#### Round Table 2

Improving Supply Chain Connectivity recent developments.

### TRADE FACILITATION

&

#### **CONNECTIVITY RECENT DEVELOPMENT & NEW CHALLENGES**

## Myanmar

Captain Aung Khin Myint MIFFA aungkhinmyint@captaung.com COLOMBO 2012

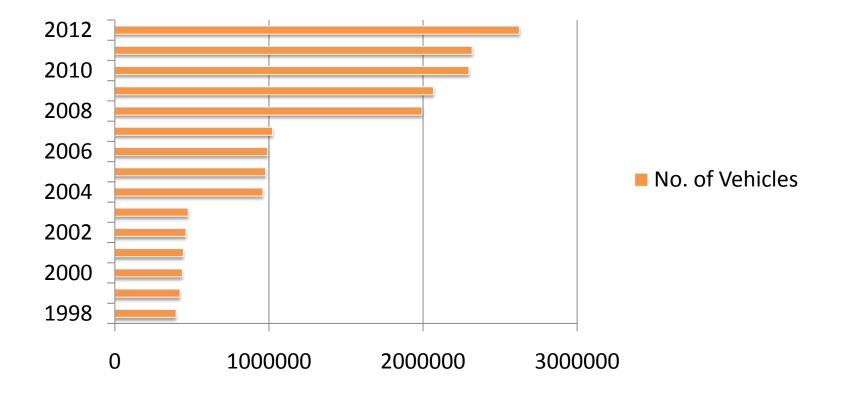
### Content

- Statistics of Transport Sector
- Current situation of Domestic Logistics
- Policy for Environmental Management in Myanmar
- Current Activities and Actions in Transport Sector
- Environmental Improvement Measures in Road Transport Sector
- future plans of the transport sector
- PPP concept for improving in logistics, supply chain management and trade facilitation

## Statistics of Transport Sector

**Emerging Trends** 

## Vehicle Trend in Myanmar (7/2012)



### **Statistics of Road Transport Sector**

#### No. of registered vehicles in Yangon and other States/Regions(7 / 2012)

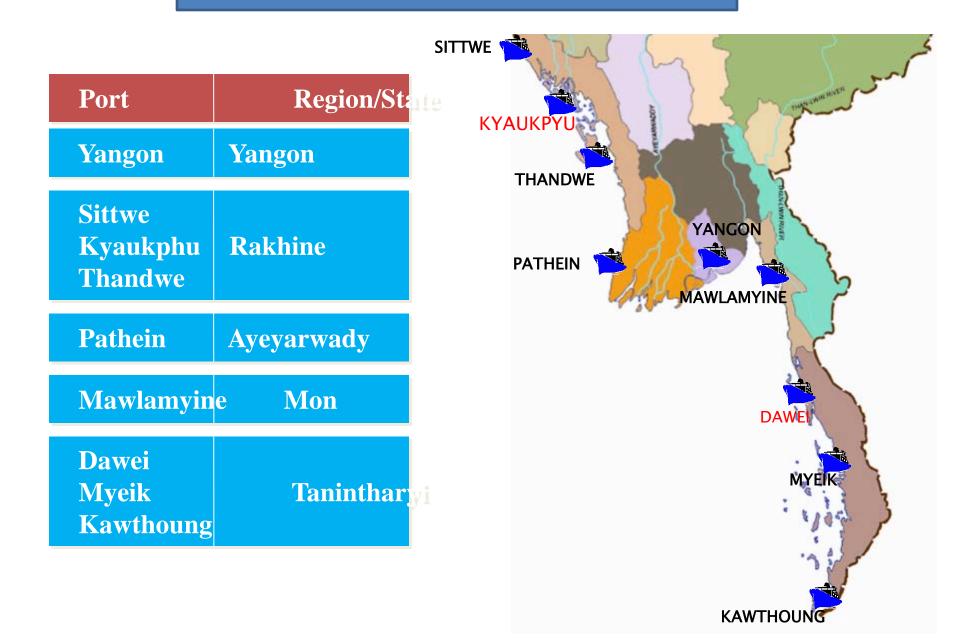
Sr.	Types of vehicles	Yangon	Others	Total
1.	Private	165005	91062	256067
2.	Truck (Light duty)	16326	12850	29176
3.	Truck (Heavy duty)	11480	28037	39517
4.	Bus	11180	8122	19302
5.	Motorcycle	68698	2135014	2203712
6.	Three wheelers	407	23501	23908
7.	Trawlergi	1292	35141	36433
8.	Machinery	222	429	651
9.	Others	12616	3912	16537
	Total	287226	2338077	2625303

#### Statistics of Road Transport Sector(cont'd)

#### **Registered vehicles by Fuel Types (7/2012)**

Sr.	Types of vehicles	Gasoline	Diesel	CNG	LPG	Total
1.	Private	122679	119958	13421	12	256067
2.	Truck (Light duty)	4573	22253	2350	-	29176
3.	Truck (Heavy duty)	874	37356	1287	-	39517
4.	Bus	1784	12180	12180	2	19302
5.	Motorcycle	2203712	-	-	-	2203712
6.	Three wheelers	23642	134	132	-	23908
7.	Trawlergi	2	36431	-	-	36433
8.	Machinery	2	649	-	-	651
9.	Others	541	15419	577	-	16537
	Total	2357806	244380	23103	14	2625303 <sub>5</sub>

### Maritime Transport Sector



#### General Cargo (including Container) Handled in Port of Yangon

#### (M.ton in thousand)

No	Year	Import	Export	Total	Yearly Growth Rate%
1	2002-2003	6005	4835	10,840	(+)7%
2	2003-2004	5191	4609	9,800	(-)10%
3	2004-2005	5208	4773	9,981	(+)2%
4	2005-2006	5514	4725	10,239	(+)3%
5	2006-2007	5623	5332	10,955	(+)7%
6	2007-2008	6240	5619	11,859	(+)8%
7	2008-2009	6150	6166	12,316	(+)4%
8	2009-2010	9492	6655	16,147	(+)31%
9	2010-2011	12307	6131	18,438	(+)14%
10	2011-2012	12590	7818	20,408	(+)11%

