding.
- Sandoval Shipyard  
It is a large-scale shipyard with two docks. The yard once concentrated on new shipbuilding. For example, the yard built a 4,500 DWT tanker based on the drawings supplied by a Singaporean naval architect. Taking the existing facilities and technical staff into account, it is difficult to receive a new ship order without external support.
- Tsuneishi Heavy Industry (Cebu), Inc.  
This large-scale shipyard was developed exclusively for new shipbuilding. Presently, the yard is constructing a series of the 52-type bulk carriers. Basic ship designs are done in the HQ in Japan and afterwards, the yard is responsible for the rest of the works with its subsidiary naval architecture office.  
  
The yard facilities and equipments satisfied the international standards in terms of capability and layout. The yard has recently installed a new dock with two track cranes so that the large block construction method is applicable. It is questionable whether the yard can build domestic shipping vessels efficiently and cost effectively at such large docks and facilities. The yard manager explained that one floating dock would be rearranged to build domestic vessels whenever necessary. However, some problems may arise including uncoordinated divisions of works and its workers, and no suitable crane available and thus, it will take a longer construction period.
- Fortune Shipworks Inc  
The medium-category shipyard commenced operation in 2003. So far, the yard provides only ship repairing services but it holds a business plan to participate in new shipbuilding business. However, the Study Team observed that the site was small and no drawing capability was found.
- Josefa Slipways, Inc.  
Previously named Ultra Shipyard due to change in ownership, the company is a medium-scale shipyard. The yard is now under rehabilitation and the Study Team was informed that they have a new order of a 15-meter tugboat. After rehabilitation, the yard will be able to deliver such small ships.

**Table 3.3.4. Outline of Surveyed Domestic Shipyards (1 of 2)**

SHIPYARD NAME	PHIL. IRON CONST. & MARINE WORKS	R & LT SHIPYARD	DANSYCO SHIPYARD	ELFA SHIPYARD	ULTRA SHIPYARD	NEPTUNA SHIPYARD	HERMA SHIPYARD
<b>LOCATION</b>	Cagayan de Oro	National Capital Region	National Capital Region	National Capital Region	National Capital Region	National Capital Region	National Capital Region
<b>CATEGORY</b>	Large	Medium	Medium	Medium	Medium	Medium	Large
<b>Visited</b>	(Jan.24,05)	(Jan.25,05)	(Jan.25,05)	(Jan.26,05)	(Jan.26,05)	(Jan.27,05)	(Jan.27,05)
<b>Layout of Yard</b>		2-ha			2250m2	7Ha	17Ha
<b>Building Berth or Dock</b>	Syncro Lift 1500t 120m x 2 60m x 1	Slipway 4000t (250',750t) Launching Pad 1000t	Slip Building Way 5000t (90mx24m) Bld/Repair Berth 5000t	Slipway 5000t (300'x52') Bld/Repair Berth 2500t (300' x 46') Launching Pad 500t	Slipway 4500 (250' x 55' x 2)	-	Bld/Repair Berth 6500t Graving Dock 10000DW (173m x 30.5m)
<b>Delivery List</b>	Repair Main 54in total (1980-1998)	Repair Main Over 40 vessels a year	Repair Main NB available (Tanker)	Repair Main NB available but few (3 vsls since 99)	Repair Main up to 2500DW NB available	Repair Main NB available (3 vsls last built in 99)	
<b>RoRo Experience(NB)</b>		Nil	Nil			Nil	
<b>IACS Class (NB)</b>	ABS, LR	ABS, LR		ABS (Tankers)	BV (Bureau of Veritas)	PRS? (Tankers)	ABS
<b>Annual Capability</b>	Repair 70 vsls New 4 vsls		New 2-3 of 5000DW Tanker Repair : 20 vsls			(Data will be submitted later)	
<b>Construction Duration, Work Period</b>	Repair : 15-30 days New : 180 days for 1000DWT			New : 9-months (C-D), 45days for Conversion of Double Botm	Repair: 3 vessels a month (tankers)		
<b>Ship's Price</b>		4-5mil Peso for 18ft Tanker		3mil\$ for 999DWT Tanker	40mil Peso for 3-1500 Tankers	100mil Peso for 488.75GRT Tanker (99 price)	
<b>Facilities</b>	Crane : 35t x 2, 15t x 2, Weld Mach. 80	Rented mobile cranes					
<b>Employee</b>	Proper : 50 Temp : 300	30 welders	Proper : 20 Temp : 80	Total : 300		Subcontract (Variable)	
<b>Training</b>	TESDA (Tech. Education & Develop. Authority)	In-house regular training program	M/ESCOR Training Center				
<b>Cutting Steel Plate</b>	40t/m		abt.500t/y				
<b>Main Supplier</b>	by Trader	Steel: Russia (yard purchase or customer purchase) M/E: Local(Caterpillar), O/S (Japan)	Steel : Local (Russia, etc) M/E :O/S (Catt, Cummins)	Steel : Yard Purchase M/E : O/S (Catt, Cummins)			Steel : From Europe M/E : From Korea
<b>New Work Marketing</b>	In-house	In-house	Fm Ship Owner				Own Marketing

