FINAL REPORT

Intermodal Transport Development Project

(Tar No. 37233-01)

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ITDP Main Report

Volume I

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ASIAN DEVELOPMENT BANK

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Engineers • Planners • Scientists • Economists

in association with

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Currency Equivalents
(as of May 2006)

$1.00 = Pesos 52.

In this report, "$" refers to US dollars. A rate of $1.00 = Pesos 52 has been used. This was the approximate exchange rate prevailing during Phase II.

Abbreviations

AADT	-	Annual Average Daily Traffic
AAGR	-	Average Annual Growth Rate
AAP	-	Airport Authority of the Philippines
ADB	-	Asian Development Bank
ADTA	-	Advisory Technical Assistance
AFP	-	Armed Forces of the Philippines
AFTN	-	Aeronautical Fixed Telecommunications Network
AGL	-	Airfield Ground Lighting
AIM	-	Asian Institute of Management
AIS	-	Airport Information System
AO	-	Administrative Order
AP	-	Affected People
ARMM	-	Autonomous Region in Muslim Mindanao
ASEAN	-	Association of South East Asian Nation
ATC	-	Air Traffic Control
ATM	-	Air Traffic Management
ATO	-	Air Transportation Office
ATON	-	Aids to Navigation
BAe	-	British Aerospace
BCDA	-	Bases Conversion Development Authority
BESF	-	Budget of Expenditure and Source of Financing
BIMP-EAGA	-	Brunei Darussalam, Indonesia, Malaysia, and the Philippines-East ASEAN Growth Area
BIR	-	Bureau of Internal Revenue
BOI	-	Board of Investments
BOT		Build Operate Transfer
BRP	-	Better Roads Philippines
BT	-	Build Transfer
CAA	-	Civil Aeronautics Act
CAAP	-	Civil Aviation Authority of the Philippines
CAB	-	Civil Aeronautics Board
CAMP	-	Civil Aviation Master Plan
CAPEX	-	Capital Cost Estimates
CAS	-	Country Assistance Strategy
CDC	-	Clark Development Corporation
CEC	-	Community E-Center
CEZA	-	Cagayan Economic Zone Authority

CFR	-	Crash, Fire and Rescue
CIAC	-	Clark International Airport Corporation
CIQS	-	Customs-Immigration-Quarantine-Security
CMRRP	-	Central Mindanao Rural Road Project
CNC	-	Certificate of Non-Coverage
CNS	-	Communication, Navigation and Surveillance
COA		Commission on Audit
CPA	-	Cebu Ports Authority
CSP	-	Country Strategy for the Philippines
DA	-	Department of Agriculture
DAO	-	Department Administrative Order
DBCC	-	Development Budget Coordination Committee
DBM	-	Department of Budget and Management
DBP	-	Development Bank of the Philippines
DENR	-	Department of Environmental and Natural Resources
DIA	-	Davao International Airport
DILG	-	Department of Interior and Local Governments
DMAP	-	Distribution Association of the Philippines
DME	-	Distance Measuring Equipment
DOF	-	Department of Finance
DOT	-	Department of Tourism
DOTC	-	Department of Transportation and Communications
DPWH	-	Department of Public Works and Highways
DSDA	-	Domestic Shipping Development Act
DTI	-	Department of Trade and Industry
DVOR	-	Doppler Very High Frequency Omni-Range
ECA	-	Environmentally Critical Areas
ECC	-	Environmental Compliance Certificate
ECPs	-	Environmentally Critical Projects
EDC	-	Export Development Council
EDCF/KEXIM	-	Economic Development Cooperation Fund/Korea Export Import Bank
EI	-	Education Index
EIA	-	Environment Impact Assessment
EIB	-	European Investment Bank
EIRR	-	Economic Internal Rate of Return
EIS	-	Environmental Impact Statement
EMIS	-	Emergency Management Information System
EMK	-	Equivalent Maintenance Kilometer
EMP	-	Environmental Management Plan
ENPV	-	Economic Net Present Value
EO	-	Executive Order
EU	-	Environmental Unit
FAPs	-	Foreign Assistance Projects
FED	-	Final Engineering Design
FFTR	-	Fifth Freedom Traffic Rights
FGDs	-	Focus Group Discussions
FIES	-	Family Income and Expenditure Survey

FIR	-	Flight Information Region
FIRR	-	Financial Internal Rate of Return
FNPV	-	Financial Net Present Values
FS	-	Feasibility Study
GA	-	General Aviation
GAA	-	General Appropriation Act
GDP	-	Gross Domestic Product
GEM	-	Growth with Equity in Mindanao
GFI	-	Government Financial Institution
GNP	-	Gross National Product
GOCC	-	Government Owned and Controlled Corporations
GOJ	-	Government of Japan
GOP	-	Government of the Philippines
GPS	-	Global Positioning Systems
GRDP	-	Gross Regional Domestic Product
GRT	-	Gross Registered Tonnage
GVW	-	Gross Vehicle Weight
HDI	-	Human Development Index
HIV/AIDS	-	Human Immunodeficiency Virus /Acquired Immune Deficiency Syndrome
IA	-	Implementing Agency
IALA	-	International Association of Marine Aides to Navigation and Lighthouse Authorities
IATA		International Air Transportation Association
IATCTP	-	Inter-Agency Technical Committee on Transport Planning
IATWC		Inter-Agency Technical Working Committee
IBRD	-	International Bank for Reconstruction and Development
ICAO	-	International Civil Aviation Organization
ICB	-	International Competitive Bidding
ICC		Investment Coordination Committee
IDC	-	Interest During Construction
IEE	-	Initial Environmental Examination
IFR	-	International Frame Relay
II	-	Income Index
ILS	-	Instrument Landing System
IMAG	-	Infrastructure Monitoring and Advisory Group
IMF	-	International Monetary Fund
IMO	-	International Maritime Organization
InfraCom	-	Infrastructure Committee
IP	-	Indigenous People
IPDP	-	Indigenous People's Development Plan
IPSA	-	Initial Poverty and Social Assessment
IRI	-	International Roughness Index
IRRs	-	Implementing Rules and Regulations
IRR		Internal Rate of Return
ISA	-	Initial Social Assessment
ISPS Code		International Ship and Port Facility Security Code
ITDP	-	Intermodal Transport Development Project

JBIC	-	Japan Bank for International Cooperation
JETRO	-	Japan External Trade Organization
JFPR	-	Japan Fund for Poverty Reduction
JICA	-	Japan International Cooperation Agency
JPDC	-	John Hay-Poro Point Development Corporation
KALAHI-CIDSS	-	Kapit-Bisig Laban sa Kahirapan-Comprehensive and Integrated Delivery of Social Services
LARP	-	Land Acquisition and Resettlement Plan
LARPFPG	-	Land Acquisition and Resettlement Policy Framework and Procedural Guidelines
LBGPH	-	Louis Berger Group Philippines
LEI	-	Life Expectancy Index
LGU	-	Local Government Unit
LIBOR	-	London Interbank Offered Rate
LOE		Level of Effort
LO-LO	-	Lift-On Lift-Off
LRT	-	Light Rail Transit
LRTA	-	Light Rail Transit Authority
LTFRB	-	Land Transportation Franchising and Regulatory Board
LTO	-	Land Transportation Office
MARINA	-	Maritime Industry Authority
MARTF		Mindanao Arterial Road Task Force
MBC	-	Mindanao Business Council
MBS	-	Mindanao Budget Summit
MCIAA	-	Mactan-Cebu International Airport Authority
MCTP	-	Mindanao Container Terminal Port
MDFO	-	Municipal Development Fund Office
MEDCO	-	Mindanao Economic Development Council
MIAA	-	Manila International Airport Authority
MILF	-	Moro Islamic Liberation Front
MIMAROPA	-	Mindoro, Marinduque, Romblon, Palawan
MIP	-	Mindanao Investment Program
MIRDP	-	Metro Iligan Regional Infrastructure Development Project
MMDA	-	Metro Manila Development Authority
MOU	-	Memorandum of Understanding
MRT	-	Metro Rail Transit
MSRIP	-	Mindanao Second Road Improvement Project
MTPDP	-	Medium-Term Philippine Development Plan
MTPIP	-	Medium-Term Public Investment Program
MTRDP	-	Medium-Term Regional Development Plan
MVUC	-	Motor Vehicle User's Charge
MWG	-	Mindanao Working Group
NAIA	-	Ninoy Aquino International Airport
NCASP	-	National Civil Aviation Security Program
NCC	-	National Compensation Circular
NCIP	-	National Commission on Indigenous People
NCR	-	National Capital Region

NDC	-	National Development Corporation
NEDA	-	National Economic and Development Authority
NGAs	-	National Government Agencies
NGO	-	Non-Government Organization
NPAC	-	National Ports Advisory Council
NPV	-	Net Present Value
NRA	-	National Roads Authority
NRIMP	-	National Road Improvement and Management Program
NSCB	-	National Statistical Coordination Board
NSO	-	National Statistics Office
NTPP	-	National Transportation Planning Project
O&M	-	Operations and Maintenance
OD	-	Origin-Destination
ODA	-	Office Development Assistance
OECF	-	Overseas Economic Cooperation Fund
OM	-	Operational Manual
OP	-	Office of the President
OPEX	-	Maintenance and Operating Cost
OSCC	-	Office for the Southern Cultural Communities
OTS	-	Office of Transport Security
PAIs	-	Poverty Alleviation Initiatives
PAL		Philippine Airlines
PAMS	-	Project Advisory and Monitoring System
PAP	-	Project-Affected Persons
PAPs	-	Programs and Projects
PAPI		Point of Access to Providers Information
PCCI	-	Philippine Chamber of Commerce and Industry
PCG	-	Philippine Coast Guard
PCGA	-	Philippine Coast Guard Auxiliary
PCI	-	Pacific Consultants International
PCSD	-	Palawan Council for Sustainable Development
PD	-	Project Description
PD	-	Presidential Decree
PEA	-	Public Estate Authority
PENRO	-	Provincial Environment and Natural Resources Office
PG	-	Provincial Government
PHIVIDEC	-	Philippine Veterans Investment Development Corporation
PIA	-	PHIVIDEC Industrial Authority
PIU	-	Project Implementation Unit
PMAC	-	Ports Management and Advisory Council
PMO	-	Project Management Office
PMS	-	Presidential Management Staff
PNCC	-	Philippine National Construction Corporation
PNP	-	Philippine National Police
POID	-	Project Operations and Implementation Department
PPA	-	Philippine Ports Authority
PPMS	-	Project Performance Monitoring System

PPP	-	Public-Private Partnership
PPTA	-	Project Preparatory Technical Assistance
PSA	-	Poverty and Social Analysis
PSA	-	Public Service Act
PSAs	-	Priority Strategies and Activities
PSP	-	Private Sector Participation
PTA	-	Philippine Tourism Authority
PTSD	-	Planning and Technical Services Department
PTSS	-	ADB-assisted Philippine Transport Strategy Study
RA	-	Republic Act
RAP	-	Resettlement Action Plan
RC	-	Reinforce Concrete
RDC	-	Regional Development Councils
RDIP	-	Regional Development Investment Program
REA	-	Rapid Environmental Assessment
REDPB	-	Regional Economic and Development Planning Board
R&FFF	-	Rescue and Firefighting Facilities
RFFS	-	Rescue and Firefighting Service
ROPAX	-	Roro Passenger
RoRo or RO-RO	-	Roll-On, Roll-Off
ROW	-	Right-Of-Way
RPA	-	Regional Port Authority
RPMA	-	Regional Port Management Authority
RRNDP	-	Rural Road Network Development Project
RRPs	-	Rules, Regulations and Procedures
RRTS	-	Road Roll-on/Roll-off Terminal System
RWY	-	Runway
SARP	-	Standards and Recommended Practices
SBMA	-	Subic Bay Metropolitan Authority
SEAIR	-	Southeast Asian Airways
SEMS	-	Safety and Environment Management Staff
SEP	-	Strategic Environmental Plan
SIEE	-	Summary Initial Environmental Examination
SLDP	-	Sustainable Logistics Development Program
SOLAS		Safety of Life at Sea Convention
SOW	-	Scope of Work
SPADP	-	Southern Philippines Airport Development Project
SPMs	-	Strategy Planning Matrices
SRNH	-	Strong Republic Nautical Highway
SSR	-	Secondary Surveillance Radar
SZOPAD	-	Special Zone of Peace and Development
TA	-	Technical Assistance
TADP	-	Third Airports Development Project
TEU		Twenty Foot Equivalent Unit
TOR	-	Terms of Reference
TRB	-	Toll Regulatory Board
TSP/ PM	-	Total Suspended Particulate/ Particulate Matter

TWC	-	Technical Working Committee
TWG	-	Technical Working Group
UNDP	-	United Nations Development Program
UPS	-	Uninterrupted Power Supply
UPT	-	Uniform Port Tariff
USAID	-	United States Agency for International Development
USD	-	United States Dollar
USG	-	United States Government
VAT	-	Value Added Tax
VHF	-	Very High Frequency
VSAT	-	Very Small Aperture Terminal
WACC	-	Weighted Average Cost of Capital
WB	-	World Bank
ZOI	-	Zone of Influence

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

1.0 LOAN AND PROJECT SUMMARY

Borrower	Philippines
Classification	Poverty classification: General intervention Sector: Transport Subsectors: Airports, Ports, and Shipping Themes: Sustainable economic growth, access improvement Subthemes: Fostering physical infrastructure
Environment Assessment	Category B. An environmental assessment was undertaken.
Project Description	The Project comprises of four major components: (i) airport expansion and improvement; (ii) hub port expansion and improvement; (iii) feeder port expansion and improvement; and (iv) consulting services, including support to airport and port subsector reform and training. The airport construction component comprises of the expansion and improvement of three (3) airports (Butuan, Cotabato and Puerto Princesa); the hub port component of two (2) ports (Zamboanga and General Santos); and the feeder port component of three (3) ports (Bongao, Jolo and Sitangkai). The consulting services component provides design and construction supervision services as well as technical assistance to key agencies in the intermodal transport system and support to airport and port subsector reform and training.
Rationale	The development of these airports and ports will enhance intermodal transport and logistics and help to accelerate economic growth and trade in Mindanao and Palawan. The Project will relieve airport and port capacity constraints faced by the project airports and ports and accommodate growing air and sea transport demand. It will enhance regional cooperation as Zamboanga and General Santos ports, Palawan and Cotabato airports have roles as BIMP–EAGA (Brunei, Indonesia, Malaysia, and the Philippines - East ASEAN Growth Area) and ASEAN (Association of Southeast Asian Nations) ports and airports to accelerate development and integration of the region.
Impact and Outcome	The Project will expand the capacity of the airports and ports leading to greater efficiency of movement for cargo and passengers. The Project will result in increased economic development in Mindanao and Palawan, and improved regional cooperation in BIMP-EAGA and ASEAN.

Cost Estimates

The total project cost is estimated at US$ 254.4 million equivalent, including cost of consulting services, physical and price contingencies, interest during construction, taxes, and duties. Of the total cost, US$ 126.1 million or 49.6 % is the foreign exchange cost and US$ 128.3 million or 50.4 % is the local currency cost.

Financing Plan

The proposed Asian Development Bank (ADB) financing represents 65% of the total project cost and will finance the direct and indirect foreign exchange cost and a portion of the local currency cost, interest and other charges during construction, and recurring costs for project management and consulting services. The loan will help finance the civil works for the Project, equipment for the subprojects, and consulting services. The Government will provide the remaining local currency costs of US$ 79.4 million.

(US$ million)

Source	Cost	Percent
Asian Development Bank	166.0	65
Government	88.4	35
Total	254.4	100

The two hub port subprojects will be financed by on-lending to the Philippine Ports Authority. All other subprojects will be financed by on-lending to Department of Transportation and Communication (DOTC).

Loan Amount and Terms

A loan of US$ 166.0 million from ADB's ordinary capital resources will be provided under ADB's London interbank offered rate (LIBOR)-based lending facility.

Period of Utilization

16 October 2007 to 5 August 2013

Estimated Project Completion Date

5 August 2013

Executing Agency

Department of Transportation and Communications

Implementation Arrangements

DOTC will be the Executing Agency responsible for the overall Project. A project steering committee will be established to monitor and coordinate project implementation. The Project will have the following implementing agencies:

- Department of Transportation and Communication; and
- Philippine Ports Authority (PPA)

Procurement

Procurement of all ADB-financed civil works and equipment will be carried out in accordance with ADB's *Guidelines for Procurement*. In most cases, International Competitive Bidding (ICB), with the allowance for preferences for domestically manufactured goods and, where appropriate, for domestic contractors for works under prescribed conditions is the most appropriate method. Therefore, ADB requires its borrowers to obtain goods, works and services through ICB open to eligible suppliers and contractors. Where ICB is not the most economic and efficient method of procurement, other methods of procurement may be used. Some alternative modes are: Limited International Bidding; National Competitive Bidding; Shopping; and Direct Contracting. The particular methods that may be followed for procurement under a given project are provided for in the financing agreement. The following contract packaging is envisaged: sixteen (16) International Competitive Bidding packages; one (1) National Competitive Bidding; and one (1) Direct Contracting (International Civil Aviation Organization (ICAO)).

Consulting Services

All consultants will be recruited in accordance with ADB's Guidelines on the Use of Consultants and other arrangements satisfactory to ADB for the engagement of domestic consultants. Consulting services to be financed under the ADB loan will be required for (i) detailed design, supervision, and project management for the airport and feeder port construction component; for (ii) detailed design, supervision, and project management for the PPA hub port construction component; (iii) support to airport and port subsector reform and training; and (iv) ICAO oversight SARPs review.

These services will be undertaken by five (5) separate consulting firms with total consulting inputs of 258 person-months of international and 1,077 person-months of domestic consultants.

Project Benefits and Beneficiaries

For airports, the economic benefits include improved aviation safety and security, aircraft operating cost savings resulting in part from direct international flights, quicker turnaround times, and the use of larger and more economical aircraft, passenger service improvement benefits, passenger travel cost savings and airfreight cost savings. In addition, the improvement of the airport facilities will directly lead to improved aircraft utilization, reduced incidence of cancellations and diversions and travel-time savings. Through the improvement of facilities to accommodate increased traffic volume and more advanced aircraft, the airport subprojects will generate incremental aircraft operating cost savings. Airport subprojects will also produce economic benefits by attracting more business travelers, whose net expenditure is treated as a benefit; and through improved airport facilities, higher safety and security levels, and better passenger handling services.

For ports, the main quantified economic benefits include reduction of ship turnaround time and losses due to poor cargo handling. Other project benefits that were not quantified include elimination of congestion overcharges, and environmental and social benefits.

The subprojects were found to be economically feasible as demonstrated by the economic internal rates of return (EIRR).

Subproject		EIRR %
Airports	Butuan	35.8
	Cotabato	15.2
	Puerto Princesa	20.8
Hub Ports	General Santos	37.3
	Zamboanga	21.5
Feeder Ports	Bongao	31.7
	Jolo	19.9
	Sitangkai	32.0

Risks and Assumptions

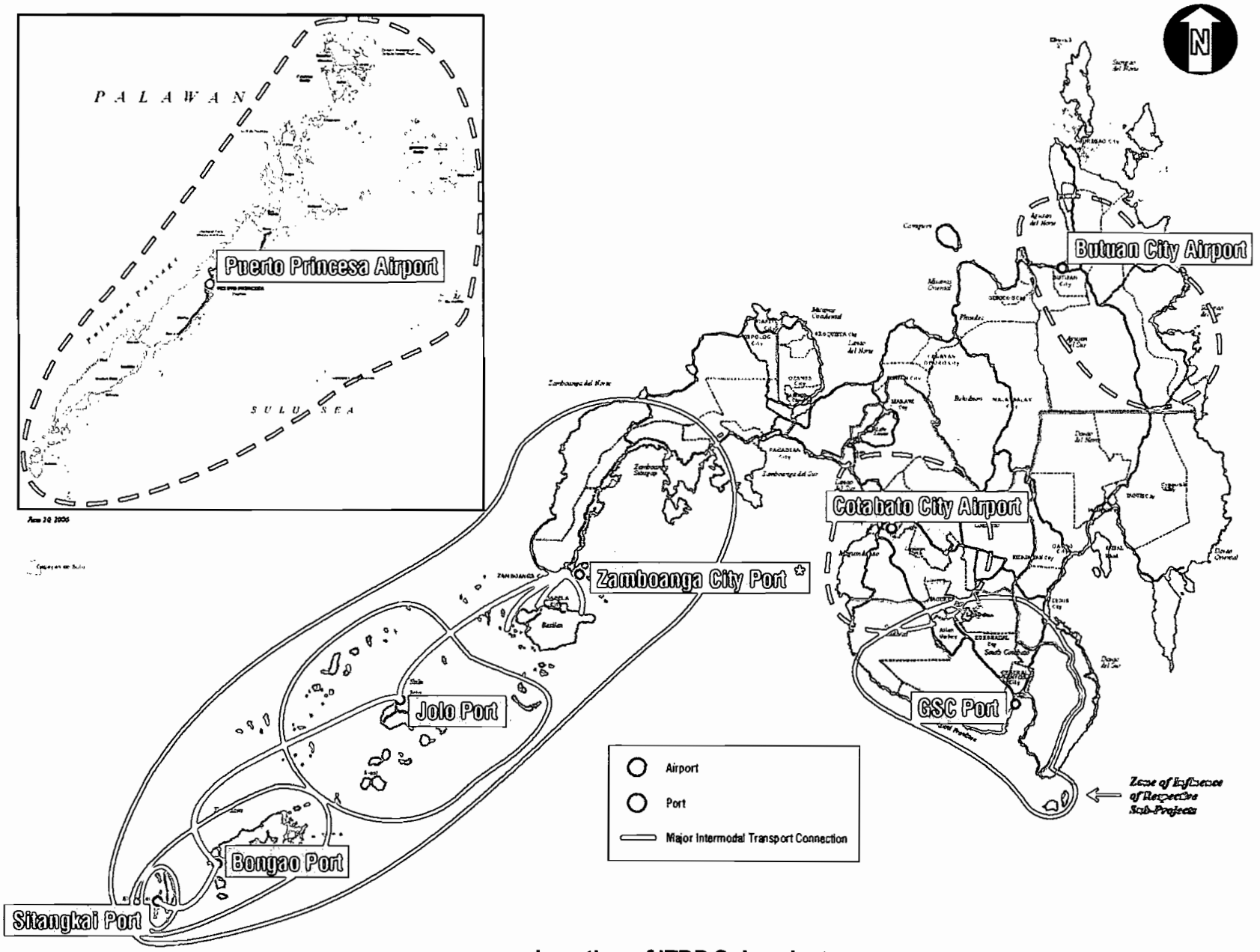
The Subprojects are generally not expected to be subject to any significant economic risks in view of expected traffic growth. The peace and order situation in the Autonomous Region in Muslim Mindanao (ARMM) may pose some impediment to project implementation and realization of benefits but the port and airport subproject sites are well secured while the security situation in the respective areas has improved significantly in recent years.

The Civil Aviation Authority of the Philippines (CAAP) Bill is expected to be enacted in the Third regular session of the Thirteenth Congress.

In terms of project implementation, the risks are considered manageable as DOTC is familiar with ADB procedures, the Government is ready to undertake advance procurement action, the Project does not involve leading-edge technology, and almost all significant land acquisition and resettlement has taken place with only limited land acquisition and resettlement issues remaining. To minimize delays in implementation, the Government and ADB will closely monitor the Project.

To minimize the environmental impacts, environmental mitigation costs were included in the project cost estimates. In addition, a special topic in environmental management is included in the training subcomponent to ensure that the port and airport operators and other stakeholders will pay serious attention to environmental management.

A US$ 2 million grant from the Japan Fund for Poverty Reduction (JFPR) is proposed to implement poverty alleviation interventions in the vicinity of the three feeder port subprojects in the Sulu Archipelago.



Location of ITDP Subprojects

2.0 RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES[1]

2.1 Performance Indicators and Analysis

2.1.1 General

2.1.1 Transport in the Philippine archipelago is often intermodal in character with inter-island as well as intra-island movement combining air, sea and road transport modes. The intermodal transport system and its connections to the hinterland play a crucial role in the socio-economic development of the widely dispersed regions of the country, particularly in Mindanao and Palawan. Improving intermodal transport in the Southern Philippines will provide increased access and opportunity to remote areas where poverty is prevalent.

2.1.2 The provinces of Mindanao (including the Sulu Archipelago) and Palawan, which contain over 25% of the country's population and 40% of the land area, hold enormous economic potential for the Philippines. Nonetheless, inefficient, ineffective and expensive transport has contributed to a historically lower rate of economic growth and higher rates of poverty in these areas. The Intermodal Transport Development Project (ITDP) for the Southern Philippines provides a significant opportunity not only to improve the transport system, but also to help accelerate economic growth, reduce poverty and contribute to peace and development. The design and monitoring framework is in **Appendix ES-A.**

2.1.2 Air Sector Performance

- **Airport System**

2.2.1 The Mindanao and Palawan airport system consists of about 28 functional airports strategically located in the various regions of the two islands. Of the total number of airports in the islands, three airports are categorized by the Air Transportation Office (ATO) as alternate international, three are trunkline, 14 are secondary, and eight are feeder airports. The 2006 Master Plan Study on the Strategy for National Airports, has proposed amending the ATO airport classification system, resulting in the following changes for Mindanao and Palawan airports:

  - **Puerto Princesa** is reclassified to International from current Trunkline;
  - **Butuan**, Dipolog, and Pagadian are reclassified to Principal Class 1 together with most of the current Trunkline airports;
  - Busuanga, Caminguin and Siargao are moved from Feeder to Principal Class 2; and
  - All airports currently with no scheduled flights are named Community Airports.

- **Air Transport Services**

2.2.2 **Airlines**. Domestic air services are provided by three major air carriers: Philippine Airlines (PAL), Air Philippines and Cebu Pacific Air. PAL has no international routes or active international code share agreements from Mindanao or Palawan, but PAL is considering direct international routes into Puerto Princesa subject to demand and the availability of airport

[1] A project preparatory TA was provided for this project: TA PHI-4344 Intermodal Transport Development

facilities. Historical fluctuation in passenger and cargo numbers at some Mindanao airports is due to supply problems (lack of an operator) and not just demand, which was also affected by various events. Air Philippines competes with (or supplements) PAL on some routes, such as Manila-Zamboanga.

2.2.3 Cebu Pacific Air, has undertaken an aggressive modernization and expansion strategy within the Philippine domestic market, and forecasts it will overtake PAL as the top domestic carrier in the next five years. The carrier held a 38% share of the domestic market in 2005.

2.2.4 Under the government's liberalization policy in the 1990's, other airlines were authorized to serve domestic routes. Besides Air Philippines, two other airlines are providing service mainly on secondary and feeder airports: Asian Spirit and Southeast Asian Airways (SEAIR).

- **Air Sector Traffic**

2.2.5 New air traffic demand forecasts for international and domestic airports were prepared under the 2006 Master Plan Study on the Strategy for the Improvement of National Airports, serving as the basis for planning the strategy for improving the national airports in the Philippines. These forecasts were reviewed and later adopted for ITDP.

2.2.6 Puerto Princesa, Butuan and Cotabato airports were ranked 5th, 6th and 7th among Mindanao and Palawan airports in 2005. Their respective ranks in 2010 are forecasted to be 5th, 6th and 8th, with corresponding annual domestic air passenger demand of 340,888, 251,800 and 100,668 passengers.

2.1.3 Maritime Transport Sector

2.2.7 The review of the maritime transport sector included the key topics of: Port System, Shipping Industry, Port Traffic and Inter-Regional Flows, Port Security and Safety, National Port Master Plan, Strong Republic Nautical Highway (SRNH) and Road Roll-on/ Roll-off (RoRo) Terminal System, Ports and Shipping Reforms, and PPA Port Development Program, 2005-2011.

- **Port System**

2.2.8 The port system of the Philippines consists of public ports and private ports. The public ports are administered by various government agencies, while the private ports are owned and operated by private firms that are usually handling specific commodities. Some of the private ports are operated by shipping companies and terminal operators that are handling various types of cargoes and commodities.

2.2.9 The PPA is responsible for managing and operating all of the country's public ports. However, new port authorities have been created for the management and operation of the ports within specific areas and zones. Regardless of the creation of these new port authorities, the PPA remains the principal agency in the administration and management of most of the major ports in the country. Public ports within the ARMM are managed by the Regional Ports Management Authority (RPMA) which is based on the role and responsibilities of PPA, while municipal ports are managed by Local Government Units (LGUs).

2.2.10 Current cargo movements between the greater economic zones and the gateway ports to the international trade indicate their strong linkage. Major inter-regional cargo movements link the major hubs at Manila, Cebu, Cagayan de Oro, Davao and Zamboanga.

2.2.11 In addition to the nationwide trunk shipping routes, short distance ferries serve the island provinces and major islands. These short-distance ferry service routes complement the nationwide maritime transport system. Some of the ferry routes, coupled with the highways, constitute the intermodal transport corridors.

2.2.12 Due to poor highway conditions, security reasons and the reliance on ports for passenger and cargo transport, the economy of Mindanao has developed four growth zones, with the major ports in Mindanao emerging as the gateway of the respective economic zones: Davao and General Santos Ports are the gateways of Southern Mindanao; Zamboanga Port for Western Mindanao; Dapitan, Ozamiz, Iligan and Cagayan de Oro are the gateways of Northern Mindanao; and Nasipit and Surigao Ports are the gateways of Eastern Mindanao. While the private ports in Mindanao have more important roles in international trade, the public ports are dominant in the domestic trade and passenger transport.

2.2.13 The gateway ports of Palawan are Puerto Princesa, Coron and Culion Ports. Scheduled shipping service is available from Manila, Batangas, Iloilo and Dumaguete to Puerto Princesa. The long-distance ferry plying between Manila and Puerto Princesa makes stopover at Coron, Busuanga Is., and Culion, Culion Is. Between Puerto Princesa and Brooke's Point, there is a local service. Brooke's Point Port serves the coastal communities in the southern islands.

- **Shipping Industry**

2.2.14 The Philippine domestic shipping industry is usually referred to as being oligopolistic in nature, i.e. shipping operations in domestic trunk lines continue to be served by few big companies. Small sized shipping companies dominate the domestic shipping industry; some of these are single vessel operators, somewhat similar to jeepney operations in the land transport sector. Most of these companies are registered in cities other than Manila and Cebu.

2.2.15 A major development in domestic shipping was the enactment of the Domestic Shipping Development Act (DSDA) of 2004, which adopts the policy of deregulation of fare setting in the industry. Henceforth, domestic ship operators are authorized to establish their own shipping rates for both passenger and cargo, provided that effective competition is fostered and public interest is served. The public interest is to be protected and safeguarded by the Maritime Industry Authority (MARINA) exercising regulatory intervention. DSDA allows the granting of franchise to the company, instead of the vessel. The ship operator proposes the level and types of service for the route(s) applied for. The operator is given the flexibility to determine which vessel would be deployed in a particular route at a particular time to adapt to the fluctuating demands of the route(s). MARINA would still regulate entry into the industry by imposing the requirements of citizenship (franchise can be granted to Filipino citizens only), financial capability (to ensure sustainable operations) and safety regulations.

2.2.16 Domestic shipping faces formidable challenges among which are: (i) rising fuel and ship repair costs; (ii) competition from the airline industry; and (iii) limited increase in passenger and cargo traffic.

- **Port Traffic and Inter-Regional Flows**

2.2.17 In 2004, the aggregate cargo throughput nationwide reached 157.4 million metric tons, or 7.3% higher than in 2003. Total sea passengers grew at a slower pace at only 2.6% with 53 million people served in 2004.

2.2.18 For the Southern Philippines on the other hand, port cargo traffic maintained its level in 2004 which can be attributed to the continued shipment of export goods from Mindanao ports, particularly coconut oil, banana, tuna, fresh pineapples and iron ore agglomerates. More than 52% of the country's export cargo originated from and were handled at Mindanao and Palawan ports. By 2009, Southern Philippines ports are expected to handle about 55.6 million tons of cargo.

2.1.4 Institutional Framework

- **General**

2.2.19 Several Government agencies are involved in the planning and administration of the transport sector. The DOTC is the primary agency which, either directly or through its subordinate agencies, oversees policies, planning, operations, regulations, and investment in all modes except for road infrastructure. The Department of Public Works and Highways (DPWH) is responsible for the planning, construction, and maintenance of the national road network, while for lower categories of road it shares the planning and administrative tasks with the Department of Interior and Local Governments (DILG). The National Economic and Development Authority (NEDA) appraises, monitors, and coordinates public investments in the sector and has an advisory and coordinating role in the formation of sector policies. Other agencies that have a role in the sector include the Department of Finance (DOF) regarding domestic and foreign financing and taxation; and the Board of Investments (BOI), an agency under the Department of Trade and Industry (DTI), for policies concerning domestic vehicles assembly as well as investment incentives for private sector infrastructure development. Coordination among the various Government departments and agencies is undertaken through interdepartmental committees, many of which are chaired by NEDA, and ultimately by the NEDA Board, which is a cabinet-level committee comprising all departments concerned with economic and financial matters and chaired by the President of the Philippines. **Appendix ES-B** presents the key agencies involved in the sector.

- **Air Transport**

2.2.20 Civil aviation in the Philippines is under the supervision of the DOTC, and managed by two of its agencies: the ATO and the Civil Aeronautics Board (CAB). The ATO handles airport operation, air navigation and air traffic management, and the CAB deals with regulation of air transport services.

- **Maritime Transport**

2.2.21 The PPA, which was created in 1975 through Presidential Decree 505, as amended, is mandated to formulate a comprehensive national port development plan and program. PPA is attached to the DOTC for policy and program coordination. Subsequently, by Executive Order No. 159, issued in 1987, PPA became financially autonomous.

2.2.22 In addition to PPA, the DOTC undertakes port development projects which are financially non-viable but socially needed. The creation of new port authorities and public port management bodies is a recent development. The Cebu Port Authority (CPA) spun off from PPA in 1992 as part of the government's decentralization policy based on Republic Act No. 7621 (i.e. CPA Charter). The Subic Bay Metropolitan Authority (SBMA) and Poro Point Management Corporation under the Bases Conversion and Development Authority (BCDA), which are responsible for the administration/ management of Subic port and San Fernando port respectively, were also created. The Regional Ports Management Authority in the Autonomous Region in Muslim Mindanao (ARMM-RPMA) was created to administer and manage the ports in the region, which were transferred from PPA. Furthermore, the PHIVIDEC (Philippine Veterans Investment Development Corporation) Industrial Authority (PIA) established the Mindanao Container Terminal near Cagayan de Oro. Aside from PPA and CPA, these public port management bodies are outside of the administrative jurisdiction of DOTC. In short, as of February 2005, there is no nationwide coordination body for port development and operations.

2.2.23 Key to the success of the ITDP is the extent of involvement of various stakeholders and the level of coordinative effort in bringing out the issues and concerns of these stakeholders. The inter-relationships and respective roles of agencies and institutions are also described in Appendix ES-B.

2.1.5 Government Policies and Plans

- **General**

2.2.24 Government policy has placed high priority in developing the Southern Philippines; Mindanao including the ARMM and the island of Palawan. Intensive peace and development efforts are being targeted on the region to promote greater regional equity, increased employment, and improved incomes in these poor but resource-rich areas. These areas are part of BIMP-EAGA and are the subject of intensive initiatives by the Government, intended to accelerate development of the Southern Philippines through regional cooperation with neighboring Association of South East Asian Nations countries. The establishment of transport and civil aviation infrastructure links is a key strategy of BIMP-EAGA to encourage regional economic development.

- **Airport Safety and Security**

2.2.25 The ATO is tasked with ensuring safe, reliable, economical, and efficient air transportation, fully integrated with the national transportation system, taking into account the requirements of national interest and local concerns in accordance with the ICAO Standards and Recommended Practices (SARPs). On the other hand, the Office of Transport Security (OTS) within the DOTC was established on January 30, 2004 under Executive Order (EO) No. 277 as the designated appropriate authority for civil aviation security in the Philippines. The OTS is responsible for implementation of the National Civil Aviation Security Program (NCASP).

- **Civil Aviation Reform Agenda**

2.2.26 For the last 10 years, the Philippine government took a number of steps towards a more liberal civil aviation policy framework, particularly in the delivery of air services. Borne out of the policy and capacity-building recommendations of the ADB-assisted Philippine Transport Strategy Study (PTSS), the earlier Updated Medium-Term Philippine Development Plan (MTPDP) (2001-2004) set new directions towards longer-term improvement in governance,

structural reforms, partnership approach, increased transparency and accountability and mainstreaming of stakeholders participation in infrastructure development. Over the years, the government, in cooperation with international lending institutions and bilateral partners, initiated pro-market policy reforms, substantial privatization (i.e. unbundling of government functions), and private sector participation in capital projects, among others.

2.2.27 **Pricing of Airport Services**. The 1997 PTSS recommended that airports should be financially self-supporting, except where: air services provide vital communications for people in isolated parts of the country, which requires some form of subsidy; and for developmental airports designed to stimulate local economic growth.

2.2.28 To date, proposed adjustments in airport fees and aeronautical charges have not been approved. There appears to be no urgency in setting new tariff rates, despite the recent adjustment by Manila International Airport Authority (MIAA) and Mactan-Cebu International Airport Authority (MCIAA), for instance, of their domestic passenger terminal fee from PhP 100 to PhP 200 in August 2005.

2.2.29 **Corporatization of ATO**. The Philippine Government committed to ADB under the Third Airports Development Project (TADP) the restructuring of ATO and CAB into a government-owned corporation responsible for safety regulation, operation of national airports, and the regulation of domestic and international air services. The ADB also provided support to the ATO Task Force in crafting the proposed legislative measure. However, no bills were passed, due to insufficiently detailed presentation by DOTC at the Congress. Recently, a consolidated version of a CAAP as a single aviation body that will have regulatory and operational mandate was forwarded to the Senate and House of Representatives but has not yet been passed.

- **Airport Development Plan and Program**

2.2.30 The Government previously secured loans from the ADB and the European Investment Bank (EIB) under a parallel co-financing arrangement to fund significant portions of TADP as part of the Government's continuing program to develop and improve the domestic aviation sector through the upgrading and rehabilitation of airport equipment and facilities to internationally prescribed standards.

2.2.31 The TADP, under the DOTC, sought to upgrade six local airports, including Puerto Princesa, Butuan, and Cotabato to better levels of service and in a way that met ICAO prescribed international safety and security standards and practices. The scope of the project included land acquisition and resettlement, civil and building works, equipment acquisition and installation, and technical assistance on sector restructuring and human resources development.

2.2.32 The EIB loan expired in 2002, while the closing date for the ADB loan was in 2003. The TADP project had suffered critical implementation problems that significantly slowed down the progress of works. The TADP was cancelled with the loan effectivity not being further extended.

2.2.33 The Government and ADB agreed in principle that new loans may be considered to finance the components of the project that failed to materialize under the original TADP loans. To distinguish and separate new activities from the TADP, the implementation and financing of projects under the proposed new loans envisioned was agreed to be referred to as the Southern

Philippines Airport Development Project (SPADP). With no firm commitment by Government to proceed with the proposed SPADP, the six airports were included in the scope of work and reduced to three under the ITDP.

- **Port Security and Safety**

2.3.34 The new International Ship and Port Facility Security Code (ISPS Code) took effect from July 2004, under the 1974 Safety of Life at Sea Convention (SOLAS), as amended. In response to the International Maritime Organization (IMO)-mandated compliance with the ISPS Code and to avert further security problems, the Office for Transportation Security (OTS) under the DOTC was created. Originally, the primary responsibility of the OTS was to implement guidelines of the ICAO on aviation security. President Arroyo designated the OTS as the "Single Authority Responsible for the Security of the Transportation Systems of the Country" which expanded its powers. On 31 May 2004, DOTC issued the National Maritime Transport Security Programme containing the Guidelines for Ship and Port Facility Security Assessment and Plans. OTS reported that, as of 31 July 2006, eighty eight (88) international ports in the country, including the PPA base ports in Mindanao and Palawan, servicing ships engaged in international voyages are ISPS Code compliant. To further support improving security in the region, the ADB has initiated the preparation for regional technical assistance on port security for ASEAN countries.

- **National Port Master Plan**

2.3.35 To achieve the establishment of a nationwide Maritime Transport Network, the 2004 Port Master Plan[2] proposed the following three packages: development of selected International Gateway Ports; improvement of Domestic Container Transport Efficiency; and Development of Break Bulk Cargo Handling Facilities.

2.3.36 To formulate a maritime transport base to support regional development, the 2004 Port Master Plan proposed programs to enhance of the mobility of people and goods in the regions; secure transportation services to support daily life in remote islands; and support to the Social Reform Program of the Government. The cost of the whole long-term development plan is estimated to be almost PhP 150 billion. In addition to the infrastructure development plan, the Master Plan also made various recommendations to improve the management and operation of the country's ports, including:

- Institutional reform of port administration; and
- Strategies for the improvement of port management and operation.

2.3.37 **Strong Republic Nautical Highway (SRNH) and Road Roll-on/ Roll-off Terminal System (RRTS).** Roll-on, Roll-off (RoRo) transport system is a time- and cost-efficient way of moving cargo and passengers. The system was initially introduced along the Pan-Philippine Highway, with two RoRo crossings at Matnog-Allen and Liloan-Lipata. Over the years, other RoRo routes were developed connecting the various islands of the country, and expanded recently because of the prominence of the development of the SRNH in the Ten-Point Agenda under the current MTPDP.

[2] JICA, Study on the Master Plan for the Strategic Development of the National Port System, Jan. 2004

2.3.38 Due to the success of the RoRo service, the term "SRNH" has been used to describe the RoRo systems connecting the main islands of the country. The western nautical highway system has been extended to Zamboanga City then to the RoRo ports in the island provinces of the ARMM via Zamboanga. The ports of Siasi, Bongao and Jolo as part of the expanded SRNH and the RoRo link Zamboanga-Lamitan as a missionary route was approved.

2.3.39 The RRTS is focused on promoting private sector participation and investment in the development and operation of the Road Roll-on/ Roll-off Terminal System. The original EO set a limit to the distance covered by RRTS to not more than fifty (50) nautical miles. The coverage has since been expanded to include long haul RoRo vessels to further support the Government's agri-fisheries modernization programs and to reduce the cost of inter-island transportation.

2.3.40 The objectives of related presidential issuances are to: (i) reduce the cost of inter-island transportation through the establishment of a safe, efficient and cost- effective RRTS; (ii) enhance the country's agro-fisheries modernization/ food security programs; (iii) enhance tourism, transportation and commerce throughout the country; (iv) promote private sector participation in the establishment, construction and operation of RRTS facilities; and, (v) establish a new policy to promote the development of RRTS.

2.3.41 In 2005, Japan International Cooperation Agency (JICA) published a macro study on the feasibility of the development of RoRo routes. From their evaluation, the study found that to be able to generate an Internal Rate of Return (IRR) of 12% or above, the average load factor of the missionary routes should be 70% which is a daunting task, considering the highly seasonal and uni-directional character of cargo and passenger movement. In order to develop the country's infrastructure services and logistics network, the following were recommended: (i) A standard RoRo port design should be developed to accommodate RoRo vessels and meet the potential market demands and allow the vessels to operate more efficiently; (ii) Financial assistance should be provided to existing ship operators to enable them to upgrade their fleet while loan facilities should be made available to investors who want to enter into the domestic shipping and logistics industry; and (iii) The government should implement institutional reforms that will facilitate the development of the domestic shipping industry, such as: (i) Monitoring of freight and passenger fare rates; (ii) Formulating more appropriate rules and regulations governing the local water transport industry; and (iii) Improvement of existing search and rescue system including ship-to-shore communication systems.

2.3.42 **PPA Port Development Program, 2005-2011**. The Port Development Plan is being updated by PPA as of the writing of this report. After consultations with the Study Team, PPA forwarded a list of major port projects for possible Office Development Assistance (ODA) availment. The figures provided were different from the figures from the Port Development Plan. Further coordination with PPA would be done to clarify the scopes of the proposed port projects and their cost breakdown. Please see **Table 1** for the listing of the port projects in the study area for possible ODA availment.

Table 1: Proposed Major Port Projects in Southern Philippines for ODA Support

Port and Scope of Work	Est. Cost (Million Pesos)
1. Port of Sasa, Davao City: Wharf Extension & Reclamation of Back-up Area	910
2. Port of Cagayan de Oro: Reclamation of Back-up Area, 4.0 Has.	600
3. Port of Surigao: Wharf Extension, 120 l.m. and Reclamation of Back-up Area	223
4. Port of Zamboanga: Wharf Extension and Reclamation of Back-up Area	511
5. Port of General Santos: Wharf Extension & Reclamation of Back-up Area	2,010
6. Port of Ozamis: Reclamation of Back-up Area, 0.69 Has.	104
7. Port of Nasipit: Reclamation of Back-up Area, 1.5 Has.	225
8. Port of Puerto Princesa: Reclamation of Back-up Area, 1.66 Has.	249
Total Cost	**4,832**

Source: Philippine Ports Authority

- **Ports and Shipping Reforms**

2.3.43 A number of policy studies noted that the "reported high cost of shipping not only has negative implications for the overall efficiency, competitiveness and growth of the Philippines, but it also makes it more difficult for the Government to achieve its poverty reduction objectives." Inefficient port and shipping services make foreign imports, particularly of agricultural commodities, more competitive than domestic products, and in the case of exports, they reduce the income of farmers and producers in Mindanao and other islands.

2.3.44 These studies pointed to the institutional framework of the PPA, being the developer, operator and regulator, as a major flaw that hinders improvement of port infrastructure and services. Since PPA is the government agency that issues permits to construct and operate ports, it has the power to control competition. However, it must be said that PPA has granted permits to private ports that are in close proximity to, and in competition with their existing ports.

2.3.45 Another issue is PPA benefiting from its own regulations. PPA regulates and approves port tariffs and increases thereof. PPA's charter allows it to have a share of at least ten percent (10%) from cargo handling revenues. This creates a conflict of interest for PPA because higher cargo rates would result in higher revenues for PPA.

2.3.46 Because of these identified concerns in the policy and regulatory system in the ports subsector, studies and policy papers have recommended the review and amendment of the charter of the PPA (and by extension of the rationale, of the CPA and RPMA of ARMM), and to separate the regulatory responsibilities from ownership, development and operation functions. The proposed policy review under the loan should consider the clear delineation of the roles of the government and the private sector in the development and operation of ports and port facilities and how to pursue the objective of developing ports in less developed areas of the country.

2.3.47 The passage of Republic Act No. 9295, otherwise known as the Domestic Shipping Development Act of 2004, led to many reforms in the domestic shipping industry. Fare setting was deregulated with the objective of keeping tariff competitive and affordable. Franchising requirements and procedures were simplified by dispensing with the tedious requirements and procedures previously provided in the Public Service Act, as amended, and related MARINA Circulars.

2.3.48 Another reform being advocated is to devolve localized franchising functions to the LGUs. The current organizational structure and manpower level of MARINA makes it difficult for this agency to effectively evaluate all franchising applications, especially from remote island or coastal communities. To better regulate and further develop local shipping, it is recommended that franchises for shipping services within the territories of the LGUs (municipal or provincial) should be devolved to the appropriate LGU. This is very much like the devolution of regulation of tricycle operations from the Land Transportation Franchising and Regulatory Board (LTFRB) to the LGUs. However, MARINA should provide guidelines for the proper evaluation of the safety regulatory requirements on vessels.

2.2 Analysis of Key Problems and Opportunities

2.2.1 Problems, Causes, and Key Challenges

2.3.49 **Infrastructure Capacity Issues.** Port facilities for container and RoRo operations are limited in Mindanao and Palawan. With the heavy reliance on the maritime transport for the movement of cargo, the efficiency and productivity of port operations become of vital importance. With the growth rates at the major ports in Mindanao and Palawan, particularly for Puerto Princesa, Zamboanga, Surigao, General Santos, and Davao, higher than the average rate increase for the whole country, major expansion of port facilities have to be undertaken within the next ten years.

2.3.50 According to the 2006 Airport Master Plan and confirmed in the ITDP airport assessment, Mindanao and Palawan airports would need runway improvements, obstruction clearing, night landing facilities, installation of air navigational systems for enhanced IFR operations, and basic upgrading of security systems (mainly security fences to prevent entry of unauthorized persons, vehicles and stray animals into restricted areas) to accommodate unrestricted operations of A330, A320 or B737 aircraft. The forecast of passenger traffic at the different Mindanao and Palawan airports reveals that faster annual growths are expected for General Santos (8.6%), Butuan (6.8%), Davao (6.1%) and Cagayan de Oro (5.8%). By 2015, Cagayan de Oro Airport will join Davao Airport with air passenger traffic of more than 1 million, and by 2020, General Santos Airport will have reached 1.1 million overtaking Zamboanga Airport as the fourth most important airport in the project area.

2.3.51 **Financing Gap and Regulatory Constraints.** The fundamental problems of the ports sector include the lack of sufficient government budget for investment, and private sector participation (PSP) has been limited due to perceptions of risk, especially in ARMM. Moreover, the RPMA ports suffer from lack of trained management and technical personnel which has led to poor service. Poor financial performance in port operations is also attributed to relatively low traffic volumes thru these ports.

2.3.52 On civil aviation, ATO does not have financial autonomy. ATO, which operates and manages all Philippine airports (except for international airports and small runway strips in private reports), has no control of its revenue streams. That is, ATO has no authority to either use its revenue for airport operations or regulate airport tariffs to meet sustainable operations. The National Treasury, under the single fund concept, receives the entire airport revenue from the currently low tariffs. Each year, the Congress-approved General Appropriations Act (GAA) allocates a budget to ATO through the DOTC for airport improvement, operation and management, which is hardly adequate to meet the required expenditures for airports. As a result, the operational and safety standards today in almost all ATO-managed airports are far below those stipulated by ICAO, in technical as well as safety and security aspects.

2.3.53 **Civil Aviation Authority of the Philippines (CAAP) Bill.** The CAAP Bill has the prime objective of transforming the ATO, into a financially autonomous corporate body. If the Bill is passed, ATO will be an independent government corporation, which can regulate tariffs and cross-subsidize to operate and manage its network of airports and air traffic/navigation facilities in a financially sustainable manner.

2.3.54 The existing BOT law is supportive of PSP, but issues related to risk allocation have remained contentious and this has discouraged private sector interest. This will be addressed in part by the Policy and Institutional Development package under the proposed ITDP project.

2.2.2 Lessons Learned

- **Legislative Agenda**

2.3.55 During 2000-2001, a draft bill creating the CAAP was submitted to Congress which did not approve it. The main reason for this was an agreed legislative agenda which excluded the bill in the list of priority and urgent bills as certified by the President. Moreover, the other reason was insufficient preparation by the lead agency of the bill before submission, which required thorough and systematic consultation with all stakeholders involved, mainly ATO and CAB, to reach a unified position on the bill. When Congress questioned various stakeholders, it was not convinced that the ATO and CAB were ready for this proposed change, due to their non-uniformity of opinion on the proposed Bill.

2.3.56 Past ADB intervention addressed the Bill's necessity and how it should best achieve the stated objective above. In addition, the JICA completed "The Master Plan Study on the Strategy for the Improvement of National Airports in the Republic of the Philippines" in March 2006, which also addressed the CAAP Bill, proposing a draft version. The present ADB Technical Assistance, the ITDP, further assisted DOTC to modify this draft version and prepared it for submission by DOTC.

- **Upgrading Technical and Management Capacity**

2.3.57 The growing volume of goods traded domestically and internationally has led to increasing demand for transport services. This requires higher standards of port performance and more efficient and reliable services. Ports serving international trade will also have to comply with the International Ships and Port Facility Security Code. In addition, uncertainty about regional port management is also a concern. Under the local government code, which was first issued in 1991 increased autonomy was given to the local governments (provinces and cities).

2.3.58 Furthermore, the law creating the Autonomous Region in Muslim Mindanao provides that except for authority relating to foreign relations, national security, judicial system, monetary and fiscal policy, and religion, all other governmental authority rests with the ARMM. This means that the ARMM has the authority to manage its own ports. However, the transition from national management to regional management has not been without problems. The main problem has been the political nature of the appointments of personnel at the ports authority in ARMM. Since the management is replaced every time a new ARMM governor is elected, there has been limited follow-up or follow through with regard to management policies and more importantly in improving expertise and basic management competency.

- **Project Implementation**

2.3.59 The Bank's three most recent loans[3] to the civil aviation sector in the Philippines have been directed at upgrading the Manila and Davao international airports and regional airports in the Southern Philippines. The major objectives of the projects included expanding the civil aviation infrastructure to facilitate access to economic opportunities in both domestic and international markets; upgrading of facilities to meet minimum international safety and operating procedures; and strengthening the capacity of Government agencies through advisory Technical Assistance (TA) and human resource development.

2.3.60 The objective of strengthening the efficiency of Manila International Airport operations and making them financially sustainable was not fully achieved. The experience highlighted the importance of conducting preparatory studies and preliminary designs for complex projects before entering into project financing agreements.

2.3.61 The principal problems encountered in the implementation of the last two ADB-funded airport projects were front-end delays due mainly to protracted recruitment for consultants and slow approval of bidding documents. Additional delays occurred because of initial problems with land acquisition and resettlement. While DOTC and ATO are competent executing agencies, lessons learned include that there is a need to minimize delays in obtaining approvals for consultant selection and contract awards, streamline DOTC's internal approval procedures to ensure conformity with relevant Bank guidelines, and implement in a timely manner land acquisition and resettlement. These issues have been raised with DOTC and ATO, and measures have been taken into account in the design of the Project.

2.2.3 ADB's Transport Sector Strategy

2.3.62 Bank assistance to the transport sector focuses mainly on the development of national and provincial roads, airports, and ports. The ITDP directly supports the current ADB country strategy for the Philippines (2005-2007), which stresses the "*high priority to improve access to remote areas of the Southern Philippines, at relatively low costs and improve the efficiency of the intermodal transport system, by reducing deficiencies in land, air and sea systems and improving network interconnections.*" Notably, in pursuing poverty reduction and economic growth objectives with the Government, ADB proposes to continue the sector-level policy dialogue on: policies and regulatory issues which adversely affect the delivery of transport services; increased Private Sector Participation (PSP) and Public-Private Partnership (PPP); and strengthening intermodal transport planning.

2.3.63 By targeting remote areas for improvement and development of transport infrastructure such as ports and airports or sea and air landing facilities as well as appropriate transport services, the ITDP will link these communities to provincial centers and markets. The provision of adequate transport infrastructure is an important element in attaining balanced regional growth and improving social services throughout the archipelago, particularly in the less developed areas of the southern Philippines.

[3] Loan No. 164-PHI: Manila International Airport Project, for US$ 29.6 million, approved on 11 December 1973, Loan No. 1333-PHI: Airport Development Project, for US$ 41 million, approved on 24 November 1994 and TADP.

2.3.64 The ADB strategy for the civil aviation subsector particularly focuses on assisting the Government in establishing a policy and regulatory environment conducive to promoting economic development, improving the management and financial performance of the subsector, increasing competition and private sector involvement, expanding air transport services to remote and poorer areas, and improving safety to international standards.

2.3.65 **Policy Dialogue**. Policy dialogue has focused primarily on institutional restructuring, liberalization of transport services, and increasing cost recovery.

2.3.66 **Restructuring and Corporatization**. In order to sustain the level of funding that is necessary to develop the country's civil aviation infrastructure and to meet operational and safety standards, there is an immediate requirement to restructure ATO into an autonomous government body through the creation of the CAAP. This restructuring of the civil aviation organization will (i) foster improved accountability and promote self-financing by progressively transferring responsibility for the operation and management of airports from itself to separate corporations, and ultimately to the private sector or local government; and (ii) clearly delineate and assign responsibility for regulatory versus operating functions.

2.3.67 **Cost Recovery**. ATO is responsible for determining and collecting civil aviation user charges. ATO also collects a range of fees from the aviation industry for activities such as licensing, air worthiness inspection, and aircraft registration. ATO's charges have been based on nonspecific notions about what is considered affordable by the traveling public, air service operators, and concession operators. No formal cognizance has been given to international equivalents, definitive guidelines, or aviation-specific benchmarks. The result is that the user charges levied by ATO are well below those of other countries in the region, and the average investment in aviation infrastructure of about US$ 50 million equivalent per year over the last decade is low compared with the investment in neighboring countries and the requirements of the sector. Subsequent studies have emphasized the significance of adopting distance- and weight-based charges for air navigation commonly used internationally, and reductions in cross-subsidies between air navigation services and airport operations. In these studies, further increases were also proposed to achieve parity in the region and, based on annual reviews, to achieve full cost recovery. The agreed upon tariff levels will be applied to all ATO airports, and the additional revenues will be used to improve the services for airlines and passengers, and to provide a firmer financial basis for a corporatized ATO.

2.3.68 **Safety**. On the basis of past accident records, scheduled air transport in the Philippines is relatively safe by world standards. However, many airports do not meet the basic ICAO safety standards and recommended practices for scheduled passenger services. A prime objective of the Project is to alleviate severe safety problems at the three airports by upgrading the facilities to meet basic ICAO safety and operational standards. About 60 percent of the total Project cost is aimed at meeting basic airport safety requirements. ICAO is also continuing its assistance to ATO in implementing a program of safety reforms and initiatives to bring aviation safety in the Philippines up to accepted international standards, and will monitor the attainment of these standards and provide general sector wide advice.

2.3.69 **Training and Human Resource Development**. The effectiveness of DOTC and ATO in planning and policy implementation impacts on the long-term capacity and responsiveness of the subsector. If these functions are not carried out efficiently, then the expected benefits from the Government's reform and investment programs will be at risk. Consulting services proposed under the Bank loan will assist the Government with further training and capacity building to effectively implement and administer the new sector policy reform agenda in the longer term.

2.2.4 Opportunity for Improvements

2.3.69 ADB Project Preparatory Technical Assistance[4] developed an intermodal transport development plan for Southern Philippines. The study suggests prioritizing the following strategic airports and ports: (i) airports with developmental importance, Butuan, Cotabato and Puerto Princesa; (ii) ports with hub functions General Santos and Zamboanga (*iii*) ports with feeder/ access function, Bongao, Jolo and Sitangkai. All these strategic airports and ports will serve to connect underdeveloped areas to areas of demand and production.

2.3.70 The development of the these subprojects will contribute to implementation of BIMP-EAGA and ASEAN plans by improving regional and subregional connectivity, and strengthening facilitation of flows of subregional economic and trade activities. This will significantly complement the efforts and policy interventions provided by ADB and countries concerned by improving trade facilities and regulated procedures within port operations, enhancing cargo-handling efficiency and reliability for improved economic integration and trade promotion, and creating a conducive investment climate in the region and the Southern Philippines that will attract greater PSP in ports and other economic sectors.

[4] ADB. 2006. *Technical Assistance to the Republic of the Philippines- Intermodal Transport Development Project.* Manila.

3.0 THE PROPOSED PROJECT

3.1 Impact and Outcome

3.1.1 In the PPTA, an exhaustive search for potential subprojects identified 135 potential subprojects for consideration. After evaluation of these subprojects using a multi-criteria screening approach including the facilities' role in an integrated transport development plan and following a series of consultations with stakeholders and government agencies, eight subprojects (Cotabato, Butuan, and Puerto Princesa City airports; Zamboanga and General Santos City hub ports; and the feeder ports in Sitangkai, Bongao, Tawi-Tawi and Jolo, Sulu) were selected for further study. These subprojects hold the greatest potential for timely implementation and impact.

3.1.2 The PPTA provided the necessary technical, economic, social and environmental studies to allow these subprojects to quickly enter the loan preparation phase, and to identify the policy and institutional issues that will allow these ports and airports (as well as other ports and airports around the Philippines) to be operated in an efficient and effective manner. The Project will expand the capacity and increase the efficiency of the airports and ports in Mindanao and Palawan.

3.1.3 The Project includes core projects as follows:

- Airports: Butuan, Cotabato, Puerto Princesa
- Ports: General Santos, Zamboanga, Bongao

3.1.4 Non-core projects are:

- Jolo Port
- Sitangkai Port

3.2 Outputs

3.2.1 Construction Component

3.2.1 **Butuan, Cotabato and Puerto Princesa Airports Construction.** The airport subcomponent consists of the improvement of existing airports rather than the construction of new airports.

3.2.2 Airport improvements recommended comprise of (a) airside civil works including upgrading runways; widening and grading landing strips; establishing object-free areas; installing airfield approach and runway lighting; installing perimeter security fences; relocating and recalibrating navaid; removal of existing obstructions; constructing crash, fire, and rescue centers and new control towers; constructing airfield perimeter roads; constructing taxiways to new terminal areas; constructing new airport access roads and parking areas; and constructing new cargo terminals; (b) landside civil works including constructing new passenger terminal buildings and refurbishing existing ones, constructing new administration and Operations and Maintenance (O&M) buildings, and supplying and installing passenger and cargo terminal equipment and utilities; (c) provision and installation of airfield maintenance equipment, additional communications equipment and navaid, meteorological equipment, emergency generators, and selected spare parts; and (d) land acquisition and relocation of affected families;

3.2.3 **General Santos and Zamboanga Hub Ports Construction.** The hub ports subcomponent includes improvement of existing ports rather than the construction of new ports. Improvements recommended for Zamboanga Port under ITDP include providing a new improved air conditioned passenger terminal, increased parking, and improved RoRo facilities utilizing a moveable ramp which will be accessible at low and high tide. The RoRo ramp serves both passenger and cargo traffic, particularly to the Sulu Archipelago.

3.2.4 Improvements recommended for General Santos Port under ITDP include building an expansion of the presently congested berth for larger container ships by adding two berths and reconstruction of the oldest berths for smaller inter-island vessels.

3.2.5 **Bongao, Jolo and Sitangkai Feeder Ports Construction.** The feeder port subcomponent includes the improvement of existing ports rather than the construction of new ports.

3.2.6 Improvements recommended for Bongao Port include the expansion of the cargo marshalling area and berthing space. The expansion of the port will help to decongest the nearby Chinese pier. The Chinese port would then be better able to accommodate inter-island provincial traffic which uses smaller vessels. Other improvements include a trestle on pile to provide a road connection to the Chinese Pier. Transit sheds will also be constructed to provide storage space for cargo. An additional small passenger terminal will be constructed to serve vessels at the reclaimed area. Perimeter fences and gates will be constructed to allow for better security. A lighting system will be built to allow for better operations at night. These improvements are expected to increase the capacity of the port while improving efficiency, security and safety.

3.2.7 Improvements recommended for Jolo Port include major reconstruction and expansion within the existing port area of all facilities including the construction of additional piers and RoRo ramps to increase the number of available berthing spaces and allow berthing in deeper water. Also included are the expansion of marshalling areas and wharf area, provision of berthing spaces for small vessels coming from the nearby islands, construction of a new passenger traffic gate and access road as well as the installation of supporting facilities and utilities. In support of more efficient operations, the rationalization of the assignment of berthing spaces according to vessel sizes and types is also recommended.

3.2.8 Improvements recommended for Sitangkai Port include the expansion of wharf apron space for handling cargo, the construction of a segregated stair handling area for the local wooden-hulled vessels (called "tempels"), provision of a passenger terminal building, the replacement of the existing transit shed with a larger one.

3.2.9 All of these improvements will provide greater capacity and segregation of different forms of port traffic to improve efficiency, security and safety.

3.2.2 Equipment Procurement

3.2.10 **Airport Equipment Procurement.** Communications and Navigation Equipment will be procured to improve the existing national communications and navigation system and to meet future satellite-based communications, navigation, surveillance, and air traffic management requirements. Crash, Fire, and Rescue Vehicles will be procured for regional and domestic airports to meet minimum ICAO safety standards.

3.2.3 Support to Port and Airport Subsector Reform Component

3.2.11 **Air and Maritime Transport Subsector Reform.** The institutional strengthening TA will assist DOTC, ATO, PPA, ARMM-RPMA and Mindanao Economic Development Council (MEDCO) in carrying out the civil aviation and maritime transport sector reforms.

3.2.12 **Training.** Training and institutional capacity enhancement will be built-in to the policy and institutional strengthening and development services in connection to the following consulting contracts:

- Assistance in formulation of the aviation and maritime transport policy frameworks (two consulting services contracts with international firms);
- Assistance to MEDCO and to ARMM – RPMA (probably two international consulting firms with experience in developing and implementing transport policy frameworks); and
- Assistance to regional and local DENR in the implementation of the project (single consulting contract with local consulting firm familiar with DENR regulations).

3.3 JFPR Grant Component

3.3.1 A US$ 2 million grant from the JFPR is proposed to implement poverty alleviation interventions in the vicinity of the three feeder port subprojects in the Sulu Archipelago.

3.4 Special Features

3.4.1 Resettlement for core and non-core subprojects comes to a total of US$ 2.2 million.

3.5 Project Investment Plan

3.5.1 The total project cost is estimated US$ 254.4 million equivalent, including the cost of consulting services, physical and price contingencies, interest during construction, taxes, and duties. A summary of the cost estimates is in **Table 2**. Detailed cost estimates and financing plan for the Project are in **Appendix ES-C**.

3.6 Financing Plan

3.6.1 The Government has requested a loan of US$ 166 million from ADB's ordinary capital resources to help finance the Project. The loan will have a 30-year term, including a grace period of five years, an interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, and a commitment fee on the undisbursed amount of the loan. The Government will provide ADB with (i) the reasons for its decision to borrow under ADB's LIBOR-based lending facility on the basis of these terms and conditions, and (ii) an undertaking that these choices were its own independent decision and not made in reliance on any communication or advice from ADB.

Table 2: Project Cost Estimates
(US$ million)

		Local	Foreign	Total Cost
A	**Base Costs**			
	Civil Works and Equipment			
	1. Airports	36.4	60.6	97.0
	2. Hub Ports	12.3	7.5	19.8
	3. Feeder Ports	10.3	5.7	16.0
	Total Base Cost	**59.0**	**73.8**	**132.8**
B	**Consulting Services**			
	Design & Construction Supervision and Other Consulting Services for Policy + TA	7.5	7.5	15.0
	Total Consulting Services	**7.5**	**7.5**	**15.0**
C	**Resettlement & Land Acquisition**	**2.8**	**-**	**2.8**
D	**Administration of the Project by GOP**	**3.6**	**1.0**	**4.6**
	Sub-Total (A+B+C+D)	**72.9**	**82.3**	**155.2**
E	**Taxes and Duties**	**17.9**	**-**	**17.9**
F	**Contingencies**	**37.5**	**16.2**	**53.7**
	Physical	7.7	7.0	14.7
	Price Escalation	29.8	9.2	39.0
	Sub-Total (A+B+C+D+E+F)	**128.3**	**98.5**	**226.7**
G	**Financial Charges during Implementation**	**-**	**27.5**	**27.5**
	Interest during Construction (IDC)	-	25.5	25.5
	Commitment Charges	-	0.3	0.3
	Front end fees	-	1.7	1.7
	Total including Taxes and Price Escalation	**128.3**	**126.1**	**254.4**

a. Includes taxes and duties of 12% and 3%, respectively
b. In mid 2006 prices.
c. Physical contingencies computed at an average of 8.5% for civil works and equipment. Price contingencies computed at 1.9% p.a. on foreign exchange costs and 5.5% p.a. on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.
d. Includes interest, commitment charges and front end fees. Interest during construction has been computed at the five-year forward London interbank offered rate plus a spread or 6.0% p.a.

Source(s): Tables 2.6-1, 2.6-2, 2.6-3, 3.6-1, and 4.6-1 in Volume I: Main Report

3.6.2 The ADB loan will help finance the civil works for the Projects, equipment, and consulting services. As summarized in **Table 3**, the proposed ADB financing represents 65% of the total project cost; it will finance the direct and indirect costs, interest, and other charges during construction; and consulting services. The Government will provide the remaining costs of US$ 88.4 million.

Table 3: Project Financing Plan
(US$ million)

Source	Total Cost	Percent
Asian Development Bank	166.0	65
Government	88.4	35
TOTAL	**254.4**	**100**

Source: Asian Development Bank estimates.

3.6.3 The PPA has fiscal autonomy and, in the case of hub ports, the PPA will fund the local currency costs. The implementation of the hub port component will be the responsibility of the PPA through the on-lending of funds received from the loan by the Government. On the other hand, along with airports, implementation of the feeder port component of the project will be under the direction of the DOTC, which will act as the executing agency for the Government and will oversee through its organization the implementation of the feeder port and airport components of the project.

3.7 Implementation Arrangements

3.7.1 Project Management and Coordination

3.7.1 Prior to loan effectiveness and in agreement with ADB, the Government through the DOTC will establish a Project Steering Committee (PSC) composed of key agencies that will have an involvement with the implementation of the ITDP (see **Appendix ES-D**). An Executive Order will create the various project committees required to meet technical and financial regulatory requirements to the satisfaction of the Government and ADB; which will need the final approval of the Office of the President. The DOTC-led PSC will coordinate the implementation of the project and will provide policy directives to the agencies given responsibility for specific components of the ITDP. This Committee, chaired by the DOTC Secretary, includes the respective heads and officials of MEDCO, NEDA, DPWH, DOT, DOF, DBM, ARMM, Provincial Government of Palawan; and Attached agencies of DOTC, including: PPA; MARINA; ATO; and CAB.

3.7.2 The PSC will be supported by an Inter-Agency Technical Working Committee (IATWC) which will directly liaise with counterparts from the above agencies, and will be headed by the DOTC Assistant Secretary for Planning and Project Development who will also be the Director of the ITDP Project Management Office (PMO). The PMO will have day to day responsibility for the implementation of the ITDP and will act as the secretariat of the PSC and the Inter-Agency Technical Working Committee. To assist the PMO on a day to day basis, the consultant providing planning, design, tendering and construction supervision services for the Airport and Feeder Port Components will also act as the project coordination consultant to the PMO.

3.7.3 Over the duration of the ITDP, a Project Team will be seconded to the PMO, comprising of officials and staff of the DOTC Transportation Planning Service, the ATO, the PPA and ARMM RPMA who will work directly for the PMO. The Project Team will provide the administrative and technical expertise necessary to manage the ITDP and ensure compliance with Government regulations and loan covenants. A draft EO creating the IATWC and PMO will be covered by the same EO creating the PSC.

3.7.4 The ATO will supervise the implementation of the three subprojects that form the Airport Component of the ITDP. It has the institutional capacity and competence to handle the planning, design and construction of large civil works projects similar in scope to those of the ITDP. It is familiar with the three subprojects since it has had responsibility for them under the TADP. The PPA is given the responsibility of supervising the two hub port subprojects. It too has the financial and technical capacity and competence to implement these projects successfully under the oversight of the PMO. However, the feeder port projects will be directly supervised through the PMO with the advisory inputs of the ARMM RPMA. The proposed feeder port component will be a venue for the institutional strengthening of this agency.

3.7.5 The PMO and the project coordinating consultant who is responsible for preparing designs and providing construction supervision ensure coordination at the local level. During construction, the contractor is expected to satisfy all the environmental and social requirements stipulated in the tender documents.

3.7.6 **Infrastructure Monitoring and Advisory Groups (IMAGs)**. An existing mechanism that has already been used in the Southern Philippines that can provide greater involvement of the private sector and LGUs in improving project implementation is the IMAG. The IMAG provides effective mechanisms for project monitoring and problem-solving. IMAG meetings provide a useful forum for discussion, reporting and tasking among implementing agencies, contractors, LGUs, Non-Government Organizations (NGOs) and other local stakeholders. Project-related issues such as relocation of utilities, negotiations with lot owners on right-of-way problems, security, access to material sources and inadequate manpower and equipment of contractors are discussed by the IMAGs at monthly or quarterly meetings. The IMAG provides a venue where project implementation problems and issues are discussed and solutions jointly formulated and implemented. The IMAGs have been particularly useful in: a) resolving land acquisition problems; b) resolving local material supply material problems; and c) addressing security and peace and order related problems.

3.7.7 This IMAG composition varies but usually includes a representation of: LGU officials (provincial governors, city or municipal mayors); DOTC/ PPA/ DPWH regional directors, PMO engineers and consultants, district engineers; NEDA regional office; Presidential Management Staff (PMS); Department of Environment and Natural Resources (DENR); Armed Forces of the Philippines (AFP) and Philippine National Police (PNP); project contractors; mass media representatives; business sector representatives; NGO and religious organization representatives within the impact area of the infrastructure project. In 2004, the ARMM Governor signed an Administrative Order establishing IMAGs in each of the ARMM provinces. The ITDP Project Team recommends that IMAGs be established for each ITDP subproject. MEDCO has sufficient experience in helping to establish IMAGs and should be requested to support this effort.

3.7.2 Implementation Period

3.7.8 The Project will be implemented over 6 years inclusive of preconstruction activities, including preparatory works and selection of consultants; and excluding the liability period. A tentative implementation schedule is given in **Appendix ES-E**.

3.7.9 Jolo feeder port and General Santos City hub port have project durations in excess of 5 years reflecting the longer construction period of 30 and 42 months, respectively, due to the need to phase pier improvements so as not to close significant portions of the ports during reconstruction.

3.7.3 Procurement

3.7.10 Procurement of all ADB-financed civil works and equipment will be carried out in accordance with ADB's *Guidelines for Procurement.* In most cases, International Competitive Bidding (ICB), with the allowance for preferences for domestically manufactured goods and, where appropriate, for domestic contractors for works under prescribed conditions is the most appropriate method. Therefore, ADB requires its borrowers to obtain goods, works and services through ICB open to eligible suppliers and contractors. Where ICB is not the most economic and efficient method of procurement, other methods of procurement may be used. Some alternative modes are: Limited International Bidding; National Competitive Bidding; Shopping; and Direct Contracting. The particular methods that may be followed for procurement under a given project are provided for in the financing agreement. The following contract packaging is envisaged: eighteen(18) contracts:

- Civil Works - 8;
- Equipment - 5; and
- Consulting Services - 5.

