JICA

Japan International Cooperation Agency (JICA)
Maritime Industry Authority (MARINA)

No.

The Study on Domestic Shipping Development Plan in the Republic of the Philippines

DSDP

FINAL REPORT

Main Text Volume 1

December 2005

ALMEC
ALMEC CORPORATION

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
MARITIME INDUSTRY AUTHORITY (MARINA)

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THE STUDY ON DOMESTIC SHIPPING DEVELOPMENT PLAN IN THE REPUBLIC OF THE PHILIPPINES

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The exchange rate used in the report is:

J.Yen 110 = US$ 1 = Philippine Peso 56

(average during the study period)

PREFACE

In response to the request from the Government of the Republic of the Philippines, the Government of Japan decided to conduct the "Study on Domestic Shipping Development Plan" and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a team to the Philippines between November 2004 and October 2005, which was headed by Mr. KUMAZAWA Ken of ALMEC Corporation.

The team conducted the study in collaboration with the Philippine counterpart team including: formulation of domestic shipping development policies and strategies; drafting of a sustainable ship modernization scheme centered on public ship finance; conduct of feasibility studies of shipping business models; and holding of a series of discussions with concerned officials of the Government of the Philippines. Upon returning to Japan, the team duly finalized the study and delivered this report.

I hope that this report will contribute to the development of Philippines' domestic shipping and to the enhancement of the friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the concerned officials of the Government of the Philippines for the close cooperation they extended to the team.

December 2005

MATSUOKA Kazuhisa
Vice President
Japan International Cooperation Agency

December 2005

MATSUOKA Kazuhisa
Vice President
Japan International Cooperation Agency
Tokyo

LETTER OF TRANSMITTAL

Dear Sir,

We are pleased to formally submit herewith the final report of the "Study on Domestic Shipping Development Plan in the Republic of the Philippines".

This report compiles the results of the study which was undertaken both in the Philippines and Japan from November 2004 to December 2005, by the Team organized by ALMEC Corporation.

We owe a lot to many people for the accomplishment of this report. First, we would like to express our sincere appreciation and deep gratitude to all those who extended their extensive assistance and cooperation to the Team, in particular the Maritime Industry Authority (MARINA) of the Philippines.

We also acknowledge the concerned officials of your agency, the JICA Advisory Committee, and the Embassy of Japan in the Philippines for their support and valuable advice during the course of the Study.

We wish the report would contribute to the promotion and sustainable development of Philippines' domestic shipping.

Very truly yours,

KUMAZAWA Ken
Team Leader
The Team for the Study on Domestic Shipping Development Plan
in the Republic of the Philippines

TABLE OF CONTENTS (Main Text - Vol.1)

List of Tables vi
List of Figures xi
List of Abbreviations xvii

VOLUME I

1. INTRODUCTION 1-1
1.1 Study Background 1-1
1.2 Study Objectives 1-1
1.3 Study Area 1-1
1.4 Study Activities 1-1
1.5 Framework of Domestic Shipping Development Plan 1-8

2. APPRECIATION OF THE STUDY AREA 2-1
2.1 Habitation and Migration 2-1
2.1.1 Population Growth and Distribution 2-1
2.1.2 Regional Population Distribution 2-1
2.1.3 Labor Force and Employment 2-2
2.2 Economy and Trade 2-4
2.2.1 GDP 2-4
2.2.2 Economic Growth 2-6
2.2.3 Regional Composition 2-7
2.2.4 International Trade 2-9
2.2.5 Income, Expenditure and Poverty 2-10
2.3 Maritime Traffic 2-12
2.3.1 Role of Maritime in National Transportation 2-12
2.3.2 Inter-regional Freight Demand 2-13
2.3.3 Inter-regional Passenger Demand 2-26
2.3.4 RoRo Survey 2-28
2.4 Domestic Fleet 2-37
2.4.1 Registered Domestic Fleet 2-37
2.4.2 Fleet Analysis by Type, Size and Age 2-38
2.4.3 Shipyard Nationality of Commercial Vessels 2-40
2.4.4 Hull Material of Commercial Vessels 2-41
2.5 Ports 2-42
2.5.1 Philippine Port System 2-42
2.5.2 Port Facilities and Throughput 2-51
2.5.3 Role of Public and Private Ports 2-52
2.5.4 Case Studies at Selected Ports 2-54

2.6 Maritime Environment and Marine Safety 2-60
2.6.1 Oceanographic and Meteorological Features 2-60
2.6.2 Maritime Incidents 2-64
2.6.3 Marine Environmental Protection 2-68
2.6.4 Maritime Security 2-71

3. SHIPPING AND SHIPPING RELATED INDUSTRIES 3-1
3.1 Shipping Industry 3-1
3.1.1 The Industrial Structure 3-1
3.1.2 Categorization of Shipping Companies 3-5
3.1.3 Ship Operation and Management Practices 3-7
3.1.4 Shipping Company Interview Survey 3-10
3.2 Shippers and Forwarders 3-15
3.2.1 Commodity Wise Analysis 3-15
3.2.2 Shippers and Forwarders Interview 3-32
3.2.3 Truckers Interview 3-36
3.3 Shipbuilding and Repairing Industry 3-37
3.3.1 Shipyard in the Philippines 3-37
3.3.2 Shipbuilding Facility, Capability and Achievement 3-44
3.3.3 Ship Repairing Facility, Capability and Achievement 3-47

4. EXISTING SHIPPING SERVICES 4-1
4.1 Classification of Shipping Services 4-1
4.2 Cargo-Passenger and Passenger Shipping 4-3
4.2.1 Long-/Medium-distance Ropax Vessels 4-3
4.2.2 Conventional Cargo-Passenger Vessels 4-5
4.2.3 Wooden-Hull Bancas 4-6
4.2.4 Passenger Vessels and Fast Crafts 4-9
4.2.5 Short-distance RoRo Shipping 4-10
4.3 Freight Shipping 4-12
4.3.1 Container Vessels 4-12
4.3.2 General Cargo Vessels 4-14
4.3.3 Dry Bulk Carriers 4-16
4.3.4 Tankers 4-17
4.4 Shipping Service Competitiveness 4-19
4.4.1 Passenger Shipping Services 4-19
4.4.2 Freight Shipping Service 4-21

5. SHIP FINANCE 5-1
5.1 Financial Market in the Philippines 5-1
5.1.1 History of Financial Market Development 5-1
5.1.2 Structure of Financial Market 5-2
5.1.3 Size and Characteristics of Financial Market 5-3
5.2 Overview and Performance Analysis of DBP 5-9
5.2.1 Development Finance of DBP 5-9
5.2.2 Performance Analysis 5-11
5.3 Assessment of DSMP I and Provisional Assessment of DSMP II 5-13
5.3.1 Preparation and Achievement of DSMP 5-13
5.3.2 Impact Evaluation 5-20
5.3.3 Identification of Improvement Needs 5-21

6. INSTITUTIONAL DEVELOPMENT 6-1
6.1 Shipping Framework 6-1
6.1.1 Historical Overview 6-1
6.1.2 Shipping Related Laws and Regulations 6-3
6.1.3 International/Regional Initiatives on Maritime Service Liberalization 6-12
6.2 Fleet Quality Control 6-13
6.2.1 Registration 6-13
6.2.2 Inspection, Classification, Certification 6-15
6.2.3 Wooden-hulled Vessels 6-17
6.3 Recent Government Initiatives in Shipping Development 6-20
6.4 Shipping Policy Debates 6-22
6.4.1 Cabotage Regime 6-22
6.4.2 Port Charges and Other Service Fees 6-24
6.4.3 Ship Safety Standards 6-25
6.4.4 Coordinated Policy Between Shipping and Shipbuilding 6-28
6.4.5 Market Access, Competitive Assignment and Tariff Setting 6-29
6.5 Comparative Policy Study on ASEAN Shipping 6-31

7. DEMAND FORECAST AND FUTURE FLEET REQUIREMENT 7-1
7.1 Demand Forecast and Fleet Estimation Model Framework 7-1
7.1.1 Overall Model Structure 7-1
7.1.2 Future Socio-Economic Framework 7-1
7.1.3 Commodity Classification, Zoning System and Network Configuration 7-2
7.2 Demand Forecast 7-4
7.2.1 Demand Forecast Model Structure 7-4
7.2.2 Maritime Cargo Forecast 7-5
7.2.3 Maritime Passenger Forecast 7-15

7.3 Fleet Estimation 7-17
7.3.1 Fleet Estimation Model Structure 7-17
7.3.2 Fleet Estimation Parameters 7-19
7.3.3 Nautical Highway vs. Direct Shipping Diversion Model 7-23
7.3.4 Model Calibration and Validation 7-25
7.3.5 Base Case Future Fleet Requirement 7-26

8. DOMESTIC SHIPPING DEVELOPMENT POLICIES AND STRATEGIES 8-1
8.1 Shipping Policy and Institutional Development 8-1
8.1.1 Re-examination of the Existing Package of Regulations and Incentives for Improving Shipping Services and Lowering Tariff Setting 8-1
8.1.2 Provision of Incentives to LGUs for Developing Local Shipping 8-4
8.1.3 Enhancement of Maritime Safety, Protection of Marine Environment and Increasing Awareness in Maritime Security in Conformity with Relevant International Initiatives 8-6
8.2 Maritime Transport System Development 8-9
8.2.1 Upgrade of Trunk Liner Shipping Services 8-9
8.2.2 Expansion of Dry Bulk Shipping 8-12
8.2.3 Upgrading of Liquid Bulk Shipping 8-14
8.2.4 Development of Cold Chains 8-18
8.2.5 Effective Implementation of the Wooden-hull Replacement Program 8-23
8.2.6 Development of Short-haul RoRo System 8-28
8.2.7 Improvement of Public Port Operation 8-30
8.3 Development of Shipping and Related Maritime Industries 8-32
8.3.1 Facilitation of Modern Management in Shipping Business 8-32
8.3.2 Introduction of Ship-management Service for Domestic Fleet 8-35
8.3.3 Upgrading of Domestic Shipbuilding Capability 8-39
8.3.4 Providing Sufficient Ship Repairing and SBSR Ancillary Services 8-42
8.3.5 Facilitation of Supply Chain Management through IT 8-43

9. SUSTAINABLE SHIP MODERNIZATION SCHEME 9-1
9.1 Framework of Beneficial Fiscal Regimes for Domestic Shipping 9-1
9.2 Fleet Procurement and Modernization Plan 9-4
9.3 Comparative Analysis of Ship Procurement Alternatives 9-12
9.3.1 Ship Procurement Alternatives Subject to the Study 9-12
9.3.2 Characteristics and Philippine Condition by Procurement Alternative 9-12
9.3.3 Conclusions 9-17
9.4 Identified Roles of Public Finance in Combination with a Dedicated Ship Finance Institution 9-19
9.4.1 On-Lending Program Scheme using ODA Fund 9-19
9.4.2 Ship Leasing through NMEC 9-24

9.4.3 Innovative Financing with Empowering Local Shipping ····· 9-27
9.4.4 Necessary Legal and Regulatory Framework to Support Public Ship Finance ····· 9-30
9.5 Further Public Finance Options in Tandem with the Development of Public Ship Finance ····· 9-32

VOLUME II

10. DEVELOPMENT OF NEW GENERATION TRUNK LINER ROPAX VESSELS ····· 10-1
11. ROAD RO/RO TERMINAL SYSTEM (RRTS) PILOT PROJECT ····· 11-1
12. DEVELOPMENT OF BULK SHIPPING AND CORN LOGISTICS SYSTEM ····· 12-1
13. COLD CHAIN FOR FISHERY PRODUCTS IN PANAY ISLAND ····· 13-1
14. FOSTERING PROGRAM FOR NMEC ····· 14-1
15. Conclusions and Recommendations ····· 15-1

APPENDICES

Appendix 1 (Appendix to Chapter 3)
Appendix 2 (Appendix to Chapter 5)
Appendix 3 (Terms of Reference)
Appendix 4 (Appendix to Chapter 9)

COLUMNS

Column 3-1 PPA's Response and Initiative ····· 3-13
Column 5-1 Why have Japanese second-hand vessels dried up in the market? ····· 5-25
Column 6-1 MARINA M.C. 190 ····· 6-19
Column 8-1 Institutional Efforts of Ship Management Services ····· 8-39
Column 8-2 Logistics Reform as a National Policy in Japan ····· 8-46
Column 9-1 Apprehension about the restriction on vessel importation ····· 8-11
Column 9-2 What is NDC? ····· 9-22
Column 9-3 Different Law Provisions on Mortgage ····· 9-31
Column 9-4 Collateral in the Case of World Bank On-lending Programs ····· 9-32

LIST OF TABLES

Table 1.4.1 Members of JICA Side ····· 1-2
Table 1.4.2 Members of Philippine Side ····· 1-4
Table 1.4.3 List of Agencies and Organization Interviewed ····· 1-6
Table 1.4.4 Field Surveys Conducted ····· 1-7

Table 2.1.1 Philippine Population ····· 2-1
Table 2.1.2 Population and Population Growth Rate by Region ····· 2-1
Table 2.1.3 Employment by Region and Sector, 2002 ····· 2-3
Table 2.2.1 Employment by Industrial Sector ····· 2-4
Table 2.2.2 GDP Contribution of Sea Transportation ····· 2-6
Table 2.2.3 GRDP Growth Rate ····· 2-8
Table 2.2.4 Export by Commodity (2003, FOB in mil. USD and thousand MT) ····· 2-10
Table 2.2.5 Incidence of Poor Families in the Philippines ····· 2-12
Table 2.3.1 Role of Maritime in National Freight Transportation ····· 2-12
Table 2.3.2 Role of Maritime in National Passenger Transportation ····· 2-13
Table 2.3.3 Domestic Traffic Composition by Commodity (2002) ····· 2-14
Table 2.3.4 Composition of Food and Live Animals Domestic Sea Cargo (2002) ····· 2-14
Table 2.3.5 Composition of Crude Materials, Inedible, Except Fuels Domestic Sea Cargo (2002) ····· 2-15
Table 2.3.6 Composition of Material Fuels, Lubricants and Related Domestic Sea Cargo Materials (2002) ····· 2-15
Table 2.3.7 Composition of Manufactured Goods Classified Chiefly by Materials Domestic Sea Cargo (2002) ····· 2-16
Table 2.3.8 Composition of Machinery and Transport Equipment Domestic Cargo (2002) ····· 2-16
Table 2.3.9 Packaging Trend of Commodities (2002) ····· 2-19
Table 2.3.10 RoRo Service Profile at Survey Ports ····· 2-30
Table 2.3.11 Classified 24-hour Count of RoRo Vehicles ····· 2-31
Table 2.3.12 Passenger Arrival and Departure 24-hour Count ····· 2-31
Table 2.3.13 Socio-Economic Profile of RoRo Passengers ····· 2-32
Table 2.3.14 Trip Characteristics of RoRo Passengers ····· 2-33
Table 2.3.15 Service Assessment of RoRo Passengers ····· 2-34
Table 2.3.16 Trip Information of Cargo Trucks ····· 2-35
Table 2.3.17 Service Assessment of RoRo Freight Users ····· 2-36
Table 2.4.1 Philippine Registered Merchant Fleet ····· 2-37
Table 2.4.2 Profile of Commercial Ships ····· 2-38
Table 2.4.3 Total GRT per Type of Ship ····· 2-38
Table 2.5.1 Port Development in the Philippines ····· 2-44
Table 2.5.2 Number of Ports in the Philippines ····· 2-46

Table 2.5.3 Classification of Port Authority / PPBB and Number of Ports 2-47
Table 2.5.4 Institutional and Policy Framework for RRTS 2-50
Table 2.5.5 Government Share of Various Port Tariffs 2-50
Table 2.5.6 Total Cargo Volume at Top 50 Ports in the Philippines (2003) 2-54
Table 2.5.7 Turnaround Times at Selected Major Domestic Ports 2-55
Table 2.5.8 Cargo Handling Productivity and Traffic Volume of Selected Ports 2-55
Table 2.5.9 Berth Length and Alongside Water Depth of Selected Ports 2-56
Table 2.6.1 Maritime Incidents Resulting into Deaths of Ten Persons or More, 1995-2004 2-67
Table 2.6.2 Major Maritime Apprehensions (2000-2004) 2-72

Table 3.1.1 Top Ten Domestic Shipping Companies (in Terms of Paid-up Capital and GT, 2000) 3-2
Table 3.1.2 Top Ten Domestic Shipping Companies in Terms of GRT (2000) 3-2
Table 3.1.3 Grouping of Type of Service 3-3
Table 3.1.4 Top Ten Companies in Cargo Freight Service 3-3
Table 3.1.5 Top Ten Companies in Passenger Cargo Service 3-4
Table 3.1.6 Top Ten Companies in Passenger Ferry Service 3-4
Table 3.1.7 Top Ten Companies in Liquid Carrier Service 3-5
Table 3.1.8 Share of Top Ranking Companies 3-5
Table 3.1.9 Criteria Applied for Categorization of Shipping Companies 3-6
Table 3.1.10 Distribution of Company, GRT and Ships by Type of Service 3-6
Table 3.1.11 Summary of the Problems from the Onboard Survey 3-8
Table 3.1.12 Issues and Problems on Shipping Industry 3-12
Table 3.2.1 Geographical Location of Cement Plants 3-23
Table 3.2.2 Location and Capacity of Fertilizer Plants 3-25
Table 3.2.3 Raw Sugar Production (MT) 3-28
Table 3.2.4 Refined Sugar Production (in 50 Kg-Bag) 3-29
Table 3.2.5 Survey Coverage for Shippers and Forwarders Interview 3-32
Table 3.2.6 Ranking of the Requirements and Aspects of Transport Service 3-32
Table 3.2.7 Comments of Shippers of Perishable Goods on Maritime Transport 3-33
Table 3.2.8 Comments of Shippers of Non-Perishable Goods on Maritime Transport 3-34
Table 3.2.9 Comments of Shippers on Shipping Cost Increments 3-34
Table 3.2.10 Profile of Surveyed Truckers 3-36
Table 3.2.11 Truckers Opinion and Views on Shipping 3-37
Table 3.3.1 MARINA Licensed Shipbuilding and Repairing Firms, 1999-2003 3-38
Table 3.3.2 MARINA Licensed Shipbuilding and Repair Firms (as of December 31, 2003) 3-38
Table 3.3.3 Profile of Surveyed Domestic Shipyards 3-38
Table 3.3.4 Outline of Surveyed Domestic Shipyards 3-41

Table 3.3.5 Profile of Shipyard Facilities by Region, 2003 3-44
Table 3.3.6 Profile of Shipyard Facilities, 2002 & 2003 3-44
Table 3.3.7 Profile of Large Shipyards in the Philippines 3-45
Table 3.3.8 Number of Locally Constructed Vessels for Domestic Use 3-45
Table 3.3.9 Capacity (GT) of Locally Constructed Vessels for Domestic Use 3-46
Table 3.3.10 No. of Locally Constructed Vessels for Export 3-46
Table 3.3.11 Capacity (GT) of Locally Constructed Vessels for Export 3-46
Table 3.3.12 No. of Domestic Ships Dry-docked/Repaired 3-47
Table 3.3.13 Capacity of Domestic Ships Dry-docked/Repaired, 1999-2003 3-48
Table 3.3.14 Number of Foreign Ships Dry-docked/Repaired, 1999-2003 3-48
Table 3.3.15 Capacity of Foreign Ships Dry-docked/Repaired, 1999-2003 3-49

Table 4.1.1 Classification of Existing Domestic Shipping Services 4-1
Table 4.2.1 Profile of Major Long-/Medium-Distance Ropax Operators and Vessels 4-3
Table 4.2.2 Load Factors of Sample Ropax Vessels 4-5
Table 4.2.3 Profile of Conventional Cargo-Passenger Vessels 4-5
Table 4.2.4 Shipping Companies Operating Conventional Cargo-Passenger Vessels 4-6
Table 4.2.5 Profile of Wooden-hull Bancas 4-7
Table 4.2.6 Registry of Wooden-hull Bancas 4-7
Table 4.2.7 Shipping Companies Operating Wooden hull Bancas 4-8
Table 4.2.8 Profile of Passenger Vessels 4-9
Table 4.2.9 Registry of Passenger Vessels 4-10
Table 4.2.10 Profile of Selected Short-distance RoRo Operators and Vessels 4-11
Table 4.3.1 Profile of Container Vessels 4-12
Table 4.3.2 Load Factors of Sample Container Vessels 4-14
Table 4.3.3 Profile of General Cargo Vessels 4-14
Table 4.3.4 Registry of General Cargo Vessels 4-14
Table 4.3.5 Shipping Companies Operating General Cargo Vessels 4-15
Table 4.3.6 List of Shipping Companies with More Than 10 General Cargo Vessels 4-15
Table 4.3.7 Profile of Barges 4-16
Table 4.3.8 Registry of Barges 4-16
Table 4.3.9 Shipping Companies Operating Barges 4-17
Table 4.3.10 Profile of Tankers 4-18
Table 4.3.11 Registry of Tankers 4-18
Table 4.3.12 Shipping Companies Operating Tankers 4-18
Table 4.4.1 Comparison of Services between Shipping and Air Transport 4-20
Table 4.4.2 Comparison of Services between Shipping and RORO-Highway 4-21
Table 4.4.3 Cross Country Comparison of Container Freight Rates 4-22
Table 4.4.4 MARINA's Prescribe Freight Rate 4-23

Table 4.4.5 MARINA's Prescribe Freight Rate for Sample Routes 4-23

Table 5.1.1 Change of the Number of Banks in the Philippines 5-3
Table 5.1.2 Comparison of GDP Share by Sector and Share of Total Lending 5-6
Table 5.1.3 Lending Balance (Net) by Type of Bank, Lending Balance in the Areas Outside NCR (2002) 5-6
Table 5.1.4 Comparison of Savings Rate in the Region 5-7
Table 5.1.5 Comparison of Effective Rates with Neighboring Countries (1997-2004) 5-7
Table 5.1.6 Spread Index-Comparison among Countries in the Region 5-8
Table 5.2.1 DBP's Major Financial Items of Past 6 Years 5-12
Table 5.2.2 DBP Indicators and Commercial Bank Averages, 2002 & 2003 5-13
Table 5.3.1 Outline of DSMP I and II 5-15
Table 5.3.2 List of Participating Financial Institutions (as of December 31, 2004) 5-16
Table 5.3.3 Disbursement of Primary Loan and Sub-loan (Phase I) 5-17
Table 5.3.4 Number of Sub-Projects (Phase I and Phase II) 5-17
Table 5.3.5 Number and Amount of Sub-loans by Type of Sub-project (Phase I) 5-18
Table 5.3.6 Cash Collection Ratio of Sub-loans (Phase I only) 5-19
Table 5.3.7 Arrears Ratio of Sub-loans (Phase I only) 5-19
Table 5.3.8 Status of Special Account and Revolving Fund (Phase I only) 5-19
Table 5.3.9 Issues and Constraints Identified during Implementation of DSMP II 5-22