**Table 3.3.4. Outline of Surveyed Domestic Shipyards (2 of 2)**

SHIPYARD NAME	SEAFRONT SHIPYARD	KEPPEL BATANGAS SHIPYARD	KEPPEL CEBU SHIPYARD, INC.	SANDOVAL SHIPYARD	TSUNEISHI HEAVY INDUSTRIES (CEBU)	COLORADO SHIPYARD	SANTIAGO SHIPYARD & SHIPBUILDING
<b>LOCATION</b>	National Capital Region	Batangas	Cebu	Cebu	Cebu	Cebu	Cebu
<b>CATEGORY</b>	-	Large	Large	Large	Large	Medium	Medium
<b>Visited</b>	(Jan.27,05)	(Feb. 9, 05)	( Mar. 1, 05)	(Mar. 2, 05)	(Mar, 3, 05)	(Mar, 2, 05)	( Mar, 2, 05)
<b>Layout of Yard</b>	New shipyard			107,400m2		60,000 & 65,000m2	6.13Ha
<b>Building Berth or Dock</b>	-	Graving Dock 200x38m Floating Dock 100x19m Synchrolift 172x28m Berth 167x27m, 172x27m, 100x20m	Graving Dock 210x30m Slipway 105x10.4m, 73x7.9m, 43x3.09m Launching way 100x8m	Berth 100x 17m Slipway 100x 12m	Berth 200x34m-2 Floating Dock 128x23.3m 139.5x24m	Slipway 1-1,500DWT 1-1,000DWT 1-500DWT	Dry dock 48x14m 75x22m Berth under construction
<b>Delivery List</b>		Repair 80%, New 20% About 20 vessels a year	Repair Main 78 vessels in 2004	Repair main, about 20 vessels in 2004		Repair main, 6-12 repair vsls/month	Repair main 31 repair vsls in 2004
<b>RoRo Experience(NB)</b>		Nil	Nil	Nil	Nil	Nil	Nil
<b>IACS Class (NB)</b>		ABS		ABS	NK, ABS, LRS		
<b>Annual Capability</b>					New building 52BCx7 per year		
<b>Construction Duration, Work Period</b>			About 10 days for dock services			3 days to 1 month	7-10 days for dry dock
<b>Ship's Price</b>							
<b>Facilities</b>		Crane: 20-100t mobile 10-50t traveling	Crane: 20, 25t luffing 55,29,50t crawler 30,16,7t traveling	Crane: 50, 30t Weld machine 30 Tug boat 150ps	Crane: Jib 50t-2, 200t-2 Gantry 100t-1	Crane:crawler 100,60,55,45,30t Tug boat 750ps	Crane: crawler 30t Truck 25t Welding machine 12
<b>Employee</b>				Regular 9	Regular 3,500	40-60 workers	Regular 22
<b>Training</b>		Singapore center	Singapore center			TESDA	
<b>Cutting Steel Plate</b>					About 6,000t/month	5-20t/month	
<b>Main Supplier</b>		Steel: UK M/E: Caterpillar			Ordered by Japan side	Local hardware store	Local supplier
<b>New Work Marketing</b>		Singapore center	Singapore center		Japan side		

**Figure 3.3.1. Shipyard Surveys**



*Interview with Shipyard Managers*



*Painting Works at Elfa Shipyard*



*Herma Shipyard's Graving Dock*



*Sand Blasting Equipment*



*Slipway of Newly Built Seafront Shipyard*



*Converting an Imported Vessel from Japan*



*Bending Machine*



*Mobile Crane at Dansyco Shipyard*

### 3.3.2 Shipbuilding Facility, Capability and Achievement

As mentioned in 3.3.1, shipbuilding facilities are not fully utilized for new building, but rather concentrates on ship repairing. This is attributed to the low demand for new buildings for the past few years.