3.7.11 Appendix ES-D also shows the relation between these separate contracts in terms of organizations and implementation.

3.7.12 The Government may undertake advance procurement action for preparation of tender documents, bidding, and evaluation up to, but not including, contract signing. Approval of the advance procurement action does not commit ADB to finance the ensuing Project.

3.7.13 During project preparation, a special workshop targeting staff at DOTC, PPA, ATO, RPMA and project management offices will be held to inform them of ADB policies and procedures for procurement of goods and services.

3.7.4 Consulting Services

3.7.14 A total of about 258 person-months of international and 1,077 person-months of domestic consulting services will be required for detailed engineering design, and supervision of project management for the airport and port (hub and feeder) subprojects.

3.7.15 The scope of the consulting services for the three feeder port and three airport subprojects cover project coordination, planning, design and the construction supervision for all three subprojects. These consulting services are to be done through a single contract under the direction of the DOTC acting as the executing agency for the Government. The objective of

having a single consultant is to facilitate the overall management of this project and to reduce costs by avoiding duplication of similar activities and personnel. As with ports, these consulting services include environmental and other monitoring activities during the project.

3.7.16 The consulting services for the Hub Port Component will be supervised by PPA; its emphasis will be on the implementation of the two subprojects at Zamboanga and General Santos City, and, unlike the feeder port, consulting services will have limited institutional development activities within the scope of these two subprojects.

3.7.17 Each of these two consulting services contracts will cover loan compliance requirements (assistance in Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome (HIV/ Aids) prevention and awareness, monitoring the Environmental Management Plan, benefit monitoring, resettlement plans compliance, monitoring poverty alleviation and social programs, and etc.).

3.7.18 All consultants will be recruited in accordance with ADB's *Guidelines on the Use of Consultants by Asian Development Bank and its Borrowers* and other arrangements satisfactory to ADB for the engagement of domestic consultants. The consultants will be engaged through international firms in association with domestic firms using the quality- and cost-based selection method.

3.7.5 Anticorruption Policy

3.7.19 ADB's *Anticorruption Policy* (1998) was explained to and discussed with the Government. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project. To support these efforts, relevant provisions of ADB's *Anticorruption Policy* are included in the loan regulations and the bidding documents for the Project. In particular, all contracts financed by ADB in connection with the Project will include provisions specifying the right of ADB to audit and examine the records and accounts of DOTC or PPA and all contractors, suppliers, consultants, and other service providers as they relate to the Project.

3.7.20 To ensure the transparency and integrity of the bidding and award process, the following are recommended:

a) If evaluation and notice of award is not completed within the following timeframe the bid and award committee should reconsider retendering:

- Local Consulting Services Contract - 3 months after the submittal date of the proposals;
- International Consulting Services Contract - 4 months after submittal date of the proposals; and
- International Competitive Bidding Contract - 6 months after the submittal date of the bids or other period given the bid documents.

b) Establishment of a permanent bid and award committee secretariat;

c) Involvement of the Procurement Watch, an NGO group assisting the government in ensuring fair and honest procurement of goods and services as well as civil works;

d) Web publishing of the consultant's bid evaluation for civil works and supply contract including any revisions; and

e) Setting up of ITDP website for procurement announcements and bid bulletins;

3.7.6 Disbursement Arrangements

3.7.21 Loan disbursements will be in accordance with ADB's *Loan Disbursement Handbook* (January 2001), as amended from time to time. An imprest account will be established in the name of the Government, with an initial advance and a ceiling equivalent of US$ 2 million. Statement of expenditure procedures will be used for individual payments of US$ 100,000 or less.

3.7.7 Accounting, Auditing, and Reporting

3.7.22 The Government and all its relevant agencies (DOTC, PPA, ATO and RPMA) will prepare and maintain accounts exclusively for the Project and will register in such accounts all receipts and payments for the Project in accordance with sound accounting principles and procedures. Annual project accounts will be prepared by an independent auditing firm acceptable to ADB based on sound and acceptable accounting principles. The Government will provide ADB annually with financial statements of the subprojects. Audited project accounts, financial statements, and the audit opinion must be submitted to ADB within 6 months of the end of the financial year and at project completion. A separate audit opinion on the use of the imprest account and statement of expenditure procedures should be included in the annual audit report. Both the financial statements and the auditor's report will be in English. The Government and its agencies will be informed of ADB's policy on the submission of audited accounts, which covers consequences of failure to submit audited accounts and financial statements in due time. A formal warning will be issued for failures to submit audited accounts more than 6 months overdue, and disbursements will be suspended for accounts that are 12 months overdue.

3.7.23 An audited opinion of the project accounts will reflect (i) an assessment of the adequacy of accounting and internal controls systems with respect to project expenditures and other financial transactions, and ensure safe custody of project-financed assets; (ii) a determination as to whether the Government and project implementing agencies have maintained adequate documentation on all relevant transactions including imprest account transactions; (iii) a confirmation that expenditures submitted to ADB are eligible for financing and identification of any ineligible expenditures; and (iv) a confirmation of compliance with financial loan covenants and ADB requirements for project management. As the Project will also be audited by DOTC's internal auditor—the Commission on Audit (COA)—the audits must be complementary. Under Philippine regulations, the COA must audit the Project's financial accounts. Copies of all such reports will be sent to ADB.

3.7.24 Reporting systems will be set up to enable DOTC, through the PMOs, to effectively supervise the implementation of all project activities. The monthly and quarterly reports will be submitted to ADB within 15 days of the end of the month or quarter due. Within 3 months from the physical completion of the Project, a project completion report will be submitted to ADB, providing details of project implementation, costs, benefits derived from the Project, and any other information requested by ADB.

3.7.8 Project Performance Monitoring, Evaluation, and Review

3.7.25 The Government will ensure the implementation of an adequately formulated benefit monitoring and evaluation system in each of the subprojects to ensure that the facilities are managed efficiently and the expected benefits are realized. Baseline data on technical, commercial, operational, financial, and socioeconomic indicators in the areas affected by the Project will be collected by the PMOs at the commencement of the Project and at regular intervals thereafter.

3.7.26 The status of project implementation covering physical progress, and technical and institutional matters will be monitored on a semiannual basis and discussed with ADB. ADB and the Government will conduct regular loan reviews, and a midterm review at the end of the second year of project implementation. The midterm review will (i) review the scope, design, and project implementation arrangements; (ii) identify any necessary changes; (iii) assess performance against targets and benchmarks; (iv) review compliance with the loan agreement; (v) recommend any changes in project design and or implementation arrangements, if needed; and (vi) agree with the Government on the financial performance to be achieved by the operator of project airports and ports.

4.0 PROJECT BENEFITS, IMPACTS, ASSUMPTIONS, AND RISKS

4.1 Benefits

4.1.1 Financial Benefits

4.1.1 Financial analysis was undertaken for each of the airport and port subprojects.

4.1.2 In common, with other national airports in the country, full financial viability of operations with increasing demands of operational and safety improvements cannot be assured at the three Airports. The Project Team in its analysis assumed the prevailing rates at MIAA. The subprojects have a greater potential for financial sustainability with the proposed investment, if the assumed prevailing tariff rates (those of MIAA, MCIAA and SBMA for the corporatized ATO) could be increased by 100% by 2012 when the improved airports would commence operation.

4.1.3 Hub Port FIRRs are lower than the hurdle rate of 7.4% (i.e., the estimated Weighted Average Cost of Capital (WACC)), therefore the subprojects are financially not viable under current conditions and cost recovery does not occur. However, as the detailed net revenue streams exhibited, the port revenues cover the annual cost of operations and maintenance in the "with" project condition.

4.1.4 The Feeder Port all had negative Financial Net Present Values (FNPV) and negative Financial Internal Rates of Return (FIRR) and are not financially viable with the present tariff levels. They require increases in the fees to be charged for the use of port facilities. However, the calculated amount by which the rates must increase are relatively high and may not be easily achieved in the immediate term.

4.1.2 Economic Benefits

4.1.5 Economic analysis was undertaken for each of the airport and port subprojects.

4.1.6 **Puerto Princesa Airport** is the principal airport serving Palawan, the largest province of the Philippines. The province is a major tourism resource of the country and the airport serves as its gateway. Currently, the airport airside facilities are underutilized but landside facilities are congested.

4.1.7 **Cotabato Airport** is the gateway to Central Mindanao and thus to the administrative center of the ARMM. The airports' improvement will directly support the peace and development objectives of the Government in this conflict-affected area and will be supportive of the pending peace agreement between the Government and the Moro Islamic Liberation Front (MILF).

4.1.8 **Butuan Airport** serves Butuan City, which is the capital and commercial center of Agusan del Norte as well as the regional center of the CARAGA Region.

4.1.9 Benefits for the three proposed airport improvements include: Aircraft Operating Cost Savings; Benefits from International Business or Tourist Travelers; Passenger Travel Cost Savings; Airfreight Cost Savings; Aviation Safety and Security Benefits; Passenger Service Improvement Benefits; and Repair and Maintenance Cost Savings (only for Cotabato Airport). From the point of view of the Philippine economy, the Projects have demonstrated economic feasibility at a 15% social cost of capital.

4.1.10 **Zamboanga Hub Port.** This strategic hub port serves the Sulu Archipelago and half of the Zamboanga Peninsula which is one of the most conflict-affected areas in the country while also serving as a gateway to the BIMP-EAGA. This port is also an important node of the SRNH with existing RoRo service to Basilan and Sulu and planned RoRo service to Tawi-Tawi. The port's passenger traffic level of over 3.2 million passengers (more passengers than Cebu airport handles) is second only to the Port of Cebu and additionally it moves significant cargo volumes from Western Mindanao to the Visayas and Luzon markets. In general, the port is a major hub of intermodal transport since a large number of feeder ports, particularly those located in the Sulu Archipelago, transit cargo and passengers through this port, which then transfers cargo to other vessels and to the air and road transport systems.

4.1.11 **General Santos Hub Port.** The General Santos City (Makar) Port is a major cargo transport hub and gateway to the SOCSKSARGEN region and BIMP-EAGA. This port serves the rapidly growing SOCSKSARGEN area, which is a leading producer of a wide range of fishery products, crops, livestock, and agribusiness products that are increasingly being moved by container.

4.1.12 Benefits for the hub ports improvements includes: Improved vessel utilization by reducing ship waiting and service times; Increased cargo handling efficiency, including a reduction in the cost of delays in cargo loading and unloading; Passenger time savings; Reduction or elimination of double handling costs associated with "lighter-age" operations under certain conditions; Improved passenger embarkation and disembarkation efficiency gains; Avoided road or sea transport costs to alternative ports; and Reduction in cargo handling losses due to spoilage.

4.1.13 The ITDP proposed improvements for the two (2) hub port subprojects are judged to be economically feasible with EIRR values of 21.52% and 37.34% for Zamboanga and General Santos Ports, respectively.

4.1.14 **Bongao Feeder Port.** Tawi-Tawi is one of the most remote island provinces in the country. Its residents are highly dependent on maritime travel. Bongao Port is an important sub-hub connecting numerous smaller nearby island ports to other ports in the Sulu Archipelago as well as the regional hub of Zamboanga. An improved Bongao Port will strengthen the economic linkage between Tawi-Tawi and Zamboanga City and to BIMP-EAGA.

4.1.15 **Jolo Feeder Port.** This port is a strategic sub-hub port in the Sulu area, one of the country's poorest and most conflict-affected provinces. RoRo ferry service (to and from Zamboanga) and local feeder service (to remote islands nearby) will be improved by the project. Improved RoRo services will strengthen the ports' newly designated role in the SRNH and make it possible to ship fresh products in reefer containers.

4.1.16 **Sitangkai Feeder Port.** Tawi-Tawi is one of the most remote island provinces in the country and Sitangkai is one of Tawi-Tawi's most remote municipalities and ports. Its residents are highly dependent on maritime travel. Once improved, Sitangkai Port (more specifically referring to the Tumindao Pier) can better function as a maritime collector and linkage between remote islands in the municipality of Sitangkai with Bongao (Tawi-Tawi) and then with Zamboanga. Although there are few ships each month which directly connect to Zamboanga, most ships ply the route that connects Sitangkai to Zamboanga, via Bongao, Siasi and Jolo. An improved Sitangkai Port will strengthen the economic linkage between Sitangkai and the rest of Tawi-Tawi, as well as with Zamboanga City and to BIMP-EAGA.

4.1.17 Feeder port benefits include: Passenger travel time savings; Passenger travel expense savings; Vessel operating cost savings related to waiting and service time improvements; Cargo transport cost savings; and Cargo spoilage reduction.

4.1.18 The ITDP proposed improvements for the feeder port subprojects are judged to be economically feasible.

4.1.3 Environmental Benefits

4.1.19 A number of positive impacts or benefits will also be created by the project. These include; improvements to the aesthetic quality of the airport environments, job creation during the construction phase as well as provision of various livelihood opportunities during operation, encouragement of business and investment in the wider area, and benefits to the local economy through increases in trade.

4.1.4 Social Benefits

4.1.20 Nearly all of the proposed subprojects included in the recommended ITDP shortlisted are located within the country's 44 poorest provinces and many service areas that have been subject to years of conflict and war. As a result, these subprojects are expected to provide significant benefits to the targeted populations of the Southern Philippines by providing critically needed improvements to existing transport facilities and their intermodal linkages. By targeting smaller feeder port facilities in more isolated areas, many of these proposed subprojects will serve to improve transport linkages between remote communities, provincial centers and markets.

4.1.21 The initial short-term benefit to the poor will be the generation of a number of jobs for unskilled and poor labor as the subprojects are constructed. Based on our initial poverty analysis, it is estimated that 2,002 person-years of construction employment will likely go to poor local workers to complete the civil works for the airport subprojects; 467 person-years of construction employment will likely go to poor local workers to complete the civil works for the hub ports; and 895 person-years of construction employment will likely go to poor local workers to complete the civil works for the smaller port facilities.

4.1.22 In total, poor local workers are expected to earn an estimated US$ 10 million from the proposed construction activities over the average 2.5-year construction period. To increase such employment benefits to the local population, it is recommended that construction contracts include specific provisions to prioritize the employment of qualified laborers and service providers who belong to poor local households.

4.1.23 The estimates that all the subprojects combined will generate about 3,364 person-years of employment for poor workers. The estimates depend on the teams expert judgment regarding the amount of unskilled labor required for the different sub-projects. With a typical regional multiplier effect, the total wage injection into these communities will be two to three times as large as the initial total wage bill of US$ 14 million, and at least 30% to 60% of this induced income will accrue to poor households. This is because the subprojects areas have very high concentrations of poor households. Using conservative estimates, the study team estimates that there will be nearly 1.6 million poor beneficiaries and about five million total beneficiaries.

4.1.24 **Appendix ES-G** shows the summary initial poverty and social analysis conducted for the study.

4.2 Impacts

4.2.1 Environmental Impacts

4.2.1 Construction impacts of the hub and feeder port subprojects are considered to be of low/ insignificant to moderate impact, while operation impacts range from low to high significance. Most of the significant impacts are positive as they relate to project benefits and are anticipated to improve the living standards and socio-economic conditions of the local population. Mitigation measures have been identified for all impacts of low magnitude or higher.

4.2.2 The costs of implementing the two Environmental Management Plans (EMPs) for the hub port subprojects are estimated to be PhP 2 million (US$ 38,462), and the costs of implementing the three EMPs for the feeder port subprojects are estimated to be PhP 1.8 million (US$ 34,038).

4.2.2 Land Acquisition and Resettlement

4.2.3 Since the ITDP is limited to needed and prioritized improvements to existing basic transport facilities, the adversely affected population is expected to primarily involve those households and businesses that will be directly affected or displaced by land acquisition and/or resettlement.

4.2.4 Based on the relevant policies and procedures studies, the land acquisition and/or resettlement impacts and corresponding requirements are summarized below.

4.2.5 **Puerto Princesa City Airport (Palawan).** LARP was prepared in 2002 under ADB TADP. Based on a due diligence review of 2002 LARP, nearly all required land acquisition and resettlement activities have been completed with the noted exception of on-going expropriation proceedings involving 5 ha of land with no structures and replication of AFP structures, requiring an estimated budget of PhP 76.38 million. In addition, a total of 21 structures, totally some 1,258 sq. m. in area, remain to remove from the approximate 2,400 sq. m. land area of the new access road. This land is owned by the Armed Forces of the Philippines (AFP), and the structures are owned by renters who have signed Temporary Occupancy contracts with the AFP. Estimated cost of relocating these renters is PhP 8.94 million. External LARP monitoring remains to be completed by the DOTC. Fencing of acquired land areas remains to be completed by the LGU but a budget to be provided by DOTC.

4.2.6 **Butuan City Airport (Agusan del Norte).** A LARP was prepared in 2002 under TADP. Based on a due diligence review of 2002 LARP, all required land acquisition and resettlement activities have been completed with the noted exception of on-going expropriation proceedings involving some 7 ha of land requiring an additional budget of PhP 1 million. Based on external LARP monitoring conducted in March 2006 by the City of Butuan, relocation is required of 9 small structures (1,610 sq. m. of building area) belonging to the Philippine Army and local government, and 14 structures in the DVOR area and on the road which will be realigned and need to be relocated. An estimate of PhP 15.21 million for these structures is included in the costs. Fencing of acquired land areas is 75 % completed and completion of this fencing work is fully funded by the LGU.

4.2.7 **Cotabato City Airport (Maguindanao)**. A LARP was prepared in 2002 under TADP. Based on a due diligence review of 2002 LARP, all required land acquisition and resettlement activities have been completed with the exception of replication of AFP structures which will cost PhP 33.04 million. Based upon external LARP monitoring, seven (7) additional structures will need to be relocated costing PhP 1.67 million. Fencing of acquired land areas is 70 % complete and completion of this work is fully funded by the LGU.

4.2.8 **Port of Zamboanga City and Port of General Santos City**. There are no land acquisition or resettlement requirements.

4.2.9 **Bongao Port (Tawi - Tawi).** A Short LARP has been prepared. Some 14 households and Coast Guard affected. Implementation of the Short LARP once it is finalized and approved by the DOTC, Municipality of Sitangkai and ADB. Estimated cost of LARP implementation is PhP 2.59 million and may require up to 9 months to complete. Following implementation, external LARP monitoring will be required, with a copy furnished to the ADB.

4.2.10 **Jolo Port (Sulu)**. A LARP TOR prepared. A Short LARP will need to be prepared under the project. Subproject could affect eight households require approximately 300 m^2 of land and affect about 152 m^2 of buildings in barter trade area. Preparation of a Short LARP may be required during project implementation depending on the detailed design of the port access road where the APs are located. Implementation of the Short LARP once it is approved by the DOTC, Municipality of Bongao and ADB. Estimated cost of LARP implementation is PhP 2.06 million and may require up to 9 months to complete. Following implementation, external LARP monitoring will be required, with a copy furnished to the ADB.

4.2.11 **Sitangkai Port (Tawi - Tawi).** A LARP TOR and socio-economic survey has been prepared. Preparation of a Short LARP will be required during project implementation to address the 26 households located behind the port along the dilapidated causeway. Implementation of the Short LARP once it is approved by the DOTC, Municipality of Sitangkai and ADB. Estimated cost of LARP implementation is PhP 3.23 million and may require up to 9 months to complete. Following implementation, external monitoring will be required, with a copy furnished to the ADB.

4.2.12 Therefore, neither subproject requires the preparation of a retroactive land acquisition and resettlement plan. Due diligence conducted for both ports confirms that no issues involve indigenous people.

4.3 Risks

4.3.1 The following are a summary of identified project risks may impact on the successful completion of the project:

4.3.2 **Project Implementation.** The Project is not expected to be subject to any significant economic risks in view of previous and expected air and sea traffic growth. To avoid delays in project implementation, the Government and ADB will closely monitor the Project.

4.3.3 Passage of the CAAP Bill, due to the length of the legislation process, is subject to possible delay.

4.3.4 Lack of accurate geotechnical (particularly off-shore) data may lead to increasing risks of higher cost and delays. Employment of a qualified consultant to oversee the final designs, including adequate funding for geotechnical investigations for ports will minimize the risks.

4.3.5 **Environmental Degradation**. Environmental degradation is an important identified risk. To minimize the impacts, the Project, will implement all mitigation measures provided in the Airport Environment Impact Assessments (EIAs), Port Initial Environmental Examinations (IEEs) and the Summary Initial Environmental Examination (SIEE). Environmental mitigation costs are included in the project cost estimates. Monitoring of mitigation measures will be appropriately undertaken. In addition, a special topic on environmental management is included in the training subcomponent to ensure that contractors and government stakeholders pay serious attention to managing the environment.

4.3.6 **Health and Gender**. The large construction works and port development pose a few adverse social impacts in the region. One of these is the risk of having HIV/ AIDS spread among construction workers and seafarers. To help mitigate this risk, a TA on sexually transmitted disease including HIV/ AIDS, is included in this loan.

4.3.7 **Funding Risks.** The DOTC annual infrastructure budget has remained at the PhP 3.1 billion level from 2002-2005. The budget deficit problem of the national government required the imposition of new tax measures and the stringent controls on the expenditure program. With the budget deficit expected to be within manageable limits by 2009, the funding risk may have diminished, but the ability of the Government to meet counterpart funding requirements needs further commitment during the loan appraisal stage.

4.3.8 **Revenue and Market.** Small regional airports can be subject to dramatic increases or decreases in passenger and aircraft traffic in short periods of time as they are more sensitive to external economic or other "shocks" that impact on the industry. The history of traffic at the three airports has been erratic. The key in planning and design is the retention of flexibility to adapt the airport facilities and operation if required. The concept design under this Study is considered flexible and conservative.

4.3.9 Steady increase of passenger and cargo traffic at Zamboanga has been observed. For General Santos, a steady increase was observed till 2004 but followed by some decrease.

4.3.10 The growth of demand for port services in the island provinces of ARMM has not been well analyzed as there is lack of completely reliable historical data due to underreporting of cargo and passenger throughput at these ports. However, anecdotal accounts reflect an upward trend for traffic volumes.

4.3.11 **Readiness Risks.** The separate DOTC project to replicate the AFP facilities to allow the development of the original TADP project has commenced but has not significantly advanced and appears to have stopped. It should have been completed in approximately 2003 to meet the original schedule for the TADP. The fact that it has not significantly advanced up until May 2006 would suggest there is a significant risk it will not be completed prior to the commencement of schedules under this ITDP.

4.3.12 There are a few occupants on land areas designated for the new passenger terminal area, terminal access road and areas to the southwest inside the widened 300m strip. These occupants should have been relocated under the TADP. One reason they have not been may in part be associated with the lack of progress associated with the AFP replication of facilities

contract (discussed above). Further discussions with the AFP and possibility additional surveys are need to quantify the extent of this problem, the exact causes and the likely speed proper solutions can be implemented.

4.3.13 The implementation of the subprojects in the ARMM require relatively more complex institutional arrangements than the other proposed subprojects. The establishment of these arrangements may not be completed in a timely fashion.

4.3.14 **Security Risks**. The security risks may be classified as those during implementation and during operation. The increased terrorist threat has been recognized and thus precautionary measures for raising the level of alertness and the level of preparedness is considered in the preparation of the proposals. The peace and order situation in the ARMM may pose some impediment to project implementation and realization of benefits but the port and airport subproject sites are well secured while the security situation in the respective subproject areas has improved significantly in recent years.

4.3.15 **Overall Assessment**. For a large part, the projects are ready to update design. Only Jolo and Sitangkai subprojects require full feasibility studies.

4.3.16 Some LARP issues need to be resolved such as access roads, but these are generally addressed by the proposed project.

4.3.17 These projects are expected to contribute to the following:

- National Peace and Development;
- National Tourism Development;
- National Agribusiness and Fisheries Industries; and
- Upgrading of safety standards (such as to ICAO standard).

4.3.18 Because of their breadth and scale of project impact, implementation of these proposals is highly justifiable.

5.0 ASSURANCES

5.1 Specific Assurances

5.1.1 In addition to the standard assurances, the Government has given the following assurances, which will be incorporated in the legal documents:

a) The Government will provide counterpart funds for project implementation on time. The Government will make timely submission of annual budgetary appropriation request and ensure prompt disbursement of appropriated funds during each year of project implementation.

b) Prior to project completion, based on the port master plan, the Government will issue zoning regulations around the project ports to avoid future changes in land and water use patterns that are incompatible with the port development.

c) The Government will ensure that potential adverse environmental impacts arising from the construction and operation of the Project are minimized by implementing all the mitigation measures presented in the IEE and SIEE. The Government will also ensure that the design, construction, expansion, and operation of the airports and ports are implemented in accordance with ADB's Environmental Policy and the Government's environmental laws and regulations. The Government will also ensure that there will be sufficient and timely budgetary allocations for all costs related to environmental management programs during construction and operation of completed facilities.

d) The Government will ensure and will cause its respective agencies to ensure the following:

- Each of the PMOs will coordinate adequately with environmental management personnel of the EMB-DENR, and have access to sufficient resources to implement and record the implementation of the EMP prepared for the purposes of the Project;

- Each of the PMOs will prepare semiannual environmental reports and submit them to ADB, within 3 months of the close of each half of the calendar year, from the start of the project implementation and until commencement of commercial operation of the project facilities. The report will include, among other things, a review of (a) progress made on environmental measures detailed in the IEEs, SIEEs, and EMPs, and monitoring thereof; and (b) problems encountered and remedial measures taken; and

- Detailed engineering designs, civil works, and other contracts for the project facilities will incorporate applicable environmental measures identified in the IEEs, SIEEs, and EMPs.

e) The Government will abide by the relevant provisions of ADB's anticorruption policy. Furthermore, the Government will ensure the strict application of governance and anticorruption measures specified in the Fiduciary Control, Fraud, and Anticorruption Action Plan agreed between the Government and ADB.

f) The Government, through DOTC and related agencies, will carry out benefit monitoring and evaluation of the Project in accordance with the design and monitoring framework agreed between the Government and ADB, as provided in Appendix ES-A.

g) The Government, through its agencies, will ensure that civil works contracts with the contractors will include appropriate clauses requiring contractors to allow their workers to attend planned awareness campaigns on sexually transmitted disease, including HIV/ AIDS. The Government will ensure that the contractors disseminate adequate information on the risks of sexually transmitted disease, including HIV/ AIDS, to those employed during project implementation.

h) The Government will include a specific provision in bidding documents to ensure that civil works contractors (a) do not differentiate payment between men and women for work of equal value; (b) do not employ child labor in the construction and maintenance activities; (c) eliminate forced or compulsory labor; (d) eliminate discrimination in respect of employment; and (e) allow for freedom of association.

i) The Government will ensure that the contractors, to the extent possible, maximize employment of local poor and disadvantaged persons for project construction purposes, provided that the requirements for the job and efficiency are adequately met.

CHAPTER 1

Introduction

Chapter 1 INTRODUCTION

1.1 Background

1.1.1 During the 2003 Country Programming Mission, the Government of the Philippines (Government) requested the Asian Development Bank (ADB) to extend technical assistance as part of the 2004 non-lending program to the Department of Transportation and Communications (DOTC) to prepare an intermodal transport development program for the Southern Philippines (Mindanao and Palawan). Improving the intermodal transport system of the country is consistent with the development policies and strategies for the transportation sector under the earlier Updated Medium-Term Philippine Development Plan, 2001-2004. The focus on Mindanao and Palawan reflects the Government's commitment to pursue a "*peace and development*" agenda for Mindanao, and to improve transport and trade linkages under the Brunei Darussalam, Indonesia, Malaysia, and the Philippines-East ASEAN Growth Area (BIMP-EAGA).

1.1.2 An ADB Fact-Finding Mission, headed by Mr. Shihiru Date, Transport Specialist, carried out field work and consultation activities from 1-28 October 2003 for the proposed technical assistance (TA). ADB and Government officials signed on 10 December 2003 the Memorandum of Understanding (MOU), which reflected the agreements reached on objectives, scope, terms of reference for the consulting services, cost estimates, financing plan, and implementation arrangement. On 31 May 2004, the TA for preparing the Intermodal Transport Development Project (TA No. 4344-PHI) was approved for financing under the Japan Special Fund.

1.1.3 The Louis Berger Group Phils., Inc. (LBGPh), in association with Pacific Consultants International (PCI), were selected to carry out the TA, which officially started on 04 July 2005.

1.2 Rationale of the Project

1.2.1 Transport in the Philippine archipelago is often intermodal in character with inter-island as well as intra-island movement combining air, sea and road transport modes. The intermodal transport system and its connections to the hinterland play a crucial role in the socio-economic development of the widely dispersed regions of the country, particularly in Mindanao and Palawan. Improving intermodal transport in the Southern Philippines will provide increased access and opportunity to remote areas where poverty is prevalent.

1.2.2 The provinces of Mindanao (including the Sulu Archipelago) and Palawan, which contain over 25% of the population and 40% of the country's land area, hold enormous economic potential for the Philippines. Nonetheless, inefficient, ineffective and expensive transport has contributed to a historically lower rate of economic growth and higher rates of poverty in these areas. The Intermodal Transport Development Project (ITDP or the Project) for the Southern Philippines provides a significant opportunity not only to improve the transport system, but also to help accelerate economic growth, reduce poverty and contribute to peace and development.

1.2.3 After an exhaustive search for potential subprojects (135 potential subprojects were considered) and their evaluation using multi-criteria including the facilities role in an integrated transport development plan, eight subprojects (Cotabato, Butuan, and Puerto Princesa City airports; Zamboanga and General Santos City hub ports; and the feeder ports in Sitangkai,

Bongao, Tawi-Tawi and Jolo, Sulu) have been selected for further study. These subprojects hold the greatest potential for timely implementation and impact. **Figure 1.2-1** shows the eight selected subprojects and their impact areas. The ITDP Second Interim Report delineates the subproject selection process. Phase 2 of the ITDP provides the necessary studies to allow these subprojects to quickly enter the loan preparation phase, and address the policy and institutional issues that will allow these ports and airports (as well as other ports and airports around the Philippines) to be operated in an efficient and effective manner.

1.3 Objectives of the Project

1.3.1 The Project for the Southern Philippines is envisaged to improve transport accessibility, efficiency and sustainability in Mindanao and Palawan, and contribute to the reduction of the high poverty incidence in these areas. In particular, this Project:

- Formulated an integrated transport development plan for the Southern Philippines covering the period 2005-2025, which identified priority activities and measures to improve the efficiency of the intermodal (air, sea and land) transport system;
- Developed a policy reform agenda and investment options for ADB intervention, and an investment program covering subprojects suitable for near-term ADB financing; and
- Prepared the implementation program covering the period 2007-2012, including the scope of the selected subprojects, financing arrangements, and implementation mechanisms.

1.3.2 The ITDP directly supports the current ADB country strategy for the Philippines (2005-2007), which stresses the "*high priority to improve access to remote areas of the Southern Philippines, at relatively low costs and improve the efficiency of the intermodal transport system, by reducing deficiencies in land, air and sea systems and improving network interconnections.*" Notably, in pursuing poverty reduction and economic growth objectives with the Government, ADB proposes to continue the sector-level policy dialogue on:

- Policies and regulatory issues which adversely affect the delivery of transport services;
- Increased Private Sector Participation (PSP) and Public-Private Partnership (PPP); and
- Strengthening intermodal transport planning.

1.3.3 By targeting isolated areas for improvement and development of transport infrastructure such as ports and airports or sea and air landing facilities as well as appropriate transport services, the ITDP will link remote communities to provincial centers and markets. More specifically, the needs of the transport users will be addressed through: the establishment of mechanisms to lower transport costs; development of components suitable for PSP/ PPP initiatives; improvement of transport facilitation and logistics; and provision of infrastructure or transport services.

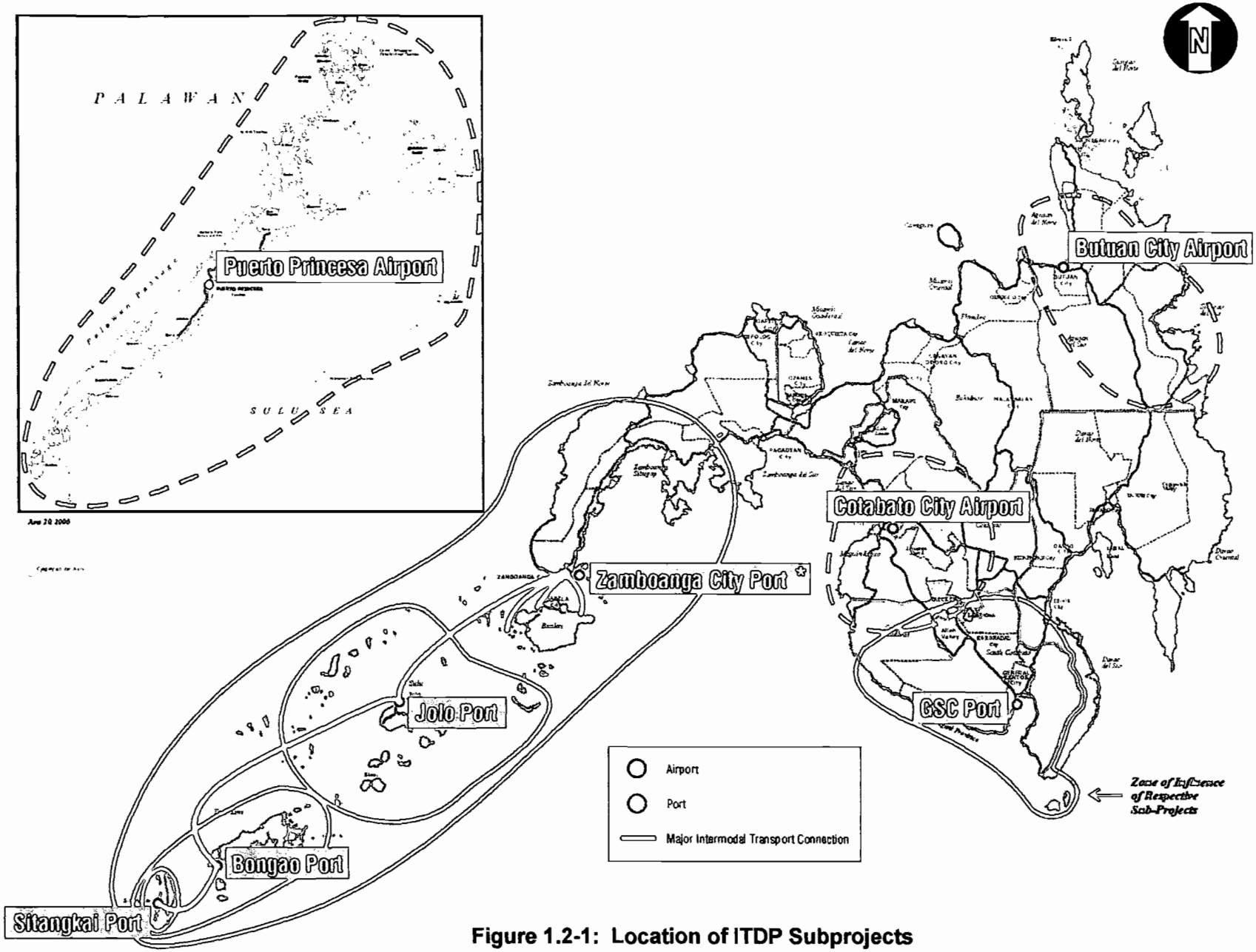


Figure 1.2-1: Location of ITDP Subprojects

1.4 Scope of the Project

1.4.1 Project Area and Location

1.4.1 The ITDP study area covers all the provinces and cities in Mindanao and the Province of Palawan as shown in **Figure 1.4.1-1** and listed in **Table 1.4.1-1**.

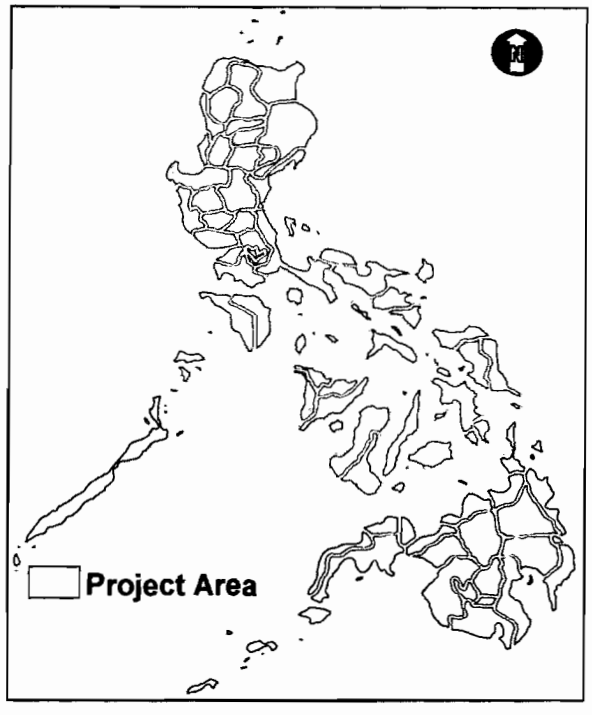


Figure 1.4.1-1: Map of the Philippines and Project Area

1.4.2 Scope of Work

1.4.2 The ITDP was conducted in two phases. Following an integrated transport system approach and building on the recommendations of the previous and on-going planning studies available for the various transport sub-sectors, Phase 1:

a) Identified priority interventions (capital investment, policy reform, and institutional strengthening) to improve the complementary road-port-airport network and related transport services in the study area;

b) Identified suitable areas of Government and ADB intervention;

c) Selected candidate intermodal transport sub-projects; and

d) Formulated of an investment program for evaluation and preparation in Phase 2.

1.4.3 ITDP Phase 1 results are delineated in the ITDP Second Interim Report.

Table 1.4.1-1: Mindanao and Palawan Provinces and Cities

Region	Provinces	Cities
VI- Western Visayas*	Palawan	Puerto Princesa
IX – Zamboanga Peninsula	Zamboanga del Norte	Dapitan, Dipolog, Isabela
	Zamboanga del Sur	Pagadian, Zamboanga
	Zamboanga Sibugay	
		Isabela
X – Northern Mindanao	Bukidnon	Malaybalay, Valencia
	Camiguin	
	Lanao del Norte	Iligan
	Misamis Occidental	Oroquieta, Ozamis, Tangub
	Misamis Oriental	Cagayan de Oro, Gingoog
XI – Davao Region	Compostela Valley	
	Davao del Norte	Panabo, Samal, Tagum
	Davao del Sur	Davao, Digos
	Davao Oriental	
XII - SOCCSKSARGEN	North Cotabato	Kidapawan
	Sarangani	
	South Cotabato	General Santos, Koronadal
	Sultan Kudarat	Tacurong
		Cotabato
XIII – CARAGA	Agusan del Norte	Butuan
	Agusan del Sur	
	Surigao del Norte	Surigao
	Surigao del Sur	Bislig
ARMM	Basilan	
	Lanao del Norte	Marawi
	Maguindanao	
	Sulu	
	Tawi-Tawi	

* Palawan was transferred from Region IV-B (MIMAROPA) to Region VI (Western Visayas) last 23 May 2005

1.4.4 At the end of Phase 1, the ADB and the Government confirmed the focus areas of Phase 2, and agreed on a list of candidate sub-projects for Phase 2. More specifically, Phase 2:

1) Completed feasibility studies of the sub-projects selected during Phase 1, including technical, economic and financial appraisal, and assessment of environmental, social, and poverty impacts; and

2) Finalized the project scope, implementation and financing arrangements, required capacity building measures, and supporting policy and institutional reform agenda.

1.4.5 The Outline Terms of Reference for the consulting services are presented as **Appendix A**.

1.4.3 Implementation Arrangements

1.4.6 The ITDP included a total of about 68 person-months of consulting services, including about 24 person-months of international consultants and about 44 person-months of domestic consultants. The international consultants have expertise in: (1) transport planning and economics, (2) air transport, (3) maritime transport, (4) financing and public-private partnership, (5) social development and resettlement, and (6) environment. The domestic consultants have expertise in (1) transport planning, (2) airport engineering, (3) port engineering, (4) financial analysis and private sector participation, (5) development economics, (6) institutional development, (7) environment, and (8) social and resettlement.

1.4.7 The DOTC is the Executing Agency for this technical assistance project. A Steering Committee, chaired by DOTC, and comprising of the Departments of Public Works and Highways, Tourism, Interior and Local Government, Finance, the National Economic and Development Authority (NEDA), the Mindanao Economic Development Council (MEDCO) and the Autonomous Region in Muslim Mindanao (ARMM), was established to provide policy guidance and to coordinate the project activities. The composition of the DOTC-led Steering Committee, including the counterpart Project Team, is presented below.

1.4.4 Project Team Organization

Consultant Team

1.4.8 The ITDP was carried out by a Project Team of international and domestic consultants based in Manila. The "Project Team," comprising of the Team Leader and the Assistant Team Leader, was supported by sector and policy specialists drawn from The Louis Berger Group Phils., Inc., in association with Pacific Consultants International. **Figure 1.4.4-1** presents the project organizational chart.

DOTC Project Committees

1.4.9 As agreed upon with ADB and recorded in the MOU of 10 December 2003, the DOTC established a project steering committee composed of key agencies which were consulted during the October 2003 Fact Finding Mission of the ADB. An Executive Order (EO) creating the various project committees was prepared and in the final stage of approval by the Office of the President. The DOTC-led Steering Committee will coordinate the implementation of the project and provide policy directives to the Project Team. This Committee, chaired by the DOTC Secretary, includes the respective heads and officials of:

- National Economic and Development Authority (NEDA);
- Mindanao Economic Development Council (MEDCO);
- Department of Public Works and Highways (DPWH);
- Department of Tourism (DOT);
- Department of Finance (DOF);
- Department of Budget and Management (DBM);
- Regional Government of the Autonomous Region in Muslim Mindanao (ARMM);

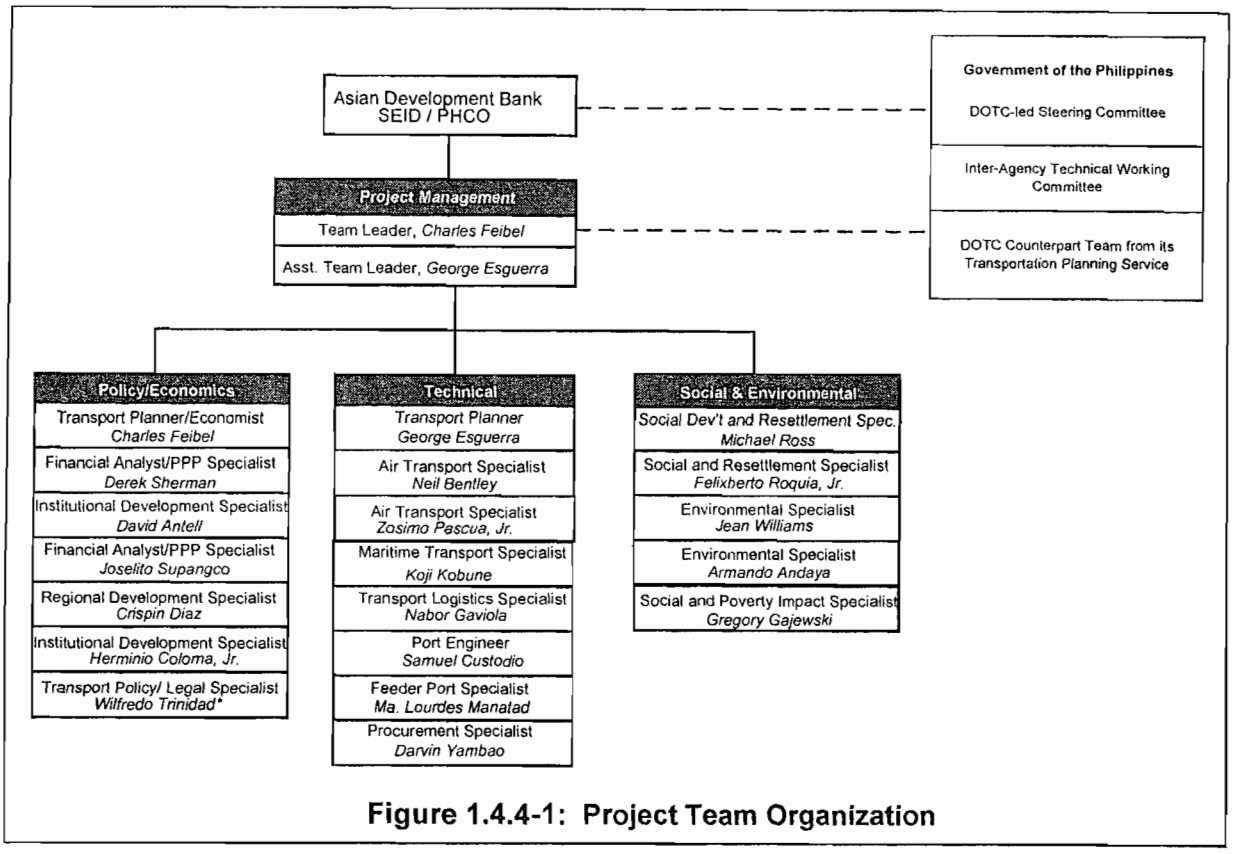


Figure 1.4.4-1: Project Team Organization

- Provincial Government of Palawan; and
- Attached agencies of DOTC, namely:
  - Philippine Ports Authority (PPA);
  - Maritime Industry Authority (MARINA);
  - Air Transportation Office (ATO); and
  - Civil Aeronautics Board (CAB)

1.4.10 The DOTC Steering Committee was supported by an Inter-Agency Technical Working Committee, headed by the DOTC Assistant Secretary for Planning and Project Development. A Counterpart Study Team, comprising of officials and staff of the DOTC Transportation Planning Service worked directly with the Project Team. The Administrative Order (AO) No.140 is presented as **Appendix B**.

1.4.11 Key to the success of the ITDP work was the extent of involvement of various stakeholders and the level of coordinative effort in bringing out the issues and concerns of these stakeholders. The inter-relationships and respective roles of agencies and institutions are described in **Figure 1.4.4-2**. Early discussions with the ADB pointed to the need to interact closely with the NEDA Board Committees, notably the Infrastructure Committee (InfraCom), including its Inter-Agency Technical Committee on Transport Planning (IATCTP) and the Investment Coordination Committee (ICC).

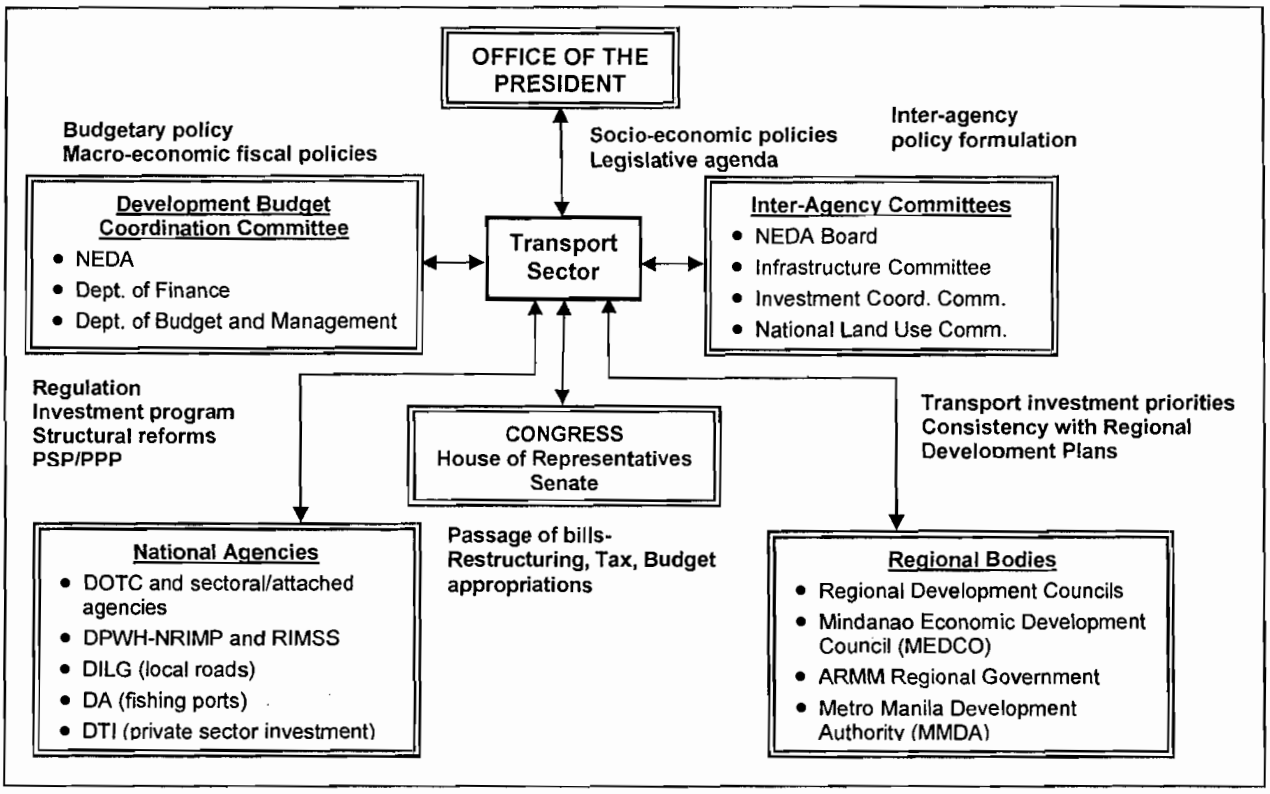


Figure 1.4.4-2: Agency Linkages in Transport Development in the Philippines

1.4.12 Dialogue was held at the level of InfraCom as part of the more formal review and deliberation of ITDP's preliminary and final conclusions and recommendations. Technical discussions under IATCTP envisaged prior to any presentation of project outputs to InfraCom. On the other hand, the ICC will be involved at a much later stage when the public investment package consisting of identified intermodal transport sub-projects are submitted for government approval to implement.

1.4.5 Scope of Social and Environmental Studies

1.4.13 The ITDP terms of reference (TOR) state that the Project Team should provide needed changes in the scope of work in Phase 2 in the Second Interim Report. The Project Team provided these comments. Of the issues raised two, concerning IEEs and RAPs, are relevant to discuss here. Below, the issue of data constraints is also described.

1.4.14 **Summary Initial Environmental Examination (IEE).** The ITDP TOR Section B.3.(ii) states that a Summary IEE will be prepared for each subproject. In the Second Interim Report, the Project Team proposed to prepare a Summary IEE covering all eight subprojects to address ADB loan appraisal requirements. The detailed description and outline of this Summary IEE as agreed with the ADB Environmental Specialist was provided in the Second Interim Report.

1.4.15 IEEs were prepared for only four subprojects (Zamboanga and General Santos Hub Ports and Jolo and Sitangkai Feeder Ports) to address the Government's review and approval requirements. For the three airport subprojects, Environment Impact Statement (EIS) studies were prepared in 2003 and approved by the DENR. For the Bongao Feeder Port, an IEE was prepared in 2004 and approved by the DENR and the ADB. The Project Team conducted due diligence reviews of these four subproject IEEs for which the required environmental impact assessment studies and DENR clearances are available, the results of which are provided in **Volume V**.

1.4.16 **Resettlement Action Plans (RAPs).** The ITDP TOR Section B.3.(iii) states that RAPs will be prepared for each subproject, if required. In the Second Interim Report, the Project Team committed to providing a RAP only for Bongao and RAP Terms of Reference (TORs) elsewhere, when required. In terms of being able to prepare RAPs versus RAP TORs, the primary issue was the time and staff resources available to the Project Team as the average time period to complete a RAP is about four months after sufficient design details are available. Supplementary Land Acquisition and Resettlement Plans (LARPs) were prepared for three airport subprojects.

1.4.17 Under the Sector Loan approach, the Project Team prepared a sample RAP for Bongao feeder port and RAP TORs for the two other feeder port subprojects requiring RAPs to guide the preparation of these studies under the loan.

1.4.18 **Data Constraints.** Hydrological and Geotechnical Studies could not be undertaken due to time and resource constraints. This was of most concern in the feeder port projects but for Bongao, the feeder port for which a feasibility study was prepared, a recent United States Agency for International Development (USAID) project had pile data for the area in which the ITDP will work. It should be noted that the level of contingency used for each subproject varies and reflects the amount of data available. It should also be noted that the available Regional Port Management Authority (RPMA) traffic and financial data for the three feeder ports is incomplete, but the Project Team was able to estimate these using secondary data from a number of sources. The traffic and financial data for hub ports and airports were complete.

1.5 Phase 1 and Phase 2 Study Process and Work Program

1.5.1 Study Approach

1.5.1 The technical approach focuses on the following important and cross-cutting issues:

- Improving the **intermodal transport system** and the logistics chain will address the economic development of the widely dispersed regions/ areas in Southern Philippines and provide a lifeline access to remote areas where poverty is prevalent;
- Through recommended **institutional improvement**, weak institutions can be strengthened in terms of improving organizational structures, streamlining procedures and formalities, reforming the incentive and penalty systems, and harnessing human resources more effectively;
- With macro-economic stability, competitive policy environment and improved peace and order, the **private sector participation (PSP) and public-private partnership (PPP)** will be encouraged, while taking full account of appropriate tariff levels, risk-sharing and return on investments;

- Promotion of **cost-based pricing and tariffs** and transparent delivery of subsidies will be required to restore fiscal stability and private sector confidence to invest;
- Through recommended reforms in the **legal and regulatory frameworks**, efficiency and competition can be re-established in the delivery of transport services; and
- **Social acceptability and ownership** of the recommended action program stem from the full accounting of the needs and aspirations of the various stakeholders, particularly those currently living in poverty.

1.5.2 Work Plan and Task Description

1.5.2 The Project Team's methodology and work plan followed closely the Project TOR (Appendix A). The attached work flow chart (**Figure 1.5.2-1**) indicates the activities under the two project phases and linkages among the different tasks. The detailed descriptions of the tasks are outlined below.

1.5.3 **Task 1: Project Inception.** This task covered the detailed review of the study approach and methodology and preparation of the Inception Report. An initial review of the transport system performance from the national and project area viewpoints was included in the Inception Report. The Project Team also carried out a project scoping meeting with DOTC and ADB during the Inception stage. The Inception Report included the revised implementation plan and preliminary conclusions of the transport sector review.

1.5.4 **Task 2: Review of Earlier Studies and Update Data [A.1 (i) to (ix) of TOR].** Aware of various transport studies, development plans and programs, and comprehensive databases covering Southern Philippines, the Project Team compiled the relevant documents and information from participating government agencies and lending institutions. Additional information and reports were obtained and reviewed under this task.

1.5.5 In coordination meetings with ADB and the DOTC, the Project Team was allowed access to reports of recently completed and on-going Japan International Cooperation Agency (JICA)-assisted transport studies, notably:

- Study on the Master Plan for the Strategic Development of the National Port System in the Philippines (January 2004);
- Survey on Inter-Regional Passenger and Freight Flow (December 2004);
- Axle Load Survey in the Philippines (January 2005);
- Survey on Analysis of Data Collection System for Traffic Accidents in the Philippines (February 2005);
- Master Plan Study on the Strategy for the Improvement of National Airports, Interim Report (October 2005), including its Air Transportation Databook 2005 (June 2005); and
- Study on Domestic Shipping Development Plan, Draft Final Report (October 2005).

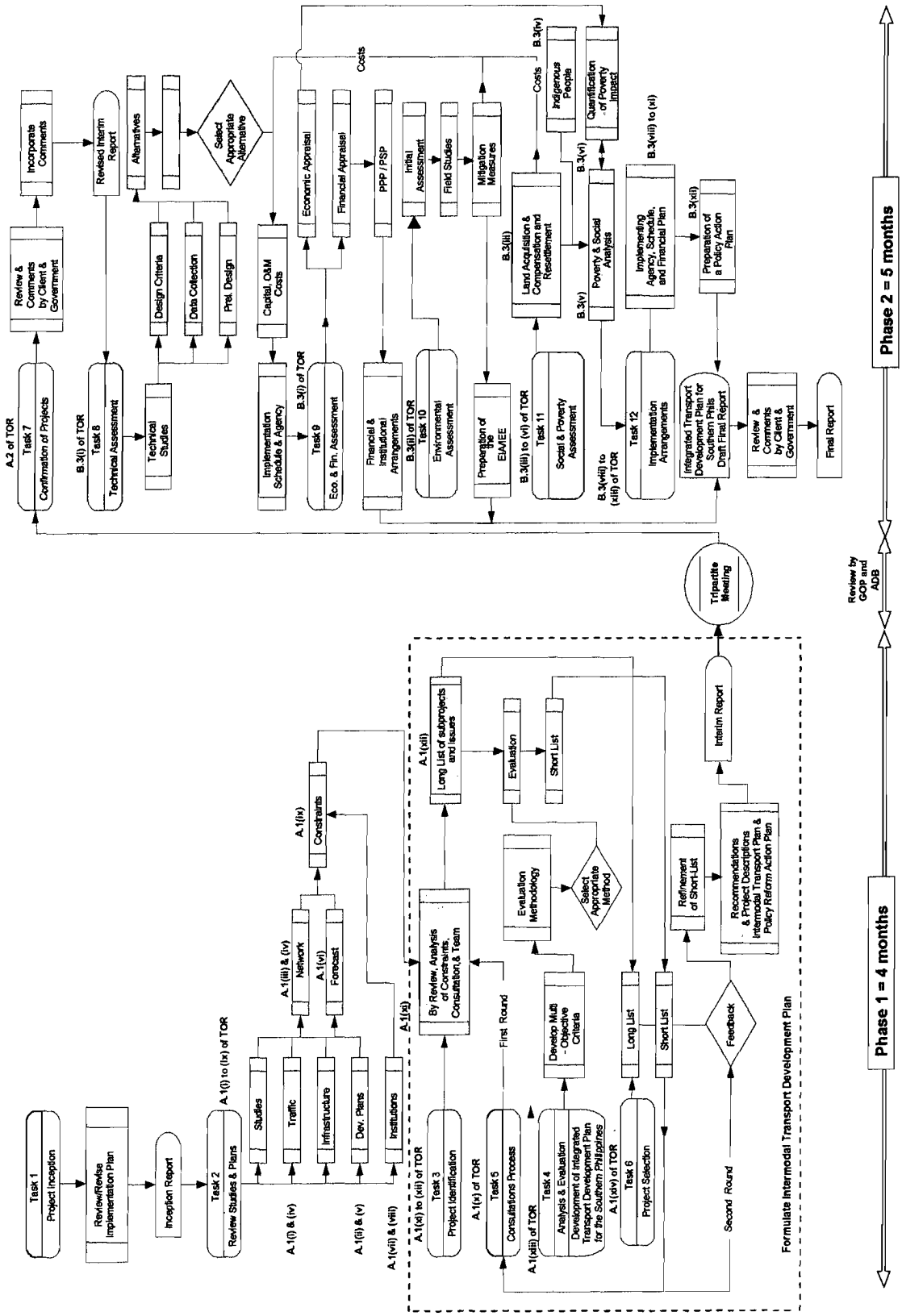


Figure 1.5.2-1: Flow Chart of Tasks for the Intermodal Transport Development Project

1.5.6 **Task 3: Project Identification [A.1 (xi) to (xii) of TOR].** The main purpose of this task was to develop project concepts and proposals from various "actors" in the intermodal transport system, which are meant to:

- Fill gaps in the transport network;
- Improve the functioning of the infrastructure facilities and transport services; and
- Address critical development issues confronting the government and other stakeholders.

1.5.7 Project proposals came from a range of sources, but the primary responsibility in identifying potential sub-projects was that of the concerned transport agencies. Project concepts or proposals were also identified as part of dialogue between financial institutions and the government. Other sources included: high-level visits, sector studies, programming missions, donor consultative forums and mission reports, and projects reviews and evaluations conducted by the government, the business sector, the academe and/or civil society. It is important to note that consultations were used as key steps in the identification process. The list of possible sub-project proposals were presented, refined and agreed upon in such meetings.

1.5.8 **Task 4: Analysis and Evaluation of the Sub-Projects [A.1 (xiii) of TOR].** There were a large number of modal and intermodal transport projects identified and endorsed by government agencies and regional bodies which exceeded the capacity to be funded through the proposed ADB loan. A rational method of screening, selecting and ranking projects for more detailed and complete evaluation was developed in consultation with the Government and ADB. More specifically, a multi-criteria, decision-making procedure was formulated to assist the Project Team in deciding which of the sub-projects would be evaluated in Phase 2.

1.5.9 The Project Team considered resettlement, land acquisition, and social impact issues in its analysis of potential sub-projects. Resettlement, land acquisition and social impact issues were factored into the screening analysis to insure selected sub-projects did not involve substantial resettlement issues or costs. The ITDP Team prepared an Initial Social Assessment (ISA) for each selected sub-project using the ADB's *Handbook on Poverty and Social Analysis* (2001). This would identify and analyze any constraint to land acquisition and resettlement activities which may affect sub-project preparation and implementation, and recommend ways to overcome them.

1.5.10 Using ADB's *Rapid Environmental Assessment Checklists* (ports and harbors, airports, and roads), the Project Team factored potential adverse environmental impacts into the screening analysis to insure that selected sub-projects can be developed without degradation of the natural environment or human activity system.

1.5.11 **Task 5: Consultative Process**. This interactive phase of the Project was used to gain consensus on methodologies and key milestone outputs and deliverables. The process was planned to be progressive, engaging certain groups of stakeholders in structured discussions about specific issues and/or recommendations. Structured workshops or interviews, involving selected government officials and private sector representatives, was also undertaken in the field.

1.5.12 **Task 6: Sub-Project Selection [A.1 (xiv) of TOR].** The main output of this task was the shortlist of proposed sub-projects for feasibility analysis to be undertaken in Phase 2 along with a detailed work plan indicating how further preparation of the subprojects would be accomplished. Moreover, policy recommendations to support the proposed investment package were formulated.

1.5.13 **Task 7: Confirmation of the Projects for Feasibility Analysis [A.2 of TOR].** A Tripartite Meeting was convened by the Government with ADB on 8 December 2005 to review and confirm the findings and recommendations contained in the First Interim Report.

1.5.14 The Project Team considered the written comments received and prepared the Second Interim Report, which also contained the Inception Report for Phase 2. In the process of incorporating the comments into the final version of the Second Interim Report, coordination meetings were held with DOTC and the ADB.

1.5.15 At the Joint Steering Committee and Technical Working Committee Meeting of 8th February 2006, the eight short-listed subprojects recommended in the ITDP First and Second Interim Report and the level of study for each subproject (see **Table 1.5.2-1**) were confirmed.

1.5.16 **Task 8: Technical assessment [B.3 (i) of TOR]**. The purpose of the technical assessment is to define the key elements and parameters of each of the proposed airport and port subprojects; formulate the basic technical design and alternative designs; formulate the operation and maintenance plan; set project costs; and prepare the implementation program. A major undertaking in this task was the review of the traffic forecast of each subproject, with particular attention paid to the expected future aircraft and vessel characteristics for airports and ports, respectively.

1.5.17 **Preliminary Design of Airport Facilities**. For the airport subprojects, the requirements of airport facilities were based on standard, generally accepted and recommended practices of airport physical characteristics and air traffic parameters, such as anticipated types of aircraft and peak-hour air traffic volumes.

1.5.18 **Preliminary Design of Port Facilities**. The port technical studies were guided by planning and design manuals used by the PPA, notably, *Guide to Port Planning, 1995* and *Design Manual for Port Facilities in the Philippine Ports Authority, 1995.*

1.5.19 **Cost Estimation**. Unit costs for airport and port civil works and equipment procurement were based on recent DOTC and PPA airport and port contracts and updated to December 2005 prices. Current unit costs for feeder port subprojects were available from an ongoing USAID project in the Sulu Archipelago. The main project costs cover civil works, equipment procurement and installation, consulting services for detailed design, tender assistance and construction supervision and physical contingencies. Other cost components include land acquisition, resettlement of informal settlers, price escalation contingencies, interest during construction, and taxes. Operating and maintenance costs were also estimated at constant end of 2005 prices based on the appropriate operation and management plan.

Table 1.5.2-1: Phase 2 Subprojects and Scope of Work

	Subproject	Present Status	Phase 2 SOW: Technical Studies	Phase 2 SOW: Environmental / Social Safeguards & Poverty Alleviation Initiatives		
				Environmental Safeguards	Social Safeguards	Poverty Alleviation Initiatives
Airport Subprojects						
1	Puerto Princesa	Feasibility Study	• Updated Feasiblity Study • Due Diligence Review	• Due Diligence Review of Designs • Provide guidance to DOTC to extend issued ECC	• Due Diligence Review of Designs • External LARP Monitoring by DOTC • Analyze cargo for inputs to PSA • Supplementary LARP	• No detailed studies
2	Cotabato	Feasibility Study	• Updated Feasiblity Study • Due Diligence Review	• Due Diligence Review of Designs • Provide guidance to DOTC to extend issued ECC	• Due Diligence Review of Designs • External LARP Monitoring by DOTC • Analyze cargo for inputs to PSA • Supplementary LARP	• No detailed studies
3	Butuan	Feasibility Study	• Updated Feasiblity Study • Due Diligence Review	• Due Diligence Review of Designs • Provide guidance to DOTC to extend issued ECC	• Due Diligence Review of Designs • External LARP Monitoring by DOTC • Analyze cargo for inputs to PSA • Supplementary LARP	• No detailed studies
Hub Port Subprojects						
1	Zamboanga	Feasibility Study (Break Bulk Wharf FS & RoRo No FS)	• Updated Feasiblity Study* • Due Diligence Review • Pre-Feasibility Study RoRo	• Initial Environmental Examination	• No land acquisition or resettlement required • Analyze cargo and passengers for PSA	• Recommend facilities within the subproject site facilities for small businesses and/or for "poor" passengers and for cargo consumed or produced by the poor to support poverty alleviation objectives.
2	General Santos City	Feasibility Study	• Update Feasiblity Study* • Due Diligence Review	• Initial Environmental Examination	• No land acquisition or resettlement required • Analyze cargo and passengers for PSA	• Not applicable (large commercial port)

* No geotechnical or hydrological or other off-shore studies were undertaken

DOTC - Department of Transportation and Communications
ECC - Environmental Compliance Certificate
FS - Feasibility Study
LARP - Land Acquisition and Resettlement Plan
PSA - Poverty and Social Analysis
RoRo - Roll-On, Roll-Off

Table 1.5.2-1: Phase 2 Subprojects and Scope of Work (Continuation)

Subproject		Present Status	Phase 2 SOW: Technical Studies*	Phase 2 SOW: Environmental / Social Safeguards & Poverty Alleviation Initiatives		
				Environmental Safeguards	Social Safeguards	Poverty Alleviation Initiatives
Feeder Port Subprojects						
1	Bongao	No Feasibility Study	• Feasiblity Study*	• Initial Environmental Examination	• Prepare Supplemental LARP • Prepare PSA Case Study	For all 3 subprojects: Recommend facilities within the subproject site for handling smaller or outriggered boats and facilities for small businesses and/or for "poor" passengers and cargo produced or consumed by the poor and recommend additional off-site facilities (within 1/2 km) to support poverty alleviation objectives.
2	Jolo (Sulu)	No Feasibility Study	• Pre-Feasiblity Study*	• Initial Environmental Examination	• Prepare LARP TOR. • Analyze cargo and passengers for inputs to PSA.	
3	Sitangkai	No Feasibility Study	• Pre-Feasiblity Study*	• Initial Environmental Examination	• Prepare LARP TOR • Analyze cargo and passengers for inputs to PSA.	

* No geotechnical or hydrological or other off-shore studies were undertaken

DOTC - Department of Transportation and Communications
IEE - Initial Environmental Examination
LARP - Land Acquisition and Resettlement Plan
PSA - Poverty and Social Analysis
TOR - Terms of Reference

	Overall ITDP Project Safeguards	Environmental Safeguards	Social Safeguards	Poverty Alleviation Initiatives
1	Summary IEE	Yes		
2	Land Acquisition and Resettlement Policy Framework*		Yes	
3	Poverty and Social Analysis (PSA)		Yes	
4	Consultation	Yes	Yes	Yes
5	Indigeneous People Policy Framework (IPPF)		Yes	

*Draft Land Acquisition and Resettlement Policy Framework and Procedural Guidelines (LARPFPG) provided in First Interim Report requires review and approval by DOTC and concerned LGUs prior to project appraisal.

1.5.20 **Implementation Program**. The overall implementation program for all subproject packages covers the period from NEDA/ICC approval and loan application to the construction phase of each subproject. It is anticipated that NEDA/ICC review and approval could be completed by the end of 2006.

1.5.21 **Task 9: Economic and Financial Assessments [B.3 (i) of TOR]**. The purpose of an economic analysis of a subproject is to bring about a better allocation of resources leading to an improvement in the incomes of the project beneficiaries, and in turn results in an increase in investment and/or consumption for the nation as a whole. The purpose of a financial analysis is to ensure that the revenues generated provide sufficient funds to cover the costs incurred and provide a profit to the investors or proponents of the project. Economic and financial assessments have common elements, but the methodology and purpose of each are quite different. Both require inputs from the other tasks, especially *Task 8: Technical Assessment.*

1.5.22 **Economic Evaluation**. The economic analysis of a subproject compares the costs (capital and operation and maintenance costs) and benefits under the "with" and "without" subproject basis. The "without" subproject scenario refers to the continued operation of the existing facility without physical improvement. The "with" project is established by appraising the costs and benefits of airport or port improvement in terms of incremental revenue generation, its contribution to the overall economic development of the zone of influence, and its enhancement of accessibility in the transport of passengers and freight. The subprojects were evaluated over a period of 25 years.

1.5.23 For airport subprojects, the improvement of the airport facilities will directly lead to improved aircraft utilization and reduced incidence of cancellations and diversions. Through the improvement of facilities to accommodate increased traffic volume and more advanced aircraft, the airport subprojects will generate incremental airport operating revenues through landing and takeoff fees, passenger terminal charges (non-tourists), commercial space rental, car parking charges and other airport business income. The airport subprojects will also produce economic benefits by attracting more tourists, whose net expenditure will be treated as benefit, to the outlying areas through improved airport facilities, higher safety and security levels, and better passenger handling services.

1.5.24 For port subprojects, the improvement of port facilities will bring about improved vessel utilization (ship waiting time savings), cargo handling efficiency, avoidance of lighterage cost (i.e. the cost of carrying break-bulk cargo by lighter or small boat to the shore), and avoided road transport cost. Because of the mandatory compliance with the International Ship and Port Facility Security (ISPS) Code, which applies to all ports handling foreign trade, the impact of enhanced port security and safety was assessed.

1.5.25 All financial costs and revenues were converted to economic costs and revenues by excluding taxes and duties, and by applying the shadow prices for foreign exchange and local labor. However, taxes imposed on foreign tourists are not netted out as they represent net gain to the Philippine economy.

1.5.26 Common analysis approaches to estimating and summarizing the economic cost and benefit streams were used: net present value (NPV) and economic internal rate of return (EIRR) calculations. Sensitivity analyses was undertaken for variations in the base case such as: 10% increase in costs, 10% decrease in benefits, one-year implementation delay, and a combination of these three cases.

1.5.27 **Financial Analysis**. The financial internal rate of return (FIRR) was estimated using the "with" and "without" subproject comparison. The major assumptions are: (i) the financial analysis reflects constant December 2005 prices; (ii) the capital costs include all incremental capital expenditures associated with the airport or port subproject, but exclude interest expenses and service charges during construction, and price contingency provisions; (iii) the project traffic growth attributable to the subproject is as derived in the technical assessment (Task 8); and (iv) the tariffs and charges will be based on the results of the operation and maintenance review under Task 8. As the present tariff levels have not been set in relation to costs, airport and port charges will be increased, and new tariffs, such as airport and port security fees, may be imposed.

1.5.28 Sensitivity analyses were carried out to test the effects of possible unfavorable scenarios with respect to changes in the main parameters that determine subproject costs and revenues. These scenarios include: 10% cost increase, 10% decrease in revenues, one-year delay in implementation, and the combination of these three cases.

1.5.29 **Task 10: Environmental Assessment [B.3 (ii) of TOR].** The subprojects to be considered all have potential environmental impacts. The construction of subprojects may disrupt the existing natural and social balance of the immediate area, potentially causing changes in land use, changes to the social dynamics of the population, changes to the economy, living conditions and health, among others. Apart from these changes, there are potential environmental impacts which may occur for only a limited period, i.e. temporarily during construction, but which may have longer-term adverse impacts if preventive and mitigation measures are not taken. The design assumptions from the airports and ports technical specialists were used as the basis to predict changes to, and effects on, the environment (including adjacent communities).

1.5.30 The environmental analysis and management of subprojects was carried out in accordance with ADB guidelines, e.g. *ADB Environmental Assessment Guidelines* (2003). The environmental assessments also comply with the requirements of the Government. The environmental categories of the subprojects were identified using ADB's *Rapid Environmental Assessment Checklists* (ports and harbors, airports, and roads) and were re-assessed if significant design changes were proposed. Initial environmental examinations (IEEs) have been prepared for some of the proposed subprojects, and in some cases environmental clearance certificates (ECCs) have been issued. For the subprojects with no existing environmental assessment, an IEE was prepared in accordance with both ADB and Government guidelines and processing requirements. The environmental examination includes identification of temporary and permanent impacts, costed mitigation measures for impacts of an adverse nature, and consultation with beneficiary and affected communities on the likely issues associated with the subproject. Consultation was coordinated with the requirements for social assessment and resettlement planning. As noted in the Inception Report, ADB agreed to the proposed structure for the IEE.

1.5.31 **Task 11: Resettlement, Land Acquisition and Poverty Impact [B.3 (iii) of TOR].** Under Phase 2, the Project Team determined if land acquisition, compensation and resettlement plans were needed for the selected subprojects. The Project Team prepared a compensation policy framework and procedural guidelines, which indicate general compensation and implementation procedures for the Project, and individual land acquisition and resettlement plans for each subproject in accordance with ADB's *Policy on Involuntary Resettlement* (1995, as amended) and in accordance with applicable Philippine laws.

