



# **Logistics and Transportation Infrastructure**

**Hussein S. LIDASAN, Ph.D.**  
**Professor/Director of Graduate Studies**  
**School of Urban & Regional Planning**  
**University of the Philippines**

**ROUNDTABLE DISCUSSION ON TRANSPORTATION  
INFRASTRUCTURE FOR NATIONAL  
DEVELOPMENT, COMPETITIVENESS, AND RESILIENCY**

**2014 March 6**  
**Hyatt Hotel, Manila**

# OUTLINE

- I. Introduction
- II. Intermodal Logistics Network System Defined
- III. Issues on Logistics and Transport Infrastructure
- IV. Addressing the Issues: **City Logistics Strategies**



# **I. Introduction**

Being an archipelagic country, the Philippines' intermodal logistics system is anchored on its **maritime transport system**, supported by:

- A road network linking the ports to production areas, markets and logistics terminals
- An air transport system with strategic regional and local airports
- An information-based system for documentation (CIQS)
- An intermodal transport system utilizing Ro-Ro network

## Being in a typhoon belt,

- The Philippines experiences at least 20 typhoons annually
  - a need to ensure smooth flow of relief goods and evacuation of people
  - efficient debris management to have efficient and seamless movement of relief works and rehabilitation
- humanitarian logistics
- resilient transport infrastructure

In most urban and metropolitan areas:

- Traffic congestion in major roads
- Incompatible land use and transport interaction
- Freight vehicles perceived to cause traffic congestion
- Concern on increasing carbon footprints
- Access to ports and airports lack efficient traffic management



## Current issues

- ▶ **Lack of trip schedules at some Ro-Ro connections**
  - Increased waiting time of passengers
  - Risk of missing scheduled trips
  
- ▶ **Limited capacities at new Ro-Ro routes and terminals**
  - Arterial roads with average total width of 6-6.5 meters (both directions)
  - Increased side frictions (i.e. presence of developments at road sides)
  - Lack of berths at terminals

**Trip frequency at major Ro-Ro connections**

Origin	Destination	Trips/week
Batangas	Calapan	235
Calapan	Batangas	224
Roxas	Caticlan	17
Caticlan	Roxas	14
Iloilo	Bacolod	22
Bacolod	Iloilo	24
Dumaguete	Dapitan	10
Dapitan	Dumaguete	6
Matnog	Allen	245
Allen	Matnog	217



## Comparative Logistics Costs in the Philippines

Item	Cost
<b>Power</b>	<b>10-25% of costs</b>
<b>Logistics</b>	<b>25-30% of costs</b>
<b>Telecommunications</b>	<b>5% of cost</b>

Source: Global Competitiveness Ranking (World Bank, 2006-07)

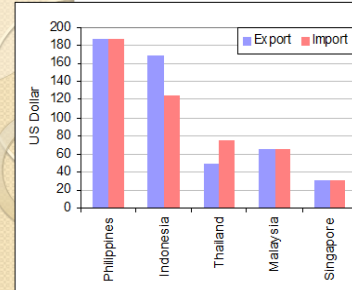
Activity	% of Wholesale Price
<b>Post Harvest Services</b>	<b>3.1 – 5.4 %</b>
<b>Non-Port Handling</b>	<b>3.5 – 10 %</b>
<b>Port Services</b>	<b>2.6 – 5.4 %</b>
<b>Shipping</b>	<b>8.0 – 12 %</b>
<b>Trucking</b>	<b>7.0% - 11%</b>
<b>Total Transport Cost and Logistics Cost</b>	<b>24.2 – 43.8%</b>

Source: Cash Crop Distribution Systems in the Philippines (JBIC, 2002)

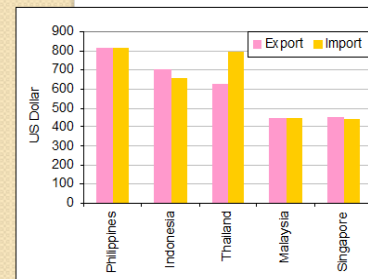
## Total number of days to process a container (Export and Import)

Export	Duration (days)	Duration (days)	Duration (days)	Duration (days)	Duration (days)
Documents preparation	9	14	8	10	1
Customs clearance	2	2	1	2	1
Ports and terminal handling	3	2	3	3	1
Inland transportation and handling	2	3	2	3	2
<b>Total</b>	<b>16</b>	<b>21</b>	<b>14</b>	<b>18</b>	<b>5</b>
Import	Duration (days)	Duration (days)	Duration (days)	Duration (days)	Duration (days)
Documents preparation	8	15	8	9	1
Customs clearance	3	4	2	1	1
Ports and terminal handling	4	6	2	2	1
Inland transportation and handling	1	2	1	2	0
<b>Total</b>	<b>16</b>	<b>27</b>	<b>13</b>	<b>14</b>	<b>3</b>

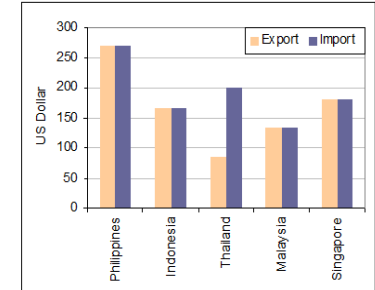
Source: World Bank – Doing Business (2009)



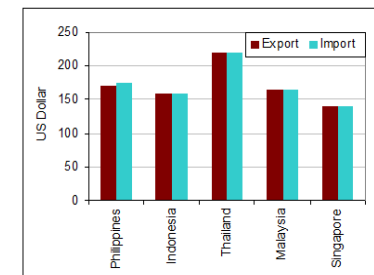
Customs Clearance Fee per Container



Inland Transportation and Handling Fee per container



Ports and Terminal Handling Fee per Container



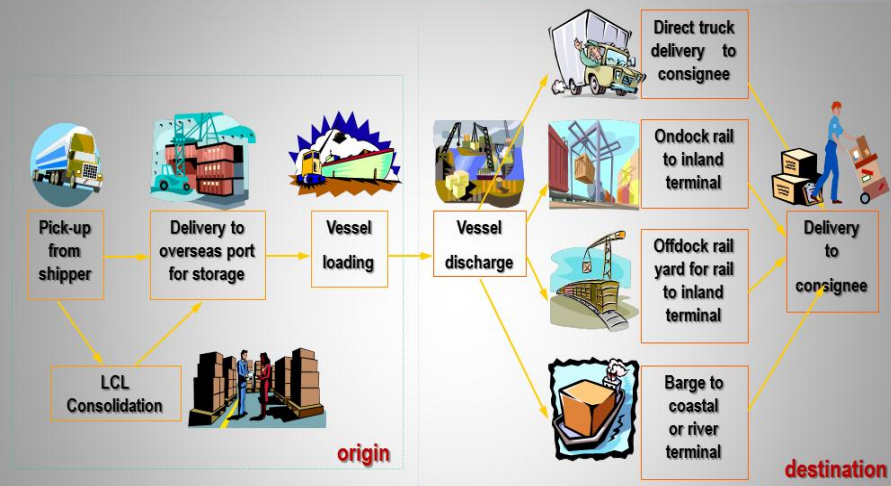
Total Cost to Import/Export per container