Table 3.3.5, shows the profile of shipyard facilities commonly used for new building and ship repair and number of this facility shows comparatively in large figures. Facility profile in 2002 and 2003 is shown in Table 3.3.6.

**Table 3.3.5. Profile of Shipyard Facilities by Region, 2003**

Category	Luzon		Visayas		Mindanao		Total	
	No	Total building capacity in DWT	No	Total building capacity in DWT	No	Total building capacity in DWT	No	Total building capacity in DWT
Marine railway								
- Slipway	33	65,600	15	104,650	16	18,025	64	188,275
- Buildingway	10	34,950	2	9,500	7	1,410	19	45,860
- Building/repair berth	25	805,150	3	10,500	1	300	29	815,950
Launching pad	14	30,949	11	11,000	3	1,175	28	43,124
Graving dock	3	390,000	2	36,000	-	-	5	426,000
Floating dock	4	36,150	2	17,000	3	4,165	9	57,315
Lift dock	2	20,500	-	-	1	1,500	3	22,000
Total	91	1,383,299	35	188,650	31	26,575	157	1,598,524

Source: MARINA

**Table 3.3.6. Profile of Shipyard Facilities, 2002 & 2003**

Category	2002		2003	
	No	Total building capacity in DWT	No	Total building capacity in DWT
Marine railway				
-Slipway	98	161,000	64	188,275
-Building way	32	40,490	19	45,860
-Building/repair berth	52	123,100	29	815,950
Launching pad	22	36,820	28	43,124
Graving dock	5	394,500	5	426,000
Floating dock	9	29,100	9	57,315
Lift dock	3	9,500	3	22,000
Total	221	794,510	157	1,598,524

Source: MARINA

Table 3.3.7 shows the nine large shipyards in the Philippines, and the total building/dry docking capacities of 242,600 DWT (15.2%) in the country. Five large shipyards are joint ventures with foreign shipbuilding and ship repair companies, which are Keppel group with 3 shipyards, Tsuneishi and FBMA.

**Table 3.3.7. Profile of Large Shipyards in the Philippines**

Name of company	Location	Facility	Total capacity	% Share
Keppel Batangas	Luzon	LD,FD,GD,RB	97,100	40.0
Tsuneishi Heavy Industry	Visayas	SW,FD	65,500	27.0
Subic Shipping & Eng	Luzon	GD	34,000	14.0
Keppel Cebu Shipyard	Visayas	SW,GD	11,000	4.5
Sandoval Shipyard	Visayas	SW,SBW,RB,LP	11,000	4.5
FBMA Babcock Matine	Visayas	SW,SBW,RB	10,500	4.3
Herma Shipping	Luzon	GD	10,000	4.1
Navotas Industrial Corp	Luzon	SW	2,000	0.8
Phil Iron Construction	Mindanao	LD	1,500	0.6
<b>Total</b>			<b>242,600</b>	<b>100</b>

Source: MARINA

Note: Data as of Dec. 31, 2003

LD: Lifting Dock      RB: Repair Berth      SBW: Shipbuilding Way  
FD: Floating Dock      SW: Slip Way      GD: Graving Dock      LP: Launching Pad