Main Export Commodities - Timber, Pulses, Rice and Rice Products, Yellow maize, fishery products

Main Import Commodities - Construction Materials, Machinery and Equipments, Fertilizer, Crude Oil, Palm Oil, wheat grain, Cement

## **Volume of Container Handled in Port of Yangon**

No	Year	Import	Export	Total (TEU)	Total (M.T in thousand)	Yearly Growth Rate%
1	2000-2001	80.406	79.091	159.497	2262.428	-
2	2001-2002	95.366	93.483	188.849	2658.216	(+)18%
3	2002-2003	97.573	98.140	195.713	2838.689	(+)4%
4	2003-2004	86.867	86.457	173.324	2676.184	(-)11%
5	2004-2005	78.223	77.361	155.584	2664.521	(-)10%
6	2005-2006	86.130	85.775	171.905	2606.160	(+)10%
7	2006-2007	99,942	97,337	197,279	3148.324	(+)15%
8	2007-2008	115.267	111.236	226.503	3462.489	(+)15%
9	2008-2009	133.712	130.294	264.006	3937.131	(+)17%
10	2009-2010	152.077	151.333	303.410	4372.025	(+)15%
11	2010-2011	175,315	171,327	346,642	4,571,902	(+)14%
12	2011-2012	207,540	200,503	408,043	5,594,589	(+)18%

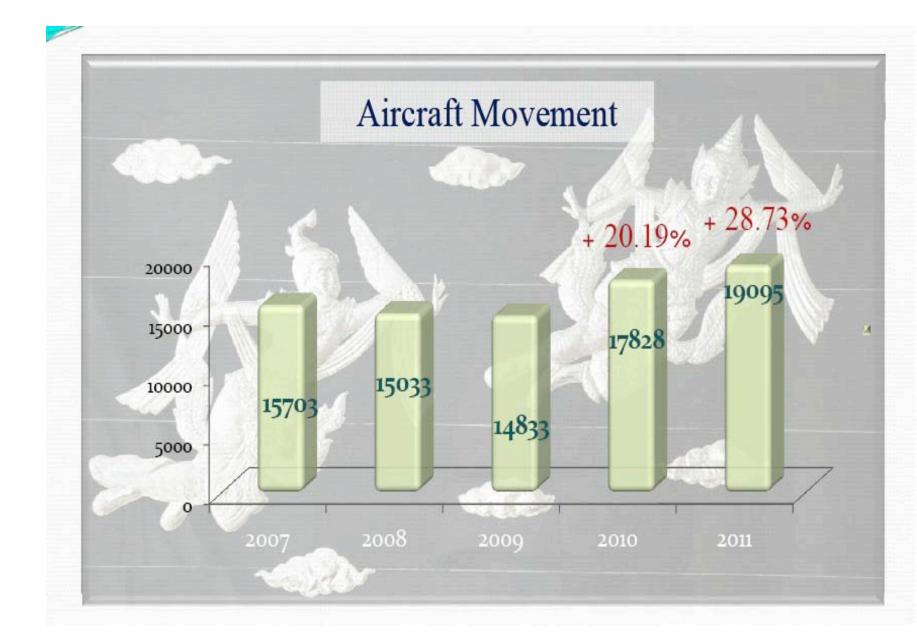
### Air Transport Sector



#### International Air Lines (International /Domestic)

#### **14 International airlines**







# **Rail Transport Statistics**

particular	2001	2004	2005	2006	2007	2008	2009	2010
Route mileage	2946	3013	3042	3075	3119	3187	3238	3410
Track mileage	3852	3922	3952	3986	4062	4272	4327	4518
Steam Rolling stocks	39	39	39	39	37	37	Na	Na
Diesel Rolling stocks	291	291	292	297	307	307	343	352

# Current situation of Domestics Logistics Performance

# Truck to Truck



# Truck to Rail



# Truck to Inland Waterway



# Current Payload of Local Cargo Truck

• ASEAN Standard.

Sr no	Туре	Cargo + Truck weight
1.	6 wheels	16 Tons
2.	10 wheels	21 Tons
3.	12 wheels	25 Tons
4.	18 wheels	46 Tons
5.	22 wheels	55 Tons



AH-14 Road Condition

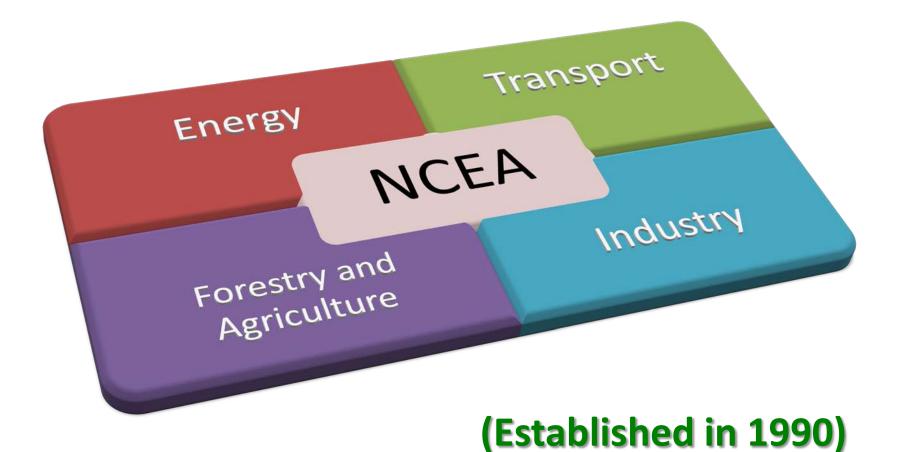
Algeria	125	2.41	45.3
Solomon Islands	126	2.41	45.2
Mauritania	127	2.40	44.7
Papua New Guinea	128	2.38	44.0
Myanmar	129	2.37	43.8
Kyrgyz Republic	130	2.35	43.3
Gabon	131	2.34	43.0
Moldova	132	2.33	42.6
Guyana	133	2.33	42.5
Burkina Faso	134	2.32	42.3
Afghanistan	135	2.30	41.5
Tajikistan	136	2.28	41.1
Libya	137	2.28	41.0
Angola	138	2.28	40.8
Rwanda	139	2.27	40.5
Mongolia	140	2.25	40.0
Ethiopia	141	2.24	39.6
Lesotho	142	2.24	39.5
Congo, Dem. Rep.	143	2.21	38.6
Cuba	144	2.20	38.3
Iraq	145	2.16	37.1
Comoros	146	2.14	36.5
Eritrea	147	2.11	35.5
Sudan	148	2.10	35.3
Congo, Rep.	149	2.08	34.7
Sierra Leone	150	2.08	34.5
Nepal	151	2.04	33.1
Chad	152	2.03	32.9
Haiti	153	2.03	32.8
Djibouti	154	1.80	25.5
Burundi	155	1.61	19.5