Source: World Bank – Doing Business (2009)



**II. Intermodal  
Logistics  
Network System  
Defined: City  
Logistics Concept**

# Steps of an intermodal freight movement



- at each step when the container and its accompanying documents are transferred, possibility that a **SEAM** (usually associated with the transport related factors and documentation) or delay arises
- Regulatory measures/initiatives tend to be the causes of impediments in every step of the logistics movement, thus increasing the **SEAM**

## Characteristics of Asian Intermodal Logistics Networks

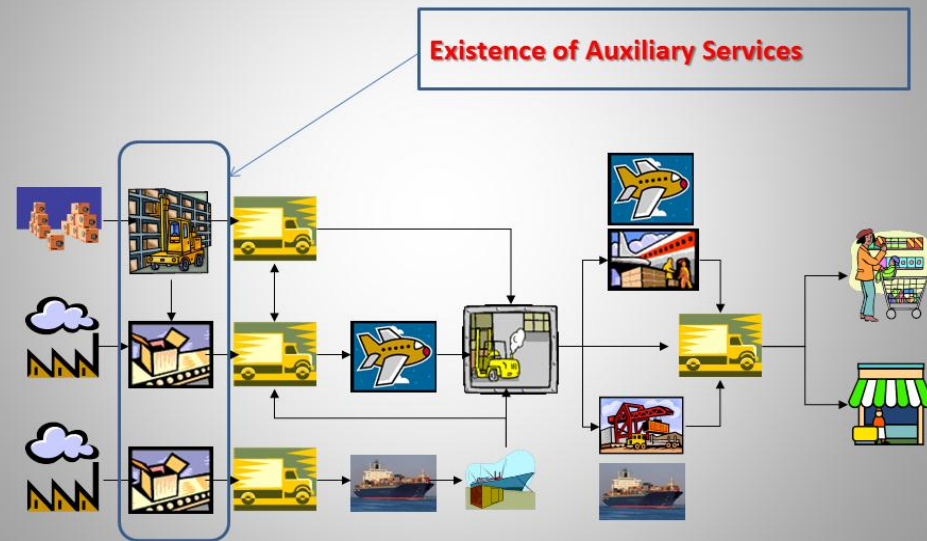
### From two mode to one

- One integrated mode
- One responsible party through all trips (3PL, 4PL)
- One transportation rate
- One document through all modes
- Single contract through intermodal transportation

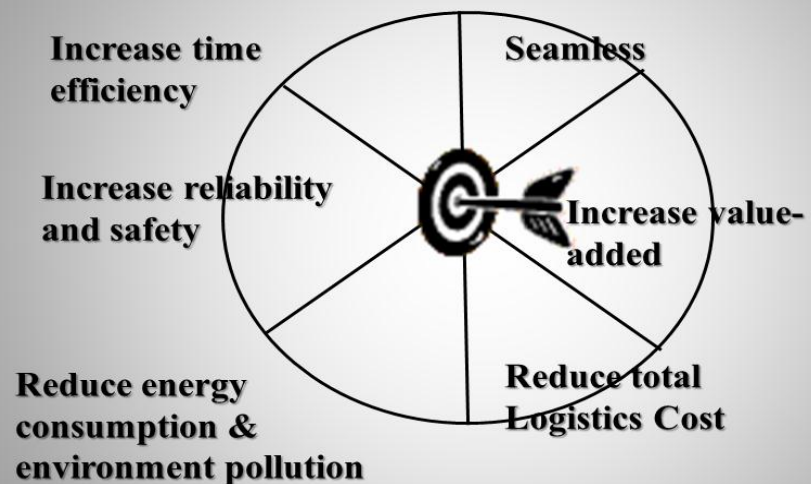
### Asian Countries

- Islands and/or archipelagos
- Large distances between countries
- Sea and air transport
- Export center of industrial goods
- Containerized cargo transport

# What are types of Intermodal Logistics Networks



## Goal of Intermodal Logistics Networks



- Basically, intermodal logistics aimed at reducing the seam, caused by impediments



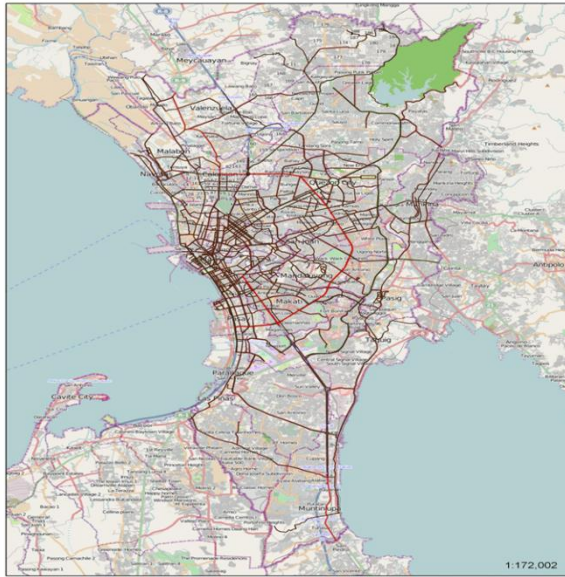
# What is sustainable and efficient Intermodal Logistics Networks

- ◎ Cooperation and collaboration among private corporations, governments and countries to minimize the regulation and institutional barriers
  - ◎ Standardization of intermodal logistics systems to provide seamless services
  - ◎ Harmonization between logistics operations and environment quality to reduce the externality and energy consumption
  - ◎ Sufficient logistics physical and information infrastructure to reduce the congestion
  - ◎ Wide use of ICT to meet shippers higher demands
- Significant requirements of seamless and efficient connectivity