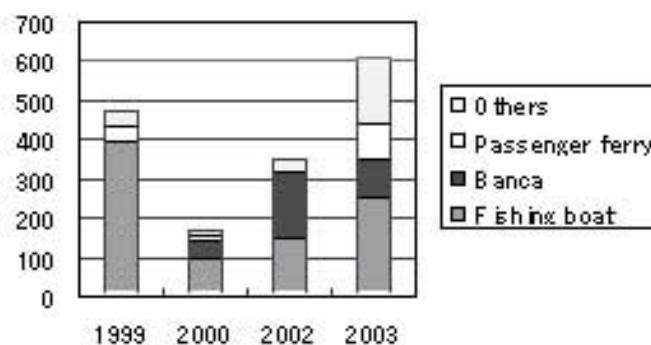
As for achievement, Table 3.3.8 and Figure 3.3.2 shows the locally constructed vessels for the past five years and Table 3.3.9 shows the total gross tonnage for each type of ship. It reveals that fishing boats and bancas are the majority of constructed vessels, and this is a predictable result since majority of shipbuilders are small shipyards.

**Table 3.3.8. Number of Locally Constructed Vessels for Domestic Use**

Type of Ships	1999	2000-2001	2002	2003	Total	% Share
Fishing Boat	396	96	148	256	896	55.9
Banca	-	46	170	99	315	19.6
Passenger ferry	36	13	2	84	135	8.4
Pleasure yacht	11	-	-	92	103	6.4
Barge	3	1	4	57	65	4.1
General Cargo	3	7	20	19	49	3.1
Patrol Boat	10	5	1	-	16	1.0
Speedboat/Sports Craft	8	-	-	1	9	0.6
Tugboat	2	1	3	-	6	0.4
Landing Craft Trans	4	-	-	-	4	0.3
Others	-	-	2	1	3	0.2
Tanker	1	-	1	-	2	0.1
Landing Craft Mech	-	-	-	1	1	0.1
<b>Total</b>	<b>474</b>	<b>169</b>	<b>351</b>	<b>610</b>	<b>1,604</b>	<b>100.0</b>

Source: MARINA

**Figure 3.3.2. Number of Locally Constructed Vessels for Domestic Use, 1999-2003**



Source: MARINA



**Table 3.3.9. Capacity (GT) of Locally Constructed Vessels for Domestic Use**

Type of ships	1999	2000-2001	2002	2003	Total	% Share
Fishing Boat	6,425	2,261	5,917	4,203	18,808	34.5
Barge	1,421	1,982	3,312	7,242	13,959	25.6
General Cargo	4,525	958	1,245	219	6,948	12.7
Tanker	660	-	4,500	-	5,160	9.5
Banca	-	-	2,116	985	3,102	5.7
Passenger Ferry	492	770	101	887	2,252	4.1
Patrol Boat	109	10	1,500	-	1,619	3.0
Landing Craft Trans	1,513	-	-	-	1,513	2.8
Pleasure Yacht	492	-	-	376	868	1.6
Tugboat	117	3	63	-	184	0.3
Landing Craft Mech	-	-	-	60	60	0.1
Others	-	-	5	49	53	0.1
Speedboat/Sports Craft	27	-	-	5	32	0.1
<b>Total</b>	<b>15,784</b>	<b>5,986</b>	<b>18,762</b>	<b>14,762</b>	<b>54,564</b>	<b>100.0</b>

Source: MARINA

Table 3.3.10 and Table 3.3.11 are useful to understand the general trend of vessels built here for export. Vessel type is focused on the bulk carrier but the demand is low.

**Table 3.3.10. No. of Locally Constructed Vessels for Export**

Type of ships	1999	2000-2001	2002	2003	Total
Passenger Ferry	1	1	-	-	2
Bulk Carrier	4	5	7	12	28
<b>Total</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>12</b>	<b>30</b>

Source: MARINA

**Table 3.3.11. Capacity (GT) of Locally Constructed Vessels for Export**

Type of ships	1999	2000-2001	2002	2003	Total
Passenger ferry	660	374	-	-	1,034
Bulk carrier	82,200	115,400	212,800	364,800	775,200
<b>Total</b>	<b>82,860</b>	<b>115,774</b>	<b>212,800</b>	<b>364,800</b>	<b>776,234</b>

Source: MARINA

As a common feature in many shipyards, it is concluded that facilities were not arranged for new ship building work exclusively and are deemed as compromised with ship repair work. This might be the result of practicality to meet both new building and/or repair work requirements.