Furthermore, in line with ADB's *Policy on Indigenous People* (1998), the Project Team prepared a policy framework for the Project.

1.5.32 Finally, the Project Team conducted desk and field investigations for poverty and social analysis (PSA), consulted with local stakeholders, and prepared a PSA report that meets the requirements of ADB's *Handbook on Poverty and Social Analysis* (2001). Using available national, regional and local statistics, the Project Team prepared the following profiles for the Project and each specific subproject: a social-economic profile, a poverty profile and a stakeholder analysis. The Project Team also assessed quantitatively the poverty impact of the ITDP, using ADB methodology. With the project area or project impact area as the basis for analysis, the Project Team outlined the mechanism, including micro and macro effects, through which the Project will contribute to reduce poverty.

1.5.33 **Task 12: Implementing Arrangements and Draft Final Report Preparation [B.3 (vii) to (xiii) of TOR].** Based on the results of the feasibility assessments of the subprojects, and in close consultation with the Government and ADB, the Project Team recommended appropriate institutional arrangements and schedules for project implementation for DOTC and the other implementing agencies (ATO and PPA). The Project Team also suggested modalities for the involvement of the private sector, government departments and Local Government Units (LGUs) in charge of regional and local infrastructure development.

1.5.34 On the basis of the cost estimates prepared for the feasibility studies, the Project Team estimated the proposed funding arrangements for each subproject. The contribution of the private sector, national Government and attached corporations, ARMM, and LGUs, as well as on-lending mechanisms, if required, was indicated. Various options to ensure proper maintenance of the subprojects through PSP and other modalities were also recommended.

1.5.35 In close consultation with the Government and ADB, the Project Team assisted in the preparation of an action plan for policy dialogue. Phase 2 work included more detailed analyses of the intermodal transport policy as well as institutional, legal and regulatory frameworks. Particular attention was given to: RoRo ferry service operation, pricing and investment; domestic air services; airport operation, management and pricing; restructuring of the civil aviation organizations; and expansion of air and sea linkages under the BIMP-EAGA economic cooperation. The development of the action plan ensures full understanding of the constraints and policy alternatives and how best to address them. The Project Team drafted terms of reference to help the Government and concerned stakeholders address the issues in a time-bound manner.

1.5.36 The results of the feasibility studies, proposed implementation program, policy reforms, and institutional strengthening measures are incorporated in the draft Final Report. This report will be finalized upon receipt of formal comments from the Government and ADB.

1.6 Consultation Process

1.6.1 Regional and National Consultation Workshops

1.6.1 The TOR of the ITDP states that the Consultant should "*hold regional and national consultation workshops with the actors and stakeholders in intermodal transport: ARMM, Mindanao Economic Development Council (MEDCO), LGUs, transport operators and users, non-government organizations, private sector, and civil society*." Each consultation or dialogue

is designed to be participatory to fully understand the constraints of local government, the extent of inter-agency cooperation, and the perceptions of the main stakeholders.

1.6.2 The regional stakeholder consultation workshops were held at the following project sites: Davao City for Regions X, XI, XII and CARAGA; Zamboanga City for Regions IX and ARMM; and Puerto Princesa City for Palawan Province. "Stakeholders" were broadly defined to include relevant LGUs, representatives from relevant line agencies in the region, users of infrastructure, etc. **Table 1.6.1-1** shows the following regional ITDP Stakeholder Consultations and Workshops held.

Table 1.6.1-1: Regional and National Consultations Workshops

Name	Place	Date	No. of Participants
• Zamboanga City Regional Stakeholder Workshop	Garden Orchid Hotel, Zamboanga City	9 September 2005	67
Stakeholders at the Zamboanga City Regional Stakeholder Consultation were from the Sulu Archipelago, and Region 9.			
• Davao City Regional Stakeholder Workshop	Waterfront Hotel, Davao City	13 September 2005	86
Stakeholders at the Davao City Regional Stakeholder Consultation were from all Mindanao Regions			
• Palawan Regional Stakeholder Workshop	The Legend Hotel, Puerto Princesa, Palawan	21 September 2005	46
Stakeholders at the Palawan Regional Stakeholder Consultation were from Palawan Province.			
• Phase 1 National Consultation Workshop	Astoria Hotel, Pasig City	9 November 2005	55
Stakeholders from national government agencies, regional bodies such as ARMM and MEDCO, representatives of the transport industry, business sector and civil society.			
• National Stakeholder Presentation	The Linden Suites	17 May 2006	63
Stakeholders from national government agencies, regional bodies such as ARMM and MEDCO, representatives of the transport industry, business sector and civil society.			
• Mindanao Stakeholder Presentation	Apo View Hotel, Davao City	28 July 2006	64
Stakeholders from national government agencies, regional bodies such as ARMM and MEDCO, representatives of the transport industry, business sector and civil society.			

1.6.3 The 318 registered participants of the Stakeholder Consultations and Workshops were from the private sector (including representatives from shipping companies, airlines, Chamber of Commerce, regional business organizations and other Non-Government Organizations (NGOs)), local government (Governors, Provincial and Municipal planning staff, and Mayors, as well as, the ARMM and MEDCO were represented), and from National Government line agencies (including regional representatives of NEDA, DPWH, ATO, DTI, PPA, and DENR).

1.6.2 Agency Consultations and Field Visits

1.6.5 The Project Team conducted agency visits to bring to the attention of key officials specific concerns relevant to that agency as well as seek guidance on the conduct of the Phase 1 and Phase 2 activities. As part of the formal inquiry on identified sub-projects under the refined long-list in Phase 1 and to gather detailed subproject and site information of the short-listed subprojects in Phase 2, the Project Team undertook numerous field surveys visits to each subproject.

1.6.3 Steering Committee and Technical Working Group Meetings

1.6.6 Eight Steering Committee and/ or Technical Working Committee Meetings were held in Phase 1 and Phase 2. The Minutes of Meeting, Program, Presentation given, Photos and Attendance sheet for meetings held in Phase 2 are provided in **Appendix C**.

1.6.7 The Phase 2 Inception Report was presented to the joint meeting of the TWC and Steering Committee on 8 February 2006. This meeting confirmed the methodology for conducting feasibility-study updates for the airport and hub port subprojects, pre-feasibility studies for feeder ports, as well as social impact and environmental studies.

1.6.8 The draft Final Report was discussed in a Steering Committee meeting on 16 May 2006 (see Appendix C) and its principal recommendations were endorsed by the Committee.

1.6.4 Tripartite Meetings with Government, ADB, and Consultants

1.6.9 At the end of Phase 1, on 8 December 2005, the Project Team participated in a Tripartite Meeting with the Government and ADB to review the Project Team's methodology, findings and recommendations, and agreed on:

- Priority areas of intervention for the ensuing Intermodal Transport Development Project;
- A list of candidate sub-projects to be further prepared for ADB financing; and
- Corresponding implementing arrangements for project preparation (Phase 2).

1.6.10 The second and final Tripartite Meeting between the Government, ADB and Project Team will be held in September 2006.

1.6.5 Phase 2 Field Visits

1.6.11 In February, ADB-DOTC field missions visited Davao City and Zamboanga City. In March, General Santos City port, Bongao feeder port, Jolo feeder port and Zamboanga City port were visited. In April, the Puerto Princesa airport was visited and in May the Cotabato City and Butuan airports. In June, the Puerto Princesa and Cotabato City Airports were visited and in July the Bongao and Sitangkai feeder ports.

1.7 Organization of the Final Report

1.7.1 The ITDP Final Report is organized in a Main Report with Chapters 1 through 7 and Volumes II through VI. The Main Volume, Volume 1, has the following contents:

- **Chapter 2**, which presents the summary of Updated Feasibility Studies for Puerto Princesa, Cotabato City and Butuan City Airports.
- **Chapter 3**, which presents the summary of Feasibility Studies for Zamboanga City and General Santos City Hub Ports.
- **Chapter 4**, which presents the summary of Feasibility Studies for Bongao, Jolo and Sitangkai Feeder Ports.
- **Chapter 5**, which summarizes Environmental, Social and Poverty Issues.
- **Chapter 6**, which contains the Institutional and Policy Reforms discussion.
- **Chapter 7**, which discuss the Implementation Plan for the proposed loan.

1.7.2 The ITDP Draft Final Report also includes the following Volumes:

- **Volume II** Update of Airport Feasibility Studies
- **Volume III** Hub Port Feasibility Studies
- **Volume IV** Feeder Port Feasibility Studies
- **Volume V** Environmental and Social Safeguards
- **Volume VI** Summary Initial Environmental Examination: Airports, Hub Ports and Feeder Ports

CHAPTER 2

Summary of Updated Feasibility Studies for Puerto Princesa, Cotabato, and Butuan Airports

Chapter 2 SUMMARY OF UPDATED FEASIBILITY STUDIES FOR PUERTO PRINCESA, COTABATO, AND BUTUAN AIRPORTS

2.1 Brief Profiles of Subprojects

2.1.1 This chapter contains a summary of the ITDP update of the previously completed feasibility studies prepared under the Third Airports Development Project and the proposed Southern Philippines Airports Development Project. The three ITDP airport subprojects include: Puerto Princesa, Cotabato, and Butuan Airports. The complete updates of the previous feasibility studies are presented in Volume II of this Report. The location and zones of influence (ZOI) of these three (3) subprojects in the Southern Philippines are illustrated in **Figure 2.1-1**, and **Figures 2.1-2, 2.1-3,** and **2.1-4** show more detailed location maps.

2.1.2 The Implementing and Executing Agency for the three (3) airports is the DOTC.

2.1.3 **Puerto Princesa Airport** is the principal airport serving Palawan, the largest province of the Philippines. The province is a major tourism resource of the country and the airport serves as its gateway. Currently, the airport airside facilities are underutilized but landside facilities are congested. The airport has great potential and there are existing plans to accommodate international flights. The airport's ZOI includes the whole of Palawan Province with a population of 891,000. In terms of passenger traffic, the airport ranks 7th in the nation. ITDP recommended improvements include building a new and larger passenger terminal with facilities for international arrivals, runway upgrading, Cat I air navigational facilities and an access road across the runway from the existing terminal, among others.

2.1.4 Peace and order conditions are stable in Puerto Princesa City and especially at the airport. Thus security concerns are unlikely to negatively affect the process of project implementation.

2.1.5 **Cotabato Airport** is the gateway to Central Mindanao and thus to the administrative center of the ARMM. The airports' improvement will directly support the peace and development objectives of the Government in this conflict-affected area and will be supportive of the pending peace agreement between the Government and the Moro Islamic Liberation Front (MILF). The airport's ZOI (the second largest among the airports studied) includes: Cotabato City, North Cotabato, Lanao del Sur, and Maguindanao provinces. The population within this ZOI is 2.4 million and in terms of passenger traffic the airport ranks 9th in the nation. ITDP recommended improvements include building a new passenger terminal, rehabilitation and widening of runway, and access road across the runway from the existing terminal, among others.

2.1.6 Peace and order conditions are relatively stable in Cotabato City and especially in the vicinity of the airport, which is located next to military facilities. Therefore, security concerns are unlikely to negatively affect project implementation. Furthermore, part of the rationale for the proposed investment is to provide better socio-economic conditions which should support the Government's objectives in promoting peace.

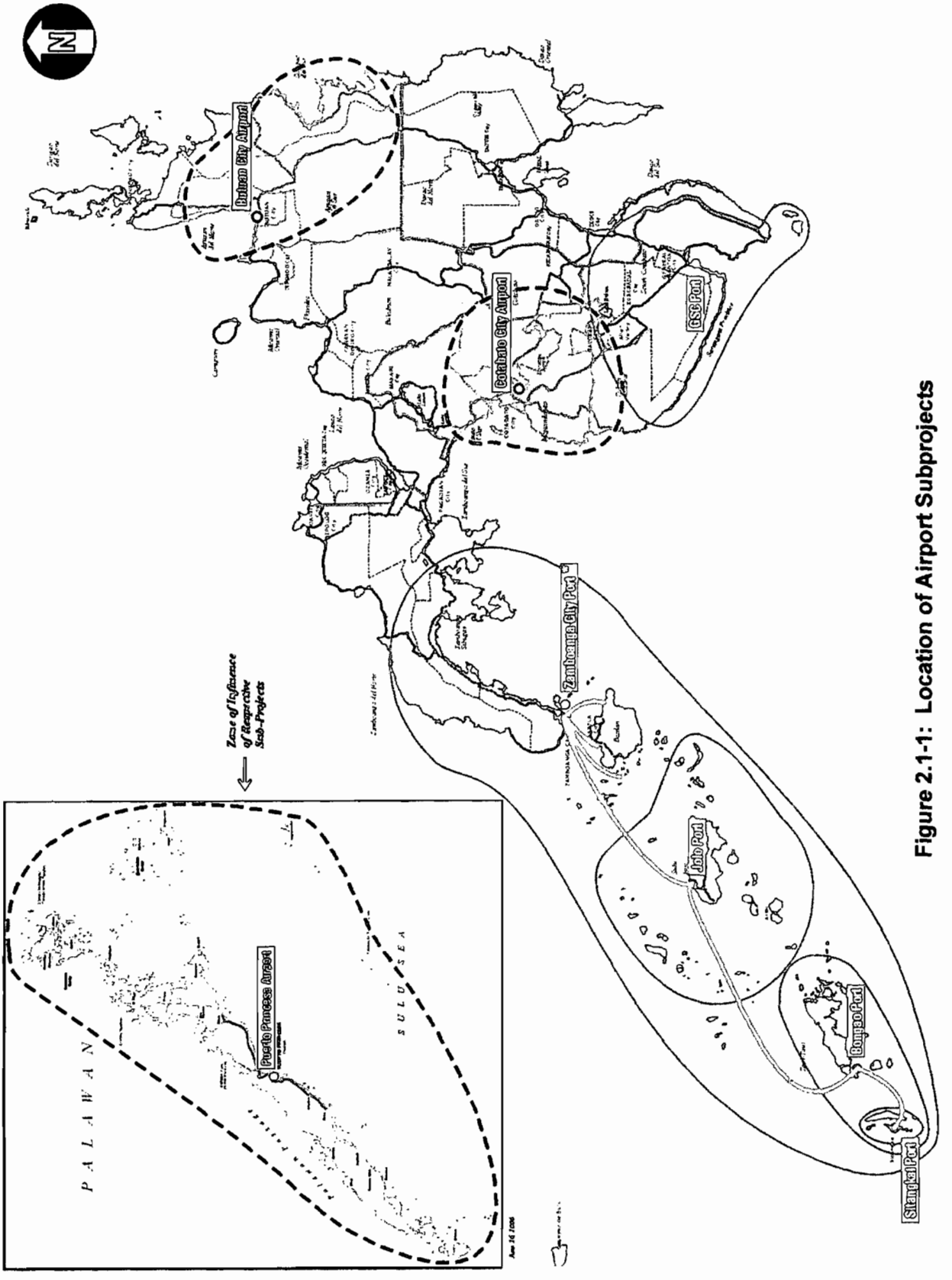


Figure 2.1-1: Location of Airport Subprojects

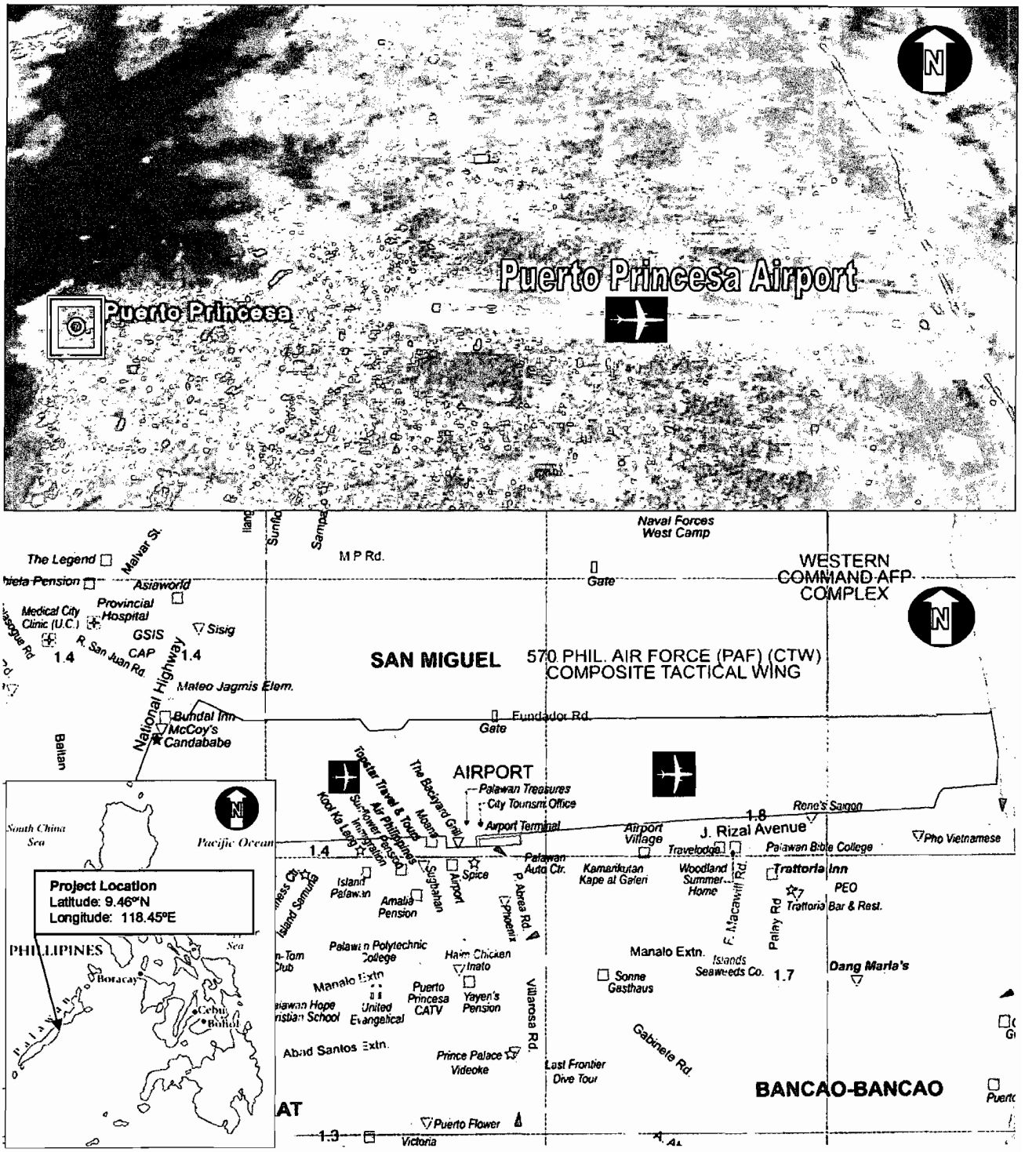


Figure 2.1-2: Vicinity Map of Puerto Princesa Airport

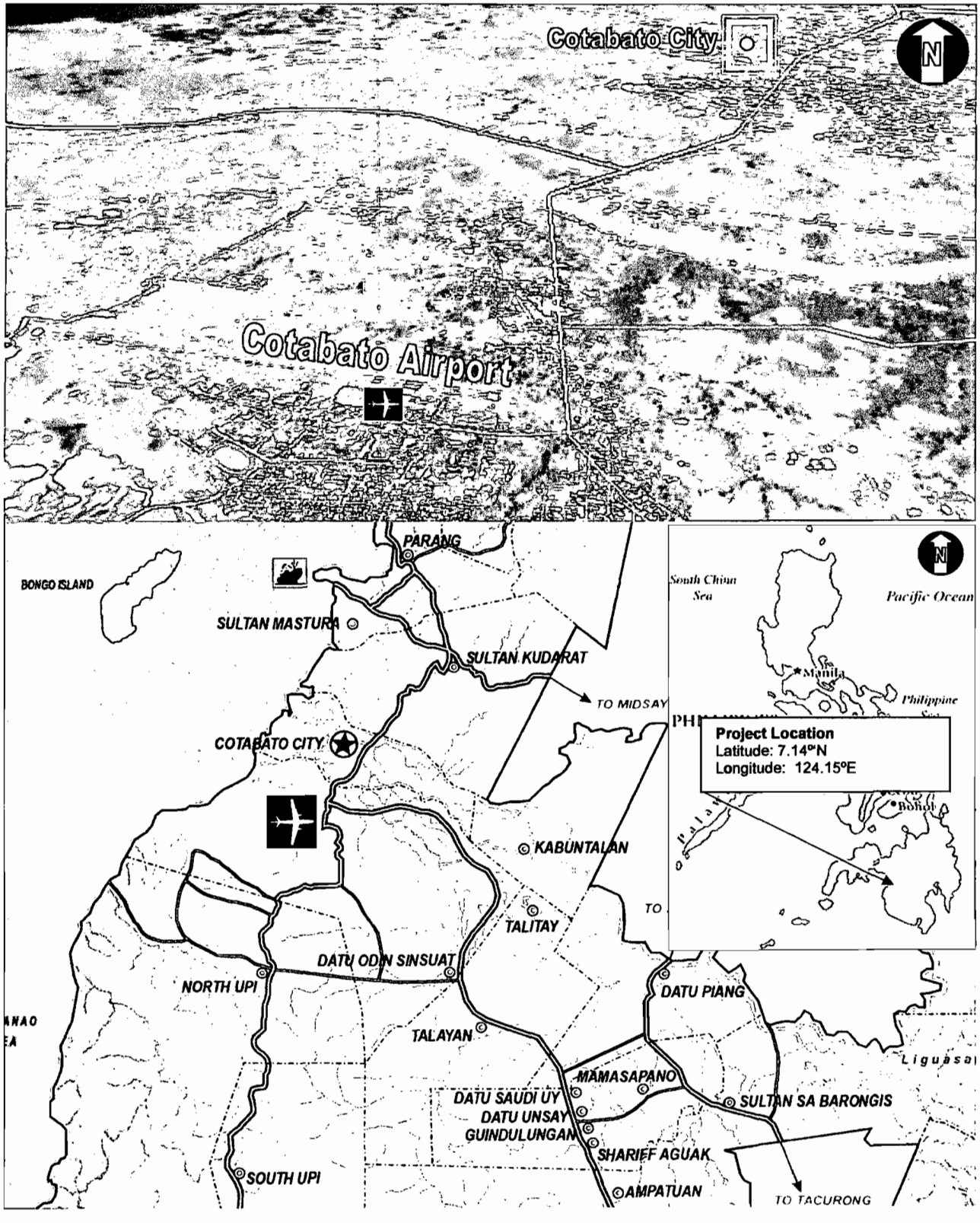


Figure 2.1-3: Vicinity Map of Cotabato Airport

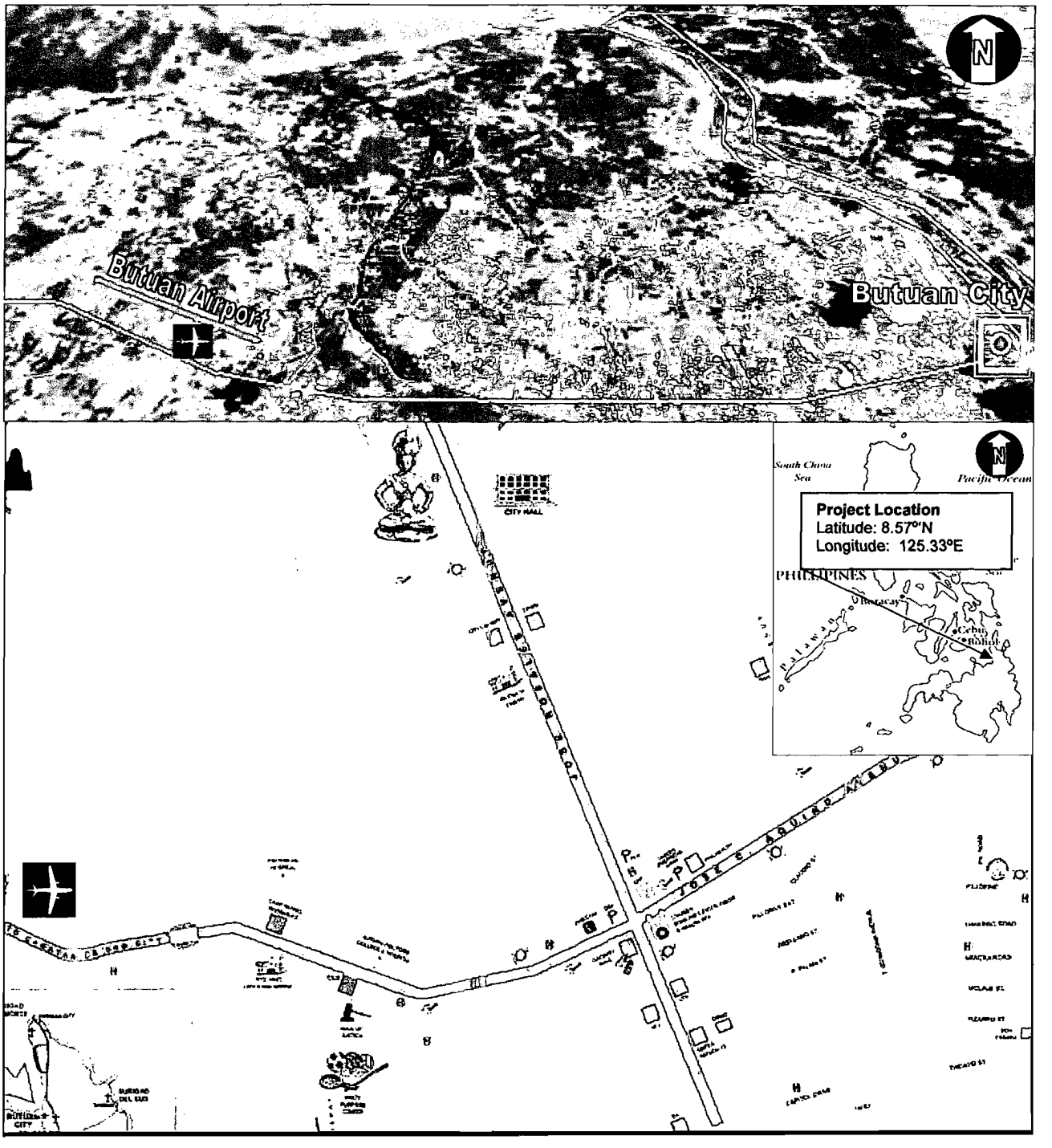


Figure 2.1-4: Vicinity Map of Butuan Airport

2.1.7 **Butuan Airport** serves Butuan City, which is the capital and commercial center of the Province as well as the regional center of the CARAGA Region. The airport's ZOI (the third largest among airports studied) includes: Surigao del Sur, Agusan del Norte, Butuan City, and parts of Agusan del Sur. The population within this ZOI is 1.4 million and in terms of passenger traffic the airport ranks 8th in the nation. However, it should be noted that the airport has a high passenger growth rate. ITDP recommended improvements include expansion and improvement to the existing terminal, runway widening and extension, and rehabilitate and extend the runway by 100m, among others.

2.1.8 Peace and order conditions are stable in Butuan City and thus security concerns are unlikely to negatively affect project implementation.

2.1.9 All updates to the feasibility studies recommend additional facilities relevant to improving safety (including meeting International Civil Aviation Organization (ICAO) standards), security, access, passenger and cargo movement efficiency, and operational efficiency at the three airports.

2.2 Summary Scopes of Work for the Airport Subproject Feasibility Studies

2.2.1 The scopes of work (SOWs) of project preparation studies completed for each of the three (3) airport subprojects were agreed to at the Tripartite Meeting following Phase 1 and then subsequently reconfirmed at the Steering Committee Meeting to review the Phase 2 Inception Report. These SOWs can be found in **Table 2.2-1**.

Table 2.2-1: Future Airport Subprojects and Scopes of Work

Subproject	Present Status	Phase 2 SOW: Technical Studies	Phase 2 SOW: Environmental / Social Safeguards	
			Environmental Safeguards	Social Safeguards
Puerto Princesa	Feasibility Study	• Updated Feasibility Study • Due Diligence Review	• Due Diligence Review of Designs • Assist DOTC to extend issued (ECC)	• Due Diligence Review of Designs • External RAP Monitoring by DOTC • Analyze cargo for inputs to PSA • Prepare Supplemental LARP
Cotabato	Feasibility Study	• Updated Feasibility Study • Due Diligence Review	• Due Diligence Review of Designs • Assist DOTC to extend issued ECC	• Due Diligence Review of Designs • External RAP Monitoring by DOTC • Analyze cargo for inputs to PSA • Prepare Supplemental LARP
Butuan	Feasibility Study	• Updated Feasibility Study • Due Diligence Review	• Due Diligence Review of Designs • Assist DOTC to extend issued ECC	• Due Diligence Review of Designs • External RAP Monitoring by DOTC • Analyze cargo for inputs to PSA • Prepare Supplemental LARP

ECC - Environmental Compliance Certificate
LARP - Land Acquisition and Resettlement Plan
PSA - Poverty and Social Analysis

2.3 Major Assumptions

2.3.1 The primary limitations of the updates of the three (3) airport feasibility studies include:

- This study is essentially an update of previous studies and therefore it has been assumed that there would be few significant changes to the scope and layout of earlier designs. With the detailed airside, terminal area and passenger terminal layouts and designs, the Project Team's approach involved preserving the integrity and details contained within the previous designs;
- There are limited recent air passenger profile surveys, cargo profile surveys, topographic surveys, geotechnical surveys, pavement condition surveys, pavement strength testing, instrument testing, and surveys of the condition of existing airport equipment and facilities; although data records were accessed from relevant agencies and observations and notations were made during airport site inspections.
- Traffic levels are relatively low and schedules are relatively undeveloped compared to other regional domestic airports. As a result, the forecast traffic levels and forecast busy hour demand (both passengers and also aircraft stand demand) are difficult to predict and actual future traffic levels and busy hour demand may vary significantly from the results of the analysis.

2.4 Passenger and Cargo Traffic

2.4.1 Recent Trends

2.4.1 Recent trends at the three airports can be found in **Table 2.4.1-1**. For a number of reasons, including disruption to Philippine Airlines (PAL) service (sometimes caused by runway deterioration) and nearby terrorism events or conflict, air traffic in the three airport subprojects has been erratic.

Table 2.4.1-1: Recent Trends

	Puerto Princesa			Cotabato			Butuan		
	Pax	Cargo (kg)	Aircraft Movements	Pax	Cargo (kg)	Movements	Pax	Cargo (kg)	Movements
1995	146,795	2,322,134	6,130	144,128	1,484,450	6,726	38,742	548,490	1,054
1996	193,330	3,723,987	5,348	136,394	1,184,466	7,398	43,894	479,961	1,012
1997	230,054	3,584,987	2,522	193,231	1,480,756	5,812	151,526	320,208	678
1998	159,106	2,544,594	1,029	98,789	637,378	2,707	179,982	476,812	352
1999	199,086	4,172,797	2,374	90,201	520,346	2,914	57,773	295,542	1,078
2000	208,714	4,810,166	1,834	52,482	326,820	1,437	72,337	1,319,855	1,308
2001	188,403	3,885,907	2,658	117,742	717,919	1,638	98,334	1,609,190	2,066
2002	147,000	3,795,726	2,000	76,302	1,363,376	1,550	101,487	2,090,753	2,342
2003	194,176	5,001,051	2,792	65,146	640,663	920	121,117	2,407,450	2,060
2004	267,507	4,500,599	3,164	80,865	494,656	1,240	136,066	2,067,447	1,876
2005	267,868	4,744,875	4,144	82,638	817,423	1,392	117,913	2,013,095	1,740

2.4.2 Traffic Forecasts

Traffic forecasts in **Table 2.4.2-1** were adopted from "the JICA Airport Master Plan Study on the Strategy for the Improvement of National Airports," which have been officially accepted by the DOTC.

Table 2.4.2-1: Future Air Traffic Demand

	Puerto Princesa			Cotabato			Butuan		
	Pax	Cargo (kg)	Aircraft Movements	Pax	Cargo (kg)	Aircraft Movements	Pax	Cargo (kg)	Aircraft Movements
2005		4,746,187			1,598,764			2,022,491	
2006	351,099			85,997			156,881		
2007	363,552			88,950			168,470		
2008	376,006			91,902			180,060		
2009	388,459			94,855			191,649		
2010	400,912	6,982,810	6,470	97,807	1,956,244	1,451	203,239	3,082,967	2,522
2011	420,090			102,331			219,285		
2012	439,269			106,856			235,331		
2013	458,447			111,380			251,376		
2014	477,626			115,905			267,422		
2015	496,804	9,983,626	7,733	120,429	2,527,757	2,238	283,468	4,528,758	2,877
2016	522,883			126,592			304,482		
2017	548,962			132,756			325,496		
2018	575,041			138,919			346,510		
2019	601,120			145,083			367,524		
2020	627,199	13,874,675	8,916	151,246	3,305,453	2,215	388,538	6,397,017	3,896
2021	662,001			159,495			416,178		
2022	696,803			167,744			443,817		
2023	731,606			175,994			471,457		
2024	766,408			184,243			499,096		
2025	801,210	18,950,616	10,502	192,492	4,358,196	2,259	526,736	8,829,797	5,231

2.5 Proposed Improvements

2.5.1 Based upon a review of previous studies and designs, and a demand capacity analysis, the Airport Improvements found in **Table 2.5-1** are proposed.

Table 2.5-1: Proposed Improvements

Puerto Princesa	Cotabato	Butuan
Airside Facilities and Works		
• Runway strip widening and grading works • New runway shoulders, turning eave at runway end 27 and blast pads at both ends • Apron, military apron, taxiways, maneuvering area, and shoulders • Airside roads (R&FF, service and maintenance roads) • Existing runway overlay, grooving, cracking and seating • Demolition and removal works	• Runway strip widening and grading works • Rehabilitation of existing runway • Widening of existing runway from 30m to 45 m • Runway shoulders, turning eave and blast pads at both ends • Taxiway and Apron, • Runway extension of 110m • Airside roads (R&FFF, apron, maintenance and air service roads) • Perimeter fence and perimeter security roads • Demolition of various obstacles	• Runway strip extension, widening and grading • Runway widening from 36m to 45m • Runway extension, 100m • Provision of turning eaves and paved blast pads in the extension of runway ends. • Taxiway shoulders • R&FF roads • Overlay of existing runway, cracking and seating and grooving • Perimeter fence and perimeter security roads, 5,000m • Demolition of existing obstacles
Landside Facilities and Works		
• New passenger terminal building (7,500 sq.m.) • New cargo terminal building (650 sq.m.) • Other new buildings (Administration and operations; R&FF; Airport Maintenance/ Emergency generator; Sewerage treatment plant; Chiller; Pump house; Control Tower; AGL Substation • New landside roads, security fence and parking facilities • Drainage (Runway, road apron, parking)	• New passenger terminal building • New cargo terminal building • Other new buildings (Administration and operations; R&FF; Power House; Solid waste disposal, Chiller Pump house; Control Tower) • New landside roads, security fence and parking facilities • Drainage (Runway strip, apron, road, parking)	• Expansion & refurbishing of existing passenger terminal bldg • Refurbishing of existing control tower • Expansion & refurbishing of existing CFR bldg • Expansion & refurbishing of existing CFR bldg • Expansion of water supply system and upgrading of sewage treatment facilities • Drainage (runway strip, runway, road, parking and taxiways) • Landside roads and walkways

AGL - Above Ground Level
CFR - Crash Fire Rescue
R&FF - Rescue Firefighting
R&FFF - Rescue Firefighting Facilities

Table 2.5-1: Proposed Improvements (Continuation)

Puerto Princesa	Cotabato	Butuan
Equipment		
• Navigational Aids (DME; DVOR; Remote Control; Power Supply; and ILS) • ATC & Communications (VHF system; Voice switch control system; recording equipment, HF communication and UPS. • Airfield Ground Lighting (Category I approach lighting for RWY 27; simple approach lighting system for RWY 09; 300 m. displaced threshold; Runway edge lights; High intensity runway end lighting; High intensity runway threshold lighting; High intensity runway threshold identification lights for RWY 09; Medium intensity taxiway edge lighting; Apron flood lighting; Obstacle lighting; Illuminated wind cones; Aerodrome beacon) • Airfield Maintenance (Tractor; Grass mower; Utility vehicle) • Crash, Fires and Rescue (Rescue and fire fighting vehicles; Inflatable rescue boat)	• Navigational Aids (DVOR; DME; Remote control; Power supply) • ATC & Communications (VHF system; Voice switch control system; recording equipment, and UPS) • Airfield Ground Lighting (High intensity simple approach lighting system for RWY 30 and 12; High intensity runway edge lighting; High intensity runway end lighting; High intensity runway threshold lighting; Medium intensity taxiway edge lighting; Apron flood lighting; Obstacle lighting; Illuminated wind cones) • Airfield Maintenance (Tractor; Grass mower; Utility vehicle) • One fire fighting vehicle	• Navigational Aids (DVOR; DME; Remote Control; Power Supply) • ATC & Communications (VHF system; Voice switch control system; recording equipment, and UPS) • Airfield Ground Lighting (High intensity simple approach lighting system for RWY 30 and 12; High intensity runway edge lighting; High intensity runway end lighting; High intensity runway threshold lighting; Medium intensity taxiway edge lighting; Apron flood lighting; Obstacle lighting; Illuminated wind cones; Aerodrome beacon) • Airfield Maintenance (Tractor; Grass mower; Utility vehicle) • One fire fighting vehicle

ATC - Air Traffic Control
DVOR - Doppler Very High Frequency Omni—Directional Range
DME - Distance Measuring Equipment
HF- High Frequency
ILS - Instrument Landing System
RWY – Runway
UPS – Uninterruptible Power Supply
VHF – Very High Frequency

2.5.1 Puerto Princesa Airport

2.5.2 The existing and proposed layout of the Puerto Princesa Airport can be found in **Figures 2.5.1-1** and **2.5.1-2**. The proposed Puerto Princesa Airport subproject will improve aviation operational and safety standards by upgrading the facilities of the airport in order to comply with ICAO safety standards. Secondly, the recommended airport improvements will expand the capacity of the airport in order to serve future air travel demand, particularly the expected introduction of direct international flights for tourists to Palawan. As detailed in the study, without these improvements, the airport capacity limits will be reached by 2009. Air passengers already experience delays at check-in counters, security inspection at the airport entrance and pre-departure areas, and at the baggage reclaim area for arriving passengers. With no addition aircraft stands for peak-hour arrivals and departures, airlines would have to defer offering new flight schedules.

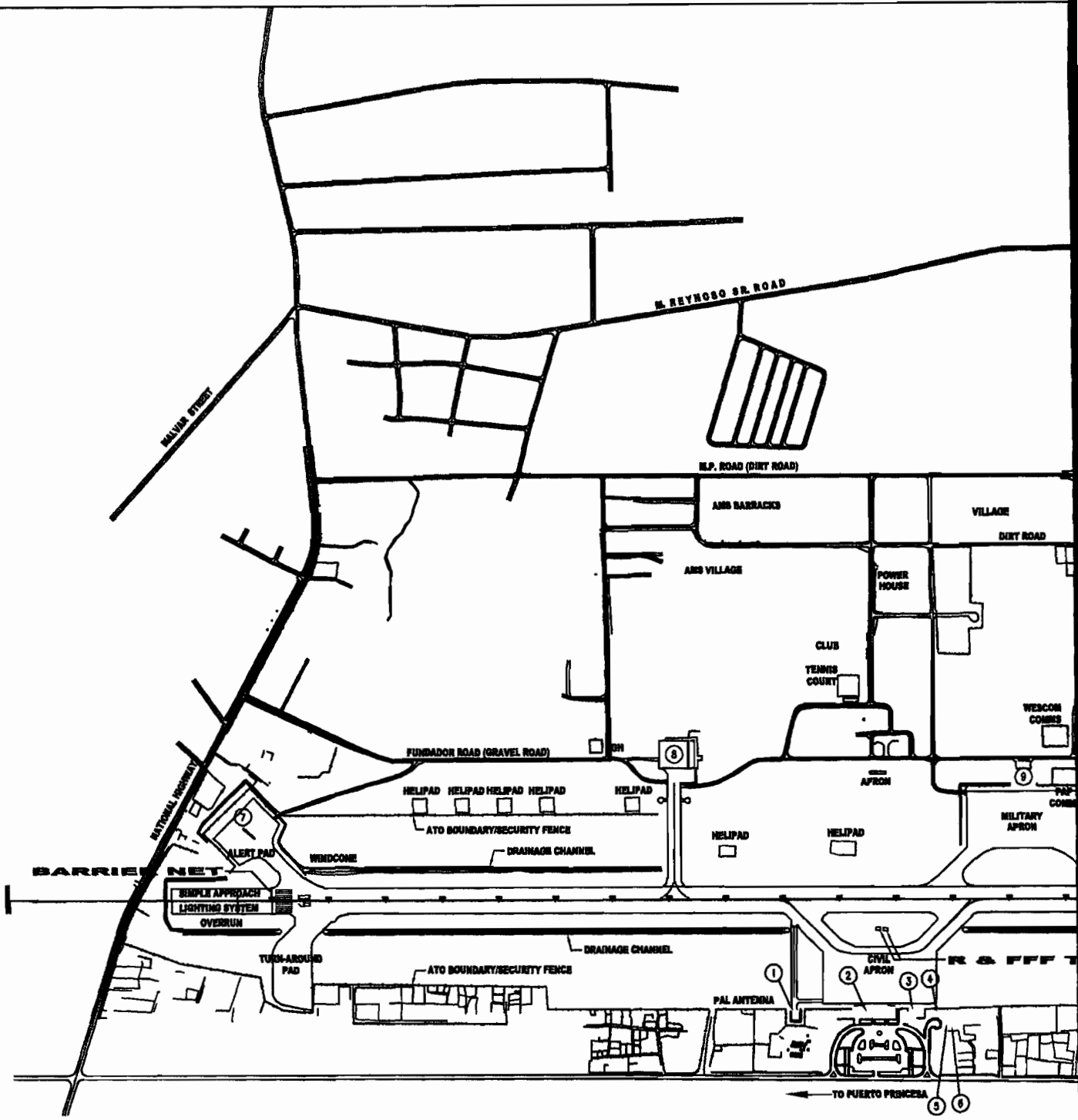


FIGURE 2.5.

SCALE :

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DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS

ASIAN DEVELOPMENT BANK

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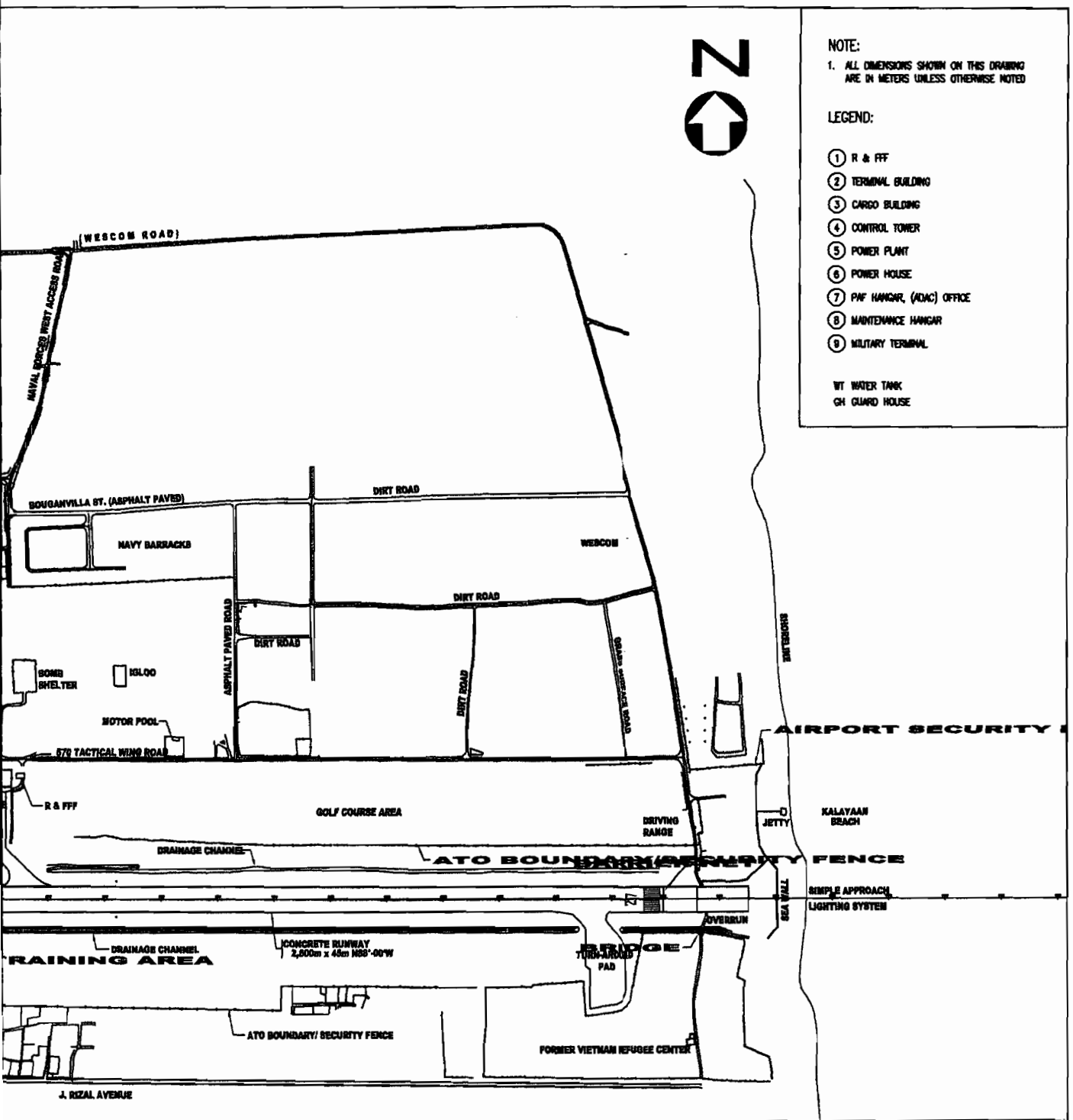
Project Name:

Intermodal Transport Development Project



Note:

1. The concept layout is based on the detailed design drawings prepared under the Third Airports Development Project as sourced from DOTC.

1–1: EXISTING AIRPORT LAYOUT

1:10,000

Design Concept:	Sheet Contents:	Graphic Scale:	Sheet No.
PUERTO PRINCESA AIRPORT	EXISTING AIRPORT LAYOUT	0 50 100 200 300 400m GRAPHIC SCALE 1:10,000	**2-11** Date DD/MM/YY

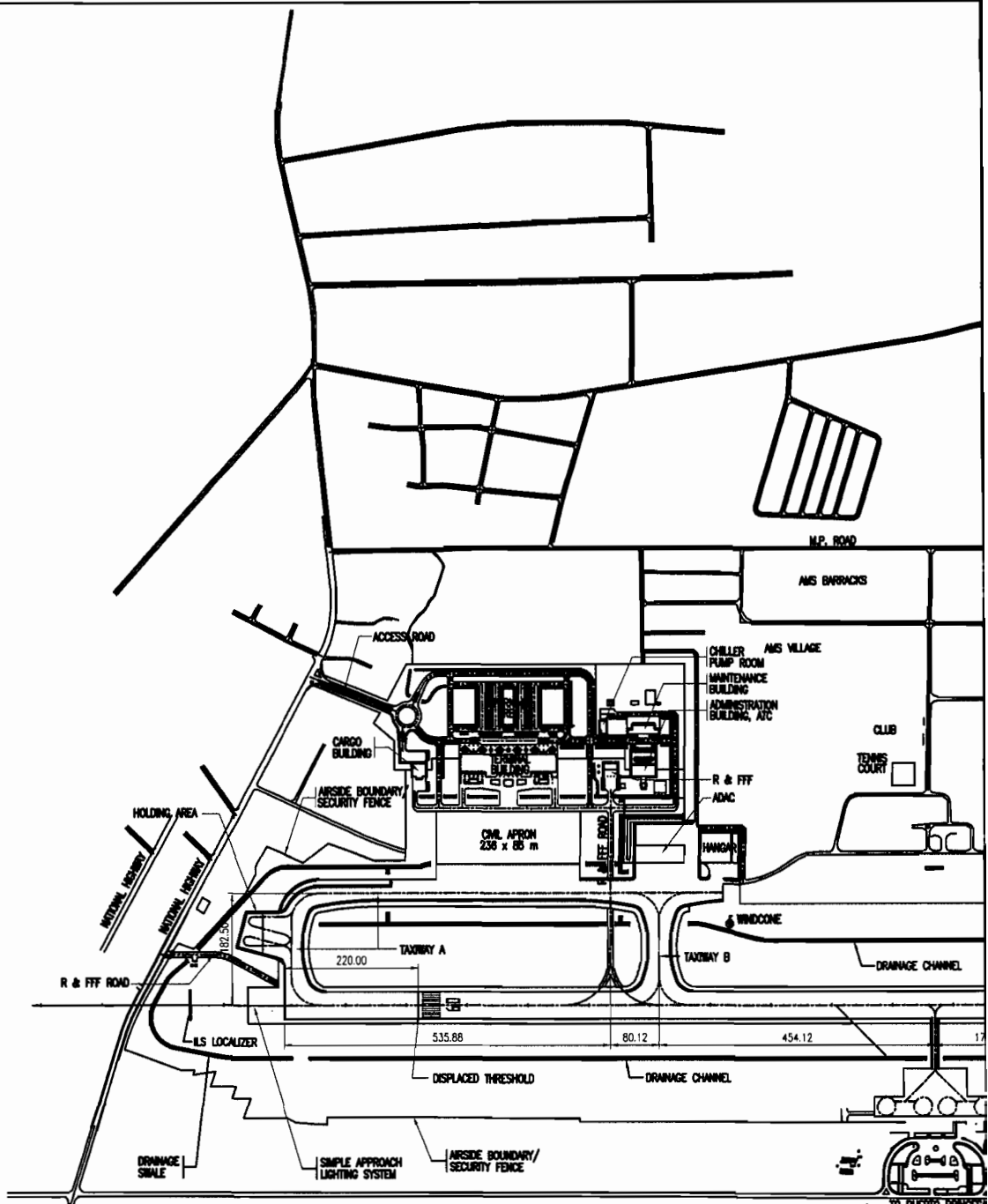


FIGURE 2.5.1-2: PRO

SCALE :

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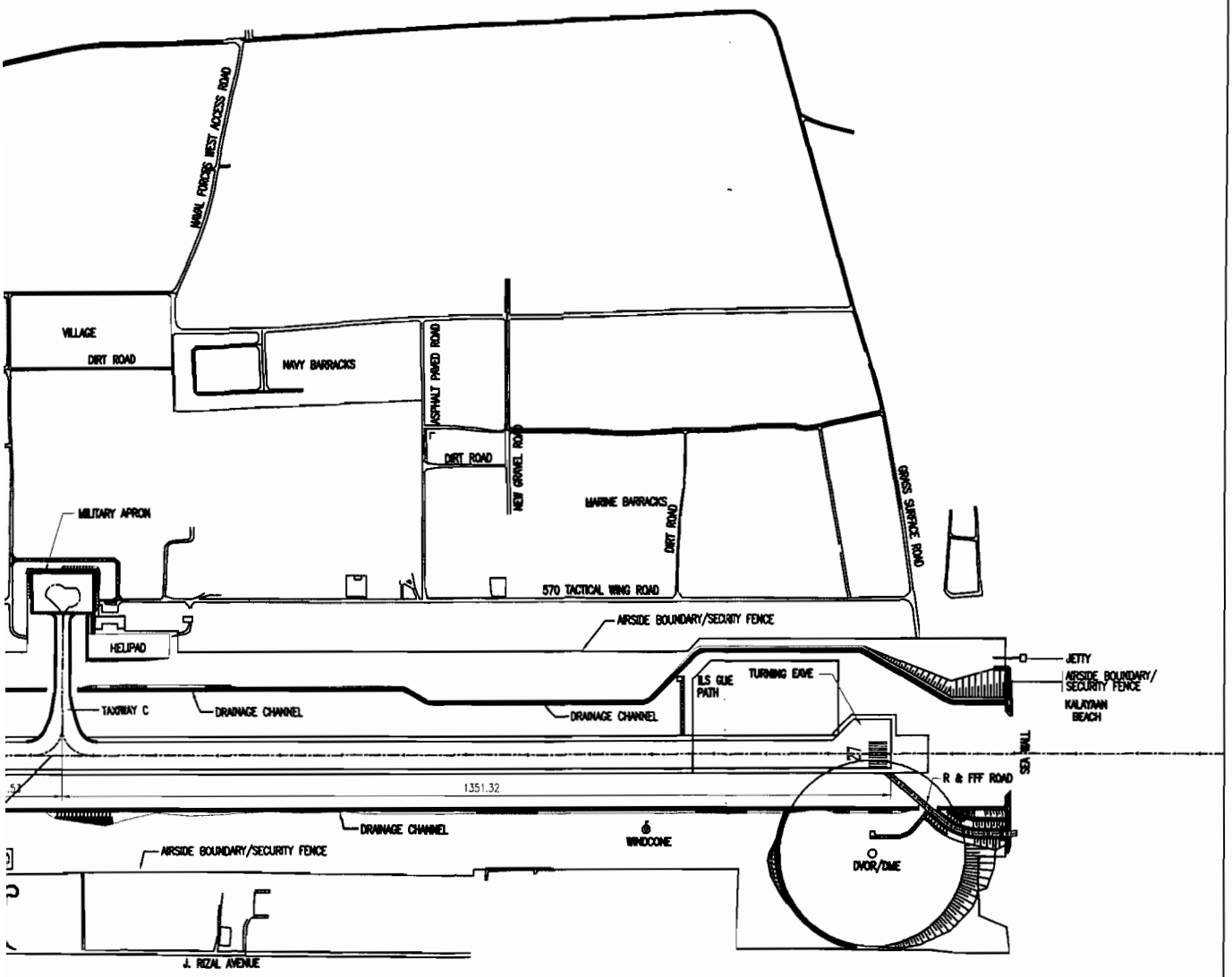

POSED DEVELOPMENT PLAN
1:10,000

Note:

1. The concept layout is based on the detailed design drawings prepared under the Third Airports Development Project as sourced from DOTC.

	Design Concept:	Sheet Contents:	Graphic Scale:	Sheet No.
	PUERTO PRINCESA AIRPORT	PROPOSED DEVELOPMENT PLAN	0 50 100 200 300 400m GRAPHIC SCALE 1:10,000	2-12 Date DD/MM/YY

2.5.3 Based on an evaluation of the current airport facilities and the associated capacity in concert with traffic forecast for the Puerto Princesa Airport, the ITDP recommended improvements include:

- Construction of a new passenger terminal complex including ATC, cargo, administration, maintenance and other support facilities to the northwestern side of the existing runway;
- Construction of a new access road to the passenger terminal complex off the national highway;
- Widening of the runway strip, installation of an ILS system to one (1) runway approach considering a range of mountains at a distance of some 12 to 15 km (Stanley Hills and Thumb Hills) with elevations ranging from 800 m to over 1200 m, which prohibit straight-in approaches from the west, a runway overlay noting the structural integrity of the sub-base and widening of the runway shoulders to permit operations of four (4) engine Code E aircraft;
- New security fencing and removal of remaining obstacles; and
- Improved Navigational Aids, Air Traffic Control, Communications, and Airfield Lighting.

2.5.4 The primary difference between the ITDP and Third Airport Development Project (TADP) recommended improvements are that the ITDP recommended a 20% increase in the apron size, a slight increase in the size of the terminal and expanded development of the new access road and its intersection with the National Highway.

2.5.5 Once the improvements are completed, the airport (landside and airside) will be able to efficiently and safely handle a four engine commercial jet aircraft (i.e. A340) on its 2600 meter runway and in the new expanded passenger terminal.

2.5.6 It should be noted that the ITDP recommended improvements depend on the successful replication of Armed Forces of the Philippines (AFP) facilities and relocation of AFP operations to be completed separately prior to the commencement of this project.

2.5.2 Cotabato Airport

2.5.7 The existing and proposed layouts of the Cotabato Airport can be found in **Figures 2.5.2-1** and **2.5.2-2**. The Cotabato Airport Project is aimed at improving aviation operational and safety standards by upgrading the facilities of the airport in order to comply with safety standards of ICAO. Secondly, it will expand the capacity of the airport in order to be able to serve future domestic air travel demand.

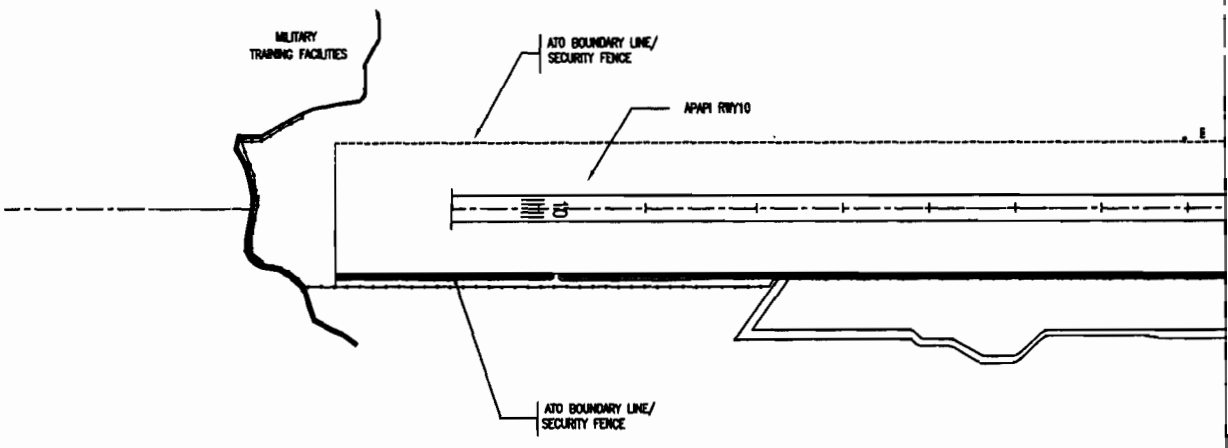

FIGURE 2.5.2

SCALE :

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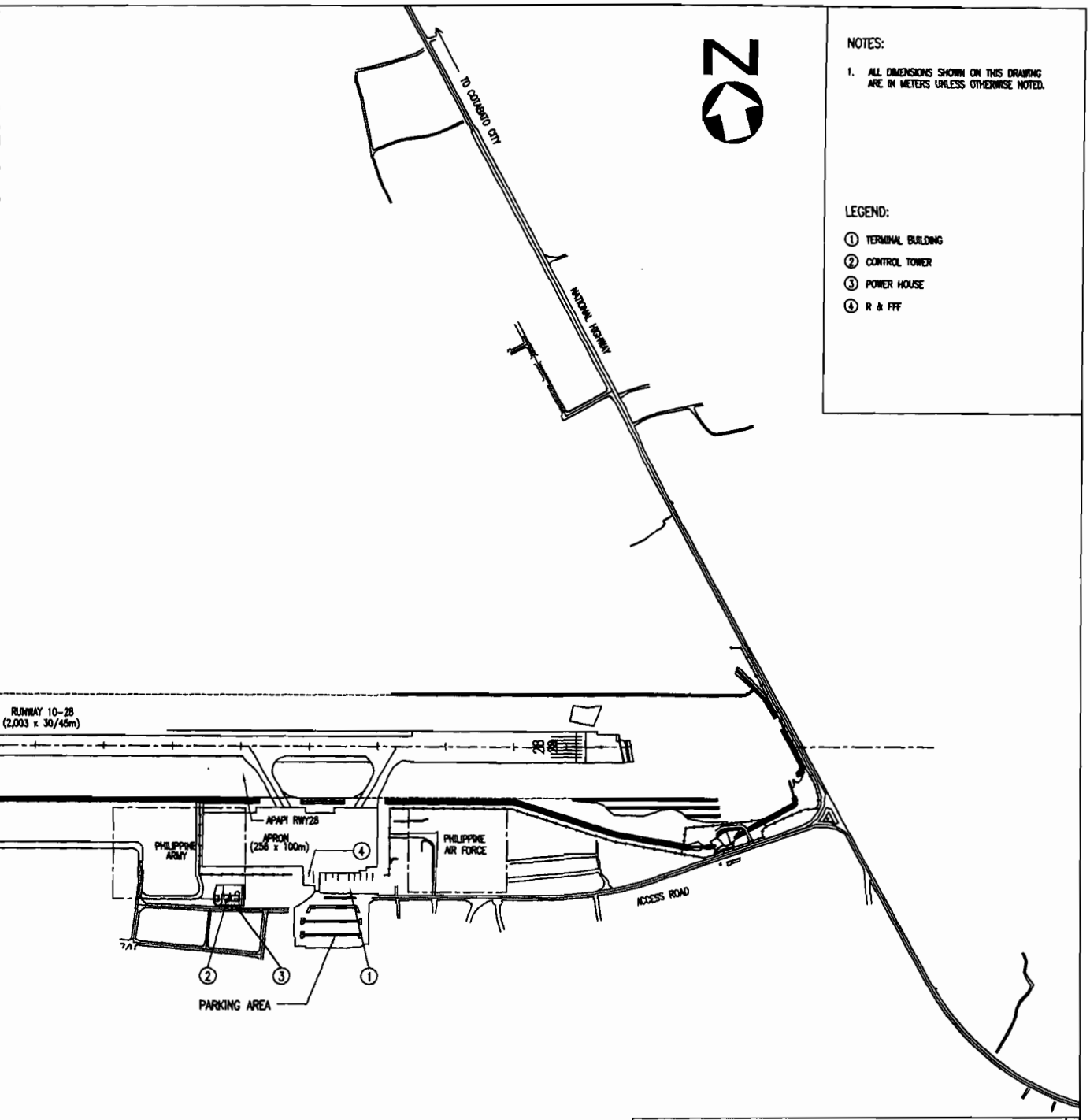

NOTES:

1. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METERS UNLESS OTHERWISE NOTED.

LEGEND:

1. TERMINAL BUILDING
2. CONTROL TOWER
3. POWER HOUSE
4. R & FFF

-1: EXISTING AIRPORT LAYOUT

1:8,000

Note:

1. The concept layout is based on the detailed design drawings prepared under the Third Airports Development Project as sourced from DOTC.

	Design Concept:	Sheet Contents:	Graphic Scale:	Sheet No.
	COTOBATO AIRPORT	EXISTING AIRPORT LAYOUT	0 50 100 200 300 400m GRAPHIC SCALE 1:8,000	**2-14** Date DD/MM/YY

A4

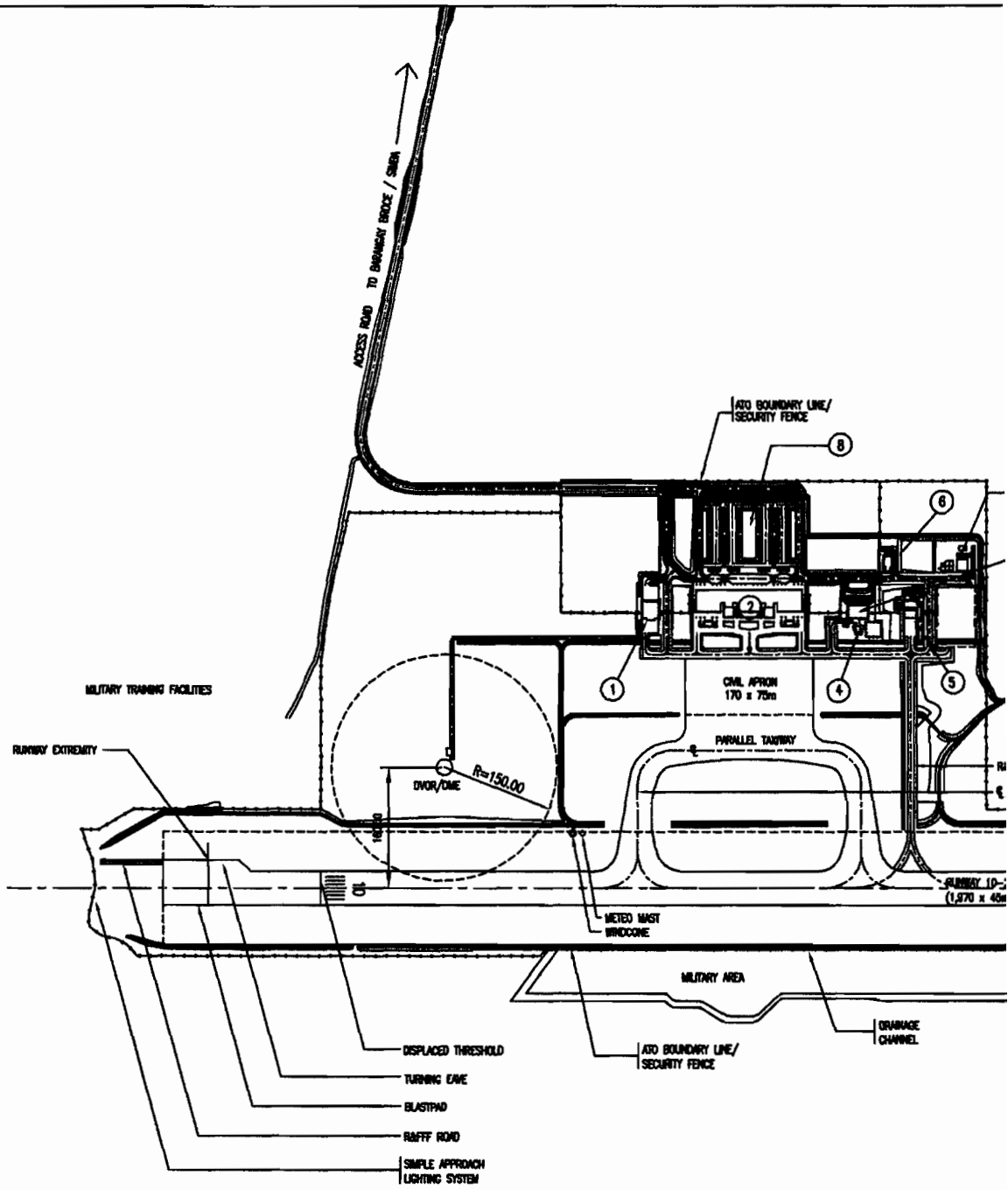

FIGURE 2.5.2-2:

SCALE :

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Project Name:

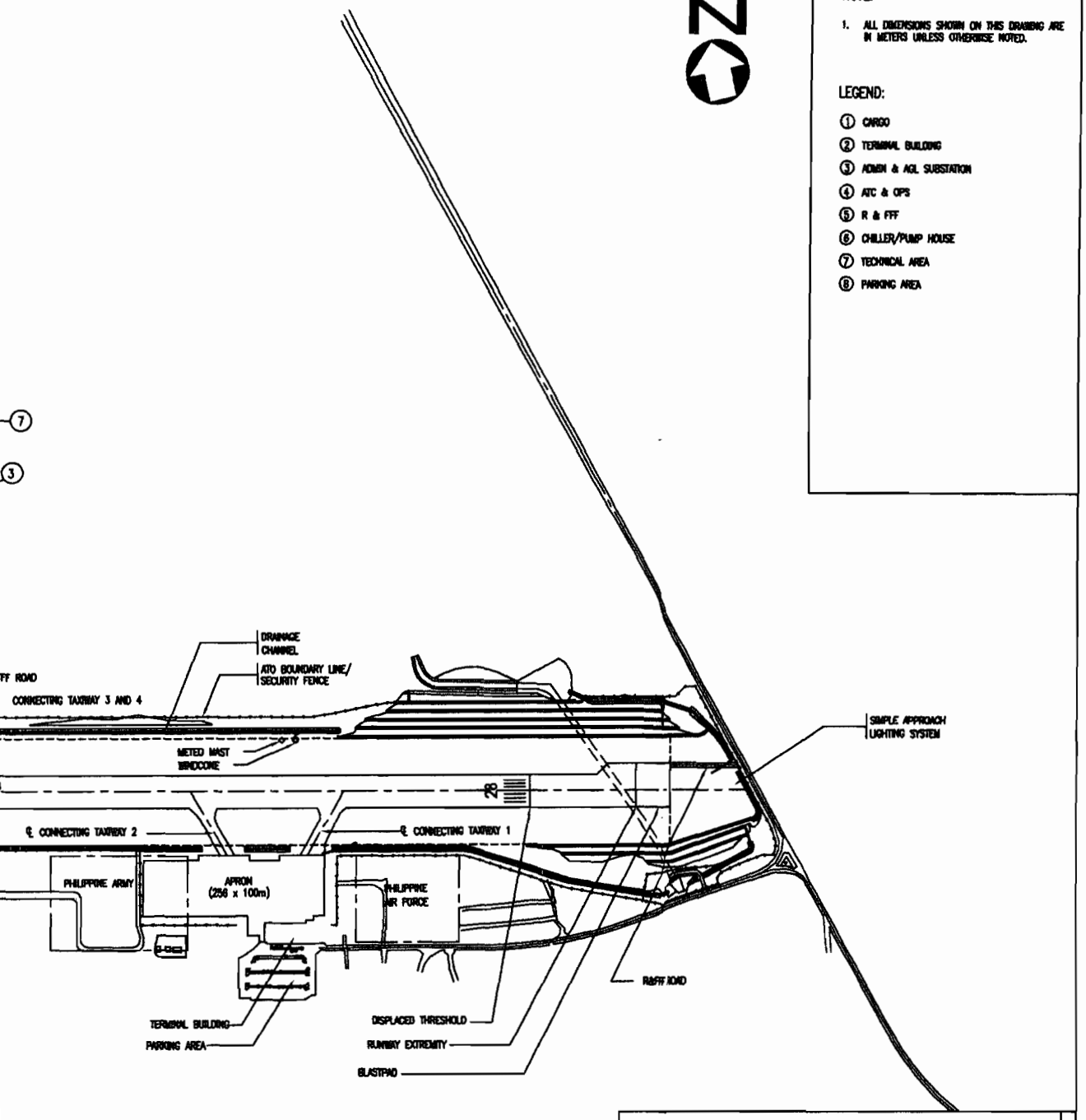
Intermodal Transport Development Project

NOTE:

1. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METERS UNLESS OTHERWISE NOTED.

LEGEND:

① CARGO
② TERMINAL BUILDING
③ ADMIN & AGL SUBSTATION
④ ATC & OPS
⑤ R & FFF
⑥ CHILLER/PUMP HOUSE
⑦ TECHNICAL AREA
⑧ PARKING AREA



PROPOSED DEVELOPMENT PLAN

1:8,000

Note:

1. The concept layout is based on the detailed design drawings prepared under the Third Airports Development Project as sourced from DOTr.

Design Concept:	Sheet Contents:	Graphic Scale:	Sheet No.
COTOBATO AIRPORT	PROPOSED DEVELOPMENT PLAN	0 50 100 200 300 400m GRAPHIC SCALE 1:8,000	2-15 Date DD/MM/YY

A4

2.5.8 The proposed ITDP subproject may briefly be described as follows:

- Construction of a new passenger terminal complex including ATC, cargo, administration, maintenance and other support facilities to the northwestern side of the existing runway;
- Construction of a new access road to the passenger terminal complex off a road leading to the national highway;
- Extension of the runway, runway overlay and selective strengthening of the runway sub-base, and establishment of 150m wide runway strip;
- New security fencing and removal of remaining obstacles; and
- Improved Navigational Aids, Air Traffic Control, Communications, and Airfield Lighting.

2.5.9 There are no modifications to the TADP's design proposed for Cotabato Airport under ITDP, except for provision for international customs-immigration-quarantine (CIQ) which have been deleted.

2.5.10 Once the improvements are completed the airport (landside and airside) will be able to efficiently and safely handle a two engine commercial jet aircraft (i.e. A320) on its 1,970 meter runway and in the new expanded passenger terminal.

2.5.11 The project depends on the successful implementation of the agreement with the AFP and any actions by DOTC such as replication of AFP facilities and relocation of AFP operations to be done separately prior to the commencement of this project.

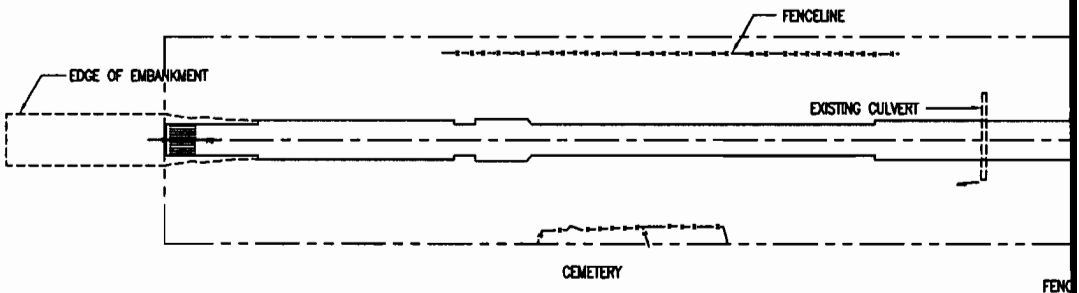
2.5.3 Butuan Airport

2.5.12 The existing and proposed layouts of the Butuan Airport can be found in **Figures 2.5.3-1** and **2.5.3-2**. The Butuan Airport Project is aimed at improving aviation operational and safety standards by upgrading the facilities of the airport in order to comply with safety standards of ICAO. Secondly, it will expand the capacity of the airport in order to be able to serve future domestic air travel demand.

2.5.13 The proposed ITDP subproject may briefly be described as follows:

- Expansion and rehabilitation of the existing passenger terminal
- Runway widening, overlay and extension 100 m.;
- New security fencing and setbacks of housing structures outside the fences, clearing of the pond within the perimeter fence, removal of remaining obstacles, including the cutting of tree branches obstructing the view from the airport tower; and
- Improved Navigational Aids, Air Traffic Control, Communications, and Airfield Lighting.