## Features of a Seamless Intermodal Logistics Network System:

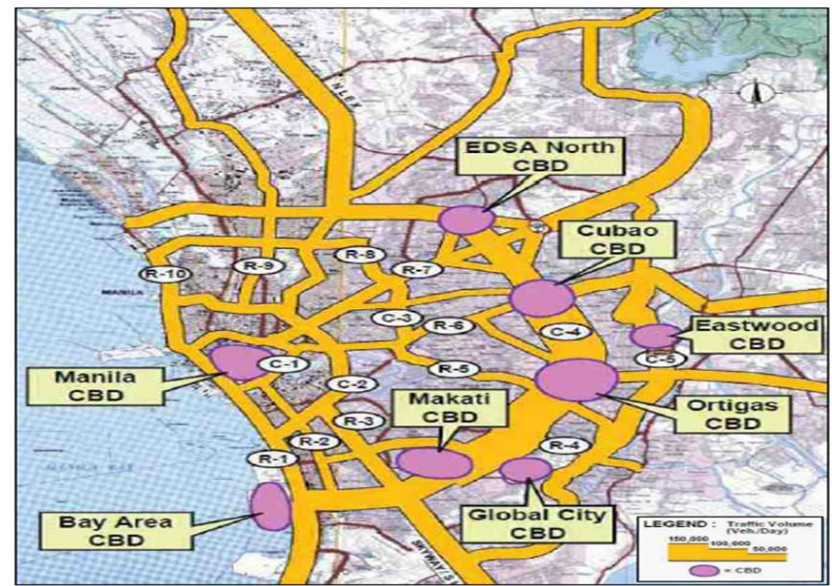
Characteristics	Factors to be Considered
<ul style="list-style-type: none"><li>❑ Efficient intermodal transport system</li><li>❑ Standardized information and nomenclature systems</li><li>❑ High standard transport infrastructure network</li></ul> <p>➤ Ensuring efficient infrastructure and ICT provisions for an efficient and seamless intermodal logistics network system</p>	<ul style="list-style-type: none"><li>▪ Efficient CIQS documentation and facilitation system/s</li><li>▪ Improvement of auxiliary services</li><li>▪ Land use – Transport integration</li><li>▪ Environmental and energy</li></ul> <p>➤ Harmonization and integration</p> <p>➤ Institutional and management schemes in support of the provision of a seamless and efficient intermodal logistics network system</p>

# Metro Manila's Road Network

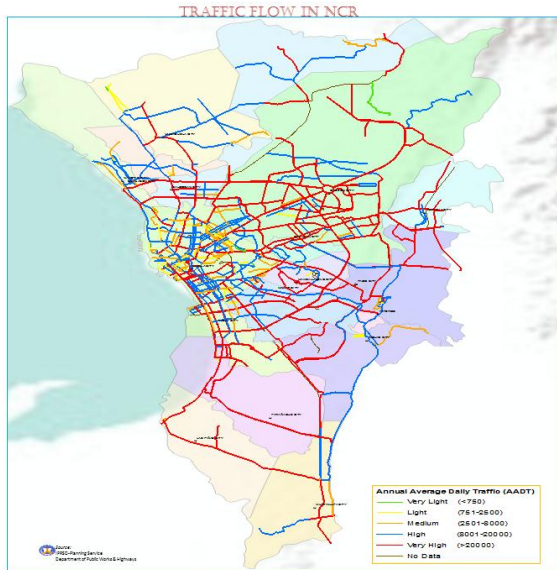


Source: DPWH, 2011

# CBDs and Road Network in Metro Manila



# Traffic Flow in Metro Manila

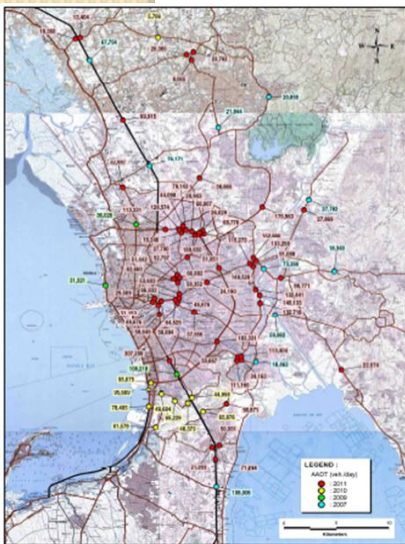


Source: DPWH, 2011

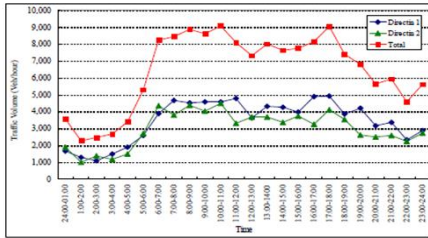
# Traffic Growth Rates, 2011

	Motorcycle	Passenger Car	Passenger Utility	Goods Utility	Bus (All Types)	Truck (All Types)
PHILIPPINES	2.226	2.654	2.226	2.101	2.226	2.101
Metro Manila	2.231	3.801	2.231	1.932	2.231	1.932

# Metro Manila Road/Traffic Infrastructure Profile

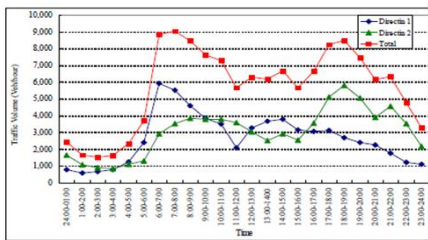


Traffic Volume in Metro Manila, 2007



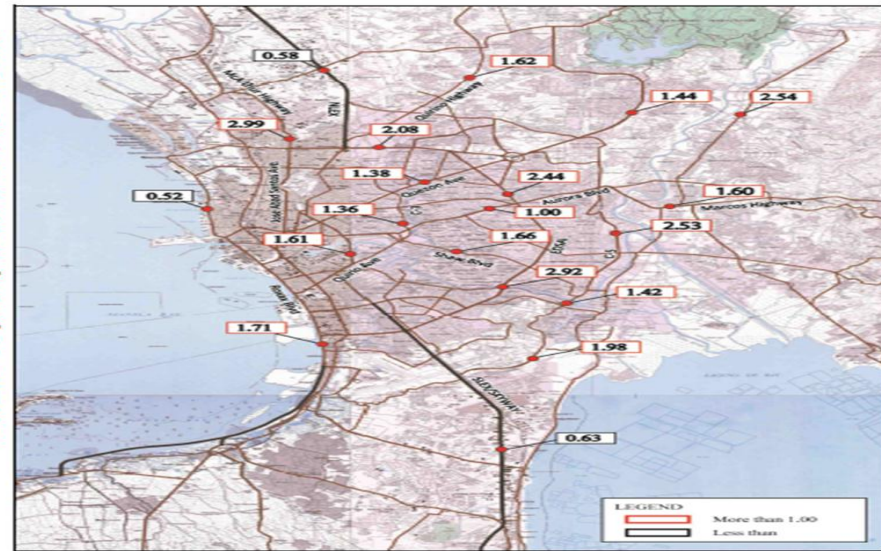
Source: C-6 Expressway FS by 2007

FIGURE 5.1-4 HOURLY VARIATION OF TRAFFIC AT EDSA



Hourly Traffic Variation @ Selected Corridor, 2007

Volume Capacity Ratio in Metro Manila



From: Mega Manila Region Highway Network ITS Integration Project, JICA, 2013

Bottleneck (Morning time)