Table 6.21 Vessel Classification Requirements 6-16

Table 7.1.1 Commodity Classification 7-3
Table 7.2.1 Sea Freight Traffic Model Calibration Results 7-6
Table 7.2.2 Inbound and Outbound Freight Traffic Forecast Results 7-10
Table 7.2.3 Sea Passenger Traffic Model Calibration Results 7-15
Table 7.2.4 Estimated Future Passenger Inbound and Outbound and Traffic by Zone 7-16
Table 7.3.1 Operational Characteristics of Representative Vessels 7-20
Table 7.3.2 Cost Parameters of Representative Vessels 7-21
Table 7.3.3 Cargo Handling Rate at Ports 7-23
Table 7.3.4 Existing Nautical Highway and Direct Shipping Passenger Demand Profile 7-24
Table 7.3.5 Existing Nautical Highway and Direct Shipping Freight Demand Profile 7-24
Table 7.3.6 Sea NH vs. DS Diversion Model Calibration Results 7-25
Table 7.3.7 Base Case Fleet Requirement Estimate (Units) 7-27
Table 7.3.8 Base Case Fleet Requirement Estimate (000 GT) 7-28

Table 8.1.1 Matrix of Sea Areas and Protected Waters 8-8
Table 8.2.1 Future Demand on Trunk Line Routes 8-10

Table 8.2.2 Estimated Number of Replaced RoRo/Ropax Vessels in Japan ····· 8-11
Table 8.2.3 Shipping Demand of Potential Cargoes for Dry Bulk Shipping····· 8-13
Table 8.2.4 Phase Out Schedule on the Single-Hull Tanker ····· 8-15
Table 8.2.5 Proposed Phase-Out Schedule of Domestic Tankers ····· 8-17
Table 8.2.6 Perishable Commodity Sea Traffic (000MT/yr)····· 8-18
Table 8.2.7 Inventory of Wooden Hulled Vessels····· 8-23
Table 8.2.8 Maritime Accident Profile (1999-2000) ····· 8-24
Table 8.2.9 Indicate Vessel Requirement “With” and “Without” the Wooden Hull Vessel Replacement Program····· 8-26
Table 8.2.10 Indicate Ropax Procurement Schedule for Wooden Hull Vessel Replacement Program ····· 8-26
Table 8.2.11 Indicate Cost Savings in Operation under the Wooden Hull Vessel Replacement Program (Php million) ····· 8-27
Table 8.3.1 Proposed Training Program ····· 8-35
Table 8.3.2 Comparison of New Shipbuilding Performance and Demand ····· 8-40
Table 8.3.3 Cost Adders to the Logistics Chain in the Philippines ····· 8-43
Table 8.3.4 IT Logistics Benefits and Barriers ····· 8-45

Table 9.2.1 Comparison of Cases of Scrap and Build Policies ····· 9-4
Table 9.2.2 Fleet Average Age under Scrap and Build Policy Cases····· 9-5
Table 9.2.3 Required Fleet Investment under Five Levels of Scrap and Build Policy (mil.P) ····· 9-6
Table 9.2.4 Operating Cost Savings under Four Cases of Scrap and Build Policy (mil. P/yr) ····· 9-6
Table 9.2.5 Fleet Requirement Estimate under Case 3 (units) ····· 9-8
Table 9.2.6 Fleet Requirement Estimate under Case 3 (000 GT)····· 9-9
Table 9.2.7 Scrapped Vessels under Case 3 (000 GT) ····· 9-9
Table 9.2.8 Purchased Vessels under Case 3 (000 GT)····· 9-10
Table 9.2.9 Procurement Requirements for RoRo/Ropax under Case 3 ····· 9-10
Table 9.4.1 Assumed Fund Scale····· 9-23
Table 9.4.2 Assumed Interest Rate····· 9-23
Table 9.4.3 Benefits Obtainable through NMEC ····· 9-24
Table 9.4.4 Possible Reduction on RoRo Vessel Cost through NMEC Stipulating Project ····· 9-27
Table 9.4.5 Comparison of Trust with Other Forms of Legal Organization ····· 9-28
Table 9.5.1 Financial Strategies of SBGFC ····· 9-33

LIST OF FIGURES

Figure 1.4.1 Study Area 1-3
Figure 1.5.1 Relation of Planning Works in the Report 1-11

Figure 2.1.1 Past Trend of Employment Rate in the Philippines 2-2
Figure 2.1.2 Unemployed Rate by Region 2-3
Figure 2.1.3 Employment by Industrial Sector 2-3
Figure 2.2.1 Agri. Fishery and Forestry Value Added per Components 2-4
Figure 2.2.2 Industry Value Added per Components 2-5
Figure 2.2.3 Manufacturing Value Added per Components (2003) 2-5
Figure 2.2.4 Service Value Added per Components 2-5
Figure 2.2.5 Gross Domestic Products (1985 PhP prices) 2-6
Figure 2.2.6 GDP Growth Rate by Industrial Sector 2-7
Figure 2.2.7 GDP per Capita (1985 PhP prices) 2-7
Figure 2.2.8 GRDP Composition 2-8
Figure 2.2.9 GRDP and GRDP per Capita 2-8
Figure 2.2.10 GRDP Composition 2-9
Figure 2.2.11 Foreign Trade 2-9
Figure 2.2.12 Imported Cargo by Commodity at Philippine Ports (Composition by Weight) 2-10
Figure 2.2.13 Average Annual Family Income 2-11
Figure 2.2.14 Family Income Distribution in 2000 2-11
Figure 2.2.15 Average Household Expenditure Pattern 2-11
Figure 2.2.16 Incidence of Poor Families 2-12
Figure 2.3.1 Domestic Freight Traffic Trend 2-13
Figure 2.3.2 Trend in Maritime Traffic per Type of Package 2-17
Figure 2.3.3 Composition of Break Bulk Traffic (2002) 2-17
Figure 2.3.4 Composition of Container Traffic (2002) 2-18
Figure 2.3.5 Composition of Dry Bulk Traffic (2002) 2-18
Figure 2.3.6 Composition of Liquid Traffic (2002) 2-19
Figure 2.3.7 Inter/Intra-Regional OD Structure of Domestic Sea Freight (2002) 2-20
Figure 2.3.8 Inter/Intra-Regional OD Structure of Domestic Container and Break Bulk (2002) 2-21
Figure 2.3.9 Volume-Distance Profile of Container and Break Bulk Traffic (2002) 2-21
Figure 2.3.10 Inter/Intra-Regional OD Structure of Domestic Dry Bulk (2002) 2-22
Figure 2.3.11 Volume-Distance Profile of Dry Bulk Traffic (2002) 2-23
Figure 2.3.12 Inter/Intra-Regional OD Structure of Domestic Liquid Bulk (2002) 2-23
Figure 2.3.13 Volume-Distance Profile of Liquid Bulk Traffic (2002) 2-24
Figure 2.3.14 Monthly Variation of Selected Port Traffic-All Commodities (2003) 2-24

Figure 2.3.15 Monthly Variation of Selected Port Traffic-Ref. Petroleum (2003) ····· 2-25
Figure 2.3.16 Monthly Variation of Selected Port Traffic-Gen. Cargo (2003) ····· 2-25
Figure 2.3.17 Monthly Variation of Selected Port Traffic-Palay and Rice (2003) ····· 2-25
Figure 2.3.18 Monthly Variation of Selected Port Traffic-Corn (2003) ····· 2-26
Figure 2.3.19 Trend in Domestic Maritime Passenger Traffic ····· 2-26
Figure 2.3.20 Inter/Intra-Regional OD Structure of Domestic Sea Passenger Traffic (2002) ····· 2-27
Figure 2.3.21 Volume-Distance Profile of Passenger Traffic (2002) ····· 2-27
Figure 2.3.22 Monthly Variation of Passenger Traffic (2002) ····· 2-28
Figure 2.3.23 Location Map of Survey Stations for the RoRo Survey ····· 2-29
Figure 2.4.1 Size Profile of Vessels per Type ····· 2-39
Figure 2.4.2 Age Profile of Vessels per Type ····· 2-40
Figure 2.4.3 Shipyard Nationality of the Commercial Fleet ····· 2-41
Figure 2.4.4 GRT Distribution as to Shipyard Nationality ····· 2-41
Figure 2.4.5 Hull Material of Commercial Vessels ····· 2-42
Figure 2.4.6 GRT Distribution as to the Type of Material Used ····· 2-42
Figure 2.5.1 Classification of Philippine Port System ····· 2-45
Figure 2.5.2 Nationwide Share of Berth Length by Depth ····· 2-51
Figure 2.5.3 Berth Length of Public Ports by Region and Depth ····· 2-51
Figure 2.5.4 Berth Length of Public Ports by Region and Classification Depth ····· 2-52
Figure 2.5.5 Regional Distribution of Ports with RoRo Ramps ····· 2-52
Figure 2.5.6 Cargo Volume Handled by Public or Private Port (2003) ····· 2.53
Figure 2.5.7 Commodities Haul Led by Public and Private Ports ····· 2-53
Figure 2.5.8 The Layout of North Harbor at Manila Port ····· 2-58
Figure 2.5.9 The Layout of Harbor Centre Port Terminal ····· 2-58
Figure 2.5.10 The Layout of Culasi Port, Roxas City ····· 2-59
Figure 2.5.11 The Layout of Dumangas Port ····· 2-59
Figure 2.6.1 Annual Incidence of Tropical Cyclone in the Philippines, 1948-2004 ····· 2-61
Figure 2.6.2 Annual Incidence of Tropical Cyclone in the Philippines, 1995-2004 ····· 2-62
Figure 2.6.3 Ten Year Average of Monthly Tropical Cyclone Incidence, 1995-2004 ···· 2-62
Figure 2.6.4 Monthly Percentage Share of Tropical Cyclones in the Philippines, 1995-2004 ····· 2-63
Figure 2.6.5 Frequency Analysis for all Tropical Cyclones in the Philippines, from 1948 to 2000 ····· 2-63
Figure 2.6.6 Tropical Cyclone Tracks ····· 2-64
Figure 2.6.7 Monthly Distribution of Maritime Incidents in the Philippines, 1995-2004 ····· 2-65
Figure 2.6.8 Monthly Distribution of Fatalities from Maritime Incidents in the Philippines, 1995-2004 ····· 2-66
Figure 2.6.9 Location of the Major Maritime Accidents in the Philippines, 1995-2004 ····· 2-68

Figure 2.6.10 Occurrences of Oil Spill Incidents in the Philippines, 1995-2004 ····· 2-70
Figure 2.6.11 Location of the Major Oil Spill Incidents in the Philippines, 1995-2004 ··· 2-71

Figure 3.1.1 Accreditation of Shipping Companies ····· 3-1
Figure 3.1.2 Domestic Shipping Companies (in Terms of Paid-Up Capital), 2000 ····· 3-1
Figure 3.1.3 Distribution of the Number of Company, Ship and GRT by Type of Service ····· 3-7
Figure 3.1.4 Photos from Onboard Surveys ····· 3-9
Figure 3.1.5 Marine Incident of the MV Princes of the World on July 19, 2005 ····· 3-10
Figure 3.2.1 Fish Production ····· 3-15
Figure 3.2.2 Regional Fish Production ····· 3-16
Figure 3.2.3 Price of Fish at Production Site and Market (P/kg) ····· 3-16
Figure 3.2.4 Shipping Modality of Fish ····· 3-16
Figure 3.2.5 Typical Fish Logistics ····· 3-17
Figure 3.2.6 Mode of Transportation of Fish from Panay to Metro Manila ····· 3-17
Figure 3.2.7 National Fruit Consumption ····· 3-18
Figure 3.2.8 Regional Fruit Production ····· 3-18
Figure 3.2.9 National Vegetable Consumption ····· 3-18
Figure 3.2.10 Regional Vegetable Production ····· 3-19
Figure 3.2.11 Typical Fruits and Vegetable Logistics Chain ····· 3-19
Figure 3.2.12 Shipping Modality of Fruits and Vegetables ····· 3-19
Figure 3.2.13 National Livestock Consumption ····· 3-20
Figure 3.2.14 Regional Livestock Production ····· 3-20
Figure 3.2.15 National Poultry Consumption ····· 3-21
Figure 3.2.16 Regional Poultry Production ····· 3-21
Figure 3.2.17 Typical Live Animal Logistics Chain ····· 3-21
Figure 3.2.18 Shipping Modality of Animal Feeds ····· 3-22
Figure 3.2.19 Typical Animal Feeds Logistics Chain ····· 3-22
Figure 3.2.20 SMC-BMEG Logistics Chain ····· 3-22
Figure 3.2.21 National Cement Production ····· 3-23
Figure 3.2.22 Shipping Modality of Cement ····· 3-23
Figure 3.2.23 Typical Cement Logistics Chain ····· 3-24
Figure 3.2.24 National Corn Consumption ····· 3-24
Figure 3.2.25 Shipping Modality of Corn ····· 3-24
Figure 3.2.26 Regional Corn Production ····· 3-25
Figure 3.2.27 Typical Corn Logistics Chain ····· 3-25
Figure 3.2.28 Fertilizer Supply and Consumption ····· 3-26
Figure 3.2.29 Typical Fertilizer Logistics Chain ····· 3-26
Figure 3.2.30 Shipping Modality of Fertilizer ····· 3-26
Figure 3.2.31 National Palay Consumption ····· 3-27

Figure 3.2.32 Regional Palay Production ····· 3-27
Figure 3.2.33 Shipping Modality of Rice ····· 3-28
Figure 3.2.34 Typical Rice Logistics Chain ····· 3-28
Figure 3.2.35 National Sugar Cane Production ····· 3-28
Figure 3.2.36 Shipping Modality of Sugar ····· 3-29
Figure 3.2.37 Typical Sugar Logistics Chain ····· 3-29
Figure 3.2.38 National Petroleum Consumption ····· 3-30
Figure 3.2.39 Production of Key Petroleum Products by Source ····· 3-30
Figure 3.2.40 Location of Import Depots and Refineries ····· 3-31
Figure 3.2.41 Price of Diesel at Selected Cities (1Q'04) ····· 3-31
Figure 3.3.1 Shipyard Surveys ····· 3-43
Figure 3.3.2 Number of Locally Constructed Vessels for Domestic Use, 1999-2003 ·· 3-45
Figure 3.3.3 No. of Domestic Ships Dry-docked/Repaired, 1999-2003 ····· 3-47
Figure 3.3.4 Number of Foreign Ships Dry-docked/Repaired, 1999-2003 ····· 3-48

Figure 4.1.1 Typical Domestic Vessels ····· 4-2
Figure 4.2.1 Major Routes of Long-/Medium-Distance Ropax Service ····· 4-4
Figure 4.2.2 Banca Routes by GT ····· 4-8
Figure 4.2.3 Banca Routes by Units ····· 4-8
Figure 4.2.4 Nautical Highways ····· 4-11
Figure 4.3.1 Service Route of Liner Container Shipping ····· 4-13
Figure 4.4.1 Passenger Rates for Ropax Vessel ····· 4-19
Figure 4.4.2 Philippine Airport System 4-20
Figure 4.4.3 Sample of Freight Rate of Container Shipping ····· 4-22
Figure 4.4.4 Sample of Freight Rate of Tanker Shipping ····· 4-23

Figure 5.1.1 Financial Depth and Lending to Private Sector (2002) ····· 5-4
Figure 5.1.2 Transition of Financial Depth and Lending to Private Sector in the Philippines ····· 5-4
Figure 5.1.3 Rate of Increase of Money Supply (M3) and Domestic Lending (Public and Private Sectors) ····· 5-5
Figure 5.1.4 Transition of Non-performing Loan Rate in the Banking Sector ····· 5-8
Figure 5.2.1 DBP's Total Revenue and Net Profit of Past 6 Years ····· 5-12
Figure 5.2.2 DBP-Loan Past 6 Years, Outstanding Balance of Deposit and Borrowed Money ····· 5-12
Figure 5.3.1 Flow of Funds ····· 5-16
Figure 6.5.1 Map of the Association of South East Asian Nations (ASEAN) ····· 6-32

Figure 7.1.1 Overall Structure of Demand Forecast and Fleet Estimation Model ····· 7-1
Figure 7.1.2 Past and Future Socio-Economic Framework ····· 7-2
Figure 7.1.3 Zone System and Network Configuration ····· 7-4

Figure 7.2.1 Demand Forecast Model Structure ····· 7-5
Figure 7.2.2 Estimated Future Sea Freight Traffic ····· 7-6
Figure 7.2.3 Trend of High Growth Sea Commodities ····· 7-7
Figure 7.2.4 Trend of Medium Growth Sea Commodities ····· 7-7
Figure 7.2.5 Trend of Low Growth Sea Commodities ····· 7-8
Figure 7.2.6 Estimated Growth Rate of Sea Traffic by Commodity ····· 7-8
Figure 7.2.7 Estimated Future Sea Traffic by Commodity ····· 7-9
Figure 7.2.8 Estimated 2015 Unitized Cargo OD ····· 7-13
Figure 7.2.9 Estimated 2015 Liquid Bulk Cargo OD ····· 7-13
Figure 7.2.10 Estimated 2015 Dry Bulk Cargo OD ····· 7-14
Figure 7.2.11 Estimated 2015 Perishable Cargo OD ····· 7-14
Figure 7.2.12 Estimated Future Sea Freight Traffic ····· 7-15
Figure 7.2.13 Estimated Growth Rate of Inbound and Outbound Passenger Traffic ···· 7-16
Figure 7.2.14 Estimated 2015 Passenger OD ····· 7-17
Figure 7.3.1 Fleet Estimation Model Structure ····· 7-18
Figure 7.3.2 Effect of Vessel Ageing on Commissionable Days ····· 7-22
Figure 7.3.3 Effect of Vessel Ageing on Repair Cost ····· 7-22
Figure 7.3.4 Liner Network ····· 7-23
Figure 7.3.5 Fleet Model Estimation Validation: Estimated vs. Actual ····· 7-25
Figure 7.3.6 Estimated Future Share of Tramper and Liner in Freight Transport (Base Case) ····· 7-26
Figure 7.3.7 Future Fleet Size by Type (Base Case) ····· 7-29
Figure 7.3.8 Future Growth of Fleet by Type (Base Case) ····· 7-29
Figure 7.3.9 Future Average Vessel Size by Type (Base Case) ····· 7-30

Figure 8.1.1 Proposed Sea Areas ····· 8-7
Figure 8.1.2 Proposed Sea Area ····· 8-7
Figure 8.2.1 Tanker Renewal Model ····· 8-16
Figure 8.2.2 Origin-Destination of Perishable Sea Cargo ····· 8-19
Figure 8.2.3 Current Mode of Fish Transport ····· 8-20
Figure 8.2.4 Current Mode of Fruits and Vegetables Transport ····· 8-20
Figure 8.2.5 Current Mode of Meat Transport (Live Animals) ····· 8-21
Figure 8.2.6 Existing Capacity of Reefer Container Transport (Plug-Trips/Year) ····· 8-22
Figure 8.2.7 Wooden Hull Vessel Operation ····· 8-24
Figure 8.3.1 Problems and Proposed Actions for Ship Management ····· 8-38
Figure 8.3.2 General Scheme of Ship-management Contract ····· 8-39
Figure 8.3.3 Operational Segments in Logistics ····· 8-45

Figure 9.1.1 Framework for Beneficial Fiscal Regimes for Domestic Shipping ····· 9-3
Figure 9.2.1 Savings in Investment Cost and Operating Cost (Case1 less Case 10) · 9-7

Figure 9.2.2 NPV of Transport Cost ····· 9-7
Figure 9.2.3 Fleet Requirement – Case 1 vs Case 3 ····· 9-8
Figure 9.2.4 <500 GT Vessel New Building Demand under Case 3 ····· 9-10
Figure 9.2.5 Composition of <500 GT Vessel New Building Demand Under Case 3 (2004-2015) ····· 9-11
Figure 9.2.6 ROE vs Age of Vessel Upon Purchase ····· 9-11
Figure 9.3.1 Outline of Ordinary Ship Finance ····· 9-13
Figure 9.3.2 Outline of Project Ship Finance ····· 9-14
Figure 9.3.3 Overview of Shipbuilding Program under Co-ownership by JRTT, Japan ····· 9-15
Figure 9.3.4 Outline of Ship Leasing ····· 9-16
Figure 9.3.5 Outline of Bare-Boat Charter ····· 9-17
Figure 9.3.6 Charter Rate ····· 9-18
Figure 9.3.7 Second-hand Ship Price (2001-2004) ····· 9-19
Figure 9.4.1 Proposed Public Finance Scheme (in case of ODA fund utilization) ····· 9-21
Figure 9.4.2 Proposed Implementation Scheme for A NMEC Shipping Project (in the case of RRTS RORO vessels) ····· 9-26
Figure 9.4.3 Financing Service Based on Trust Agreement ····· 9-30
Figure 9.5.1 SBGFC Strategies for SME Assistance ····· 9-33

LIST OF ABBREVIATIONS

ABS	American Bureau of Shipping
ARG	Autonomous Regional Government
ARMM	Autonomous Region in Muslim Mindanao
ASEAN	Association of South East Asian Nations
ATO	Air Transportation Office
BCDA	Bases Conversion and Development Authority
BOC	Bureau of Customs
BPI	Bank of the Philippines Islands
BSP	Bangko Sentral ng Pilipinas
BV	Bureau Veritas
C/P	Commercial Paper
CALABARZON	Cavite Laguna Batangas Rizal Quezon
CAR	Cordillera Administrative Region
CATT	Corporation of Advanced Transport and Technology
CDO	Cagayan De Oro
CEZA	Cagayan Economic Zone Authority
CO	Certificate of Ownership
CPA	Cebu Ports Authority
CPC	Certificate of Public Convenience
CPR	Certificate of Philippine Registry
CTAP	Confederation of Truckers Association of the Phils.
DA	Department of Agriculture
DBP	Development Bank of the Philippines
DFO	Diesel Fuel Oil
DILG	Department of the Interior and Local Government
DMAP	Distribution and Management Association of the Philippines
DnV	Det Norske Veritas
DODO	Drive-On, Drive-Off
DOE	Department of Energy
DOTC	Department of Transportation and Communications
DPWH	Department of Public Works and Highways
DSDA	Domestic Shipping Development Act
DSDP	Domestic Shipping Development Plan
DSMP	Domestic Shipping Modernization Program
DSO	Domestic Shipping Office
DTI	Department of Trade and Industry
DWT	Dead Weight Ton
EEC	Economic Council Regulation
EO	Executive Order
FSA	Flag State Administration
FSA	Filipino Shipowners' Associations
GDP	Gross Domestic Product
GDS	Gross Domestic Savings
GMDSS	Global Maritime Distress and Safety System
GOCC	Government Owned and Controlled Corporation
GOJ	Government of Japan
GOP	Government of the Philippines
GRT	Gross Registered Tonnage
GT	Gross Tons
IACS	International Association of Classification Societies
IMF	International Monetary Fund