In the interview with ship yard personnel, it was found out that the low demand for new building has been the same for the past few years. Ship building activities have been limited to barges, fishing boats and other less sophisticated vessels for domestic use.

It was noticed that shipyard facilities have some irregularities in the following items:

- Generally, shipyard area is comparatively narrow for building the steel blocks or other equipment.
- There are no traveling cranes alongside the building berth. Instead of that, mobile truck cranes are employed for the same purpose.
- Steel blocks are considered to be transported within the shipyard area by truck trailers, not by jack-up carrier.
- Advanced outfitting system is not applied.

- Floating crane is usually employed for outfitting alongside quay, not by traveling crane.

### 3.3.3 Ship Repairing Facility, Capability and Achievement

It was found that ship repair activity is the predominant industry in the country, as observed in actual works on the slip way in many shipyards.

Table 3.3.12 and 3.3.13 show the number of domestic ships and gross tonnage by type of ship drydocked/ repaired. It reveals that repair/ dry-docking of fishing vessels, passenger ferries and cargo vessels are the main activities for this industry.

Table 3.3.14 and Table 3.3.15 are the summary of foreign ships locally repaired in the country and gross tonnage by the type of ships.

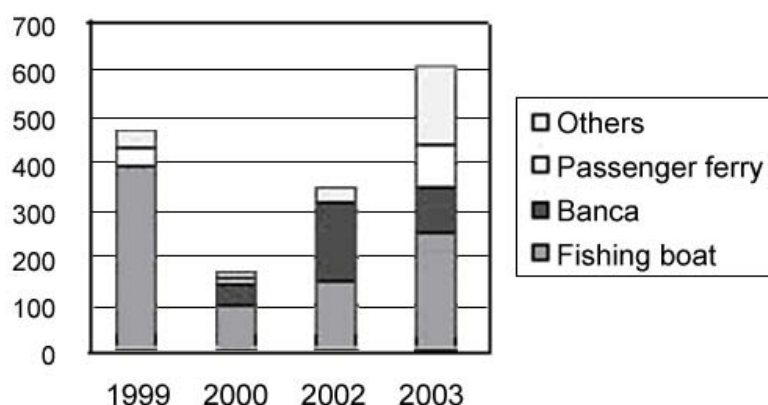
Although the number of the vessels is smaller than the domestic vessels, the total gross tonnage is far bigger than the domestic ones. This only means that shipyards received the large sized vessels such as bulk carrier, general cargo or container ship.

**Table 3.3.12. No. of Domestic Ships Dry-docked/Repaired**

Type of ships	1999	2000-2001	2002	2003	Total	% Share
Fishing boat	289	159	367	175	987	31.7
Passenger ferry	219	150	145	176	690	22.2
General cargo	185	131	154	128	598	19.2
Tugboats	54	33	97	81	265	8.5
Barge	68	56	60	60	244	7.8
Tanker	46	29	21	96	192	6.2
Others	-	34	30	4	68	2.2
Patrol boats	-	-	-	35	35	1.1
Container ship	7	4	5	9	25	0.8
Bulk carrier	4	1	-	-	5	0.2
Pleasure Yacht	-	-	-	3	3	0.1
Livestock carrier	-	1	-	-	1	0.0
Total	869	598	879	767	3,113	100.0

Source: MARINA

**Figure 3.3.3. Number of Domestic Ships Dry-docked/Repaired, 1999-2003**



Source: MARINA



**Table 3.3.13. Capacity of Domestic Ships Dry-docked/Repaired, 1999-2003 (GT)**

Type of ships	1999	2000-2001	2002	2003	Total	% Share
Passenger ferry	248,809	213,420	204,576	433,336	1,100,142	42.1
General cargo	158,715	175,932	105,994	182,569	623,211	23.9
Barge	98,945	42,347	57,177	43,594	242,074	9.3
Tanker	60,948	32,043	21,716	123,821	238,530	9.1
Fishing boat	55,208	41,744	44,064	32,645	173,662	6.7
Container ship	17,007	17,532	18,435	56,850	109,827	4.2
Others	-	13,706	24,829	28,557	67,092	2.6
Tug boat	13,167	7,083	12,703	9,778	42,732	1.6
Bulk carrier	12,364	892	-	-	13,257	0.5
Livestock carrier	-	1,259	-	-	1,259	0.1
Pleasure Yacht	-	-	-	902	902	0.0
Total	665,165	545,963	489,498	912,056	2,612,682	100.0