2.5.14 The primary difference between the ITDP and TADP recommended improvements is the ITDP has recommended a slightly bigger passenger terminal.



NATIONAL HIGH

FIGURE 2.5.3-1: EXISTING AIRPO

SCALE : 1:5,000

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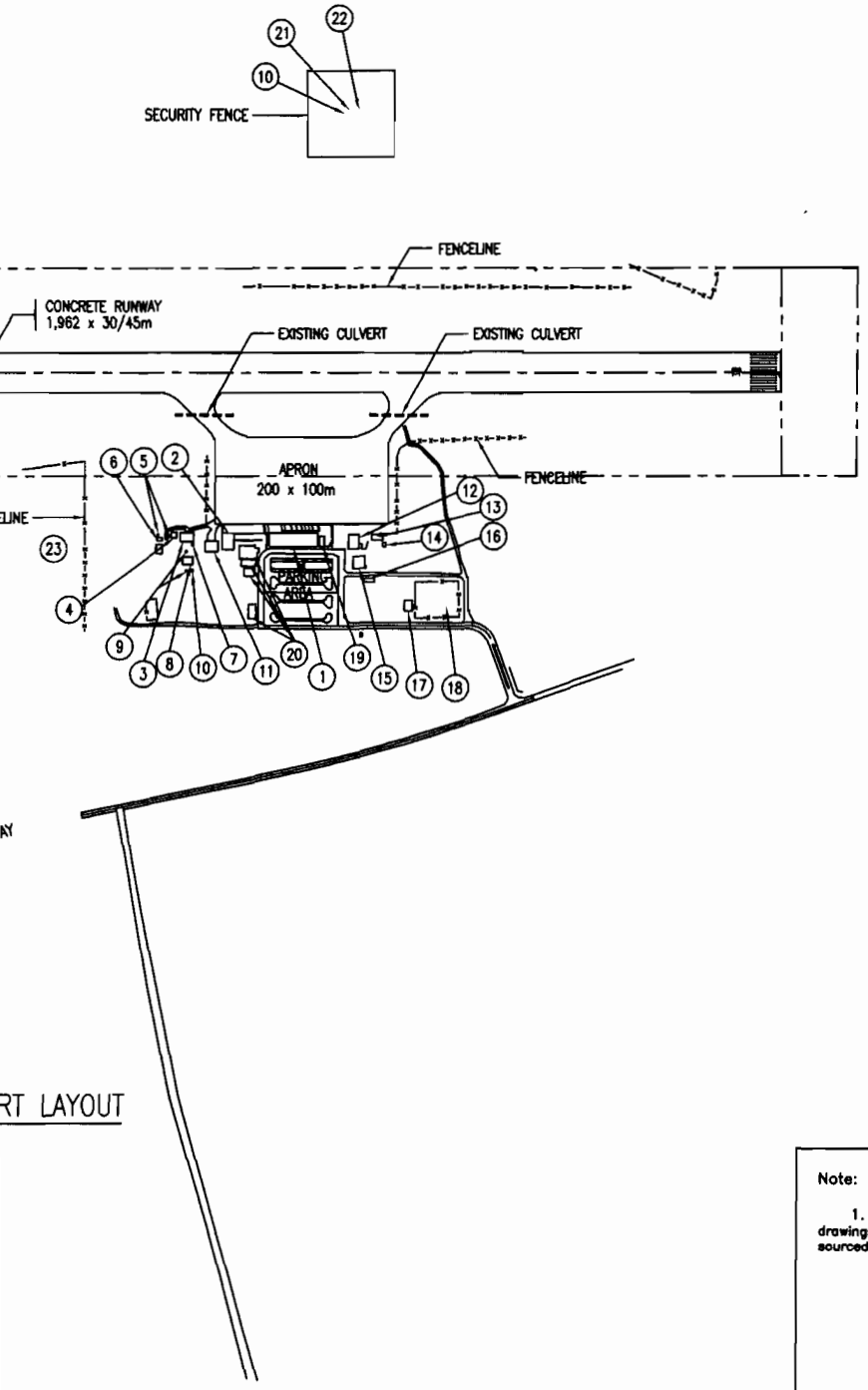

NOTE:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

LEGEND:

1. TERMINAL BUILDING
2. R&FFF
3. CONTROL TOWER
4. POWER HOUSE
5. FUEL TANK
6. OLD POWERHOUSE
7. PUMP HOUSE
8. WAREHOUSE
9. ANTENNAE
10. WATER TANK
11. MAINTENANCE HANGAR
12. PAL CARGO BUILDING
13. PAL WAREHOUSE/HANGAR
14. GENSET HOUSE
15. ATO ADMINISTRATION BUILDING
16. STORE
17. NATIONAL POLICE COMMISSION STATION
18. PAGASA
19. AP WAREHOUSE
20. COMMERCIAL ESTABLISHMENTS
21. VOR/DME BUILDING
22. STEP-DOWN TRANSFORMER
23. PMS OFFICE & STAFF HOUSE

RT LAYOUT

Note:

1. The existing airport layout is based on the detailed design drawings prepared under the Third Airports Development Project as sourced from DOTC.

	Design Concept:	Sheet Contents:	Graphic Scale:	Page No.
	BUTUAN AIRPORT	EXISTING AIRPORT LAYOUT	0 50 100 200 300 400m GRAPHIC SCALE 1:8,000	**2-17**
				Date

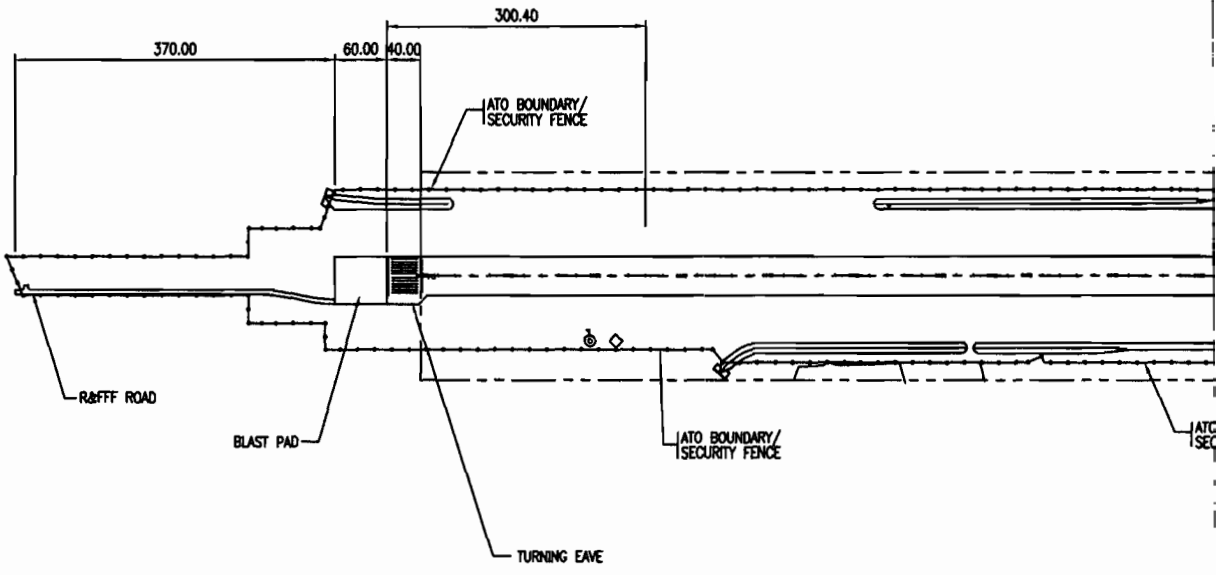

FIGURE 2.5.3-2:

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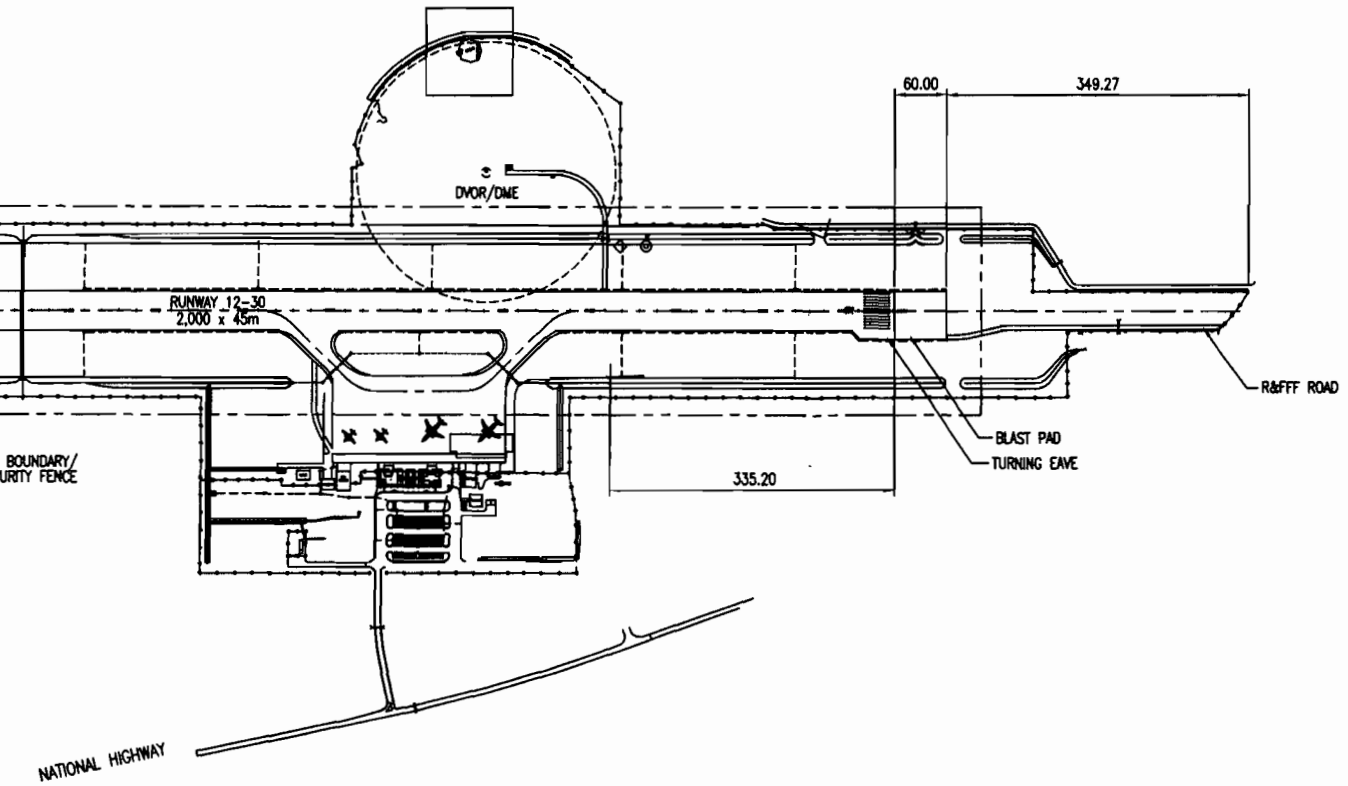


PROPOSED DEVELOPMENT PLAN

1:8,000

Note:

1. The concept layout is based on the detailed design drawings prepared under the Third Airports Development Project as sourced from DOTC.

Design Concept:	Sheet Contents:	Graphic Scale:	Sheet No.
BUTUAN AIRPORT	PROPOSED DEVELOPMENT PLAN	0 50 100 200 300 400m GRAPHIC SCALE 1:8,000	**2-18** Date DD/MM/YY

A4

2.5.15 Once the improvements are completed the airport (landside and airside) will be able to efficiently and safely handle a two-engine commercial jet aircraft (i.e. A320) on its 2,000 meter runway and in the expanded passenger terminal.

2.5.16 The project depends on the successful implementation of the agreement with the AFP and any actions by DOTC such as replication of AFP facilities and relocation of AFP operations to be done separately prior to the commencement of this project.

2.5.4 Access Improvement Recommendations

2.5.17 Budget has been provided for off-site access improvements at each of the airport subprojects. Improvements recommended include geometric improvement of intersections where the airport access roads meet the national highway leading to the airport, and traffic engineering measures to be adopted such as signage, markings and sidewalks construction.

2.5.18 The most complicated access road intersection will be the one for the Puerto Princesa Airport. This is in a highly urbanized area. The four-laning of the highways in Puerto Princesa passing the airport should be programmed by the DPWH, while intersection improvements are included in the airport subproject. In Cotabato, the biggest access issue is the difficulty of accessing the airport from the east and north of Cotabato City. However, there are current plans to build a bypass and additional bridges around Cotabato City financed by the Saudi Fund. For Butuan Airport, the programmed construction of the Magsaysay Bridge and Butuan City Bypass Road, Phase 2 will provide an alternative route to the airport.

2.6 Project Investment Cost

2.6.1 The Project Investment Costs, excluding price escalation and ADB financing charges, for the three airports can be found in **Tables 2.6-1, 2.6-2** and **2.6-3**.

Table 2.6-1: Puerto Princesa Project Investment Cost (Excluding Price Escalation and ADB Financing Charges)

	Project Component	Project Cost, PhP'000		
		Local Cost	Forex Cost	Total
1.	**Civil Works, Buildings & Intermodal**	**858,502**	**1,365,580**	**2,224,082**
	a. Materials	600,951	1,365,580	1,966,531
	b Labor	257,551	0	257,551
	i. Skilled	85,850	0	85,850
	ii. Unskilled	171,700	0	171,700
2.	**Airport Equipment Packages**	**11,205**	**100,843**	**112,048**
	a. Maintenance	246	2,214	2,460
	b. Crash, Fire Fighting and Rescue	10,959	98,629	109,588
3.	**Consulting Services**	**60,331**	**60,331**	**120,662**
4.	**Land Acquisition & Resettlement**	**85,320**	**0**	**85,320**
5.	**Project Administration (DOTC/ATO)**	**65,412**	**16,353**	**81,765**
6.	**Taxes and Duties**	**298,177**	**0**	**298,177**
5.	**Physical Contingencies**	**96,526**	**108,018**	**204,544**
	Total	**1,475,473**	**1,651,125**	**3,126,598**

Table 2.6-2: Cotabato Airport Project Investment Cost (Excluding Price Escalation and ADB Financing Charges)

Project Component			Project Cost, PhP'000		
			Local Cost	Forex Cost	Total
1.	**Civil Works, Buildings & Intermodal**		**740,373**	**1,115,832**	**1,856,205**
	a.	Materials	518,261	1,115,832	1,634,093
	b	Labor	222,112	0	222,112
		i. Skilled	74,037	0	74,037
		ii. Unskilled	148,075	0	148,075
2.	**Airport Equipment Packages**		**3,781**	**34,030**	**37,811**
	a.	Maintenance	246	2,214	2,460
	b.	Crash, Fire Fighting and Rescue	3,535	31,816	35,351
3.	**Consulting Services**		**53,628**	**53,628**	**107,255**
4.	**Land Acquisition & Resettlement**		**34,710**	**0**	**34,710**
5.	**Project Administration (DOTC/ATO)**		**53,033**	**13,258**	**66,291**
6.	**Taxes and Duties**		**241,287**	**0**	**241,287**
5.	**Physical Contingencies**		**78,877**	**85,172**	**164,049**
	Total		**1,205,688**	**1,301,920**	**2,507,608**

Table 2.6-3: Butuan Airport Project Investment Cost (Excluding Price Escalation and ADB Financing Charges)

Project Component			Project Cost, PhP'000		
			Local Cost	Forex Cost	Total
1.	**Civil Works, Buildings & Intermodal**		**275,878**	**500,690**	**776,568**
	a.	Materials	193,115	500,690	693,805
	b	Labor	82,763	0	82,763
		i. Skilled	27,588	0	27,588
		ii. Unskilled	55,176	0	55,176
2.	**Airport Equipment Packages**		**3,781**	**34,030**	**37,811**
	a.	Maintenance	246	2,214	2,460
	b.	Crash, Fire Fighting and Rescue	3,535	31,816	35,351
3.	**Consulting Services**		**20,111**	**20,111**	**40,221**
4.	**Land Acquisition & Resettlement**		**16,210**	**0**	**16,210**
5.	**Project Administration (DOTC/ATO)**		**22,802**	**5,701**	**28,503**
6.	**Taxes and Duties**		**103,686**	**0**	**103,686**
5.	**Physical Contingencies**		**30,973**	**39,237**	**70,210**
	Total		**473,441**	**599,768**	**1,073,209**

2.6.2 The overall Proposed ITDP Project Financing Plan, and Project Implementation and Cash Disbursement Schedules for the three airports can be found in Chapter 7.

2.7 Financial Analysis

2.7.1 The financial analysis compares "with" and "without" project conditions with respect to the proposed improvements to financially evaluate the project from the perspective of the Government as owner of the facilities. Incremental revenues were calculated and compared with any incremental costs incurred. Sources of (incremental) revenue included aeronautical fees, passenger service charges, airport business income, and additional government taxes from foreigners on international flights (only for Puerto Princesa).

2.7.2 **Table 2.7-1** provides the results of the financial analysis for the three airports.

Table 2.7-1: Airport Subproject Improvement Estimated Financial Returns

	Puerto Princesa	Cotabato	Butuan
FIRR	0.59%	Negative	Negative
NPV (7.4%), PhP'000	-1,169,910	-1,834,087	-535,711

2.7.3 In common, with other national airports in the country, full financial viability of operations with increasing demands of operational and safety improvements cannot be assured at the three airports. The Project Team in its analysis assumed the prevailing rates at Manila International Airport Authority (MIAA)/ Mactan-Cebu International Airport Authority (MCIAA)/ Subic Bay Metropolitan Authority (SBMA). The subprojects have a greater potential for financial sustainability with the proposed investment, if the assumed prevailing tariff rates (those of MIAA, MCIAA and SBMA for the corporatized ATO) could be increased by 150% by 2012 when the improved airports would commence operation, particularly for Puerto Princesa and Butuan Airports.

2.8 Economic Analysis

2.8.1 The economic analysis for the proposed airport subprojects' improvements was evaluated over a 20 year life cycle. The subproject improvements were evaluated according to their estimated EIRR and Economic Net Present Value (ENPV) using a discount rate of 15%. In order to assess the incremental value of the proposed ITDP improvements, "with" or "without" project conditions were compared and assessed. Benefits categories for the proposed "with" project improvements for the Airports considered:

- Aircraft Operating Cost Savings;
- Benefits from International Business or Tourist Travelers;
- Passenger Travel Cost Savings;
- Airfreight Cost Savings;
- Aviation Safety and Security Benefits;
- Passenger Service Improvement Benefits; and
- Repair and Maintenance Cost Savings (only for Cotabato Airport).

2.8.2 The specific benefits realized vary among the airport subprojects.

2.8.3 **Table 2.8-1** provides the summary results of the economic analysis of the three airports. Sensitivity analyses were carried out to test the effects of possible unfavourable scenarios with respect to changes in the cost and benefit parameters. These analyses indicated that the airport subprojects, except Cotabato (EIRR of 12.5%), would continue to be economically viable even under severe conditions involving a 10% cost increase and 10% decrease in benefits with EIRR values of 17.5% and 31.1% for Puerto Princesa and Butuan Airports, respectively.

Table 2.8-1: Summary of Economic Analysis of Airport Subprojects

	Puerto Princesa	Cotabato	Butuan
EIRR	20.74 %	15.21 %	35.91 %
NPV (15%), PhP'000	784,395	18,903	1,173,510

2.8.4 From the point of view of the Philippine economy, the airport subprojects have demonstrated economic feasibility at 15% social cost of capital.

2.9 Environmental and Social Safeguards Summary

2.9.1 The key environmental and social/ resettlement issues are summarized in the **Table 2.9-1** and **Table 2.9-2**.

2.9.2 All relevant social and environmental documentation for these subprojects can be found in the Environmental and Social Safeguards Volume (Volume V).

2.9.3 **Summary of On-site and Off-site Poverty Alleviation Interventions.** No specific off-site poverty alleviation initiatives (PAIs) were identified for the proposed airport subprojects.

2.10 Conclusions and Recommendations

2.10.1 The following recommendations are made based on the results of the update of the previous Feasibility Studies:

- The improvement of the three airport subprojects in Puerto Princesa, Cotabato and Butuan Cities, as defined in the study, should be implemented since the EIRRs exceed 15% and therefore the subprojects are economically feasible;
- The detailed design phase for Puerto Princesa should include an update of the Master Plan to examine future limitations and a budget for this has been included in the investment cost;
- The subprojects depend on the successful implementation of the agreement with the AFP and actions by DOTC such as replication of AFP facilities and relocation of AFP operations to be done separately prior to the commencement of this project;
- All land acquisition and resettlement issues at the three airports must be resolved (see Table 2.9-2); and
- The civil aviation policy reform agenda, which is discussed in Chapter 6 has to be approved by the NEDA Board upon the recommendation of DOTC prior to loan application.

Table 2.9-1: Summary of Key Environmental Issues

Subproject		ECA	ECP	DENR Env. Cat	Documentation	Main Environmental Issues and Mitigation Identified	EMP Cost (PhP, 000)	Environmental Management Capacity
Airports	Puerto Princesa	No	No	B	TADP – existing EIS and LARP	EIS reports comply with ADB environmental assessment and consultation requirements. Three design modifications proposed under ITDP (small increase in terminal size and apron 20% larger at Puerto Princesa and small increase in terminal size at Butuan) are minor and do not change the overall conclusions of the original EIS reports. No additional issues have been identified. EMP costs updated.	960	DOTC PMO's environmental management capacity limited. ECCs require DOTC to establish environment unit. ATO for each subproject will also need strengthening, recommendation to set up SEMS.
	Butuan	No	No	B	TADP – existing EIS and LARP		948	
	Cotabato	No	No	B	TADP – existing EIS and LARP		924	

Notes: ECA – environmentally critical area; ECP – environmentally critical project; TADP – Third Airport Development Project; EIS – Environmental Impact Statement; IEE – initial environmental examination; LARP – land acquisition and resettlement plan; SIEE – summary initial environmental examination; PSC – project supervision consultant; DENR – Department of Environment & Natural Resources; ECC – environmental clearance certificate; SEMS – safety and environment management staff

Table 2.9-2: Summary of Key Social / Resettlement Issues

Subproject	Documentation	Main Issues and Status	Actions Required
Puerto Princesa	LARP was prepared in 2002 under TADP Supplementary LARP prepared by ITDP Project Team	LARP was prepared in 2002 under ADB TADP and a Supplemental LARP was prepared by the Project Team during ITDP preparation. Based on a due diligence review of the 2002 LARP, nearly all required land acquisition and resettlement activities have been completed with the noted exception of on-going expropriation proceedings involving 5 ha of land with no structures. Based on this review and available information from DOTC, completion of the 2002 LARP requirements, including replication of AFP structures, will cost an estimated PhP 76.38 million. In addition to the requirements of the 2002 LARP, the Project Team prepared a Supplemental LARP to address a total of 21 structures, totally some 1,258 sq. m. in area, which remain to be removed from the approximate 2,400 sq. m. land area of the new access road. This land is owned by the Armed Forces of the Philippines (AFP), and the structures are owned by renters who have signed Temporary Occupancy Contracts with the AFP which include provisions for terminating occupancy use of the area. These 21 remaining structures involve a total of 14 households, with 78 household members and 15 employees. The estimated budget for relocating these renters, including replacement costs for existing structures and fixed assets, compensation for lost income, disturbance allowance and external monitoring plus monitoring and administrative and contingency costs is PhP 8.94 million. Since the Affected People (APs) involve renters, the project is not required to provide for formal resettlement. The AFP has an existing Memorandum of Agreement (MOA) with the DOTC for use of this land for the proposed airport expansion project and new access road but this MOA needs to be updated to shift the previously agreed 20 m width of the access road 5 m to the north. No additional ROW areas will be required for improving the intersection of the new access road with the national highway. External LARP monitoring remains to be completed by the DOTC. Fencing of acquired land areas remains to be done by the LGU by a budget to be provided by DOTC.	Supplemental LARP approved by Government and ADB; External LARP monitoring still to be completed. Fencing of acquired land areas remains to be done by the LGU by a budget to be provided by DOTC.

Table 2.9-2: Summary of Key Social / Resettlement Issues (Continuation)

Subproject	Documentation	Main Issues and Status	Actions Required
Butuan	LARP was prepared in 2002 under TADP. Supplementary LARP prepared by ITDP Project Team	Based on a due diligence review of the 2002 LARP, all required land acquisition and resettlement activities have been completed with the noted exception of on-going expropriation proceedings involving some 7 ha of land. Based on this review and available information from DOTC, completion of the 2002 LARP requirements, including replication of AFP structures, will cost an estimated PhP 1 million. In addition to the requirements of the 2002 LARP, the Project Team prepared a Supplemental LARP to address the relocation of: • 9 structures (1,610.4 m^2 of building and other structural area including one room of a doctor's quarters which will be relocated to allow realignment of a gravel road) belonging to the Philippine Army and local government • 4 structures (193 m^2 of building area; 3 households and 1 kitchen) located inside the fence in the DVOR area • 10 other structures (452 m^2 of building area; 8 households, 1 kitchen, and 1 shed) which will need to be relocated on AFP property to allow realignment of the gravel barangay road. Based on the Supplemental LARP, an estimated budget of PhP 15.21 million will be provided for the replacement costs for all structures and fixed assets, to resettle 11 households of informal settlers within the available TADP resettlement site and to provide compensation for lost income, disturbance allowance and external monitoring plus monitoring and administrative and contingency costs. In addition, some 15 shade trees growing on government land need to be either removed or significantly trimmed to allow full view of the runway from the air traffic control tower. Fencing of acquired land areas is 75 per cent completed and completion of this fencing work is fully funded by the LGU. The DOTC still needs to establish a MOA with the AFP to formalize use of their government properties for the airport expansion project.	Supplemental LARP approved by Government and ADB. Fencing of remaining 25% of area (fencing work is fully funded by the LGU); and ongoing monitoring

Table 2.9-2: Summary of Key Social / Resettlement Issues (Continuation)

Subproject	Documentation	Main Issues and Status	Actions Required
Cotabato	LARP was prepared in 2002 under TADP. Supplementary LARP prepared by ITDP Project Team	Based on a due diligence review of 2002 LARP, all required land acquisition and resettlement activities and corresponding budget requirements have been completed but a budget of some PhP 33.04 million remains for replication of affected AFP structures. In addition to the requirements of the 2002 LARP, the Project Team prepared a Supplemental LARP to address the relocation of: 7 structures/ households that were not included in the TADP LARP but who remain within the fence line on government property. Estimated cost of resettling these informal settlers including replacement costs for existing structures and fixed assets, compensation for lost income, disturbance allowance and external monitoring plus monitoring and administrative and contingency costs is PhP 1.67 million. An adequate number of lots are still available within the TADP resettlement site to meet these additional needs. External LARP monitoring remains to be completed by the DOTC. Fencing of acquired land areas is 70 per cent complete and completion of this work is fully funded by the LGU.	Supplemental LARP approved by Government and ADB. Fencing of remaining 30% of area (fencing work is fully funded by the LGU); External LARP monitoring still to be completed.

CHAPTER 3

Summary of Feasibility Studies for Zamboanga City and General Santos City Hub Ports

Chapter 3 SUMMARY OF FEASIBILITY STUDIES FOR ZAMBOANGA CITY AND GENERAL SANTOS CITY HUB PORTS

3.1 Brief Profile of the Subprojects

3.1.1 This chapter contains a summary of the feasibility studies performed for the two (2) hub port subprojects: Zamboanga City and General Santos City ports. The complete feasibility study reports for each of the two (2) hub port subprojects are contained in Volume III. **Figure 3.1-1** shows the location and ZOI of these subprojects in the Southern Philippines, while **Figures 3.1-2** and **3.1-3** present more detailed location maps for each of the two (2) hub port subprojects.

3.1.2 The Implementing and Executing Agency for the two (2) hub port subprojects is the PPA. Financing for the implementation of the subprojects will be provided through on-lending to the PPA.

3.1.3 **Zamboanga Hub Port.** This strategic hub port serves the Sulu Archipelago (covering the provinces of Basilan, Sulu and Tawi-Tawi) and half of the Zamboanga Peninsula which is one of the most conflict-affected areas in the country while also serving as a gateway to the BIMP-EAGA. This port is also an important node of the Strong Republic Nautical Highway (SRNH) with existing RoRo service to Basilan and Sulu and planned RoRo service to Tawi-Tawi. The port's passenger traffic level of over 3.2 million passengers (more passengers than Cebu airport handles) is second only to the Port of Cebu, and even more than the Port of Manila and additionally it moves significant cargo volumes from Western Mindanao to the Visayas and Luzon markets. In general, the port is a major hub of intermodal transport since a large number of feeder ports, particularly those located in the Sulu Archipelago, transit cargo and passengers through this port, which then transfers cargo to other vessels and to the air and road transport systems. The port's ZOI, which covers the entire Sulu Archipelago and remote areas in Zamboanga Sibugay, Zamboanga del Norte, and Zamboanga City, has a population of 2.85 million (2005 population forecast).

3.1.4 Improvements recommended under ITDP include providing a new improved air conditioned passenger terminal, increased parking, and improved RoRo facilities, the latter of which serve both passenger and cargo traffic, particularly to the Sulu Archipelago.

3.1.5 Peace and order conditions are stable in Zamboanga City and particularly in Zamboanga Port and thus are unlikely to negatively affect the project implementation process.

3.1.6 **General Santos Hub Port.** The General Santos City (Makar) Port is a major cargo transport hub and gateway to the SOCSKSARGEN region and BIMP-EAGA. This port serves the rapidly growing SOCSKSARGEN area, which is a leading producer of a wide range of fishery products, crops, livestock, and agribusiness products that are increasingly being moved by container. Efficient container operations in this region will improve the shipment of cargo as it moves from the road to sea transport systems. The port is the third largest in the Southern Philippines in terms of population served, as well as cargo and containers moved, handling 1.6 million tons per year. The population of the ZOI is estimated to be 2.4 million (2005 population forecast).

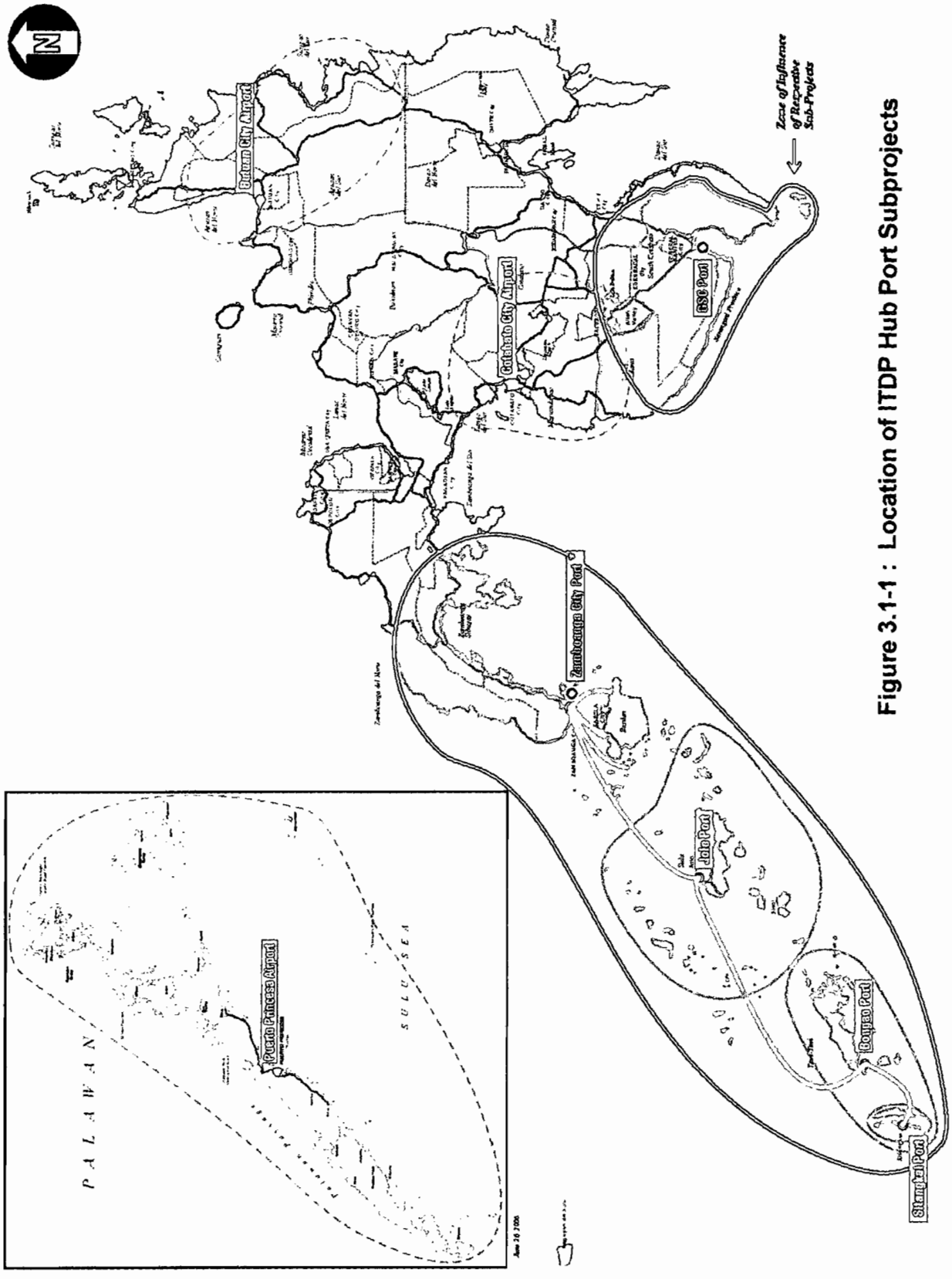


Figure 3.1-1 : Location of ITDP Hub Port Subprojects

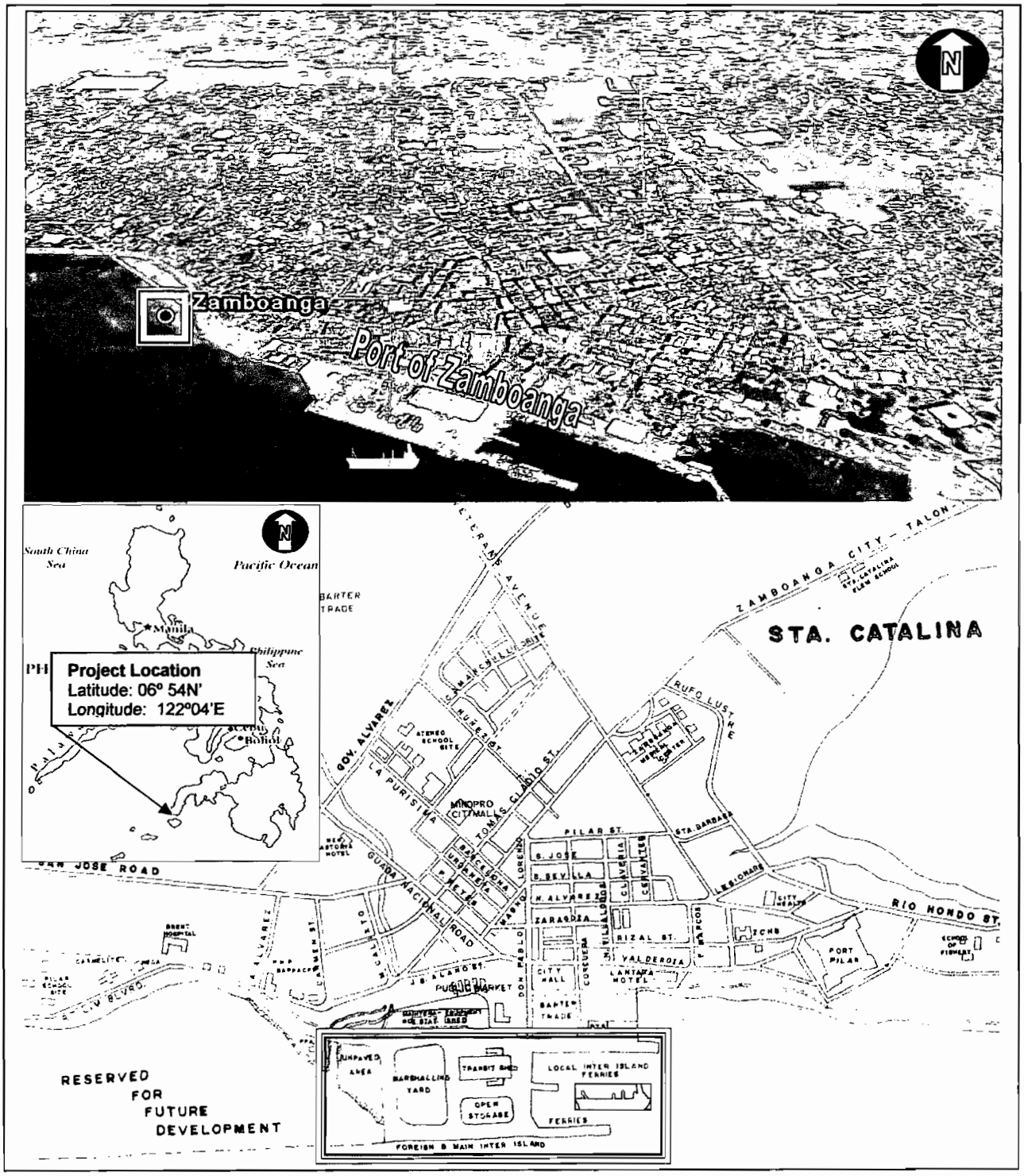


Figure 3.1-2: Vicinity Map of Zamboanga City Hub Port

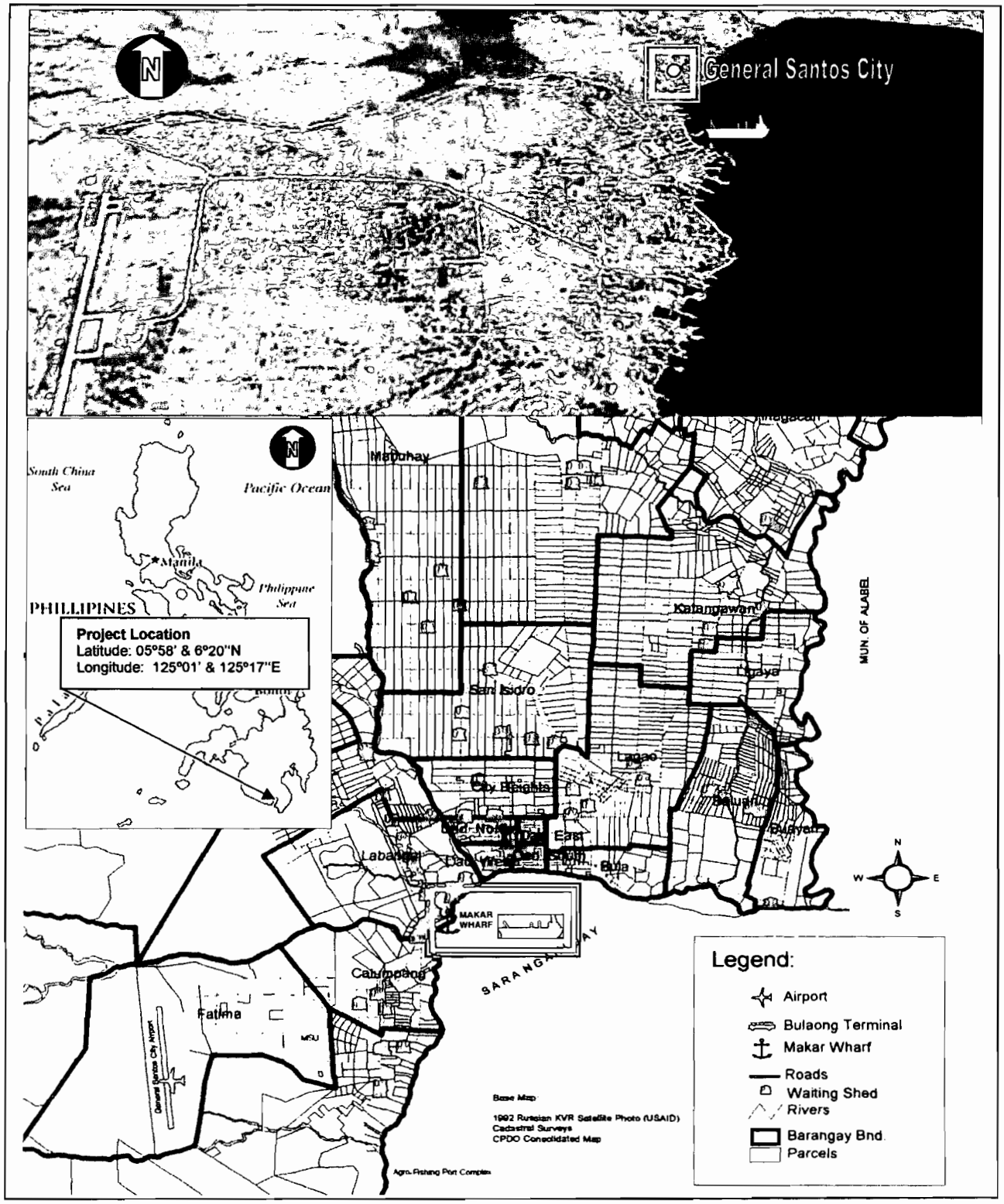


Figure 3.1-3: Vicinity Map of General Santos City Hub Port

3.1.7 Improvements recommended under ITDP include building an expansion of the presently congested berth for larger container ships and reconstruction of the oldest berths for smaller inter-island vessels.

3.1.8 Peace and order conditions are stable in General Santos City and particularly in the General Santos Port and thus are unlikely to negatively affect project implementation.

3.1.9 The PPA conducted previous scoping and feasibility studies for the development of both Zamboanga City and General Santos City Ports in 2000, which provided the basis for development and direction for the present ITDP analysis. However, the proposed improvements resulting from the ITDP analysis for both ports reflect the present conditions and updated data upon which the traffic forecasts are based.

3.2 Limitations of the Studies

3.2.1 The primary limitations of the Hub Port Feasibility Studies include:

- No off-shore or on-shore geotechnical investigations were undertaken;
- Given time constraints for conducting the feasibility studies following final selection of the subprojects to be studied was confirmed, the majority of data used for the analyses was secondary, rather than primary sourced.

3.3 Summary Scopes of Work for the Subproject Studies

3.3.1 The scopes of work of studies completed for each of the two (2) Hub Port subprojects was agreed to at the Tripartite Meeting following Phase 1 and reconfirmed at the Steering Committee Meeting to review the Phase 2 Inception Report. These scopes of work can be found in **Table 3.3-1**.

Table 3.3-1: Hub Port Subprojects and Scope of Work

Subproject	Present Status	Phase 2 SOW: Technical Studies	Phase 2 SOW: Environmental /Social Safeguards	
			Environmental Safeguards	Social Safeguards
Zamboanga	Feasibility Study (Break Bulk Wharf FS & RoRo No FS)	• Updated Feasibility Study • Due Diligence Review • Pre-Feasibility Study RoRo Improvements	• Initial Environmental Examination	• No land acquisition or resettlement required • Analyze cargo and passengers for PSA
General Santos City	Feasibility Study	• Update Feasibility Study • Due Diligence Review	• Initial Environmental Examination	• No land acquisition or resettlement required. • Analyze cargo and passengers for PSA

PAPs - Project-affected Persons
PSA - Poverty and Social Analysis
FS - Feasibility Study
RoRo - Roll-On, Roll-Off

3.4 Passenger and Cargo Traffic

3.4.1 Recent Traffic Trends

3.4.1 The passenger and cargo traffic at the two (2) ports over the past 20 years are shown in **Table 3.4.1-1**. In 2005, the passenger traffic at Zamboanga Port was 2.8 million, while that at General Santos was approximately 200,000. At both ports, the number of passenger movements grew at a high rate from 1992 to 1999. However, since 2000 the passenger traffic at Zamboanga Port has tended to increase at a slower rate, while at General Santos Port the number of passengers has decreased, although there is an indication that it has recovered in 2005 and is once again increasing. .

3.4.2 The start of Fast Craft operations in the Sulu archipelago in 1997 encouraged passenger traffic and resulted in a rapid increase of passenger movements at Zamboanga between 1997 and 2000, while the withdrawal of local coastal shipping from General Santos Port resulted in a decrease in passengers at the port since 1998.

3.4.3 At both ports, domestic cargo volumes increased at a higher rate during the 1990s than in the last five years. However, although the cargo traffic growth has been stagnant at both ports in recent years, there are indications of a recovery in 2005. Over the past ten (10) years, the foreign cargo volume at Zamboanga port has been about 100,000 tons and equivalent to 10% of the domestic cargo volumes. Whereas at General Santos Port, the foreign trade volume has tended to increase steadily, although foreign cargo volumes dropped in 2006 with the transfer of one (1) international shipping line to Davao City.

3.4.2 Traffic Forecasts

3.4.4 The previous PPA Feasibility Studies were conducted based on cargo statistics up to 1997 when both passengers and cargo showed rapid growth. As the statistics indicate, recent data demonstrates that the traffic at both of these two (2) ports continue to follow similar general trends, while also exhibiting different characteristics attributed to the specific details of the port namely its location, hinterland, and current facilities.

3.4.5 Therefore, to account for these similar trends but specific differences, methodologies to estimate the traffic forecasts differed. The cargo and passenger traffic volumes for the Zamboanga Port have been forecasted based on a regression analysis using Gross Regional Domestic Product (GRDP) in Western Mindanao, while for the traffic forecast for General Santos City Port was estimated using a regression with Gross Domestic Product (GDP), as these gave the best fit to the historical data. Although passenger and cargo traffic volumes over the past seven (7) to eight (8) years showed different characteristics from those observed in 1990s, the correlations between the passenger and cargo volumes at Zamboanga and the GRDP of Western Mindanao and those of General Santos Port and GDP are both fairly high (r^2 ~ 0.8). The correlation between the passengers at General Santos Port turned out to be a little lower (r^2 = 0.7) which is probably related to the decline in traffic over the past six (6) years and issues related to the redrawing of the official boundaries of relevant geographic areas and the effects on associated statistical data.

3.4.6 The results of the forecast are shown in **Table 3.4.2-1**.

Table 3.4.1-1: Passenger and Cargo Trends (1,000 passengers or tons)

Year	Zamboanga Port								General Santos Port							
	Total	Domestic			Foreign			Cargo	Total	Domestic Cargo			Foreign cargo			Cargo
	Passenger	Inward	Outward	Total	Import	Export	Total	Total	Passenger	Inward	Outward	Total	Import	Export	Total	Total
1987	1,008	384	203	588	-	24	24	611	120	186	451	638	43	36	78	716
1988	1,222	373	250	624	6	25	31	655	119	214	569	782	52	25	77	860
1989	1,298	404	215	619	0	24	24	643	127	239	540	779	36	36	72	851
1990	1,265	432	239	670	35	26	61	731	108	259	512	771	60	14	74	845
1991	1,311	387	219	606	1	14	15	621	107	248	534	781	38	31	69	850
1992	1,208	348	223	571	3	11	15	585	91	304	533	837	49	54	104	940
1993	1,481	427	268	695	15	39	53	749	102	255	593	848	64	50	114	962
1994	1,570	477	259	737	38	30	68	804	127	283	550	833	69	-	69	902
1995	2,432	612	305	917	30	11	42	959	143	359	621	980	103	54	157	1,137
1996	1,789	608	403	1,011	79	8	87	1,098	150	506	578	1,084	119	51	170	1,254
1997	2,018	633	422	1,056	67	0	67	1,123	167	569	634	1,204	129	44	173	1,377
1998	2,535	652	525	1,177	121	0	121	1,298	181	529	691	1,220	200	25	225	1,445
1999	2,630	632	489	1,120	90	0	91	1,211	218	525	704	1,228	167	26	193	1,422
2000	2,997	652	458	1,110	74	0	74	1,184	215	562	824	1,386	145	50	195	1,581
2001	2,908	644	462	1,106	147	1	148	1,254	210	481	837	1,319	190	67	257	1,576
2002	2,978	699	556	1,256	105	0	105	1,361	197	578	762	1,340	161	81	242	1,582
2003	2,798	711	500	1,211	66	1	66	1,278	182	480	657	1,137	-	177	-	1,137
2004	3,224	658	438	1,096	86	1	88	1,184	178	527	601	1,128	216	208	424	1,552
2005	2,801	845	625	1,469	104	1	105	1,574	194	510	782	1,293	238	73	311	1,604

Source: 1986-2005 PPA Statistics. 2006-2036; Forecast by Project Team

Table 3.4.2-1: Future Passenger and Cargo Traffic (1000 passengers or tons)

Year	Zamboanga Port						General Santos					
	Passenger	Growth Rate 2005 =100	Domestic Total	Foreign Total	Cargo Total	Growth Rate 2005 =100	Passenger	Growth Rate 2005 =100	Domestic Total	Foreign Total	Cargo Total	Year 2005 100
2005	2,801	100	1,469	105	1,574	100	194	100	1,293	311	1,604	100
2010	3,831	100	1,684	120	1,804	100	269	100	1,765	527	2,293	100
2015	4,523	118	2,071	120	2,191	121	324	120	2,111	690	2,801	122
2020	5,314	139	2,531	120	2,651	147	388	144	2,522	884	3,405	149
2025	6,203	162	3,077	120	3,077	171	465	173	3,009	1,113	4,122	180
2030	7,192	188	3,725	120	3,725	206	543	202	3,500	1,345	4,845	211
2035	8,279	216	4,495	120	4,495	249	632	235	4,070	1,613	5,683	248
2036	8,508	222	4,666	120	4,666	259	652	242	4,194	1,672	5,866	256

3.4.7 It has been forecast that the passenger traffic in Zamboanga and General Santos Ports will be expected to be on the order of 5.3 million and 388,000 in 2020, respectively. It should be noted that although different methods were used, the forecast passenger traffic volumes in 2020 are about twice as large as those in 2005 for both ports.

3.4.8 In 2020, the cargo volumes are expected to be on the order of 2.7 million tons at Zamboanga, and approximately 3.4 million tons in General Santos Port. These volumes are equivalent to 1.57 and 2.2 times as large as those handled at Zamboanga and General Santos Port in 2005, respectively.

3.4.9 On the basis of the passenger and cargo forecast, ship calls were estimated. The future demand capacity evaluation has been carried out for both ports under the condition of the cargo handling productivities that were achieved in 2005.

3.4.10 For the case of Zamboanga port, the capacity evaluation has been performed for four (4) different types of ships. Based on the forecasted passenger demand, the numbers of passengers will exceed the capacity of ship services provided on the Port of Zamboanga in the 2010 to 2015 time period, most likely in 2012. It is thus imperative that additional shipping services be provided to realize the projected demand. The capacity and improvement analyses considered: ongoing improvement works, the forecast number of passengers and cargo, type of ships employed in connecting routes, and port capacity with respect to both physical infrastructure and passenger and cargo handling operations. Based on these analyses, the near term constraint was determined to be services geared towards passengers, small cargo, and RoRo vessels serving the Sulu Archipelago.

3.4.11 For the case of General Santos, the capacity evaluation was performed for three (3) different types of ships. Given the trends in passenger and cargo traffic at the port, it was clear that the ITDP improvements should focus on the relatively more urgent objective of improving facilities for the movement of cargo through the port. Therefore, the analysis tended to examine the most appropriate means to expand the berthing capacity for the types of cargo vessels forecast to be making ship calls at the port and the cargo handling capacity of the port.

3.5 Proposed Improvements

3.5.1 Zamboanga City Port

3.5.1 Based on the capacity evaluation of Zamboanga Port, it was determined that the Project should focus on the most urgent requirements, i.e., the capacity expansion for short-distance inter-island vessels with RoRo capabilities that are for the most part providing passenger and cargo ferry services to and from the Sulu Archipelago. See **Figure 3.5.1-1** for the plan of the existing port and **Figure 3.5.1-2** for the plan of proposed ITDP Improvements.

3.5.2 The study identified the following items that should be included in the improvements for the subproject:

- Expansion and improvement of the facilities for short-distance RoRo ferries by constructing one (1) movable RoRo Ramp on one (1) of the existing RoRo ramps and provision of a Breasting Dolphin;
- Create a 1,500m^2 backup area for the RoRo Ramp;
- Construction of a new improved air conditioned passenger terminal (2,400m^2);
- Improve and expand the parking lot for the passenger terminal (1,500m^2), including security scanning equipment for the passenger terminal entrance; and
- Provide additional equipment including air conditioned buses (2 units) and trucks (2 units) to increase efficiency and/or safety of operations.

3.5.3 Based on the forecast of traffic in concert with the ongoing PPA container wharf expansion work and those improvements as proposed by ITDP analysis, no additional wharf or berthing space is expected to be required until 2020.

3.5.2 General Santos City Port

3.5.4 The capacity evaluation of the General Santos Port suggests that the cargo volume will reach the capacity of the present port infrastructure facilities before 2015. See **Figure 3.5.2-1** for the plan of the existing port facilities and **Figure 3.5.2-2** for the plan of proposed ITDP Improvements.

3.5.5 The study identified the following items that should be included in the subproject:

- Rehabilitate the Western Wharf that is old and needs upgrading to handle heavy cargo in order to maintain the full capacity of the existing six (6) berths; and
- Construct two additional (2) berths (7th and 8th berths) with lengths of 165 m each and a depth of 12m.

3.5.6 Given recent trends, the ITDP analysis suggests that a review of the need for a new passenger terminal may be deferred for a few years to better evaluate how the future growth in passenger traffic develops. In recent years the growth trend has been generally negative, with a small upturn in 2005. However, the annual traffic is only about 200,000 passengers and large passenger ferries are only stopping at the port four (4) times per week. In the interim period, the ITDP analysis recommends that minor amenity improvements be made in the existing waiting area using PPA funds.

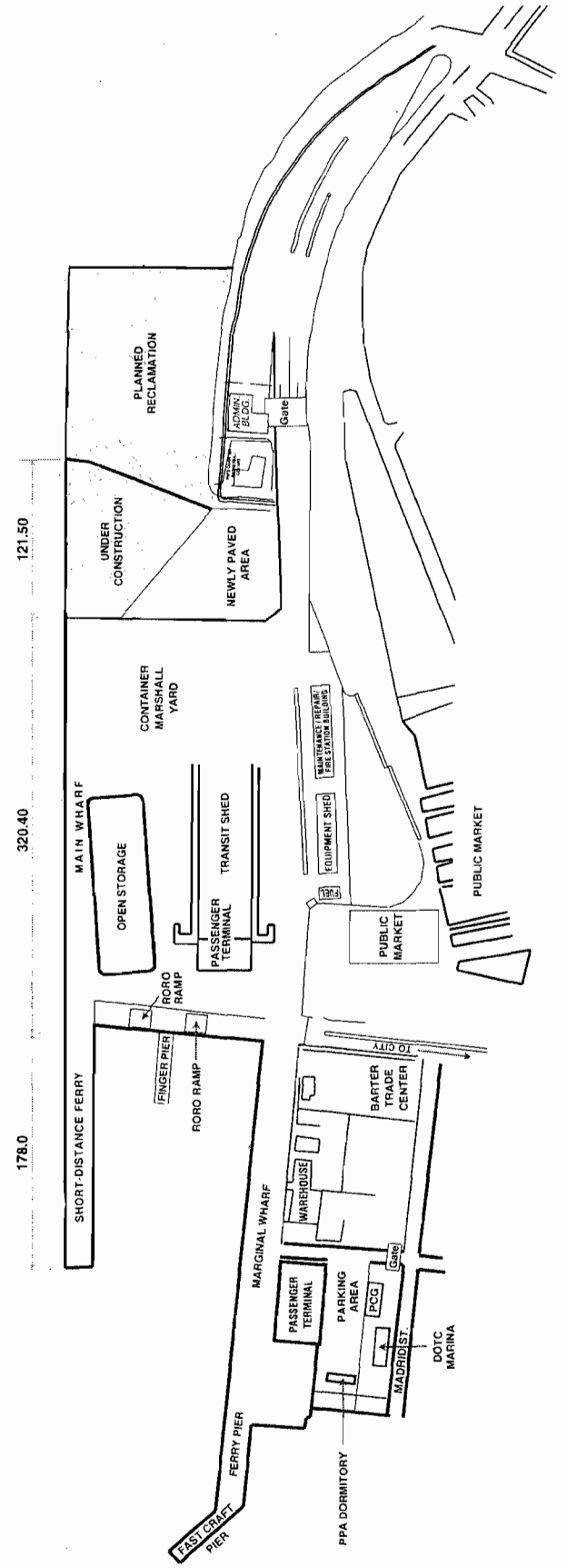


Figure 3.5.1-1: Zamboanga City Port Existing Layout

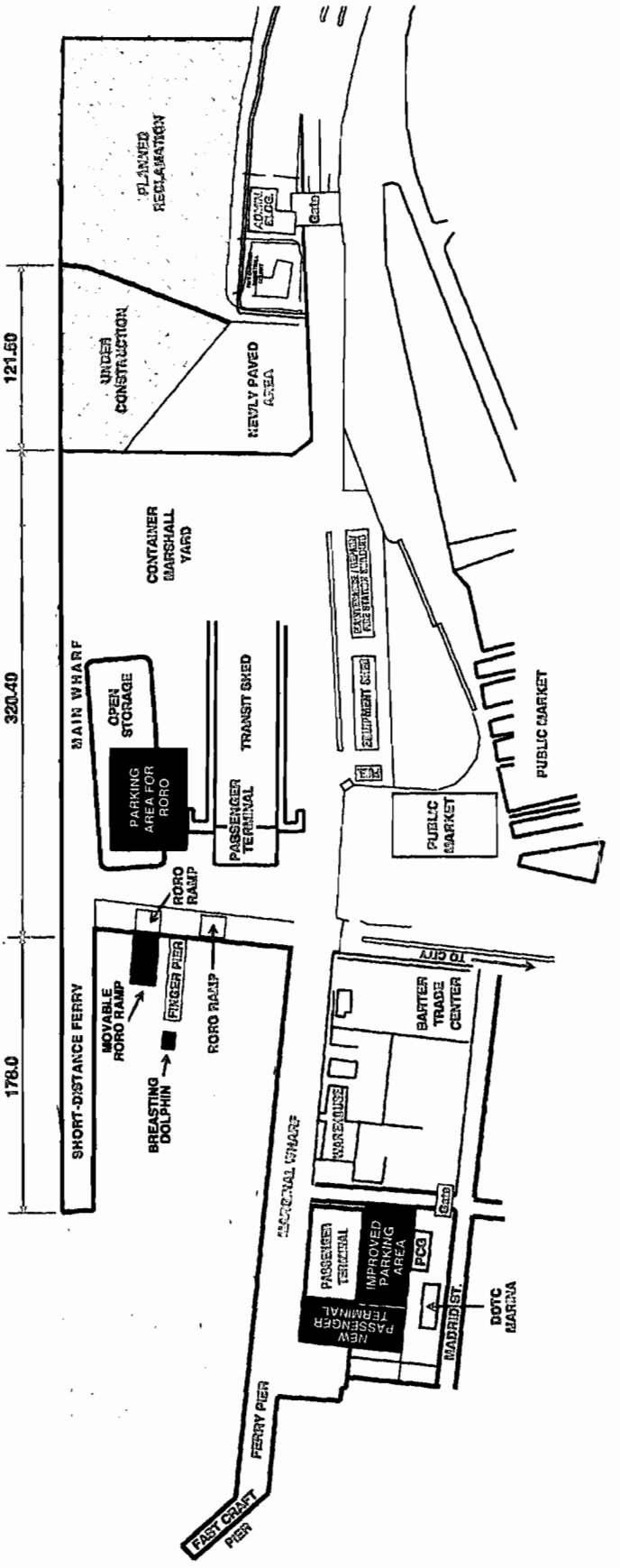


Figure 3.5.1-2: Zamboanga City Port Development Plan

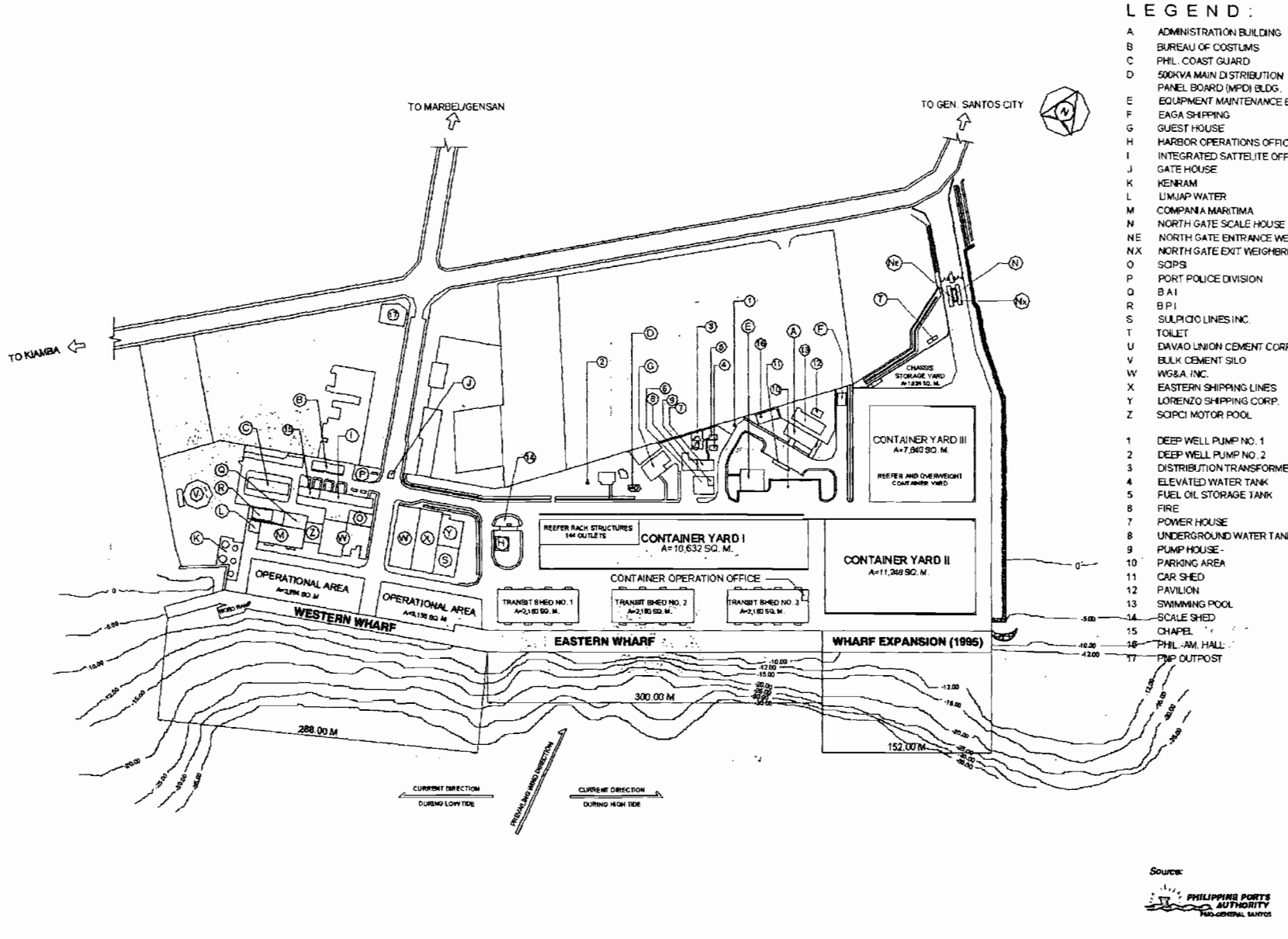


Figure 3.5.2-1: General Santos City Port Existing Layout

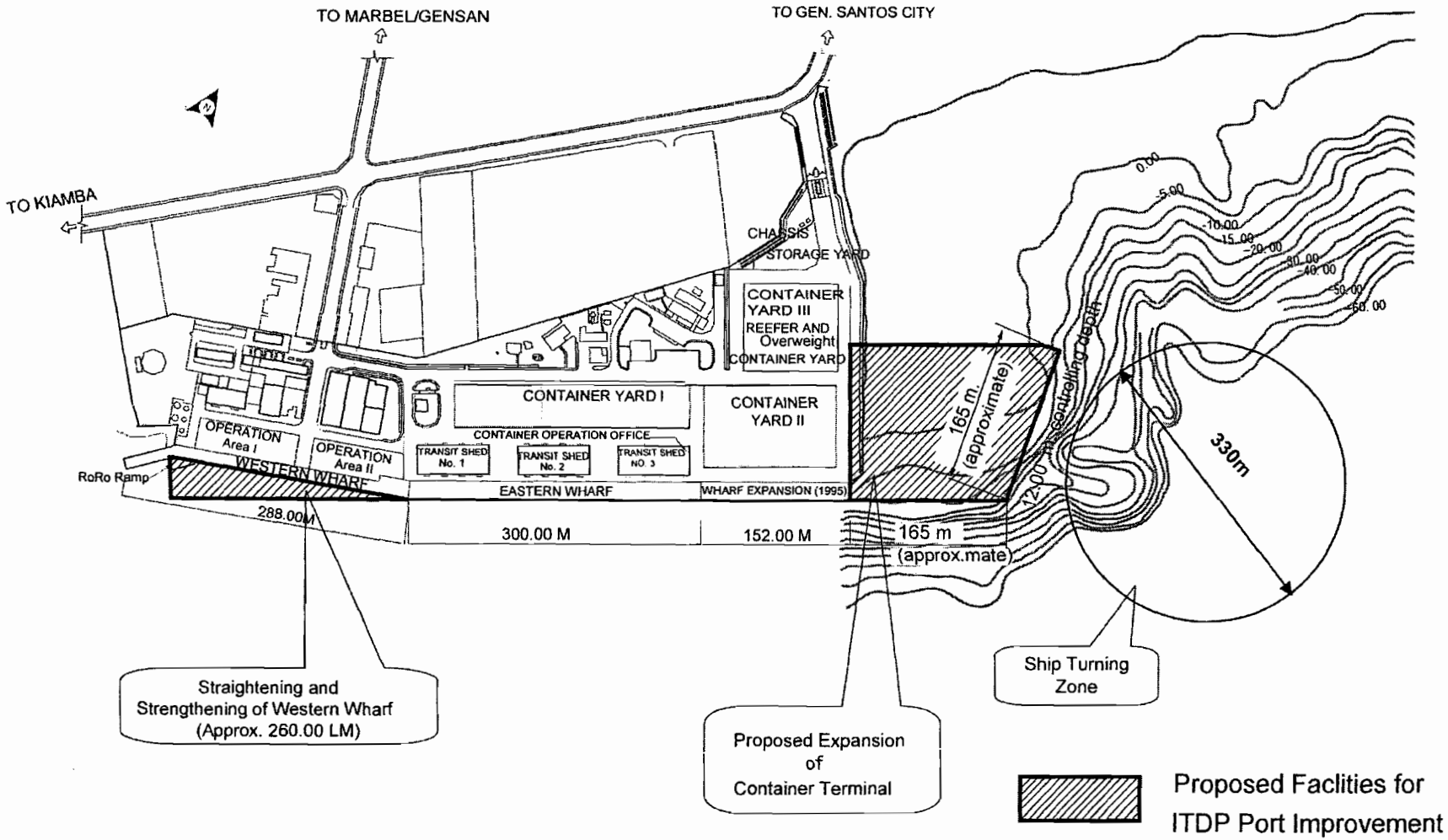


Figure 3.5.2-2: General Santos City Port Development Plan

3.5.3 Access Improvement

3.5.7 The main gate of the General Santos Port is directly connected to a four (4) lane national highway and the container terminal gate is connected to an adequate paved urban road. The Zamboanga Port is connected by a 200m long access road to a high capacity urban road. These access roads and the local road network are evaluated to be adequate for expected traffic at this time as a result of the proposed improvements. Furthermore sufficient budget has been provided in the construction works cost estimate to improve signage in Zamboanga and General Santos City to better direct users to the ports.

3.6 Project Investment Costs

Table 3.6-1: Hub Ports Subproject Costs (costs in thousand PhPs)

	Zamboanga City Hub Port Item	Subtotals		General Santos City Hub Port Item	Subtotals
Base Costs			Base Costs		
A	Civil Works		A	Civil Works	
1	General Requirement	8,000	1	General	12,000
2	Roro Ramp	113,039	2	Wharf Extension	263,124
3	Breasting Dolphins	2,846	3	Reclamation Works	160,824
4	Roro Berth Back Up Area	6,859	4	Wharf Construction	225,419
5	Passenger Terminal Area Complex	62,400	5	Reclamation Works (Reconstruction)	47,296
			6	Other Works	70,000
6	Mitigation Measures (Construction Monitoring)	190	7	Mitigation Measures (Construction Monitoring)	1,210
	Total Civil Works	193,334		Total Civil Works	779,873
B	Equipment		B	Equipment	
1	Truck (6-wheeler)	2248	1	Scanning Machine for Human	12,900
2	Bus	13356	2	Scanning Machine for Baggages	6,450
3	Scanning Machine for Human	12900			
4	Scanning Machine for Baggage	6450			
	Total Equipment	34,954		Total Equipment	19,350
	Total Base Cost	228,288		Total Base Cost	799,223

3.6.1 The overall proposed ITDP Project Financing Plan, and Project Implementation and Cash Disbursement Schedules can be found in Chapter 7.

3.7 Financial Analysis

3.7.1 Similar to the economic analysis, "with" and "without" project conditions were compared with respect to the proposed improvements for financially evaluating the project from the perspective of the Government as owner of the facilities. Incremental revenues were calculated and compared with any incremental costs incurred. Sources of (incremental) revenue included:

- Dockage fees for domestic vessels;
- Wharfage fees (per metric ton of cargo) for domestic vessels;
- Share of arrastre and stevedoring fees;
- Passenger terminal fees; and
- Concession revenue.

3.7.2 The summary results are as follows:

ITDP Proposed Hub Port Subproject Improvements Estimated Financial Analysis Results		
	Zamboanga	General Santos
FIRR	1.25%	-2.00%
FNPV @ 7.4%	-204,007	-888,762

3.7.3 As the financial analysis has exhibited, the FIRR turned out to be lower than the hurdle rate of 7.4%, i.e., the estimated Weighted Average Cost of Capital (WACC), therefore technically the subprojects are financially not viable under current conditions and cost recovery does not occur. However, as the detailed net revenue streams exhibited in Section 8 Financial Evaluation for the two studies in Volume III point out, the port revenues cover the annual cost of operations and maintenance in the "with" project condition.

3.7.4 These results are most likely due to the current tariff levels, which have not been regularly revised to compensate for inflation. This is especially true for the domestic cargo because port charges are set at a much lower level than that of foreign cargo and domestic cargo operations at these ports encompass more than 90% of the total cargo. Therefore, the ports have been providing services without adequate revenue to pay for the costs of such services. The result of the financial analysis indicates that the tariff should be increased by 30% to fulfill the NEDA's requirement of a return that would at least equal the WACC.

3.7.5 Furthermore, the low tariff level also encourages overstaying of ships at the port facilities, a source of inefficiency. The port charges are currently paid on a daily basis, but should perhaps be revised to an hourly basis. The hourly basis charge will discourage ships from overstaying at the port and, in turn, congestion will be eased, especially at the "Marginal Wharf" in Zamboanga and the "Western Wharf" in General Santos City, where small ships especially tend to overstay.

3.7.6 Additional recommendations to improve operational efficiencies can be found in Volume III and policy recommendations for the sector in Chapter 6 of this Volume.

3.8 Economic Analysis

3.8.1 The economic analysis for the proposed ITDP hub port improvements were evaluated over a 30 year life cycle. The subproject improvements were evaluated according to their estimated EIRR and Economic Net Present Value (ENPV) using a discount rate of 15%. In order to assess the incremental value of the proposed ITDP improvements "with" and "without" project conditions were compared and assessed. Benefits categories for the proposed "with" project improvements for the hub ports considered:

- Improved vessel utilization by reducing ship waiting and service times;
- Increased cargo handling efficiency, including a reduction in the cost of delays in cargo loading and unloading;
- Passenger time savings;
- Reduction or elimination of double handling costs associated with "lighter-age" operations under certain conditions;
- Improved passenger embarkation and disembarkation efficiency gains;
- Avoided road or sea transport costs to alternative ports; and
- Reduction in cargo handling losses due to spoilage.

3.8.2 For General Santos, the majority of benefits expected from the proposed port improvements were derived from reduction of vessel waiting time in port. Such reductions would enable the vessel to be utilized much more efficiently, whereas under current situations ships must wait until a berth is open, thus incurring greater vessel operating costs per transfer of cargo.

3.8.3 Similarly for Zamboanga, the majority of benefits expected from the proposed port improvements are expected to be derived from the more efficient loading and unloading of vessels, but specifically those with RoRo capabilities. In addition to the RoRo feature due to the nature of the traffic, the key difference between the two hubs is the improvements for General Santos are primarily for containerized cargo movements, while those for Zamboanga are for passenger and non-containerized cargo movements.

3.8.4 Sensitivity analysis was performed and the results were determined to be robust under significant unexpected changes in the benefit and cost streams within magnitudes of 20%. Therefore, the ITDP proposed improvements for the two (2) hub port subprojects are judged to be economically feasible (see **Table 3.8-1)**.