IMO	International Maritime Organization
IRA	Internal Revenue Allotment
IRR	Implementing Rules and Regulations
ISM	International Safety Management
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
JRTT	Japan Railway Construction, Transport and Technology Agency
L/A	Loan Agreement
LGU	Local Government Unit
LR	Lloyd's Register of Shipping
MARINA	Maritime Industry Authority
MARSAD	Maritime Safety Administration
MC	Memorandum Circular
MEPCOM	Marine Environment Protection Command
MIMAROPA	Mindoro Marinduque Romblon Palawan
MITA	Meat Importers and Traders Association
MMAP	Master and Mates Association of the Philippines
MMTC	Maritime Training Council
MOTC	Ministry of Transportation and Communications
MPW	Ministry of Public Works
MT	Metric Ton
MTPDP	Medium-term Philippine Development Plan 2001-2004
N.M.	Nautical Mile
NCR	National Capital Region
NDC	National Development Company
NDC-MEC	National Development Company- Maritime Equity Corporation
NEDA	National Economic Development Authority
NFA	National Food Authority
NFA	National Food Authority
NK	Nippon Kaiji Kyoukai
NKK	Nippon Kaiji Kentei Kyoukai
NMEC	National Development Company – Maritime Equity Corporation
NOCOP	National Operation Center for Oil Pollution
NPL	Non-Performing Loans
NSCB	National Statistics Coordinating Board
NSM	National Safety Management
NSO	National Statistics Office
OD	Origin-Destination
ODA	Official Development Assistance
OECF	Overseas Economic Cooperation Fund (Now JBIC)
OFW	Overseas Filipino Workers
OIP	Other Investment Projects
OP-ODAAO	Office of the President's Priority Programs and Official Development Assistance Affairs Office
PAGASA	Philippine Atmospheric, Geophysical, and Astronomical Services Administration
PAMI	Philippine Association of Maritime Institutions
PAR	Philippine Area of Responsibility
PCCI	Philippine Chamber of Commerce and Industry
PCG	Philippine Coast Guard
PCPR	Provincial Certificate of Philippine Registry
PDB	Private Development Banks
PFDA	Philippine Fisheries Development Authority
PFI	Participating Financial Institutions
PHILPESTA	Philippine Petroleum Sea Transport Association Inc.
PHIVIDEC	Philippine Veterans Investment Development Corporation

PIA	Industrial Authority
PICO	Port Integrated Clearance Office
PIP	Priority Investment Projects
PISA	Philippine Inter-island Shipping Association
PISA	Philippine Interisland Shipping Association
PLSA	Philippine Liner Shipping Association
PMMRR	Philippine Merchant Marine Rules and Regulations
PMO	Project Management Office
PPA	Philippine Ports Authority
PPMB	port authority / public port management bodies (PPMBs)
PPMC	Poro Point Management Corporation
PRS	Philippine Register of Ship
PRS	Philippine Register of Shipping
PSB	Philippine Shipper's Bureau
PSCC	Philippine Standard Commodity Classification
PSE	Philippine Stock Exchange
PSRA	Philippine Shipbuilders and Repairs Association
PSY	Philippine Statistical Yearbook
PTSR	Philippine Transport Sector Review
RA	Republic Act
REC	Real Estate Collateral
REM	Real Estate Mortgage
RFC	Rehabilitation Finance Corporation
ROA	Return on Assets
ROE	Return on Equity
ROPAX	RoRo - Passenger
RORO	Roll-on, Roll-off
RPMA	Regional Ports Management Authority
RRTS	Road-RORO Terminal System
SBMA	Subic Bay Metropolitan Authority (SBMA)
SBSR	Ship Building and Ship Repairing
SC	Steering Committee
SLDP	Sustainable Logistics Development Program
SME	Small and Medium Enterprises
SOLAS	Safety of Life at Sea Convention
SRNH	Strong Republic Nautical Highway
SSMS	Sustainable Ship Modernization Scheme
STRAMINDO	JICA Study on the Development of Domestic Sea Transportation and Maritime Industry in the Republic of Indonesia
TD	Tropical Depression
TEU	Twenty feet Equivalent Unit
TS	Tropical Storm
TY	Typhoon
UP-NCTS	University of the Philippines National Center for Transportation Studies
VAFBCSO	Visayan Association of Ferry Boats and Coastwise Service Operators
VAFCSO	Visayan Association of Ferryboat and Coastwise Service Operators
VAFSCBO	Visayan Association of Ferry Service Companies & Boat Operators
WB	World Bank
WG&A	William Gothong & Aboitiz, Inc

1. INTRODUCTION

1. INTRODUCTION

1.1 Study Background

The Philippines is an archipelagic country comprised of more than 7,000 islands and islets. Owing to its geographic features, maritime transport is understandably one of the most important basic services for the movement of goods and people as well as for the country's socio-economic development. The improvement of vessel safety and vessel operation is essential to the sustainable development of the domestic shipping sector in the Philippines. Crucial also is the improvement of domestic shipping services in terms of cost, quality and efficiency in order to increase its competitiveness with other modes and to alleviate economic disparity among regions.

In this context, it is therefore necessary to modernize domestic shipping vessels through an effective ship supply system which will promote the renewal of inefficient over-aged vessels based on a comprehensive domestic shipping development plan. Moreover, the Government of the Philippines (GOP) has clearly stated in its Medium-term Philippine Development Plan 2001-2004 (MTPDP) its intention to address domestic shipping's vessel expansion policy and its requirement of financial support mechanism. It has then requested the Government of Japan (GOJ) for a technical assistance to formulate a realistic plan and scheme. In response to this request, a preparatory study was undertaken by the Japan International Cooperation Agency (JICA) and the Implementing Arrangement for this Study was signed in July 2004.

1.2 Study Objectives

The main objectives of the Study are:

1) To formulate a Domestic Shipping Development Plan (DSDP up to the year 2015) for the enhancement of reliability and sustainability of the domestic shipping business;
2) To conduct feasibility studies to delineate a Sustainable Ship Modernization Scheme that will continuously support the investment requirement of the DSDP; and,
3) To provide relevant technology transfer to Philippine counterpart personnel during the course of the Study.

1.3 Study Area

The study area includes all the territorial waters of the Philippines (refer to Figure 1.3.1)

1.4 Study Activities

(1) THE JICA SIDE

JICA selected and dispatched a study team organized by ALMEC Corporation between November 2004 and November 2005. JICA also organized the Advisory Committee for supervision the study team's activities. Members are shown in Table 1.4.1.

Table 1.4.1 Members of JICA Side

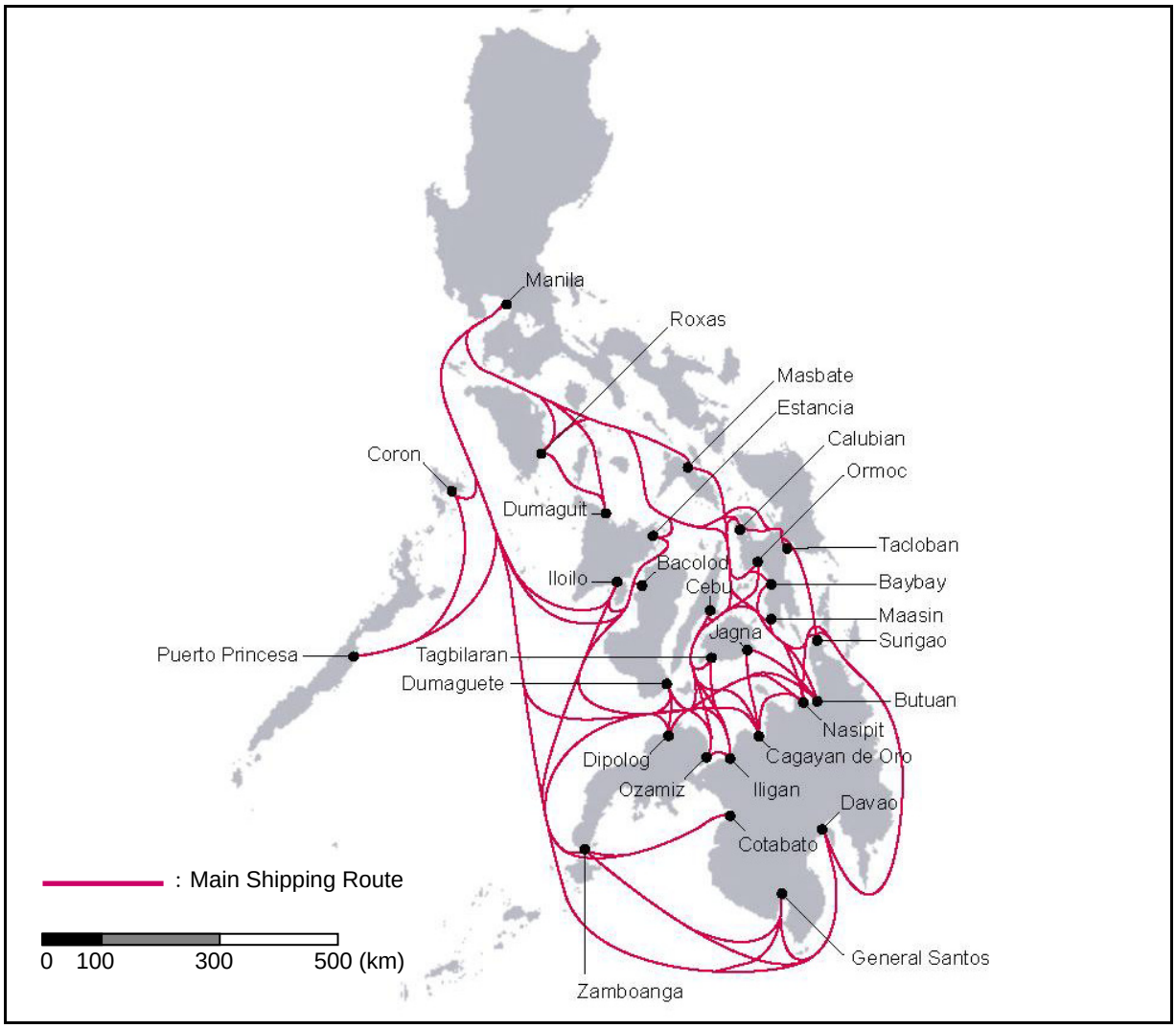
STUDY TEAM

1.KUMAZAWA Ken	Team Leader/Intermodal Transport Planning
2. MIZUSHIMA Yasumasa, Prof.	Logistics Planning and Business Management
3. Ian C. ESPADA , Dr.	Traffic Survey / Demand Forecast
4. Samuel C. CUSTODIO	Shipping Policy and Institution
5. MASUJIMA Tetsuji , Dr.	Deputy Team Leader / Maritime Transport Planning
6. KOIKE Isamu	Shipping Business Modernization
7. WATANABE Akira	Fleet Development and Control
8. WAKAMATSU Yoshio	Shipping Design and Assignment
9. Arthur M. Alvendia	Financial Audit / Risk Analysis
10. SAKAGUCHI Kasuaki	Ship Management.
11. MAEDA Eiji	Ship Finance Scheme
12. MINAMINO Koichi, Capt. (until March 2005)	Financing Organization and Management
13. NAGAYA Toshiaki (from April 2005)	Financing Organization and Management
14. KATSURADA Toshisada	Economic / Financial Analysis
15. MURAOKA Takeshi	Port Development Analysis

ADVISORY COMMITTEE

1. OGURA Shiegeo	Chairman
2. NAKAGAWA Takanori	Member
3. FUKUHARA Tomoyoki	Member
4. MORI Hirotsugu	JICA HQ O-I-C (until March 2005)
5. ISHIHARA Masatoyo	JICA HQ O-I-C (until April 2005)

Figure 1.4.1 Study Area



Source: Study Team

(2) THE PHILIPPINE SIDE

Steering Committee is composed of high-rank officers of major related agencies, including MARINA, NEDA, DOTC, DPWH, DA, PSB/DTI, PPA and DBP in order to discuss and make decisions on key issues. The Steering Committee (SC) is headed by Mr. Vicente Suazo Jr., Administrator of MARINA. Members of SC are shown in the Table 1.4.2.

The 1st Steering Committee meeting was held on 24th of November 2004, of which the main objective is to explain the background, objective, and overall framework of the Study based on the Inception Report. Study Team and SC members agreed with the basic framework of the Study.

In addition to the official SC meetings, the Study Team requested to organize a meeting to inform progress of the Study to the members of the SC on 11th March 2005.

The third SC meeting was held on 17th June 2005. The meeting was attended by members of the SC, the JICA Study Team, the Philippine Counterpart Study Team, and by representatives of the Japan International Cooperation Agency (JICA). Salient

features of the Interim Report were presented. Members of the SC also gave their comments regarding the said report. The composition and conduct of the feasibility studies for the five selected pilot projects were also discussed.

The fourth SC meeting was held on 27th October 2005. The meeting was attended by the Steering Committee members, the JICA Study Team (JST), members of the Philippine Counterpart Study Team, and representatives of the Japan International Cooperation Agency (JICA) and the President and CEO of the National Development Corporation - Maritime Equity Corporation (NMEC). The meeting was highlighted by the presentation of the DSDP Draft Final Report, message from the JICA representative and various comments and suggestions from among the SC members. It is addressed during the meeting that written comments be requested from the DOTC, specific on the RRTS Pilot Project (Chapter 11) and from among the major shipping organizations to be further incorporated in the final report. In general, the outcome of the DSDP study was well accepted with minor revisions.

A Counterpart Team was formulated in order to discuss more about technical and practical matters during the course of Study. The Counterpart Team is headed by a Project Manager (Atty. Gloria Victoria Banas, Deputy Administrator of MARINA), and is composed of a Project Management Committee and a Technical Working Group manned by MARINA officials. Regular Study Team Meeting with the counterpart team was held every other week. During the meeting, the Study Team discussed the progress, problems and concerns at each stage of the study to inform and get comments and input from the Philippine Counterpart Team. Members of Counterpart Team are shown in the Table 1.4.2.

Table 1.4.2. Members of Philippine Side

	Steering Committee			
	Agency	Position	Name/Position	
1.	Maritime Industry Authority (MARINA)	Chairman	Mr. Vicente Suazo	Administrator
2.	National Economic and Development Agency (NEDA)	Member		
3.	Dept. of Transportation and Communication (DOTC)	Member		
4.	Dept. of Public Works and Highways (DPWH)	Member		
5.	Dept. of Agriculture	Member		
6.	Dept. of Trade and Industry (DTI)/	Member		
	Philippine Shippers Bureau (PSB)	Member		
7.	Philippine Port Authority (PPA)	Member		
8.	Development Bank of the Philippines (DBP)			
	Counterpart Team			
1.	Atty. Gloria Victoria Bañas	Project Manager, Deputy Administrator		
	Project Management Committee			
2.	Ms. Lilian T. Javier	Ship Finance		
3.	Ms. Myrna E. Calag	Transport Planning		
4.	Atty. Virgilio B. Calag	Shipping Policy Legal System		
5.	Mr. Emerson M. Lorenzo	Shipping Management and Operation		
6.	Engr. Rodolfo S. Llobrera	Ship building and Repair		
7.	Ms. Arhleen A. Romero	Transport Database Analysis		
	Technical Working Group			
8.	Ms. Delia P. Lorenzo			
9.	Atty. Jabeth Sepath Dacanay			
10.	Ms. A. Criselda Del Rosario			
11.	Ms. Fe M. Calaoagan			
12.	Ms. Maricon C. Arbolario			

(3) WORKSHOP/TECHNICAL WORKSHOP

The First Workshop was held on 4th February 2005 to introduce the Study and discuss on the maritime development policy and current initiatives of SRNH and

NDC-MEC and the existing condition of logistics system including shipping. The Study Team invited various stakeholders of the Study, including related government agencies, shipping companies, shipyards, major shippers associations and forwarders, etc. The First Workshop was participated by about 100 people.

The Second Workshop was held on 14th March 2005 to present the progress of the Study and to introduce the experiences of Indonesia on domestic shipping administration and management and its on-going ship financing scheme for its modernization. The Study Team invited various stakeholders of about 100 people. Technical Sessions on Ship Safety and Management was held.

Based on the on-board survey on several ships in the Philippines, the Study Team conducted the technical sessions to present the results and to discuss with related agencies and organizations such as MARINA, classification societies and shipping companies.

The first session was conducted with the technical staff of PRS (Philippine Register of Shipping) and the second session was held on 8th March 2005 with MARINA's inspectors, shipping companies and local classification societies based in Cebu.

The First Seminar of the DSDP was held on 20th June 2005 in order to present the DSDP Interim Report. Several presentations, delivered by members of the JICA Study Team were made. Different stakeholders in domestic shipping were in attendance for the seminar. Subsequently, an open forum was held in order to clarify certain issues regarding the Interim Report and the domestic shipping industry, in general.

Apart from the seminar and the two workshops mentioned earlier, several other workshops were held. These workshops pertain to specific topics related to the five pilot projects subjected to feasibility studies.

The first of these five workshops focused on the Feasibility Study on Corn Logistics from Southern Mindanao to Luzon. It was held on 28th July, 2005 and the discussion revolved around bulk shipping. The second was held on 5th August 2005. It was focused on the Feasibility Study on Cold Chain for Fisheries in Panay Island. The third was held on the 17th August 2005. Presentations and discussions during this workshop centered on the Feasibility of Developing the Shipbuilding Industry in the Philippines. Specifically, designs of new generation trunk liner Ropax vessels as well as short-haul RoRo vessels were presented by the Study Team. The fourth workshop focused on the NMEC Fostering program and was held on 19th August 2005. The fifth workshop focused on the Feasibility Study on the Road, Roll-on-Roll-off, Terminal System (RRTS) and was held on 12th September 2005. The feasibility and viability of developing some of the routes in the RRTS were discussed. The said F/S was likewise presented to the Department of Transportation and Communication (DOTC) Technical Working Group on 8th September 2005. Additionally, the JICA Study Team also conducted a special workshop on Fleet Quality Control which was held 12th August 2005.

In addition, a similar workshop was held on 13th October 2005 in Cebu to present and discuss to the local stakeholders the RRTS and the Trunkliner Ropax Development Study. The workshop was attended by major shipbuilding companies and various stakeholders in the Visayas Region. Many shipbuilding companies expressed their views and opinions on the current plight of the local shipbuilding industry.

The last seminar was held on 18th October 2005 from which the outcome of the DSDP study was presented. The presentation was divided into three parts, the main content of the study including the bulk shipping, cold chain system and the fostering program for NMEC was presented during the morning session and was followed by a panel discussion and an open forum. The two other pilot projects, the RRTS

Development and the Trunkline RoPax Development was likewise presented in the afternoon session and was followed by an open forum. The workshop was attended by some 100 people from various sectors.

(4) DISCUSSION WITH RELATED AGENCIES AND ORGANIZATIONS

The Study Team visited various agencies and organizations which are related to the domestic shipping industry and logistics system in the Philippines in order to identify the role and function of each agency and to obtain opinions of private sector. The lists of agencies visited during the first stage of the Study are shown in Table 1.4.3.

Table 1.4.3. List of Agencies and Organization Interviewed

Category	Agencies/Organization
Government Agencies	DOTC (Dept. of Transportation and Communications PPA (Philippine Port Authority) CPA (Cebu Ports Authority) PCG (Philippine Coast Guard) NEDA Region IV, V, and VII DOE (Dept. of Energy) NFA (National Food Authority) PFDA (Philippine Fisheries Development Authority) DBP (development Bank of the Philippines) NDC-MEC (National Development Company- Maritime Equity Corporation) CEZA (Cagayan Economic Zone Authority)
Shipping Companies	PISA (Philippine Inter-island Shipping Association) PLSA (Philippine Liner Shipping Association) PHILPESTA (Philippine Petroleum Sea Transport Association Inc.) VAFCSO (Visayan Association of Ferryboat and Coastwise Service Operators) Aboitis Transport System Corp. Sulpicio Lines Inc. Lorenzo Shipping Solid Shipping Magsaysay Maritime Corporation Starlite Ferry Various Shipping companies in Manila and Cebu
Shipyards	Tsuneishi Heavey Industries（Cebu） Inc. FBMA Marine Inc. (Aboitis) Keppel Shipyard (Batangas) Philippine Iron Construction and Marine Works, Inc. Local Shipyards in Manila Area (Nepruna, Herma, R&LT, Elfa, Ultra, Dansyco) Local shipyards in Cebu Area (Trigon, Santiago, Colorado, Sandoval, Fortune)
Port and Storage	Harbor Center Port Terminal Inc. VIFEL Ice and Cold Storage, Inc.
Classification Society etc.	PRS (Philippine Register of Ship) NK (Nippon Kaiji Kyokai) NKK (Nippon Kaiji Kentei Kyoukai)
Shippers and Forwarders	Philippine Sugar Millers Association Inc. Cement Manufactures Corporation Cold Chain Association in the Philippines National Corn Competitiveness Board Meat Importers and Traders Association (MITA) Fertilizer Association of the Philippines Philippine Association of Feed Millers, Inc. DMAP (Distribution and Management Association of the Philippines) CTAP (Confederation of Truckers Association of the Phils.) Philippine Foremost Milling Corp. San Miguel Corp. Petron Corporation Pilipinas Shell Nippon Express Philippine Corporation Other dealers and trading companies
Local Government	Panay Island (Estancia Municipality and Dumangas Municipality)
	Bicol Region (Pilar Municipality, Cataingan Municipality, Balud Municipality, Masbate Province)
	Bogo Cebu
Academe	UP-NCTS
	UPV-IFPT
	University of Asia and the Pacific

(5) FIELD SURVEYS

The Study Team also conducted a series of field surveys, primarily to visit various stakeholders and investigate the site outside of Metro Manila. Activities of those field surveys are summarized in Table 1.4.4. In addition, the Study Team commissioned local consulting firms to conduct field surveys and case studies to augment its baseline data. These are interview surveys with ship owners, shippers, and truckers, RoRo survey, and a case study of Panay Fish Logistics.