#### LPI ranking and scores, 2012

#### Rank 135 2010

## Policy for Environmental Management in Myanmar

### **Environmental Management in Myanmar**



### National Commission for Environmental Affairs (NCEA) (Established in 1990)

- Policy Body for environmental protection
- Focal Point and coordinating Agency for environmental affairs
- 4 main committee: Committee on Conservation of National Resources
  - : Committee on Control of Pollution
  - : Committee on Research, Information and Education
  - : Committee on International Cooperation

#### The National environment policy of Myanmar (adopted in December 1994)

- The wealth of a nation is its people, its cultural heritage, its Environment and its natural resources.
- Environmental protection should always be the primary objective in seeking development.
- Myanmar strongly believes that environmental education is essential for improving and promoting the capacity of people to address environment issues and achieve sustainable development objectives.

## Role of Relevant Organizations

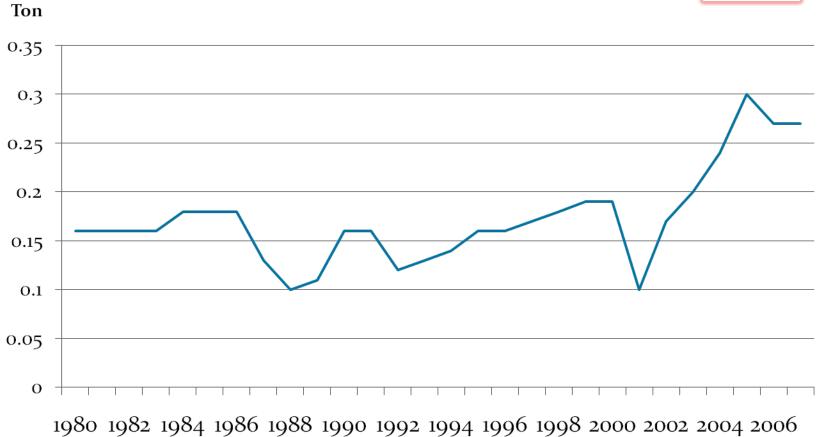
No	Organizations	Roles
1	National Commission for Environmental Affairs (NCEA)	Developing/implementing/reviewingNationalAction Plan for environment protectionCoordinating among related ministries
2	Ministry of Transport	Implementing measures regarding transport planning, emission control,
3	Ministry of Rail Transportation	Implementing measures regarding transport planning, emission control,
4	Ministry of Construction	Implementing measures regarding improving infrastructure related to transport
5	Ministry of Energy	Implementing measures for energy consumption in transport sector , Promotion for alternative fuels
6	Ministry of Science and Technology	Implementing research for environment improvement in Transport Sector
7	City Development Committees	Implementing measures to upgrade urban public transport

# **Environmental Conservation Law**

- Implementing the environmental conservation policies
- Planning and laying down national or regional work plans relating to environmental management
- Laying down, carrying out and monitoring programme for conservation enhancement of the environment, and for conservation, control and abatement not to cause environmental pollution
- Prescribing environmental quality standards including standards on emissions, effluents, solid wastes, production procedures, processes and products for conservation and enhancement of environmental quality
- Submitting the proposals to the Committee for economic incentive mechanisms and terms and conditions which may not affect the environment or cause least environmental affects for sustainable development in addition to legal affairs and guidelines relating to environment

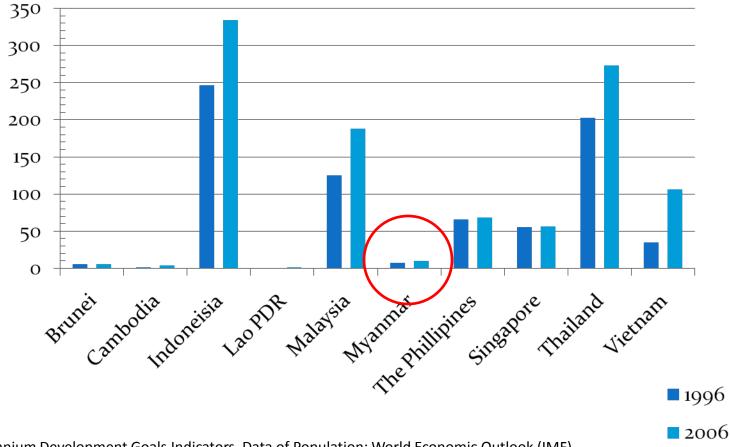
#### CO<sub>2</sub> Emission Per Capita in Myanmar (1980 – 2007)