Table 3.8-1: ITDP Proposed Hub Port Subproject Improvements
Estimated Economic Benefit & Cost Streams

Year	Zamboanga			General Santos		
	Total Benefits	Total Economic Cost	Net Benefits	Total Benefits	Total Economic Cost	Net Benefits
2008		18,044	-18,044		48,628	-48,628
2009		126,360	-126,360		261,626	-261,626
2010		126,360	-126,360		337,180	-337,180
2011	20,450	92,361	-71,912		337,180	-337,180
2012	45,108	24,751	20,357	406,905	525,960	-119,055
2013	49,416	24,832	24,584	813,811	36,228	777,583
2014	55,659	24,915	30,744	813,811	36,228	777,583
2015	63,110	24,998	38,112	813,811	36,228	777,583
2016	71,806	25,082	46,724	813,811	36,228	777,583
2017	88,925	25,167	63,758	813,811	36,228	777,583
2018	114,122	25,252	88,869	813,811	36,228	777,583
2019	150,580	25,339	125,241	813,811	36,228	777,583
2020	254,281	25,426	228,855	813,811	36,228	777,583
2021	366,833	25,514	341,319	813,811	36,228	777,583
2022	458,104	25,603	432,501	813,811	308,541	505,270
2023	459,314	25,693	433,621	813,811	36,228	777,583
2024	448,334	25,784	422,550	813,811	36,228	777,583
2025	389,310	25,876	363,434	813,811	36,228	777,583
2026	276,982	25,969	251,014	813,811	36,228	777,583
2027	- 215,642	26,062	189,579	813,811	36,228	777,583
2028	216,239	26,157	190,082	813,811	36,228	777,583
2029	216,818	26,253	190,566	813,811	36,228	777,583
2030	217,379	26,349	191,030	813,811	36,228	777,583
2031	217,379	26,447	190,933	813,811	36,228	777,583
2032	217,379	96,545	120,834	813,811	308,541	505,270
2033	217,379	26,644	190,735	813,811	36,228	777,583
2034	217,379	26,745	190,634	813,811	36,228	777,583
2035	268,713	26,846	241,866	1,004,430	36,228	968,202
EIRR			*21.52%*	*EIRR*		37.34%
ENPV @ 15%			*214,827*	*ENPV @ 15%*		1,722,046

3.9 Environmental and Social Safeguards Summary

3.9.1 Adverse environmental impacts are of low to moderate significance and can be mitigated. Mitigation measures have been identified, budgeted for, and incorporated into the environmental mitigation plans. The environmental mitigation plan for General Santos includes a septic tank system for animal wastes. In both proposed subproject improvement plans, no land acquisition or resettlement is required. For further detail see Chapter 5 of Volume I, Volume V, and the environmental and social sections of the respective feasibility studies.

3.9.2 No specific off-site PAIs were identified for the proposed port subprojects. The proposed new passenger terminal and moveable RoRo ramp in Zamboanga Port will directly benefit the poor of the Sulu Archipelago as they will be among the primary users of these facilities. In the General Santos Port, no on-site poverty alleviation interventions were recommended since the port operates primarily as a large commercial port for cargo.

3.10 Conclusions and Recommendations

3.10.1 The following are the major conclusions and recommendations of the two hub port feasibility studies:

- The proposed ITDP improvements for the Zamboanga City and General Santos City Hub Ports are economically feasible and will provide improved capacity and efficiency for cargo movement through the General Santos Port and for both passengers and cargo moving through the Zamboanga to the Sulu Archipelago, one of the most conflicted areas in the Philippines.
- The proposed ITDP improvements when financially analyzed are not viable. As pointed out in the analysis, this is most likely due to port operations and management policy issues, particularly the structure of tariffs and fees.
- The environmental and social impacts of the project are assessed to be minimum and manageable.

CHAPTER 4

Summary of Feasibility Studies for Bongao, Jolo and Sitangkai Feeder Ports

Chapter 4 SUMMARY OF FEASIBILITY STUDIES FOR BONGAO, JOLO AND SITANGKAI FEEDER PORTS

4.1 Brief Profile of the Subprojects

4.1.1 This chapter contains a summary of the feasibility study performed for the Bongao feeder port subproject and the summary of the pre-feasibility studies for the Jolo and Sitangkai subprojects

4.1.2 The complete feasibility / pre-feasibility study reports for these feeder ports are contained in Volume IV. **Figure 4.1-1** shows the location in the Southern Philippines and ZOI of these subprojects. **Figures 4.1-2, 4.1-3** and **4.1-4** present more detailed location maps for each of the feeder port projects.

4.1.3 The Implementing and Executing Agency for the feeder ports subprojects is the DOTC in consultation with the ARMM RPMA. Financing for the implementation of the subprojects will be provided through a sector loan from ADB which is assumed to cover 65% of the project cost.

4.1.4 **Bongao Feeder Port:** Tawi-Tawi is one of the most remote island provinces in the country. Its residents are highly dependent on maritime travel. Bongao Port is an important sub-hub connecting numerous smaller nearby island ports to other ports in the Sulu Archipelago as well as the regional hub of Zamboanga. An improved Bongao Port will strengthen the economic linkage between Tawi-Tawi and Zamboanga City and to BIMP-EAGA. The population of Tawi-Tawi, the port's ZOI, was 322,000 as of the 2000 census.

4.1.5 Improvements recommended for Bongao include the expansion of the cargo marshalling area and berthing space through the reclamation of almost 4,000 square meters, which would mainly serve motor launches (wooden hulled vessels with GRT ranging from about 60 to 125 tons) and some conventional vessels (steel-hulled vessels with GRT above 100 tons). The expansion of the port will help to decongest the "Chinese Pier." The Chinese Pier would then be better able to accommodate inter-island provincial traffic which uses smaller vessels. Other suggested improvements include a trestle on pile to provide a road connection to the Chinese Pier. Transit sheds will also be constructed to provide storage space for cargo. An additional small passenger terminal will be constructed to serve vessels at the reclaimed area. Perimeter fences and gates will be constructed to allow for better security. A lighting system will be built to allow for better operations at night. Ancillary and supportive systems will also be built. These improvements are expected to increase the capacity of the port while improving efficiency, security and safety.

4.1.6 Peace and order conditions are stable in Bongao Municipality and are unlikely to affect the project implementation process negatively.

4.1.7 **Jolo Feeder Port:** This port is a strategic sub-hub port in the Sulu area, one of the country's poorest and most conflict-affected provinces. RoRo ferry service (to and from Zamboanga) and local feeder service (to remote islands nearby) will be improved by the project. Improved RoRo services will strengthen the ports' newly designated role in the SRNH and make it possible to ship fresh products in reefer containers. The ZOI is the whole Sulu Province, which had a population of about 620,000 in the 2000 census.

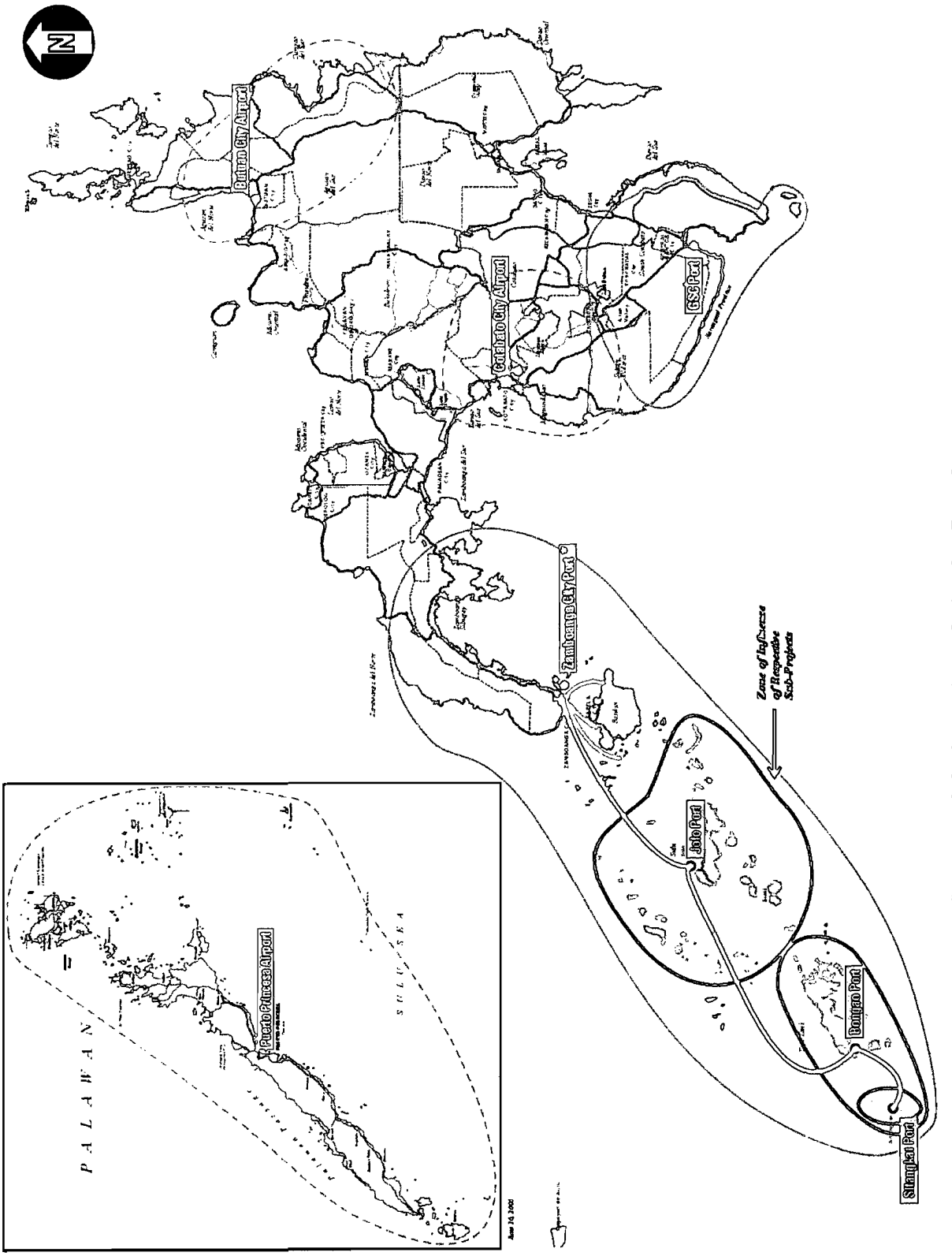


Figure 4.1-1: Location of Feeder Port Subprojects

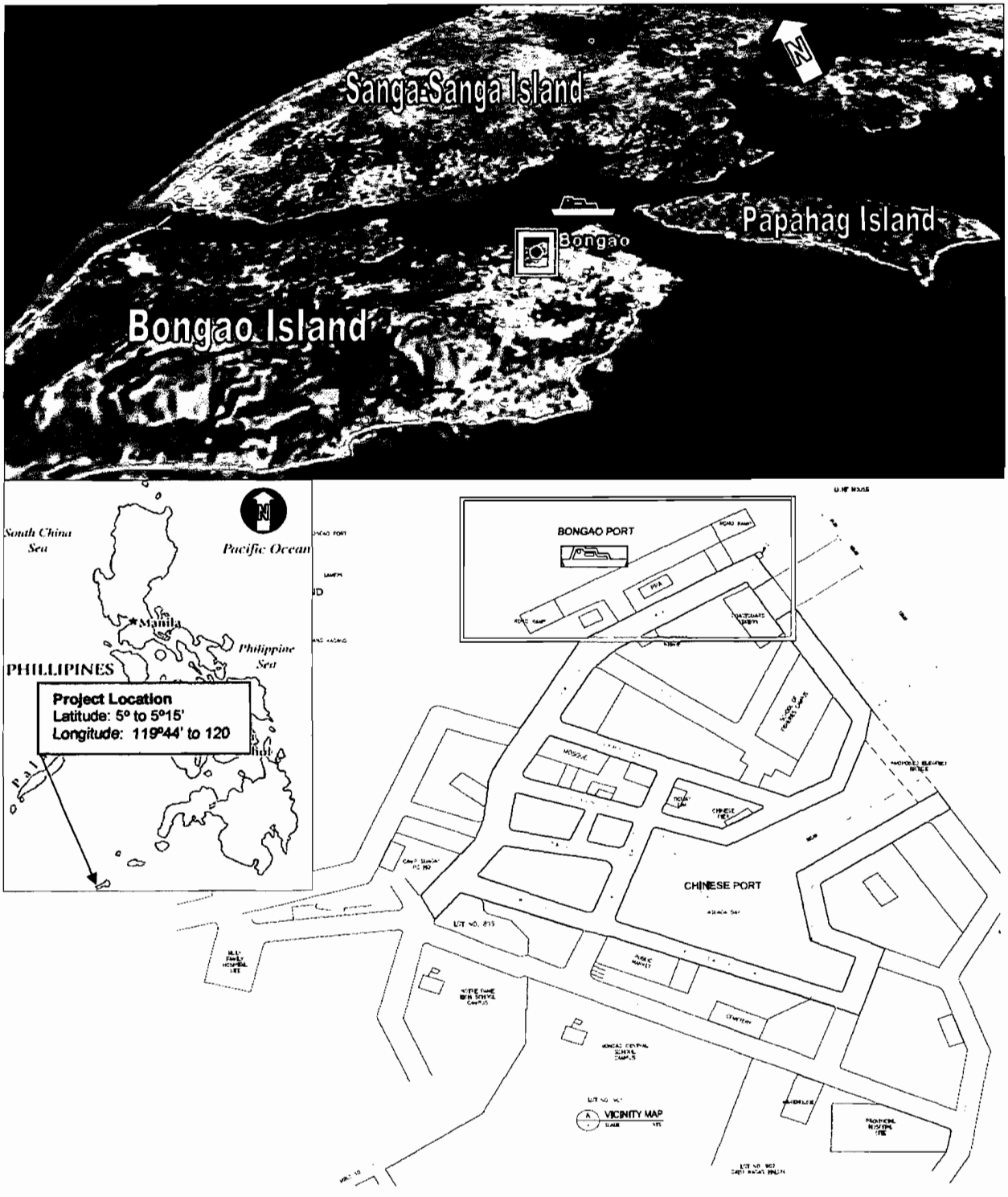


Figure 4.1-2: Location Map of Bongao Port

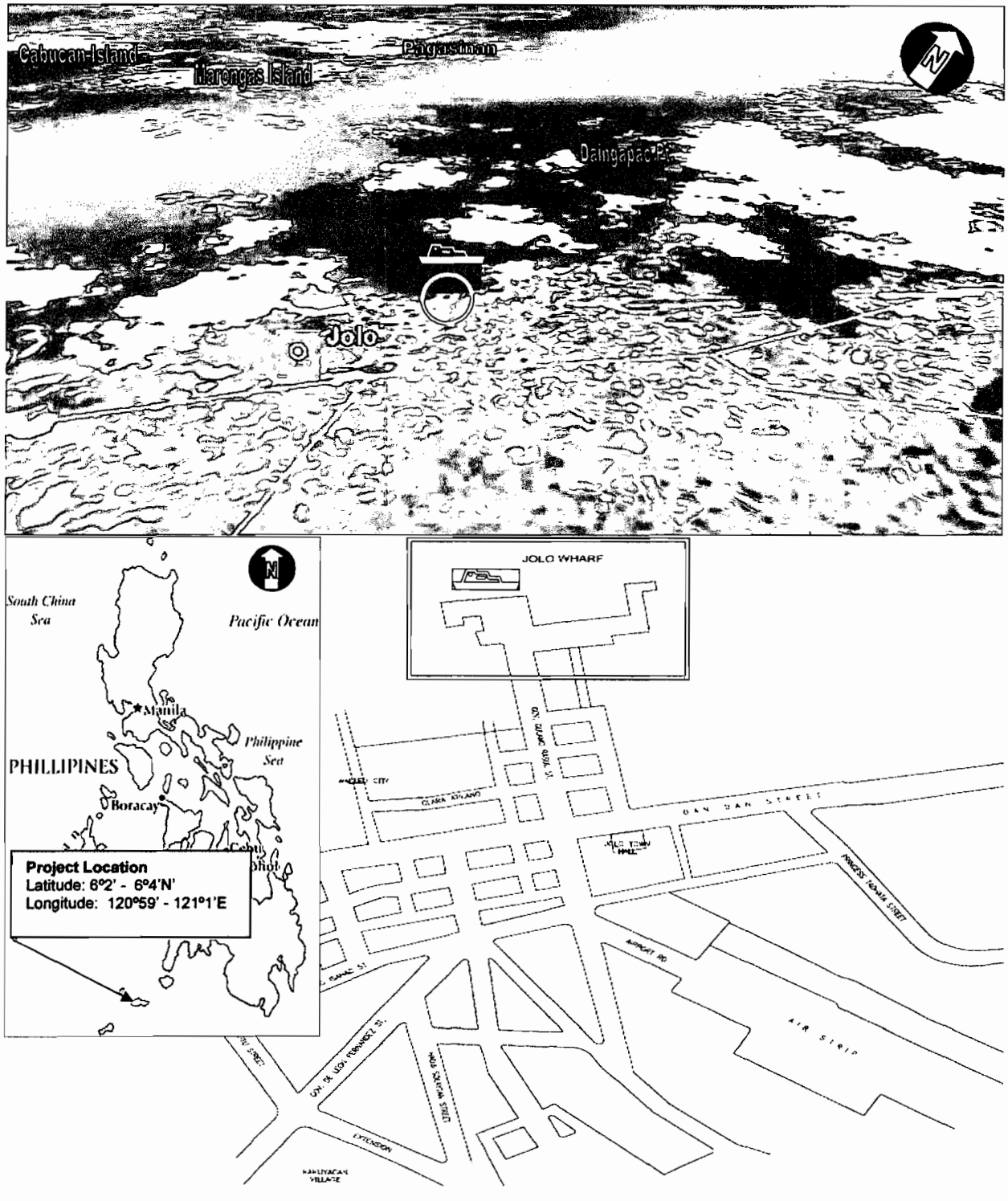


Figure 4.1-3: Location Map of Jolo Port

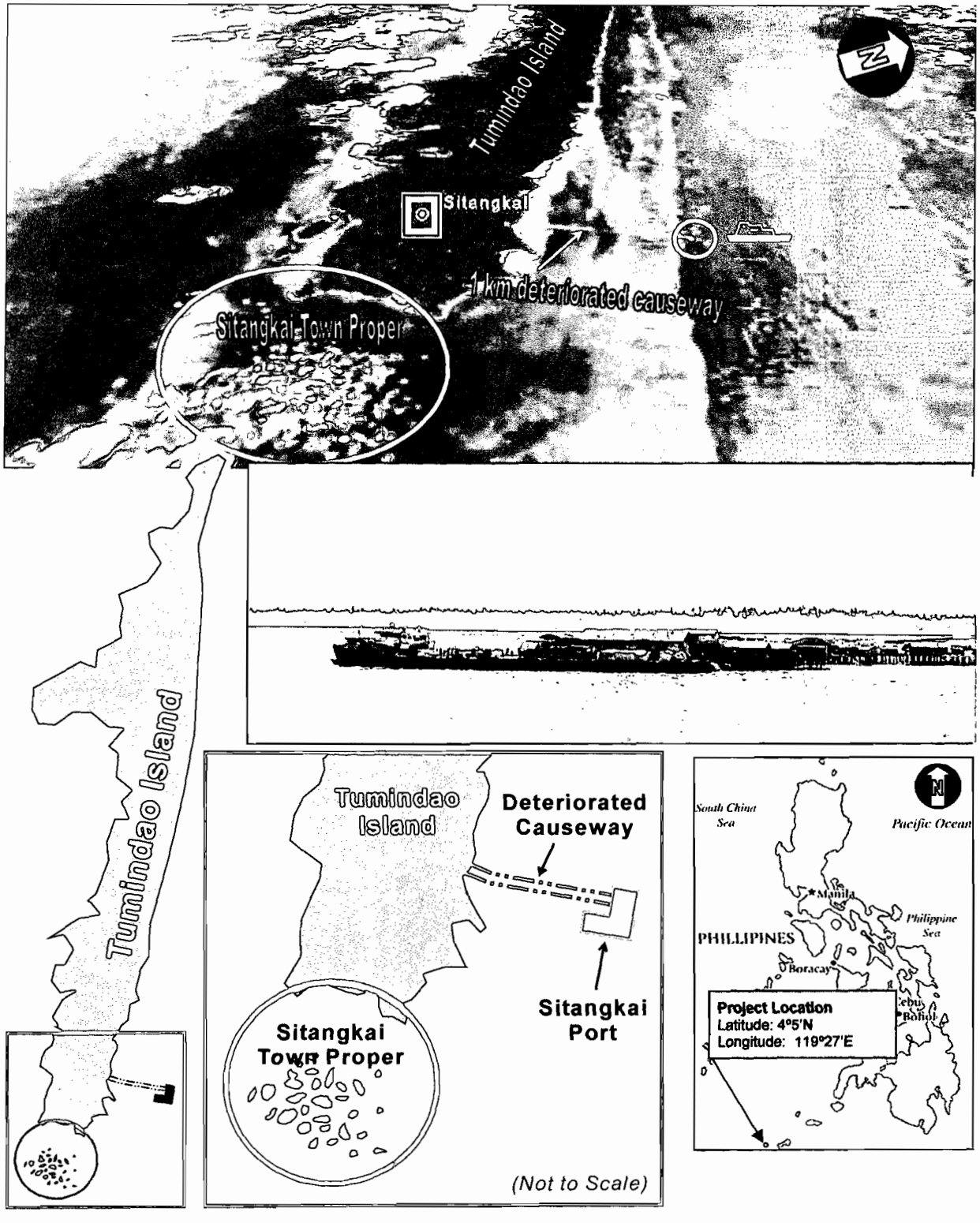


Figure 4.1-4: Location Map of Sitangkai Port

4.1.8 Improvements recommended for Jolo include major reconstruction and expansion of all facilities within the existing port area including the construction of additional piers and RoRo ramps to increase the number of available berthing spaces and allow berthing in deeper water. Also included are the expansion of marshalling areas and wharf area, demolition of a dilapidated pier, provision of berthing spaces for small vessels coming from the nearby islands, construction of a new passenger traffic gate and access road as well as the installation of supporting facilities and utilities. In support of more efficient operations, the rationalization of the assignment of berthing spaces according to vessel sizes and types is also recommended. All of these improvements will provide greater capacity and segregation of different forms of port traffic to improve efficiency, security and safety.

4.1.9 Peace and order conditions are relatively stable in the urban area of Jolo Municipality, security in the port itself is sufficient and therefore security is not likely to affect the project implementation process negatively.

4.1.10 **Sitangkai Feeder Port:** Tawi-Tawi is one of the most remote island provinces in the country and Sitangkai is one of Tawi-Tawi's most remote municipalities and ports. Its residents are highly dependent on maritime travel. Once improved, Sitangkai Port (more specifically referring to the Tumindao Pier) can better function as a maritime collector and linkage between remote islands in the municipality of Sitangkai with Bongao (Tawi-Tawi) and then with Zamboanga. Although there are few ships each month which directly connect to Zamboanga, most ships ply the route that connects Sitangkai to Zamboanga, via Bongao, Siasi and Jolo. An improved Sitangkai Port will strengthen the economic linkage between Sitangkai and the rest of Tawi-Tawi, as well as with Zamboanga City and to BIMP-EAGA. The project is expected to benefit the residents of the Municipality of Sitangkai (which includes the Sibutu Island group). The ZOI population of the port was 53,000 as of the 2000 census.

4.1.11 Improvements recommended for Sitangkai include the expansion of wharf apron space for handling cargo, the construction of a segregated stair handling area for the local variety of small wooden-hulled vessels (called "tempels"), provision of a passenger terminal building, the replacement of the existing transit shed with a larger one. These improvements will increase the capacity of the port while improving efficiency, security and safety.

4.1.12 Peace and order conditions are stable in Sitangkai Municipality and are unlikely to affect the project implementation process negatively.

4.2 Limitations of the Studies

4.2.1 The primary limitations of these studies include:

- There have been limited new passenger and cargo profile surveys undertaken by the study team. There have been no topographic surveys, geotechnical surveys, pavement condition surveys, or pavement strength testing. The study relied on data records accessed from relevant agencies and observations and notations were made during site inspections. The condition of existing port equipment and facilities were confirmed during field visits.
- The assessment of geotechnical issues in Bongao Port has been limited to a review of data from the studies conducted by the Growth with Equity in Mindanao (GEM) Project funded by the United States Agency for International Development (USAID). It is assumed that these field investigations were sufficient, at the feasibility level of study.

- It should also be noted that traffic levels are relatively stable and schedules of conventional vessels are relatively well developed and thus are considered fairly reliable. However, the traffic of smaller craft like motorized launches may require further updating when the construction design studies are conducted in the future.
- Dialogue with the community regarding land acquisition issues has begun in the form of focus group discussions and a LARP has been prepared (see Volume V). Further work on this important issue is required. The full scope of the project has been developed incrementally and would need to be presented again to the various stakeholders to verify acceptability.
- Experienced judgment was applied by the Project team to provide conservative estimates of subproject benefits and impacts as part of the poverty and social impact appraisal. Estimates of direct poverty benefits are based on typical construction labor shares, costs and composition from similar types of projects.

4.3 Summary Scopes of Work for the Subproject Studies

4.3.1 The scopes of work of the studies for each of the feeder port subprojects were agreed to at the Tripartite Meeting following Phase 1 and reconfirmed at the Steering Committee Meeting to review the Phase 2 Inception Report. These scopes of work can be found in **Table 4.3-1**.

Table 4.3-1: Feeder Port Subprojects and Scope of Work

Subproject	Present Status	Phase 2 SOW Technical Studies*	Phase 2 SOW: Environmental/ Social Safeguards	
			Environmental Safeguards	Social Safeguards
Bongao (Tawi-Tawi)	No Feasibility Study	• Feasibility Study*	• Due Diligence Review of Designs • Assist DOTC to extend issued ECC	• Prepare LARP • Prepare PSA Case Study
Jolo (Sulu)	No Feasibility Study	• Pre-Feasibility Study*	• Initial Environmental Examination	• Prepare LARP TOR • Analyze cargo and passengers for inputs to PSA
Sitangkai (Tawi-Tawi)	No Feasibility Study	• Pre-Feasibility Study*	• Initial Environmental Examination	• Prepare LARP TOR • Analyze cargo and passengers for inputs to PSA

* No geotechnical studies were undertaken
PAPs – Project-Affected Persons
PSA – Poverty and Social Analysis
FS – Feasibility Study
RoRo – Roll-On, Roll-Off

4.4 Passenger and Cargo Traffic

4.4.1 Recent Trends

4.4.1 **Bongao.** Passenger throughput of Bongao Port was 369 thousand in 1998 and rose by eight percent overall by 2002. Cargo grew by almost 31% in gross terms over the same period. Shipcalls increased between 1998 and 2002 but remained close to the average of 923 shipcalls (see **Table 4.4.1-1**).

Table 4.4.1-1: Passenger, Cargo and Shipcalls at Bongao Port

Year	Passengers	Cargo [tons]	Shipcalls
1998	369,984	45,551	757
1999	390,928	50,924	926
2000	397,912	54,125	955
2001	398,354	57,934	985
2002	399,992	57,536	992
2003*	411,532	59,682	1,029
2004*	423,405	61,422	1,059
2005*	435,620	63,162	1,089

** Note: Figures from 2003 to 2005 are conservative projections made due to lack of reliable data*
Source: for data between 1998 to 2002, RPMA

4.4.2 There has been no organization systematically recording motor launch traffic. An estimate of the current frequency of trips was derived from interviews with operators. The number of registered motor launches was based on records at the local office of MARINA. For the forecasts related to Bongao Port, GRT classes of 65 and 125 were used, while the 25 GRT class was assumed to remain at the Chinese Pier as shown in **Table 4.4.1-2**.

Table 4.4.1-2: Data on Motor Launch Operations in the Bongao Chinese Pier

Average GRT Class	GRT Range	Number of Registered Motor Launches	Average Monthly Frequency	Shipcalls Per Year
125	100~150	30	3.69	1,328
65	60~70	62	3.69	2,744
25	20~30	80	20.75	19,920

4.4.3 **Jolo.** The Passenger throughput of Jolo Port was 653 thousand in 2001 and rose by ten percent overall by 2005 (see **Table 4.4.1-3**). Cargo traffic grew by 8% in gross terms over the same period. Shipcalls varied between 2001 and 2005 but remained close to the average of 2,291 ship calls.

Table 4.4.1-3: Recent Passenger, Cargo and Shipcalls at Jolo Port

Year	Passengers	Cargo [tons]	Shipcalls
2001	653,921	144,167	2,308
2002	700,156	135,958	2,302
2003	725,937	116,667	2,152
2004	803,641	110,927	2,413
2005	724,831	120,662	2,280

Source: RPMA

4.4.4 **Sitangkai.** The Passenger throughput of Sitangkai Port (Tumindao Pier) was 61 thousand in 2001 and rose by 40 percent overall by 2005. Cargo grew by 7.4% in gross terms over the same period. Shipcalls varied between 2001 and 2005 with an annual average of 412 shipcalls. An adjusted passenger traffic figure of 117,658 for 2005 was derived from data records at the port and this was adopted as the base passenger traffic since data at Tumindao Pier was assumed to be more reliable. However, the data on cargo from the RPMA central office and at the pier were in relative agreement and the RPMA figure shown in **Table 4.4.1-4** was used as basis for the projection. The shipcalls were calculated based on the average cargo per shipcall ratio derived from the table below.

Table 4.4.1-4: Recent Passenger, Cargo and Shipcalls at Sitangkai Port

Year	Passengers	Cargo [tons]	Shipcalls
2001	61,113	29,574	463
2002	74,337	33,583	382
2003	88,101	31,324	335
2004	66,286	30,889	420
2005	85,782	31,775	452

Source: RPMA

4.4.2 Traffic Forecasts

4.4.5 The results of the unconstrained (not considering capacity limits) forecasts are shown for Bongao, Jolo and Sitangkai in **Table 4.4.2-1, Table 4.4.2-2** and **Table 4.4.2-3**, respectively. These were adjusted in the economic and financial analyses to include the effects that limits in the number of berths, length of service time and other operational aspects would determine.

Table 4.4.2-1: Future Passenger, Cargo and Shipcall Forecasts for Bongao

Year	Conventional Vessels			Motor Launches		
	Passenger	Cargo [tons]	Shipcalls	Passengers	Cargo [tons]	Shipcalls
2005	435,620	63,162	1,089	71,243	122,130	2,036
2006	448,188	64,960	1,120	73,298	125,640	2,094
2007	461,118	66,874	1,153	75,413	129,270	2,155
2008	474,421	68,788	1,186	77,588	133,020	2,217
2009	488,108	70,760	1,220	79,827	136,860	2,281
2010	502,190	72,790	1,255	82,130	140,790	2,347
2011	516,678	74,936	1,292	84,499	144,870	2,415
2012	531,584	77,082	1,329	86,937	149,040	2,484
2013	546,920	79,286	1,367	89,445	153,330	2,556
2014	562,699	81,606	1,407	92,026	157,770	2,630
2015	578,933	83,926	1,447	94,681	162,300	2,705
2016	595,635	86,362	1,489	97,412	166,980	2,783
2017	612,819	88,856	1,532	100,223	171,810	2,864
2018	630,499	91,408	1,576	103,114	176,760	2,946
2019	648,689	94,076	1,622	106,089	181,860	3,031
2020	667,404	96,802	1,669	109,150	187,110	3,119
2021	686,659	99,586	1,717	112,299	192,510	3,209
2022	706,469	102,428	1,766	115,539	198,060	3,301
2023	726,851	105,386	1,817	118,872	203,790	3,397
2024	747,821	108,460	1,870	122,302	209,670	3,495
2025	769,396	111,534	1,923	125,830	215,700	3,595
2026	791,593	114,782	1,979	129,460	221,940	3,699
2027	814,431	118,088	2,036	133,195	228,330	3,806
2028	837,928	121,510	2,095	137,038	234,930	3,916
2029	862,103	124,990	2,155	140,991	241,710	4,029
2030	886,975	128,586	2,217	145,059	248,670	4,145
2031	912,565	132,298	2,281	149,244	255,840	4,264
2032	938,893	136,126	2,347	153,549	263,220	4,387
2033	965,980	140,070	2,415	157,979	270,810	4,514
2034	993,849	144,130	2,485	162,537	278,640	4,644
2035	1,022,522	148,248	2,556	167,227	286,680	4,778
2036	1,052,022	152,540	2,630	172,051	294,930	4,916

Table 4.4.2-2: Future Passenger, Cargo and Shipcall Forecasts for Jolo Port

Year	Passengers	Cargo [tons]	Shipcalls
2005	724,831	128,590	2,338
2006	744,722	132,110	2,402
2007	765,159	135,740	2,468
2008	786,157	139,480	2,536
2009	807,731	143,330	2,606
2010	829,897	147,235	2,677
2011	852,671	151,305	2,751
2012	876,070	155,430	2,826
2013	900,111	159,720	2,904
2014	924,812	164,065	2,983
2015	950,191	168,575	3,065
2016	976,266	173,195	3,149
2017	1,003,057	177,980	3,236
2018	1,030,583	182,820	3,324
2019	1,058,864	187,880	3,416
2020	1,087,922	192,995	3,509
2021	1,117,777	198,330	3,606
2022	1,148,451	203,775	3,705
2023	1,179,967	209,330	3,806
2024	1,212,348	215,105	3,911
2025	1,245,617	220,990	4,018
2026	1,279,799	227,040	4,128
2027	1,314,919	233,310	4,242
2028	1,351,003	239,690	4,358
2029	1,388,077	246,290	4,478
2030	1,426,169	253,055	4,601
2031	1,465,306	259,985	4,727
2032	1,505,517	267,135	4,857
2033	1,546,832	274,450	4,990
2034	1,589,280	281,985	5,127
2035	1,632,893	289,685	5,267
2036	1,677,703	297,660	5,412

Note: Includes motor launch but not bancas

Table 4.4.2-3: Future Passenger, Cargo and Shipcall Forecasts for Sitangkai Port

Year	Passengers	Cargo [tons]	Shipcalls
2005	117,658	29,435	421
2006	121,052	30,852	441
2007	124,544	32,339	462
2008	128,137	33,900	484
2009	131,834	35,539	508
2010	135,637	37,258	532
2011	139,550	39,064	558
2012	143,576	40,959	585
2013	147,718	42,948	614
2014	151,980	45,035	643
2015	156,365	47,227	675
2016	160,876	49,528	708
2017	165,517	51,943	742
2018	170,292	54,478	778
2019	175,205	57,140	816
2020	180,260	59,934	856
2021	185,461	62,866	898
2022	190,812	65,945	942
2023	196,317	69,178	988
2024	201,981	72,571	1,037
2025	207,808	76,133	1,088
2026	213,803	79,873	1,141
2027	219,971	83,799	1,197
2028	226,317	87,920	1,256
2029	232,846	92,247	1,318
2030	239,564	96,790	1,383
2031	246,476	101,559	1,451
2032	253,587	106,566	1,522
2033	260,903	111,822	1,597
2034	268,430	117,341	1,676
2035	276,174	123,134	1,759
2036	284,142	129,217	1,846

Note: Includes motor launch but not tempels

4.5 Proposed Improvements

4.5.1 Bongao Port

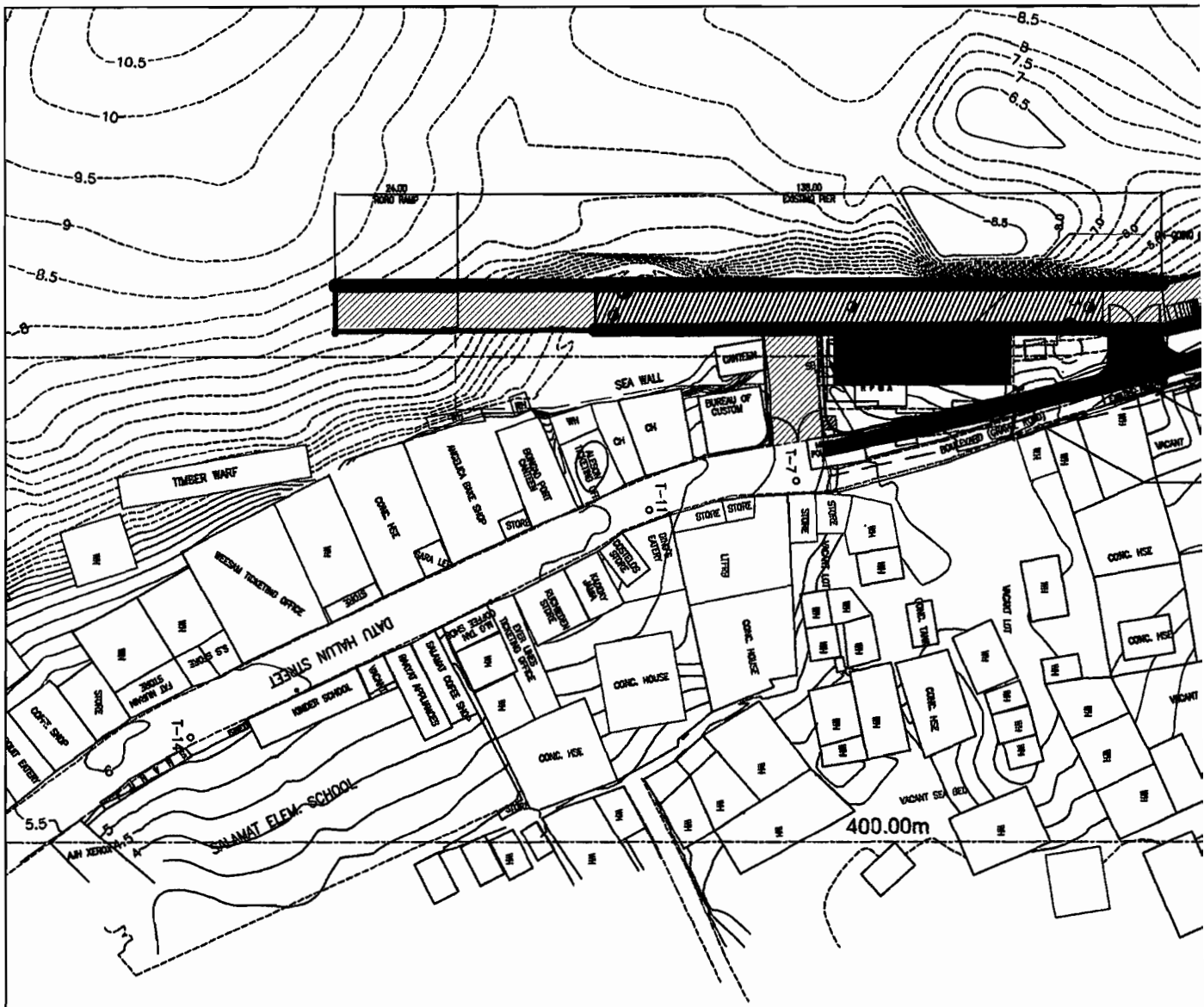
4.5.6 The proposed development works for Bongao port are shown in the following table.

Table 4.5.1-1: Proposed Development Works for Bongao Port

Item No.	Scope of Work	Description	Remarks
A. Port Facilities			
PF1	Proposed Expansion of Back-up Area at Bongao Port	750 m2	Expansion of existing wharf
PF2	Rehabilitation of Existing Pier at Bongao Port	Lump Sum	Repair of dilapidated surface, fendering system and mooring bollards
PF3	Proposed Embankment for the Widening of Access Road	150m x 4mx 0.60m	Will improve mobility/flow of traffic
PF4	Proposed Reclamation Area for Motor Launch Berth	45m x 85m	Will serve big wooden hulled motor launch vessels plying to nearby island and Sandakan, Malaysia: will decongest vessel traffic at existing Chinese Pier
PF5	Motor Launch Quay Wall with Fendering and Mooring System	125 lin. meters	Will serve big wooden hulled motor launch vessels plying to nearby island and Sandakan, Malaysia: will decongest vessel traffic at existing Chinese Pier
PF6	Proposed open pile trestle connection to Chinese Pier	9m x 105m	Will connect the missing access to the Chinese Pier: will help decongest traffic at the Chinese Pier and improve mobility
PF7	Additional Breasting Dolphins and Buoy Marker at Ro Ro Ramp	3 units	2 units breasting dolphins, 1 unit breasting dolphin with mooring tee-head and rubber fender located at RoRo ramp area for proper mooring of the vessel and 1 unit buoy marker is needed at the shallow area fronting the harbor basin of the RoRo berth
B. Buildings			
B1	Cargo Shed for Bongao Port	30m x 10m	Serve as connection, distribution, cargo sorting, marshalling and primary storage to enable the vessels to leave the port quickly.
B2	Powerhouse at Bongao Port	3m x 3m	For standby generator set to assure an uninterrupted power supply in the port
B3	Guardhouse at Motor Launch Berth	2 units	For security
B4	Cargo Shed for Motor Launch Berth	30m x 10m	Serve as collection, distribution, cargo sorting, marshalling and primary storage to enable the vessels to leave the port quickly.
B5	Passenger Terminal Bldg, Vendors Area and Ticketing Booth, Canteen, Prayer Area and Wash Room/Comfort Room for Motor Launch Berth	30m x 10m	Designated area for vendors and incoming/outgoing passengers
B6	Powerhouse at Motor Launch Berth	3m x 3m	For standby generator set to assure an uninterrupted power supply in the port
B7	Proposed Relocation/Construction of Affected Houses	16 houses	Houses to be relocated/constructed: affected by the port expansion as per LARP

Table 4.5.1-1: Proposed Development Works for Bongao Port (continued)

Item No.	Scope of Work	Description	Remarks
C. Pavement and Perimeter Fence			
PP1	Vehicle Parking Area at Bongao Port	15m x 30m	Designated areas for private vehicles and trucks
PP2	Perimeter Fence at Bongao Port	157 lin. meters	For security
PP3	Access Road	150m x 4m; 40m x 4m; 85m x 7.5m; 90m x 10m	Improvement of traffic flow in/out of the port.
PP4	Sidewalk	1.25m x 170m; 1m x 140m	For the safety of the pedestrian users
PP5	Main Gate at Motor Launch	2 - 10 lin. meters	For security
PP6	Vehicle Parking Area at Motor Launch Berth	60m x 10m	Designated areas for private vehicles and trucks
PP7	Concrete Apron	115 m x 10m	Marshalling/staging area in front of motor launch berth
PP8	Perimeter Fence at Motor Launch Berth	95 lin. meters	For security
D. Utilities			
U1	Water Supply System	2 units	Needed by inhabitants/port users from nearby islands. Needed for Bongao Port Area and for Motor Launch Berth
U2	Fire Fighting System	1 unit	For emergency purpose in case of fire
U3	Public Announcement System	2 Lump Sum	For passengers information regarding their trips (both for Bongao Port and Motor Launch Berth)
U4	Lighting System	Lump Sum	For security and night operation at Bongao Port, Motor Launch Berth, open pile pier and access roads
U5	Standby Generator	2 units	Back-up for an interrupted power supply inside the port (both for Bongao Port and Motor Launch Berth)
U6	Drainage System	1 unit	For environmental sanitation (for motor launch berth)
U7	Environmental Facilities	1 Lump Sum	Development of 20 units septic tanks and installation of garbage collection facilities



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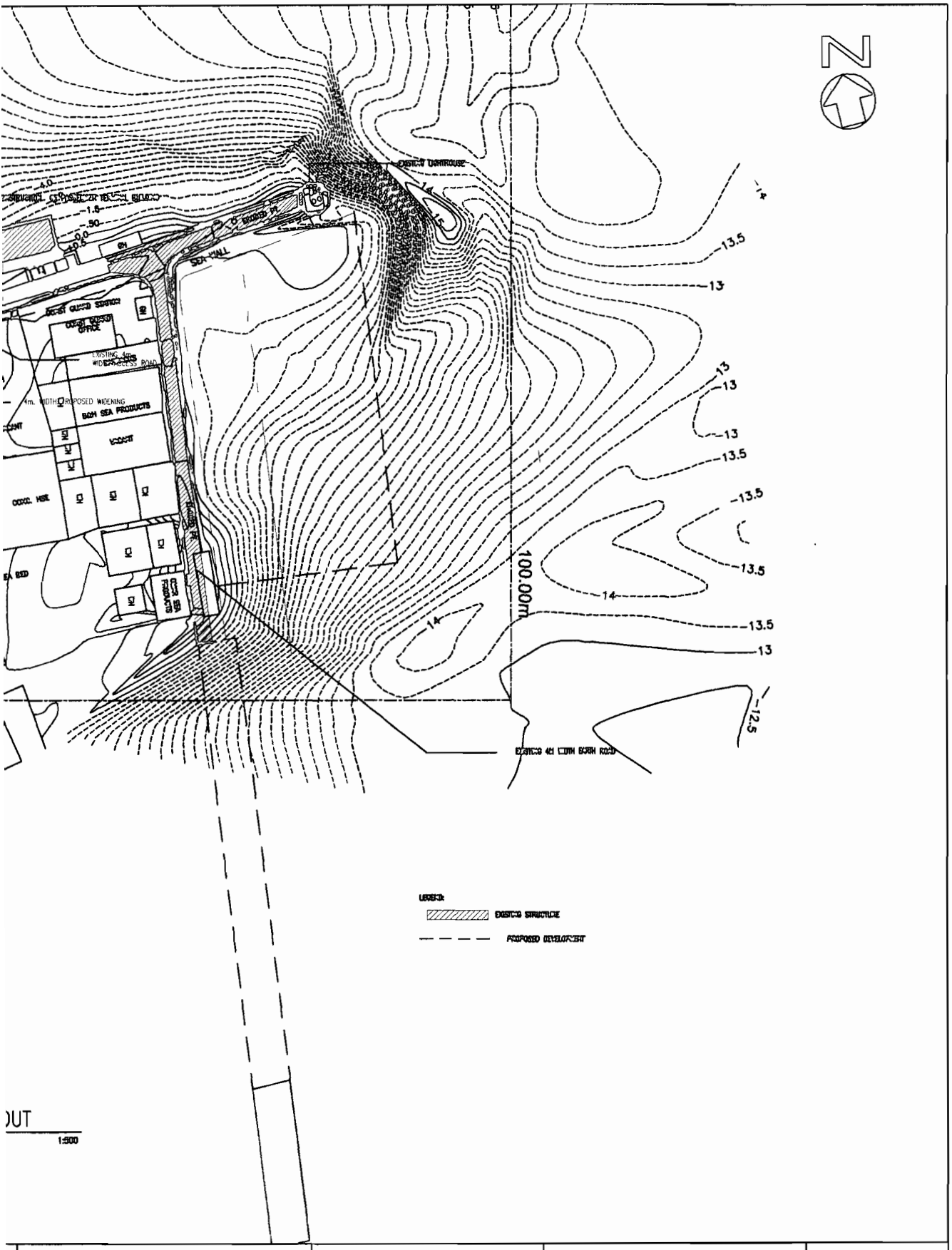

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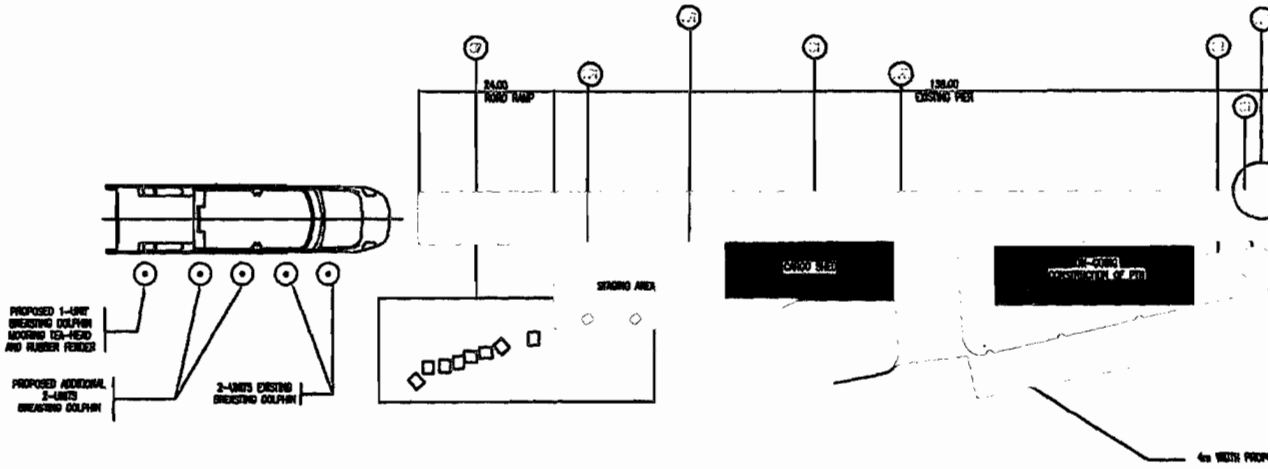

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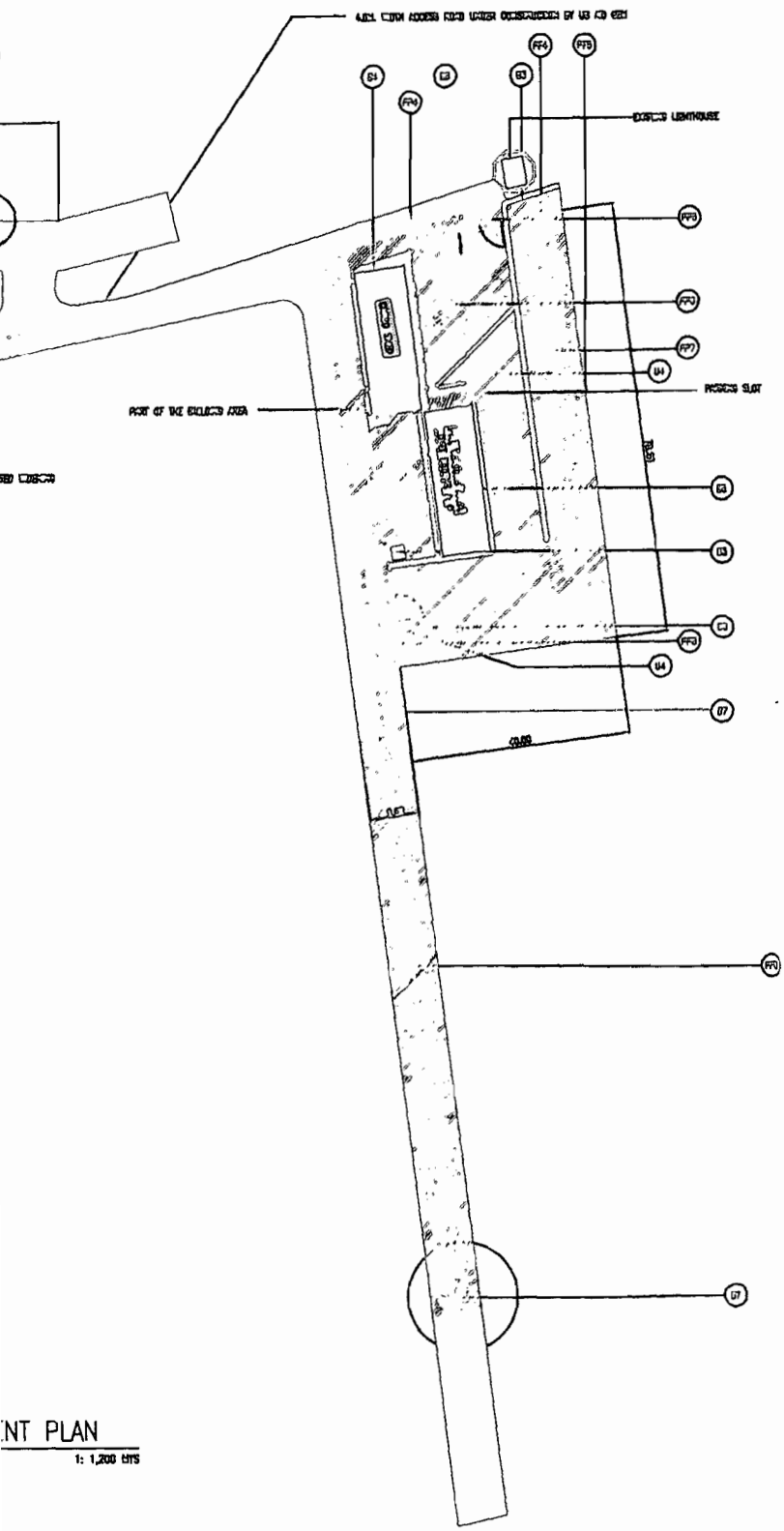

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4.5.2 Jolo Port

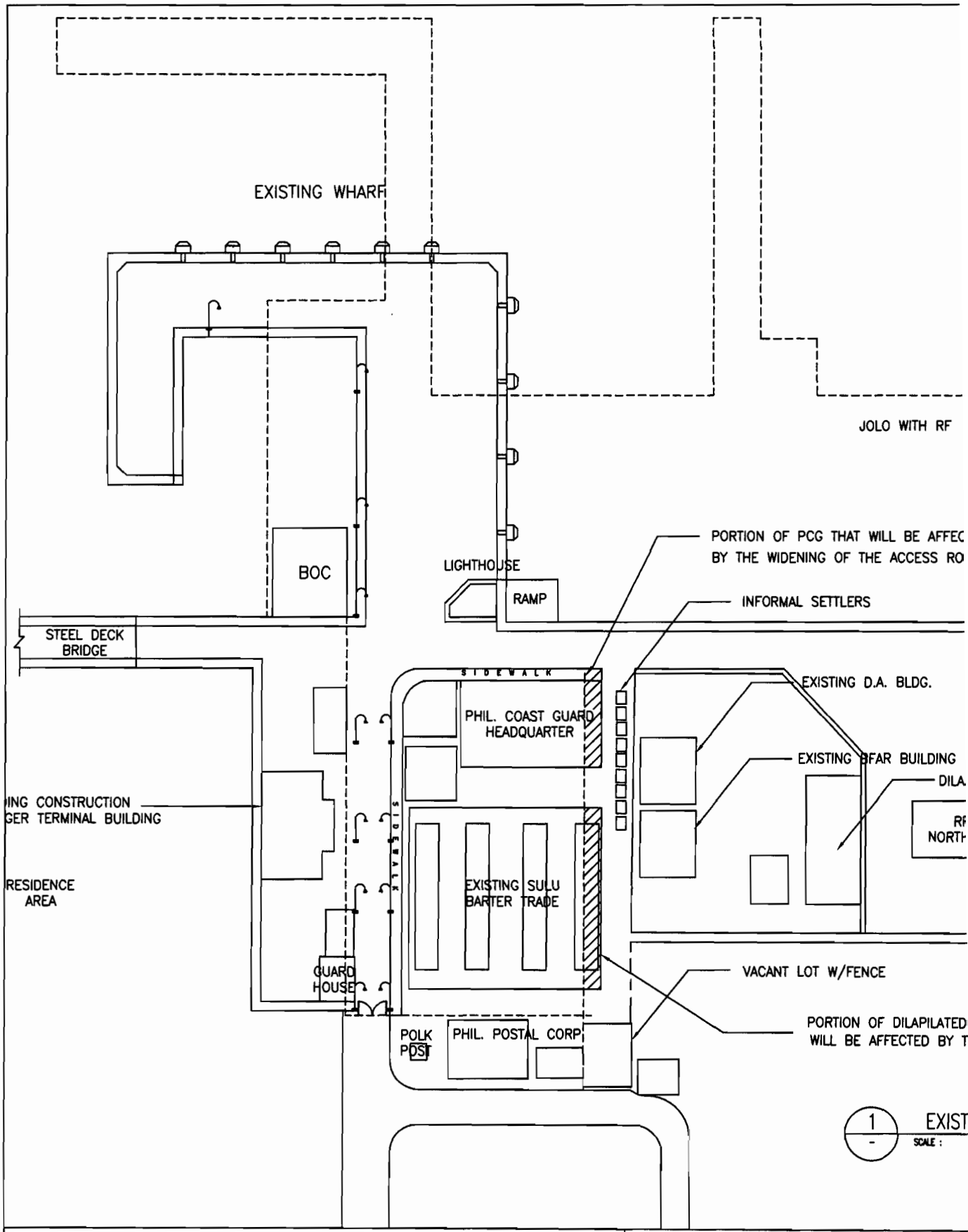
4.5.7 The proposed development works for Jolo port are shown in **Table 4.5.2-1**.

Table 4.5.2-1: Proposed Development Works for Jolo Port

Item No.	Scope of Work	Description	Remarks
A. Port Facilities			
PF1	Construction of Banca Landing Quay	30m x 70m	Will serve wooden hulled vessels with outriggers plying to nearby islands.
PF2	Demolition of Existing Deteriorated Wharf	Lump Sum	Removal of deteriorated portion of existing wharf
PF3	Construction of Motor Launch Berth with Ancillary Facilities	150m x 10m	Will serve bigger wooden hauled vessels w/o outriggers/motor launches plying to nearby islands and Sandakan, Malaysia
PF4	Reclamation	50m x 181m	Expansion of existing wharf
PF5	Construction of Fast Craft Berth with Ancillary Facility	80 m x 10m	Will serve fast craft vessels to any destination
PF6	Construction of RoRo Ramps	2 units	Will serve RoRo vessel plying the route Zamboanga-Jolo, etc.
PF7	Installation of Light Beacon and Rehabilitation of existing 19th century light house as landmark	1 unit	Installation of light bacon at the end of new pier is needed to guide incoming vessels.
PF8	Construction of Conventional Cargo/Pax Berth with Ancillary Facilities	80m x 10m	Will serve conventional vessels
B.Buildings			
B1	Conversion of existing BOC bldg to passenger terminal bldg for banca landing and relocation of BOC bldg to existing Passenger Terminal Bldg..	18m x 12m	Affected by the construction of the banca landing facilities to serve inhabitants from nearby islands. This would also provide a commercial space for vendors.
B2	Covered Walkway/Shed	208 lin. Meters	To protect passengers from exposure to sunlight and rain
B3	Passenger Terminal Bldg.	40m x 15m	For passenger waiting area, wash room, prayer room, canteen and vendors area.
B4	Cargo Transit Shed	50m x 30m	Serve as collection, distribution, cargo sorting, marshalling and primary storage to enable the vessels to leave the port quickly.
B5	Powerhouse	3m x 3m	For standby generator set to assure an uninterrupted power supply in the port
B6	Building for Port Related Offices	30m x 8m	Designated for port related govt offices
B7	Covered Vehicular Terminal Area	75m x 5m	Designated area for Public Utility Vehicles serving incoming/outgoing passengers
B8	Passenger Shed and Vendors Area	75m x 4m	Designated area for vendors and incoming/outgoing passengers
B9	Ticketing Booth	38m x 3m	Designated areas for shipping companies
B10	Public Comfort Room	3m x 2m	For passengers/cargo truck drivers
B11	Relocation/Construction of Mosque at the Main Entrance near Vehicle Terminal Area	10m x 10m	Affected by the expansion of the port.
B12	Conversion of Passenger Terminal Bldg. to BOC and other displaced offices (DA and BFAR)	24m x 13m	Affected by the construction of the banca landing facilities, vehicular parking area and ticketing booths.
B13	Guard House	2.25m x 2.25m	For security
B14	Proposed Relocation/Construction of 8 Houses Affected	8 Houses	Houses to be relocated/constructed: affected by the port expansion

Table 4.5.2-1: Proposed Development Works for Jolo Port (Continuation)

Item No.	Scope of Work	Description	Remarks
C. Pavement and Perimeter Fence			
PP1	Staging/Marshalling Area/Open Area	9,200 sq. m.	For motor launch, fastcraft, RoRo and conventional berths
PP2	Perimeter Fence	550 lin. meters	For security
PP3	Vehicle Parking Area	720 m2	Designated areas for private vehicles and trucks
PP4	Landscaping	Lump sum	For center island beautification
PP5	Sidewalk	1.25m x 180m	For the safety of the pedestrian users
PP6	Access Road	90m x 7.5m	Improvement of traffic flow in/out of the port.
PP7	Gate Structure	10 lin. meters	For security
D. Utilities			
U1	Lighting System (i.e., High Mast, Lighting Pole)	1 Lump Sum	For security and night operation
U2	Water Supply System	1 Lump Sum	Needed by inhabitants/port users from nearby islands
U3	Fire Fighting System	1 Lump Sum	For emergency purpose in case of fire
U4	Public Announcement System	1 Lump Sum	For passengers information regarding their trips
U5	Standby Generator	1 Lump Sum.	Back-up for an uninterrupted power supply inside the port
U6	Drainage System	1 Lump Sum	For environmental sanitation
U7	Environmental Facilities	1 Lump Sum	Development of communal septic system link to toilet facilities, installation of garbage collection facilities



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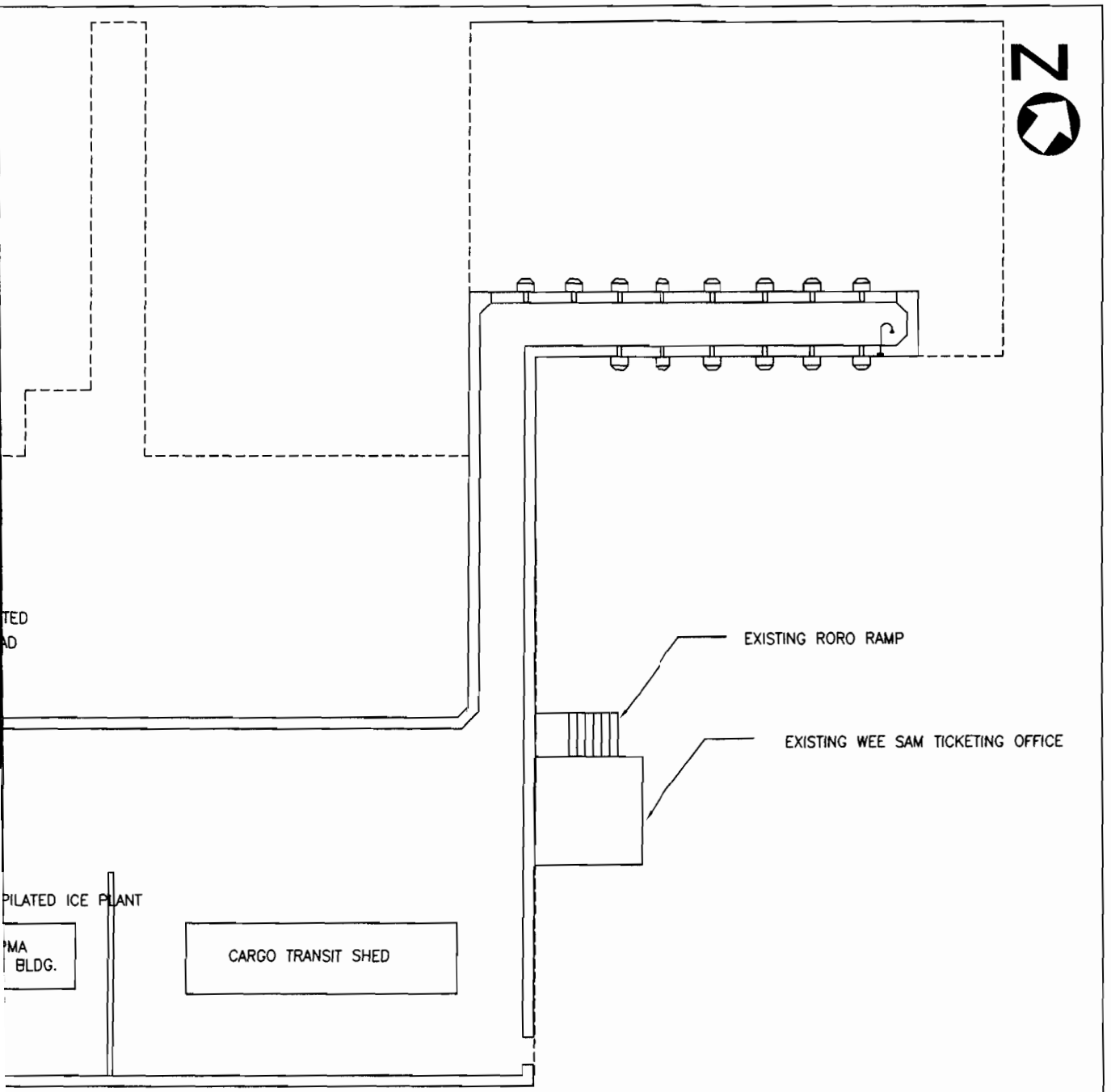

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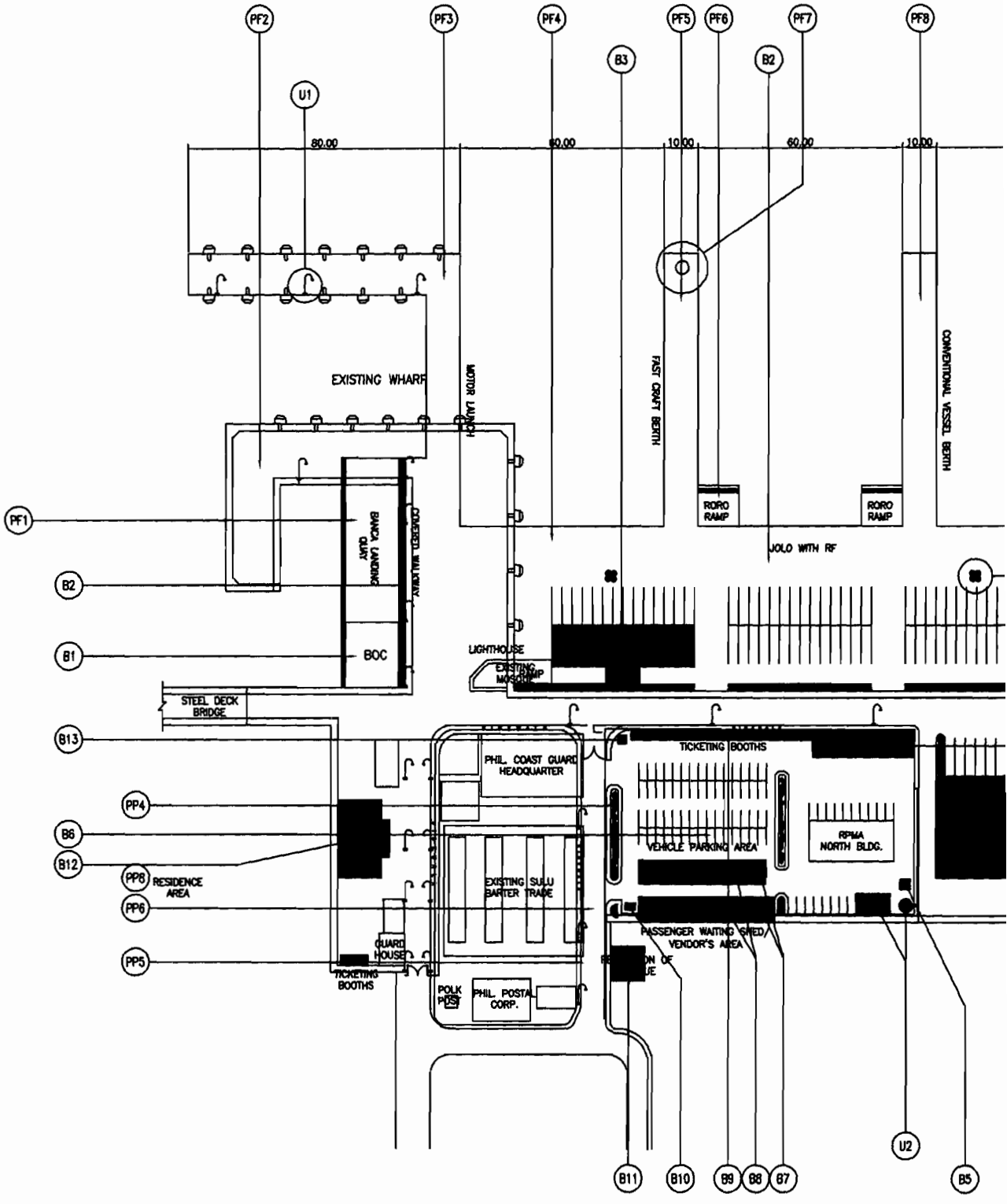

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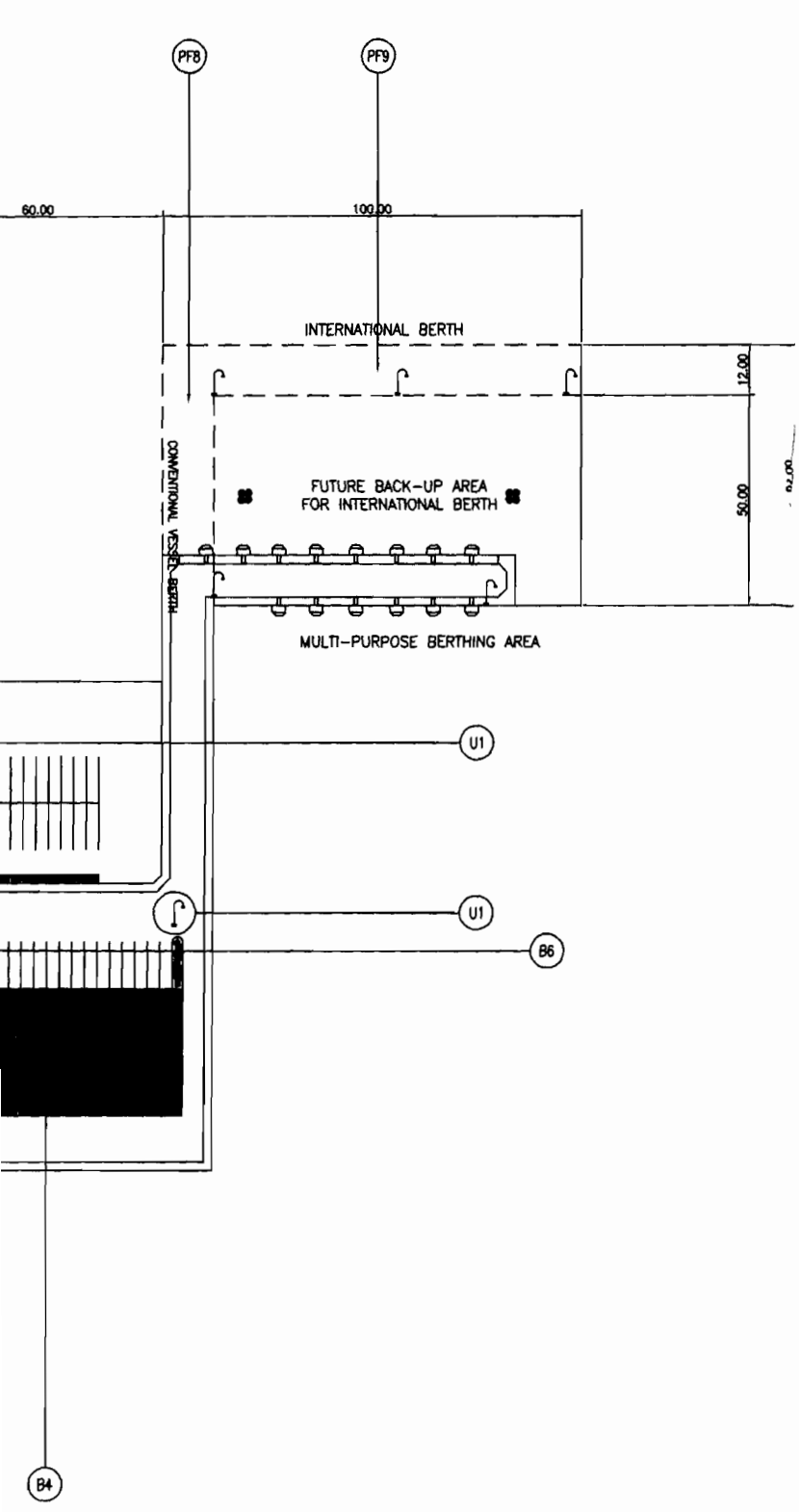

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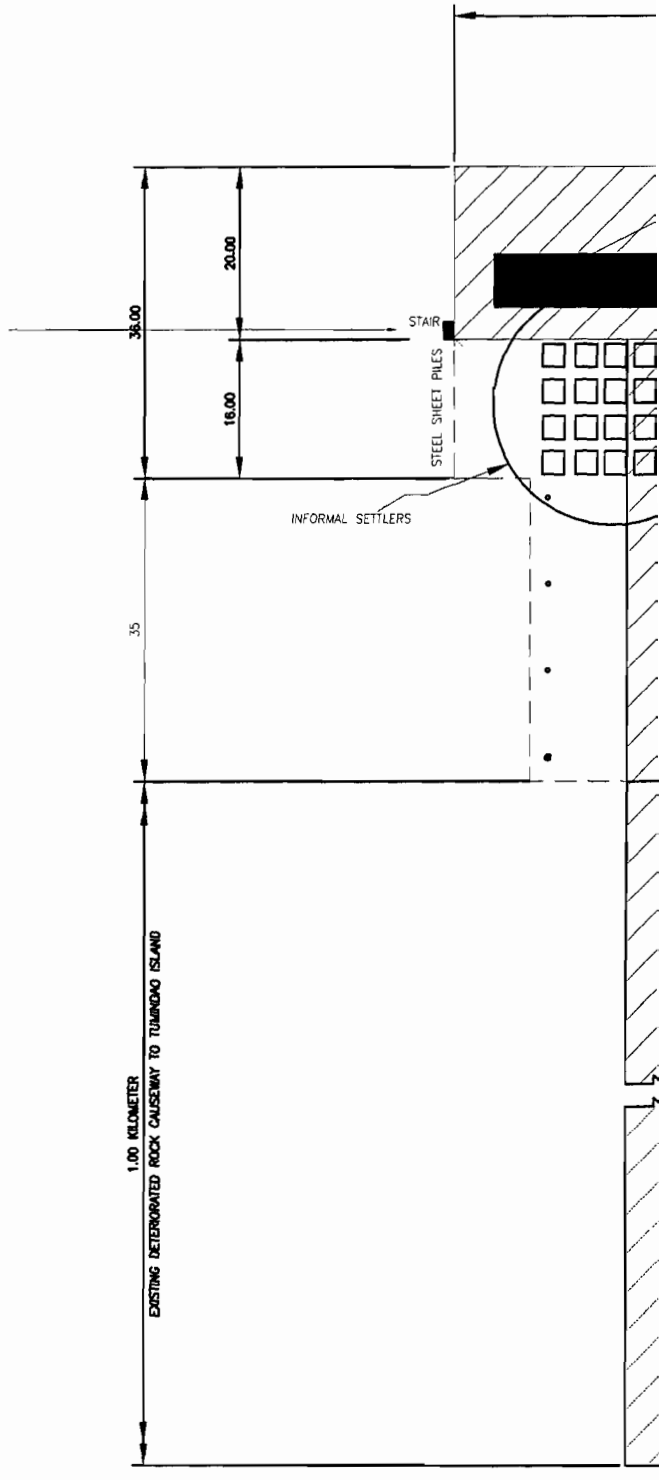
4.5.3 Sitangkai Port