Table 1.4.4. Field Surveys Conducted

Date	Place	Activities
14-18 Dec. 2004	Roxas Estancia Dumangas Iloilo Cebu	Culasi Port (Roxas) Estancia Municipality and LGU Port Dumangas Municipality and LGU Port Iloilo Ports and PFDA's Cold Storage MARINA Regional Office in Cebu Cebu Port and CPA Shipping companies in Cebu (Sulpicio Lines, 2GO, etc.) Toledo Port Tsuneishi Shipyard and FBMA-Aboitis Shipyards Danao Port, Carmen Port, Bogo Port, San Remegio Port
25-27 Jan. 2005	Manila and Bataan	R&LT Shipyard Dansyco Shipyard Elfa Shipyard Ultra Shipyard Neptuna Shipyard Herma Shipyard
1-7 Feb. 2005	On-board Survey 1	Manila-Cebu-Manila Cebu-Dumaguete-Cebu Cebu-Ormoc-Cebu Cebu-Tubigon-Cebu
9 Feb. 2005	Batangas	MARINA Regional Office in Batangas Keppel Shipyards Batangas Port
24 Feb. 2005	On-Board Survey 2	Manila North Harbour
26 Feb.-3 Mar. 2005	On-board Survey 3	Manila-Bacolod Bacolod-Iloilo Iloilo-Manila
1-4 Mar. 2005	Cebu	Tsuneishi Shipyard Trigon Shipyard Santiago Shipyard Colorado Shipyard Sandoval Shipyard Fortuna Shipyard
6-8 Mar. 2005	Davao	MEDCO Shipping companies and Shippers
7-8 Mar. 2005	Cebu	Cebu Port FGD with Shipping Companies Technical Session on Ship Safety and Management
Jan-Mar. 2005	Nationwide	Shipping Company Interview Survey, Shippers Interview Survey, Truckers Interview Survey
Jan-Feb. 2005	Nationwide	RoRo Survey
Mar.-May 2005	Panay	Panay Fish Logistics Survey
28 June – 3 July 2005	Panay	Cold Chain Survey
6-8 July 2005	Gen. Santos	Bulk Shipping Survey
12 – 14 July 2005	Manila - Cebu	On-Board Observation On-board Passenger Interview Survey
17 – 22 July 2005	Sorsogon - Masbate	RRTS Survey I: OD Survey Passenger Interview Survey
19 – 27 July 2005	Cebu	Port Survey
25 – 29 July 2005	Roxas – Iloilo - Cebu	RRTS Survey II: OD Survey Passenger Interview Survey
7 – 10 August 2005	Indonesia	Interview with PT PANN Observation of PT PANN's Vessels

1.5 Framework of Domestic Shipping Development Plan

(1) FUTURE DIRECTIONS FOR PHILIPPINE DOMESTIC SHIPPING

The passage of the Domestic Shipping Development Act of 2004 (DSDA) is another high water level mark in the history of Philippine domestic shipping. Nevertheless, there are still a lot to be done to apply and streamline all the principles and policies stated in the law to see all the initiatives come into fruition.

The DSDA recognizes that shipping is a necessary infrastructure, which is vital to the economic development of our country. The DSDA compiles several policy tools to realize the recognition, including investment incentives, deregulation of the domestic shipping industry with authority of MARINA, shipping rates, compulsory insurance coverage, shipbuilding and ship repair and others. The MARINA prepared the implementing rules and regulations (IRR) for the DSDA and is pursuing the policies stipulated under the DSDA.

The DSDA states that the Philippines needs a strong and competitive domestic merchant fleet owned and controlled by Filipinos or by corporations at least sixty percent (60%) of the capital of which is owned by Filipinos and manned by qualified Filipino officers and crew. Then, the following five objectives are clarified to develop such a domestic merchant fleet.

- Bridge islands by ensuring safe, reliable, efficient, adequate and economic passenger and cargo service;
- Encourage the dispersal of industry and the economic development of our regional communities by ensuring the availability of regular, reliable and efficient shipping services;
- Ensure the growth of exports by providing necessary, competitive and economical domestic sea linkages;
- Serve as a naval and military auxiliary in times of war and other national emergencies; and,
- Function as an employment support base for Filipino seafarers.

To achieve such a strong and competitive domestic merchant fleet, the DSDA declares the following policies:

- To promote deregulation in the domestic shipping industry, encourage effective competition, free enterprise and market driven rates that are sensitive to the demands of the public;
- To promote Filipino ownership of vessels operated under the Philippine flag;
- To attract private capital to invest in the shipping industry by creating a healthy and competitive investment and operating environment;
- To provide necessary assistance and incentives for the continued growth of the Philippine domestic merchant marine fleet;
- To encourage the improvement and upgrading of the existing domestic merchant marine fleet and Filipino crew to meet international standard;
- To ensure the continued viability of domestic shipping operations; and,
- To encourage the development of a viable shipbuilding and ship repair industry to support the expansion and modernization of the Philippine domestic merchant marine fleet and its strict adherence to safety standards, which would ensure the seaworthiness of all seaborne structures.

(2) DSDA'S INTERPRETATION INTO A SECTOR DEVELOPMENT PLAN

The DSDA shows a strong State's will to promote the development of domestic shipping, shipbuilding and repairing and ordaining reforms. However, all of these declared policies are inter-related. All the other policies are required to achieve each objective. For example, for domestic shipping operations to be viable there ought to be healthy and competitive investment and operating environment. However, considering that shipping requires huge capital investments, financing assistance and incentives should be extended to ship owners and operators, then this would mean that new vessels would need to be built by the local shipbuilding industry or existing vessels would need to be upgraded or retro-fitted by the local ship repair industry. More vessels would mean the employment of more competent Filipino seafarers. A vibrant domestic shipping industry will no doubt attract more Filipino and foreign investors to invest in domestic shipping.

A salient feature of the law is its reference to safety. Safety plays a crucial role in the development of the domestic shipping industry. Safety affects, in more ways than one, the costs and viability of shipping. The safety record of a country directly affects the insurance premiums paid by domestic shipping companies. One way or another, the safety record also affects the interest rates of lending institutions, if ever they are willing to finance.

The DSDA and its IRR shows clear development directions. Though they are policy documents, while there are almost no quantitative analysis. To prepare the effective implementation of those policies and regulations, more expert analysis and judgment must come in from various shipping related fields such as transport planning, engineering analysis and financial assessment. More specifically, in relation to the DSDA and its IRR, some indicative contributions may be included as follows:

- The DSDA and its IRR give a period of 10 years for tax incentives and restrictions on imported vessels. Many questions may be raised in this regard. For example, how large will be the domestic fleet in 2015? How many vessels and how large tonnage will be imported and/or newly built at domestic shipyards within a ten-year time until 2015?
- The DSDA and its IRR intends to attract private capital to invest in the shipping industry by creating a healthy and competitive environment. Likewise there are many questions. How much investment will be necessary to meet future domestic shipping demand? What are suitable guidelines to fleet investment where desirable ship designs and promising shipping services/routes are indicated? How can investors gauge and maintain a healthy and competitive environment?
- The DSDA and its IRR allow the MARINA to impose restrictions/limitations on imported vessels starting from those of less than 500 GT. Similarly, the questions are the necessary shipbuilding capacity at domestic shipyards to meet those vessels needs and the way to expand and upgrade their shipbuilding capability.
- The DSDA and its IRR stipulate the enhancement of ship safety through the relation between maritime administration and shipping company. However at the business side, financial institutions are also keen on ship safety from a collateral protection viewpoint. And it is now one of bottlenecks to financing ships. Thus, it is important to develop a reliable and bankable ship safety enhancement means in addition to conventional standard setting.

(3) DSDP OBJECTIVES AND COVERAGE

In relation with the DSDA and its IRR, the Domestic Shipping Development Plan (DSDP) can share the three objectives of the DSDA, namely (1) bridging the islands by domestic shipping, (2) encouraging the dispersal of industry and the economic development, and (3) ensuring the growth of exports by providing domestic sea linkages.

In-depth analysis has been made and necessary policies and strategies have been elaborated to pave the way to realizing the DSDP objectives. The planning areas include maritime transport development planning, shipping industry and SBSR industry development planning, legal and other institutional analysis and engineering analysis of domestic vessels and ports. The DSDP elaborates on various shipping needs over the country and the way to modernize them to provide more competitive services. Particularly, to secure economic benefits accruing to the country from domestic fleet investment, overall logistics development is considered in formulating shipping system development plans. Another focal area is public ship finance to function as “calling water” to various private investment opportunities and a dynamic public-private partnership towards the DSDP objectives.

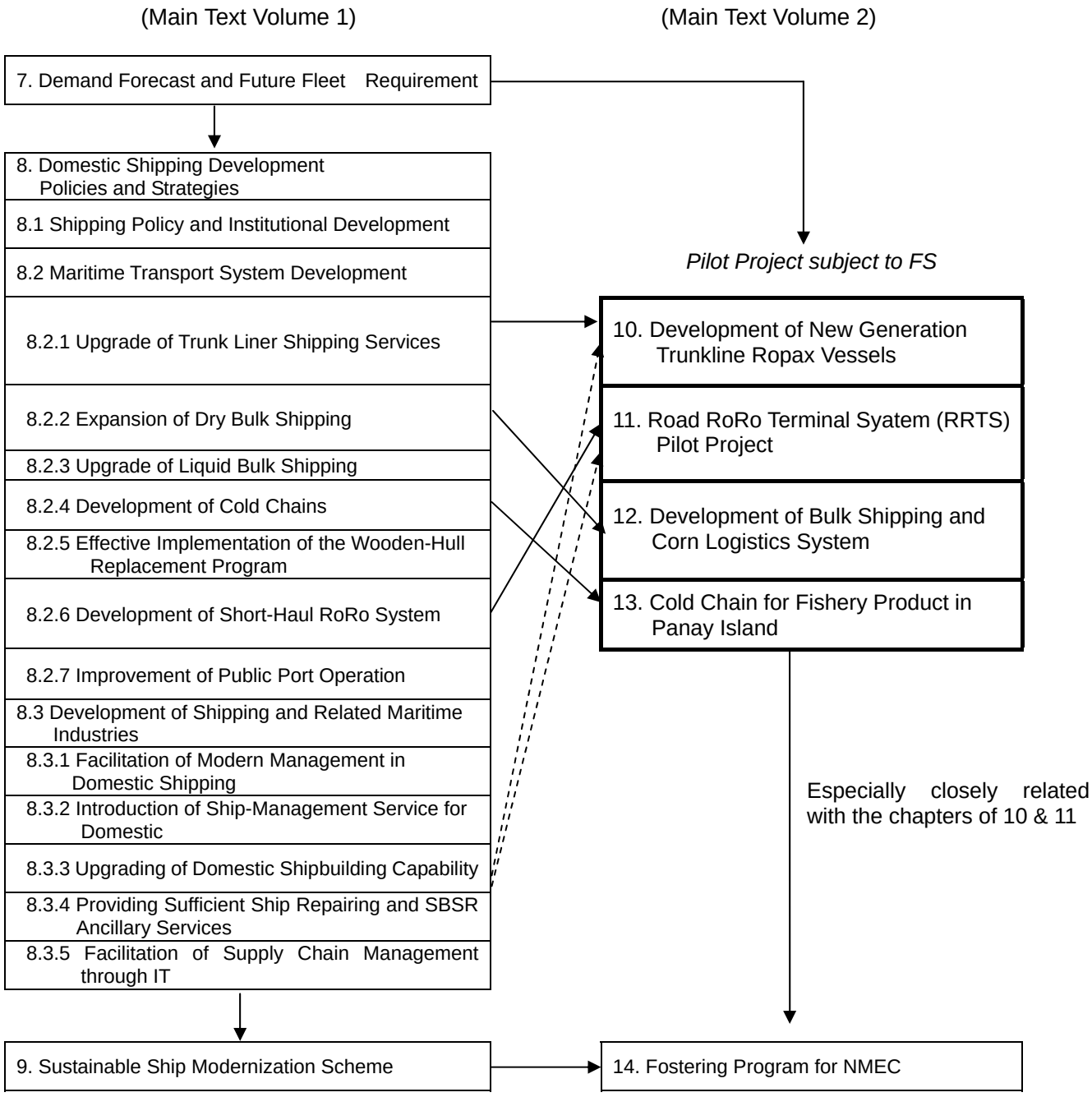
The DSDP has a ten-year planning span towards the year 2015. The DSDP consists of a domestic shipping development framework and five (5) small feasibility studies to realize some priority development issues. The DSDP framework has the following planning areas:

- Domestic shipping demand forecast and its conversion into fleet requirement (Chapter 7)
- Development policies and strategies for shipping regulations and incentives (Section 8.1), future shipping service systems including trunk liner, minor liner, dry bulk, liquid bulk, wooden hulled fleets, short-distance RoRo, port system for domestic shipping (Section 8.2), and shipping and maritime related industries (Section 8.3).
- Sustainable shipping modernization scheme (Chapter 9) where many topics are discussed for public ship finance to work more effectively and efficiently including orientation of beneficial fiscal regimes, investment requirements with or without scrapping policy and import vessel restriction policy, alternative ship procurement methods, desirable role of public ship finance and its expansion opportunities, and identified shipping business models to be supported by public ship finance.

The five (5) small feasibility studies encompass four (4) pilot development projects and one (1) organizational project. The pilot projects include trunkline Ropax fleet on the Manila – Cebu route (Chapter 10), RRTS development along the Central Nautical Highway (Chapter 11), corn bulk shipping between Southern Mindanao and Luzon (Chapter 12), and fish processing and cold chain between Panay and Metro Manila (Chapter 13). Lastly the practice of an alternative ship finance scheme by NDC MEC is proposed (Chapter 14).

Figure 1.5.1 illustrates the coverage of DSDP and the relation among individual planning elements.

Figure 1.5.1 Relation of Planning Works in the Report



2. APPRECIATION OF THE STUDY AREA

2. APPRECIATION OF THE STUDY AREA

2.1 Habitation and Migration

2.1.1 Population Growth and Distribution

The population census in the Philippines is being carried out every five or ten years. According to the most recent Census in the year 2000, the population of the Philippines is about 76.5 million. During the last 20 years from 1980 to 2000, the population has increased as much as 60% or nearly 30 million. Although, the growth rate shows a declining tendency, it was about 2.2% in the period 1995 to 2000, which is still one of the fastest growth rates among ASEAN countries.

The population in 2004 is projected as 82.7 million according to the National Statistics Office.

Table 2.1.1. Philippine Population

Year	Population (000 pax)	Ave. GR
1960	27,088	
1970	36,684	3.1%
1975	42,071	2.8%
1980	48,098	2.7%
1990	60,698	2.4%
1995	68,614	2.5%
2000	76,483	2.2%

Source: PSY 2003 and 1990

2.1.2 Regional Population Distribution

About 55% of the population resides in Luzon, 20% in Visayas and 25% in Mindanao. About 13% of the population is in Metro Manila, which has grown at a very high rate in the last two decades. However, growth in Metro Manila slowed down in the period 1995 to 2000, while outlying regions of Calabarzon and Central Luzon (Region III) grew at a very high rate of more than 3%.

Table 2.1.2. Population and Population Growth Rate by Region

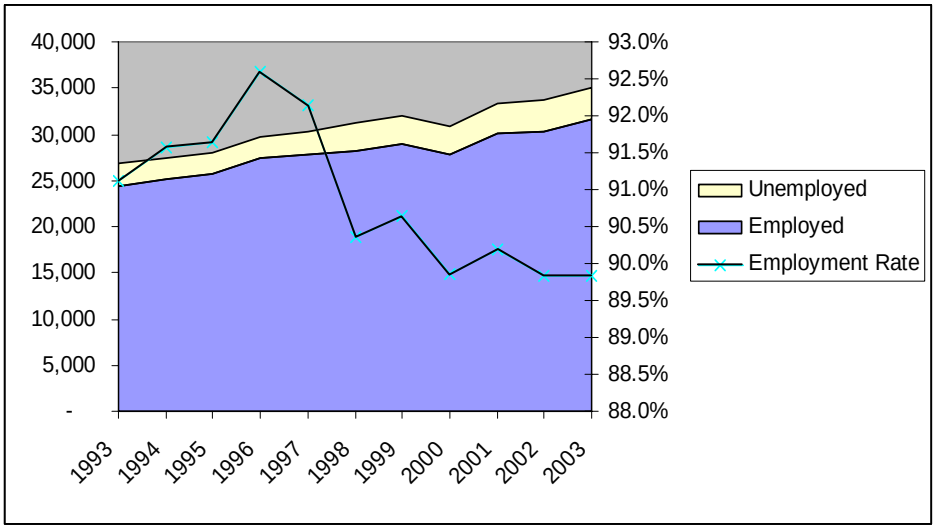
	Population				Ave. Pop Growth Rate		
REGION	**1980**	**1990**	**1995**	**2000**	**80~90**	**90~95**	**95~00**
Region I (Ilocos Region)	2,922,892	3,550,642	3,803,890	4,200,478	2.0%	1.4%	2.0%
Region II (Cagayan Valley)	1,919,091	2,340,545	2,536,035	2,813,159	2.0%	1.6%	2.1%
CAR (Cordillera Administrative Region)	914,432	1,146,191	1,254,838	1,365,412	2.3%	1.8%	1.7%
Region III (Central Luzon)	4,802,793	6,199,017	6,932,570	8,030,945	2.6%	2.3%	3.0%
National Capital Region	5,925,884	7,948,392	9,454,040	9,932,560	3.0%	3.5%	1.0%
Region IV (Southern Tagalog) IV-A (CALABARZON)	4,710,580	6,489,025	7,909,824	9,494,426	3.3%	4.0%	3.7%
Region IV (Southern Tagalog) IV-B (MIMAROPA)	1,408,040	1,774,074	2,033,271	2,299,229	2.3%	2.8%	2.5%
Region V (Bicol Region)	3,476,982	3,910,001	4,325,307	4,686,669	1.2%	2.0%	1.6%
Region VI (Western Visayas)	4,525,615	5,393,333	5,776,938	6,208,733	1.8%	1.4%	1.5%
Region VII (Central Visayas)	3,787,374	4,594,124	5,014,588	5,706,953	1.9%	1.8%	2.6%
Region VIII (Eastern Visayas)	2,799,534	3,054,490	3,366,917	3,610,355	0.9%	2.0%	1.4%
Region IX (Western Mindanao)	1,973,267	2,459,690	2,794,659	3,091,208	2.2%	2.6%	2.0%
Region X (Northern Mindanao)	1,765,120	2,197,554	2,483,272	2,747,435	2.2%	2.5%	2.0%
Region XI (Southern Mindanao)	2,969,156	4,006,731	4,604,158	5,189,335	3.0%	2.8%	2.4%
Region XII (Central Mindanao)	1,329,432	1,813,992	2,098,640	2,303,271	3.2%	3.0%	1.9%
CARAGA	1,371,512	1,764,297	1,942,687	2,095,367	2.6%	1.9%	1.5%
ARMM (Autonomous Region in Muslim Mindanao)	1,496,756	2,055,896	2,282,071	2,707,098	3.2%	2.1%	3.5%
Philippines	**48,098,460**	**60,697,994**	**68,613,705**	**76,482,633**	**2.4%**	**2.5%**	**2.2%**

Source: PSY 2003

2.1.3 Labor Force and Employment

The labor force has steadily increased in line with population growth and reached at 35 million in 2003. The total number of employment also increased to 31.5 million in 2003. Figure 2.1.1 shows that the employment rate has a downturn after the peak in 1996 and is keeping a low level in the recent several years, resulting to 89% employment rate in 2003. In spite of the continuous economic growth as elaborated later, this stagnant employment condition in the recent years suggests that the economic growth may not be sufficiently well enough to provide job opportunities for the rapidly growing population.

Figure 2.1.1. Past Trend of Employment Rate in the Philippines

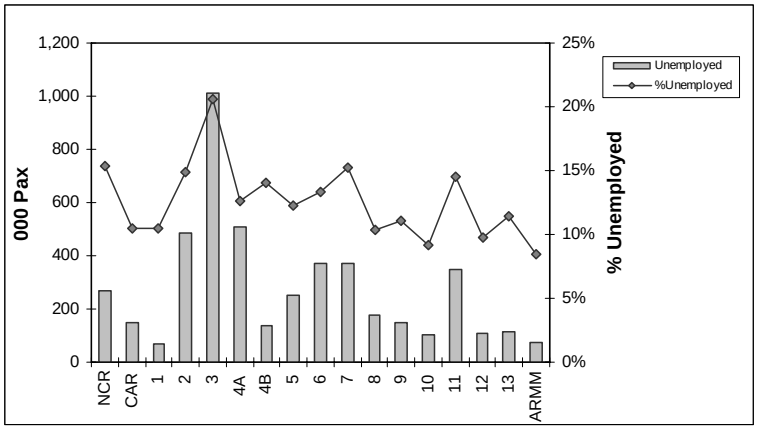


Source: PSY 2004

Particularly Metro Manila shows the highest unemployment rate, 17% in 2003. The important employment opportunities for the skilled workers are additionally provided from the overseas market. According to the Statistical Yearbook, the number of Overseas Filipino Workers (OFW) in 2001/2002 was more than one million, remitting foreign currency of about US$7 billion in 2002.

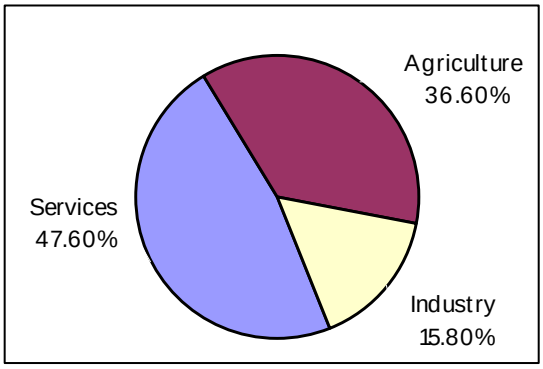
In terms of industrial sector of employment, service sector has the highest share, 48% followed by agriculture/fishery sector of 37%. Especially in Metro Manila, Calabarzon and Central Luzon, the share of the service sector is predominant, accounting 75%, 55%, 52% of the total employment respectively. On the other hand, the rest of the country, particularly in the northern part of Luzon, Southern Tagalog, Eastern Visayas, Central Mindanao, ARMM, etc., the agriculture/fishery sector is the most important and predominant sector.