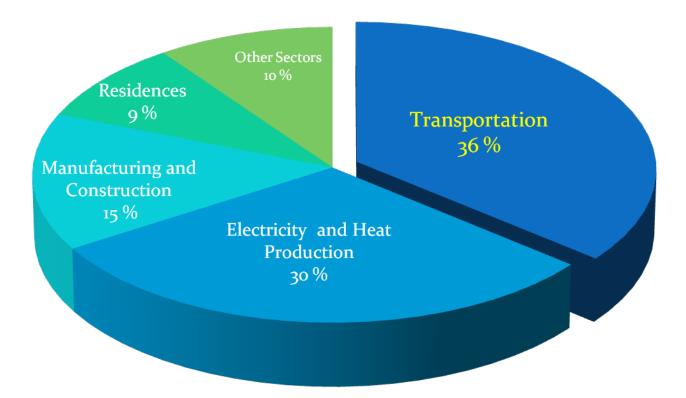
Source: World Bank data

#### CO2 emission in ASEAN Countries (Million Tons)

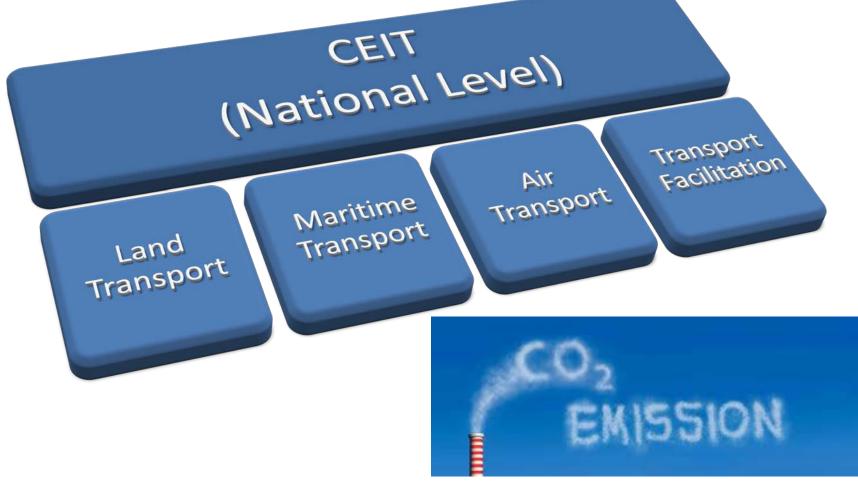


Source: Millennium Development Goals Indicators, Data of Population: World Economic Outlook (IMF)

## CO2 Emissions by Sector in Myanmar



## Committee for Environment Improvement in Transport Sector (Myanmar)



## National Implementation Plan (NIP) on Environment Improvement in the Transport Sector

## **MYANMAR**

## **Current Activities and Actions in Transport Sector**

## Current Activities and Actions in Transport Sector Rail Sector

Activities / Action plans	Lead agencies	Other agencies involved	Completed by
<ul> <li>Track improvement Project for Yangon-Mandalay up line and down line</li> <li>(a) Rail transportation is vital for the economic and socio development of the state and this project will improve the track quality and punctuality of the trains. Moreover, this project will support the reduction of noises and will improve the smooth running of trains. The scope of works are indicated below:</li> <li>(i) Replacing rail;</li> <li>(ii) Welding the existing 12 m rail to make 200 m length;</li> <li>(iii) Replacing concrete sleepers on the whole line;</li> <li>(iv) Replenishing ballast;</li> <li>(v) Repairing and replacing the turnouts;</li> <li>(vi) Strengthening of the bridges;</li> <li>(vii)Refurbishing stations' buildings and replanting of trees in the station area as well as along the rail lines.</li> </ul>	Myanma Railways	Nil	2016
(b) Installing of computer based interlocking (CBI) system at Bago and Myohaung Station. This project will support the punctuality of the trains and to improve infrastructure of existing signaling system.	Myanma Railways	Nil	2015

## Current Activities and Actions in Transport Sector Rail Sector(cont'd)

Activities / Action plans	Lead agencies	Other agencies involved	Completed by
<ul> <li>Upgrading of circular line (Yangon)</li> <li>(a) This project will improve Yangon urban transportation system and will reduce the congestion in downtown area. Moreover, this project will support the reduction of noises and will improve the smooth running of trains. The scope of works are indicated as follow:</li> <li>Replacing rail</li> <li>Welding the existing 12 m rail to make 200 m length</li> <li>Replacing concrete sleeper on whole length</li> <li>Replenishing ballast</li> <li>Repairing and replacing the turnouts</li> <li>Strengthening of the bridges</li> <li>Refurbishing stations' building and replanting of trees in the station area as well as along the rail lines</li> <li>(b) Construction of Fiber optics back bone system and installation of train Dispatcher system along Yangon Circular Line. This project will support the punctuality of the trains and to improve the infrastructure of existing communication and signaling system.</li> </ul>	Myanma Railways	Nil	2016
Upgrading of locomotives and carriage maintenance workshop This project will improve the maintenance system of locomotives and carriage workshop and will support the reduction of noises and emission of carbon monoxide gas caused by rolling stocks.	Myanma Railways	Nil	2016

## **Current Activities and Actions in Transport Sector**

## Rail Sector(cont'd)

Activities / Action plans	Lead agencies	Other agencies involved	Completed by
Construction of new Locomotive Plant and new carriage and wagon plant With Chinese Government Ioan, Myanma Railways will implement these two new projects. After completion of this project, Myanmar Railways will produce new locomotives and carriages and, the trains, running with those new rolling stocks will fulfill the transportation needs in the whole country. Moreover, by running new one, that will support the reduction of noises and emission of carbon monoxide gas caused by rolling stocks.	Myanma Railways	Chinese Government	2014
Repowering of locomotives There are 97 Nos locomotives having service life over 15 years and need to be repowered. Repowering of locomotives will increase that reliability and efficiency. Moreover, that will support the reduction of noises and emission of carbon monoxide gas caused by rolling stocks.	Myanma Railways	Nil	2016

## Current Activities and Actions in Transport Sector Maritime Sector

Activities / Action plans	Lead agencies	Other agencies involved	Completed by
National legislation of the Regulations for the prevention of pollution by oil, MARPOL ANNEX 1	Department of Marine Administration	-	2014
National legislation of the regulation for the prevention of pollution by oil in coastal and inland waterways	Department of Marine Administration	-	2014
National legislation of the regulations for the controls of pollution by Noxious Liquid substances in Bulk, MAPPOL ANNEX II	Department of Marine Administration	-	2014
National legislation of the regulations for the controls of pollution by harmful substances carried by sea in packaged form, MAPPOL ANNEX III	Department of Marine Administration	-	2015
National legislation of the regulations for the prevention of pollution by sewage from ships, MAPPOL ANNEX IV	Department of Marine Administration	-	2015