Road	Section	Congestion Length (km)	Speed (km/h)	Cause of Congestion
Rizal Ave	Jose Abad Santos Ave to C-2	1.4	4.2	Traffic Signal (Intersections in C-2)
A. Bonifacio Ave	C-3 - C-2	3.6	8.9	Traffic Signal (Intersections in C-2)
A. Bonifacio Ave	C-2 - C-3	3.6	9.1	Traffic Signal (Intersections in C-3)
Azusa Blvd.	C-5 - EDSA	2.8	8.7	Slow moving vehicle (motorcycle, jeepney, heavy loaded truck), Traffic Signal (Intersections in EDSA)
Ramona Magpayas Blvd.	C-2 - Claro M. Recto Ave	1.0	3.3	Traffic Signal (Intersections in Claro M. Recto Ave)
Elpidio Blvd.	C-3 - Claro M. Recto Ave	2.8	3.8	Traffic Signal (Intersections in Claro M. Recto Ave)
EDSA	Rozas Blvd. - Taft Ave	8.9	3.3	Traffic Signal (Intersections in EDSA)

Source: C-6 Expressway FS by 2011, HSR by 2009, C-4 Expressway FS by 2007

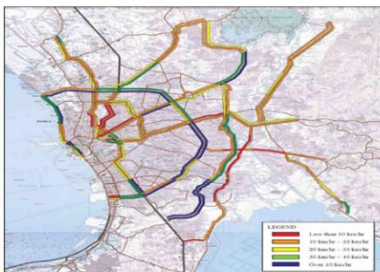
Bottleneck (Evening time)

Road	Section	Congestion Length (km)	Speed (km/h)	Cause of Congestion
C-5	A. Marcos Highway - Commonwealth Ave	4.3	9.0	Traffic Signal (Commonwealth Ave)
C-5	Pang Blvd. - Katayunan Ave	1.2	4.6	Slow moving vehicle (motorcycle, jeepney, heavy loaded truck)
Rozas Blvd.	Kalaw - Burgos	0.4	8.8	Traffic Signal (Burgos Interchange)
Ramona Magpayas Blvd.	C-2 - Claro M. Recto Ave	1.0	3.0	Traffic Signal (Intersections in Claro M. Recto Ave)
Rizal Ave	Jose Abad Santos Ave - Monumento	1.4	6.4	Roundabout in Monumento
Rizal Ave	Rizal Ave - Jose Abad Santos Ave	1.4	4.9	Traffic Signal (Intersections in Jose Abad Santos Ave)
Pres. Quirino Ave	Magdalen Bridge - Pres. Quirino Ave	6.8	8.5	Traffic Signal (Intersections in Orinda Highway)

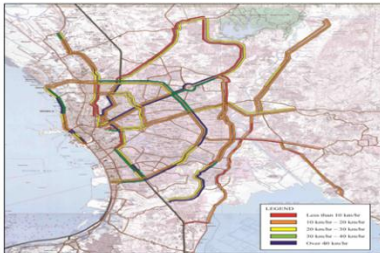
Source: C-6 Expressway FS by 2011, HSR by 2009, C-4 Expressway FS by 2007

Bottleneck Periods

AM Travel Speed



PM Travel Speed



From: Mega Manila Region Highway Network ITS Integration Project, JICA, 2013

Modal Share in Metro Manila, 1996

Mode	Person Trips		Average Occupancy	Vehicle Trips		
	No. (000)	%		No. (000)	% vehicle	% PCU <sup>2</sup>
Private	Motorcycle	125	0.7	114	3.2	1.6
	Car/Jeep+UV <sup>1/</sup>	3,289	18.5	1,316	37.0	37.2
	Truck	422	2.4	201	5.7	11.4
	Subtotal	3,836	21.6	1,630	45.8	50.2
Semi Public	Taxi	862	4.9	392	11.0	11.1
	HOV Taxi	226	1.3	48	1.4	1.4
	Private Bus	440	2.5	20	0.6	1.1
Subtotal	1,528	8.6	460	12.9	13.6	
Public	Tricycle	2,373	13.4	949	26.7	13.4
	Jeepney	6,952	39.1	460	12.9	19.5
	Bus	2,653	14.9	57	1.6	3.2
	LRT	409	2.3	-	-	-
	PNR	6	0.0	-	-	-
Subtotal	12,394	69.8	1,466	41.2	36.2	
TOTAL	17,758	100.0	-	3,556	100.0	100.0

Source: MMUTIS Person-trip Survey

<sup>1/</sup> UV - Utility Vehicle

<sup>2/</sup> PCU - Passenger Car Unit: conversion of different sizes of vehicles in terms of car size for comparison.

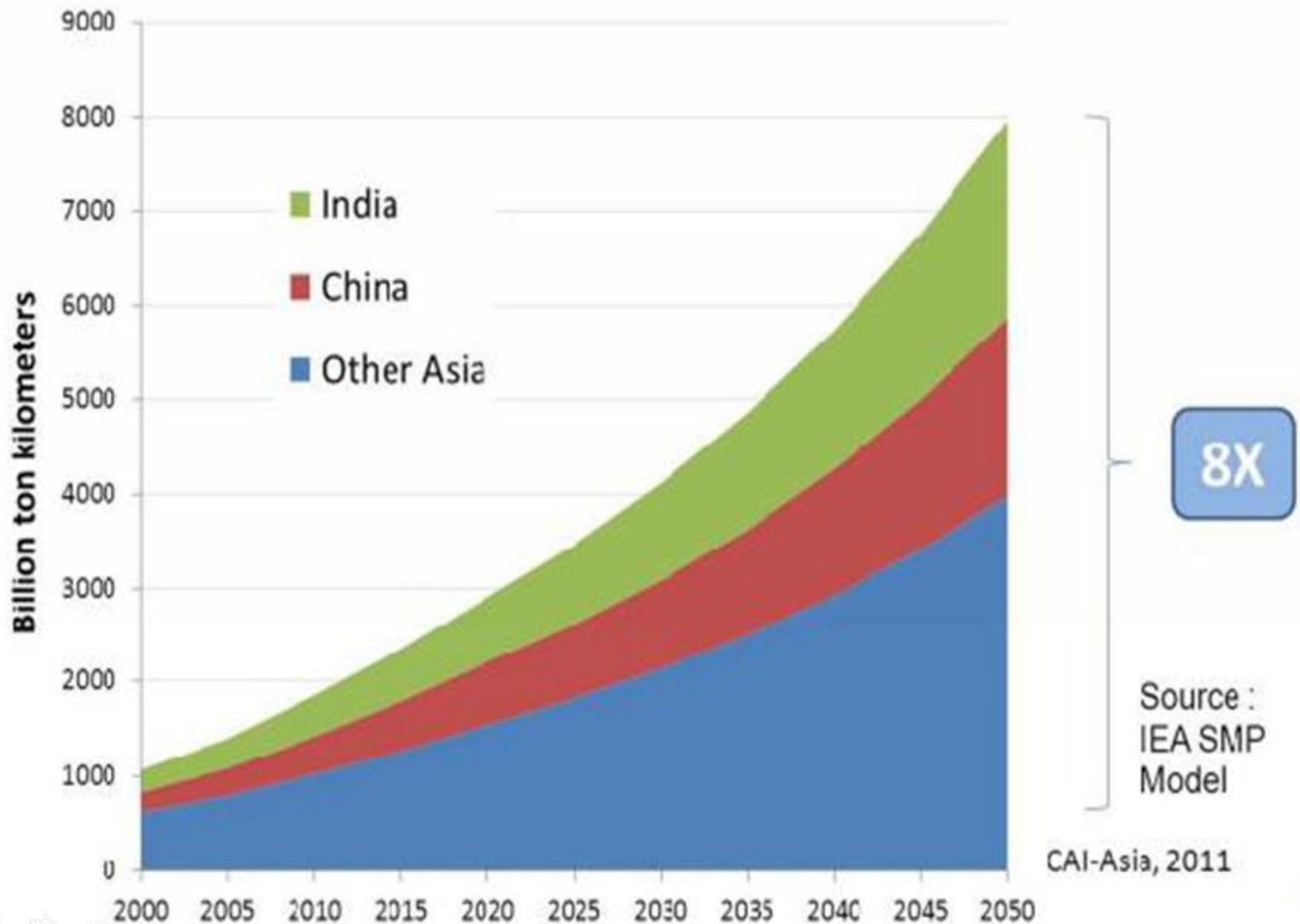
From: Research On Urban Railway Transport in MM, JBIC, 2011