Figure 2.1.2. Unemployed Rate by Region



Source: PSY 2004

Figure 2.1.3. Employment by Industrial Sector



Source: PSY 2004

Table 2.1.3. Employment by Region and Sector, 2002

REGION	Employment by Type (000 pax), Year 2002							
	Agr	Ind	Ser	Total	Agri%	Ind%	Ser%	Total
Region I (Ilocos Region)	673	210	681	1,564	43%	13%	44%	100%
Region II (Cagayan Valley)	738	98	395	1,231	60%	8%	32%	100%
CAR (Cordillera Administrative Region)	327	78	169	574	57%	14%	29%	100%
Region III (Central Luzon)	717	641	1,474	2,832	25%	23%	52%	100%
National Capital Region	43	928	2,956	3,927	1%	24%	75%	100%
Region IV (Southern Tagalog) IV-A (CALABARZON)	726	897	1,973	3,596	20%	25%	55%	100%
Region IV (Southern Tagalog) IV-B (MIMAROPA)	480	105	326	911	53%	12%	36%	100%
Region V (Bicol Region)	876	245	766	1,887	46%	13%	41%	100%
Region VI (Western Visayas)	1,057	302	1,134	2,493	42%	12%	45%	100%
Region VII (Central Visayas)	834	404	885	2,123	39%	19%	42%	100%
Region VIII (Eastern Visayas)	829	163	624	1,616	51%	10%	39%	100%
Region IX (Western Mindanao)	622	95	482	1,199	52%	8%	40%	100%
Region X (Northern Mindanao)	602	141	542	1,285	47%	11%	42%	100%
Region XI (Southern Mindanao)	944	300	903	2,147	44%	14%	42%	100%
Region XII (Central Mindanao)	529	83	372	984	54%	8%	38%	100%
CARAGA	463	91	363	917	50%	10%	40%	100%
ARMM (Autonomous Region in Muslim Mindanao)	551	30	242	823	67%	4%	29%	100%
Philippines	11,011	4,811	14,287	30,109	37%	16%	47%	100%

Source: Countryside in Figures, 2002
Note: Agr= Agriculture; Ind= Industry; Ser= Services

2.2 Economy and Trade

2.2.1 GDP

The Gross Domestic Products (GDP) of the Philippines was about 4.3 trillion pesos in 2003. About 53% of the GDP came from the service sector, while the industrial sector and the agricultural sector contributed 32% and 15% of the GDP respectively.

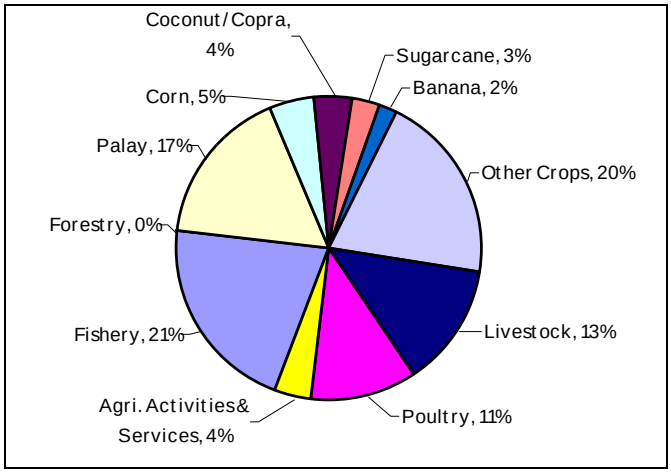
Table 2.2.1. Employment by Industrial Sector

INDUSTRY SECTOR	2000		2003	
	Product	**%**	**product**	**%**
AGRI., FISHERY & FORESTRY	528,868	15.8%	637,764	14.8%
a. Agriculture & Fishery	525,485	15.7%	635,515	14.8%
b. Forestry	3,383	0.1%	2,249	0.1%
INDUSTRY SECTOR	1,082,431	32.3%	1,372,497	31.9%
a. Mining & Quarrying	21,788	0.6%	43,566	1.0%
b. Manufacturing	745,857	22.2%	1,004,004	23.3%
c. Construction	217,275	6.5%	187,755	4.4%
d. Electricity, Gas & Water	97,511	2.9%	137,172	3.2%
SERVICE SECTOR	1,743,428	52.0%	2,289,671	53.2%
a. Transport, Communication/Storage	198,956	5.9%	313,160	7.3%
b. Trade	473,004	14.1%	602,772	14.0%
c. Finance	149,062	4.4%	188,118	4.4%
d. Ownership of Dwellings & Real Estate	220,947	6.6%	269,970	6.3%
e. Private Services	381,648	11.4%	537,941	12.5%
f. Government Services	319,811	9.5%	377,710	8.8%
Gross Domestic Product	3,354,727	100.0%	4,299,932	100.0%

Source: PSY 2004

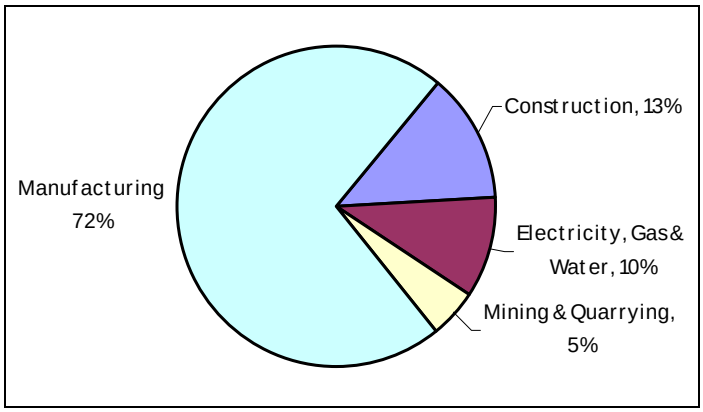
In the agriculture sector, primary commodities contributing to the economy are fishery, palay, livestock and poultry. In the industry sector, manufacturing represents 72% of gross value added, and within the manufacturing sector, food products, petroleum, and electrical machinery are the dominant sources. In the service industry, trade and transportation/communication represent more than 50% share in gross value added.

Figure 2.2.1. Agri. Fishery and Forestry Value Added per Components



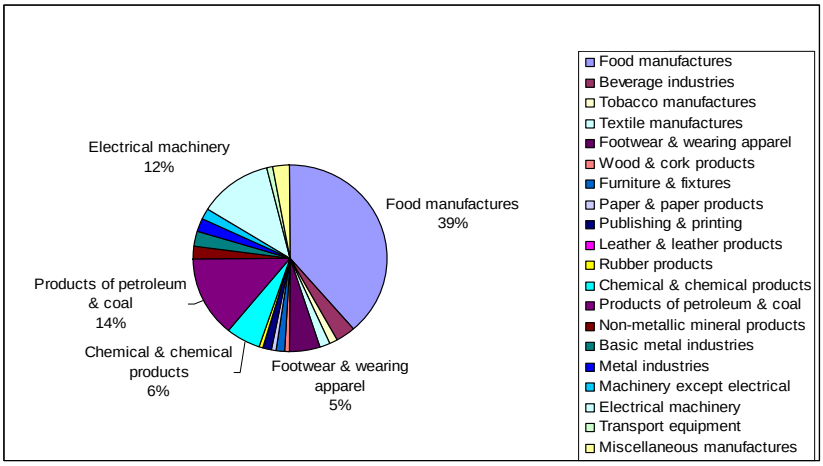
Source: PSY 2004

Figure 2.2.2. Industry Value Added per Components



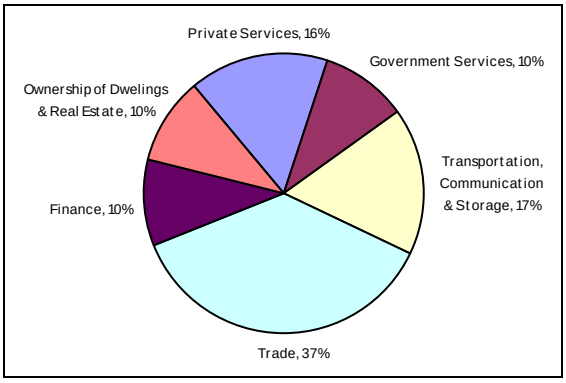
Source: PSY 2004

Figure 2.2.3. Manufacturing Value Added per Components (2003)



Source: PSY 2004

Figure 2.2.4. Service Value Added per Components



Source: PSY 2004

The share of the transportation/storage sub-sector shows around 4% of total GDP during the recent years as shown in Table 2.2.2. Among them, sea transport industry contributed 0.52 % of GDP in year 2003.

The total number of workers in transport/storage/communication sector was 2.35 million as of October 2003. Assuming that the labor productivity is uniform over the sector, the total workers in sea transport is estimated as 169,000.

Table 2.2.2. GDP Contribution of Sea Transportation

(Million pesos)

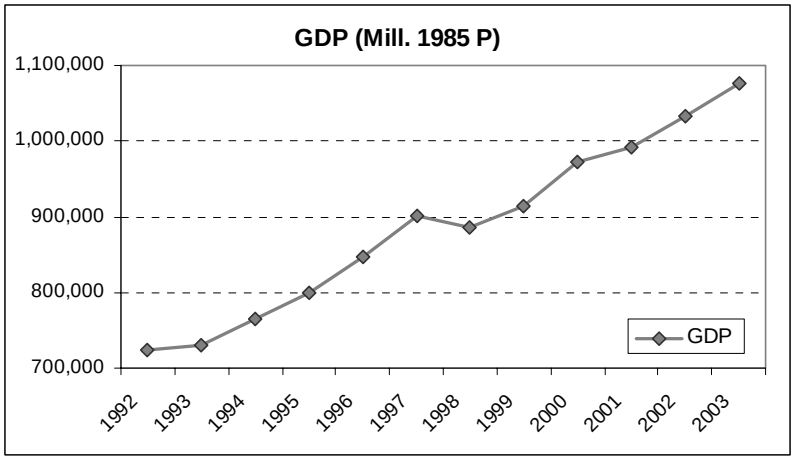
Year	GDP	Transport/Storage		Sea Transport	
		Production	%	Production	%
2000	3,354,727	121,238	3.6	15,285	0.46
2001	3,673,687	145,624	4.0	19,491	0.53
2002	4,022,697	154,435	3.8	20,877	0.52
2003	4,299,932	166,079	3.9	22,562	0.52

Source: PSY 2004

2.2.2 Economic Growth

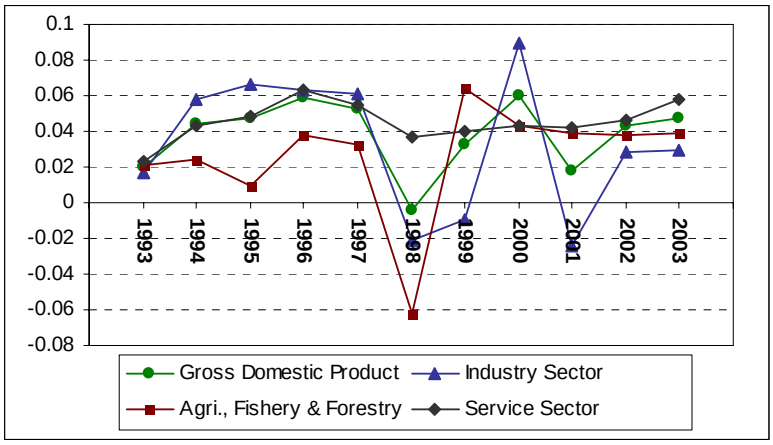
GDP has been steadily increasing in real terms, though there was a slight decline in 1998 as a result of the Asian Financial Crisis – resulting in declines in the agricultural and industrial sector. GDP expanded by 2.4% in 1999, and 4.4% in 2000, but slightly slowed to 3.2% in 2001 caused by a global economic recession, an export slump, and political and security concerns. GDP growth accelerated again to 4.4% in 2002 and 4.2% in 2003, owing to the continuous growth of the service sector, particularly high demand for telecommunication and transportation and regaining of industrial output, and improved exports of manufacturing goods. The agricultural sector was able to rebound and is growing steadily at 4% per annum. The industrial sector meanwhile rebounded sharply then declined again in 2001 due to the global down turn in information technology, but nevertheless has shown steady growths of 4% for the last two years.

Figure 2.2.5. Gross Domestic Products (1985 PhP prices)



Source: PSY 2004

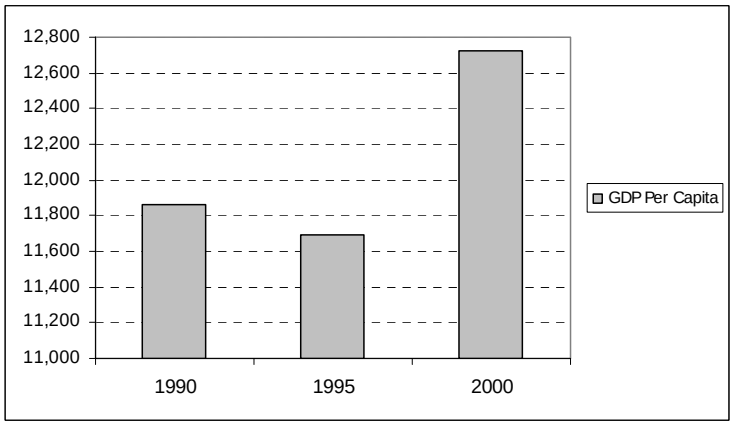
Figure 2.2.6. GDP Growth Rate by Industrial Sector



Source: PSY 2004

GDP per capita slightly decreased in 1995 vis-à-vis 1990, but has posted growth in 2000.The GDP per capita in current prices was 43,863 pesos/person or US$802 /person in 2000. It should have grown to US$970 in 2003 when based on the projection by the National Statistics Office.

Figure 2.2.7. GDP per Capita (1985 PhP prices)

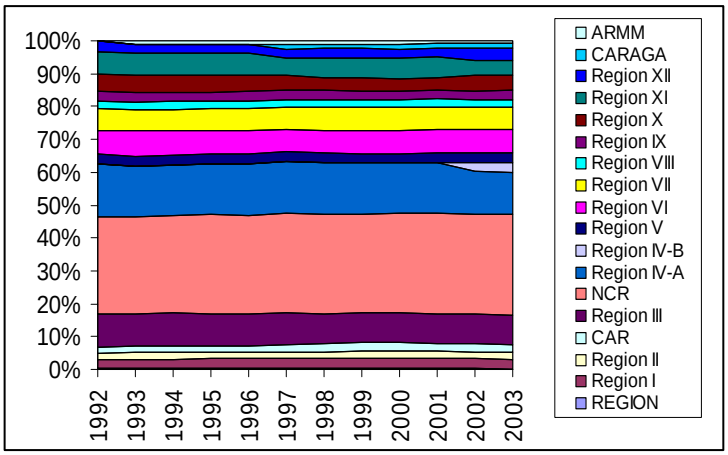


Source: PSY 2004

2.2.3 Regional Composition

Regional composition of GDP has so far remained constant. More than half of GDP is attributed to Metro Manila and its neighbouring regions, Region 3 and CALABARZON. These two regions are also the fastest economic growth area in the country. There is a variety in the composition of GRDP, as some regions are more agriculturally based while others are industrial and service sector oriented. In terms of GRDP per capita, there is also a significant variation in the country and even within island group, for example in Mindanao.

Figure 2.2.8. GRDP Composition



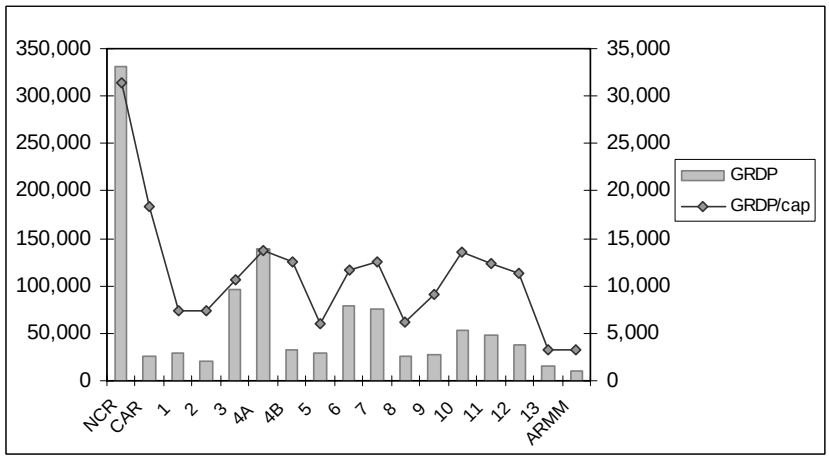
Source: PSY 2004

Table 2.2.3. GRDP Growth Rate

REGION	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Region I (Ilocos Region)	2.7%	6.7%	8.7%	3.8%	6.4%	6.6%	-0.9%	5.1%	0.5%	4.3%	3.5%
Region II (Cagayan Valley)	3.5%	6.7%	4.6%	3.5%	10.4%	-5.1%	22.2%	5.7%	0.2%	-1.2%	1.3%
CAR (Cordillera Administrative Region)	7.7%	8.8%	0.9%	5.0%	16.4%	3.4%	17.0%	4.1%	-1.7%	4.3%	3.0%
Region III (Central Luzon)	3.1%	3.3%	4.1%	4.4%	5.1%	-6.8%	2.1%	6.3%	2.7%	5.0%	3.6%
National Capital Region	0.3%	5.2%	6.5%	5.7%	6.6%	-0.2%	2.2%	6.7%	2.4%	3.1%	5.3%
Region IV (Southern Tagalog) IV-A (CALABARZON)	1.1%	4.7%	4.2%	7.6%	4.5%	-1.3%	1.7%	5.0%	2.6%	7.1%	3.8%
Region IV (Southern Tagalog) IV-B (MIMAROPA)											11.0%
Region V (Bicol Region)	2.4%	3.0%	1.9%	4.7%	5.8%	-1.6%	1.6%	4.2%	2.8%	5.7%	5.4%
Region VI (Western Visayas)	4.0%	2.8%	1.0%	6.1%	0.9%	0.5%	6.1%	4.1%	2.2%	4.4%	5.9%
Region VII (Central Visayas)	1.4%	4.0%	5.4%	8.2%	5.8%	2.1%	3.5%	8.5%	2.3%	2.9%	4.6%
Region VIII (Eastern Visayas)	4.5%	3.0%	3.2%	5.4%	4.9%	0.1%	3.5%	4.6%	-0.1%	2.6%	5.2%
Region IX (Western Mindanao)	-1.5%	1.3%	3.3%	13.2%	0.8%	2.3%	0.6%	5.6%	0.7%	0.3%	4.5%
Region X (Northern Mindanao)	1.5%	4.8%	5.4%	2.1%	-7.1%	-14.0%	4.0%	5.4%	3.2%	27.9%	5.6%
Region XI (Southern Mindanao)	3.5%	3.7%	1.8%	4.5%	-13.2%	13.6%	5.5%	6.4%	-0.2%	-24.1%	4.2%
Region XII (Central Mindanao)	-16.4%	2.0%	6.5%	5.9%	2.7%	-2.0%	3.8%	4.9%	0.3%	44.2%	3.8%
CARAGA						-6.6%	0.0%	13.6%	-1.4%	0.9%	0.9%
ARMM (Autonomous Region in Muslim Mindanao)		7.4%	9.4%	3.3%	2.3%	2.2%	4.6%	0.2%	-8.7%	15.4%	2.6%
Philippines	2.1%	4.4%	4.7%	5.8%	5.2%	-0.6%	3.4%	6.0%	1.8%	4.3%	4.7%

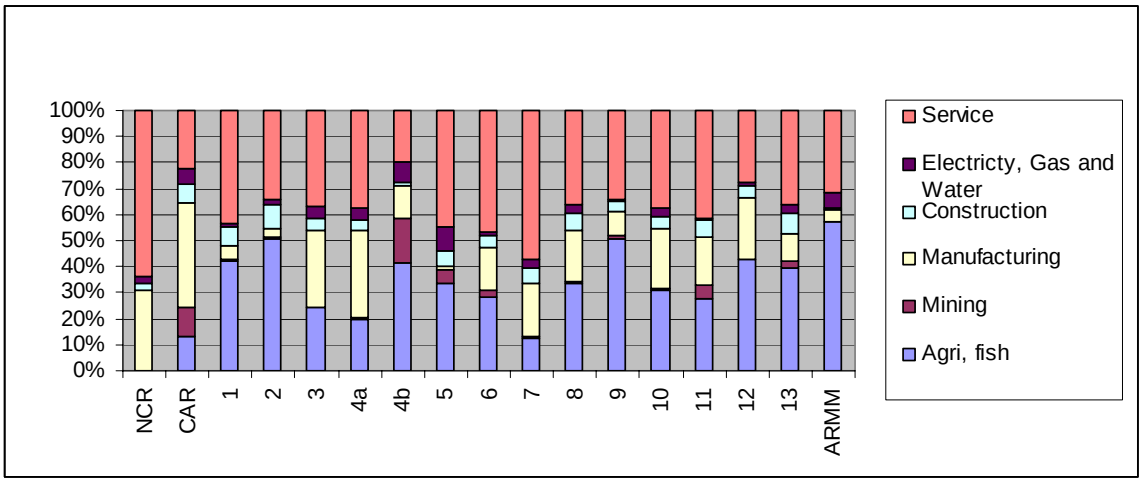
Source: PSY 2004

Figure 2.2.9. GRDP and GRDP per Capita



Source: PSY 2004
Note: GRDP in million 1985 PhP; GRDP/ Cap in 1985 PhP

Figure 2.2.10. GRDP Composition



Source: PSY 2004

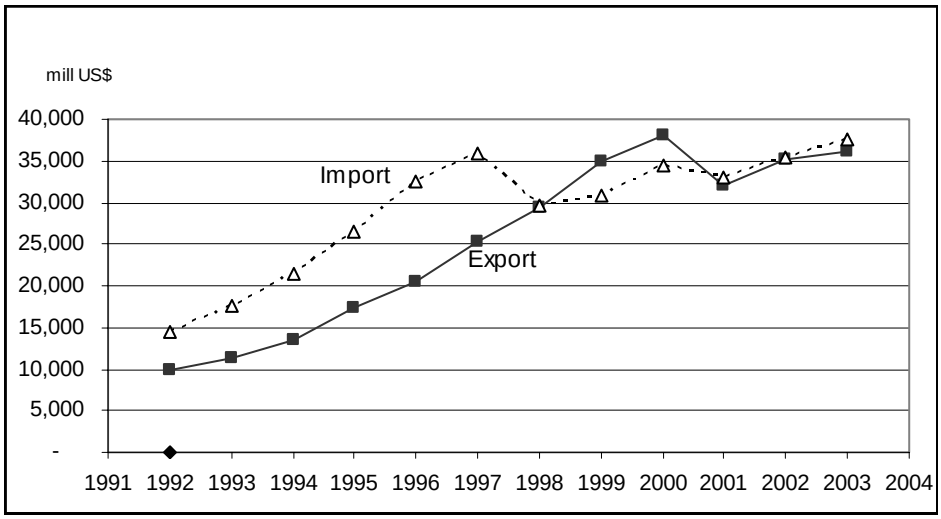
2.2.4 International Trade

Export from the Philippines has steadily increased during the decade in 1990's mainly owing to the rapid growth of the manufacturing sector. Although it was affected by the downturn of the IT industry in 2001, it has regained growth in the recent two years. Import has been exceeding export for more than two decades till the year 2000, however, due to the rapid growth of export, the trade deficit has been remarkably reduced and in recent years the export and import are almost balanced.

The primary exporting goods are manufactured products such as electronics related products, transport equipments etc. accounting almost 90% of the total export in terms of monetary value and 28% in terms of tonnage. The main destination countries are USA, Japan, Hongkong, etc.

With respect to imports, primary commodities are raw materials such as metal ore, mineral fuel, and refined petroleum in terms of tonnage.