4.5.8 The proposed development works for Sitangkai port are shown in the following table.

Table 4.5.3-1: Proposed Development Works for Sitangkai Port

Item No.	Scope of Work	Description	Remarks
A.	**Port Facilities**		
PF1	Proposed Expansion of Wharf	16m x 30m	Expansion of existing wharf
PF2	Rehabilitation of Fendering System and Mooring Bollards	Lump sum	Replacement of dilapidated fenders and mooring bollards.
PF3	Rehabilitation of Concrete slabs	20m x 30m	Repair of dilapidated surface, fendering system and mooring bollards
PF4	Reclamation	40m x 35m	Will improve mobility/flow of traffic
PF5	Continuous Stair Landing	2 units 35 lin. Meters	Will serve small wooden hulled (tempel) motor vessels plying to nearby Sitangkai island and Sandakan, Malaysia.
B.	**Buildings**		
B1	Cargo Warehouse	16m x 19m	Serve as collection, distribution, cargo sorting, marshalling and primary storage to enable the vessels to leave the port quickly.
B2	Passenger Terminal Bldg, Vendors Area and Ticketing Booth, Canteen, Prayer Area and Wash Room/Comfort Room	2 storey (16m x 8m)	Designated area for vendors and incoming/outgoing passengers
B3	Buildings for Govt Offices	2 storey (14m x 8m)	For MARINA, PCG, Bureau of Quarantine (Plants and Animals), Marine Detachment, BOC and other port related govt offices
B4	Powerhouse	3m x 3m	For standby generator set to assure an uninterrupted power supply in the port
B5	Transfer 26 wooden stilt houses to an adjacent area near the port and construction of access foot bridge	26 Houses	Houses to be transferred: affected by the port expansion
C.	**Pavement and Perimeter Fence**		
PP1	Pavement	968 m2	Pavement at reclamation area
D.	**Utilities**		
U1	Lighting System	1 unit	For security and night operation
U2	Fire Fighting System	1 unit	For emergency purpose in case of fire
U3	Public Announcement System	1 unit	For passengers information regarding their trips
U4	Water Supply System	1 unit	Expansion of concrete water tank
U5	Solar Power with Back-up Standby Generator	1 units	Back-up for an interrupted power supply inside the port



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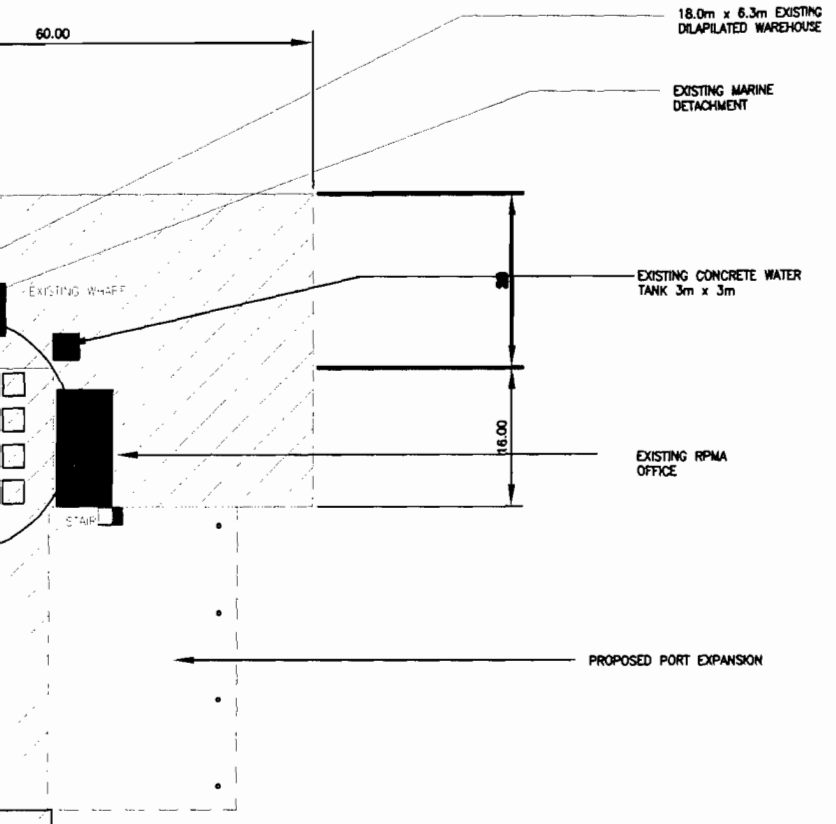

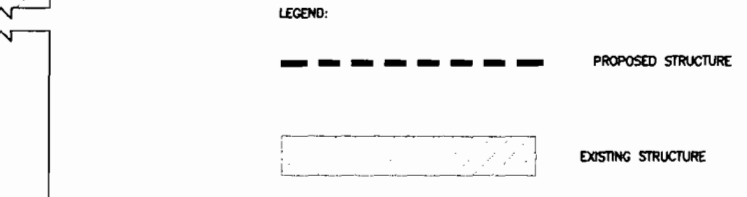

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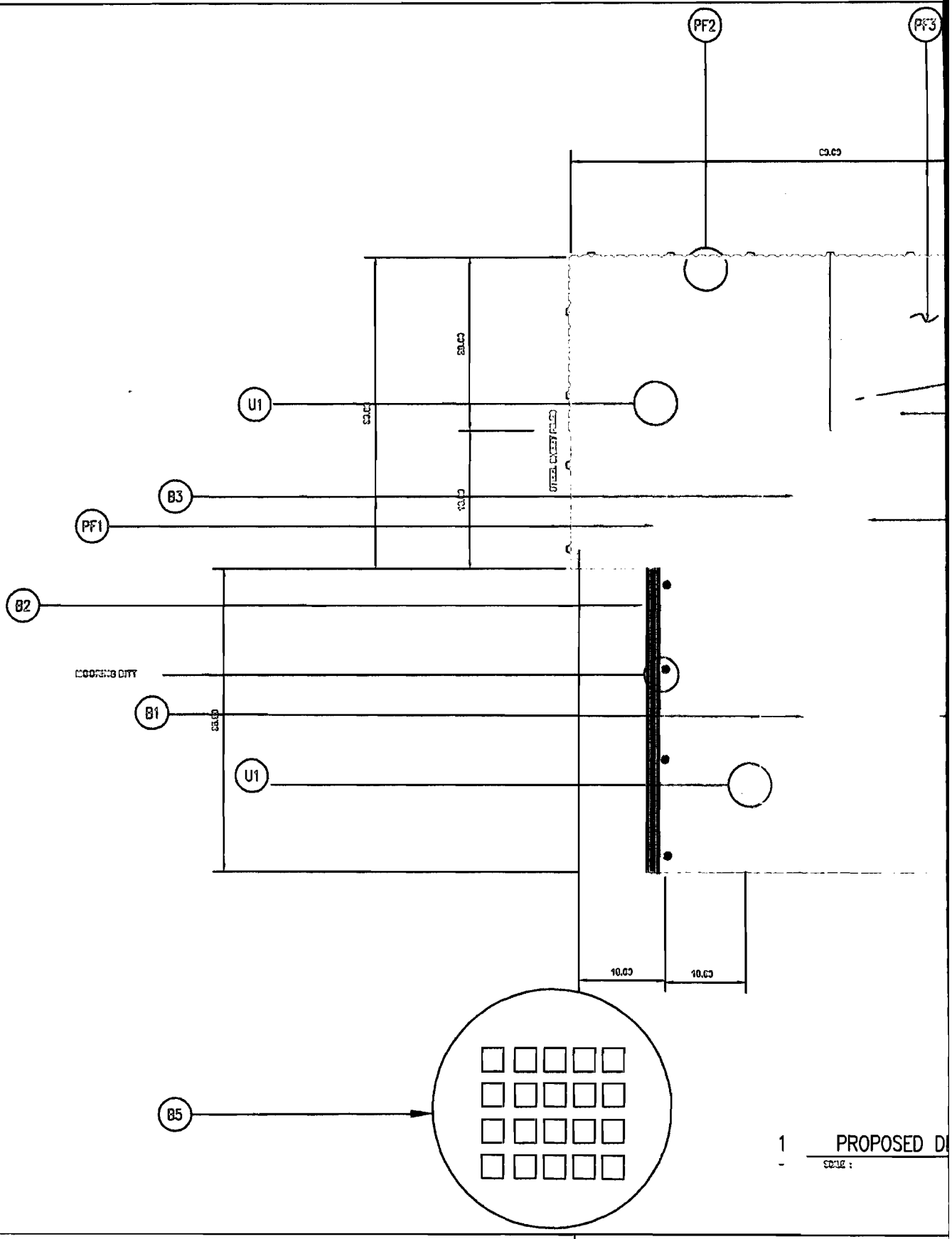

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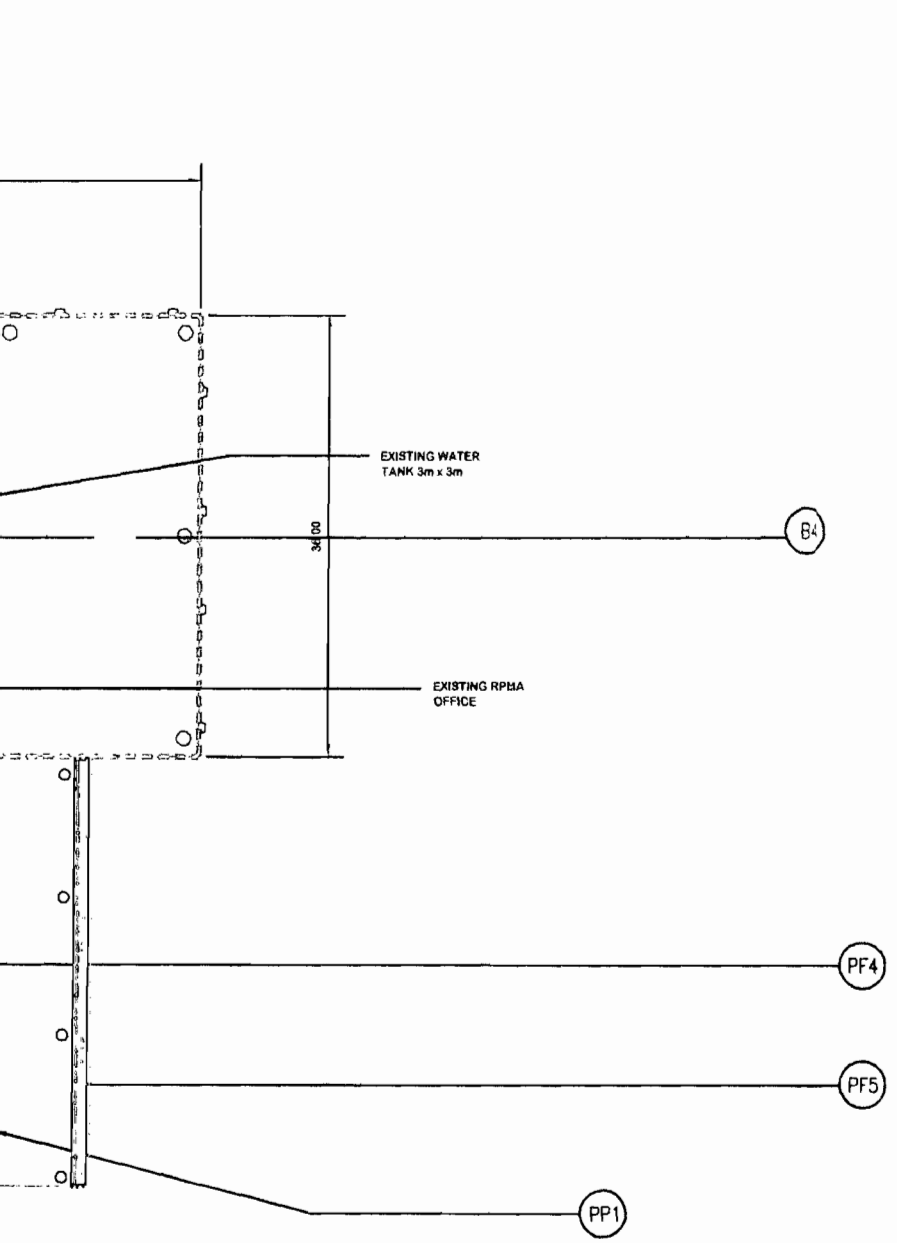

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4.6 Project Investment Cost

4.6.1 The project investment costs for the feeder port subprojects are summarized in **Table 4.6-1**.

Table 4.6-1: Feeder Port Subproject Costs (in thousand Pesos)

Item		Bongao	Jolo	Sitangkai
I	Base Costs (Civil Works and Equipment)	309589.6	495766.7	126934.8
II	Consulting Services	50,863	72,662	21,768
III	Resettlement and Land Acquisition	2,591	1,929	3,239
IV	Cost of Administration of the Project by Government	9,670	15486.8	3,964
V	Contingencies (15%)	55,907	87876.55	23,386
Total Financial Cost		428,621	673720.2	179,292

4.6.2 The overall Proposed ITDP Project Financing Plan, and Project Implementation and Cash Disbursement Schedules can be found in Chapter 7.

4.7 Financial Analysis

4.7.1 The revenue sources considered in the analyses include dockage, wharfage, arrastre and stevedoring (at 10%), passenger terminal fees, and concessions. These revenues were sufficient to cover assumed incremental operation and maintenance cost, but not the total cost including construction and implementation costs. There is some uncertainty on the revenue estimates due to lack of reliable data on the breakdown of cargo and this in turn affects the estimate of the level of fee collections.

4.7.2 Using a WACC of 7.4% (p.a.), the ports all had negative Financial Net Present Values and negative Financial Internal Rates of Return and are not financially viable with the present tariff levels (see **Table 4.7-1**). They require increases in the fees to be charged for the use of port facilities. However, the calculated amount by which the rates must increase are relatively high and may not be easily implemented in the immediate term.

Table 4.7-1: Comparison of Financial Viability Indicators for the Feeder Ports Projects

Port	FNPV(7.4%) [thousand pesos]	Times incremental revenue must increase to achieve breakeven based on current fee levels
Bongao	(370,155)	3.85
Jolo	(711,655)	9.95
Sitangkai	(172,793)	5.58

4.8 Economic Analysis

4.8.1 Using a 15% interest rate, the sensitivity of the ENPV to the estimates of benefits and costs were tested.

4.8.2 The benefits that were quantified include:

- passenger travel time
- passenger travel expense savings
- vessel operating cost savings related to waiting and service time improvements
- cargo transport cost savings
- cargo spoilage reduction

4.8.3 The comparison of ENPV and EIRR values are shown in **Tables 4.8-1** and **4.8-2**.

Table 4.8-1: Comparison of ENPV (15%) for the Feeder Ports Projects

Sensitivity Tests	Bongao	Jolo	Sitangkai
Base	644,207	253,094	273,009
+20% Cost	574,890	88,749	231,161
-20% Benefits	441,850	38,130	176,559
+20% Cost - 20% Benefits	351,541	(126,214)	134,711

Table 4.8-2: Comparison of EIRR for the Feeder Ports Projects

Sensitivity Tests	Bongao	Jolo	Sitangkai
Base	30.7%	19.9%	32.0%
+20% Cost	26.7%	16.3%	27.5%
-20% Benefits	25.8%	15.7%	26.6%
+20% Cost - 20% Benefits	22.3%	13.1%	22.6%

4.9 Environmental and Social Safeguards Summary

4.9.1 The Project Team prepared IEEs for all the feeder port subprojects, a Short Resettlement Action Plan for Bongao, and LARP Terms of Reference for Jolo and Sitangkai Feeder Ports.

4.9.2 All relevant social and environmental documentation for these subprojects can be found in the Social and Environmental Safeguards Volume (Volume V).

4.9.3 The key environmental and social/ resettlement issues are summarized in the **Table 4.9-1** and **Table 4.9-2.**

Table 4.9-1: Summary of Key Environmental Issues

Subproject	ECA	ECP	DENR Env Cat	Documentation	Main Env. Issues and Mitigation Identified	EMP Cost (PhP, 000)	Environmental Management Capacity
Bongao	No	No	B	PPTA prepared IEE and LARP	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP. EMP incl. septic tanks for h'holds adjacent to port area and consideration of sunlight and ventilation access for houses affected by port perimeter wall.	790	Environmental Unit for RPMA-ARMM also recommended. Port Managers to appoint SEMS of two people for Jolo and Bongao and one person for Sitangkai for duration of the project
Jolo	No	No	B	PPTA prepared IEE and LARP TOR	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP. Additional measures incl. new mosque to be constructed and plaque to be provided for historic lighthouse building (does not require relocation and is not structurally affected).	490	
Sitangkai	No	No	B	PPTA prepared IEE and LARP TOR	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP.	490	

Notes: ECA – environmentally critical area; ECP – environmentally critical project; TADP – Third Airport Development Project; EIS – Environmental Impact Statement; IEE – initial environmental examination; LARP – land acquisition and resettlement plan; SIEE – summary initial environmental examination; PSC – project supervision consultant; DENR – Department of Environment and Natural Resources; ECC – environmental clearance certificate; SEMS – safety and environment management staff

Table 4.9-2: Summary of Key Social / Resettlement Issues

Subproject	Documentation	Main Issues and Status	Actions Required
Jolo	LARP TOR prepared	A Short LARP will need to be prepared under the project to assess and address potential impacts which are expected to include 8 households of informal settlers, acquisition of approximately 300 m2 of land and 152 m2 of structures in the port access road and barter trade area. Implementation of the Short LARP will be required during the loan period once it is approved by the DOTC, Municipality of Bongao and ADB. Estimated cost of LARP study and implementation is PhP 2.06 million and may require some 3 – 9 months to complete the LARP, land acquisition and resettlement activities. Following implementation, external LARP monitoring will be required, with a copy furnished to the ADB.	Preparation of LARP during project implementation depending on the detailed design; and, Implementation of LARP after approval (DOTC, LGU of Bongao and ADB).
Bongao	Short LARP prepared	Based on the Short LARP, the subproject will affect 14 structures / households as well as 2 additional lots and Coast Guard wall and rest house. A total of 276 m2 of land will need to be acquired, and 491 m2 of structures and 68 m of fencing / walls will be affected. Estimated cost of resettling informal settlers to nearby areas, including replacement costs for existing structures and fixed assets, compensation for lost income, disturbance allowance and external monitoring, is PhP 2.59 million. It may require some 3 – 9 months to complete land acquisition and resettlement activities once the Short LARP is approved by the DOTC, Municipality of Bongao and ADB. Following implementation, external LARP monitoring will be required, with a copy furnished to the ADB.	Implementation of the Short LARP once it is approved by the DOTC, LGU of Bongao and ADB
Sitangkai	LARP TOR prepared	LARP TOR and socio-economic survey prepared by Project Team. Preparation of a Short LARP will be required during project implementation to address the 26 households of informal settlers located behind the port along the dilapidated causeway. Based on discussions with the APs and LGU, these households and small businesses, involving 26 wooden structures built on stilts, are expected to be relocated along other sections of the causeway area. Implementation of the Short LARP will be required during the loan period once it is approved by the DOTC, Municipality of Bongao and ADB. Estimated cost of LARP implementation is PhP 3.23 million and may require some 3 - 9 months to complete the LARP, land acquisition and resettlement activities. Following implementation, external monitoring will be required, with a copy furnished to the ADB.	Preparation of LARP during project implementation depending on the detailed design; and, Implementation of LARP after approval (DOTC, LGU of Sitangkai and ADB).

Notes: LARP - Land Acquisition and Resettlement Plan; TADP – Third Airport Development Project; AFP - Armed Forces of the Philippines

4.10 Summary of Poverty Alleviation Interventions

4.10.1 Consistent with ADB policy and the Governments focus on poverty reduction, the Project Team has given particular emphasis to identify on-site and off-site poverty alleviation interventions that will directly benefit the poor.

4.10.2 The identified on-site and off-site poverty alleviation initiatives for the feeder port subprojects are summarized in the following tables.

Table 4.10-1: On-Site Poverty Alleviation Initiatives Included in Subproject Feasibility Studies

Bongao	Jolo	Sitangkai
• Motor Launch Quay (PhP 120.5 million) • Open Pile Pier connection to Chinese port (PhP 37.8 million) • Cargo Warehouse for Motor Launch Berth (PhP 4.1 million) • Passenger Terminal Building at motor launch quay with Vendors Area, Ticketing Booth, Canteen, Prayer, Room, Wash Area, and Public toilet (PhP 8.3 million) • Water Supply System (PhP 4 million) • Lighting System for improved security (PhP 9.4 million)	• Banca Landing Quay (PhP 31.5 million) • Motor Launch Berth with ancillary facilities for wooden hull vessels (PhP 52.5 million) • Covered walkway (PhP 0.8 million) • Water Supply System (PhP 2 million) • Lighting System for improved security (PhP 4.4 million) • Passenger shed and vendor area (PhP 6.9 million) • Public toilet (PhP 0.3 million)	• Continuous Stair Landing for Bancas (PhP 0.5 million) • Cargo Warehouse (PhP 4.2 million) • Passenger Terminal Building with Vendors Area, Ticketing Booth, Canteen, Prayer Room, Wash Area, and Public Toilets. (PhP 7.1 million) • Water Supply System (PhP 0.7 million) • Lighting System for improved security with solar backup (PhP 3 million)
Total Construction Cost = PhP 184.1 million ($3.5 million)	Total Construction Cost = PhP 98.4 million ($1.9 million)	Total Construction Cost = PhP 17.5 million ($ 0.33 million)

Table 4.10-2: Off-Site Poverty Alleviation Initiatives Proposed for Preparation and Funding under the Japan Fund for Poverty Reduction (JFPR)

Bongao	Jolo	Sitangkai
• Construction of Public Market adjacent to Chinese Pier ($900,000) • Improvement of adjacent Chinese Port to organize Vendor activity and improve management and traffic flow ($200,000)	• Physical improvement of Barter trade area adjacent to port including management of traffic and parking around Barter Trade area ($700,000)	• Provision of Walkways (on posts), water catchment, toilets and amenities for relocated community on causeway and common use toilets and water / showers for port users ($200,000)
• Total cost of $ 1.1 million including planning, design and construction, and capability building.	• Total cost of $700,000 including planning, design and construction, and capability building.	• Total cost of $200,000 including planning, design and construction, and capability building.

4.10.3 **Small Port Development Subpackage.** A potential "Small Port Development Sub-Package", consisting of about 30 of small boat landings to be built around Liguasan Marsh, Lake Lanao and the Sulu Archipelago, was identified in Phase 1 of the ITDP as a possible poverty alleviation intervention to be funded by the Japan Fund for Poverty Reduction (JFPR). To better tie the poverty alleviation interventions to ITDP investments in conformity with the intent of the JFPR, to facilitate coordination and monitoring and since other donors are funding small community based infrastructure in Central and Western Mindanao, upon the instruction of the ADB, the Project Team focused on identifying off-site poverty alleviation interventions around ITDP Feeder Port Subprojects.

4.10.4 The main objective of the previously proposed sub-package was to improve access to low-income, remote areas that are historically conflict-affected. The idea of a small ports development sub-package was raised in both ITDP TWC and Steering Committee meetings and during the September 2005 stakeholder consultations.

4.10.5 Specific technical requirements of the sub-package were:

- stair landings or piers,
- covered waiting areas,
- trading area on concrete slabs,
- utilities,
- short access road improvements, and/or
- drainage improvements.

4.10.6 Specific subproject selection, study, design, and implementation will take place under the grant. A detailed description of the original sub-package can be found at the end of Appendix P of the Second Interim Report.

4.10.7 The estimated cost of the sub-package was estimated at US$ 2 million including site selection, studies, designs, construction supervision and construction. The estimated cost of construction (only) of the subprojects within the sub-package was US$ 30,000 to US$ 40,000. Based on these estimates, about 30 small boat landings could be constructed for US$ 2 million when other likely project costs were considered.

4.10.8 It is recommended that other donors be approached to fund this activity.

4.11 Conclusions and Recommendations

4.11.1 The following are the major conclusions and recommendations of the feeder port studies:

- The proposed ITDP improvements for the Bongao, Jolo and Sitangkai feeder port are economically feasible and will provide improved capacity and efficiency of cargo and passenger movement through these ports.
- The proposed ITDP improvements are not financially viable. As pointed out in the analysis, this is most likely due to the existing tariff structures. It is further noted that these revenues were sufficient to cover assumed incremental operation and maintenance cost, but not the total cost including construction and implementation costs.
- The environmental and social impacts of the projects are assessed to be minimal and manageable.
- The JFPR should be approached to provide grant funding for its feeder port off-site poverty alleviation intervention identified.

CHAPTER 5

Environmental, Social and Poverty Issues

Chapter 5 ENVIRONMENTAL, SOCIAL AND POVERTY ISSUES

5.1 Environmental Assessment

5.1.1 The environmental assessment of the project has been prepared in accordance with Government and ADB requirements and includes a due diligence review of the Environmental Impacts Statements (EIS) prepared for the three airport subprojects under the Third Airports Development Project (TADP) and the five Initial Environmental Examinations (IEEs) prepared for the two hub port and three feeder port subprojects as part of the PPTA reporting. A separate stand alone Summary Initial Environmental Examinations (SIEEs) has also been prepared (Volume VI) which provides a fuller summary of the eight documents.

5.1.1 Recommended Environmental Categorization of Project

5.1.2 For both DENR and ADB systems of environmental assessment, the environmental category is determined according to the likelihood and magnitude of risk associated with a project (and subprojects) either being located in an Environmentally Critical Area (ECA), and/or posing potentially significant adverse environmental impacts when implemented without mitigation.

5.1.3 The overall risks associated with ITDP are considered low because the project does not include any new development, rather it is focused on improving and rehabilitating existing facilities. Activities envisaged by the ITDP for airport improvements include extension of airport runways, widening of aprons, construction of a new passenger terminal in Cotabato and Puerto Princesa (on the existing airport site) and refurbishment of the passenger terminal in Butuan, improvement of existing access roads or rights of way to the airports, and provision of safety facilities. The port subprojects include widening and/or rehabilitation of piers, construction of ramps and cargo handling areas, construction of transit sheds and warehouses, provision of safety facilities, reclamation, improving or building passenger terminals in existing ports or ferry terminals, small port developments, widening or extension of existing access roads to existing port facilities.

5.1.4 The assessment process determined that all the short-listed subprojects fall under Category B for both DENR and ADB classifications. These subprojects are not located in ECAs but are anticipated to create a range of potentially adverse environmental impacts when implemented without mitigation. Therefore, the recommendation is that the ITDP can have an overall environmental categorization of Category B.

5.1.2 Environmental Assessment of Airport Subprojects

- ***Due Diligence Review of EIS Reports***

5.1.5 An EIS report was prepared for each airport subproject under TADP loan funding, the EIS reports were prepared in accordance with the relevant laws and guidelines and submitted to DENR. After review of the assessment process and output undertaken during TADP, it is concluded that the process is representative of that required by ADB's *Environment Policy* (2002) and Operational Manual (OM) Section F1/BP (October 2003), and the EIS documents as

they stand fully comply with ADB's EA requirements and as such can be considered as the EA documents required for the Category B airport subprojects.

5.1.6 There are three modifications to the TADP's design proposed under ITDP; for the Puerto Princesa Airport subproject the changes include an expansion of the terminal from 9,334 m^2 to 9,816 m^2, and enlarging the aircraft parking apron by up to 20 per cent, and for the Butuan Airport, an expansion of the passenger terminal from 868 m^2 to 1,332 m^2.

5.1.7 These are minor changes and have no substantive effect on the original assessment as presented in the EIS reports. There are no changes proposed to the Cotabato Airport subproject.

- ***Environmental Impacts***

5.1.8 The EIS reports conclude that the majority of adverse impacts on the physical, biological and social environment will be incurred during the construction phase. The construction phase effects are considered to be of low to medium adverse impact and are able to be mitigated.

5.1.9 In the EIS reports, land acquisition was considered to cause the most significant effect on the community. Land is being cleared prior to construction phase and this impact has already largely been incurred. A due diligence review of resettlement status of the Land Acquisition and Resettlement Plans (LARPs) has also been prepared as part of the TADP. The results of the review are that while the process of expropriation is ongoing in the case of two airports, all resettlement activities have been, and will continue to be, undertaken in compliance with the LARPs. Outstanding issues of land acquisition associated with the airport access road at Puerto Princesa, various structures and informal settler households in Butuan and Cotabato, which were not identified in the existing LARPs have been addressed in the assessment of resettlement effects (see Section 5.2).

5.1.10 The EIS reports also concluded that there are a number of impacts that will be caused as a result of subproject operation, the main effects including air quality, noise, water quality, and impacts on the community, all of which are already being experienced because the airports are already in operation. The effects of an improved operation, as proposed under the project, were predicted for the 2010 and Master Plan years for air traffic and passenger volumes and were compared with a base case for year 2000.

5.1.11 **Air Quality**. A Gaussian plume model was used to determine the effects on air quality as a result of the proposed improvements. The results showed that for all emissions tested – CO, HC, NO_x, SO_x and TSP/PM - concentrations fell well within the prescribed DENR standards for future development scenarios. For each airport subproject, the operational impact on air quality was therefore considered to be negligible.

5.1.12 **Water Quality**. The impact on water quality as a result of the proposed changes in layout and arrangements will be negligible at each of the sites. Each EIS recommended measures for treatment including; new apron being equipped with a system for collecting and separating oil or fuel spilled on the runway prior to discharge; rehabilitation of existing septic tanks; and eventual connection to a central sewerage system.

5.1.13 **Noise**. Houses and other noise sensitive uses (such as schools and hospitals) are generally considered incompatible with noise levels of greater than 65 dB. In all subproject areas, there is an existing effect on such uses already within the 65 dB L_{DN}, and this impact will continue with or without the project. However, the main effect of the project is to expand the area included in the noise impact zones at a faster rate than without the project. Relocating all existing noise sensitive uses is both impracticable (costly) and unreasonable in view of people choosing to live in proximity to the airport after it has operating for some time. Therefore noise during airport operations must be addressed through a combination of planning restrictions and guidelines that would prevent any further construction of houses and other noise sensitive uses within the 65 dB L_{DN}.

5.1.14 **Project Benefits**. A number of positive impacts or benefits will also be created by the project. These include; improvements to the aesthetic quality of the airport environments, job creation during the construction phase as well as provision of various livelihood opportunities during operation, encouragement of business and investment in the wider area, and benefits to the local economy through increases in trade.

- ***Conclusions and Findings***

5.1.15 Mitigation measures are identified for the adverse impacts, some of which depend on the cooperation of other agencies, such as municipal authorities in the case of noise and land use planning, and traffic management. The conclusion of the due diligence review is that (i) neither the subproject descriptions nor scopes of work have changed substantively as only three minor design modifications are proposed under ITDP, (ii) the process adopted to prepare the three EIS reports complies with the requirements of ADB's policy on environmental assessment, (iii) as noted in (i), the design changes made since the original subproject EIS reports were prepared and the existing ECCs were issued, are minor, therefore the airport subprojects do not require any additional environmental assessment for clearance by DENR, and (iv) DOTC will need to inform the Regional DENR Offices of the minor design modifications proposed and request amendment to the ECCs.

5.1.16 The mitigation costs included in the EIS reports have been updated to include an inflation adjustment. The cost of implementing the Environmental Management Plans (EMPs) for the three airport subprojects is PhP 2.8 million (US$54,462).

5.1.3 Environmental Assessment of Hub and Feeder Port Subprojects

5.1.17 The hub and feeder port subproject components, and their effects, are sufficiently similar - in that they include wharf extensions, small-scale reclamations, and in some cases provision of Ro-Ro ramps, as well as various land-side improvements - that the impacts of the two hub ports and three feeder ports can be discussed together.

- ***Construction Phase Impacts***

5.1.18 **Hydrology and Water Quality**. There will be no alteration of bathymetry related to the further development of the ports. Construction of the wharf extensions will be designed to conform to the natural bathymetry of the bayshore areas and the designs will minimize alteration of the seabed and avoid changes in local hydrologic features. Construction works will employ appropriate sediment and silt control measures to reduce impacts on water quality.

5.1.19 **Air Quality and Noise**. In terms of air quality, rise in ambient levels of particulates and noxious gases in the atmosphere is anticipated to be both a temporary effect and of low magnitude provided that construction equipment, vehicles, and boats are properly operated and maintained. Noise generated by dredging and piling machines and equipment, barges and tugboats will be reduced by wind dissipation and by restricting night-time operations.

5.1.20 **Biological Environment and Fishery Resources**. Biological impacts during construction will be temporary and confined to the reclamation areas. Effects include turbidity which reduces light penetration and can inhibit plant photosynthesis and sediment deposition which can displace plants and animals. Aquatic life has natural mechanisms and responses to stress, and as there are no threatened, rare or endangered species of plant or animal in the subproject areas, the effect is considered to be low and the environment will recover from any alterations caused by the reclamation and wharf expansions.

5.1.21 There will be no interference with fish migration. The wharf extensions will be constructed according to designs that have considered the need for unobstructed flow of tide and current, and for uninterrupted passage of fish and other pelagic species. No commercial fishing or fish/prawn culture exist in the affected area of any of the port subprojects. There will be no impact on fish migration or coastal fisheries.

5.1.22 **Generation of Waste**. Waste (solid waste, garbage, construction debris and wastewater/ sewage) generated during construction could cause problems if not managed. Health and environmental pollution problems will be avoided through the implementation of a waste management plan (included in the EMP) and rehabilitation and upgrading of existing sewage/ wastewater treatment facilities.

5.1.23 At Bongao port there is an existing issue related to odors and health risks associated with the untreated sewage and effluent disposal from a small group of informal households living adjacent to the port area. To address this issue and as an enhancement measure, the project includes provision for ten septic tanks.

5.1.24 **Social Issues and Impacts**. Lack of, or inadequate provisions for, protective clothing and safety equipment for workers, sanitation facilities, and access to health and medical services can increase the risk of accidents and injuries during the construction phase. Health and safety issues can be avoided by a requirement for construction workers to use protective clothing and implementation of a health and safety program.

5.1.25 The main adverse social impact will be the relocation of informal households or sari-sari store operators and vendors that have set up adjacent to the ports, as a result of access road widening or wharf/pier expansion. There will be no land acquisition effects at either of the two hub port sites as a result of the proposals, the majority of subproject components are located seaward within the existing port. In General Santos some 200 small boat owners will need to relocate their boat anchorage as a result of the wharf extension. While this is a negative effect, the arrangement has been an informal one with Philippine Ports Authority (PPA) permitting the fishing boat owners to anchor within the port area on the basis that they would relocate their boats when port development plans are implemented. Consultations have been undertaken with fishers as well as the Fishing Association all of whom acknowledge the need to relocate beyond the designated port area and clear zone.

5.1.26 At Bongao Port some three households and the Coast Guard office will lose some land, a section of fence and a rest house, and 14 households will have structures affected, as a result of expansion of the port back-up area, construction of the seawall and widening of the access road. A LARP has been prepared for this subproject. Another issue for a few of these households is the relative proximity of their houses to the proposed port perimeter wall (for the back-up area). To ensure that the houses still receive adequate ventilation and sunlight, the wall will need to incorporate the following type of design features; either (i) a notched wall and provision of grates or bars on windows of the houses; or, (ii) grates in the wall aligned with the windows of the houses.

5.1.27 The scoping of resettlement issues at the other two feeder ports, suggest that at Jolo Port eight informal houses (between the RPMA Office and barter area) as well as partial removal of some structures associated with the barter trade area and acquisition of a vacant lot is required, and at Sitangkai Port 26 stilt houses (inhabited by port workers and vendors) will need to be relocated from the old causeway area. LARPs will be prepared for Jolo and Sitangkai during project implementation. Strict compliance with the LARPs will ensure that these effects are mitigated through compensation at replacement rate and implementation of measures for economic rehabilitation of any impacts on livelihoods.

5.1.28 In Jolo there will also be an impact on a mosque that is currently located within the designated port area and which will require relocation. The mosque uses a building converted for the purpose, and the pedestrian movements to and from the mosque, conflicts with port activities and traffic movements, therefore it is proposed to build a new mosque in an area that will not conflict with either port activity or traffic flow. Both the mosque Imam and RPMA Manager have confirmed that a new purpose-built mosque can be constructed near the passenger drop-off and pick-up area.

5.1.29 To address the cultural property issues related with the historic lighthouse (19th century) – part of which is currently used as the mosque - it is recommended that a plaque be installed at the front of the building. It should be noted that neither the building nor the lighthouse structure will be moved or affected, and that the building will be converted to use for port purposes.

5.1.30 There is the potential for increased socio-economic activities resulting from the construction phase to encourage migrants to the area looking for work. Although it is likely that the number of workers required is relatively small (in the order of 50), this can be mitigated in two ways; (i) a clause in the contract which provides employment preference to residents, and (ii) control, through regulation and enforcement, of entry to, and settlement in, the port area.

5.1.31 **Project Benefits**. Project benefits during construction include creation of jobs for skilled and unskilled local laborers for the construction period as well as short-term livelihood opportunities for informal and non-traditional business enterprises related to provision of goods and services for the construction workers.

- ***Operation Phase Impacts***

5.1.32 Port operations will involve provision and improvement of port services to ships, handling of cargo and passengers, and other port uses. After completion of the port improvements, the new and improved wharves will provide additional berthing capacity for more container ships, conventional cargo vessels, as well as RoRo ferries at the feeder ports. The

increase in port operation is anticipated to cause a range of impacts to the local physical, biological and socio-economic environment.

5.1.33 **Hydrology and Water Quality**. Increased port activity is expected to generate additional wastes from ships, cargo and passenger handling, and other sources. The anticipated increase in waste load will require appropriate collection and disposal facilities and services, and strict enforcement of, and compliance with, the approved waste management plan (included in the EMP) as described below (Waste Management).

5.1.34 At General Santos there is the existing issue of animals being kept on the wharf and waste flowing directly to the sea. To mitigate this effect, a septic tank will be installed and properly maintained to facilitate adequate treatment prior to discharge of wastewater effluent into the sea. It is proposed to locate the septic tank on the extension area so it is adjacent to the livestock holding area.

5.1.35 **Air Quality and Noise**. Diesel engine emissions from boats and ships, and emissions from vehicles using the port access roads, will affect both air quality and the ambient noise level. This will be mitigated by compliance with the EMPs and ensuring that all vessels using the port are properly maintained to avoid smoke belching and unwarranted noise.

5.1.36 Increased vehicular traffic along the port access road during peak hours could contribute to elevated levels of particulates, noxious gases and fumes into the atmosphere. This can be mitigated by implementation of traffic management plans, prepared in n coordination with municipal traffic planning authorities, installation of traffic signage and markers, and proper scheduling and provision of parking/waiting areas for vehicles. Maintenance of vehicles to maintain an acceptable level of, or to reduce, emissions and noise is beyond the purview of the project or its implementing agencies.

5.1.37 **Biological Environment and Fishery Resources**. Increased port activity is expected to generate additional wastes from ships, cargo and passenger handling, and other sources. The anticipated increase in waste load will require appropriate collection and disposal facilities and services.

5.1.38 Current waste management practices at the ports will be assessed to determine capacity for additional waste load, and a waste management plan, in coordination with the agencies that have existing contracts for waste collection and disposal at each of the ports, will be prepared.

5.1.39 No new routes are being introduced as a result of the port improvements.

5.1.40 Port operations will have negligible impact on the aquatic wildlife or the fishing activities of the local communities.

5.1.41 **Waste Management**. Poor waste management and inadequate sanitation facilities at the port pose health hazards to port users and dockworkers. To reduce this risk and avoid pollution there shall be no willful or inadvertent discharge of raw sewage or dumping of garbage into the adjacent sea.

5.1.42 Port operators will ensure strict enforcement of, and compliance with, the approved waste management plan in coordination with South Cotabato Integrated Port Services Inc which operates the arrastre and stevedoring business at the port, Golden Dragon Terminals

International Inc for contractual services for ship waste collection and disposal, and Port of General Santos City Multipurpose Cooperative Inc for collection and disposal of livestock waste. Port operators are required to maintain sanitary conditions and cleanliness of the entire premises at all times.

5.1.43 **Social Issues and Impacts**. During operation health and safety issues will be dealt with in a similar manner to that of the construction phase, primarily through use of protective clothing and implementation of a health and safety program. Adequate provision of port security will also reduce risks to safety, especially at night.

5.1.44 Increased socio-economic activities in the port area may encourage migrant workers and informal settlers, who, if not properly controlled and regulated, could impose an increased demand on local housing and basic services. This will need to be managed in a similar manner to control of in-migration during construction through regulation and enforcement, of entry to, and settlement in, the port area. Preventing informal settlement within the designated port areas will also avoid, or reduce, displacement and relocation impacts associated with any future port development plans.

5.1.45 Increased volumes of cargo and other economic activities at the port will create jobs for skilled and unskilled local laborers and livelihood opportunities for informal and non-traditional business enterprises, even on a short-term basis. This will provide opportunities for income generation by the beneficiaries, including the poor. The poverty alleviation initiatives included in ITDP are discussed in Section 5.2 below.

- ***Findings and Conclusions***

5.1.46 Construction impacts of the hub and feeder port subprojects are considered to be of low/ insignificant to moderate impact, while operation impacts range from low to high significance. Most of the significant impacts are positive as they relate to project benefits and are anticipated to improve the living standards and socio-economic conditions of the local population. Mitigation measures have been identified for all impacts of low magnitude or higher.

5.1.47 The costs of implementing the two EMPs for the hub port subprojects are estimated to be PhP 2 million (US$38,462), and the costs of implementing the three EMPs for the feeder port subprojects are estimated to be PhP 1.77 million (US$34,000).

5.1.4 Overall Conclusions of Environmental Assessment

5.1.48 No critical environmental areas exist at or near any of the subproject locations. None of the subprojects are classified as environmentally critical projects.

5.1.49 The conclusions of the due diligence review of the three airport subprojects is that the design modifications proposed for Puerto Princesa and Butuan are minor and do not substantively alter the findings. The EIS reports are considered to more than adequately meet the requirements for Category B environmental assessment requirements as set out in ADB's *Environment Policy* and OM F1/BP. Therefore no further environmental assessment is required for the airport subprojects. Based on the existing site conditions, no significant adverse environmental impacts will occur during the airport upgrading works. The adverse impacts identified can be mitigated provided that the EMPs and monitoring plans are implemented.

5.1.50 The conclusions of the studies of the hub and feeder port subprojects are that the wharf/pier expansions and RoRo ramp rehabilitations will entail minor reclamations (i.e. five hectares or less) and are therefore classified as environmental impact Category B under DENR's classification system. IEEs have been prepared as the appropriate level of environmental assessment and documentation required for the proposed project.

5.1.51 Potentially adverse environmental impacts that may arise from hub and feeder subproject activities range from insignificant to moderate. No significantly adverse impacts have been identified. The adverse impacts are amenable to mitigation, and such measures have been identified (for both construction and operation phases). In some cases measures to enhance the environment or to mitigate effects that are already occurring in the wider project areas have also been included. Based on the presented environmental site conditions, no significant environmental impacts will result from the port improvements provided that the EMPs and monitoring plans are implemented. The conclusion of the IEEs is that no further detailed environmental assessment work is required for the hub and feeder port subprojects.

5.1.52 A summary of the main findings and conclusions of the environmental assessment is provided in **Table 5.1.4-1**.

5.2 Social and Poverty Assessment

5.2.1 Parallel to the environmental assessment process, the social and poverty assessment of the project has been prepared in accordance with the Government and ADB requirements, which are summarized in the following section. The detailed results and recommendations of this assessment are provided in Volume V.

5.2.2 A key social impact consideration throughout the subproject evaluation and preparation process was the need for, and status of, any land acquisition and/or resettlement as all subprojects are located in populated or developed areas. During the ITDP project preparation studies, key social issues that were identified and agreed with the ADB include:

- As a general rule, land acquisition will be assumed (and corresponding studies required) for all subprojects where expansion is proposed, even if these expansion areas involve existing Right-of-Ways (ROW) or foreshore areas.
- In any cases involving informal businesses or "squatters", the key consideration for any agreed mitigation should be rehabilitation not just compensation.
- The ADB follows the Government's definition of Indigenous People (IPs) as provided by Republic Act 8371 (1997). The ADB's key IP concerns under the ITDP include:
  a) The relative "vulnerability" of the IPs;
  b) IPs are to be considered by communities rather than individuals and
  c) The project should assist in identifying opportunities to increase potential positive benefits to IPs.
- Due to the types of proposed ITDP subprojects and locations, IP concerns where focused on the three proposed feeder ports where Badjao and Sama communities may be located near or may obtain a source of their livelihood from nearby coastal areas.

Table 5.1.4-1: Summary of Key Environmental Issues

Subproject		ECA	ECP	DENR Env Cat	Documentation	Main Environmental Issues & Mitigation Identified	EMP Cost (PhP, 000)	Environmental Management Capacity
Airports	Puerto Princesa	No	No	B	TADP – existing EIS and LARP, PPTA prepared LARP Addendum	EIS reports comply with ADB environmental assessment and consultation requirements. Three design modifications proposed under ITDP (small increase in terminal size and apron 20% larger at Puerto Princes and small increase in terminal size at Butuan) are minor and do not change the overall conclusions of the original EIS reports. No additional issues have been identified. EMP costs updated.	960	DOTC PMO's env. management capacity limited. ECCs require DOTC to establish environment unit. ATO for each subproject will also need strengthening, reco. to set up SEMS.
	Butuan	No	No	B	TADP – existing EIS and LARP, PPTA prepared LARP Addendum		948	
	Cotabato	No	No	B	TADP – existing EIS and LARP, PPTA prepared LARP Addendum		924	
Hub Ports	General Santos	No	No	B	PPTA prepared IEE	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP. EMP incl. septic tank for animal waste. No land acquisition required.	1,510	EU for PPA also recommended. PMOs have structures for SEMS already in place; PPA-PMO General Santos to fill currently vacant positions
	Zamboanga	No	No	B	PPTA prepared IEE	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP. No land acquisition required.	490	
Feeder Ports	Jolo	No	No	B	PPTA prepared IEE and LARP TOR	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP. Additional measures incl. new mosque to be constructed and plaque to be provided for historic lighthouse building (does not require relocation and is not structurally affected).	490	EU for RPMA-ARMM also recommended. Port Managers to appoint SEMS of two people for Jolo and Bongao and one person for Sitangkai for duration of the project
	Bongao	No	No	B	PPTA prepared IEE and LARP	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP. EMP incl. septic tanks for h'holds adjacent to port area and consideration of sunlight and ventilation access for houses affected by port perimeter wall.	790	
	Sitangkai	No	No	B	PPTA prepared IEE and LARP TOR	Adverse impacts identified are of low to moderate significance, and can be mitigated. Measures identified, costed and incorporated into EMP.	490	
ITDP	**All subprojects**	No	No	Rec. cat. B under ADB system	SIEE covering all subprojects prepared by PPTA	Due diligence of TADP EIS and LARPs undertaken. IEES for hub and feeder port subprojects prepared. Based on existing site conditions, no significant environmental impacts will result from the project provided that the EMPs and monitoring plans are implemented. Overall conclusion is that no further detailed environmental assessment work is required.	6,602	PSC to provide capacity bldg as part of support and assistance to DOTC and PPA. TA for inst. strengthening of DENR (TOR prepared)

Notes: ECA – environmentally critical area; ECP – environmentally critical project; TADP – Third Airport Development Project; EIS – Environmental Impact Statement; IEE – initial environmental examination; LARP – land acquisition and resettlement plan; SIEE – summary initial environmental examination; PSC – project supervision consultant; DENR – Department of Environment & Natural Resources; ECC – environmental clearance certificate; SEMS – safety and environment management staff

5.2.3 **Government and ADB Social Impact Screening Procedures.** In accordance with DENR Department Administrative Order (DAO) 2003-30, a social impact screening or assessment shall be conducted within the environment assessment when indicated by the category of environmental impact. This shall be determined by the project's criteria of probable risk and/or potential for causing significant adverse biophysical and social impacts. The supporting Government legal basis and framework for land acquisition and/or resettlement is provided by:

- Republic Act 8974 - An Act to Facilitate the Acquisition of Right-of-Way, Site or Location for National Government Infrastructure Projects and for Other Purposes;
- Republic Act 7279 - Urban Development and Housing Act of 1992; and
- Resettlement process and responsibilities of each government agency and local government units as specified under Republic Act 7160 Local Government Code of 1991

5.2.4 A summary of the current ADB social impact policies and procedures is provided in Volume V, which also includes draft copies of the following project preparation and appraisal documents:

- Poverty and Ssocial Analysis (PSA);
- LARP for Bongao Port and LARP Terms of Reference (TOR) for Jolo and Sitangkai Feeder Ports;
- Summary results of completed LARP due diligence reviews and external monitoring; and
- Indigenous people development plan data collection for feeder ports

5.2.5 Based on the relevant policies and procedures studies, the land acquisition and/or resettlement impacts and corresponding requirements are summarized in **Table 5.2-1**.

5.2.1 Key Socio-Economic and Poverty Conditions of the Subproject Areas

5.2.6 As currently proposed, the ITDP will involve six provinces and eight cities or municipalities in four regions and the ARMM.

5.2.7 A summary of the key socio-economic and poverty indicators for the proposed ITDP subproject areas is provided in the following sections. In addition to the immediate population of the respective city or municipality, the proposed subprojects also serve to support the transport needs of a larger zone of influence.

5.2.8 **Puerto Princesa Airport.** Although Palawan is not included among the Philippine's poorest 44 provinces which is a common reference for measuring poverty at the provincial level, its unemployment level in 2000 was 17.9 per cent of the population and some 27.9 per cent of people lived below the year 2000 poverty threshold of PhP 11,700 per month.

Table 5.2-1: Summary Status of Land Acquisition and Resettlement Requirements

Completed Preparation Studies	Remaining Land Acquisition and Resettlement Requirements
Airport Subprojects	
Puerto Princesa City (Palawan)	
LARP was prepared in 2002 under TADP Supplementary LARP prepared by ITDP Project Team	LARP was prepared in 2002 under ADB TADP and a Supplemental LARP was prepared by the Project Team during ITDP preparation. Based on a due diligence review of the 2002 LARP, nearly all required land acquisition and resettlement activities have been completed with the noted exception of on-going expropriation proceedings involving 5 ha of land with no structures. Based on this review and available information from DOTC, completion of the 2002 LARP requirements, including replication of AFP structures, will cost an estimated PhP 76.38 million. In addition to the requirements of the 2002 LARP, the Project Team prepared a Supplemental LARP to address a total of 21 structures, totally some 1,258 sq. m. in area, which remain to be removed from the approximate 2,400 sq. m. land area of the new access road. This land is owned by the Armed Forces of the Philippines (AFP), and the structures are owned by renters who have signed Temporary Occupancy Contracts with the AFP which include provisions for terminating occupancy use of the area. These 21 remaining structures involve a total of 14 households, with 78 household members and 15 employees. The estimated budget for relocating these renters, including replacement costs for existing structures and fixed assets, compensation for lost income, disturbance allowance and external monitoring plus monitoring and administrative and contingency costs is PhP 8.94 million. Since the Affected People (APs) involve renters, the project is not required to provide for formal resettlement. The AFP has an existing Memorandum of Agreement (MOA) with the DOTC for use of this land for the proposed airport expansion project and new access road but this MOA needs to be updated to shift the previously agreed 20 m width of the access road 5 m to the north. No additional ROW areas will be required for improving the intersection of the new access road with the national highway. External LARP monitoring remains to be completed by the DOTC. Fencing of acquired land areas remains to be done by the LGU by a budget to be provided by DOTC.

Table 5.2-1: Summary Status of Land Acquisition and Resettlement Requirements (Continuation)

Butuan City (Agusan del Norte)	
LARP was prepared in 2002 under TADP. Supplementary LARP prepared by ITDP project team	Based on a due diligence review of the 2002 LARP, all required land acquisition and resettlement activities have been completed with the noted exception of on-going expropriation proceedings involving some 7 ha of land. Based on this review and available information from DOTC, completion of the 2002 LARP requirements, including replication of AFP structures, will cost an estimated PhP 1 million. In addition to the requirements of the 2002 LARP, the Project Team prepared a Supplemental LARP to address the relocation of: • 9 structures (1,610.4 m^2 of building and other structural area including one room of a doctor's quarters which will be relocated to allow realignment of a gravel road) belonging to the Philippine Army and local government; • 4 structures (193 m^2 of building area; 3 households and 1 kitchen) located inside the fence in the DVOR area ; and • 10 other structures (452 m^2 of building area; 8 households, 1 kitchen, and 1 shed) which will need to be relocated on AFP property to allow realignment of the gravel barangay road. Based on the Supplemental LARP, an estimated budget of PhP 15.21 million will be provided for the replacement costs for all structures and fixed assets, to resettle 11 households of informal settlers within the available TADP resettlement site and to provide compensation for lost income, disturbance allowance and external monitoring plus monitoring and administrative and contingency costs. In addition, some 15 shade trees growing on government land need to be either removed or significantly trimmed to allow full view of the runway from the air traffic control tower. Fencing of acquired land areas is 75 per cent completed and completion of this fencing work is fully funded by the LGU. The DOTC still needs to establish a MOA with the AFP to formalize use of their government properties for the airport expansion project.

Table 5.2-1: Summary Status of Land Acquisition and Resettlement Requirements (Continuation)

Cotobato City (Maguindanao)	
LARP was prepared in 2002 under TADP. Supplementary LARP prepared by ITDP Project Team	Based on a due diligence review of 2002 LARP, all required land acquisition and resettlement activities and corresponding budget requirements have been completed but a budget of some PhP 33.04 million remains for replication of affected AFP structures. In addition to the requirements of the 2002 LARP, the Project Team prepared a Supplemental LARP to address the relocation of: 7 structures/ households that were not included in the TADP LARP but who remain within the fence line on government property. Estimated cost of resettling these informal settlers including replacement costs for existing structures and fixed assets, compensation for lost income, disturbance allowance and external monitoring plus monitoring and administrative and contingency costs is PhP 1.67 million. An adequate number of lots are still available within the TADP resettlement site to meet these additional needs. External LARP monitoring remains to be completed by the DOTC. Fencing of acquired land areas is 70 per cent complete and completion of this work is fully funded by the LGU.
Hub Port Subprojects	
Port of Zamboanga City (Zamboanga del Sur)	
No Land Acquisition	No additional land acquisition and resettlement requirements.
Port of General Santos City	
No land acquisition or resettlement involved.	No additional land acquisition and resettlement requirements.
Feeder Port Subprojects	
Jolo Port (Sulu)	
LARP TOR prepared by ITDP Short LARP to be prepared during the loan period	A Short LARP will need to be prepared under the project to assess and address potential impacts which are expected to include 8 households of informal settlers, acquisition of approximately 300 m^2 of land and 152 m^2 of structures in the port access road and barter trade area. Implementation of the Short LARP will be required during the loan period once it is approved by the DOTC, Municipality of Bongao and ADB. Estimated cost of LARP study and implementation is PhP 2.06 million and may require some 3 – 9 months to complete the LARP, land acquisition and resettlement activities. Following implementation, external LARP monitoring will be required, with a copy furnished to the ADB.

Table 5.2-1: Summary Status of Land Acquisition and Resettlement Requirements (Continuation)

Bongao Port (Tawi-Tawi)	
Short LARP prepared by ITDP	Based on the Short LARP, the subproject will affect 14 structures / households as well as 2 additional lots and Coast Guard wall and rest house. A total of 276 m^2 of land will need to be acquired, and 491 m^2 of structures and 68 m of fencing / walls will be affected. Estimated cost of resettling informal settlers to nearby areas, including replacement costs for existing structures and fixed assets, compensation for lost income, disturbance allowance and external monitoring, is PhP 2.59 million. It may require some 3 – 9 months to complete land acquisition and resettlement activities once the Short LARP is approved by the DOTC, Municipality of Bongao and ADB. Following implementation, external LARP monitoring will be required, with a copy furnished to the ADB.
Sitangkai (Sibutu) Port (Tawi-Tawi)	
LARP TOR prepared by ITDP Short LARP to be prepared during the loan period	Preparation of a Short LARP will be required during project implementation to address the 26 households of informal settlers located behind the port along the dilapidated causeway. Based on discussions with the APs and LGU, these households and small businesses, involving 26 wooden structures built on stilts, are expected to be relocated along other sections of the causeway area. Implementation of the Short LARP will be required during the loan period once it is approved by the DOTC, Municipality of Bongao and ADB. Estimated cost of LARP implementation is PhP 3.23 million and may require some 3 - 9 months to complete the LARP, land acquisition and resettlement activities. Following implementation, external monitoring will be required, with a copy furnished to the ADB.

5.2.9 **Cotabato City Airport.** The ZOI includes Maguindanao Province which is one of 44 poorest provinces of the Philippines. Moreover, the unemployment level of Maguindanao province where the airport is located in 2000 was 8.0 per cent of the population and some 61.3 per cent of people lived below the year 2000 poverty threshold of PhP 12,218 per year.

5.2.10 **Butuan City Airport.** Several of the CARAGA provinces are included in the list of the Philippine's poorest 44 provinces which is a common reference for measuring poverty at the provincial level. The unemployment level of Agusan del Sur province where the airport is located in 2000 was 19.8 per cent of the population and some 45.3 per cent of people lived below the year 2000 poverty threshold of PhP 10,575 per year.

5.2.11 **Zamboanga City Hub Port.** Zamboanga del Sur, ZOI province has been listed as one of the listing of the Philippine's poorest 44 provinces. In addition, the unemployment level of Zamboanga del Sur province where the port is located in 2000 was 7.2 per cent of the population and some 43.3 per cent of people lived below the year 2000 poverty threshold of PhP 9,404 per year.

5.2.12 **General Santos City Hub Port.** South Cotabato, one of 44 poorest provinces, is the nearest ZOI province for this hub port. The unemployment level of South Cotabato province where the port is located next to (in the component city of General Santos) in 2000 was 18.7 per cent of the population and some 41.8 per cent of people lived below the year 2000 poverty threshold of PhP 11,353 per year.

5.2.13 **Bongao Feeder Port.** The ZOI province of Tawi-Tawi is also in the list of the Philippine's ten poorest provinces. The unemployment level of Tawi-Tawi province where the port is located in 2000 was 4.2 per cent of the population and some 60.2 per cent of people lived below the year 2000 poverty threshold of PhP 12,757 per year.

5.2.14 **Jolo Feeder Port.** Sulu, the ZOI province of this feeder port is listed in the Philippine's ten poorest provinces. In addition, the unemployment level of Sulu province where the port is located in 2000 was 3.8 per cent of the population and some 67.7 per cent of people lived below the year 2000 poverty threshold of PhP 12,249 per year.

5.2.15 **Sitangkai Feeder Port.** The ZOI province of Tawi-Tawi is also one of the Philippine's ten poorest provinces. **Table 5.2.1-1** shows that the unemployment level of Tawi-Tawi province where the port is located in 2000 was 4.2 per cent of the population and some 60.2 per cent of people lived below the year 2000 poverty threshold of PhP 12,757 per year.

5.2.2 Summary of Project Benefited or Adversely Affected Population

5.2.16 Poverty reduction is the over-arching goal of the ADB and all other strategic objectives of the Bank and its funding resources need to be pursued in ways that contribute to this goal. Nearly all of the proposed subprojects included in the recommended ITDP short-listed are located within the country's 44 poorest provinces and many service areas that have been subject to years of conflict and war. As a result, these subprojects are expected to provide significant benefits to the targeted populations of the Southern Philippines by providing critically needed improvements to existing transport facilities and their intermodal linkages. By targeting smaller feeder port facilities in more isolated areas, many of these proposed subprojects will serve to improve transport linkages between remote communities, provincial centers and markets.

5.2.17 Since the ITDP is limited to needed and prioritized improvements to existing basic transport facilities, the adversely affected population is expected to primary involve those households and businesses that may be directly affected or displaced by land acquisition and/or resettlement.

Table 5.2.1-1: Summary of Key Socio-Economic Conditions of the Subproject Areas

Name of Projects		2000 Population	% Annual Population Growth (1995-2000)	Average Annual Income (PhP) (2000)	% Unemployment 2000	Annual per Capita Poverty Thresholds for Area (PhP) Year 2000	% of Population below National Poverty Levels Year 2000
a) Airport Subprojects							
1. Puerto Princesa City							
1.1	Palawan Province	755,412	3.60	106,737	17.9	11,700	35.9
1.2	Puerto Princesa City	161,912	4.56		19.5 [a]		
2. Cotabato City							
2.1	Maguindanao Province	801,102	3.88	76,438	8.0	12,218	61.3
2.2	Datu Odin Sinsuat (Dinaig)	71,569	3.64		36.56 [b]	6,168 [b]	37 [b]
3. Butuan City							
3.1	Agusan del Norte Province	285,570	1.32	91,821	19.8	10,575	45.3
3.2	Butuan City	267,279	1.58	111,349	20.1		
b) Hub Port Subprojects							
1. Port of Zamboanga City							
1.1	Zamboanga del Sur Province	836,217	1.75	88,701	7.2	9,404	43.3
1.2	Zamboanga City	601,794	3.32	129,503	6.2 [c]		
2. Port of General Santos City							
2.1	South Cotabato	690,728	2.15	140,100	19.7	11,353	41.8
2.2	General Santos City Port	411,822	4.71	164,900	17.4 [d]		
c) Feeder Port Subprojects							
1. Jolo Port (Sulu)							
1.1	Sulu Province	619,668	2.94	77,598	3.8	12,249	67.7
1.2	Jolo City	87,998	2.72		11.45 [e]		
2. Bongao Port (Tawi-Tawi)							
2.1	Tawi-Tawi Province	322,317	5.15	85,240	4.2	12,757	60.2
2.2	Bongao	58,174	4.50		4.9 [f]		
3 . Sitangkai (Sibutu) Port							
3.1	Tawi-Tawi Province	322,317	5.15	85,240	4.2	12,757	60.2
3.2	Sitangkai	52,772	7.93	48,275 [g]			

Source:

a) *Socio-Economic Profile of Puerto Princesa City, 1997-1998 data*

b) *Executive & Legislative Agenda 2004-2007 – Municipality of Datu Odin Sinsuat*

c) *Zamboanga City 91997-2012) Master Development Plan – Book II (1996 – Base Data)*

d) *General Santos City Socio-Economic Profile – Briefer 2003*

e) *Jolo Executive Legislative Agenda (FY 2004-2007)*

f) *Bongao Municipal Development Plan (2004-2019)*

g) *Sitangkai Executive & Legislative Agenda FY 2004-2007*

Note: Annual poverty threshold and incidence of population in per cent are not available for city / municipal level (National Statistical Coordination Board - NSCB Inquiry Jan 9, 06)

5.2.3 Summary of Poverty Analysis

5.2.18 The ZOI for the proposed port subprojects are quite large, and will benefit nearly two million poor people. The poor will face lower transport costs and should have improved access to inter-island markets, health facilities, and other social facilities. In the longer term, the ZOI for the airports are even larger than the zones of influence for the hub ports. However, in terms of use, air passengers are non-poor and freight shipped by air is predominantly produced by the non-poor. While the component of air freight that can be apportioned to the production by the poor requires more study, it is clear that the airports will boost tourism, and as the tourism sector grows, it will generate a large number of low-skilled jobs for the poor, in addition to new retailing activities for the poor. A conservative estimate of the number of poor beneficiaries generated by the airports over the long term is about three million people. This is, in part, because the scale of the airport sub-projects is quite large compared to the port projects.

5.2.19 The initial short-term benefit to the poor will be the generation of a number of jobs for unskilled and poor labor as the subprojects are constructed. Based on our initial poverty analysis, it is estimated that:

- 2,002 person-years of construction employment will likely go to poor local workers to complete the civil works for the airport subprojects;
- 467 person-years of construction employment will likely go to poor local workers to complete the civil works for the hub ports; and
- 895 person-years of construction employment will likely go to poor local workers to complete the civil works for the smaller port facilities.

5.2.20 In total, poor local workers are expected to earn an estimated US$ 10 million from the proposed construction activities over the average 2.5-year construction period. To increase such employment benefits to the local population, it is recommended that construction contracts include specific provisions to prioritize the employment of qualified laborers and service providers who belong to poor local households.

5.2.21 The estimates that all the subprojects combined will generate about 3,232 person-years of employment for poor workers. The estimates depend on the teams expert judgment regarding the amount of unskilled labor required for the different sub-projects. With a typical regional multiplier effect, the total wage injection into these communities will be two to three times as large as the initial total wage bill of US$ 14 million, and at least 30 per cent to 60 per cent of this induced income will accrue to poor households. This is because the subprojects areas have very high concentrations of poor households.

5.2.22 In addition to the estimated local employment benefits during the construction phase, significant benefits are projected from improvements in handling efficiencies and capacities for cargo produced by poor sector of the ZOI. These projected benefits are described in the PSA (Volume V) and as part of each subproject feasibility study (Volume 2 to Volume 4) and summarized in **Table 5.2.3-1**.

Table 5.2.3-1: Summary Analysis of Outbound Cargo Produced by the Poor

Subproject	Total Outbound Cargo (2005; tons)	Predominate Commodities	Estimated % of Cargo Produced by the Poor	Estimated Annual Value to the Poor (US$ / year; 2005)
Puerto Princesa Airport	1,321	Fresh fish (91 %)	30	180,000
Butuan Airport	480	Fresh fish (85 %)	30	60,000
Cotabato Airport	inadequate cargo data available to date			
General Santos Hub Port	58,675 (a)	mixed	30	352,050
Zamboanga Hub Port	118,049 (a)	mixed	30	708,294
Jolo Feeder Port	inadequate cargo data available to date			
Bongao Feeder Port	240,000	Marine products (96 %)	60	2,764,800
Sitangkai Feeder Port	21,988	Dried seaweed (96 %); Dried fish & shells (4 %)	60	263,000
		Estimated Annual Total (US $; 2005)		**4,328,144**

Notes:

(a) - includes only outbound breakbulk cargo, not containerized cargo

For airports, economic value to the poor was estimated as the value added / reduced shipping cost to poor producers, calculated at the rate of US$ 1 / kilo for fresh fish which is shipped by air.

For ports, economic value to the poor was estimated as the value added / reduced shipping cost to poor producers, calculated at the rate of about US$ 20 / ton of marine products (equivalent to about PhP 1 / kilo)

5.2.4 Indirect Benefits and Estimates of Poor Beneficiaries

5.2.23 For the hub ports, the team estimated the total number of beneficiaries, which includes the per cent poor in the province or municipality that is in each hub port's ZOI. By applying a conservative adjustment factor to account for the fact that many of the subprojects are targeted at higher-income activities once in use, it is estimated that there will be some 1.4 million poor beneficiaries out of four million total beneficiaries.

5.2.24 Using a similar form of analysis with conservative adjustment factors to estimate the number of beneficiaries for the feeder ports, the study team estimates that there will be nearly 1.6 million poor beneficiaries and about five million total beneficiaries.

5.2.25 For the short-listed airport subprojects, it is more difficult to derive estimates of poor beneficiaries from the use of these facilities in the long term because airports and air travel typically serve better off and higher income people and broader ZOIs. Using the analysis of the share of airfreight that is shipped by poor farmers and fishermen recommended for Phase II of the project preparation will yield refined estimates of the long-term poor beneficiaries.

5.2.5 Gender Issues

5.2.26 The proposed types of airport and port subproject improvements are considered to be gender neutral and women were well represented and directly involved in the subproject evaluation and selection bodies and process. Based on passenger records, women are projected to comprise a significant proportion of the transport users and beneficiaries of the completed facilities.

5.2.27 Where resettlement is required, women and any households headed by women, may be particularly burdened by any socio-economic impact. Such potential impacts are to be carefully addressed in the respective LARP to be prepared for all such activities and subject to Bank and local reviews and approvals. Each LARP will also identify specific measures to address resettlement and livelihood impacts on women and how women can participate in the LARP implementation to the fullest extent possible.

5.2.28 While the proposed improvements in physical infrastructure are considered to be gender neutral, a gender strategy will be fully considered and integrated into the policy and institutional investments to be proposed under the ITDP, including the proposed development and project support for an Environment Units within the DOTC and PPA.

5.2.29 To help enhance gender equity during the construction phase, it is recommended that contractors be required to hire women workers for the types of work for which they are capable of and there are women applicants for. For long-term use, washrooms and toilet facilities accessible to and appropriately designed for women will also be required.

5.2.6 Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome (HIV/ AIDS) Prevention

5.2.30 While the incidence of HIV/ AIDS and other Sexually Transmitted Diseases (STDs) is believed to be low in the proposed subproject areas, it is recommended that appropriate education and outreach programs on these subjects be added to the program. Such public awareness and prevention programs should be planned and implemented during both the construction and operation of the proposed subprojects in coordination with concerned government agencies, non-government organizations (NGOs) and related aid programs to local stakeholders.

5.2.31 An HIV/ AIDS and other STDs disease prevention program will need to accompany subproject implementations. Given that the types and locations of the civil works may draw primarily on local labor resources during the construction period, the program will need to be tailored so that local workers receive HIV/ AIDS education, support and culturally sensitive programs in partnership with concerned government agencies, NGOs and institutions. During the use of the ports and airports, this public education and awareness program should continue as needed.

5.2.32 An outline The TOR and cost estimate for a subcontract to a qualified NGO to design and implement project initiatives to address gender issues and HIV/ AIDS prevention has been included in the project preparation and proposed budget.

5.2.7 Non-Government Organizations

5.2.33 NGOs have been directly involved in the overall project design, subproject identification and evaluation process, as represented by concerned multi-sectoral, business groups. The active involvement and participation of local NGOs will be further enhanced during the more detailed Phase 2 preparation activities. In particular, NGOs will be directly involved in the preparation of any required environmental and social impact assessment studies (IEEs, LARP, IPDPs), LARP external monitoring activities and public consultations, and implementation of the HIV/ AIDS awareness and prevention program for the project.

5.2.34 The proposed project-assisted development of an environment unit within DOTC will also provide the opportunity to strengthen DOTC linkages with NGOs, including their enhanced participation and potential roles in poverty reduction, livelihood development, and informal transport enhancement measures. The institutional arrangements proposed for the project are discussed in Section 5.4.

5.2.8 Social and Poverty Action Plans

5.2.35 The LARP prepared in 2002 under the TADP served as the project's point of reference for any land acquisition and/or resettlement issues and mitigation measures, such as entitled compensation. For the three TADP airports proposed for funding under the ITDP, the consultant team conducted a review on the implementation status of these completed LARP and any changes that may have occurred since they were prepared, particularly budget considerations to be included under ITDP to complete all land acquisition and/or resettlement. The summary results of the LARP review and remaining requirements for the three airport subprojects is provided in **Table 5.2.8-1**.

5.2.36 During Phase 2 of the ITDP preparation studies, the draft LARP for Bongao Port and LARP TORs for the Jolo and Sitangkai Port subprojects were prepared and provided in Volume V to guide similar studies that will need to be prepared during the loan period. Supplemental LARPs were also prepared for each of the 3 airport subprojects to assess and address Affected People (APs) not included in the 2002 LARPs prepared under the TADP.

5.2.9 Recommended Complimentary Community-Based Poverty Alleviation Initiatives

5.2.37 The approach adopted during the ITDP subproject Phase 1 selection process included poverty alleviation as one of the key selection criteria. As a result, nearly all of the subprojects are located within, or provide improved access to, remote areas, many of which are the country's poorest provinces and many service areas that have been subject to years of conflict.

5.2.38 Following a "bottom up" participatory approach, involving a series of focus group discussions and key informant interviews (refer to Appendices - Volume V), a range of potential poverty alleviation initiatives were identified for consideration in preparation studies. As summarized in **Table 5.2.9-1** and **Table 5.2.9-2**, the identified initiatives include both on-site (within port perimeter) and off-site (outside port perimeter) proposals that would serve to enhance access, utilization and social development benefits. In addition, consideration was given to possible investments to improve the accommodation for small businesses and/or poor passengers and cargo within these port facilities, such as adding passenger terminal and cargo handling facilities, utilities and/or amenities and community-operated concession facility areas and services. Total estimated construction cost of these on-site poverty alleviation initiatives that were included in the proposed scope of subprojects is US$ 9.1 million.