Metro Manila Road/Traffic Infrastructure Profile



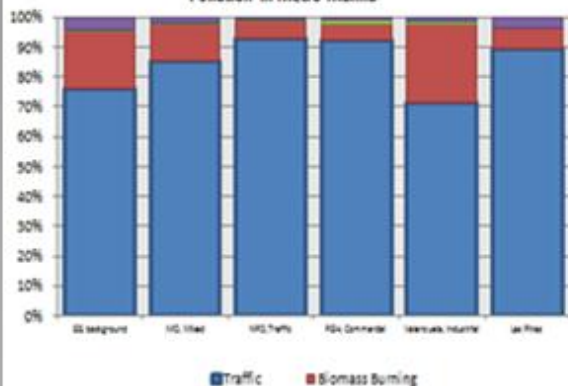
# **III. Issues on Logistics and Transport Infrastructure**

Freight now accounts for 35% of the world's transport energy use, and is growing more rapidly than passenger transportation



## Manila: transport is the biggest source

Percentage Contribution of Source Types to Particulate Matter Pollution in Metro Manila

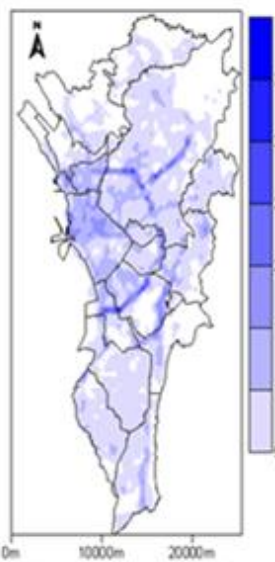


Road transport is responsible for more than 70% of PM emissions and 33% of CO<sub>2</sub> emissions in the Philippines.

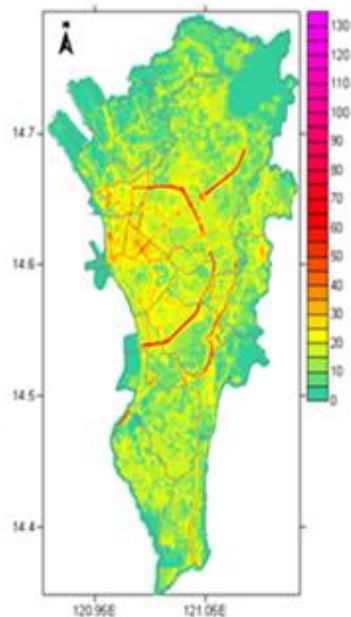
2007 Philippines CO<sub>2</sub> Emissions from Fuel Combustion in million tons CO<sub>2</sub>  
Source: IEA(2009)

Particulate Matter Pollution in Metro Manila  
Source: Public Health Foundation of the Visayas Manila Air Quality Improvement/Urban Development Program (2010 figure)

## Manila: air pollution worst close to roads



Dispersion Model



Estimated particulate emissions from mobile sources in tons per year  
Max = 35.1 tpy, Total = 16.8 x 10<sup>3</sup> tpy

## PM emissions by vehicle type in Manila

- PM Emissions estimated from ADB emission factors, TEC traffic counts
- Traffic estimates validated using retail fuel sales

Vehicle Type	PM Emissions (Tons/yr)	
	Gasoline	Diesel
Cars	663.8	165.1
UV/SUV	350.4	5,603.4
Bus	6.8	586.1
Truck	83.1	3,397.7
MC/TC	5,868.9	-
Total Gas	6,973.1	9,752.4
<b>Total emissions</b>	<b>16,725.4</b>	

# Freight transport characteristics of cities

	Shanghai	Jakarta	Manila	Bangkok	KL	Seoul	Osaka	Tokyo
Primary Objective	Efficiency and economy	Efficiency and economy	Efficiency and economy	Efficiency and economy	Safety and environment	Safety and environment	Safety and environment	Safety and environment
Underlying problem	Congestion	Congestion	Congestion	Congestion Accidents	Accidents	Accidents	Air pollution	Air pollution Accidents
Prioritized measures	Road links Terminals Info system	Road links Regulation Terminals	Road links Terminals Info system	Road links Terminals Regulation	Regulation Info system Regulation	Info system Terminals Road links	Regulation Terminals Pricing	Regulation Pricing Parking facil.
Main expected effects	Capacity Jobs Accidents	Costs Reliability Accidents	Costs Reliability Capacity	Costs Decentralize Air pollution	Accidents Noise Reliability	Accidents Air pollution Reliability	Air pollution Noise Decentralize	Accidents Air pollution Decentralize
Existing Measures								
Node				Public freight terminals		Public freight terminals	Public freight terminals, Truck parking facilities	Public freight terminals, Truck parking facilities
Link	Road network	Road network	Road network	Road network	Road network	Road network	Road network	Road network
Mode							Idling-stop trucks	Idling-stop trucks
Operation	Off-peak deliveries	Off-peak deliveries	Off-peak deliveries	Off-peak deliveries	Off-peak deliveries	Cooperative delivery, Off-peak deliveries	Cooperative delivery, Vehicle fleet sharing	Cooperative delivery, Vehicle fleet sharing
Regulations	Truck restriction	Truck restriction	Truck restriction	Truck restriction	Truck restriction	Truck restriction		Local truck restriction
Economic measures		Truck parking fees				Truck parking fees		Parking charges, Road pricing
IT Application					ETC	EDI, ITS	EDI, ITS	EDI, ITS, Internet load auction