Figure 2.2.11. Foreign Trade



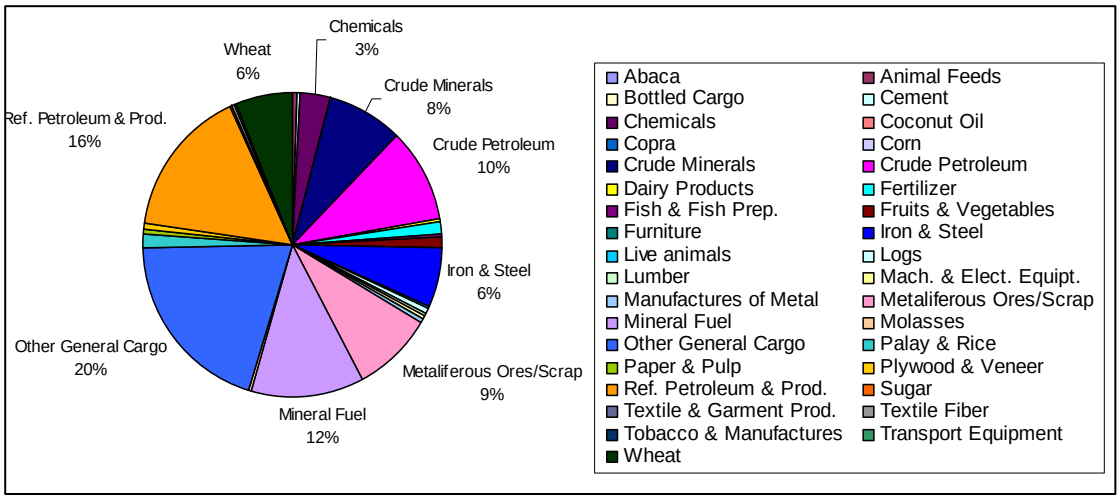
Source: PSY 2004

Table 2.2.4. Export by Commodity (2003, FOB in Mil. USD and thousand MT)

	Quantity	Value	% in Quant	% in Value
Coconut products	1,601	535	7.9%	1.5%
Sugar and sugar products	258	70	1.3%	0.2%
Fruits and vegetables	2,443	601	12.1%	1.7%
Other Agro-Based Products	1,762	179	8.7%	0.5%
Forest products	146	22	0.7%	0.1%
Mineral products	5,891	511	29.1%	1.4%
Petroleum products	2,358	536	11.7%	1.5%
Manufactures	5,702	32,418	28.2%	89.5%
Special transanctions	53	1,358	0.3%	3.7%
TOTAL EXPORTS	20,216	36,231	100.0%	100.0%

Source: PSY 2004

Figure 2.2.12. Imported Cargo by Commodity at Philippine Ports (Composition by Weight)



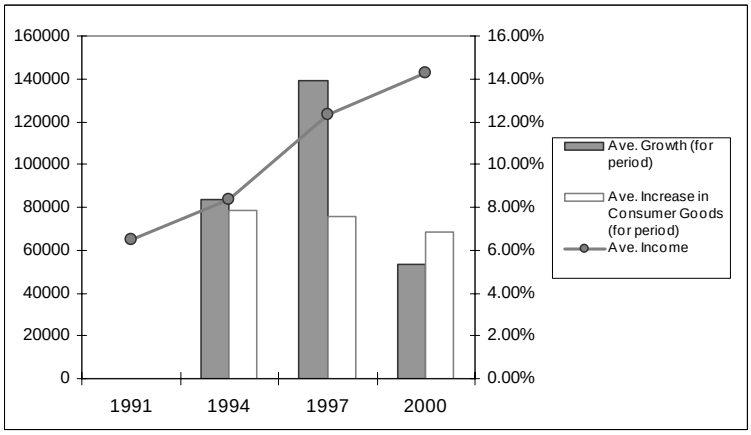
Source: PPA 2003

2.2.5 Income, Expenditure and Poverty

Average annual family income in 2000 is about 140,000 pesos. Average income has increased at a higher rate than that of consumer prices from 1991 to 1997. However from 1997 to 2000, average income growth was not able to cope with the increase in consumer prices – indicating a substantial decrease in real term. Income in the Philippines is skewed, as about 70% of families have incomes lower than the average.

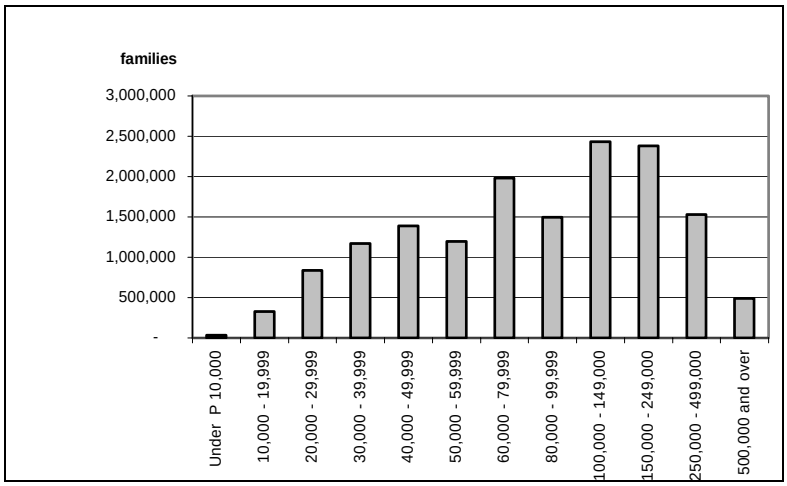
With regard to expenditure, people spend 71% of their income for basic necessities, i.e. food, housing, utilities and transportation. Average expenditure is about 82% of income resulting to savings rate of 18% or 26,000 pesos per year.

Figure 2.2.13. Average Annual Family Income



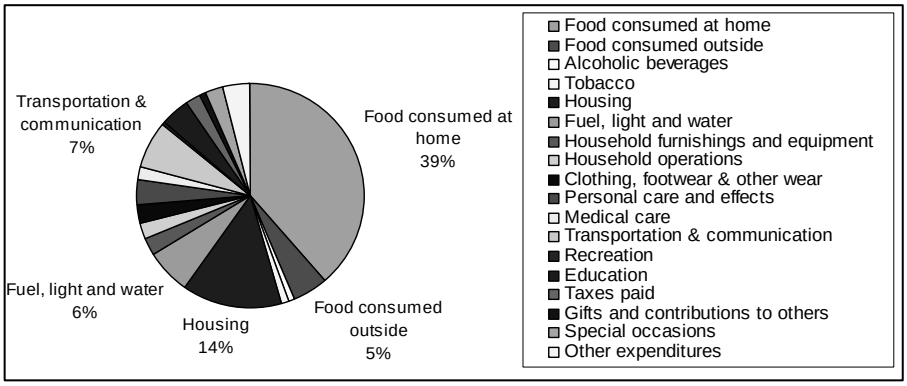
Source: PSY 2004

Figure 2.2.14. Family Income Distribution in 2000



Source: PSY 2004

Figure 2.2.15. Average Household Expenditure Pattern



Source: PSY 2004

Since 1997, there was a slight increase in the incidence of poor families. This resulted in the increase of the number of poor families in the country by about 400,000.

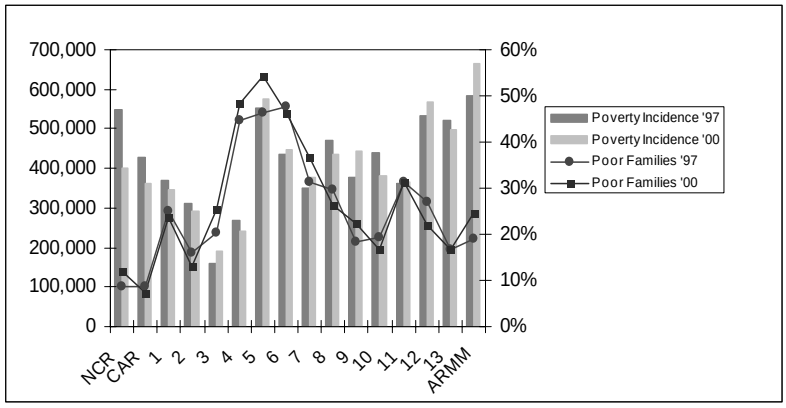
Regionally, there is a big variation in the trend in improvement or deterioration of the incidence of poor families wherein the highest record can be seen at Bicol Region and Region 12, 13 and ARMM in Mindanao. (see Table 2.2.5)

Table 2.2.5. Incidence of Poor Families in the Philippines

	Poor Families	Poverty Incidence (%)
1997	3,982,766	28.1
2000	4.338.780	28.4

Source: PSY 2004

Figure 2.2.16. Incidence of Poor Families



Source: PSY 2004

2.3 Maritime Traffic

2.3.1 Role of Maritime in National Transportation

Understandably, the Philippines being a country of more than 7,000 islands is strongly dependent on the maritime industry to facilitate the movements of good and people in support of its economy as well as to provide opportunities for the countryside to develop. Maritime transport handles most of the inter-island modes of transport in the country. In freight, it even accounts for a decent share of 9.1% of the total inter-regional cargo carried (see Table 2.3.1 and Table 2.3.2)

Table 2.3.1. Role of Maritime in National Freight Transportation

Mode Type	MT (000)	% of Total	% of Sub-Total
Inter-island Mode			100.0
- Maritime[1/]	47,298	9.1	99.9
- Aviation	49	0.0	0.1
Intra-island Mode			100.0
- Road	474,854	90.9	100.0
- Rail	2	0.0	0.0

Source: Survey on the Inter-Regional Passenger and Freight Flows, JICA 2004 (Draft Final Report)
[1/] DSDP Estimate

Table 2.3.2. Role of Maritime in National Passenger Transportation

Mode Type	Pax (000)	% of Total	% of Sub-Total
Inter-island Mode			100.0
- Maritime[/1]	30,808	1.9	83.2
- Aviation	6,224	0.4	16.8
Intra-island Mode			100.0
- Road	1,551,894	97.5	99.8
- Rail	2,560	0.2	0.2

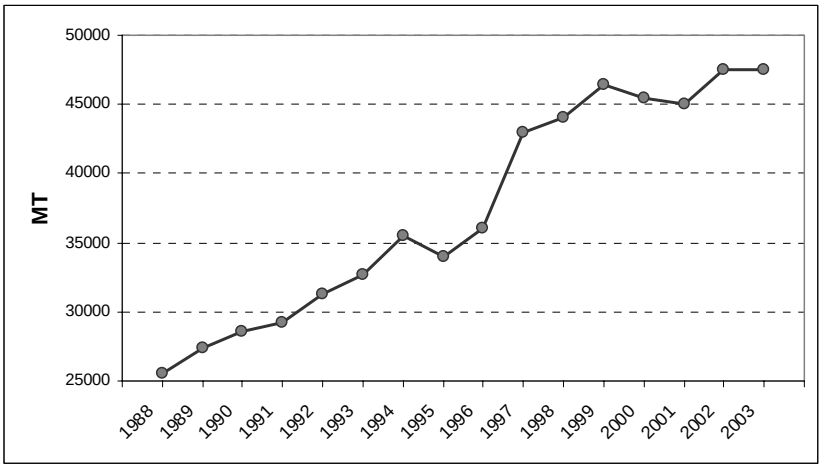
Source: Survey on the Inter-Regional Passenger and Freight Flows, JICA 2004 (Draft Final Report)
1/ DSDP Estimate

2.3.2 Inter-Regional Freight Demand

(1) TREND AND VOLUME

Domestic sea freight has been steadily expanding in volume from about 26 million MT in 1988 to nearly 48 million MT in 2003. There are three times wherein growth was stunted and even regressed, viz, in the year 1995 when the agricultural output experienced a downtrend, in 1998 during the Asian Financial Crisis, and in 2001 when the industry sector recorded a negative growth. In the last fifteen years (1988 to 2003), the first five years experienced steady growth at 4.8% growth per annum, and the highest growth occurred during the middle five years of the period at growth of 6.2% per annum. However, in the last five years, growth has been very weak at only 1.6% per annum (see Figure 2.3.1).

Figure 2.3.1. Domestic Freight Traffic Trend



Source: PPA and CPA Statistics

(2) COMMODITY COMPOSITION

Philippine maritime freight traffic is composed of varied commodities. The composition of maritime traffic based on the 1-digit classification of the Philippine Standard Commodity Classification (PSCC of 1993), is shown in Table 2.3.3. Key classes of commodities are food stuff, crude materials, mineral fuels, manufactured goods and machinery and transport equipment.

Table 2.3.3. Domestic Traffic Composition by Commodity (2002)

NSO CODE	DESCRIPTION	Quantity (000 MT)	% of Total
0	Food and Live Animals	12,219	25.8%
1	Beverage and Tobacco	1,866	3.9%
2	Crude Materials, Inedible, Except Fuels	5,263	11.1%
3	Mineral Fuels, Lubricants and Related Materials	8,498	18.0%
4	Animal and Vegetable Oils, Fats and Waxes	302	0.6%
5	Chemicals and Related Products, N.E..S.	1,812	3.8%
6	Manufactured Goods Classified Chiefly by Material	8,240	17.4%
7	Machinery and Transport Equipment/1	6,155	13.0%
8	Miscellaneous Manufactured Articles	1,573	3.3%
9	Other Commodities and Transactions	1,370	2.9%
	TOTAL	47,299	100%

Source: DSDP Estimate based on NSO and PPA Statistics
/1 RoRo vehicles are classified as transport equipment

Table 2.3.4 details the components of food stuff freight and it shows that there is much variety in the type of commodity being transported. Nonetheless, key commodities include: fish, wheat, rice, corn, fruits and vegetables, sugar, and animal feeds.

Table 2.3.5 further breakdown the composition of crude materials freight traffic and key commodities include soya, copra, and crude fertilizers.

Table 2.3.6 breaks down the composition of mineral fuel sea traffic, and indicates prevalence of refined petroleum products.

Table 2.3.4. Composition of Food and Live Animals Domestic Sea Cargo (2002)

	DESCRIPTION	Quantity (000 MT)	% of Total
00	Live animals	338	2.8%
01	Meat and meat preparations	295	2.4%
02	Dairy products and bird's eggs	236	1.9%
03	Fish, crustaceans, mollusks and aquatic invertebrates, and preparations thereof	570	4.7%
04	Cereals and Cereal Preparations	4,931	40.4%
041	*Wheat (including spelt) and meslin, unmilled*	*1,019*	*8.3%*
042	*Rice*	*965*	*7.9%*
044	*Maize (not including sweet corn), unmilled*	*676*	*5.5%*
045	*Cereals, unmilled (other than wheat, rice, barley and maize)*	*3*	*0.0%*
046	*Meal and flour of wheat and flour of meslin*	*532*	*4.4%*
047	*Other cereals meals and flours*	*555*	*4.5%*
048	*Cereal preparations and preparations of flour or starch of fruit or vegetables (e.g. pasta, malt, etc.)*	*1,179*	*9.7%*
	Sub-Total	*4,931*	*40.4%*
05	Vegetables and Fruits	1,335	10.9%
06	Sugars, sugar preparations and honey	1,525	12.5%
07	Coffee, tea, cocoa, spices and manufactures thereof	327	2.7%
08	Feeding stuff for animals	1,490	12.2%
09	Miscellaneous edible products and preparations	1,171	9.6%
	TOTAL	12,219	100%

Source: DSDP Estimate based on NSO and PPA Statistics

Table 2.3.5. Composition of Crude Materials, Inedible, Except Fuels Domestic Sea Cargo (2002)

NSO CODE	DESCRIPTION	Quantity (000 MT)	% of Total
21	Hides, skins, and fur skins, raw	5	0%
22	Oil seeds and oleaginous fruits	1,867	35%
2222	*Soya beans*	*1,064*	*20%*
2231	*Copra*	*786*	*15%*
	Others	*17*	*0%*
	Sub-total	*1,867*	*35%*
23	Crude rubber (including synthetic and reclaimed)	54	1%
24	Cork and wood	546	10%
25	Pulp and waster paper	56	1%
26	Textiles fibers	53	1%
27	Crude fertilizers	1,878	36%
28	Metalliferous ores and metal scrap	205	4%
29	Crude animal and vegetable materials, n.e.s.	600	11%
	TOTAL	5,263	100%

Source: DSDP Estimate based on NSO and PPA statistics

Table 2.3.6. Composition of Material Fuels, Lubricants and Related Domestic Sea Cargo Materials (2002)

NSO CODE	DESCRIPTION	Quantity (000 MT)	% of Total
32	Coal, coke and briquettes	143	1.7%
33	Petroleum, petroleum products and related materials	7,693	90.5%
333	*Crude petroleum*	*49*	*0.6%*
334	*Refined petroleum*	*7,624*	*89.7%*
335	*Residual petroleum products*	*20*	*0.2%*
	Sub-Total	*7,693*	*90.5%*
34	Gas, natural and manufactured	662	7.8%
	Total	8,498	100%

Source: DSDP Estimate based on NSO and PPA Statistics

Table 2.3.7 describes the composition of manufactured goods. Key commodities in this class are cement, glassware, and iron and steel.

Table 2.3.8 details the composition of machinery and transport equipment cargo wherein road vehicles take up most of the cargo. It should however be noted that RoRo vessels are classed under this category, thus, the actual cargo is actually not the vehicle but rather what is carried by the vehicle, which is unfortunately unrecorded.

Table 2.3.7. Composition of Manufactured Goods Classified Chiefly by Materials Domestic Sea Cargo (2002)

NSO CODE	DESCRIPTION	Quantity (000 MT)	% of Total
61	Leather, leather manufactures, N.E.S., and dressed fur skins	3	0.0%
62	Rubber manufactures, N.E.S.	191	2.3%
63	Cork, and wood manufactures (excluding furnitures)	611	7.4%
64	Paper, paperboard, and articles of paper pulp, of paper or of paperboard	371	4.5%
65	Textile yarn, fabrics, made-up articles, N.E.S., and related products	32	0.4%
66	Non-metallic Mineral manufacturers, N.E.S.	4,418	53.6%
661	*Lime, Cement and Fabricated Construction Materials*	*2,826*	*34.3%*
662	*Clay construction materials and refractory construction materials*	*265*	*3.2%*
663	*Mineral manufactures, n.e.s.*	*74*	*0.9%*
664	*Glass*	*76*	*0.9%*
665	*Glassware*	*1,166*	*14.1%*
666	*Pottery*	*12*	*0.1%*
667	*Pearls, precious and semi-precious stones*	*0*	*0.0%*
	Sub-total	*4,418*	*53.6%*
67	Iron and steel	1,766	21.4%
68	Non-ferrous metal	60	0.7%
69	Manufacturers of metals, N.E.S	788	9.6%
	Total	8,240	100%

Source: DSDP Estimate based on NSO and PPA Statistics

Table 2.3.8. Composition of Machinery and Transport Equipment Domestic Cargo (2002)

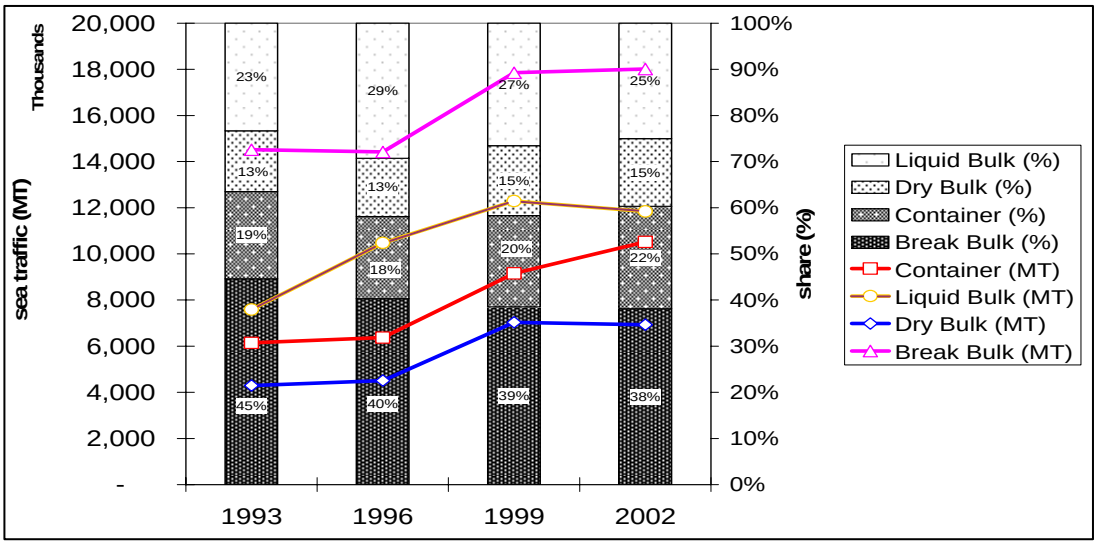
NSO CODE	DESCRIPTION	Quantity (000 MT)	% of Total
71	Power generating machinery and equipment	28	0.5%
72	Machinery Specialized for particular industries	92	1.5%
73	Metalworking Machinery	5	0.1%
74	General Industrial Machinery and Equipment, N.E.S., and machine parts, N.E.S.	84	1.4%
75	Office machines and automatic data processing machines	22	0.4%
76	Telecommunications and sound recording and reproducing apparatus and equipment	67	1.1%
77	Electrical machinery, apparatus and appliances, N.E.S., and electrical parts thereof	196	3.2%
78	Road vehicles (including air-cushion vehicles)	5,623	91.4%
79	Other transport equipment	37	0.6%
	Total	6,155	100%

Source: DSDP Estimate based on NSO and PPA Statistics

(3) PACKAGING TREND

Figure 2.3.2 summarizes the trend in maritime traffic per package type. Currently, sea traffic is 25% liquid bulk, 15% dry bulk, 22% container traffic and 36% break bulk. In the last few years, there has been a slow down in liquid bulk, dry bulk and break bulk traffic. Only container traffic has been steadily increasing at 4.7% per annum since 1999.