Table 5.2.8-1: Summary Results of LARP Review for Three Airport Subprojects

		Puerto Princesa City Airport	Cotabato City Airport	Butuan City Airport	Total
1	**Status of Land Acquisition** (sq. m)				
1.1	Total Land Area Required	361,180	492,865	74,845	928,890
1.2	Land Area Paid For / Acquired to Date	310,940	492,865	5,316	767,480
1.3	Land Area currently under Expropriation Proceedings	50,240	0	69,529	119,769
2	**Fencing Works to Protect Areas were Land Acquisition has been Completed**	Fencing has been approved by city mayor and start of work is pending the signing of MOA	Fencing is 70 % complete and completion of work is fully funded by LGU	Fencing is 75 % complete and completion of work is fully funded by LGU	
3	**Status of Structure Acquisition** (% complete)				
3.1	Percent Complete - Private Structures	100%	100%	100%	
3.2	Percent complete - Philippine Air Force / Military structures	62.85%	0%		
4	**Status of Resettlement** (# of households)				
4.1	Total Number of Households to be Resettled	119	84	111	314
4.2	Number of Households Resettled to Date	112	82	111	305
4.3	Remaining Number of Households to be Resettled	7	2	0	9
5	**Status of LARP Expenditures** (PhP millions)				
5.1	Original / Agreed LARP Estimated Budget	472.91	93.29	24.50	590.70
5.2	Actual / Revised Budget	550.56	93.29	22.08	665.93
5.3	LARP Expenditures to Date	485.13	66.83	21.08	573.04
5.4	Estimated Budget to Complete all LARP Activities after TADP[1]	76.38	33.04	- 1.00	110.42
6	**Summary Results of Supplemental LARPs**				
6.1	Additional Land Area to be Acquired (sq. m)	0	0	0	0
6.2	Additional Number of Structures to be Acquired	21	7	23	51
6.3	Additional Number of Households to be Relocated / Resettled	14	7	14	35
6.4	Est. Budget to Complete Supplemental Activities (PhP millions)	8.94	1.67	15.21	25.82
7	**Summary Total of Remaining Land Acquisition Requirements**				
7.1	Land Area currently under Expropriation Proceedings (sq. m)	50,240	0	69,529	119,769
7.2	Total Land Area to be Acquired (sq. m)	0	0	0	0
7.3	Total Number of Structures to be Acquired	21	7	23	51
7.4	Total Number of Households to be Relocated / Resettled	21	9	14	44
7.5	Estimated Budget to Complete All LARP Activities (PhP millions)	85.32	34.71	16.21	136.24

[1] LARP activities not yet completed from TADP are primarily AFP replication costs and these have been updated to 2006 prices.

Table 5.2.9-1: On-Site Poverty Alleviation Initiatives included in Subproject Feasibility Studies

Hub Port	Feeder Ports		
Zamboanga	Bongao	Jolo	Sitangkai
• New larger air conditioned Passenger Terminal with Vendors Area, Ticketing Booth, Dorm, Canteen, Prayer Room, Wash Area, and Public Toilets. (PhP 62.4 million) • Moveable RoRo Ramp allowing 24 hour use (PhP 113 million)	• Motor Launch Quay (PhP 120.5 million) • Open Pile Pier connection to Chinese port (PhP 37.8 million) • Cargo Warehouse for Motor Launch Berth (PhP 4.1 million) • Passenger Terminal Building at motor launch quay with Vendors Area, Ticketing Booth, Canteen, Prayer, Room, Wash Area, and Public Toilet (PhP 8.3 million) • Water Supply System (PhP 4 million) • Lighting System for improved security (PhP 9.4 million)	• Banca Landing Quay (PhP 31.5 million) • Motor Launch Berth with ancillary facilities for wooden hull vessels (PhP 52.5 million) • Covered walkway (PhP 8 million) • Water Supply System (PhP 2 million) • Lighting System for improved security (PhP 4.4 million) • Passenger shed and vendor area (PhP 6.9 million) • Public toilet (PhP 0.3 million)	• Continuous Stair Landing for Bancas (PhP 2.5 million) • Cargo Warehouse (PhP 4.2 million) • Passenger Terminal Building with Vendors Area, Ticketing Booth, Canteen, Prayer Room, Wash Area, and Public Toilets. (PhP 7.1 million) • Water Supply System (PhP 0.7 million) • Lighting System for improved security with solar backup (PhP 3 million)
Total Construction Cost: PhP 175.4 million pesos ($ 3.4 million)	Total Construction Cost: PhP 184.1 million ($ 3.5 million)	Total Construction Cost: PhP 98.4 million ($ 1.9 million)	Total Construction Cost: PhP 17.5 million pesos ($ 0.33 million)

Table 5.2.9-2: Off-Site Poverty Alleviation Initiatives Proposed for Preparation and Funding under the Japan Fund for Poverty Reduction (JFPR)

Feeder Ports		
Bongao	**Jolo**	**Sitangkai**
• Construction of Public Market adjacent to Chinese Port (US$ 900,000) • Improvement of adjacent Chinese Port to organize Vendor activity and improve management and traffic flow (US$ 200,000)	• Physical improvement of Barter Trade area adjacent to port including management of traffic and parking around Barter Trade area (US$ 700,000)	• Provision of Walkways (on posts), water catchment, toilets and amenities for relocated community on causeway and common use toilets and water/ showers for port users (US$ 200,000)
Total cost of US$ 1.1 million including planning, design and construction, and capability building.	• Total cost of US$ 700,000 including planning, design and construction, and capability building.	• Total cost of US$ 200,000 including planning, design and construction, and capability building.

5.2.39 The proposed additional off-site poverty alleviation initiatives (not included in the scope of subprojects) will serve to improve access and utilization of the intermodal transport and commercial facilities by the poor and enhance social development benefits to adjacent communities and service areas. As a preliminary cost estimate, these off-site investments involve a total of up to US$ 2 million in recommended detailed preparation and construction costs, which is proposed for grant funding under the Japan Fund for Poverty Reduction (JFPR).

5.3 Consultations for Environmental and Social Assessments

5.3.1 Overall Consultation for ITDP

5.3.1 Consultation for ITDP has been conducted on a number of levels, this includes national level for overall ITDP planning and programming, and regional and local level for subproject specific participation of government stakeholders, beneficiaries and affected communities. National and regional level consultation includes a number of meetings with the counterpart team, the Technical Working Committee and the Steering Committee. There have also been at least two ADB Missions undertaken in each phase of the PPTA and these have involved meetings with stakeholders relevant to each of the subprojects.

5.3.2 Consultation for Airport Subprojects

5.3.2 Community and stakeholder consultation was undertaken for the airport subprojects – under TADP loan funding - during the preparation of the EIS, and has been fully documented in the EIS reports. This consultation process has been signed off by DENR as a pre-requisite to issuance of ECCs. As the three design modifications proposed under ITDP do not change the

nature of the impacts or the overall conclusions of the EIS, reports additional consultation has not been required. Ongoing dialogue with the community, since that time, has focused primarily on land acquisition.

5.3.3 The consultation undertaken for the airport subprojects complied with the DENR's requirements and included scoping meetings with stakeholders, community meetings and a project perception survey, as shown in **Table 5.3.2-1**. Attendees at the first and second EIS scoping meetings included representatives of DENR-EMB, Provincial Environmental and Natural Resources Office (PENRO), ATO, Vendors Association, affected barangays, Office of City Planning, and DOTC and its consultants. The community meetings were attended by affected families, barangay captains and officials (such as health workers, church pastors, and representatives from religious groups), people's organizations, as well as neighborhood associations and other interested residents. The numbers of people attending the various meetings ranged from 31 in Puerto Princesa, and 50 in Cotabato to 141 in Butuan.

Table 5.3.2-1: Summary of Consultation for Airport Subprojects

Consultation	Dates of Consultation		
	Puerto Princesa	**Butuan**	**Cotabato**
First EIS scoping meeting	07 February 2001	24 May 2001	13 March 2001
Second EIS scoping meeting	23 February 2001	07 July 2001	19 March 2001
Community meetings	March 2001	July 2001	April 2001
Project perception survey in affected barangays	March 2001	June 2001	April 2001
Various meetings for data gathering purposes	March 2001	July 2001	March 2001
Barangay Health Office, Municipal Planning & Health Offices	April 2001	June 2001	March 2001
Various meetings for resettlement/land acquisition	Ongoing	Ongoing	Ongoing
Public information booklet to affected households	2002	2002	2002

Source: TADP EIS Reports (2001 &.2002) and ITDP PPTA reporting

5.3.4 The accountability statements, and project endorsements (from the mayors and barangay captains) obtained as part of the EIS consultation, are included as an appendix to each EIS report. The EIS reports includes a communications plan – Information and Education Campaign (IEC) - which will be fully implemented by DOTC upon commencement of subproject design.

5.3.5 Consultation with DENR-ROs and DENR-EMBs has also been undertaken during the PPTA as part of the due diligence review process. Meetings have been held with Regional Directors as well as DENR over the period October 2005 and April 2006.

5.3.3 Consultation for Hub and Feeder Port Subprojects

5.3.6 For each consultation for the hub and feeder port subprojects, an Information Letter was prepared setting out the background to the project and the request for participation from stakeholders. The letter was sent to a range of potential beneficiaries and stakeholders prior to site visits and community meetings.

5.3.7 As part of the consultation, a stakeholder analysis was conducted during March 2006 to identify potentially new users and beneficiaries of the proposed ITDP investments in and near the feeder port subprojects. In addition, as part of the project's Poverty and Social Analysis (Section 3 - Volume V), the stakeholder analysis serves to support proposed recommendations for any needed subproject modifications and/or potential additional measures that will serve to enhance subproject benefits as measured by poverty alleviation and/or social benefits to the poor. A survey of a sample of ship operators and passengers was also undertaken at each subproject site, as well as focus group discussions and meetings with families directly affected by land acquisition or impact on structures or displacement of boat moorings.

5.3.8 The participants of the focus group and stakeholder meetings included PPA Port Managers, RPMA Port Managers and port engineers, representatives of various provincial and municipal government agencies including Provincial Planning and Development Officer, Municipal Planning and Development Officer, Department of Social Welfare and Development, DENR-ARMM, Provincial Health Office, Bureau of Fisheries and Aquatic Resources, Office of the Mayor, Mindanao State University, LGUs, barangay captains, representatives of various people's organizations such as Barter Associations, Fishing Associations, representatives of affected families, and representatives of boat owners, boat and vessel operators, and passengers The full stakeholder analysis is presented in Section 3 - Volume V.

5.4 Action Plans for Environmental and Social Safeguards

5.4.1 Environmental Management and Monitoring Plans

5.4.1 An EMP and monitoring plan has been prepared for each subproject. The EMPs set out the measures required to be implemented in order to mitigate the low-moderate environmental impacts anticipated to occur during the construction and operation phases.

5.4.2 The monitoring plans establish the parameters that must be monitored during construction and then during operation, the methodology for the monitoring, the responsibility for the monitoring, and the costs.

5.4.3 The EIS reports for the three airport subprojects included costs for monitoring, the reports were submitted between December 2001 and February 2002 and costs were based on 2001 prices, therefore inflation adjustments have been added. The five IEEs prepared under the PPTA include monitoring costs for the hub port and feeder port subprojects.

5.4.4 In total monitoring costs, for both construction and operation phases (of all eight subprojects), are estimated to be PhP 23.6 million (US$ 454,500)

5.4.2 Institutional Requirements for Environmental Management

- ***Recommended Organizational Structure for ITDP Environmental Management***

5.4.5 The recommended structure to handle the environmental management aspects of the project is for the DOTC, PPA, and RPMA-ARMM to each establish an Environment Unit (EU). The EUs will provide support to the regional offices actually implementing the subprojects. The EUs and each Safety and Environment Management Staff (SEMS) will have four staff: a head (senior), environmental specialist, social specialist (resettlement) and a safety specialist. SEMS will be established in ATO-PPA, ATO-BA and ATO-CA. For Jolo and Bongao the PMOs will appoint two staff for safety / environmental and social / resettlement while the Port Manager at

Sitangkai will appoint one staff to be responsible for social and environment tasks. These staff will be supported by environmental specialists that will form part of the teams of the two project design and supervision consultants; one for DOTC covering airport and feeder port subprojects and the other for PPA covering hub port projects. The requirements are shown in **Table 5.4.2-1**.

Table 5.4.2-1: Project Design & Supervision – Environmental Specialists

Project Design and Supervision Contract	International Team Leader		National Team Leader		Environmental Specialists	
	No.	Total Mths	No.	Total Mths	No.	Total Mths
DOTC (airports/feeder ports)	1	3	1	7	4	84
PPA (hub ports)	1	3	1	5	2	42
Total	**2**	**6**	**2**	**12**	**6**	**126**

5.4.6 In order to properly manage the environmental components of the project (implementation of EMPs and monitoring) the environmental specialists will be allocated to the regional offices of the implementing agencies as follows: two environmental specialists to cover the Zamboanga hub port and three feeder port subprojects; two environmental specialists to cover the General Santos hub port and Cotabato airport subprojects; and two environmental specialists to cover the Puerto Princesa and Butuan airport subprojects.

5.4.7 The estimated costs of the environmental management services to be provided as part of the two project design and supervision contracts are PhP 23.9 million (US$461,000) for the DOTC contract and PhP 14.6 million (US$280,000) for the PPA contract.

5.4.3 Draft TOR for Consulting Services and Technical Assistance

- ***Environmental Management Capacity Building for Implementing Agencies***

5.4.8 The respective agencies - DOTC-EU, and SEMS, in coordination with the relevant regional offices of DENR - shall be trained in the different aspects of environmental management and compliance monitoring to equip them with the necessary understanding and knowledge to undertake their work.

5.4.9 The training will from part of the overall responsibilities of the environment specialists of the project design and supervision consultants which include:

- Prepare an ITDP Environmental Management Manual;
- Develop the tools and procedures for environmental management, develop the framework for environmental management (and consult with DENR) and formulate the environmental management system for ITDP;
- Provide orientation on the Environmental Management Manual, EMPs, conditionalities specific to each ECC, and the monitoring plans;

- Undertake a training needs assessment;
- Design, develop and implement a suitable training program;
- Prepare the required training materials in consultation with DENR's Education Division;
- Conduct of training workshops, seminars, and an on-the-job training program; and
- Following completion of the workshops and during on-the-job training assist and support the EUs and SEMS to undertake the various environmental management aspects required for ITDP (implementation of EMPs, checking compliance with EMPs, and monitoring).

5.4.10 The cost of the training to be provided by the project supervision consultants has been included in the overall costing for the environmental management support.

- ***Environmental Management Institutional Strengthening for DENR***

5.4.11 In addition to reviewing the IEEs and providing environmental clearance for the subprojects, DENR will be required to undertake independent monitoring during construction and operation of subprojects and to audit the overall environmental management system proposed for ITDP. Consultation with DENR regional offices undertaken during the PPTA indicates that institutional strengthening is necessary for them to be able to adequately participate in ITDP implementation. To this end a Technical Assistance (TA) has been designed to be undertaken during the preparatory phases of loan implementation.

5.4.12 The TA will seek to build the capacity of the regional, provincial and community levels of DENR specifically in relation to the implementation of ITDP, and therefore will include:

- A rapid needs assessment focused on the priority needs of DENR-RO, PENRO, CENRO, DENR-ARMM vis-à-vis the ITDP's environmental management system;
- Clear identification of the roles and responsibilities, for participation in ITDP, at different levels;
- Development of a training program, based on workshops and on-the-job training, that will support wider capacity building initiatives and will strengthen DENR-RO, PENRO and CENRO in relation to their activities under ITDP; and
- Implementation of the training program.

5.4.12 The cost of the TA is estimated to be PhP 4.3 million (US$83,000). An outline TOR has been prepared.

CHAPTER 6

Institutional and Policy Reforms

6 INSTITUTIONAL AND POLICY REFORMS

6.1 Previous Studies on Policy and Institutional Reforms

6.1.1 Civil Aviation

6.1.1 The United Nations Development Programme (UNDP) and the International Civil Aviation Organization (ICAO) assisted the Philippines in preparing the Civil Aviation Master Plan (CAMP) in July 1992. The 1992 CAMP, which aimed to strengthen the air transport subsector by providing a management tool for a more effective, efficient and sustainable aviation program planning and implementation, recommended policy measures for greater liberalization of domestic air services, effective financial management through expenditure controls and new charging mechanisms, and investment programming guidelines for airport development.

6.1.2 The DOTC, in its formulation of the medium-term plan for the "Philippine Aviation 2000," convened the Philippine Aviation Convention '94 in March 1994 to identify the key elements and proposed activities under the aviation development plan, focusing on aviation policy, infrastructure and facilities, safety and education, security, and research and development. The Convention recommended an immediate action plan and future investment program taking into account the recommendations of 1992 CAMP and the operational requirements of the airlines and general aviation operators.

6.1.3 In pursuing the deregulation of the provision of transport services, Executive Order (EO) No. 219 was issued in 1995, which allowed new airlines in the domestic markets and the deregulation of air fares. Moreover, EO 219 permitted more than one Philippine air carrier to be designated to operate to airports of countries with bilateral air rights agreements.

6.1.4 The 1992 CAMP was updated by the DOTC/ ATO with technical assistance from the ADB in January 1997. The 1997 CAMP (TA 2559-PHI) covered a wide variety of issues, such as: (i) organization and institutional arrangements; (ii) human resources; (iii) policy and regulatory reforms; (iv) financial issues; (v) potential role of the private sector; (vi) air services network; (vii) airports; and (viii) Communication Navigation Surveillance/ Air Traffic Management (CNS/ATM). To provide a guide to assess the progress of aviation policy reform in the country, a Policy Reform Matrix was prepared covering: development context, legal and regulatory framework, institutional restructuring and corporatization, financial responsibility and cost recovery, domestic airline competition, international airline competition, safety, human resources development, and local and community issues.

6.1.5 As part of the loan application for the Third Airports Development Project, the Government prepared the Sector Reform Action Plan on the basis of the 1997 CAMP and the Aviation Sector Policy Statement. The key features of the Government's aviation subsector policies and guidelines included: (i) allowing operators flexibility to set fares based upon traffic volumes; (ii) progressive liberalization of the domestic airline industry to foster competition and promoting the cost-effective provision of feeder/rural services; (iii) a more liberal position on bilateral air service agreements with the end objective of promoting increased trade, tourism and investment; (iv) institutional reform, including the corporatization of ATO or creation of a new civil aviation authority; (v) private sector involvement in selected airport projects; and (vi) reducing tariffs and duties on the importation of aircraft and spare parts; and developing a national-based aviation industry.

6.1.6 During this same period, the ADB-assisted (TA 2487-PHI) 1997 Philippine Transport Strategy Study (PTSS) was commissioned to develop the Transport Agenda for the next 6-year Medium-Term Philippine Development Plan (1999-2004). It was specifically required to identify the role of the private sector in implementing the Agenda. Among others, the 1997 PTSS recommended a strategy for airport development in the Greater Capital Region, as well as a new functional classification of airports, based on the type of service provided, the scale of the communities served, and the type and size of aircraft to be accommodated. This would comprise just three international airports (Manila, Cebu, Davao), followed by principal airports and community airports. The number of international airports was proposed to be determined solely by traffic demand; i.e. they should only be operated where significant international traffic can be clearly justified commercially. These airports would require customs, immigration and quarantine controls. Sufficient flexibility was recommended in the proposed airport classification system to allow other international airports to be established as traffic conditions change.

6.1.7 The PTSS noted that ATO is a government agency under the DOTC and is not a public corporation. ATO does not prepare financial accounts in accordance with commercial practices (e.g. ATO annual reports contain no balance sheet and financial statement, including separate accounts for individual airports). One important recommendation of PTSS was the decentralization of airport management with airports as business centers, which would allow airport charges to bear relation to the different costs of operation and maintenance at each airport as well as institutionalize accountability and commercial control of airport business.

6.1.8 In 1998, further assistance to ATO was extended by ADB to detail the Civil Aviation Reform Action Plan and support the Sector Reform Task Force under ATO through the Institutional Strengthening for the Civil Aviation in the Philippines (TA 2207-PHI). The recommendations of this TA also included the devolution of airports to LGUs, other options for private sector participation in the subsector, and strategies for effective management under the corporatized ATO. The ATO Task Force with the support of DOTC was credited with the filing of House of Representatives and Senate bills creating the Civil Aviation Authority of the Philippines (CAAP), which combined the ATO and CAB for administrative convenience.

6.1.9 The most recent development in civil aviation is the conduct of the JICA-assisted Master Plan Study on the Strategy for the Improvement of National Airport, which was completed in February 2006. The 2006 Airport Master Plan Study aimed at improving the management of airports, resolving issues on airport planning and operations, and promoting sustainability in airport development and operation. More specifically, this JICA study recommended the: (i) revision of the airport classification system; (ii) development of airport standards and implementation of an aerodrome certification system; (iii) establishment of airport investment strategy for the Greater Capital Region (issue of Clark International Airport and Ninoy Aquino International Airport); (iv) improvement of airports in the short-term and long-term (up to 2025); (v) strategies for cost recovery and rational aviation pricing regulations; (vi) institutional restructuring in airport management (creation of the Civil Aviation Authority of the Philippines and the Airports Authority of the Philippines for all international airports); (vii) transfer of feeder airports to LGUs; (viii) strengthening of airport security; and (ix) improvement in airport and aviation data quality and management. The highlights of its recommendations will be reviewed further in subsequent sections.

6.1.2 Maritime Transport

6.1.10 In 1989, maritime transport reforms were discussed by a multi-disciplinary group of stakeholders under the aegis of the Presidential Task Force on Inter-Island Shipping. The Task Force was created to address of maritime accidents resulting in heavy casualties such as the MV Dona Paz and MV Don Juan collision incidents, which ranked among the world's worst accidents. Key recommendations of this Task Force focused on the liberalization of the domestic shipping industry, modernization of ports and selective privatization, and the formulation of specific measures to improve maritime safety.

6.1.11 In 1992, the JICA Nationwide Roll-on/Roll-off Transport System Development Study provided a detailed assessment of RoRo ports and ferry services in the Philippines. The priority list of 42 RoRo ports became the basis for the development of port facilities and operation of additional RoRo ferry services nationwide.

6.1.12 In keeping with national economic policy under the Ramos Administration, partial deregulation was introduced in the Philippines through the issuance of Executive Order (EO) 185 in 1994, which set out to liberalize the domestic shipping industry by making it easier for new operators to enter service. About this time, EO 213 deregulated domestic shipping rates, except the tariffs for basic commodities (rice, corn and other agricultural produce) and third-class/economy class passenger fares.

6.1.13 A comprehensive assessment of the maritime transport industry was carried out under PTSS in 1997. The key recommendations of the Study included: (i) a new classification of PPA ports based on the scale of operations (primary, main and local ports); (ii) unbundling of PPA functions by separating its regulatory powers over competing private ports; (iii) cost-based setting of port tariffs; (iv) port competition and privatization; and (v) decentralization of management functions on tariff setting and investment in individual ports.

6.1.14 PTSS presented the first integrated view of the modal interconnections. The intermodal connections were group into two, namely: road access connections and multimodal routes. For road access connections, PTSS noted the need to ensure efficient interface from road to the other modes of transport and to address accessibility problems in light of growing urban traffic congestion in the vicinity of airports and ports. On the multimodal routes, PTSS cited the importance of the conventional RoRo vessels and modern fast crafts in the development of extensive road-sea linkages. The potential of sea-air routes in islands with no direct airport connections was studied particularly for 30 economically significant islands which do not have an airport and are a long way by sea from the nearest island with at least feeder air services. In the case of these small and remote islands, passengers use multimodal routes, combining road-sea-road-air-road links. The main recommendation on intermodal linkages was the improvement of access roads and the improvement of passenger terminal facilities in airports and ports.

6.1.15 The most comprehensive review of the national port system was undertaken in 2003-2004 with the conduct of the JICA Study on the Master Plan for the Strategic Development of the National Port System. The 2004 Port Master Plan recommended: (i) reclassification of ports into international gateway, principal ports, major ports and regional ports; (ii) establishment of the national maritime transport network comprising of international trunk routes and domestic maritime trunk routes; (iii) a port investment program focusing on international and domestic container, bulk cargo, break-bulk facilities and RoRo ports for mobility enhancement; (iv) transfer of the port operational functions of PPA to terminal operators under lease

arrangements; (v) decentralize port management through the creation of Regional Port Authorities (RPAs) and a new agency under the DOTC, the Philippine Port Administration Agency, tasked with coordination and supervision on nationwide issues such as formulation of basic policies for port development, coordination of main projects of all RPAs, regulation of port security problems, etc.; and (vi) promotion of private sector investment in port development and operation.

6.1.16 The most recent maritime transport study, which was completed in 2006 and funded by JICA under the supervision of the Maritime Industry Authority (MARINA) resulted in the Domestic Shipping Development Plan. This Plan aimed at formulating a domestic shipping development plan up to 2015 for the enhancement of reliability and sustainability of the domestic shipping industry, and conducted a feasibility study on the Sustainable Ship Modernization Scheme for vessel re-fleeting and modernization. The Plan provided the detailed implementation mechanisms and action program to support the Domestic Shipping Development Act of 2004 (RA 9295), which deregulated tariff setting with the objective of keeping the shipping charges and fares competitive and affordable.

6.1.17 On shipping policy and institutional development, the 2006 Domestic Shipping Development Plan recommended: (i) further streamlining of franchising procedures; (ii) transformation of MARINA from a regulatory body into a shipping development promotion agency with the proposed Vessel Leasing Program and Asset Pool Trust; (iii) devolution of local shipping routes to LGUs; (iv) enhancement of maritime safety and security; (v) upgrading of the trunk liner shipping service presently served by ROPAX vessels (cargo-passenger ships of the Super ferry type); (vi) development of cold chain network for high value perishable goods (fish products, fruits, vegetables, meat products); (vii) replacement of wooden hull vessels; (viii) development of short-haul RoRo routes; and (ix) institutional strengthening on ship management and regulation.

6.1.3 Road Transport

6.1.18 Not until the early 1990's did official development assistance in the Philippines accord importance to strengthening the institutional capacity in the road sector. The road master plan studies for the DPWH from 1992-1999 focused efforts in developing priority road projects for investment, except the 1994 Philippine Road Classification Study (ADB) which recommended a functional classification of roads based mainly on the proportion of local and through traffic using the roads. The new road classification system, which was not adopted, should have transferred the financial and maintenance responsibility from the national government to LGUs. Road sector studies of the ADB and the World Bank noted the concluded that the road sub-sector reforms should cover the following building blocks for effective road management: (i) the involvement of road users in the management of roads to win public support for adequate road funding, to control potential monopoly power, and to constrain road spending to what is affordable; (ii) securing an adequate and stable source of funding based on an appropriate system of road user charges and ensuring that there are sound arrangements for channeling funds to the road agency or agencies; (iii) establishing a clear organizational structure for the management of the highway system and defining who is responsible for what, both for roads and road traffic; and Strengthening the management of roads by providing effective systems and procedures, strengthening managerial accountability, and attracting the most competent available staff by increasing performance-related incentives and staff remuneration.

6.1.19 Noting the deficiencies in the national road network, particularly the quality of construction of newly built roads and the state of disrepair of existing pavements, the 1997 PTSS pushed for the adoption of revised design and construction standards and the outsourcing of maintenance works. The 1997 PTSS also identified institutional deficiency as a core problem: DPWH was not sufficiently proactive in maintaining and developing the national road network. This situation was evident in the state of the road sector: (i) there was no clear strategy for the sector; (ii) there was a patchy picture of maintenance; (iii) planning was substantially ineffective; (iv) road design and construction were often poor and the performance of contractors is questionable resulting in lengthy construction times, which reduce estimates of economic viability; and (v) there were still large areas with network deficiencies. The 1997 PTSS further concluded that to solve the institutional problem, it was necessary to establish: (i) an autonomous national road and bridges agency responsible for maintaining and developing the national network; and (ii) a road maintenance fund from earmarked transport taxes. Another radical approach suggested by PTSS was to allow the private sector to manage parts of the national highway network.

6.1.20 In 1999, the Better Roads Philippines (BRP) provided management options for road administration and alternative financing structures as part of the umbrella "Business Process Re-Engineering" of DPWH under the World Bank-financed Highway Management Project. Following a broad-based consultation process within DPWH, BRP recommended for the creation of a new body for the maintenance of the national road network. Under its proposed changes, road construction and non-road related activities would rest with DPWH, unless changed under the on-going DPWH re-engineering program. The principal recommendation of BRP was the upward adjustment in vehicle registration fees and the use of collections as earmarked funds for road maintenance. The basic structure of the independent road fund body was later on carried through in the creation of the Road Board and its Secretariat under Republic Act No. 8794, dated 27 June 2000, imposing a Motor Vehicle User's Charge (MVUC) on owners of all types of motor vehicles.

6.1.21 Under the ADB Fifth Highway Project and the World Bank Highway Management Project, DPWH completed the updating of planning and management manuals and guidelines and the development of a comprehensive Road Information Management Support System (RIMSS), which would replace the existing fragmented system with readily accessible, relevant and accurate information for decision-making. RIMSS also aimed to provide analytical tools and to apply information technology in DPWH's systems and procedures.

6.1.22 In 2000, DPWH proceeded with the First National Roads Improvement and Management Project (NRIMP 1) with funding support from the World Bank. NRIMP will assist the country strengthen its institutions and reform the road sector through a phased approach (over nine and half years), thereby ensuring the improvements are sustainable. The project had two main thrusts: (i) the business improvement component, which aimed to improve the quality and delivery of DPWH services through a major business process re-engineering effort that will focus on customer needs, improved efficiency and effectiveness, and use of technology; and (ii) a policy and institutional reforms component at will improve the institutions' capacity to manage and finance the road sector, introduce business principles, recover costs, sustain finances, involve stakeholders and users in overseeing the assets, create organizations for independent and decentralized operations, and allow the private sector to participate through increasing its capacity, quality and competitiveness.

6.2 Policy Issues and Recommendations

6.2.1 Scope of the Institutional and Policy Review

6.2.1 As cited in the ITDP Second Interim Report on the policy reform agenda, the tripartite meeting noted the substantial progress in implementation of the road policy reform program through the support of donor agencies, notably ADB and the World Bank. As agreed, Phase 2 of ITDP will include more detailed analyses of intermodal transport policy and institutional, legal and regulatory frameworks. Particular attention will be given to: RoRo ferry service operation, pricing and investment; domestic air services; airport operation, management and pricing; restructuring of the civil aviation organizations; and expansion of air and sea linkages under the economic cooperation of the BIMP-EAGA.

6.2.2 While a number of aviation and maritime issues were dealt with, albeit extensively, in the sector policy and planning studies mentioned in Section 6.1, the focus on the ITDP work has been confined to intermodal and mode-specific issues of direct relevance to the efficient functioning and effective management of the intermodal transport system in the Southern Philippines.

6.2.2 Civil Aviation

6.2.3 For the last 10 years, the government had taken a number of steps towards a more liberal civil aviation policy framework, particularly in the delivery of air services. Borne out of the policy and capacity-building recommendations of the 1997 PTSS, the earlier Updated MTPDP (2001-2004) set new directions towards longer-term improvement in governance, structural reforms, partnership approaches, increased transparency and accountability and mainstreaming of stakeholders participation in infrastructure development. Over the years, the government, in cooperation with international lending institutions and bilateral partners, initiated pro-market policy reforms, substantial privatization (i.e. unbundling of government functions), and private sector participation in capital projects, among others.

6.2.4 The draft bill on the creation of the CAAP, including the annotation/comparison with similar bills filled in the Thirteenth Congress appears as **Appendix D**.

6.2.5 **Corporatization of ATO**. The Philippine Government committed to ADB, as part of the institutional reform agenda attendant to the Third Airports Development Project, the restructuring of ATO and CAB into a government-owned corporation responsible for safety regulation, operation of national airports, and the regulation of domestic and international air services. The ADB TA on Institutional Strengthening of Civil Aviation Sector provided direct support to the ATO Task Force in crafting the proposed legislative measure. More specifically, the government agreed to January 1, 1999 as the target date of achieving the corporatization of ATO through the passage of the law by Congress (note that the corporatization of Davao International Airport (DIA) by December 31, 1998 was earlier committed by the Government to ADB as part of the capital assistance in the development/ upgrading of DIA).

6.2.6 Based on DOTC records, three bills were filed in the Eleventh Congress (1998-1999):

- House Bill No. 2306 for the creation of Davao Airport Authority and the inclusion of Davao Airport management under the proposed CAA;
- House Bill No. 1603 to create CAA by amending the Civil Aeronautics Act passed in Jun 1952 (Republic Act No. 776); and
- Senate Bill No. 1768 for corporatization of Laoag and Zamboanga Airports.

6.2.7 However, none of these bills received passages, due to insufficiently detailed presentation by DOTC at the Congress. In a recent development, a consolidated version of a CAAP as a single aviation body that will have regulatory and operational mandate has been forwarded to the Senate and House of Representatives in a draft bill in March 2005 for enactment.

6.2.8 Apart from the proactive initiative of DOTC and ATO to advance the Congressional processing of the CAAP bill, the remaining issue remains whether CAB should be integrated under the proposed CAAP. The previous studies funded by the ADB and JICA on aviation policy reforms have recommended the separation of regulatory and operational functions. However, as noted in Para 6.1.8, the ATO Task Force on Policy Reform decided on CAB inclusion in the CAAP for administrative convenience and contrary to the recommendation of the Consultant of TA 2205-PHI. Just recently, the MTPDP, 2004-2010[1], sets the policy guidelines on ATO corporatization by stating that:

> *"Consistent with the scrap-and-build policy of the national government, the conversion of the Air Transportation Office (ATO) into a corporate body shall be pursued. An independent oversight unit shall be established within the Department of Transportation and Communications (DOTC) to handle economic and safety concerns. An independent accident investigation group will also be established."*

6.2.9 The separation of functions in civil aviation management signifies the separation of the regulator and operator or service provider, i.e., separate organization between civil aviation administrator and airport operators or air navigation service provider. ICAO recommended this clear demarcation of roles from the viewpoint of improved accountability. The separation of function has become an international practice not only in advanced and many developing countries. More specifically, ICAO stated that:

> *"In those States where the State is both the regulatory authority and an operator, manufacturer or maintenance organization, the requirements of the Convention will be met, and public interest better served, by clear separation of authority and responsibility between the State operating agency and the State regulatory authority. The certification and continuing surveillance procedures should be followed as though the operating agency was a non-government entity." (Section 2.4.9, Part A, Safety Oversight Manual, Doc 9734-AN/959)*

[1] Chapter 22 Bureaucratic Reforms, page 258.

6.2.10 In view of the above, the ITDP Project Team recommends the exclusion of the CAB from the proposed CAAP and retaining its quasi-judicial function as economic regulator on civil aviation services, with its Board presently chaired by the DOTC Secretary. As the MTPDP specifically confirmed the policy to reorganize the civil aviation organization, a revised draft of the CAAP bill will need to be certified by the President as an urgent administration measure to ensure expeditious consideration by Congress. This recommendation should be given priority. The ITDP Team further recommends the inclusion of a TA for the institutional strengthening aimed at assisting in the establishment of the CAAP. This assistance would be available after passage of the legislation creating the CAAP.

6.2.11 **Devolution of Airports**. The 1997 Aviation Sector Policy Statement provided for the divestment of national airports by the corporatized ATO either through:

- management by existing airport authorities (MIAA, MCIAA, SBMA, CIAC);
- privatization of airports (or of parts such as the passenger and cargo terminal buildings);
- transfer of assets and management responsibility to local government or any government corporation; and
- closure of airports which are no longer required.

6.2.12 The JICA Airport Master Plan, citing international experiences, recommended the merging of the international airports into the proposed Airport Authority of the Philippines (AAP), which integrates management of all nine international airports, i.e., NAIA, Clark, Subic Bay, Mactan Cebu, Davao, Zamboanga, General Santos, Laoag and Puerto Princesa. In other ASEAN countries, the network of airports concept is widely practiced for the management of national airports as indicated in **Table 6.2.2-1**. The 2006 Airport Master Plan prepared a draft bill creating the AAP for consideration by DOTC and ATO.

6.2.13 The concept of integrated international airport operation would come to be tested with the issuance of EO 341, dated 04 August 2004, placing the international airports of Laoag, Clark, Subic, Mactan-Cebu, Davao, General Santos and Zamboanga under the administrative supervision of MIAA. On 02 March 2006, the implementing rules and regulations of EO 341 was issued by the MIAA Board which clarified that the covered airports, to include any one of the listed international airports and other international airports as may be established in the country, availing of the financial assistance fund provided by the MIAA under a comprehensive and integrated policy, plan and program for the management, operation, maintenance and development of such airports in accordance with international civil aviation standards.

6.2.14 The MTPDP[2] specifically stated that "*there shall be a moratorium on the establishment of Government Owned and Controlled Corporations (GOCCs) and their subsidiaries.*" This provision is in line with the Government's policy to maintain fiscal discipline in public spending, particularly with the large deficits of GOCCs requiring government advances as well as direct subsidies to their operation. Only those new agencies identified under the Plan can be justified for creation or restructuring such as the corporatization of ATO.

[2] Chapter 8: Fiscal Strength, Page 100

Table 6.2.2-1: Integrated Airport Authorities within ASEAN

Thailand ○ Airports of Thailand (AOT) ▪ Manages 6 international airports including SBIA which is under construction ▪ 92% of total passenger traffic in Thailand is handled by AOT ▪ Partially privatized government corporation
Malaysia ○ Malaysia Airports Holding Berhad (MAB) ▪ Manages all 37 airports in Malaysia ▪ 100% of passenger traffic in Malaysia is handled by MAB ▪ Partially privatized government corporation
Indonesia ○ Angkasa Pura I (AP-I) ▪ Manages 13 eastern Indonesian airports including Bali International Airport ▪ 100% government owned corporation ○ Angkasa Pura II (AP-II) ▪ Manages 10 western Indonesian airports including Jakarta International Airport ▪ 100% government owned corporation ○ 94% of total passenger traffic in Indonesia is handled by AP-I and AP-II
Vietnam ○ Northern Airports Authority (NAA) ▪ Manages 6 airports in northern Vietnam including Hanoi International Airport ▪ 100% government owned corporation ○ Middle Airports Authority (MAA) ▪ Manages 8 airports in central Vietnam including Danang International Airport ▪ 100% government owned corporation ○ Southern Airports Authority (SAA) ▪ Manages 10 airports in southern Vietnam including HCM City International Airport ▪ 100% government owned corporation ○ 100% of passenger traffic in Vietnam is handled by NAA, MAA and SAA.

Source: JICA, Airport Master Plan Study, 2006

6.2.15 Considering that a funding and management mechanism has been established by the Government to assist international airports short of the required legislation as in the proposed AAP, the ITDP Project Team recommends the deferment of the filing of another aviation bill. As cited in the implementing rules and regulation of EO 341, the MIAA has to develop the detailed implementation plan and guidelines for international airports to apply and avail of the MIAA's financial support. With most of the identified airport authorities having original charters (enabling laws on their creation), the administrative arrangements on the transfer of supervision and control from their respective Boards to the MIAA Board requires further review and formulation of detailed guidelines.

6.2.16 **Transfer of Feeder Airports to LGUs**. The 2006 Airport Master Plan Study noted that 40 feeder airports have no commercial scheduled flights. The number of passengers at these airports was only 43,456 in 2004, which accounted for about 0.2% of total air passengers in the Philippines or 0.7% of total air passengers at ATO airports. In terms of expenditures, these airports required PhP51 million to keep functional and earned for ATO only PhP 1 million in airport revenues. This study recommended for their transfer to LGUs which are viewed as being in a better position to respond to local community needs.

6.2.17 While most of the feeder airports cater mainly to general aviation passengers, a number of them have been transformed into busy airports by attracting foreign and local tourists such as the airports of Caticlan (ranked 10th overall in terms of air passengers), Busuanga, Camiguin and Siargao. On the other hand, some of them serve remote parts of island provinces such as Sanga-Sanga Airport. The devolution of these feeder airports to LGUs should be undertaken selectively as the recipient LGUs may not be in financially able to sustain their operation noting that majority of LGUs[3] are heavily dependent on their Internal Revenue Allotment (IRA), particularly for provinces and fourth, fifth and sixth class municipalities.

6.2.18 Noting that feeder airports may serve different purposes (access, tourism, social service, among others), the decision on their retention within the corporatized ATO should be subject of further studies. The ITDP Project Team recommends the inclusion of the preparation of feeder airports devolution guidelines in the TA for the institutional strengthening of the CAAP.

6.2.19 **Pricing of Airport Services**. The 1997 PTSS cited that airports should be financially self-supporting, except where: (i) air services provide vital communications for people in isolated parts of the country, which requires some form of subsidy; and (ii) for developmental airports designed to stimulate local economic growth. On the whole, the government agreed to a pricing framework for infrastructure service providers, including government bodies, as follows:

- All service providers shall be free to set their own charges and collect their own revenues under a charging system consistent with ICAO guidelines;
- All service providers, whether owned by the government or private entities, shall pay the corresponding taxes, unless otherwise provided by laws; and
- Transactions with infrastructure providers shall be through usual commercial contracting arrangements.

6.2.20 However, as noted by ADB, in their report on the Institutional Strengthening of Civil Aviation Sector TA[4]:

> "*Further, following the TA recommendations, the Government approved a 300 percent tariff increase in nominal terms in September and November 1998 through Department Orders 98-1177 and 98-1178, which also requested that tariffs be revised periodically. A revised schedule of 20 percent tariff increase is presently with DOTC Secretary for approval within 2005.*

6.2.21 To date, the proposed adjustment in airport fees and aeronautical charges have not been approved, due to the insistence on the requirement of full public hearing by the DOTC legal staff. There appears to be no urgency in setting new tariff rates, despite the recent adjustment by MIAA and MCIAA, for instance, of their passenger terminal fee from PhP100 to PhP200 in August 2005. Furthermore, with the full operation of the upgraded Davao International Airport (DIA) in 2003, some fee adjustments are called for and new charges have to be introduced such as the aircraft tacking (DIA is the first domestic airport under ATO with boarding bridges).

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3 Bureau of Local Government Finance, Statement of Income and Expenditure Report for CY-2004, 2005

4 Technical Assistance Completion Report for TA 2207-PHI: Institutional Strengthening of Civil Aviation Sector, ADB, 2005

6.2.22 In common with previous studies, the 2006 Airport Master Plan recommended increasing airport tariffs and formulating rational pricing regulations for airport services. The tariff review under the 2006 Airport Master Plan revealed that the MIAA levels of international and domestic passenger service charge are comparable to those in ASEAN countries (**Table 6.2.2-2**). Furthermore, MIAA domestic landing and take-off charges are similar to neighboring countries, but international landing charges are much higher than Bangkok and Kuala Lumpur. Airport charges at ATO airports are significantly lower than MIAA rates.

Table 6.2.2-2: Tariff Comparison by Aircraft and Passenger Service Charges (US$), 2005

Airport	A330-300		A320-200		Passenger Charge	
	International	Domestic	International	Domestic	International	Domestic
Jakarta	1,216.8	64.3	349.2	17.1	10.5	1.2
Kuala Lumpur	606.6	606.6	160.7	160.7	11.7	1.6
Bangkok	682.0	341.0	188.7	94.4	12.4	1.2
Manila	1,410.9	498.8	407.3	144.2	10.4	1.9
Seoul	1,849.9	1,849.9	605.5	605.5	17.0	5.0

Source: JICA, Airport Master Plan, 2006 (based on ICAO Aircraft and IATA Tariff Data)

6.2.23 To avoid non-transparent, cross-subsidies within the aeronautical and airport business incomes, the separate accounting of cost of delivering the aeronautical services and market responses for airport businesses (dual-till approach) should form the basis for tariff setting. The use of a 'dual till' approach is predicated on the need to recover aeronautical costs only through aeronautical revenues. The 'dual till' approach additionally recognizes that aeronautical services are often subject to regulation whereas airport business services are instead influenced by competition and market demands.

6.2.24 As cited in the 2006 Airport Master Plan, with the improvement in airport facilities, there is compelling reasons and economic justification for ATO to adjust its airport fee structure to MIAA's level. Taking the MIAA rates as the willingness to pay values (arguing for instance that a departing passenger at NAIA pays PhP200 and should be willing to pay the same price for comparable airport facilities in the upgraded Puerto Princesa Airport), ATO can raise its fees by an average of 100% from their current levels.

6.2.25 The ITDP Project Team recommends the dual-till approach in assessing the tariffs of airport operation (aeronautical and non-aeronautical services) since this approach enhances incentives to more commercially-oriented management of the airport. Likewise, the ITDP Team recommends for the adjustment of ATO tariffs by 100% or more for airports recently upgraded to international civil aviation standards such as the Davao International Airport and the General Santo Airport. A review of all airport tariffs should be undertaken through the proposed TA on institutional strengthening.

6.2.26 **Privatization of Airports**. As stated in previous studies, the foremost opportunities for private sector involvement in airports are in the provision of terminal buildings and ancillary services. The extent to which these can be achieved will depend on the success of the proposed corporatization of ATO and its being managed with commercial orientation.

6.2.27 A more recent strategy to commercializing airports and allowing private sector involvement in airport development was the agreement between the DOTC and the National Development Corporation (NDC) to bid out the preparation of a business plan for the implementation of the Laguidingan Airport (Cagayan de Oro), which suffers from inadequate funds to start the construction of the new airport, and the operation of Davao International Airport. The agreed scheme involves the selection of a private sector group which would help finance the completion of the Laguindingan Airport, operate this airport commercially, and be allowed to manage the Davao International Airport.

6.2.28 Section 6.2.5 presents in greater detail the options on PSP/ PPP, particularly in consideration of the ITDP airport and port subprojects.

6.2.29 The summary of ITDP recommendations on civil aviation policy reforms is shown in **Table 6.2.2-3**.

6.2.3 Maritime Transport

6.2.30 A 2004 discussion paper from the World Bank noted that the "reported high cost of shipping not only has negative implications for the overall efficiency, competitiveness and growth of the Philippines, but it also makes it more difficult for the Government to achieve its poverty reduction objectives. Inefficient port and shipping services can make foreign imports, particularly of agricultural commodities, more financially attractive, and in the case of exports, they would reduce the potential income of farmers and producers in Mindanao and other islands."[5]

6.2.31 **PPA Port Functions**. This World Bank paper and previous studies, notably the 1997 PTSS, pointed to the institutional framework of the PPA, being the developer, operator and regulator, as a major flaw that hindered the improvement of port infrastructure and services. Since PPA is the government agency that issues the permits to construct and operate ports, it has the power to control competition. However, it must be said that PPA has granted permits to private ports that are in close proximity to, and in competition with, their existing ports.

6.2.32 Another issue is PPA benefiting in its own regulations. PPA regulates and approves port tariffs and increases thereof. The PPA's charter through Presidential Decree (PD) 857 allows it to have a share of at least ten percent (10%) from cargo handling revenues. This puts PPA in a conflict-of-interest situation because higher cargo rates would invariably result to higher revenues for PPA. This is a case of a regulator benefiting from its own regulations.[6]

6.2.33 Because of these identified flaws in the policy and regulatory system in the ports subsector, various studies and policy papers recommended the review and amendment of the charter of the PPA (and, by extension of the rationale, of the Cebu Ports Authority and Regional Ports Management Authority of ARMM), and to separate the regulatory responsibilities from ownership, development and operation functions. The review should also consider the clear delineation of the roles of the government and the private sector in the development and operation of ports and port facilities and how to pursue the objective of developing ports in less developed areas of the country.

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[5] See home page: http://siteresources.worldbank.org/INTPHILIPPINES/Resources/DB12-Portsandshippingpolicybrief-June29.pdf

[6] A competition policy and efficient regulatory framework for the port sector: *Getting it Unberthed.* – Gilberto M. Llanto, Philippine Institute of Development Studies Policy Notes, February 2005

Table 6.2.2-3: Summary Matrix of ITDP Recommendations on Civil Aviation Reform

Major Issues	1992 CAMP	1997 CAMP and TA on Strengthening of Civil Aviation	1997 PTSS	2004 MTPDP (2004-2010)	Recent Developments 2006 Airport Master Plan Study	ITDP Recommendations
Corporatization of ATO	Corporatization of ATO	Recommend corporatization of ATO Prepared a draft bill.	Recommend corporatization of ATO	***Pursue conversion of ATO into a corporate body***	• CAAP Bill filed 3 times • Under consideration in the 13th Congress.	• Revised bill to exclude CAB • President certifies bill as priority measure
Separation of Regulator and Operator Functions	Separate regulatory and operational bodies	Separation with creation of subsidiaries by CAAP	Separate regulatory and operational bodies	***Establish an independent oversight unit within DOTC on economic and safety concerns***	• Separation with creation of subsidiaries by CAAP	• CAB as separate quasi-judicial body • Safety regulation to CAAP subsidiary
Devolution of ATO Airports - Creation of AAP - Transfer of Feeder Airports to LGUs	• No small airport authority with less than 1 million passengers per year. • Large authority for airports and route facilities are suggested.	• MIAA and MCIAA to merge ATO airports. • Encourage LGU and private sector to take over ATO airports. • Close unused airports.	• Decentralize management of ATO airports by areas (clusters). • Corporatize airports by clusters • Sale and closure of ATO airports		• EO341, 2004 authorized MIAA to provide financial support to international airports. • DOTC/ATO reviewing the LGU transfer of airports	• Implementation of EO 341 • TA on Institutional Strengthening to MIAA on EO 341 and ATO on feeder airport devolution
Pricing of Airport Services	• Assume government budget for ATO airports • Increase tariffs for cost recovery	• Assume government budget for ATO airports • When corporatized CAAP will develop its airports. • Increase tariffs for cost recovery.	• Assume government budget for ATO airports • When corporatized CAAP will develop its airports. • Increase tariffs for cost recovery.	• ***Promote the users-pay concept*** • ***Periodic adjustments in fees and charges***	• ATO airports are funded by government budget • ODA is used for major projects • Current Bill excludes new airport devt from CAAP's role. • Cost recovery is improving.	• Dual-till approach in tariff setting • 100% increase in ATO tariffs, particularly to recently upgraded airports in Southern Philippines (Davao and General Santos)
Private Sector Participation	• Government can allow PSP.	• Sale of dozens of ATO airports.	• ATO to market selected airports to the private sector.	**Encourage PSP through applicable incentive program.**	• NAIA T3 BOT was implemented, declared void by the Supreme Court • New business model for Laguindingan studied	• Consider passenger terminal building operation by private sector for Southern Philippines airports

6.2.34 **Cargo Handling Operation**. One of the key concerns raised in a number of Mindanao shipping conferences is the setting of cargo handling rates by PPA. In 2002, the PPA Board approved the across the board 20% increase in cargo handling rates in all PPA ports. However, this was held in abeyance with widespread protests from shippers and ship-owners. Cargo handling services as defined in the PPA Administrative Order 10-81 cover arrastre, stevedoring and other related activities with the use of gears and other specialized cargo handling equipment and the supply of the required labor.

6.2.35 With PPA's application of uniform charges for cargo handling services, these charges do not reflect the true costs and take no account of differences in costs among PPA ports. The proper application of cost-based pricing should follow different tariffs at each port for each service provided.

6.2.36 The ITDP Project Team recommends the conduct of a comprehensive review of PPA tariffs and tariff setting procedures with the end in view of cost-recovery to eliminate cross-subsidies among port services. Moreover, the TA on Institutional Strengthening should consider alternative approaches to setting cargo handling rates to avoid what might be a conflict of interest.

6.2.37 **Port Planning and Investment**. Previous transport studies, such as the 1997 PTSS and 2004 Port Master Plan, called for the decentralization of planning, development and management of PPA ports. As of today, decision-making in PPA is highly centralized from the preparation of the annual port investment program, execution of foreign-assisted projects to the review and award of contract for the operations of cargo handling services at various ports. As decentralization of port management and fiscal autonomy takes time, the policy of devolution of port investment (transferring the responsibility for investment planning, design and implementation to the ports themselves), should be pilot tested.

6.2.38 Similarly, the responsibility of DOTC in the planning, financing and development of feeder ports should be devolved to PPA, with the strategic planning of transport systems and services retained at the DOTC level.

6.2.39 The ITDP Project Team recommends that alternate approaches be reviewed to devolve port investments. Based on the preferred approach, the preparation of detailed guidelines should be undertaken as part of the institutional strengthening TA for DOTC and PPA.

6.2.40 **Domestic Shipping**. The passage of Republic Act No. 9295, otherwise known as the Domestic Shipping Development Act of 2004, brought in a number of reforms in the domestic shipping industry. Fare setting was deregulated with the objective of keeping tariff competitive and affordable. Franchising requirements and procedures were simplified by dispensing with the tedious requirements and procedures previously provided in the Public Service Act (PSA) and related MARINA Circulars.

6.2.41 Nonetheless, in addition to this new deregulated and liberalized franchising environment and investment incentives, new ship financing schemes and marketing approaches should be developed to encourage new players and/or new investments, thereby fostering a fair and competitive playing field in the market.

6.2.42 Another reform being advocated is to devolve localized franchising functions to the LGUs. The current organizational structure and manpower level of the MARINA make it difficult for this agency to effectively evaluate all franchising applications, especially from the far-flung

island or coastal communities. To better regulate and further develop local shipping, it is recommended that franchises for shipping services within the territories of the LGUs (municipal or provincial) should be devolved to the appropriate LGU. This is very much like the devolution of regulation of tricycle operations from the Land Transportation Franchising and Regulatory Board (LTFRB) to the LGUs under the Local Government Code. However, MARINA should provide the guidelines for the proper evaluation of the safety requirements on vessels.

6.2.43 The ITDP Project Team recommends consideration of the recommendation of the 2006 Domestic Shipping Development Plan on the devolution of franchising for local shipping routes to the LGUs. As part of the Institutional Strengthening TA, alternative approaches will be review and recommendations made to achieve more cost-effective use of resources while maintaining services levels.

6.2.44 **Table 6.2.3-1** summarizes the recommendations on port policy and institutional reforms, including the ITDP recommendations.

Table 6.2.3-1: Summary Matrix of Study Recommendations for Ports Operations

Major Issues	PTSS	MTPDP (2004-2010)	Recent Development/ Current Status	ITDP Recommendations
PPA Restructuring	• Separation of regulator and operator functions • Decentralization of port management and fiscal autonomy	• Restructure port institution to improve port service • Transfer regulatory functions to an independent body	• NEDA Infrastructure Committee deliberating on the JICA Port Master Plan proposed new port institutions	• Review of PPA charter for separation of functions • Pilot devolution of port investment to two ITDP port subprojects • Devolution of feeder ports development from DOTC to PPA
Cargo Handling Rates and Tariff Setting		Promote the users-pay concept increase in cargo tariffs	• PPA bidding out consultancy for tariff review	• Review of tariff structure alternatives • Review alternative institutional rate setting arrangements and recommend cost-effective alternatives • PPA tariff review to include transfer of rate setting functions

Table 6.2.3-1: Summary Matrix of Study Recommendations for Ports Operations

Major Issues	PTSS	MTPDP (2004-2010)	Recent Development/ Current Status	ITDP Recommendations
Devolution of local franchising function to LGUs			• MARINA reviewing JICA Domestic Shipping Development Plan recommendations	• Review local franchising function to LGUs • Propose alternative institutional arrangement • Recommend cost-effective alternative
Private Sector Participation	• PPA to market selected airports to the private sector • Increased commercialization of ports	Encourage PSP through applicable incentive program.	• PPA awarded 10-year contract for the cargo handling operation of Zamboanga and General Santos Ports • Proposed 4-package bidding in the privatization of North Harbor	• Consider PSP/PPP components in Southern Philippines ports
Institutional Strengthening				• Undertake TA for policy framework aimed at strengthening port planning and operations

6.2.4 Roads

6.2.45 Road improvement projects were not considered as subprojects in the ITDP due to the significant portfolio of recent, ongoing and planned road projects and the under-investment in port and airport improvement in the Southern Philippines. However, the road transport sector is an important element in the intermodal transport system. There are in the Southern Philippines strategic road sector investments required to improve intermodal transport. These include:

- upgrade the national and provincial highway network;
- upgrade strategic rural roads;
- improve maintenance of highways and rural roads;
- assure axle – loading does not exceed legal limits; and
- improve road safety.

6.2.46 Each of these issues was discussed in the Second Interim Report (Section 2.2 and Appendix D-2).

6.2.47 The following paragraphs are recommendations on specific road links identified by the ITDP Project Team that, if undertaken, will ensure significant contribution to enhancing intermodal transport. For other important issues (related to rural roads, road maintenance, axle-loading and road safety), the discussion will briefly highlight the nature of the problem and actions that need to be taken by Mindanao-wide, provincial and national government organizations.

6.2.48 **Upgrade National and Provincial Roads to Enhance Intermodal Transport Efficiency**. Many roads in the Southern Philippines are in poor condition since the paved road percentage of 13 percent is over half of the national average of 21 percent of all roads paved with either concrete or asphalt. In the ITDP, a number of important road improvements were identified and proposed that would greatly enhance the Southern Philippines intermodal transport system. In the initial scoping meeting of the ITDP, it was agreed that while road improvement projects would not be considered for inclusion under the ITDP loan package, the Project Team would identify necessary road improvements and suggest actions to help accelerate the implementation of those road projects. The priority road improvements recommended by various stakeholders and strongly endorsed by the ITDP Project Team can be found in **Table 6.2.4-1**. These recommendations were forwarded to and discussed with MEDCO for inclusion in the deliberations of the Mindanao Working Group on Roads. **Table 6.2.4-2** shows that some of these roads are now in advanced preparation stages and a number are in the present priority pipeline of the Mindanao Arterial Road Task Force (MARTF).

6.2.49 **Upgrade Strategic Rural Roads**. Since a large percentage of cargo and passengers come from rural areas and the economic growth of the Southern Philippines is directly tied to growth in agriculture and tourism, there is a national strategic interest in upgrading rural roads. The most important constraint is the lack of budget used to improve rural roads by provinces and municipalities. There is however a number of donor-assisted projects improving rural roads. The DA and DAR are implementing farm to market road components of on-going projects such as the Infrastructure for Rural Productivity Enhancement Sector Project (ADB), Agrarian Reform Communities Project (ADB), Second Agrarian Reform Community Project (World Bank), Bukidnon Integrated Area Development (ADB), and Mindanao Rural Development Project (World Bank). New projects that are in the pipeline will include: Rural Road Development Project (ADB), Support to Mindanao Peace Process (ADB), ARMM Social Fund II (JBIC), and Strategy for Development of Upland Communities (ADB).

6.2.50 The problem of lack of adequate rural roads, and national and provincial highways as well, is directly tied to the lack of maintenance of these roads.

6.2.51 **Improve Maintenance of Highways and Rural Roads**. Little maintenance, deferred maintenance, and poorly implemented maintenance, in large part resulting from inadequate funding, leads to poor accessibility and high transport cost in the Southern Philippines and in the Philippines generally. Improving road maintenance is an enormous problem for the Southern Philippines and for the Philippines generally. Addressing the problem is beyond the scope of the ITDP, but actions to address it are on the agenda of the Government and a number of donor agencies. The problem of adequately maintaining roads results in part from the problem of overloaded trucks.

Table 6.2.4-1: ADB Intermodal Transport Development Project Recommended Priority Road Improvements by Region

IDENTIFIED BY PROJECT TEAM[1]	IDENTIFIED IN CONSULTATION WORKSHOPS
ARMM	
- Bridge from Bongao to Panglima Sugala - Basilan circumferential road** - New bridges into Cotabato City** - Cotabato City East Diversion - Awang to Upi to Kalamansig to Palimbang	► Circumferential road network for Tawi-Tawi leading to ports and airport*** ► Improvement of access roads: - Sumisip Port - Lamitan Port - Siasi Port - Pangutaran Port - Bongao Port
REGION IX	
- Zamboanga West Coast Road** - Zamboanga City Bypass - Pagadian to Ozamis Road	► Zamboanga West Coast Road to Zamboanga del Norte ► Pagadian to Sergio Osmena ► Expansion of roads leading to Zamboanga Port* and Pulawan Port in Dapitan
REGION X	
- CDO-Talakag-Camp Kibaritan Road - FS for Mindanao East-West Lateral Road - FS for Phivadec-Malaiba-Alae section (15km)*** - CDO bypass - FS for Panguil Bay Bridge***	► Panguil Bay Bridge from Tubod to Tangub ► FS for PHIVADEC-Malaiba-Alae section
REGION XI	
- Plan additional Davao bypass - Diosdado Macapagal flyover (MIP) - Tagum-Mati-Baganga Cateel - Davao-Samal bridge FS	► FS for Davao-Samal Bridge ► Road connecting Jose Abad Santos municipality in Dvo del Sur to Glan, Sarangani Province***
REGION XII	
- Awang-Upi-Lebak-Kalamansig** - Cotabato City East Diversion** - Cotabato City West circum - General Santos City circum - GSC bypass to port/airport - Glan-Jose Abad Santos - Palimbang-Kalamansig*** - Sen Ninoy Aquino-Kalamansig Road	► Widened roads leading to ports and airports ► Roads linking South Moro Gulf municipalities ► Diversion road going to the General Santos Airport to ease traffic congestion at the entrance of the Makar Port* ► Maitum to Palimbang***
REGION XIII (CARAGA)	
- Surigao to Davao Coastal Road	► Completion of "unfinished bridges" in Agusan del Sur
PALAWAN	
- Palawan South Road	► Concreting of National Highway from Roxas-El Nido and Taytay, Rio Tuba Road, Underground River & Abo-Abo to Rizal Roads ► Concreting of PPC to southernmost tip of Palawan and Taytay to El Nido Road ► Improvement of access roads: - Puerto Princesa Port - Puerto Princesa Airport - Taytay Port - Brooke's Point Port

CDO = Cagayan de Oro; FS = feasibility study; GSC = General Santos City;
* *Source:* Consolidated Issues and Concerns from the Regional Policy Consultations, 5th Mindanao Shippers Conference, 28 July 2005, AM Center, Makati City.
** In advanced stages of project preparation
*** In pipeline and priority of Mindanao Arterial Road Task Force.
(1) See Second Interim Report

Table 6.2.4-2: Priority Road Projects in Mindanao as Identified by Mindanao Arterial Road Task Force (April 2006)

ROAD NAME	LOCATION/COVERAGE	STATUS
Central Mindanao Road Project (Awang-Upi-Lebak-Kalamansig Section)	ARMM & XII	DE ongoing
Reconstruction of Quirino Bridge	XII & ARMM	Preconstruction activities ongoing
Basilan Circumferential Road	ARMM	Committed; loan signed on 2 October 2005
Lake Lanao Circumferential Road	ARMM	Committed; loan signed on 2 October 2005
Mindanao Roads Improvement Project (MRIP), Phase I (Cotabato City East Diversion Road)	XII	Committed; loan signed on 2 October 2005
Zamboanga West Coastal Road (Zamboanga City-Limpapa, Limpapa-Sibuco, Sibuco-Sirawai-Siocon, Siocon-Baliguian-Gutalac, Gutalac-Labason, Labason-Liloy)	IX	Committed; loan signed on 2 October 2005
National Roads Improvement Management APL 2 (Parang-Malabang-Marawi Section)	ARMM	Pipeline under World Bank
Tandag-Marihatag Road	Caraga	Pipeline under World Bank
Malita-Jose Abad Santos Road	XI	Pipeline under World Bank
Digos-Cotabato Road	XI	Pipeline under World Bank
Sulu Circumferential Road (Talipao-Maimbung-Parang, Indanan-Jolo-Patikul, Luuk-Panamao, Caluang-Panamao-P. Estino)	ARMM	Proposed
Construction/Rehabilitation of Nasipit-Masao Port Road	Caraga	Proposed
Construction of Magallanes-Banza-Butuan City Road	Caraga	Proposed
General Santos-Cotabato Coastal Road, Maitum-Kalamansig Section	XII	Proposed
Camp Andres-Lahing Lahing Transcentral Road	ARMM	Proposed
Timbangan-Romandier-Camp Andres Transcentral Road	ARMM	Proposed
Kalamansig-Palimbang Road	XII & ARMM	Proposed
Bongao-Panglima Sugala	ARMM	Proposed
Glan, Sarangani-Jose Abad Santos Road, Davao del Sur	XI & XII	Proposed
Phividec-Alae Road	X	Proposed
Iligan-Bukidnon Road	X	Proposed
Paguil Bay Bridge	X	Proposed

6.2.52 **Assure axle loads do not exceed legal limits**. Previous studies have shown that axle-loading on trucks in many areas of the Southern Philippines exceed legal limits. Particular attention should be given to road links with the most cargo traffic (see **Figure 6.2.4-1**). It is observed that the bulk of truck traffic flows originates and ends at the regional centers like Davao City, General Santos and Cagayan de Oro. The analysis also reveals the relatively high percentage of trucks (exceeding 30 percent of the total AADT at each road section) on the Davao-Bukidnon Road.

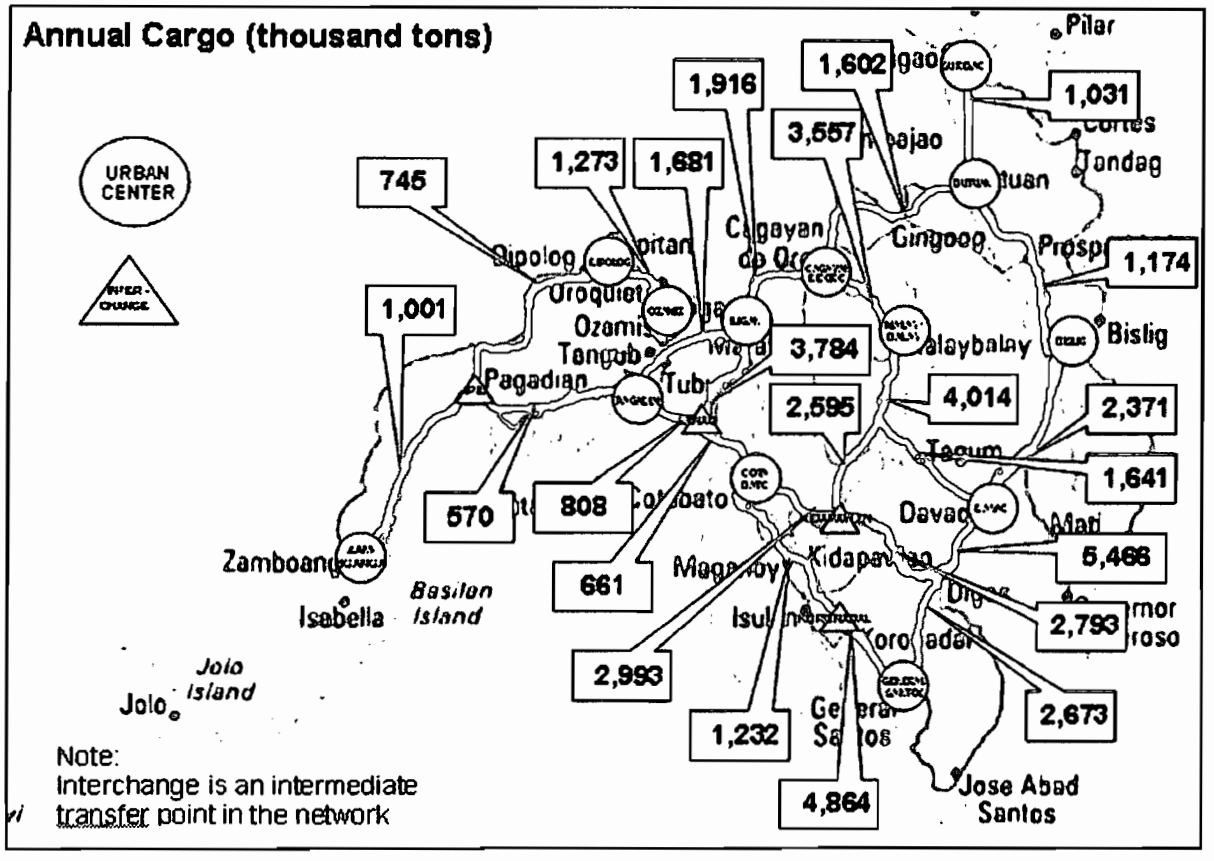

Figure 6.2.4-1: Estimated Annual Cargo Flows Along Major Arterials

6.2.53 Mindanao trucks were noted to have loads above allowable limits. Axle load surveys in Mindanao revealed that the most severe incidence of overloading occurred, mainly around Cagayan de Oro and Butuan (Northern Mindanao). Trucks plying the Mindanao road corridors have overloading factors exceeding the national averages. More specifically, 27.3% of Mindanao trucks exceeded legal GVW values, while 15.5% of trucks operating were found exceeding the axle load limit of 13.5 tons per axle. About 29.5% of Davao trucks exceeded the limits, while 18.9% of Cagayan de Oro trucks exceeded the permissible axle load.

6.2.54 **Improve Road Safety**. While increased attention is being given to road safety in the Philippines, further study of this important issue in the Southern Philippines is warranted. As highways and rural roads are improved, an increase in accidents involving speeding vehicles and pedestrians will occur. Specific attention should initially be given to identifying and rectifying "black-spots" or specific locations where an unusual number of accidents occur.

6.2.55 The ADB Sixth Road Project identified 35 hazardous sites nationwide and recommended appropriate treatments at these sites to improve road safety. Ten of these hazardous locations are situated in Mindanao (**Table 6.2.4-3**). The most accident-prone areas in the country are located in Zamboanga and Northern Mindanao regions. Overall, Mindanao roads registered the worst accident records in terms of severity of accidents and the total number of casualties.

Table 6.2.4-3: Hazardous Road Locations in Mindanao

Reference No.	Region	Location
26*	Region IX	Junction of Agusan - Misamis Oriental-Lanao Road/ Poblacion - Balingasag Road at Km 1390+074, Balingasag, Misamis Or.
27*	Region X	Junction of Agusan - Misamis Oriental - Lanao Road/ Gingoog - Claveria Road at Km 1315+670, Gingoog City, Misamis Or.
28*		Junction of Iligan - Cagayan - Butuan Road/ Tagoloan Road at Km 1418+250, Tagaloan, Misamis Oriental
29*		Junction of Iligan - Cagayan - Butuan Road/ Poblacion - Jasaan Road at Km 1405+200, Jasaan Misamis Oriental
30	Region XI	Junction of Quimpo Blvd/Sandawa St. at Km 1511+900, Davao City
31		Junction of Davao - Agusan Road/ Madaom Road at Km 1462+000, Tagum City, Davao del Norte
32	Region XII	Makilala - Kidapawan Road, Batalongan Bridge approach at km 1607+761, Kidapawan, North Cotabato
33		Section of Makilala-Kidapawan Road between Km 1614+000 and Km 1615+000, Makilala, North Cotabato
34	Region XIII	Agusan del Norte-Surigao Road, Taguibo Bridge approach at Km 1229+930, Butuan City
35		Agusan del Norte-Misamis Oriental Road at Km 1245+000, Butuan City

*Note: * Part of priority sites for immediate hazardous treatment*

Source: DPWH

6.2.56 A recent JICA-assisted road safety study[7] provided a detailed review of road safety management in the country and identified a number of problems, issues, and recommendations. These should be aggressively pursued by the Government.

6.2.57 **Recommendations:** While the priority focus of the ITDP policy change agenda will be on the air and port sub-sectors which are under the mandate of the DOTC, some attention should be given to advancing the road sector as part of the intermodal system. The focus of this limited agenda should be on:

- Working with MEDCO, DPWH, RDCs, and the Mindanao Road Working Group to accelerate implementation of the road segments identified in Table 6.1.3-1;

[7] Survey on Analysis of Data Collection System for Traffic Accidents in the Philippines, Final Report, JICA and DPWH, February 2004.

- Increasing and improving enforcement of laws on axle-loading using permanent and temporary or mobile weigh-bridges; and
- Assuring Mindanao involvement in road safety, road maintenance and rural road development initiatives of the Government and in Donor-assisted projects.

6.2.58 The Project Team recommends and has budgeted for technical assistance to MEDCO to help accelerate this agenda.

6.2.5 Intermodal Transport

6.2.59 **RoRo Services and the Strong Republic Nautical Highway**. The Strong Republic Nautical Highway (SRNH) Program that is anchored upon road-sea transport linkages provided by RoRo port facilities is, arguably, the single most beneficial inter-modal transport infrastructure development program in the last decade.

6.2.60 Presently, the SRNH extends from Manila to Iligan City via Dapitan City, covering 919 kilometers of road and 174 nautical miles of sea travel. Further expansion of the existing SRNH is being mulled by the DOTC. The extension of the Western Nautical Highway System to Zamboanga covers the linkages to the ports of Siasi, Bongao and Jolo and the RoRo link Zamboanga-Lamitan as a missionary route.

6.2.61 The Central Nautical Highway is seen as connecting Luzon to Mindanao by means of the following: 1) a sea link at Donsol, Sorsogon and Aroroy, Masbate; 2) a road link up to Placer, Masbate; 3) a sea link to Bogo, Cebu; 4) a road link to Cebu City; 5) a sea link to Tubigon, Bohol; 6) a road link to Jagna, Bohol; 7) a sea link to Mambajao, Camiguin; 8) a road link to the other side of Camiguin island at Guinsiliban; and finally 9) a sea link with Mindanao at Balingoan, Misamis Oriental.

6.2.62 An alternative alignment proposes that the Central Highway traverse by road the island of Cebu up to Toledo City, then connect to the Visayas with a sea link to San Carlos City in Negros Occidental, another overland link to Dumaguete City, then a final connection to Mindanao via the sea link to Dapitan City.

6.2.63 The Eastern Nautical Highway may traverse the same route as the Central Nautical Highway up to Aroroy, Masbate, then overland to Cataingan, Masbate, followed by a sea link to La Naval, Biliran where it can be linked all the way to Mindanao via the Pan-Philippine Highway.

6.2.64 Development of RoRo-capable port facilities was placed at the top of the shipping policy reform agenda. Executive Order 170 was issued in 22 January 2003 by President to promote private sector investment in the Road-RoRo Terminal System (RRTS). It was amended by EO 170-A dated 9 June 2003 to ensure coverage of the entire network of RoRo-capable port facilities regardless of the distance covered. Most recently, EO 170-B dated 19 September 2005 was also issued to encourage further expansion of the RRTS and reduction of transport cost through the projected increase in the number of RoRo-capable ports as well as the conversion of more private non-commercial port operations to commercial port operations.