Source: A-LOG Study, 2007, Japan Institute of Highway Economics

# **Freight Transport Characteristics of Metro Manila:**

- **Primary Objective: Efficiency & Economy**
- **Underlying Problem: Congestion**
- **Prioritized Measures: Road Links, Terminals, Info System**
- **Main Expected Effects: Costs, Reliability, Capacity**
- **Link: Road Network**
- **Operation: Off-peak Deliveries**
- **Regulations: Truck Restriction**



# Metro Manila truck ban



<b>Truck Ban 1 (EDSA only)</b>	<b>6 AM to 9 PM everyday except Saturdays, Sundays and Holidays. No cargo truck shall be allowed to travel or pass along EDSA.</b>
<b>Truck Ban 2 (10 major routes)</b>	<b>6 AM to 9 AM and 5 PM to 9 PM everyday except Saturdays, Sundays and Holidays. No cargo truck shall be allowed to travel or pass along these routes.</b>
<b>Definition of Cargo Truck</b>	<b>“Cargo truck” as used in the ordinance refers to motor vehicles, whether loaded or empty, having a gross vehicle weight of 4,500 kgs or more, principally intended for carrying cargo.</b>
<b>Violation and Penalty</b>	<b>Any person who violates the provisions of this ordinance shall be punished by a fine of not less than 500 pesos but not more than 2000 pesos or by imprisonment of not less than 7 days but not more than 30 days or both, at the discretion of the court.</b>

**Truck Ban Hours:**

- 6 AM - 9 PM
- 6 AM - 9 AM; 5 PM - 9 PM
- Alternate route from Port Area to Outside
- Alternate route from Outside to Port Area

## Issues on Truck Ban in Metro Manila

- The truck ban is the most commonly used vehicle restraint in developing countries
- **Banning trucks is a very feasible form of rationing scarce peak period road space**
- Government usually enforces truck restraints so that public transit modes would not compete for limited road space
- **Viable measure during construction periods when road capacity is greatly reduced to ensure better traffic movements**
- Truck restrictions can present harmful effects if not fully understood

## Economic impacts of truck ban

1. Changes in truck operating characteristics
  - shortened delivery schedules; reduced delivery hours
  - reduced quantity of products delivered during banned hours
  - increased travel time
2. Reduced truck delivery frequency
  - decreased truck trip frequency per day
3. Reduced production efficiency
  - decreased rate of production due to delays in delivery schedules
4. Increased transport costs
  - increased costs due to poor productivity are passed on to consumers

## Safety impacts of truck ban

- **A Probit Study indicated that the likelihood of accidents increases when the truck driver:**
  - ➔ **operates a trailer-truck**
  - ➔ **has insufficient sleep**
  - ➔ **performs nighttime deliveries**
  - ➔ **has no complete knowledge of the truck ban ordinance, and**
  - ➔ **violates truck ban rules**
- **Truck ban has significant impact on the likelihood of accidents**

# Issues Related to Maritime Logistics

## Landside access to seaports:

- Inadequate landside infrastructure can incur additional costs because of:
  - damage to goods
  - higher maintenance and repairs to motor vehicles
  - congestion causing time delays in transit from site to site, impacting on quality and potentially generating public safety issues for perishables
  - weight restrictions dictating the need to carry loads smaller than the vehicle's capacity
  - safety risks to users and the community
  - insecure cargo from use of smaller, open vehicles

- Imbalance in cargo movements/flows
- Low port handling productivity
- Limited space for port expansion
- Storage: Container depots; transit storage cool/cold storage
- Lack of integrated regional transport planning
- Tariff misalignment

# Local Regulations

- **Land Use Zoning**
- **Traffic Management Schemes (e.g., vehicular reduction)**
- **Truck Ban**
- **Traffic Circulation Manipulations**
- **Location of warehouses, terminals and related logistics facilities situated in incompatible land uses**
- **Imposition of traffic management affect movements and flows of cargoes, notably at urban areas**
- **Traffic measures, such as truck bans, increase delays resulting to high costs of transporting cargoes**
- **Manipulating traffic circulation by local governments & other agencies , affect routes and movement of trucks from warehouse facilities to destinations & vice-versa**

**These inconsistencies in regulations & enforcement result to increasing logistics costs thereby impede auxiliary services critical for efficient intermodal logistics network systems**

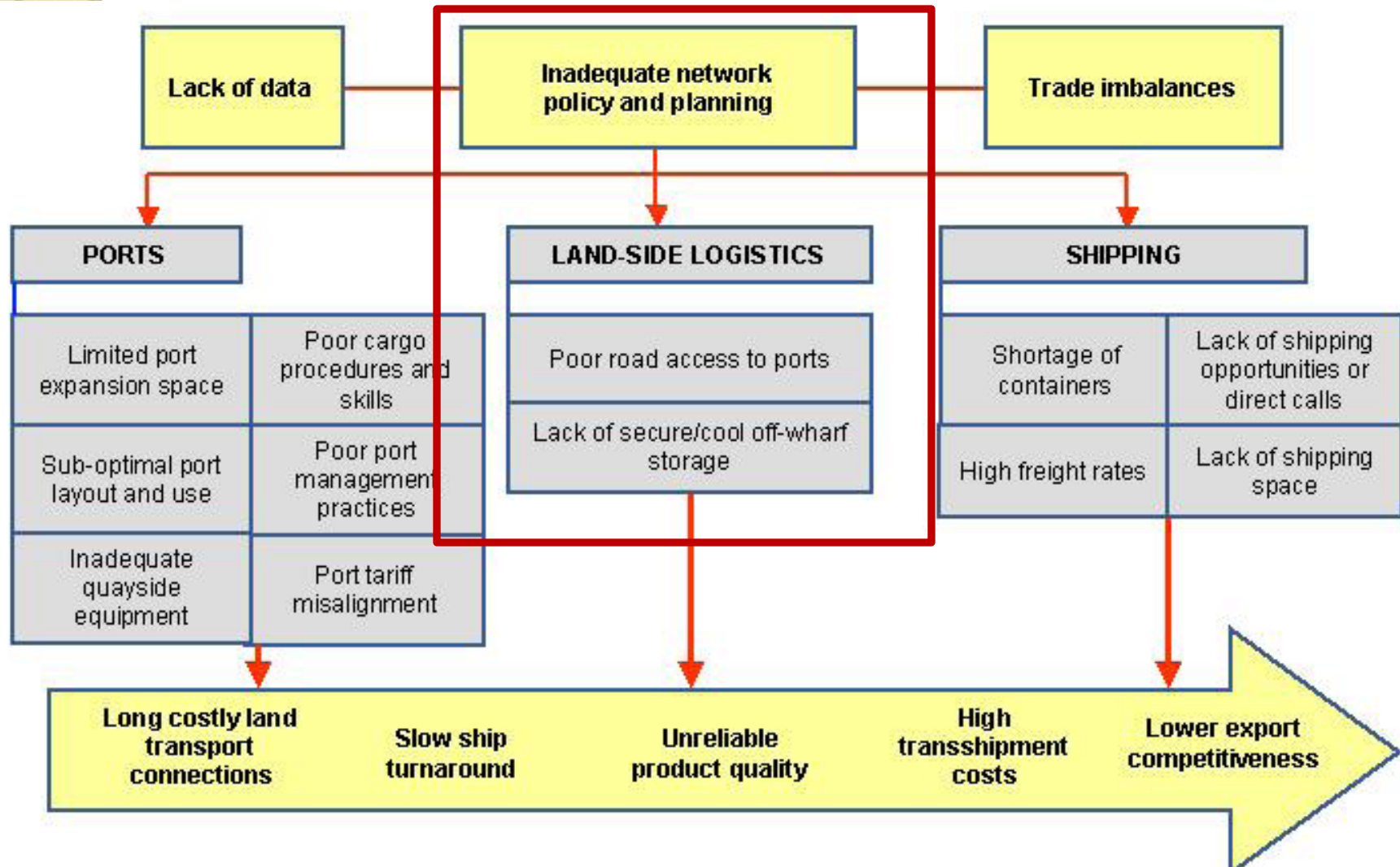
# Development of Subregional Intermodal Logistics Network System