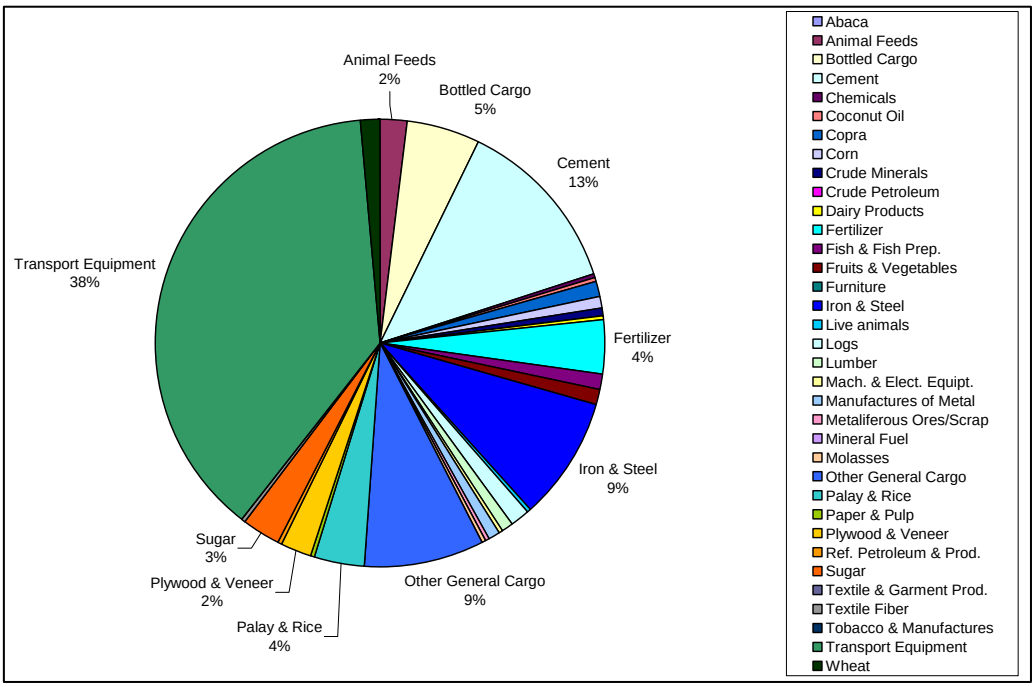
Figure 2.3.2. Trend in Maritime Traffic per Type of Package



Source: PPA and CPA Statistics

The composition of break bulk traffic, container traffic, dry bulk traffic and liquid bulk traffic are presented in Figure 2.3.3, Figure 2.3.4, Figure 2.3.5, and Figure 2.3.6 respectively.

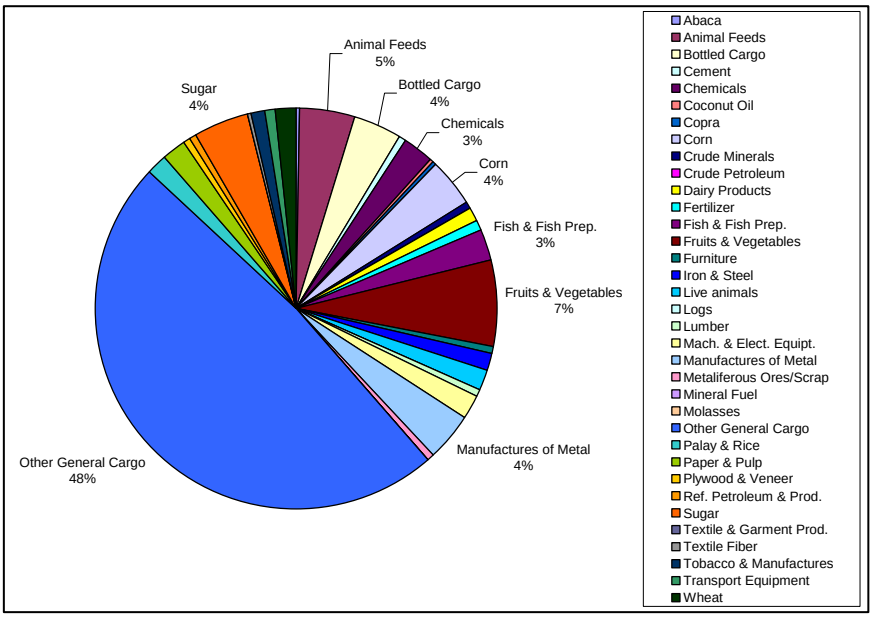
Figure 2.3.3. Composition of Break Bulk Traffic (2002)



Source: PPA Statistics

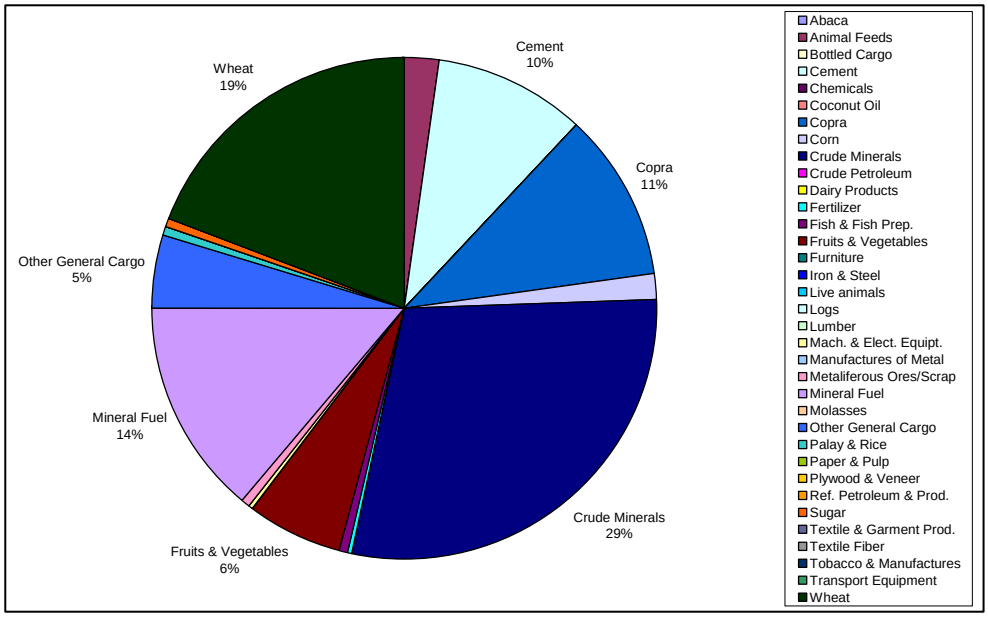
Primary commodities being transported in break bulk are transport equipment, iron and steel, cement and general cargo. In the case of container traffic, general cargo takes up nearly half of the traffic and various commodities compose the rest. Dry bulk traffic is composed of several primary commodities that include crude minerals, mineral fuel, wheat, cement and copra. Liquid cargo is mostly refined petroleum.

Figure 2.3.4. Composition of Container Traffic (2002)



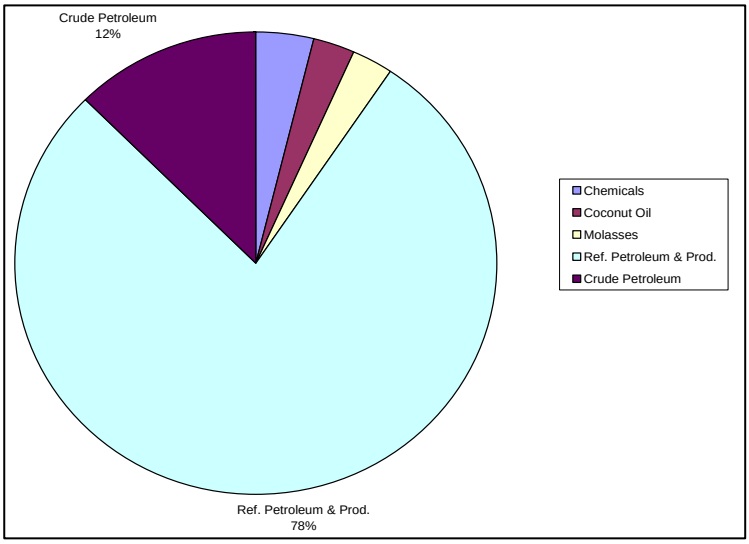
Source: PPA Statistics

Figure 2.3.5. Composition of Dry Bulk Traffic (2002)



Source: PPA Statistics

Figure 2.3.6. Composition of Liquid Traffic (2002)



Source: PPA Statistics

Table 2.3.9 shows the general indication of how (i.e. in what manner of packing) commodities are transported by sea.

Table 2.3.9. Packaging Trend of Commodities (2002)

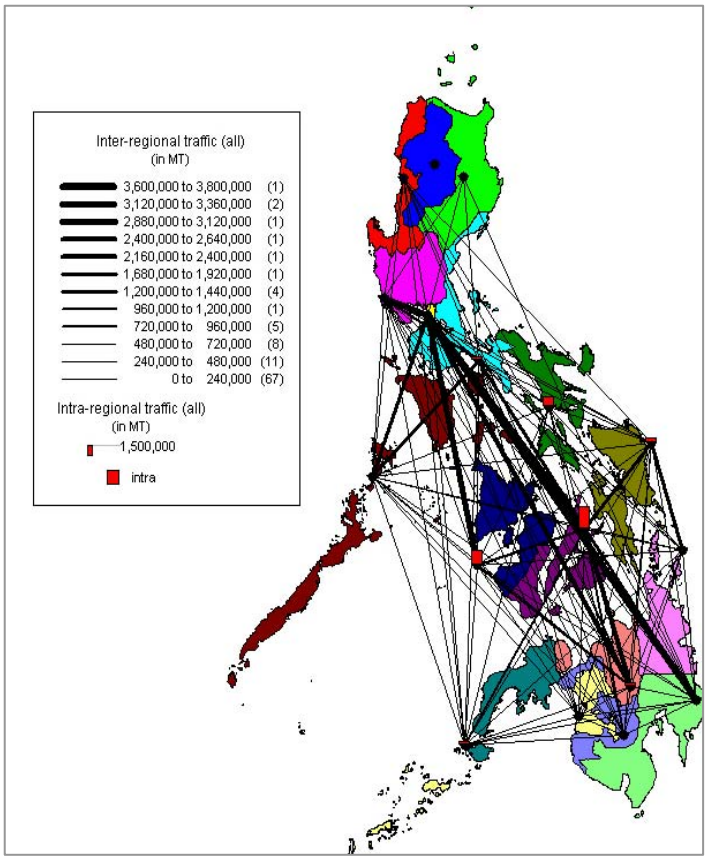
Commodities	Containerized	Break Bulk	Bulk
Dairy products, Fruits and Veg., Furniture, Live Animals, Machine and Elect'l. Equipment, Mnfct. of metal, Other Gen. Cargo, Paper, Plywood & Veneer, Textile & Garments, Tobacco	****		
Bottled Cargo, Cement, Fertilizer, Iron & Steel, Logs, Lumber, Palay & Rice, Transport equipment		****	
Coco oil, Copra, Crude Minerals, Crude & Refined Petroleum, Mineral Fuel, Molasses, Wheat			****
Abaca, Feeds, Corn, Fish & Fish Prep.., Sugar, Textile Fiber	**	**	
Chemicals	**		**
Metaliferous ores & scrap	*	*	*

Source: PPA Statistics

(4) ORIGIN-DESTINATION STRUCTURE

The National Capital Region is the leading attraction and generation zone for maritime traffic in which 22% of total domestic throughput involves ports in the National Capital Region. The next primary generator/attractor of traffic is Region VII which involves 17% of total throughput. While, the other primary attractors/generators are Region III and Region X. (see Figure 2.3.7)

Figure 2.3.7. Inter/Intra-Regional OD Structure of Domestic Sea Freight (2002)



Source: DSDP Estimate based on NSO, PPA and CPA statistics
/1 Based on port-to-port OD
/2 (Methodology of OD database development is explained in Chapter 7)

Figure 2.3.8 is a rough representation of the OD structure of break bulk and container traffic. It is taken that break bulk and container traffic is composed of the commodities listed as follows: (i) Live Animals, (ii) Dairy products, (iii) Fish, (iv)Rice, (v)Corn, (vi) Fruits and vegetables, (vii) Sugar, (viii) Feeds, (ix) Bottled cargo, (x) Tobacco, (xi) Logs and Lumber, (xii) Paper, (xiii) Abaca, (xiv) Textile fiber, textile and garments, (xv) Fertilizer, (xvi) Mineral ores/scrap, (xvii) Plywood, (xviii) Cement, (xix) Iron, steel and manufactures of metal, (xx) Machines and transport equipment, (xxi) Furniture, and (xxii) General Cargo.

There are 23% and 20% of container and break bulk throughput involves the National Capital Region and Region VII respectively. Other primary generators/attractors are Region X and XI, both are located in Mindanao.

Figure 2.3.9 describes the volume-distance profile of container and break bulk traffic. The figure on the left shows the number of routes with respect to volume of traffic and distance between routes. The elevation of the surface indicates the number of routes with the corresponding volume and route distance. The figure on the right shows the same volume-distance profile but with the surface elevation representing the share of the aggregated volume of traffic with similar route volume level and distance level vis-à-vis total traffic.

In the case of container and break bulk traffic, there are many routes that are relatively small volume but with relatively short distance. In terms of traffic share, Figure 2.3.9 indicates that the nature of traffic is vastly varied ranging from short distance low

volume routes to longer distance and higher volume routes. However, there is still the predominance of shorter distance but low volume routes – which probably owes to the relatively short distance between islands in the Philippines.

Figure 2.3.8. Inter/Intra-Regional OD Structure of Domestic Container and Break Bulk (2002)

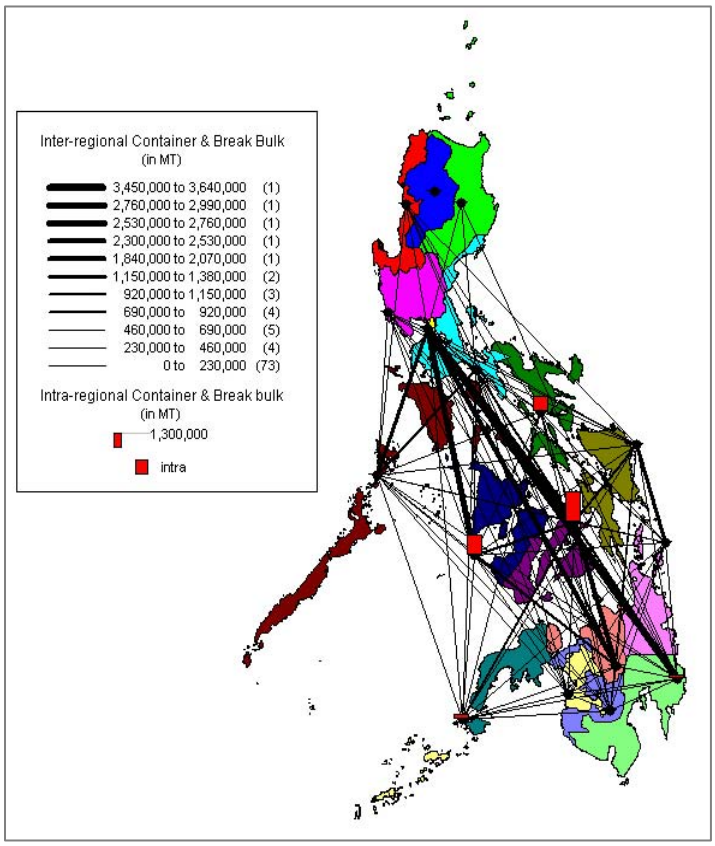


Figure 2.3.9. Volume-Distance Profile of Container and Break Bulk Traffic (2002)

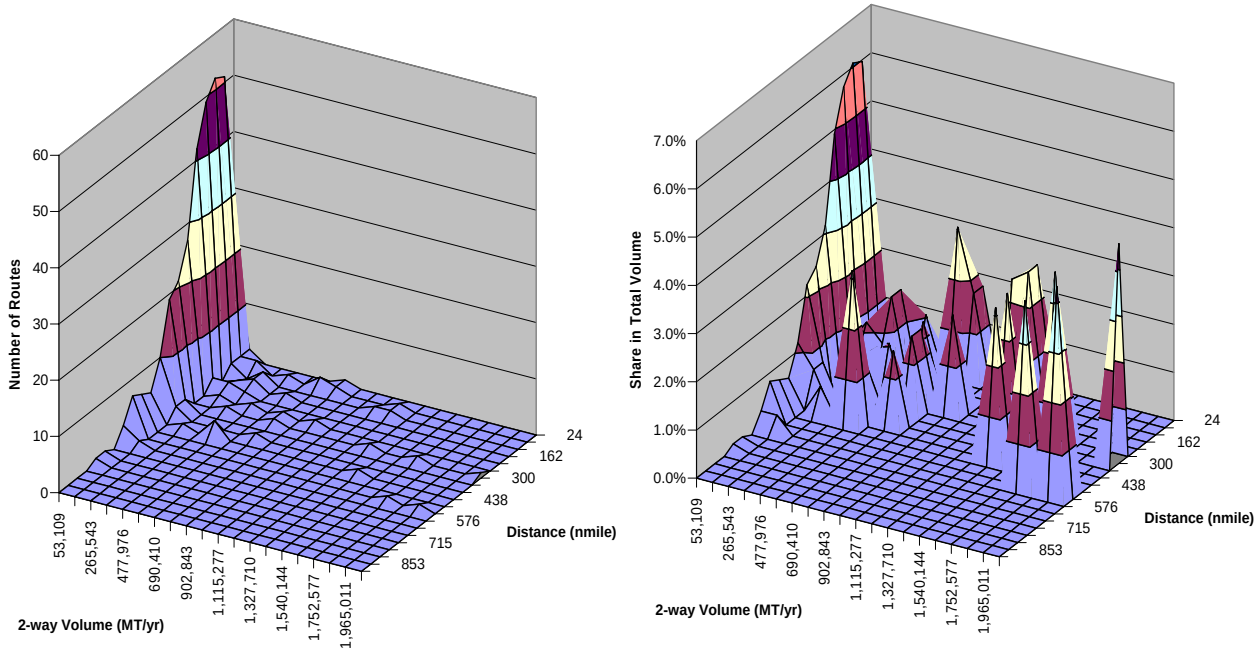


Figure 2.3.10 is a rough representation of dry bulk traffic OD. It is taken that dry bulk is composed of the following commodities: (i) Wheat, (ii) Copra, (iii) Crude Minerals, and (iv) Mineral fuel.

The primary destination of dry bulk is National Capital Region which comprises of 30% of the total dry bulk traffic. On the other hand, the primary generator of dry bulk is Region III, which accounts for nearly 30% of the total traffic.

Figure 2.3.11, represents the volume-distance profile of dry bulk traffic. It clearly shows, that with the exception of one route, most of the traffic carried low volume of traffic but distances vary from short to long distance routes – though short distance routes and low volumes are more predominant. The primary exception is the Region III (i.e. Bataan)-NCR route, where volumes nearly reach 1 million MT/yr.

Figure 2.3.10. Inter/Intra-Regional OD Structure of Domestic Dry Bulk (2002)

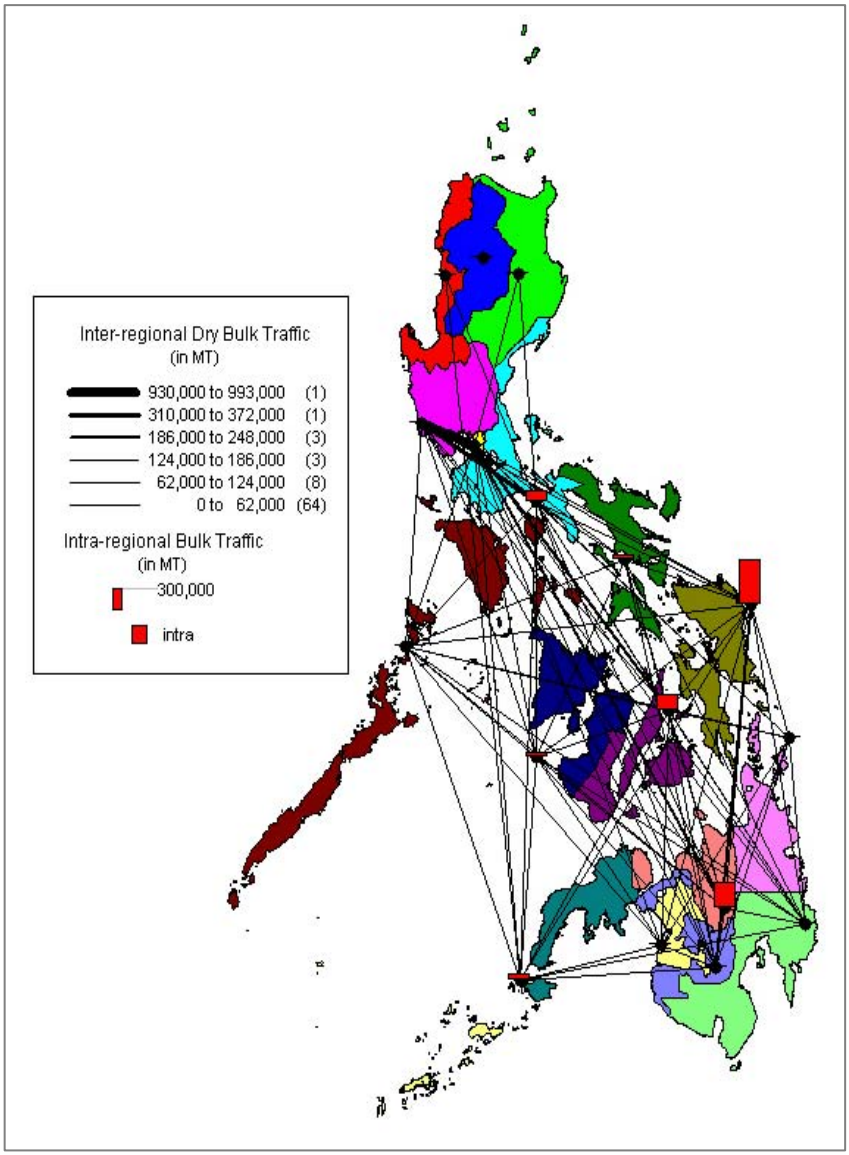


Figure 2.3.11. Volume-Distance Profile of Dry Bulk Traffic (2002)

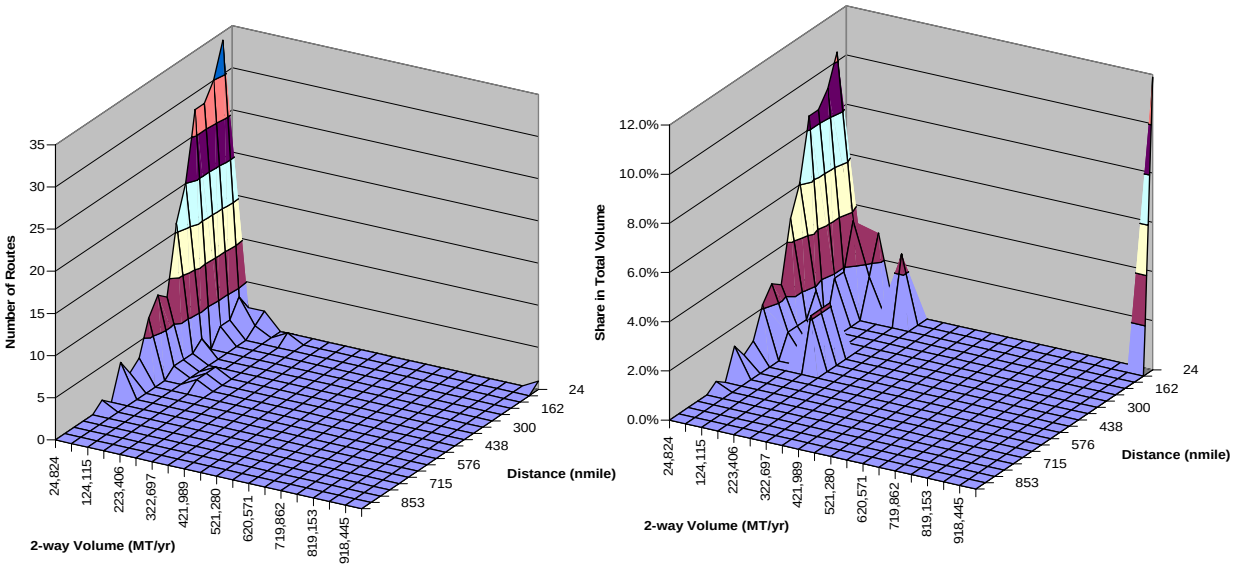


Figure 2.3.12 shows the depiction of the OD Structure of liquid bulk traffic. The primary destination regions are the National Capital Region and Region VII, which accounts for 30% and 17% of total liquid bulk traffic, respectively. The primary generators of liquid bulk are Region III and Region IV-A, which accounts for 48% and 30% of the total bulk traffic.