## Current Activities and Actions in Transport Sector Maritime Sector(Cont'd)

Activities / Action plans	Lead agencies	Other agencies involved	Completed by
National legislation of the Regulations for the prevention of pollution by sewage from ships in coastal and inland waterways.	Department of Marine Administration	-	2015
National legislation of the regulation for the prevention of pollution by Garbage form ships, MARPOL ANNEX V	Department of Marine Administration	-	2015
National legislation of the regulations for the controls of pollution by Garbage from ships in coastal and inland waterways.	Department of Marine Administration	-	2015
<ul><li>River Training</li><li>1. Bank Protection</li><li>2. River channels improvements using bed regulation method</li></ul>	Directorate of Water Resources and Improvement of River systems	User agencies of river and river water resources both public and private sector	According to G/B and Investors from in-home and abroad
Green Inland Ports establishment	Directorate of Water Resources and Improvement of River systems	_	MYANMAR CITIZENS <sup>37</sup> COMPANIES

### **Current Activities and Actions in Transport Sector**

#### **Aviation Sector**

Activities / Action plans	Lead agencies	Other agencies involved	Completed by
1. Feasibility studies are being carried out at major Airports	Department of Civil Aviation	-	On going
2.Airport Environmental Plan	Department of Civil Aviation	-	Still being formulated
3. Eco-Airport Committee	Department of Civil Aviation	Airlines, Catering Services, Ground Handling Services and shops adjacent to Airports	Still under setting up
<ul> <li>4. Facilities Improvements <ul> <li>(a) Yangon Airport</li> <li>- GPU</li> <li>- Water Services</li> <li>- Building Automation System</li> </ul> </li> </ul>	Department of Civil Aviation	-	
(b) Thandwe Airport - introducing Solar Energy			

## Current Activities and Actions in Transport Sector

## **Road Sector**

Activities / Action plans	Lead agencies	Other agencies involved	Completed by	
Construction flyover-bridges in congested areas of Yangon	Yangon City Development Committee	Nil	On going	
Replacing total number of 3000 CNG used buses for public transportation in Yangon and Express Buses for highway trips	Road Transport	Japan Oriental Transportation	On going	
Urban Development Program for Greater Yangon	Department of Transport	JICA	On going	
Prepaid card system for public transportation in Yangon				
Overage vehicles replacing program	Ministry of Commerce, RTAD	Other departments concerned	Practicing 3	

## Current Activities and Actions in Transport Sector Road Sector(cont'd)

Activities / Action plans	Lead agencies	Other agencies involved	Completed by
One-stop service registration program for illegal M/C	Ministry of Commerce, RTAD	Other departments concerned	practicing
Improve vehicles inspecting equipments	RTAD	Nil	Practicing
Using CNG and Natural gas for vehicles	Myanma oil and gas enterprise (MOGE)	Ministry of Transport	On going

## Environment Improvement Measures in Road Transport Sector

Overage vehicles replacement program

One-stop service registration program for

motorcycles

Construction flyover-bridges at the congested areas

in Yangon

Joint-venture with Road Transport and Japan for

improvement of Public Transportation in Yangon

## **Overage vehicles replacement program**

- Started on 19.10.2011
- In order to mitigate the pollution caused by old vehicles and to promote the standard of vehicles
- Up to 7/2012, total number of 61086 old vehicles are already scrapped
- Private = 55918, Truck = 3713, Bus = 1392

## **Overage vehicles replace with New cars.**



#### Lack of Proper Traffic Management in Yangon CBD Area



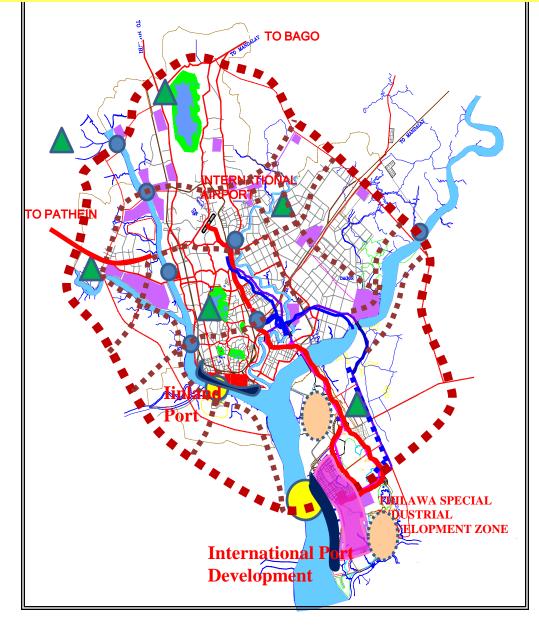






New focus areas in logistics, supply chain management and trade facilitation.

#### Proposed Ring Road Network , Harbor Based SEZ Development Area



#### TRANSPORTATION NETWORK Commodity flow

Airway ----- TSIZ to Airport (20 km) Waterway ---- Thilawa Port Railway---- Yangon-Thilawa Road Network need to be Upgraded



Route I

- Route II
   New Brid
  - New Bridges
  - Tunnel (under pass)
  - Proposed Ring Road
  - Major Roads
    - Upgrading Urban Area
    - SEZ Area (6000 acres)

Research & Development

<u>Waterway Transportation</u> Improvement of ext. Port facilities <u>Railway Transport</u> Extension of Railway Transport

#### **DEEP SEA PORT PROJECTS IN MYANMAR**

**KYAUKPYU** KALAGAUK DAWEI

There are potential areas to develop Deep Sea Ports at the following areas -

- Kyaukpyu Deep Sea Port at Rakhine State in the West Coast.
- Kalagauk Deep Sea Port between Mawlamyine and Ye Region at in the South Coast.
- Dawei Special Economic Zone together with Deep Sea Port at Tanintharyi Region in the South Coast.



#### Deep Sea Port Industrial Estate Transborder Corridor Link Development Project

CONCEPTUAL PLAN











## Thailand, Myanmar sign agreement to support DAWEI Port Project

July 24, 2012

Thailand on Monday agreed to support and develop a multi-billiondollar deep-sea port project Dawei on Myanmar's southern Andaman coast.

Visiting Myanmarese President Thein Sein signed a memorandum of understanding with Thai Prime Minister Yingluck Shinawatra on the development of a special economic zone for Dawei.



Dawei, a 250-square-kilometre industrial area will include a petrochemical plant, oil refinery and steel mill, is Myanmar's ambitious project through which Sein wants to use to transform the country's economy.

Thailand has shown interest in the project, as it would benefit from a passage through Dawei to the Indian Ocean.