6.2.65 EO 170-B has five main features:

- First, it directs the Philippine Ports Authority (PPA), the Cebu Ports Authority (CPA), the Regional Port Management Authority (RPMA) in ARMM and other independent port authorities to continue the development of more RoRo-capable ports in strategic areas of the country to widen the coverage of the SRNH program;
- Second, it directs the port authorities and the Maritime Industry Authority (MARINA) to ensure that port users benefit directly in terms of lower freight rates arising from the expected reduction of cargo handling costs brought about by the mandated reduction in RRTS charges;
- Third, it also directs all port authorities to ensure that said RRTS charges are applied uniformly to RoRo cargoes in all ports catering to RoRo operations;
- Fourth, it directs all port authorities to allow and encourage the conversion of more than 350 private non-commercial ports into commercial ports in the RRTS network, emphasizing that proximity to and direct competition with an existing public port shall not be a valid cause for non-approval of any private port conversion; and
- Fifth, it designates DOTC as the lead RoRo coordinating and program monitoring organization that will ensure compliance by all concerned agencies with the letter and spirit of the Order, foster private sector participation and report to the Office of the President progress that has been achieved in bringing down transport costs.

6.2.66 The RRTS refers to the network of terminals linked by RoRo vessels throughout the Philippine archipelago. RRTS dovetails with the promotion of countryside development, a major component of the ten-point agenda of the current administration. As pointed out in the 2006 Domestic Shipping Development Plan, the main objectives of the RRTS are:

- To reduce transport costs from Mindanao to Luzon, through the Visayas, specifically the cost of inter-island transport trough the establishment of a safe, efficient, and cost-effective RRTS;
- To enhance tourism, transport and commerce throughout the country;
- To facilitate the government's agro-fisheries modernization and food security programs; and
- To promote private sector participation in the establishment, construction and operation of RRTS facilities.

6.2.67 According to the 2006 Domestic Shipping Development Plan, 23 or nearly 80% of the 29 ports identified in the Nautical Highways were already equipped with RoRo-capable facilities. The ports of Pilar, Cataingan, Bogo and Balud were being programmed for implementation by the DOTC and the concerned LGUs; Roxas Port was being developed by the PPA; while the only other port in Mambajao, Camiguin was being eyed for further development on account of its very shallow depth.

6.2.68 Some 81 RoRo vessels with an average capacity of less than 1,500 GT favorable for short-haul travel were included in the 2006 Domestic Shipping Development Plan database. The Plan further noted that there were "many potential short-haul routes which will be used to replace wooden-hull banca operations, based on MARINA's wooden hull vessel replacement program." For such potentials to be realized fully, there is need to overcome institutional and policy constraints.

6.2.69 The ITDP Project Team recommends the integrated planning of RoRo ports identified by the DBP under its Sustainable Logistics Development Program, the RRTS/ SRNH as identified in the MTPDP, 2004 Port Master Plan's RoRo ports for mobility enhancement and the recently concluded 2006 Domestic Shipping Development Plan's pilot ports under the leadership of DOTC pursuant to AO 123.

6.2.70 **RoRo Port Tariff Rates**. In terms of reduction of overall transport cost, the simplification of the toll system in the RRTS facilities is a pivotal and key component. The RRTS toll fees have the following components:

- Terminal Fee charged on the self-powered vehicles and passengers by the RRTS Terminal Operator for the use of the terminal;
- Freight or Rolling Cargo Fee charged on the self-powered vehicles by the RRTS Shipping Service Provider based on lane-meter;
- Passage Fee charged on passengers by the RRTS Shipping Service Provider; and
- Berthing Fee charged on the RoRo ship by the RRTS Terminal Operator for mooring and berthing at the RoRo Terminal.

6.2.71 RRTS toll fees apply only to all self-powered vehicles loaded and discharged on their own wheels by their owners or drivers between a RoRo ship and a ramp. Hence, cargo handling charges should not be collected unless there is actual work that is done or performed by cargo handlers. EO 170 excluded the wharfage fee from the allowed fees in the RRTS. The 2006 Domestic Shipping Development Plan noted that: "Another sensitive issue is the matter of cargo handling charges being levied for RoRo cargo. So far, existing cargo handlers could not accept the fact that RoRo cargoes are exempted from cargo handling charges, or from wharfage. Thus, to this date, there are recurring complaints against impositions that are supposed to be not there."

6.2.72 Except for third class accommodations, all freight rates and passage rates are deregulated, in accordance with Republic Act No. 9295 (RA 9295), also known as the Domestic Shipping Development Act (DSDA). Domestic Shipping Consultative Councils (DOSCONs) were established upon the enactment of RA 9295 in 1996 "to ensure that full opportunity to be heard will still be provided to the public and affected parties on rate adjustments consequent to rates deregulation." These councils have been noticeably dormant, signifying the absence of vigorous discussions between the regulatory agency (MARINA) and the concerned stakeholders, namely, the shippers and the ship operators. The 2006 Domestic Shipping Development Plan observed that despite deregulation, "MARINA still has to make sure that the fares are not exorbitant" and should "continue to enhance its fare calculation capabilities in conjunction with (its) function to monitor fares."

6.2.73 **Infrastructure Development: Devolution to LGUs**. Despite MARINA's vigorous enthusiasm in fully exercising its mandate to develop the domestic shipping industry, it is not able to comprehensively cover the widely-dispersed port facilities all over the archipelago due to the limited reach of its regional network. Hence, as noted in the 2006 Domestic Shipping Development Plan, it appears logical that certain MARINA's regulatory functions be devolved to the LGUs. LGUs are stakeholders in the development of the domestic shipping industry as this would contribute significantly to the economic development of their communities and the economic well-being of their constituents.

6.2.74 With the assistance of the Japan Bank for International Cooperation (JBIC), the DOTC implemented Phases I and II of the Nationwide Feeder Ports Development Program (NFPDP). Due to budgetary constraints, DOTC has been unable to extend this project to finance the development of more municipal ports. "Without even a simple port with RoRo ramp," noted the 2006 Domestic Shipping Development Plan, "LGUs would be hard pressed to develop local shipping, let alone spur economic development." The 2006 Domestic Shipping Development Plan recommended a three-pronged policy, as follows:

- Devolve regulatory powers over local shipping routes to LGUs;
- Provide infrastructure support for municipal port development; and
- Provide DOTC with funds to implement Package E of the NFPDP Phase II.

6.2.75 Devolution of regulatory powers to LGUs (refer also to Section 6.2.3) has been proposed for shipping routes whose nodes are all within the territorial limits of a city or municipality (local shipping routes) or of a province (provincial shipping routes). Vessels plying local shipping routes must carry not more than 25 passengers, while vessels covering provincial shipping routes must carry not more than 100 passengers.

6.2.76 Probably aware of the detrimental effects of devolution in land transportation regulation (that is, giving LGUs power to authorize operation of tricycles and jeepneys within their territories), the 2006 Domestic Shipping Development Plan emphasized the need for the MARINA to issue Shipping Regulation Guidelines for LGUs and to conduct intensive training in the aspects of safety regulation, technical evaluation and economic evaluation.

6.2.77 In terms of infrastructure support, the study also recommended increased budgetary allocations for DOTC so that it could support further development of municipal ports. It stipulated that the basic port design should ensure its capability to handle the simplest RoRo vessel specifications as determined by the National Development Corporation-Maritime Equity Corporation (NDC-MEC).

6.2.78 Noting that the DOTC's Project Management Office for Ports has shown project implementation capability, the 2006 Domestic Shipping Development Plan also recommended that the Department should re-align its infrastructure funds for foreign-assisted projects to include the funding requirements of Package E of the NFPDP Phase II.

6.2.79 **Development of Short-Haul RoRo System**. The 2006 Domestic Shipping Development Plan identified four key constraints to the further robust development of a short-haul RoRo system within the SRNH. These are: (i) lack of strong leadership and effective inter-agency coordination in implementing the RoRo or "moving bridge" concept; (ii) DOTC's inability, with few notable exceptions, to bring together the efforts of the PPA, LGUs, DBP, investors and

vessel operators in vigorously pursuing the development of the RRTS; (iii) difficulty in implementing the privatization thrust of EO 170; and (iv) challenges in administering the cargo handling charges being levied for RoRo cargo. To overcome these constraints, the 2006 Domestic Shipping Development Plan proposed focusing on a three-prong policy thrust, namely: acceleration of the development of the RRTS, fostering of RoRo operators and port operators, and delivery of new RoRo vessels

6.2.80 To accelerate the development of the RRTS, stronger internal government coordination is sought to be achieved through the creation of the DOTC-Expanded SRNH Team and the RRTS Team to be placed directly under the Office of the President. Development of access roads and the network of primary road links to the RRTS and the SRNH require the active participation of the DPWH from the inception and planning stage. DOTC, as lead agency, needs to work hand in hand with the DPWH in order to ensure the continuity and seamlessness of these links. More vigorous participation by LGUs and private sector investors in port operations and provision of RoRo services must also be harnessed and mobilized. Nationwide RRTS development is anchored upon two important strategic programs: 1) the completion of the trunk corridors in the SRNH and the Central Nautical Highway that constitute the backbone of the Road-RoRo transport network as proposed in the MTPDP 2004-2010; and 2) the replacement of wooden hull vessel operation by RoRo vessels in mid- to long-distance routes and high-demand corridors.

6.2.81 Increased participation by the private sector in RoRo and port operations will be facilitated by the provision of financial support by the National Development Corporation-Maritime Equity Corporation (NDC-MEC). As proposed in the DSDP, it shall formulate and implement a ship lease finance scheme to support the acquisition of modern RoRo vessels that will ply the RRTS routes. Better terminal services and amenities also need to be provided and installed to enhance passenger satisfaction and increase the income of RoRo and port operators. This includes passenger waiting rooms, vehicle waiting areas, canteens, souvenir shops and convenience stores.

6.2.82 Delivery of new RoRo vessels from capable domestic shipbuilders at competitive prices and in accordance with high quality standards can also be facilitated upon preparation by the DOTC of a RoRo fleet procurement plan. The MARINA must also work closely with shipbuilders in ensuring the application of standardized and serial construction methods and with financial institutions, particularly the DBP.

6.2.83 **Table 6.2.5-1** summarizes the recommendations of previous studies on RoRo development in the Philippines.

Table 6.2.5-1: Summary Matrix of Study Recommendations on Maritime Transport

Major Issues	PTSS	MTPDP (2004-2010)	Recent Development/ Current Status	ITDP Recommendations
Investment on RoRo Port Development	• Trans Visayas Superhighway (Tacloban-Ormoc-Cebu-Balamban-San Carlos-Bacolod-Iloilo-Roxas/San Jose • Batangas-Lucena-Marinduque • Zamboanga-Isabela-Jolo • Link-up to Pagadian-Dipolog-Dumaguete-Bacolod-Santander	• ***Full development of SRNH/RRTS identified priority routes***	• JICA Port Master Plan identified 28 top priority RoRo ports for mobility enhancement • JICA Domestic Shipping Devt Plan identified four RORO port pairs for vessel acquisition and port improvement	• DOTC with PPA as RRTS Secretariat to integrate various proposals into a RoRo Port Development Plan • DOTC and PPA evaluation and prioritization of these ports for project preparation under the new JICA study on RoRo ports • Inclusion of Southern Philippines component in the above proposals
Rationalization of RoRo Tariffs		***Bring down cost of shipping through RORO network***	• JICA Domestic Shipping Devt Plan recommended these devolution	• DOTC and PPA to rationalize tariff structure • Coordinate with DILG on LGU tolls
Devolution to LGUs of Developmental and Franchising Functions on RoRo Port and Shipping Network			• JICA Domestic Shipping Devt Plan recommended these devolution	• Review approach to MARINA's devolution of local franchising functions to LGUs (refer also to Table 6.4.3.1) • DOTC and DBP to study LGU participation in RoRo port development
Devolution of local franchising function to LGUs			• MARINA reviewing JICA Domestic Shipping Development Plan recommendations	• Review local franchising function to LGUs
Private Sector Participation	• PPA to market selected ports to the private sector • Increased commercialization of ports	**Encourage PSP through applicable incentive program.**	• EO 170A & B provided the mechanisms for privatization	• PPA to firm up plan for privatization of ports/RoRo terminals
Institutional Strengthening				• Undertake TA on maritime policy framework aimed at improving its cost-effectiveness

6.3 *BIMP-EAGA Intermodal Transport Policy Agenda*

6.3.1 BIMP-EAGA Corridors and Hubs

6.3.1 Since 1992, the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA[8]) has developed slowly but progressed nevertheless. While EAGA wide initiatives and bilateral initiatives in the context of EAGA have been significant (see **Appendix E** Status of the BIMP-EAGA Priority Programs and Projects (Philippine Side) as of December 2005), progress in the transport sector with Mindanao and Palawan as origins or destinations has not yet reached its potential.

6.3.2 According to documents provided by MEDCO, the lead Philippine actor for EAGA affairs: Prior to the Asian financial crisis in mid-1997, air linkages in the sub-region (**Figure 6.3.1-1**) expanded to eleven from five routes. For the Philippine, both Bouraq Airlines and Malaysia Airlines provided air service between Davao and Manado, as well as, Davao and Kota Kinabalu. Malaysian Airlines stopped its operations in May 1998 due to low demand in part resulting from the Asian Financial Crisis. EAGA's primary Philippine sea transport linkage (**Figure 6.3.1-2**) has been provided by Aleson and Sampaguita shipping lines between Zamboanga and Sandakan (Malaysia). The EAGA Shipping Association was formed during the 7th Sea Links Working Group Meeting in Davao in July 1999 and is intended to identify opportunities for the shipping sector, as well as advocate for necessary policy changes to develop the industry in EAGA.

Source: MEDCO

Figure 6.3.1-1: Existing and Planned Air Linkages

Source: MEDCO

Figure 6.3.1-2: Existing and Planned Sea Linkages

6.3.3 Merpati Airlines (an Indonesian flag carrier) began to serve the General Santos City - Manado air route in November 2003. The route was later changed from General Santos - Manado to Davao - Manado to compete with Bouraq Airways on the same route. In December 2004, Bouraq suspended its Davao - Manado flights. Layang-layang Aerospace in partnership with South Phoenix Airways operated a short-lived Puerto Princesa - Kota Kinabalu air service in April 2004. South Phoenix Airways started Zamboanga - Sandakan, Malaysia flights in December 2004 and a Davao – Kota Kinabalu, Malaysia flight in April 2005. These South

[8] BIMP-EAGA will be referred to as simply EAGA.

Phoenix flights were also short-lived. There are discussions ongoing to resume the Zamboanga-Sandakan flight including code-sharing with Malaysian Airlines for the Sandakan-Kota Kinabalu route. In September 2005, the senior officials of EAGA prepared a roadmap to revive and to expand air linkages.

6.3.4 Airlines operators have requested incentives from the Government to make their operations in EAGA "more viable". Requested incentives include:

- discount on CAB Permit Fee
- waiver/ discount of ATO landing, take-off and parking fees
- waiver of Customs and Immigration overtime charges

6.3.5 For the sea linkages, as was noted above, there are two (2) passenger and cargo vessels plying the Zamboanga-Sandakan route. PT Humpuss Intermoda Transportasi Company began serving a route between General Santos and Bitung in March 2004. This initiative was intended to capture the Suluwesi based container traffic destined for world markets that had traditionally moved to these markets via Jakarta. The savings possible by moving this cargo thru General Santos was up to $300 per container and up to a week of travel time. Shortly after the service was started, Indonesian shippers lowered their rates to recapture traffic and the service was suspended. At present a Philippine flagged vessel is making a monthly voyage on this route.

6.3.6 Efforts to negotiate a decrease in trade barriers between Mindanao and Sabah have been ongoing since the inception of EAGA. The Philippine Tourism Authority (PTA) initiated and extended numerous times a Travel Tax Exemption for EAGA-bound passenger but finally allowed the exemption to lapse. Official requests to the Office of the President have been made for the re-implementation of the Travel Tax Exemption, which expired June 2004. However, due to austerity measures implemented by the national government, the travel tax exemption may not be renewed soon. Therefore, a 50% reduction in the travel tax has been proposed. Also, the CAB has "announced" a more liberalized civil aviation policy for EAGA to include multi-designation of airline carriers, code sharing arrangements, and unrestricted point-to-point traffic rights but it is premature to plan based on the announcement since the details are not yet clear.

6.3.7 In order to facilitate freer movement of people, goods and services within the subregion, efforts have been undertaken to simplify and harmonize the Customs-Immigration-Quarantine-Security (CIQS) Rules, Regulations and Procedures (RRPs). The conduct of the 1st EAGA CIQS Conference in July 2002 in Davao City started this process.

6.3.8 A series of CIQS Bilateral Discussions were conducted among the Zamboanga - Sandakan, General Santos - Bitung and the Davao - Manado port areas in January 2004. The results of the bilateral workshops included: (a) identified conflicting rules, regulations and procedures (RRPs) and other problems and issues other than those related to CIQS RRPs; (b) formulated CIQS Action Plans; (c) recommended Joint Project Proposals on CIQS; and (d) CIQS Consultative Councils were established in each of the EAGA trade routes, namely Davao, General Santos, and Zamboanga.

6.3.9 AusAID is presently supporting a two year technical assistance project ("Strengthening the BIMP-EAGA Support Team on CIQS"). The TA will enhance the capacity of the MEDCO Secretariat and CIQS agencies in the Southern Philippines.

6.3.10 An EAGA Security Officials Workshop was conducted in January 2004 in Davao City also with funding assistance from the Australian Government. The results of the workshop included: (a) identified and discussed common issues and problems affecting the Security of EAGA; (b) formulated Security Action Plans for Land, Aviation and Maritime Security; and (c) recommended Joint Project Proposals for Land, Aviation and Maritime Security. In October 2005, AusAid conducted workshops in Zamboanga, Davao and General Santos City to enhance capabilities in safety and bomb detection techniques.

6.3.11 Uniform Port Tariff (UPT) Agreements between the Philippines and Indonesia, and the Philippines and Brunei are presently active and negotiations are ongoing with Malaysia. Under the agreements, all vessels carrying the flag of Brunei, Indonesia and the Philippines that are accredited to operate under the EAGA Program should be entitled to special port charges on vessels, as follows:

Port Dues	-	US $ 0.040 per Gross Registered Tonnage (GRT)
Dockage	-	US $ 0.020 per GRT per day.

6.3.12 **Recommendations:** From the experience described above and based on on-going programs, earlier studies and repairs, ITDP study recommendations can be identified:

- There is a need to focus on obtaining traffic levels for both air and sea EAGA routes that are sufficient to economically justify services and adequate service levels. To reach these levels of traffic, while efforts to promote regional tourism and trade would be of course helpful, there is more importantly the need to create a limited number of nodes and corridors and a support network where traffic can be consolidated to reach the necessary critical mass on a few routes.[9]

  These corridors and nodes could include:

  a. Davao (air) and General Santos City (sea) to Manado (air) and Bitung (sea) Suluwesi;
  b. Zamboanga City (air/ sea) to Borneo Malaysia/Indonesia (once the hub container port in PHIVADEC is fully operational and working efficiently it could be considered as an alternate port for container traffic to/from EAGA).

  Other potential connections to EAGA could be networked thru these hubs.

- Development of infrastructure facilities that would support the improvement and sustainability of transport linkages within the sub-region should be focused upon improving the following facilities:
  - General Santos Port Container area (Included in the ITDP)
  - Davao Port (Proposed for JBIC Funding)
  - Zamboanga Port (Container area expansion underway and RoRo/passenger area under ITDP)
  - Zamboanga Airport (Not yet programmed)

[9] It should be noted that a similar problem can be found in ports development generally. The problem of building up sufficient traffic in any one port or shipping route to justify significant investment is in part caused by the large number of hub ports. This results in a constraint in the investment in modern container handling equipment in ports generally since traffic is spread across so many ports rather than concentrated in a few ports.

These improvements would support the following links.

Air Links
Davao – Zamboanga – Sandakan and Kota Kinabalu (Malaysia)
Davao – Manado (Indonesia)

Sea Links
General Santos – Bitung (Indonesia)
General Santos/Davao – Northern Territory

Zamboanga – Brunei Darussalam
Zamboanga/ Tawi-Tawi – Lahad Datu (Malaysia)
Zamboanga – Tarakan (Malaysia)

- Further efforts to facilitate consolidation of Mindanao and Palawan cargoes destined for EAGA with traffic from Luzon and the Visayas will help to address the perennial problem of insufficient back-haul traffic.

- Further Government action should be taken to reduce the costs of operations of EAGA sea and air services by pursuing the following:

  - Discount on CAB Permit Fee (air),
  - Waiver/ discount of ATO landing, take-off and parking fees (air),
  - Waiver of Customs and Immigration overtime charges (air and sea),
  - Initiate a Uniform Port Tariffs Agreement between Philippines and Malaysia (sea).

- Additional national policy support that would create a conducive business environment for sea and air linkages to EAGA:

  - Re-initiate the travel tax exemption or implement a reduction in the tax for air and sea passengers traveling to EAGA.
  - Streamline and simplify CIQS rules, regulations and procedures within EAGA.

6.3.13 The Project Team proposes that technical assistance be provided to MEDCO to further the agenda noted above and a budget has been involved for this in the ITDP.

6.4 Private Sector Participation (PSP) and Public - Private Partnership (PPP)

6.4.1 Legal and Institutional Overview

6.4.1 The legal and institutional framework for PSP and PPP is provided by Republic Act No. 7718, An Act Amending Certain Sections of Republic Act No. 6957, Entitled An Act Authorizing Financing, Construction, Operation and Maintenance of Infrastructure Projects by the Private Sector, and for Other Purposes. It is implementing rules and regulations establish the legal framework for private sector participation in infrastructure and development projects normally financed and undertaken by the Government.

6.4.2 The eligible types of projects for PSP include construction, rehabilitation, improvement, betterment, expansion, modernization, operation, financing and maintenance of the many types of infrastructure which are normally financed and operated by the public sector. They may be wholly or partly financed, constructed and operated by the private sector, including transport infrastructure and development projects as may be authorized by the appropriate agencies provided that such projects have a cost recovery component which covers at least 50% of the project cost.

6.4.2 PSP in the Philippines

6.4.3 The Philippines has had success in attracting private sector investment in what had previously been considered public infrastructure, especially in the early 1990s in the power sector. The transportation sector has been spotty in achieving completed infrastructure projects with private participation, although there have been some noted successes.

6.4.4 There are a number of modalities for PSP in transport infrastructure projects summarized below with examples taken from the Philippines.

a) Build Operate Transfer (BOT) projects[10] are the classic forms of PPP and generally require the greatest financial participation of the private sector. These projects are generally directed toward new, green field projects or projects that require large capital investments. Examples of this type of project in the transport sector are: (a) the Skyway over South Superhighway and (b) the concession to upgrade the North Superhighway and (c) the South Luzon Tollway which is waiting for financial closure.

b) Build Transfer (BT) is a turnkey construction project that gives the Government some flexibility in financing the project and in its operation and maintenance. The agreement can make the contractor responsible for operating and maintaining various components of the project. In the Philippines, an application of this type of contract is the MRT III in Metro Manila.

c) Concessions or long-term leases are quite flexible in what they cover and in defining the responsibilities of the concessionaire or lessee. Projects implemented under this modality are often implemented within context of a larger facility such as an airport or port. For example, they can include entire passenger terminals or an area within a terminal.

   The Philippines Port Authority has concession agreements to operate its facilities at larger ports. For instance, the container terminal in Manila South Harbor is managed on the basis of a concession with a private sector operator and investor.

[10] This type of PSP takes many forms which are basic variations of the BOT concept. No attempt is made to describe all of them.

d) Outsourcing contracts for Operations and Maintenance (O&M) is a method of managing various types of transportation infrastructure where the private sector takes on many of the responsibilities of the owner of the facilities. These contracts are well suited for airport and seaport facilities. Recently, performance based contracts have been introduced to maintain a variety of transport facilities on a cost effective basis from the government's perspective and provide improve maintenance of the facilities covered by the contract. In undertaken such a contract, the government makes a medium (3 to 5 years) or an even longer term financial commitment, which cannot be broken without sizable penalties.

6.4.5 For PSP projects, a realistic appreciation of the willingness of the private sector to participate has to be considered. Private sector participation is not assured, and its initial inclusion makes the implementation of the project more difficult. One approach is to strengthen state-owned enterprises so that they will eventually be privatized. As a first step toward privatization, the state-owned enterprise is corporatizated (required to operate like a private sector corporation), and then it is made to function on a commercial and competitive basis. If over a period of time, commercial practices are followed by this organization and the revenue streams are good, it could be privatized on a competitive tender basis. However, this is not always feasible in the transport sector because of the monopolistic environment in which these organizations operate. The Government often does not want the private sector operator to have too great a say over the management of the infrastructure because of the vital role that it plays in the economy.

6.4.6 PSP in transport infrastructure projects is particularly difficult. As indicated above, these types of projects are heavily regulated to ensure adequate levels of service and that the public interests are protected. As result, they are more or less considered utilities. This has certain legal ramifications; the Constitution of the Philippines requires that the ownership of utilities must be 60 % Filipino. Consequently, this requirement limits foreign participation in these types of projects. In addition, an adequate financial rate of return on the private sector's investment is far from assured. The traffic forecasts are often uncertain, and the regulatory environment limits the ability of the project's operator to increase tariffs.

6.4.7 In addition, the government continues to face substantive issues in the successful implementation of PSP projects such as the following:

a) Failure of government to implement specific conditions of its PSP contracts specially with relation to rate increases which is oftentimes not considered to be socially acceptable;

b) Interference of the courts in the implementation of PSP contracts;

c) Delays encountered in the approval of PSP contracts due to new policies imposed by the government such as the "budget deficit neutrality" of the undertaking and on the inability of the private sector to immediately respond to such requirements; and

d) Poor governance and the lack of transparency in the award and solicitation BOT projects.

6.4.8 Even so, under the right set of conditions, PSP in large transport infrastructure projects does happen. It is important to remember the advantages and disadvantages of the PSP in these projects as given in **Table 6.4.2-1**.

Table 6.4.2-1: Advantages and Disadvantages of Specific Modalities of PSP in the Philippines

Type of PPP	Advantages	Disadvantage	Mode
• Build Operate Transfer (BOT) concept	• Oriented toward large infrastructure projects especially green field projects; • Requires minimum financial resources from Government; • Turnkey concept with Government providing regulatory oversight; and • O&M responsibility is with BOT operator.	• Requires a long time to implement due to complexity of contractual and financial arrangements; • Difficult to bid and negotiate contract; and • Requires a large volume of traffic to maintain low unit costs and user charges.	• Roads • Airports • Ports • Mass transit • Rail
• Build transfer (BT) concept	• Oriented to larger infrastructure projects; • Built on turnkey concept; • Reduces initial financial burden on the Government; and • Can include O&M responsibilities.	• Requires considerable time to implement but less than BOT projects; and • Government has to cover the construction and financing costs of the contractor.	• Roads • Airports • Ports • Mass transit • Rail
• Concession or Long Term Lease	• Covers large to small infrastructure projects; • Covers a wide range of project types; • Contractual arrangements can be simpler than BOT concept; and • Large projects can be sub-divided in to sub-components.	• Large projects are similar to BOT; • Limited scope of activities covered by concession or lease and infrastructure improvements involved; and • Generally limited to extending or expanding exiting infrastructure.	Very suitable for: • Ports • Airports
• Outsourcing including performance based O&M contracting	• Reduce operating and maintenance costs; • Sustainability of project improves; and • More flexibility in managing O&M responsibilities.	• Does not finance initial infrastructure; and • Does not relieve governmental agency of its O&M responsibilities	All modes

6.4.9 Many activities within the transport sector are already managed largely by the private sector. In the Philippines, transport operators are private sector enterprises or individuals. Within seaports and airports, certain activities are relegated to the private sector. For instance, supplying stevedoring services is the responsibility of the private sector but covers an important but limited aspect of operating a port. Opportunities do exist to manage smaller facilities at airports and seaports, and to some extent this is already happening as shown in **Table 6.4.2-2**.

Table 6.4.2-2: Limited PSP in Activities at Airports and Seaports

Type of Facility	Airports	Sea Ports
Cargo facilities	• Cargo handling operations including storage. • Generally this is done by the airlines themselves at smaller airports.	• Warehousing • Cold storage of cargo handling equipment for general cargoes and containers • Operation of specific berth or long term lease basis • Back up area for open storage • Arrastre/ Stevedoring
Passenger facilities	• Terminal operation; • Retail outlets on short or medium term lease in terminal • Parking on concession or lease basis	• Terminal operation • Retail outlets on short or medium term leases in the terminals. • Vehicle parking on concession or lease basis
Land development within air or sea port boundary	• Hotel or guest house and • Golf course opportunities.	• Fuel supply; • Special processing slaughter house.

6.4.3 Potential PSP in the ITDP Subprojects

6.4.10 With the exception of Puerto Princesa Airport, the size and scope of the subprojects considered were relatively small with a total initial investment cost of less than US$ 20 million. The feeder port subprojects cost less than US$ 6 million to implement. There do not appear to be many opportunities for private sector participation in ITDP, except in the operation and management of transport terminals.

6.4.11 Based on recent experience in the Philippines, and considering the perceived investment climate in Mindanao due to peace and order "problems", the investment by the private sector in basic infrastructure such as a runway for an airport or a pier in a small seaport is not a realistic assumption to make. Importantly, the relatively low volumes of traffic that exist at most of the subproject locations do not justify the investment and the user charges that can be collected fall far short of the amount needed to obtain a reasonable rate of return, say, 20 percent for the private sector.

6.4.12 During the course of the study, the private sector has not shown any interest in PSP in any components of the eight subprojects of the ITDP. Thus, the willingness of the private sector to participate even if the opportunities to do so did present themselves is uncertain.

6.4.13 Of the subprojects, the passenger terminals at Zamboanga Port and Puerto Princesca are potential the better candidates for some form of PSP; however, they are far from attractive PSP projects as discussed in **Table 6.4.3-1**.

Table 6.4.3-1: PSP Passenger Terminals - Specific Issues Faced in Their Implementation

Generic Issues Facing the Subsectors	Specific Issues Faced by ITDP Subprojects
Puerto Princesa Airport Terminal	
• No clear policy framework to privatize all or a portion of an airport terminal; • Legal issues affecting PSP, especially foreign ownership and participation; • Regulatory framework in setting tariffs and especially raising fees; • Negative publicity associated with the implementation of NAIA Terminal 3 project; • Sharing or apportioning revenues between airside and landside operations; and • Large number of government agencies involved in managing and operating the subsector.	• Low traffic volumes in general and presently, there are no foreign direct flights. Revenues from foreign aircraft and passengers are considerably higher than they are from domestic sources; • Low financial rates of return from ITDP study; and • So far, there has been no interest expressed by the private sector in building and operating the airport terminal as a concession at Puerto Princesa;
Zamboanga Port – Passenger Terminal	
• No clear policy framework to privatize all or a portion of a seaport terminal serving many lines; • Regulatory framework in setting tariffs and especially raising fees; and • Negative publicity regarding the implementation of recent PSP projects in the transport sector.	• Passengers' willingness to pay for improved quality of service is low; • Low financial rates of return from analysis done by the ITDP study; • It is a small project; interest in it is likely to come from only local investors; • So far, there has been no interest expressed by the private sector in building and operating the seaport passenger terminal as a concession at Zamboanga Port; and • Perceived peace and order concerns make the project unattractive as a PSP.

6.5 Governance Issues in Project Implementation

6.5.1 Procurement Procedures

6.5.1 The Project Completion Report on the Davao International Airport Development Project (Loan 1333-PHI) cited that the overall delay in project implementation was due mainly to the slow progress in the completion of land acquisition and resettlement. Other delays that occurred prior to the start of construction, although less significant than that of the LARP, were caused by: (i) the delay in recruitment of consultants for detailed design work and construction supervision (the Project Consultants); (ii) the time the DOTC and the Project Implementation Unit (PIU) took to review prequalification and tender documents; (iii) the protracted approval

procedures of the Prequalification Bidding and Awards Committee; (iv) poor communications between DOTC and PIU with ADB and the Project Consultants; and (v) poor weather conditions with abnormally high rainfall in 1999. These reasons pointed to the unnecessary and costly delays attributable to the procurement process.

6.5.2 The same set of problems did occur in the implementation of ADB Third Airports Development Project, which was agreed upon by the DOTC and ADB to be terminated since the main civil works contracts could not be completed within the loan effectivity date. The EIB-components on the Puerto Princesa Airport and the AFTN and AIS equipment procurement were cancelled due to the delay in the bidding and to the allege collusion.

6.5.3 A further review of DOTC's loan portfolio performance based on the 13th ODA Portfolio Review by NEDA revealed that, despite the application of the new Government Procurement Act (RA 9184) and its redefined controls for greater transparency, a significant number of foreign-assisted projects of DOTC suffered delays as a result of the following:

- Failure in bidding / rebidding of contracts;
- Complaints filed by losing bidders; and
- Lengthy review process.

6.5.4 **Recommendations.** To ensure the transparency and integrity of the bidding and award process, the following are recommended:

- If evaluation and notice of award is not completed within the following timeframe the bid and award committee should reconsider retendering:
  - Local Consulting Services Contract – 3 months after the submittal date of the proposals;
  - International Consulting Services Contract – 4 months after submittal date of the proposals; and
  - International Competitive Bidding Contract – 6 months after the submittal date of the bids or other period given the bid documents.
- establishment of a permanent bid and award committee secretariat;
- the involvement of the Procurement Watch, an NGO group assisting the government in ensuring fair and honest procurement of goods and services as well as civil works;
- web publishing of the consultant's bid evaluation for civil works and supply contract including any revisions; and
- setting up of ITDP website for procurement announcements and bid bulletins;

6.6 Policy Dialogue

6.6.1 Purpose

6.6.1 The Government-ADB Policy Dialogue is the formal discussion on the intermodal transport development issues and concerns, performance indicators and policy and institutional reform action plan. A series of high-level and technical-level meeting will be held assessing the status of earlier commitments and leading to the formal adoption by the Government of the updated policy and institutional reform action plan.

6.6.2 Draft Institutional and Policy Reform Action Plan

6.6.2 **Table 6.6.2-1** presents the ITDP Draft Civil Aviation Policy and Institutional Reform Action Plan.

6.6.3 Schedule of Policy Dialogue

6.6.3 The first Policy Dialogue was held on 18 May 2006. The ITDP Project Team presented the Draft Civil Aviation Policy and Institutional Reform Action Plan for discussion with senior representatives of member agencies of the Steering Committee. Further roundtable discussions were held in June 2006 leading to the preparation of the revised CAAP Bill.

6.6.4 The formal discussion on the Draft Civil Aviation Policy and Institutional Reform Action Plan will be held during the Third Government-ADB Tripartite Meeting to be held in mid-September 2006.

6.6.5 Informal round table discussions will be scheduled after the Third Tripartite.

6.6.6 The approval by the NEDA Board through the endorsement of the Infrastructure Committee will be required for the ITDP sector loan application.

Table 6.6.2-1 Draft Policy and Institutional Reform Action Plan on Civil Aviation

Background	Current Situation	Recommended Action/Initiative	Proposed Target Dates
1. Policy Framework			
1.1 The updated policy for the civil aviation sub-sector will be in accordance with the MTPDP	1.1 Recent completed national airport master plan conforms to the policy directions and guidelines	1.1 The Aviation section of the Intermodal Transport Sector Policy Statement will be endorsed by the respective head of ATO and the DOTC Secretary. The NEDA Infrastructure Committee will formally endorse this policy statement, after which the DOTC Secretary shall issue a directive on its implementation.	1.1 DOTC Secretary to formally endorse the ITSPS by 01 July 2006; and to be approved by the NEDA Infrastructure Committee by 01 August 2006
2. Regulatory Framework			
2.1 Existing laws and EOs that govern the civil aviation sub-sector require review and amendment, particularly RA 776	2.1 EO 219 provides for the deregulation and increased competition in the international and domestic air services. Changes in legislation are required to allow the restructuring of the sub-sector, including the corporatization of the service provision functions and the separation of the safety and regulatory functions. Bills creating the CAAP have been filed in Congress.	2.1 Review/reformulation of draft legislation to substitute to the Congressional bills filed creating the CAAP, which will exclude the CAB from CAAP and provides for the creation of a CAAP subsidiary to become the safety regulator.	2.1 Draft substitute bill for the corporatization of ATO to be endorsed by DOTC Secretary to OP for certification as urgent administration measure by mid-August 2006 and OP certification by end September 2006 for onward transmittal to Congress.
3. Institutional Restructuring and Corporatization			
3.1 Support to the integration of international airports pursuant to EO 341	3.1 EO 341provides for the integration of the international airports under MIAA, covering those airports availing of the MIAA development fund support.	3.1 Implementing rules and regulations of EO 341 require detailed guidelines on contractual and administrative arrangements.	3.1 Implementation plan and guidelines for international airports availing of the funding program from MIAA to be completed by mid-August 2006.
3.2 Support to the corporatization of ATO	3.2 Proposed corporatization of ATO gained acceptance. Institutional strengthening of ATO needs to be undertaken	3.2 Proposed TA on institutional strengthening for the ITDP sector loan to develop the management and reorganization plan	3.2 Implementation plan for ATO restructuring to be completed upon the completion of the TA. 3.3 Establishment of CAAP to be achieved by 01 August 2007, subject to the passage of legislation by Congress.
4. Financial Sustainability and Cost recovery			
4.1 Current cross-subsidization from aeronautical to non-aeronautical services, and from major airports to feeder airports. MTPDP requires the periodic adjustment in fees and charges, and the promotion of users-pay principles	4.1 Airports are not viewed as business centers. Fees and charges do not reflect the difference in costs among airports with the uniform tariff schedules.	4.1 CAAP will recover its expenditures, including recovery of airport investment. As a corporate entity, the corporatized ATO has to adapt to commercial business practices, particularly in financial management and reporting, accounting and auditing	4.1 Airport tariff will be adjusted to the levels of independent airport authorities (e.g. MIAA, MCIAA) by 01 September 2006, and progressively adjust airport tariffs based on the implementation scheduled agreed upon in the TA on Tariff Reforms.

CHAPTER 7

Implementation Plan

Chapter 7 IMPLEMENTATION PLAN

7.1 Implementation Arrangements

7.1.1 Appropriate Arrangements for Project Implementation for DOTC and PPA

7.1.1 **Overview.** Several Government agencies are involved in the planning and administration of the transport sector. The DOTC is the primary agency which, either directly or thought its various subordinate agencies, oversees policies, planning, operations, regulations, and investment in all modes except for road infrastructure. The Department of Public Works and Highways is responsible for the planning, construction, and maintenance of the national road network, while for lower categories of road it shares the planning and administrative tasks with the Department of Interior and Local Governments. The NEDA appraises, monitors, and coordinates public investments in the sector and has an advisory and coordinating role in the formation of sector policies. Other agencies that have a role in the sector include the DOF regarding domestic and foreign financing and taxation; and the Board of Investments (BOI), an agency under the Department of Trade and Industry (DTI), for policies concerning domestic vehicles assembly as well as investment incentives for private sector infrastructure development. Coordination among the various Government departments and agencies is undertaken through interdepartmental committees, many of which are chaired by NEDA, and ultimately by the NEDA Board, which is cabinet-level committee comprising all departments concerned with economic and financial matters and chaired by the President of the Philippines.

7.1.2 Key to the success of the ITDP work is the extent of involvement of various stakeholders and the level of coordinative effort in bringing out the issues and concerns of these stakeholders. The interrelationships and respective roles of agencies and institutions are described in **Figure 7.1.1-1**.

7.1.3 **Aviation.** The institutional framework of the civil aviation subsector gives the DOTC overall responsibility for policy, planning and implementation of the Government's aviation strategy. Under DOTC is the ATO, which is responsible for:

- Monitoring and enforcement of safety and technical standards;
- Operational planning, airport repair and maintenance and implementation of air navigation projects;
- Discharging the Government's obligations under the ICAO;
- Providing air navigation and ATC services;
- Managing and operating 83 of the country's 86 national airports; and
- Administering the Civil Aviation Training Center in Manila, which provides the training to support the O&M of the national civil aviation system.

7.1.4 The three ITDP airports subprojects at Puerto Princesa, Cotabato and Butuan are to be implemented through the ATO which has its own PMO for foreign assisted projects.

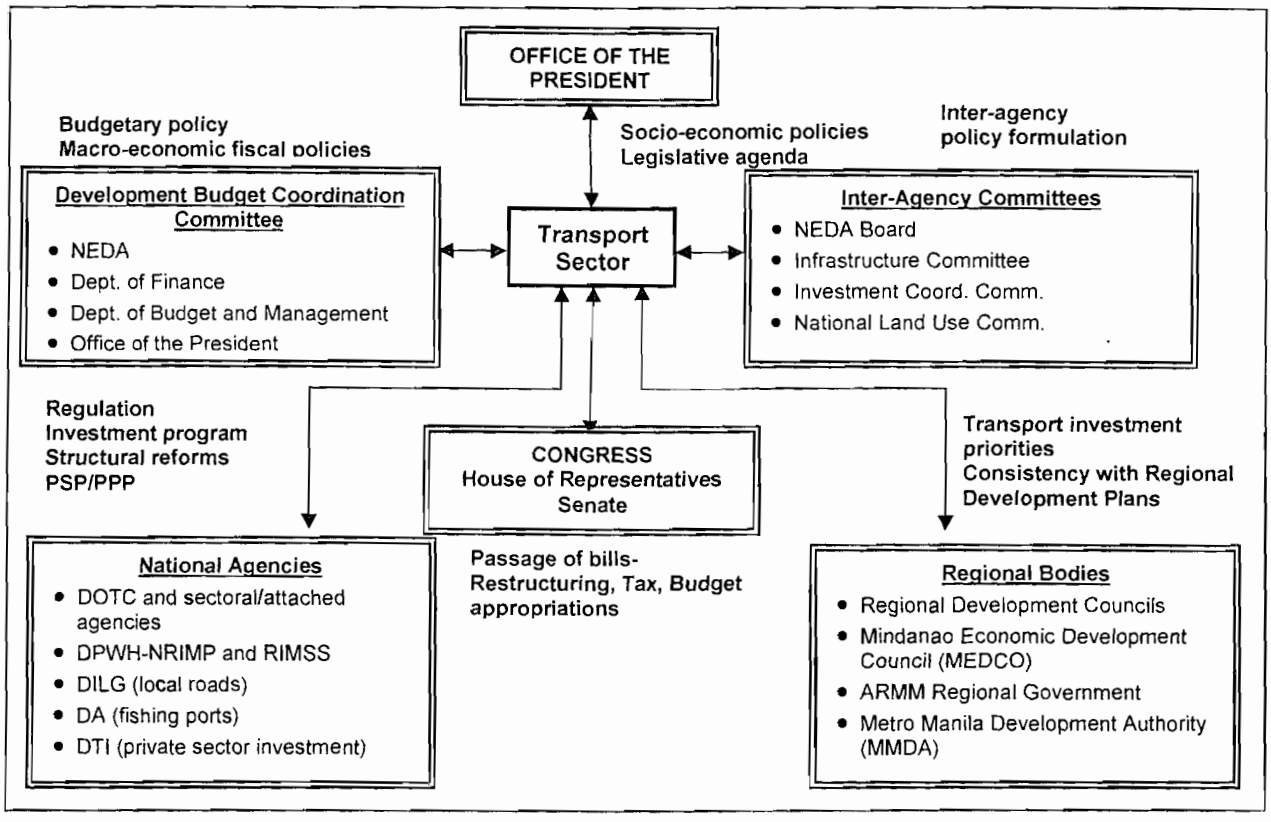

Figure 7.1.1-1: Generalized Inter-Governmental Coordination for Project Implementation

7.1.5 **Marine Transport:** The DOTC has oversight responsibility for the marine sector. However, the PPA was created in 1974 to administer all the Philippine ports in a uniform manner and is the sole port regulatory body. The PPA is concurrently responsible for managing and operating all of the country's public ports. Since 1990, however, new port authorities have been created for the management and operation of the ports within specific areas and zones.

7.1.6 Four Government-owned corporations manage and operate the airports at Manila, Cebu, Subic Bay and Clark. The economic regulation of the subsector is the responsibility of a separate agency – the CAB.

7.1.7 Regardless of the creation of new port authorities, the PPA remains as the principal agency in the administration and management of most of the major ports in the country. There are 114 ports under the PPA management, while 14 ports in Cebu Province are managed by the CPA. The ports under PPA are managed by 22 Port Management Offices (PMO's), which are responsible for the management and operation of the ports under each respective PMO, usually involving one base port and one or several terminal ports. Public ports within the ARMM are managed by the RPMA which is based on the role and responsibilities of the PPA, while municipal ports are managed by LGUs. A number of public ports have since been administered by special government bodies managing economic zones such as the Subic Bay Metropolitan Authority (SBMA), Bases Conversion and Development Authority (BCDA), John Hay-Poro Point Development Corporation (JPDC), Phividec Industrial Authority (PIA), and the Cagayan Export Zone Authority (CEZA). For Cebu ports, a separate Cebu Ports Authority has been established.

7.1.8 The classification by port management body and the number of the port of each category are shown in **Table 7.1.1-1**. The economic regulation of the subsector is the responsibility of the separate agency – the Maritime Industry Authority (MARINA).

Table 7.1.1-1: Port Classification by Type of Port Authority

Classification by Administration			
Type of Port	**Port Authority**	**Ports**	**Number of Ports**
Public Ports	PPA	Base ports, Terminal ports	114
	Cebu Ports Authority (CPA)	Base ports, Out ports	42
	PPA, CPA, LGUs	Ports located in LGUs	1,365
	Regional Ports Management Authority (RPMA), ARMM	Ports under RPMA	82
	Subic Bay Metropolitan Authority (SBMA), Bases Conversion and Development Authority (BCDA), John Hay-Poro point Development Corporation (JPDC), Phividec Industrial Authority (PIA), Cagayan Export Zone Authority (CEZA)	Subic Port & others	4
	Public Port Sub-Total		1,607
Private Ports	Private Company	Commercial (Public)	30
		Non-Commercial port	393
	Private Port Sub-Total		423
	Grand Total		**2,030**

7.1.9 The two Hub Ports of Zamboanga and General Santos City are classified as PPA base ports, and they are under its management. The three Feeder Ports associated with the ITDP fall within the jurisdiction of the Regional Port Management Authority of the ARMM.

7.1.10 The implementation of the Hub Port Component will be through the PPA, which has the financial and institutional capacity to undertake these projects and is familiar with implementing donor-funded projects. Funds received by the Government for the Hub Ports from ADB will be on lent to the PPA on the same conditions that the Government receives them. In the case of the Feeder Port Component, the ARMM RPMA is not robust enough to take on the full technical and financial responsibility to expeditiously implement the Feeder Port Component. To ensure that these subprojects are completed within budget and on schedule, the DOTC will need to play a direct role in supervising their implementation. The ARMM RPMA will play an important role in assisting the DOTC in completing the projects so that they may best serve the subsector and the hinterland served by each port. The ITDP will provide a unique opportunity to strengthen the ARMM RPMA in its role as administrator of the larger number of ports in the ARMM.

7.1.11 **Coordination and Management of the ITDP:** Prior to loan effectiveness and in agreement with ADB, the Government through the DOTC will establish a Project Steering Committee (PSC) composed of key agencies that will have an involvement with the implementation of the ITDP. An Executive Order (EO) to be issued by the Office of the

President will create the various project committees required to meet technical and financial regulatory requirements to the satisfaction of the Government and ADB. The DOTC-led PSC will coordinate the implementation of the project and will provide policy directives to the agencies given responsibility for specific components of the ITDP. This Committee, chaired by the DOTC Secretary, includes the respective heads and officials of:

- Mindanao Economic Development Council (MEDCO);
- National Economic and Development Authority (NEDA);
- Department of Public Works and Highways (DPWH);
- Department of Tourism (DOT);
- Department of Finance (DOF);
- Department of Budget and Management (DBM);
- Regional Government of the Autonomous Region in Muslim Mindanao (ARMM);
- Provincial Government of Palawan; and
- Attached agencies of DOTC, namely:
    - Philippine Ports Authority (PPA);
    - Maritime Industry Authority (MARINA);
    - Air Transportation Office (ATO); and
    - Civil Aeronautics Board (CAB)

7.1.12 The PSC will be supported by an Inter-Agency Technical Working Committee (IATWC) which will directly liaise with counterparts from the above agencies, and will be headed by the DOTC Assistant Secretary for Planning and Project Development who will also be the Project Director of the ITDP Project Management Office (PMO). The PMO will have day-to-day responsibility for the implementation of the ITDP and will act as the secretariat of the PSC and the Inter-Agency Technical Working Committee.

7.1.13 Within the duration of the ITDP, a Project Team will be seconded to the PMO, comprising of officials and staff of the DOTC Transportation Planning Service, the ATO, the PPA and ARMM RPMA who will work directly for the PMO. The Project Team will provide the administrative and technical expertise necessary to manage the ITDP and ensure compliance with Government regulations and loan covenants. A draft EO creating the IATWC and PMO will be covered by the same EO creating the PSC.

7.1.2 Involving the Public, Private Sector and LGUs

7.1.14 The public has a direct interest in how transport infrastructure is operated and maintained and in the nature and specific form of public policy regulating the transport sectors and facilities that make up the intermodal transport system. There are existing mechanisms for citizens to influence investment and policies through their elected representatives, as board members of, for example, the PPA Board; as council members of Regional Development Councils or as participants in RDC meetings; or as participants at public hearings which are usually required when important investment or policy changes are being considered. However, in ITDP consultations, repeated mention was made by private citizens, business leaders and

LGU officials of their dissatisfaction with national policy regulating sea and air transport sectors and local and operational policies affecting the efficiency, effectiveness and pricing of strategic infrastructure in their communities, particularly with respect to ports, and with greater concern in ARMM ports. While national policies for the air and sea sectors are addressed in Chapter 6, emphasis here will be given to greater involvement of communities in subproject implementation.

7.1.15 There are two existing mechanisms that have already been used in the Southern Philippines that are relevant to providing greater involvement of the private sector and LGUs in improving project implementation. They are:

- The Infrastructure Monitoring and Advisory Group (IMAG) and
- The Port Management and Advisory Council.

7.1.16 **Infrastructure Monitoring and Advisory Groups (IMAGs)**. The IMAG system was designed by the Mindanao Economic Development Council, with support from USAID, to provide effective mechanisms for project monitoring and problem-solving. The concept was based upon the successful area development project board that helped to assure the timely and under-budget implementation of road, port and airport subprojects under the USAID-GOP Socsargen-based Mindanao Development Program.

7.1.17 This system for monitoring and providing community assistance and involvement in implementing infrastructure projects has resulted in progress in helping to reduce (but not eliminate) implementation delays in Mindanao infrastructure projects. The first IMAG was formed in 1996 by the Mindanao Economic Development Council. MEDCO and USAID conceptualized the IMAG as an effective mechanism for increasing community participation in monitoring and resolving project-related issues. IMAG meetings provided a useful forum for discussion, reporting and tasking among implementing agencies, contractors, LGUs, NGOs and other local stakeholders. Project-related issues such as relocation of utilities, negotiations with lot owners on right-of-way problems, security, access to material sources and inadequate manpower and equipment of contractors are tackled by the IMAGs. See **Appendix F** for a briefer on the IMAG and an example of a draft Executive Order used to create IMAGs.

7.1.18 IMAG experiences in North Cotabato, Davao del Sur and Bukidnon indicate that involving the community on a regular basis hastens a project's implementation. Local officials and residents have said that the IMAGs have been effective for monitoring the progress of a project and quickly resolving implementation problems. "Local officials know the people, and have more influence and moral suasion over them. They help in contentious right-of-way cases and assist in relocating affected residents". Regular IMAG meetings help facilitate solutions to problems. "IMAG has been an effective instrument and it's not an expensive solution. We hope this idea is replicated in other projects," said Mr. Victorio Suaybaguio, Vice Governor of Davao del Norte, who worked with residents to resolve compensation issues on the Tagum-Carmen road project.

7.1.19 To ensure on-time implementation of public infrastructure projects in Mindanao, MEDCO has spearheaded the formation of over 20 IMAGs. This composition varies but usually includes a representation of: LGU officials (provincial governors, city or municipal mayors); DOTC/ PPA/ DPWH regional directors, PMO engineers and consultants, district engineers; NEDA regional office; Presidential Management Staff (PMS); Department of Environment and Natural Resources (DENR); AFP and PNP; project contractors; mass media representatives;

business sector representatives; NGO and religious organization representatives within the impact area of the infrastructure project. In 2004, the ARMM Governor signed an Administrative Order establishing IMAGs in each of the ARMM provinces.

7.1.20 The IMAG, often meeting monthly, provides a venue where project implementation problems and issues are discussed and solutions jointly formulated and implemented. Usually, the project implementing agency is required to report progress and reasons for delay, if any. Contractors are also asked to render construction progress reports. The IMAGs have been particularly useful in: a) resolving land acquisition problems; b) resolving local material supply material problems; and c) addressing security and peace and order related problems.

7.1.21 **Port Management Advisory Council (PMAC)**. PMACs, which include representatives from LGUs, the private sector and other users and stakeholder in ports; provide a forum where port-related issues that concern both the government and the private sector can be discussed. PMACs communicate to the National Port Advisory Council, whose chairperson is the General Manager of PPA, through its secretariat made up of PPA staff.

7.1.22 In ports and particularly in ARMM feeder ports, LGUs and/ or representatives of private business pointed out that they would like to be more involved and better informed of regulatory and operational or management policy changes in ports in their communities. The PMACs are the most appropriate venue for such dialogue. As a result of the Mindanao Shippers Conference last year, PPA issued an order mandating all port managers to convene the PMAC at least each quarter, and this has occurred in major ports. An important problem, as perceived by the Mindanao Shippers Association, is that long-term cargo handling contracts have sometimes by-passed discussion in the PMAC as well as the port district managers and local evaluation committees. While there is a standing directive to establish PMACs in ARMM Ports, PMACs are not operational in the ARMM. These PMACs could form part of the IMAGs that are recommended to be created for all ITDP subprojects and thereby help provide continuity for discussion of operational issues once IMAGs are dissolved at subproject completion.

7.1.23 **Recommendation.** The ITDP Project Team recommends that IMAGs be established for each ITDP subproject and PMACs for the feeder ports in Bongao and Jolo early in the design phase. For hub and feeder port subprojects, PMAC members can form part of the IMAGs. As these complement the project monitoring and implementation capability of the DOTC and its IAs, as well as that of the devolved ARMM DOTC and RPMA, it will also be essential to provide technical assistance to establish and strengthen the effectiveness of the IMAGs and PMACs. A budget for the technical assistance based in MEDCO has been provided in the ITDP.

7.2 Strengthening Coordination

7.2.1 Figure 7.1.1-1 shows the relationship among the many agencies involved in coordinating the project at the national level. The proposals to manage the implementation of the ITDP described in section 7.1 are schematic summarized in **Figures 7.2-1 and 7.2-2**. Key to this coordination is the Project Steering Committee chaired by the Secretary of the DOTC, working closely with and coordinating on a regular basis in the Inter-Agency Technical Working Committee, chaired by the Assistance Secretary for Planning and Development of the DOTC.

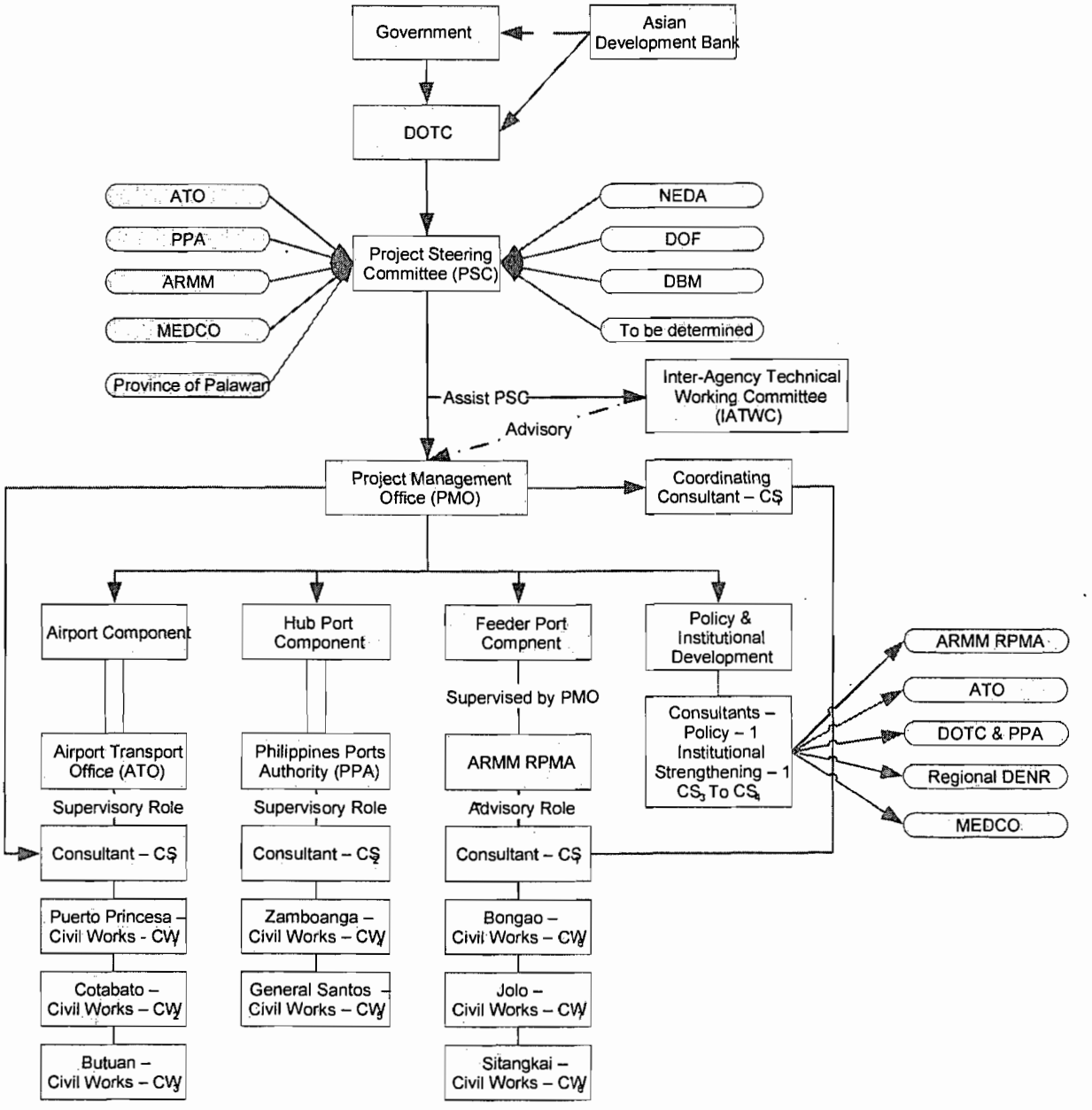

Figure 7.2-1: Organizational Relationships in the Coordination of the ITDP

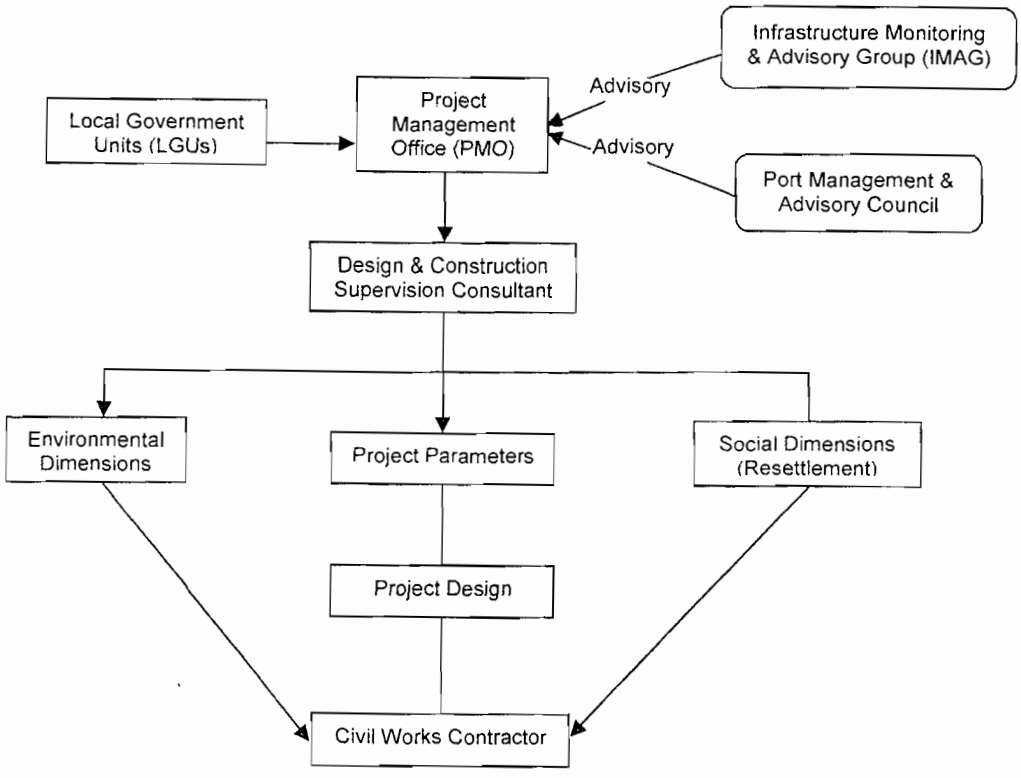

Figure 7.2-2: Project Coordination and Implementation at Local Level

7.2.2 The PMO will have overall responsibility for the day to day supervision of the ITDP and will be chaired by the Assistance Secretary of Planning and Development. The IATWC will provide advisory assistance to the PMO and liaison with key agencies of the Government on a routine basis. To assist the PMO on a day to day basis, the consultant providing planning, design, tendering and construction supervision services for the Airport and Feeder Port Components will also act as the project coordination consultant to the PMO. A description of the various consulting services required for the ITDP is summarized in the next Section (7.3).

7.2.3 The ATO is shown as supervising the implementation of the three subprojects that form the Airport Component of the ITDP. It has the institutional capacity and competence to handle the planning, design and construction of large civil works projects similar in scope to those of the ITDP. It is familiar with the three subprojects since it has had responsibility for them under the Third Airport Development Project. ICAO will be engaged as independent consultant to ensure compliance to its Standards and Recommended Practices (SARPs).

7.2.4 Likewise, the PPA is given the responsibility of supervising the two hub port subprojects. It too has the financial and technical capacity and competence to implement these projects successful under the oversight of the PMO. However, the feeder port projects will be directly supervised through the PMO with the advisory inputs of the ARMM RPMA. The proposed feeder port component will be the basis and venue for the institutional strengthening of this agency.

7.2.5 Figure 7.2-2 shows the coordination efforts at the local level using the proposals outlined in Section 7.1. This coordination begins with the planning and design of the project where inputs for local government agencies directly involved in the project will be sought as well as more informal project oriented arrangements proposed in Section 7.1. It continues through the construction phase with emphasis on compliance with the bid documents. The PMO and the project coordinating consultant, who is responsible in preparing designs and providing construction supervision, ensure coordination at the local level. During construction, the contractor is expected to satisfy all the environmental and social requirements stipulated in the tender documents.

7.2.6 To assist the PMO, the consultant providing planning, design, tendering and construction supervision services for the Airport and Feeder Port Components will also act as the project coordination consultant to the PMO.

7.3 Project Financing and Implementation Plan

7.3.1 Project Financial Plan

7.3.1 The Project Financial Plan is a summary of project investment costs and provides an indication of the distribution of these costs between ADB and the Government based on criteria described below.

7.3.2 Estimation of the Investment Costs

7.3.2 Each of the feasibility studies describes in some detail the estimation of the investment cost of the subprojects. The parameters used in the development of the investment costs are summarized in **Table 7.3.2-1**.

7.3.3 Project Cost Allocation

7.3.3 The project costs are divided according to the source of funding. Three sources of funds are identified as: 1) ADB for the loan, with the Government providing counterpart funding; 2) Other preparatory activities funded solely by the Government; and 3) the Poverty Alleviation Initiative fund through a grant from the Government of Japan thru the Japan Fund for Poverty Reduction and administered through ADB. The Loan will fund construction costs, equipment costs, consulting services for design and construction supervision of the subprojects and other consultancy funded for the benefit of the project, contingencies and financing fees, except land acquisition and resettlement costs, administrative costs, and taxes and duties to be directly borne by the Government, and will cover up to 65% of the costs of the subprojects.

- Loan based costs
  - Civil works construction costs;
  - Equipment costs;
  - Consulting services costs;
  - Physical and price contingencies; and
  - Various financial charges.
- Poverty Alleviation Initiative (PIA) - funded through the Japan Fund for Poverty Reduction (JFPR) as a grant with the ADB acting as the executing agency.

Table 7.3.2-1: Investment Costs

	Cost Component	Main Features and Method of Estimation	Proportion Local Currency
1	Civil Works	Prices are for the first quarter 2006.	
	Airports	Update unit costs with quantities based on earlier designs under Third Airport Development Project	45%
	Ports - Hub	PPA data	65%
	Ports - Feeder	Various sources including recent GEM estimates	65%
2	Equipment - imported	Current prices	10%
3	Base Cost	Civil works & equipment	
4	Resettlement and Land acquisition		
	Land acquisition	Market prices	100%
	Resettlement	Estimated actual costs	100%
5	Consulting Services[1] including principally: 1) preparation of designs and tender documents, 2) assistance during tendering and 3) construction supervision	Detailed cost estimate based on level of effort (LOE) for feeder ports, hub ports and airports. Costs are allocated to subproject on LOE. See **Appendix 7-2** for details.	50%
6	Administration of the subproject by the Government	3.5% of the Base Cost	80%
7	Taxes and Duties	Computed on Base Cost and Consulting Services at 12% EVAT and 3 % duties on *imported equipment*	100%
8	Physical Contingencies		
	Airports	7% - information based on designs	Variable
	Hub Ports	10% - better information available	Variable
	Feeder Ports	15% - offshore construction relatively poorer information available	Variable
9	Price Contingencies	For financial plan only, not used in the economic and financial analyses and based on projected domestic and foreign currency inflation rates	Variable
10	Foreign exchange rate	Php 52 = 1US$	

7.3.4 The project will be funded through an ADB loan and Government counterpart funds. In the case of the hub ports, the PPA will fund the local currency costs as indicated in **Table 7.3.3-1** and described below:

- Civil works will be funded 75% through the loan proceeds and
- All internationally procured equipment will be funded a 75 % from the loan;
- All consultancy services will be funded 100% through the loan.
- Various other project costs borne by the Government including resettlement and administration of the project as well as all EVAT taxes, duties on the import of equipment for the project, permitting fees and LGU taxes and fees associated with the implementation of the subprojects will be funded up to 100%.

[1] The Consulting Services for the three project components are estimated separately for preparation of designs and tender documents, for assistance during tendering and for supervision of construction. Other consulting services are required on (1) policy, institutional development and strengthening, and the environment not covered under the project oriented services; and (2) ICAO oversight for airports.

- The Government through counterpart funds will finance the balance of the cost.
- The Poverty Alleviation Initiative (PIA) is a Japanese Government grant. The ADB will act as the executive agency for these funds. Note that these funds are not included in the financial plan for the project.

7.3.5 This information is summarized in **Table 7.3.3-1**.

Table 7.3.3-1: Summary of Cost Sharing Arrangements

Component	Share of cost – from the loan	Counterpart funding either from the Government or PPA	
		Share of Govt	Taxes + duties
Civil Works	75%	25%	100%
Equipment	75%	25%	100%
Consulting Services	100%	0%	100%
Resettlement	0%	100%	No taxes
Administration	0%	100%	No taxes
Contingencies	40%	60%	100%
Financial Charges	100%	0%	No taxes

7.3.6 **Institutional Arrangements.** The implementation of the feeder port component of the project will be under the direction of the DOTC, which will act as the executing agency for the Government and will oversee through its organization the implementation of the feeder port and airport components of the project. The implementation of the hub port component will be the responsibility of the PPA through the on-lending of the funds received from the loan by the Government.

7.3.7 **Contract Packaging.** The largest contracts will be for civil works for the subprojects. For each location, there will be one civil works contract package, referred to as CW_1 through CW_8 as shown in **Table 7.3.3-2**. The airport subprojects include considerable procurement of equipment much of this equipment will be procured by the civil works contractor. In addition, there will be other imported equipment required and will be purchased as separate equipment contracts.

7.3.8 The equipment contracts are associated with the airport facilities and for the procurement of:

- Rescue, Firefighting equipment for all three airports (E_1) and
- Maintenance and support equipment (E_2) for the airports.

7.3.9 Because these projects are likely to be completed at approximately the same time, it is possible to procure the equipment for all three airports at the same time. For the Hub Ports, it is suggested that the equipment be bought separately for each subproject. In the case of the feeder ports, the generating sets might be purchased as a single contract; however, if there are delays in any one project it might be better to procure them in separate contracts.

Table 7.3.3-2: Contract Packages

Subproject		Civil Works	Equipment	Consulting Services	
				Design + Construction Supervision	Institutional Strengthening
Airports					
	Puerto Princesa	CW_1	E_1, E_2	CS_1	CS_3
	Cotabato	CW_2	E_1, E_2	CS_1	CS_3
	Butuan	CW_3	E_1, E_2	CS_1	CS_3
Hub Ports					
	Zamboanga	CW_4	E_4	CS_2	CS_4
	Gen. Santos City	CW_5	E_5	CS_2	CS_4
Feeder Ports					
	Bongao	CW_6	E_3	CS_1	CS_3
	Jolo	CW_7	E_3	CS_1	CS_3
	Sitangkai	CW_8	E_3	CS_1	CS_3
Institutional Strengthening					
	Aviation & Marine Policy Frameworks				CS_3+CS_4
	MEDCO + ARMM				CS_3+CS_4
	Environmental safeguards				CS_3+CS_4
	ICAO Oversight (SARPs)				CS_5
Poverty Alleviation Initiative (PIA)					
	Not included				

7.3.10 The contracts for consulting services will be limited to two basic contracts (CS_1 and CS_2) providing services for the implementation of the civil works and will cover the following types of services:

- Project Coordination and assistance to the PMO (CS_1 only);
- Planning and design services for the subprojects;
- Assistance during tendering for the subprojects;
- Construction supervision services for the subprojects;
- Compliance for the loan in general and for the subprojects in particular and benefit monitoring for the subprojects. See Section 7.4; and
- Institutional strengthening for the program by mode.

7.3.11 One of the two consulting services contract (CS_1) would cover the subprojects under the management of Department of Transport and Communications (DOTC) covering the feeder port and airport subprojects (6 subprojects). The second one (CS_2) would be for the hub port subprojects (2) managed by the PPA. Reference is also made to Figure 7.2-1 above.

7.3.12 The policy and institutional strengthening and development services in connection with be done by the following additional consulting contracts:

- Assistance in formulation of the aviation and maritime transport policy frameworks, including Assistance to MEDCO and to ARMM, and Assistance on Environmental Safeguards (two consulting services contracts with international firms) ($CS_3 + CS_4$); and
- ICAO Assistance in SARPs compliance for airport subprojects (CS_5).

7.3.13 These arrangements facilitate the management of the dialogue on aviation and maritime transport policy frameworks by providing a presence during at least 24 months.

7.3.14 To recapitulate, the scope of the consulting services for the three feeder port and three airport subprojects (CS_1) cover, project coordination, planned, designed and the construction supervised for all six subprojects. These consulting services are to be done through a single contract under the direction of the DOTC acting as the executing agency for the Government. Again the objective of having a single consultant is to facilitate the overall management of this project and to reduce costs by avoiding duplication of similar activities and personnel. As with ports, these consulting services include environmental and other monitoring activities during the project.

7.3.15 The consulting services (CS_2) for the Hub Port Component will be supervised by PPA; its emphasis will be on the implementation of the two subprojects at Zamboanga and General Santos City, and unlike the feeder port consulting services will have limited institutional development activities within the scope of these two subprojects.

7.3.16 Each of these two consulting services contracts will cover loan compliance requirements (assistance in HIV/Aids prevention and awareness, monitoring the Environmental Management Plan, benefit monitoring, resettlement plans compliance, monitoring poverty alleviation and social programs, and etc.).

7.3.17 The Poverty Alleviation Initiative will not with funds from the loan but will be done in parallel with it.

7.3.18 The main contract activities are indicated in Table 7.3.3-2. Reference is also made to Figure 7.2-1. The estimated cost of Consulting Services is found in **Appendix G**.

7.3.19 To implement the 8 subprojects, 20 contracts are anticipated as follows:

- Civil Works - 8;
- Equipment - 5; and
- Consulting Services - 5.

7.3.4 Proposed Project Implementation Schedule

7.3.20 **Activities through Loan Effectiveness.** The following activities are expected to be completed by October 2007:

- Approval of the feasibility study by the Government and ADB by December 2006;
- Loan negotiations;
- Loan Approvals and signature by mid-July 2007; and
- Conditions to be met by the Government prior to loan effectiveness (assumed to take up to three months).

7.3.21 **Activities after Loan Effectiveness.** Taking into consideration these factors, the project schedule was developed based on the following major activities:

- Completing the preliminary designs and other studies necessary to finalize the designs;
- Completing on-going environmental, cultural and permitting activities described elsewhere in the report;
- Completing on-going resettlement and land acquisition activities described elsewhere in the report;
- Preparation of the final detailed final designs and bid documents for all subprojects;
- Tendering (bidding, bid evaluation and award) the civil works contracts;
- Construction of the civil works; and
- Procurement of equipment.

7.3.22 Based on these activities, **Table 7.3.4-1** summarizes the time required to implement the key project activities according to:

- A "short" or optimistic forecast of the time needed. It assumes a minimum of delays and that everything falls into place on time;
- A "long" or pessimistic outlook which is based on long and unforeseen delays and more time needed to implement various project activities than anticipated; and
- A "most likely" (ML) scenario is estimated on a realistic assessment of the duration of each activity based on past experience with similar types of projects.