Figure 2.3.12. Inter/Intra-Regional OD Structure of Domestic Liquid Bulk (2002)

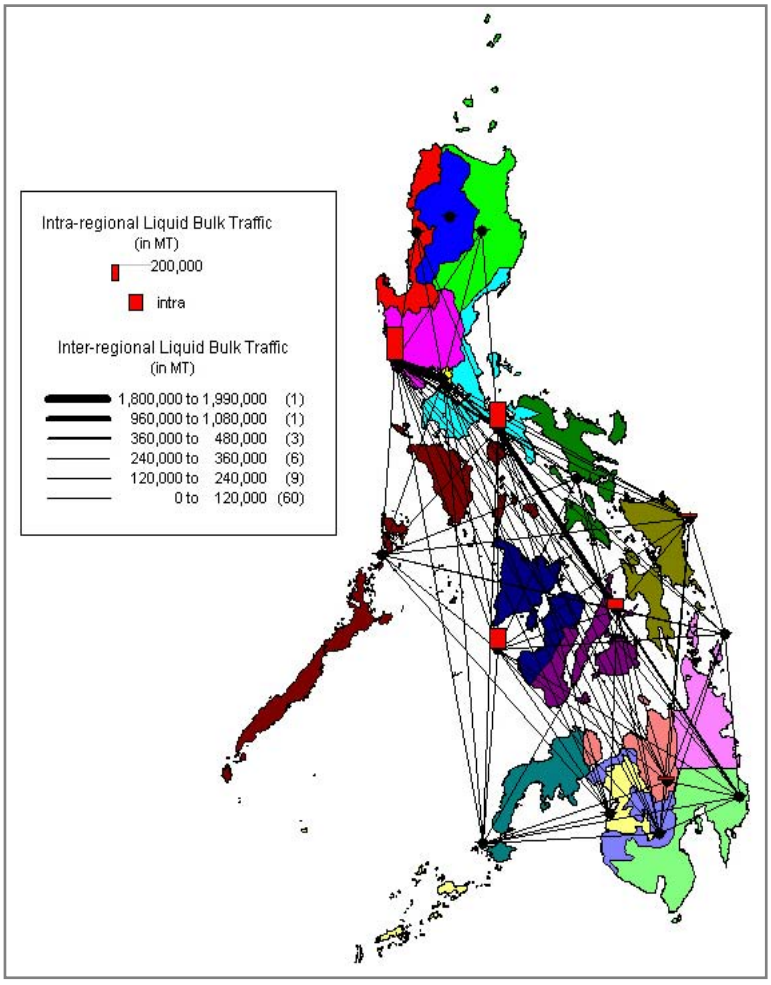
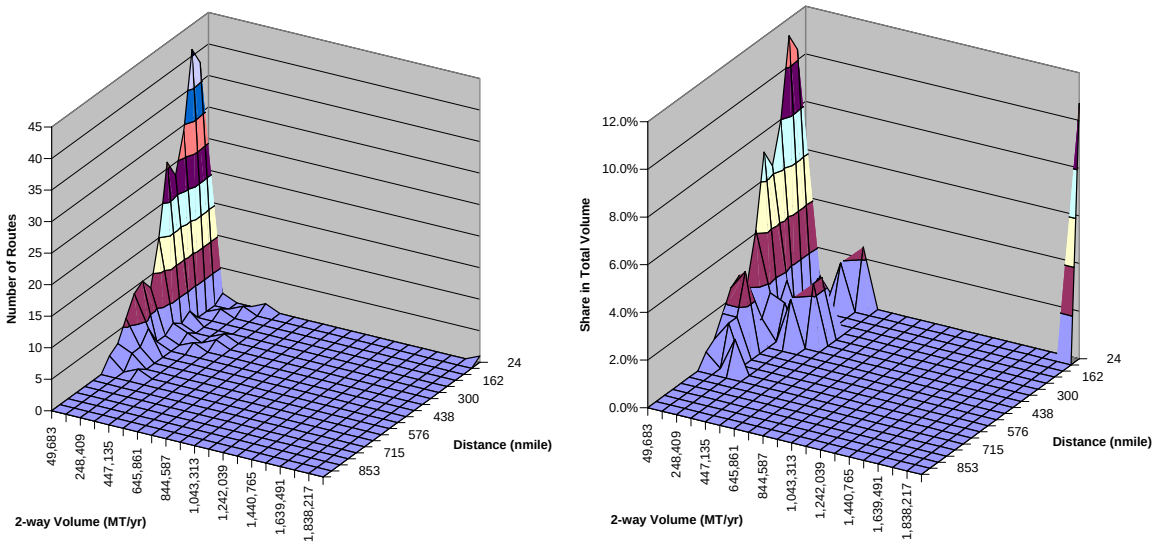


Figure 2.3.13 illustrates the volume distance profile of liquid bulk traffic. With the exception of the Region III-NCR route (which is high volume and short distance), most of the routes are low in volumes. Distances vary with more volumes being transported at shorter routes. Thus, in general, short distances and low volume routes are the predominant case.

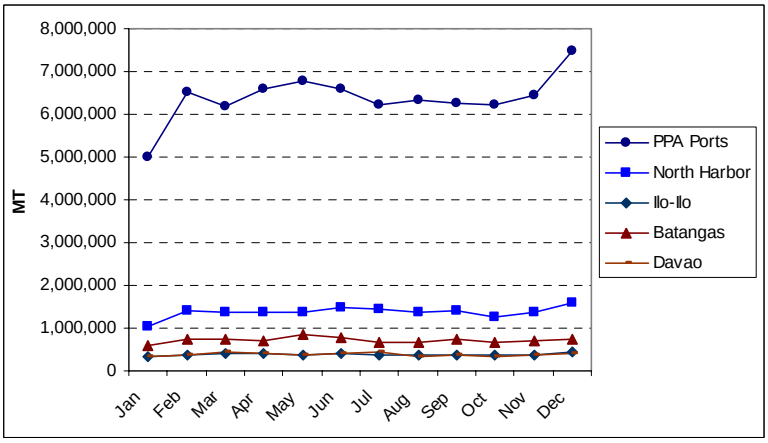
Figure 2.3.13. Volume-Distance Profile of Liquid Bulk Traffic (2002)



(5) SEASONALITY OF CARGO SEA TRAFFIC

Figure 2.3.14, illustrates the monthly port traffic at selected ports, including all commodities. Cargo in aggregate is stable with the exception of a dip in the month of January and a peak in the month of December.

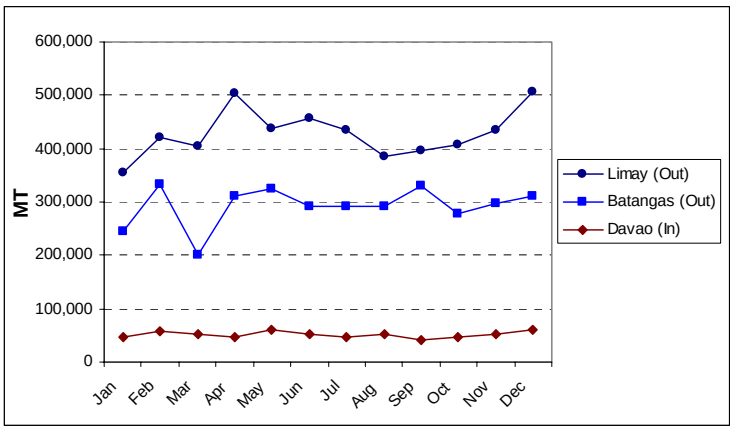
Figure 2.3.14. Monthly Variation of Selected Port Traffic-All Commodities (2003)



Source: PPA Statistics

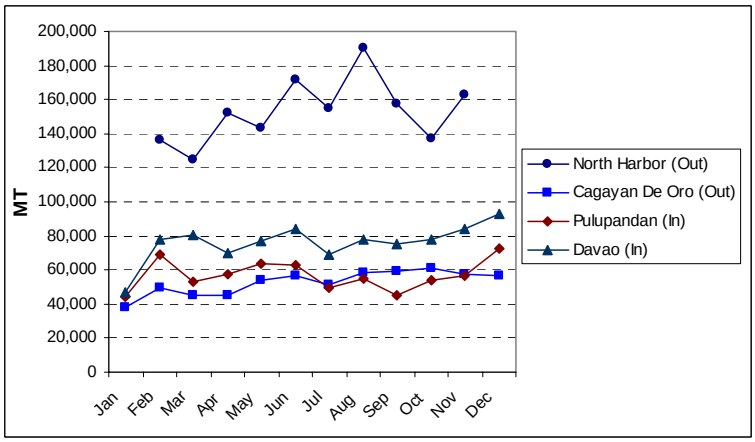
However, closer examination of port traffic per commodity reveals a significant seasonality on a per commodity basis. Exceptions are refined petroleum and general cargo, which is more or less stable throughout the year. Figures 2.3.15 to Figure 2.3.18 illustrate the monthly variation of port traffic of refined petroleum, general cargo, rice and corn.

Figure 2.3.15. Monthly Variation of Selected Port Traffic-Ref. Petroleum (2003)



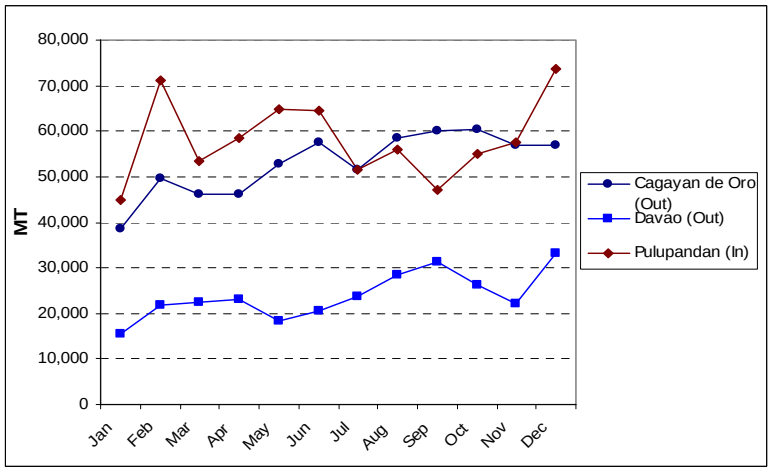
Source: PPA Statistics

Figure 2.3.16. Monthly Variation of Selected Port Traffic-Gen. Cargo (2003)



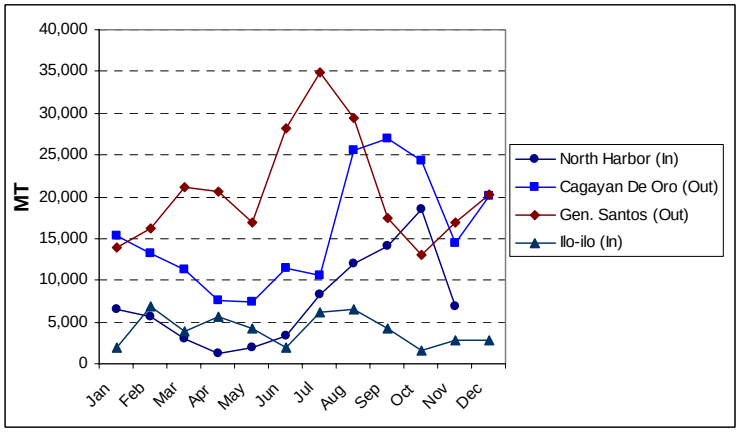
Source: PPA Statistics

Figure 2.3.17. Monthly Variation of Selected Port Traffic-Palay and Rice (2003)



Source: PPA Statistics

Figure 2.3.18. Monthly Variation of Selected Port Traffic-Corn (2003)



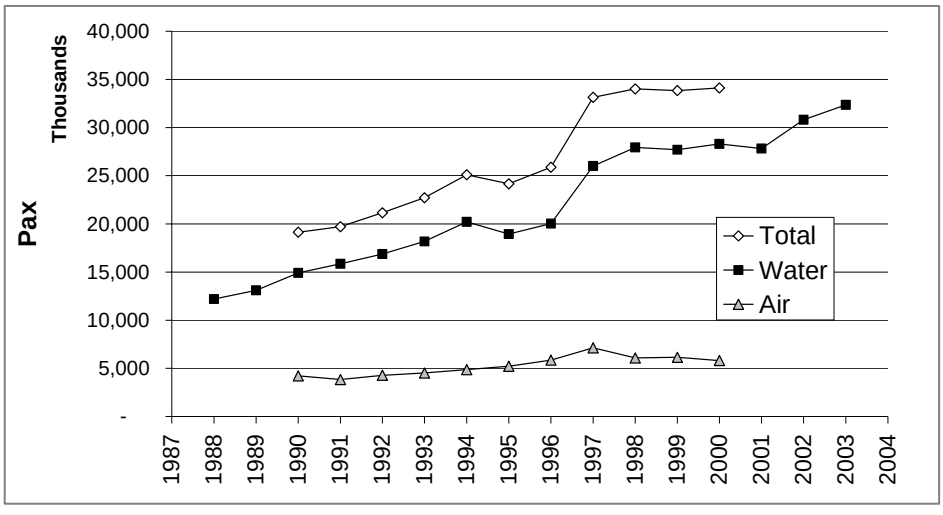
Source: PPA Statistics

2.3.3 Inter-regional Passenger Demand

(1) TREND AND VOLUME

Currently, maritime passenger traffic is about 32 million, up from only 12 million in 1988 or an average yearly growth of 6.7%. During the period there have been three instances when growth stagnated – 1995, 1999 and 2001. For the period 1988 to 2003, the first 10 years experienced substantial growth of 8.3% p.a. during the first half and 9.3% p.a. during the second half of the period 1988-1998. However, in the next five years or in the period of 1999-2003, growth slowed down to only 3.0% p.a. In contrast, air passenger traffic grew by only 3.2% during the period 1990-2000 (see Figure 2.3.19)

Figure 2.3.19. Trend in Domestic Maritime Passenger Traffic



Source: PPA and CPA Statistics; ATO Statistics

(2) ORIGIN DESTINATION STRUCTURE

Figure 2.3.20 roughly shows the inter/intra-regional OD structure of domestic sea passenger traffic. The primary generator/attractor region is region VII, which accounts for 25% of total passenger throughput. While, the other primary generators/attractor are NCR (in Luzon), Region VI (in Visayas), and Region IX (in Mindanao) accounting for 11%, 12% and 11% of passenger throughput, respectively.

Figure 2.3.20. Inter/Intra-Regional OD Structure of Domestic Sea Passenger Traffic (2002)

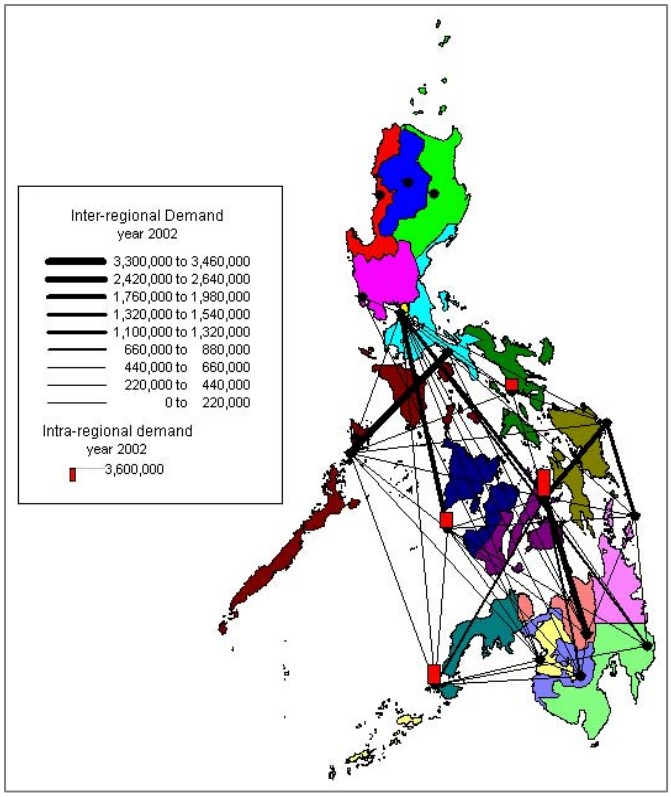
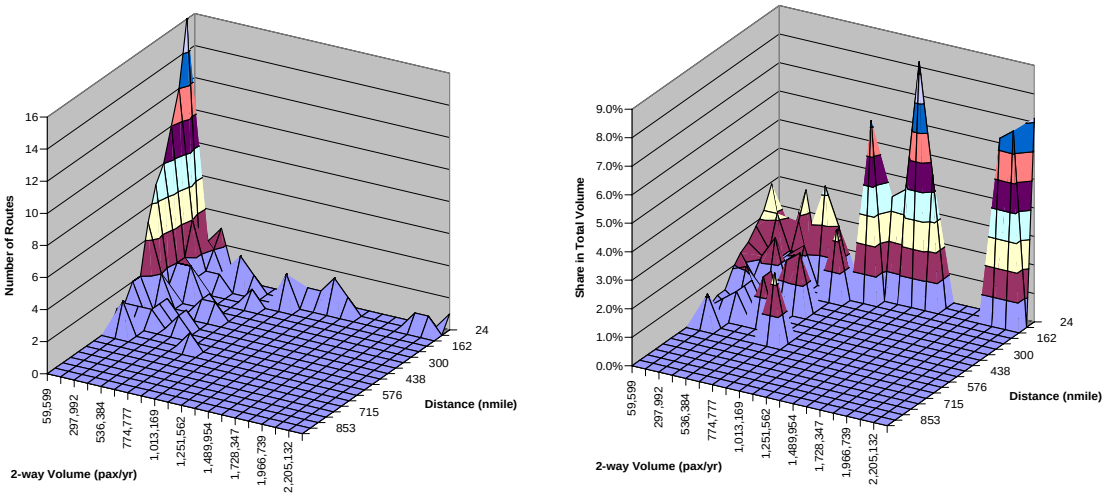


Figure 2.3.21 depicts the volume-distance profile of maritime passenger traffic. In terms of the number of routes, most of the routes serve short distances but with low volume traffic. With respect to share in total traffic, prevalent routes are short distances, (less than 400 nautical miles). Among the short distance routes, dominant routes (in terms of traffic share) are high volume routes, though there is also a decent share of lower volume routes.

Figure 2.3.21. Volume-Distance Profile of Passenger Traffic (2002)

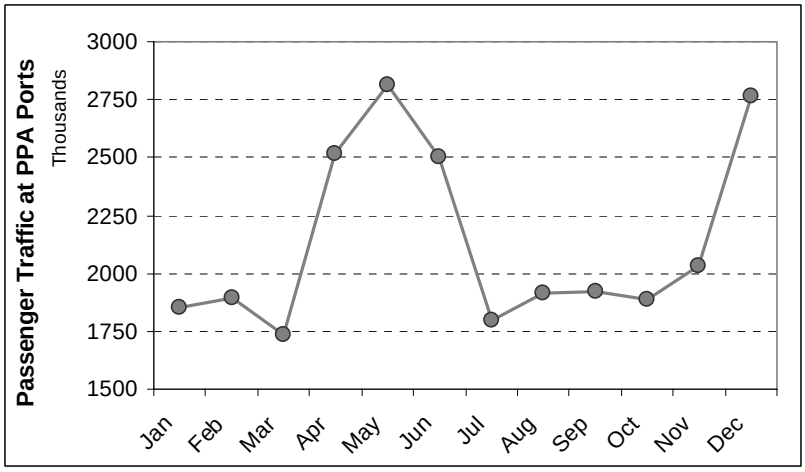


(3) SEASONALITY OF DEMAND

Figure 2.3.22 illustrates the monthly variation of sea passenger traffic at PPA ports.

The trend indicates that there are two peaks during the year, namely April-June and December. In all passenger traffic is very seasonal.

Figure 2.3.22. Monthly Variation of Passenger Traffic (2002)



Source: PPA Statistics

2.3.4 RoRo Survey

To supplement the existing data on maritime traffic flow, a RoRo traffic survey was conducted. Surveyed data is intended to examine the socio-economic profile of trip makers, trip characteristics and opinions on RoRo service. The following RoRo terminals were surveyed from January to February 2005.

- Batangas Port (Calabarzon Region)
- Roxas Port, Mindoro (Mimaropa Region)
- Iloilo Port (Western Visayas Region)
- Dumangas Port, Iloilo (Western Visayas Region)
- Guimaras (Western Visayas Region)
- Dumaguete (Central Visayas Region)
- Matnog Port (Bicol Region)
- Liloan Port (Eastern Visayas Region)

Figure 2.3.23. Location Map of Survey Stations for the RoRo Survey

(1) PROFILE OF RORO SERVICES

The following table profiles the RoRo service in each of the survey port.

Table 2.3.10. RoRo Service Profile at Survey Ports

Survey Port	Service Frequency	Example Vessel	
Batangas	36 trips/day		Ma. Isabel Montenegro Shipping 348 pax cap 836 GRT Built 1967 Japan
Dumaguete	6 trips/day		Filipinas Dinagat Cokaliong Shipping 458 pax cap 1,173 GRT Built 1972 Japan
Dumangas	5 trips/day		Aimee Joan Jomalia Shipping 185 GRT
Iloilo City	8 trips/day		Maria Abgela Montenegro Shipping 283 pax cap 371 GRT Built 1973 Japan
Liloan	5 trips/day		Maharlika Cinco PSEI Transport 758 pax cap 473 GRT Built 1971 Japan
Matnog	20 trips/day		Nelvin Jules Sta. Clara Shipping 750 pax cap 694 GRT Built 1985 Japan
Roxas	4 trips/day		Starlite Voyager Starlite Shipping 600 pax cap 30 sedans Built 1970s