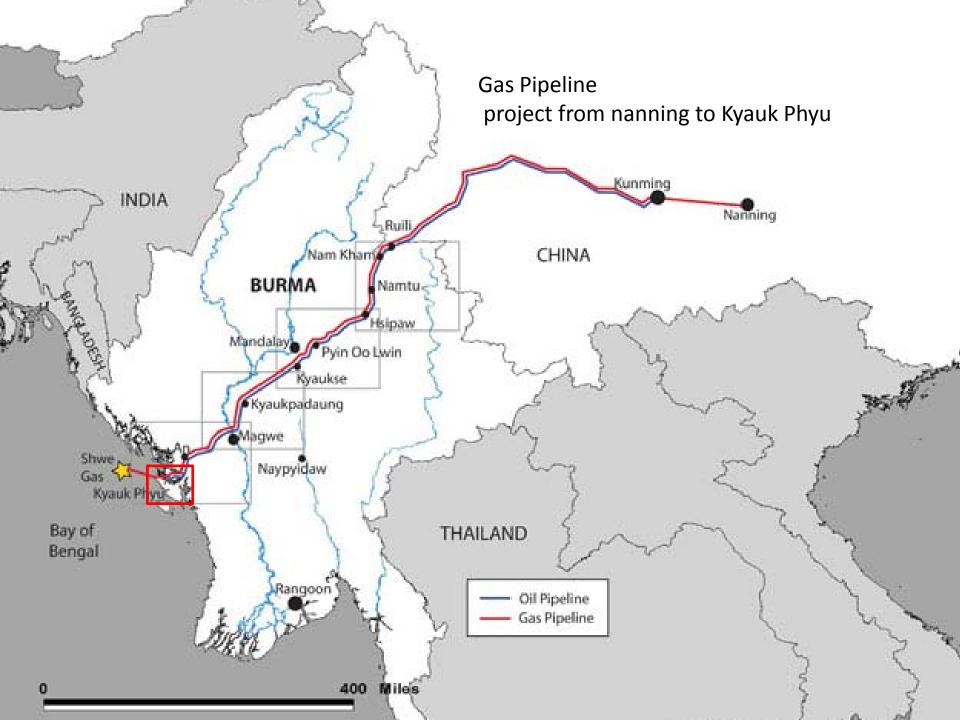
## Kyaukphyu Deep sea port projects

- Kyaukphyu deep seaport was signing MOU in 2009 with the following general layout concepts
  - Multi-purpose terminal
  - Export Processing Industry
  - Municipal Service Facilities
  - Rail Road Complex
  - Petrochemical Industry
  - Residential
  - Logistic Base

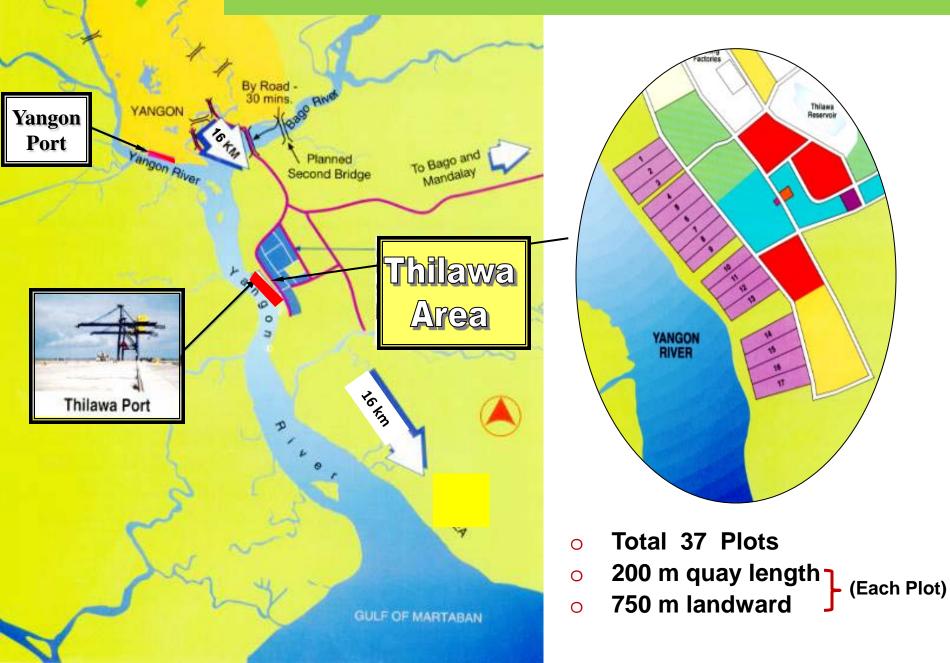


## Kyaukphyu Deep sea port projects





## **THILAWA SEZ and PORT**



Airport

# Thilawa SEZ



In the SEZ plan, SEZ and industrial zones will be as follows;

- Special Industrial Zone (for FDI)- 2300 acres
- Local Industrial Zone- 430 acres
- Singapore Myanmar Development (SINMARDEV) Industrial Zone -247 acres
- Sea ports and container yard
- Thilawa Special Industrial Zone 3,170 acres