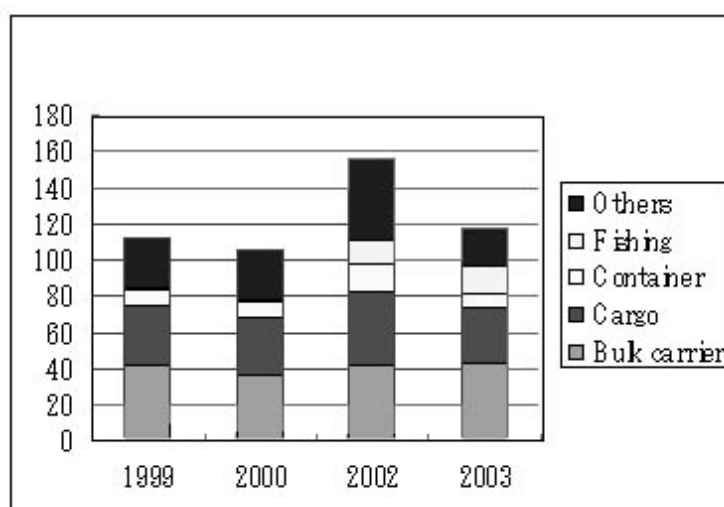
Source: MARINA

**Table 3.3.14. Number of Foreign Ships Dry-docked/Repaired, 1999-2003**

Type of ship	1999	2000-2001	2002	2003	Total	% Distribution
Bulk carrier	42	37	42	43	164	33.3
General cargo	33	31	40	31	135	27.4
Container ship	8	9	16	7	40	8.1
Fishing boat	2	1	13	15	31	6.3
Tanker	5	5	14	5	29	5.9
Reefer ship	2	3	14	4	23	4.7
Others	-	6	8	-	14	2.9
Barges	8	2	-	3	13	2.6
Tugboat	-	2	3	7	12	2.4
Product carrier	5	2	1	0	7	1.6
Passenger ferry	1	4	2	0	7	1.4
Log carrier	2	-	2	3	7	1.4
Live stock carrier	3	2	1	-	6	1.2
Ore carrier	1	1	-	-	2	0.4
Car carrier	1	-	-	-	1	0.2
Total	113	105	156	118	492	100.0

Source: MARINA

**Figure 3.3.4. Number of Foreign Ships Dry-docked/Repaired, 1999-2003**



Source: MARINA

**Table 3.3.15. Capacity of Foreign Ships Dry-docked/Repaired, 1999-2003 (GT)**

Type of ship	1999	2000 -2001	2002	2003	Total
Bulk carrier	1,976,667	1,997,063	2,395,605	2,085,557	8,454,893
General cargo	273,821	227,932	197,204	155,064	854,022
Container ship	81,575	146,030	240,948	136,684	605,237
Tanker	29,335	17,310	97,365	107,072	251,082
Reefer ship	10,969	14,280	95,455	23,649	144,353
Others	5,885	33,427	98,875	-	138,187
Ore carrier	102,395	25,169	-	-	127,564
Log carrier	9,033	-	30,897	58,528	98,458
Fishing boat	1,995	1,277	6,380	65,882	75,534
Product carrier	31,019	33,441	4,182	-	68,642
Barge	18,257	5,146	-	5,004	28,408
Passenger ferry	325	12,245	807	-	13,377
Livestock carrier	4,194	2,059	1,259	-	7,513
Tugboat	-	1,328	1,205	2,157	4,691
Car carrier	1,321	-	-	-	1,321
Total	2,546,792	2,516,710	3,170,183	2,639,599	10,873,286

Source: MARINA

In order to operate the ship repair work effectively, it is essential to secure the timely delivery of necessary equipments and parts and necessary man power.

No particular complaints on that point were raised by the shipyard personnel during the interview. Therefore, arrangements of procurement may be going well. Establishment of procurement system is indispensable for future business, such as the preparation of manufacturer's stationary warehouse, stockyard of spare parts and reliable special trading company.