- **Philippine RoRo system development not fully integrated**
  - **Linking Mindanao to ASEAN Highway not yet possible**
- **Strict left-hand drive policy**
  - **Discourages seamless movement from other EAGA provinces to Mindanao**
  - **An impediment in linking Mindanao to ASEAN Highway, passing through EAGA**
- **Port regulations and fees affecting RoRo services still in effect**
  - **Entails additional costs thereby impedes auxiliary services**
- **Lack of standard RoRo facilities, including cargo handling facilities**
- **RoRo access roads not conforming to standards**
  - **Causing longer turn around**

# Perceptions on Regulations

- **Sources of corruption, causing delays in the release of shipments by Customs office**
- **Some Brokers mentioned having trouble completing the necessary documents from other concerned agencies i.e. quarantine clearance from the Bureau of Plant or Animal industry for their Agri-product shipments. These clearances needs to be secured from their main offices in Quezon City far from Mindanao** ➤ **Affecting auxiliary (and related) services, thereby causing impediments leading to the seam in the flow of commodities from warehouses to ports, etc.**
- **Some Brokers complained of a new requirement from Customs to have them accredited. A new regulation states that they need to have 60 CPE units accredited by Professional Regulatory Commission (PRC) and processing in PRC also takes time.**
- **Payment processing in shipping centers also takes time. Usually, only one cashier to cater to hundreds of payees.**

# KEY ISSUES AND THEIR IMPACT ON EXPORT PERFORMANCE IN EASTERN INDONESIA AND SOUTHERN PHILIPPINES



Source: AusAid East ASEAN Initiative Maritime Logistics Pilot (EAI MLP), 2009

## **A. Key Issues**

<b>Issues</b>	<b>Substance</b>	<b>Actions to be Taken</b>
<b>1. Philippines an archipelago (consists of group of islands)</b>	<ul style="list-style-type: none"><li>* Linkage of the major islands has to be established</li><li>* Completion and strengthening of the National Transportation System</li></ul>	<ul style="list-style-type: none"><li>* Develop efficient intermodal system connecting major islands w/ integrated nodal points</li><li>* Develop and maintain country's arterial road system</li></ul>
<b>2. Storage and movement of raw materials and agricultural products from sources to markets</b>	<ul style="list-style-type: none"><li>* Lack of farm-to-market roads</li><li>* Lack of areas to market products</li><li>* Perishable goods (especially from agricultural areas) need to be maintained prior to delivery</li></ul>	<ul style="list-style-type: none"><li>* Develop farm-to-market roads</li><li>* Establish local market areas or transfer points for agri products</li><li>* Encourage establishment of delivery centers</li></ul>
<b>3. Air and Maritime Safety</b>	<ul style="list-style-type: none"><li>* Country has experienced aviation and maritime disasters that resulted to loss of lives and economic loses</li><li>* A number of local cities and areas does not have efficient communications and info systems</li></ul>	<ul style="list-style-type: none"><li>* Review air and maritime safety guidelines</li><li>* Enforce safety rules &amp; regulations</li><li>* Continuously maintain and check planes and vessels</li><li>* Completion of municipal telephone system</li></ul>
<b>4. Lack of efficient communications and information systems at national level</b>	<ul style="list-style-type: none"><li>* Telecommunications companies are not yet fully linked or integrated</li></ul>	<ul style="list-style-type: none"><li>* Urge companies to hurry up with their integration</li></ul>
<b>5. Linkage among communications companies</b>	<ul style="list-style-type: none"><li>* Longer travel time</li></ul>	
<b>6. Traffic congestion in major cities and regions, especially Metro Manila, Cebu and Davao</b>	<ul style="list-style-type: none"><li>* Delay in distribution &amp; movement of goods and people</li></ul>	<ul style="list-style-type: none"><li>* Complete transport and road network systems</li><li>* Develop mass transit systems and implement TDM measures</li></ul>



## **B. Weak Points**

### **Areas of Concern**

**1. Implementation of Plan or Project**

**2. Coordination among government agencies in planning and implementation**

**3. Expertise in the fields of logistics, information systems and physical distribution**

**4. Standardization and normalization of operating systems and information systems**

**5. Development of integrated container terminals at major ports**

**6. Research**

**7. Database systems**

### **Gaps**

**\* Lack of public investment on infrastructure development**

**\* Too many agencies performing the same planning and implementation tasks**

**\* Lack of persons specialized in logistics and related fields**  
**\* No formal education in logistics and related specialization**

**\* Lack of an efficient and standard operation systems at freight stations or (container) terminals especially at other major ports**  
**\* Lack of standard system for logistics information system**  
**\* So far only the Port of Manila has an integrated container terminal**  
**\* Lack of studies related to logistics, physical distribution and information systems,**

**\* Lack of standardized database systems**

### **Mitigating Measures**

**\* Encourage private sector participation through PFI**

**\* Initiate integrated planning and coordination among agencies**  
**\* Initiate capability building in the fields of logistics, IT & related fields**  
**\* Develop new courses & academic programs leading to these fields**  
**\* Develop formal and non-formal training programs**

**\* Experience at MICT be duplicated in other major ports, container term.**  
**\* Develop standardized information system for logistical purposes**