## Location Map for Future Port Development at Yangon Port

**Expected Area for Development of International Port/Terminals** 

**Existing Port/Terminals** 

SPW

Yangon

HOB

Aklone

MIP

Dawbon Myo

Eundaung Creek

ICD I & II

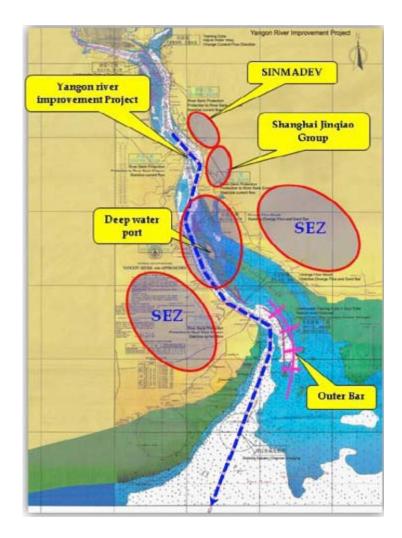
BSW

Botataung

## Yangon River Improvement Project

## Existing status

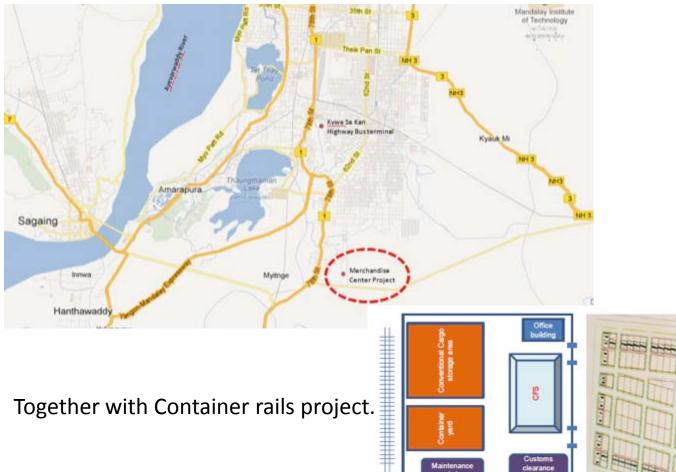
- Natural depth of the Yangon river is
   6.0 ~ 9.0 m
- Limited by the Yangon channel depth, the largest berthing ship in Yangon port is 15,000 DWT ~ 20,000 DWT.
- Potential for Deep Water Port
- Potential for Special Economic Zone

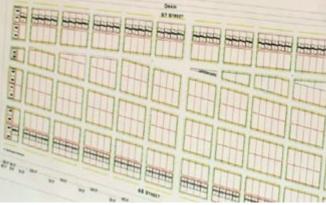


## Proposed site for Dry Port Project

work shoe

area





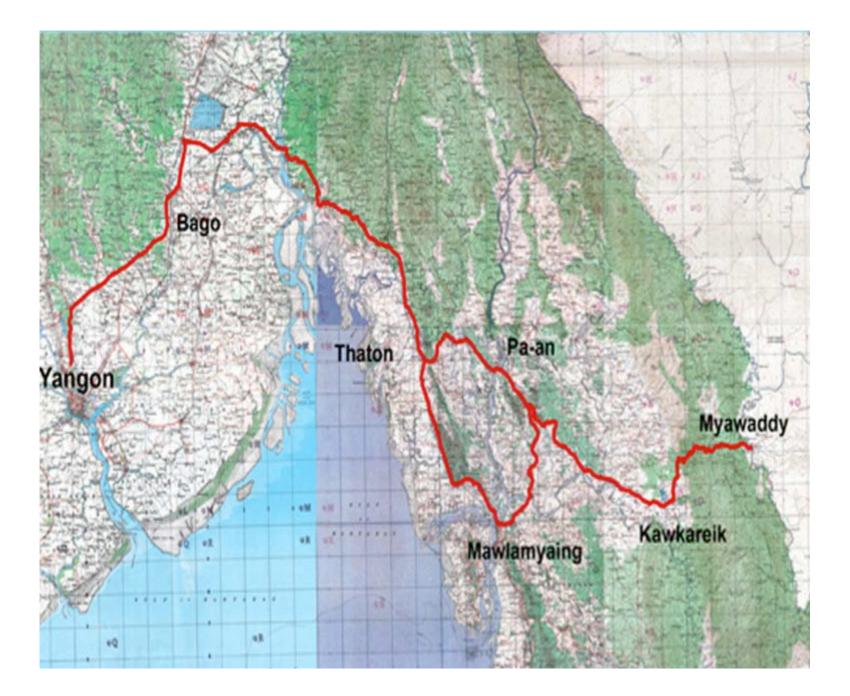
#### STATUS OF CBTA ANNEX & PROTOCOL RATIFICATION PER GMS COUNTRY as of July 2012

Item	Description / Title	CAMBODIA	PRC	LAO PDR	MYANMAR	THAILAND	VIET NAM
ANNEX 1	Carriage of Dangerous Goods	Ratified	Ratified	Ratified	Ratified	Signed	Ratified
ANNEX 2	Registration of Vehicles in Inter- national Traffic	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
ANNEX 3	Carriage of Perishable Goods	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
ANNEX 4	Facilitation of Frontier-Crossing Formalities	Ratified	Ratified	Ratified	Ratified	Signed	Ratified
ANNEX 5	Cross-Border Movement of People	Ratified	Ratified	Ratified	Signed	(Part 1-4)	Ratified
ANNEX 6	Transit and Inland Clearance Cus- toms Regime	Ratified	Ratified	Ratified	Ratified	Signed	Signed
ANNEX 7	Road Traffic Regulation and Signage	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
ANNEX 8	Temporary Importation of Motor Vehicles	Ratified	Ratified	Ratified	Ratified	Signed	Signed
ANNEX 9	Criteria for Licensing of Transport Operators for Cross-Border	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
ANNEX 10	Conditions of Transport	Ratified	Ratified	Ratified	Ratified	Signed	Ratified
ANNEX 11	Road and Bridge Design and Cons- truction Standards & Specifications	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
ANNEX 12	Border Crossing and Transit Facili- ties and Services	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
ANNEX 13a	Multimodal Carrier Liability Regime	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
ANNEX 13b	Criteria for Licensing of Multimodal Transport Operators for Cross-Border Transport Operations	Ratified	Ratified	Ratified	Signed	Ratified	Ratified
ANNEX 14	Container Customs Regime	Ratified	Ratified	Ratified	Ratified	Signed	Signed
ANNEX 15	Commodity Classifications Systems	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
ANNEX 16	Criteria for Driving Licenses	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
Protocol 1	Designation of Corridors, Routes and Points of Entry & Exit Border Cros-	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
Protocol 2	Charges Concerning Transit Traffic	Ratified	Ratified	Ratified	Ratified	Ratified	Ratified
Protocol 3	Frequency and Capacity of Services and Issuance of Quotas and Permits	Ratified	Ratified	Ratified	Signed	Ratified	Ratified