**\* Formulate master plan for devt of integrated cont term at key ports**

**\* Initiate studies through academic institutions and research centers**

**\* Integrate existing database sys.**  
**\* Develop database for logistics and information system studies**



# **IV. Addressing the Issues: **City Logistics Strategies****

# Philippine Intermodal Logistics Policy Objectives:

## Local Level

- Focused on reducing traffic congestion, alleviating environmental and social impacts and improving the economic and technical efficiency of the transportation system
  - **City Logistics Initiatives**

## National Level

- Aimed at providing efficient intermodal transportation system and develop resilient transport infrastructure facilities

## Global

- Focused on how to improve the efficiency of moving people and freights, reducing the impacts of transportation on the global carbon footprints and environment and providing a global competitive trading

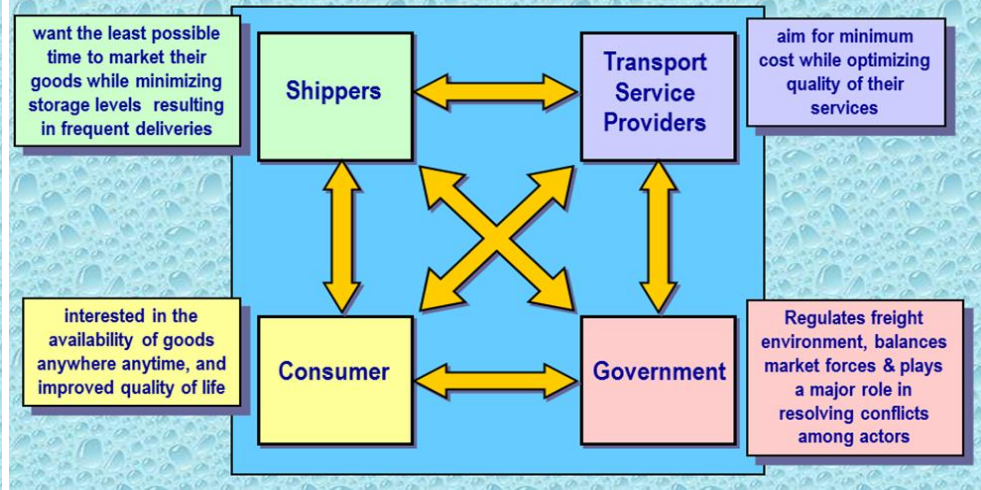
# City Logistics is defined as:

The process for totally optimizing logistics and transport activities in urban areas while considering transport environment, traffic congestion and energy consumption within the framework of free market economy

It therefore aims to:

- Allow the private shippers and freight carriers to reduce freight costs, and
- Ensure that the public sector alleviates congestion and environmental and energy problems

# ACTORS



- Urban freight transport is the subject of local, regional and national policies in different policy fields, such as transportation planning, environmental planning and economic planning
- Most of these policies have focused on reducing traffic congestion, alleviating environmental impacts, improving the economic and technical efficiency of the logistics system and in support of resilient transport infrastructure and humanitarian logistics



Policy Objectives are:

- ECONOMIC
- ENVIRONMENTAL
- INFRASTRUCTURE
- URBAN STRUCTURE

Policy Objectives :

- Efficiency – minimize transport costs and improve quality of transport services (access, reliability, travel time, flexibility or security of freight)
- Economic - assess the economic effects on income, price, market share, etc.
- Environmental -
  - Reduction of local air pollution, ensure low carbon footprints
  - In support of resilient transport infrastructure
  - Improvement of general safety (reducing the number of traffic accidents)
  - Reduction of the consumption of urban space for transport infrastructures and delivery points
  - Slowing down of the depletion of natural resources, such as materials and fossil energy
- Infrastructure - reduction of road maintenance
- Urban Structure - preservation and revitalization of (historic) city centers, and maintaining levels of service within urban areas

# City Logistics can help in -

Developing a **seamless and sustainable**  
Low Carbon Intermodal Logistics  
Network supporting efficient flow of  
urban freight movements in **green**  
development economies

- **Reverse Logistics**
- **Green Logistics**
- **Urban Logistics**

Develop integrated port and logistics  
sector policy and planning :

- ❑ **Identify hub ports, key feeder ports and local ports: include among the feeder ports fishing ports in Eastern Indonesia**
- ❑ **Tailor investment in facilities and equipment to support these defined roles**
- ❑ **Protect or secure land for future development of port and port related facilities**
- ❑ **Identify port access roads and other common user logistics facilities**

## **Prioritized City Logistics Policy Objectives in Metro Manila:**

- **Efficiency and Economic Objectives**
- **Safety and Environment**
- **Infrastructure and Urban Structure**

## **Some City Logistics Initiatives in Metro Manila:**

- **Transport Demand Management (TDM) Schemes**
  - **Traffic Volume Restraint Measures**
  - **Truck Ban at major urban thoroughfares**
- **Application of ICT (e.g., ETC)**
- **Land Use Controls**
- **Terminal Development**
- **Development of Economic and Industrial Zones at Urban Fringes**

# **Some City Logistics Initiatives in Metro Manila:**

- **Transport Demand Management (TDM) Schemes**
  - **Traffic Volume Restraint Measures**
  - **Truck Ban at major urban thoroughfares**
- **Application of ICT (e.g., ETC)**
- **Land Use Controls**
- **Terminal Development**
- **Development of Economic and Industrial Zones at Urban Fringes**

# REFERENCES

1. **ASEAN/AusAid East ASEAN Initiative – Maritime Logistics Pilot Project, Strategic Plan, June 2009.**
2. **Cheng Min Feng, A-Log Presentation, Institute of Highway Economics, 2004.**
3. **Lidasan, H.S., Characterization of Subregional Intermodal Logistics Network System in Support of Transport Policy Formulation: The Context of EAGA, Efficient and Sustainable Intermodal Logistics Network in the Asia-Pacific Region, Prepared by the Asian Task Force, Institute of Highway Economics, Japan, 2007.**
4. **Llanto, G. M., Basilio, E. L. and Basilio, L., Competition Policy Regulation in Ports and Shipping, Discussion Paper Series No. 2005-02, Philippine Institute for Development Studies, 2005.**
5. **Lidasan, H.S., Most Productive International Cooperation, Logistics Developments Supported by ICT and ITS in the Asia-Pacific Region, Prepared by the Asian Task Force, Institute of Highway Economics, Japan, 2003.**
6. **Norojono, O and Lidasan, HS, Policy Directions for Harmonizing Subregional Cross Border Procedures: The Case of BIMP-EAGA, EASTS Proceedings, 2005.**
7. **TA 6174- Support to Strategize Regional Cooperation in Southeast Asia Roadmap for the Development of the Transport Sector in the BIMP-EAGA, 2007.**
8. **Trade, Transport and Logistics Development in BIMP-EAGA Discussion Paper, Unpublished report, March 2010**