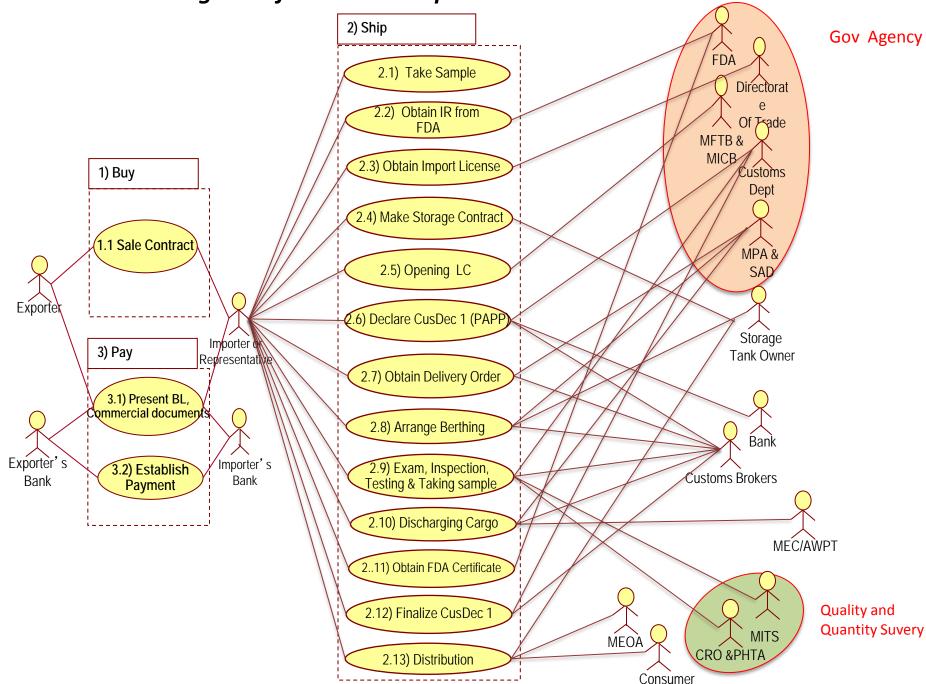
#### Legend:

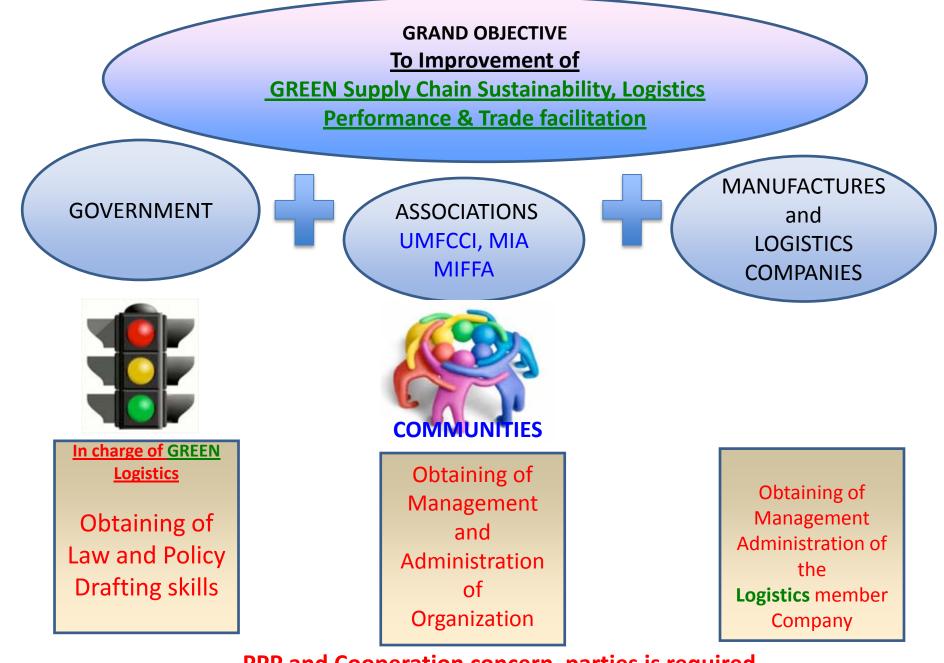
= Ratification completed

= Signed but Ratification still pending



#### **BPA-** Use Case Diagram of Palm Oil's Import

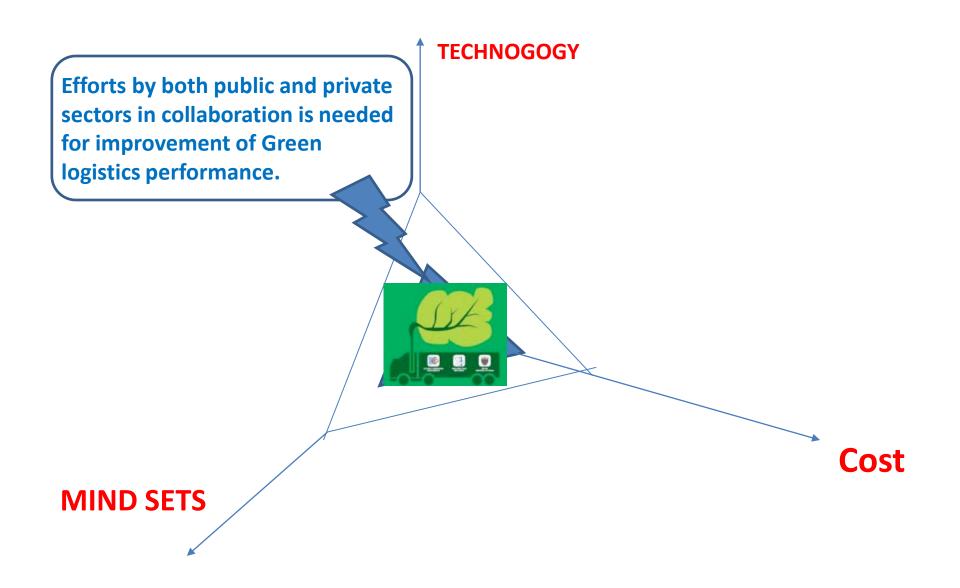




PPP and Cooperation concern parties is required and they must have specific skills and knowledge

### **Toward Improvement of**

**GREEN Supply Chain Sustainability & Logistics Performance** 



# THANK YOU

I have no doubt that if all of us join hands and act in unison, our vision of a more prosperous, cleaner and greener ASEAN can be realized.

