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Mekong Institute (MI)

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International Training Program on

Green Freight and Logistics Development

May 20 - 31, 2019

Country Reports

Mekong Institute (MI)
Khon Kaen, Thailand

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Note: Some country reports are not available and the copies of the Ppt slides presented at the training program instead are included in this report.

1. Azerbaijan

I. Introduction:

Name of the training Course: Green Freight and Logistics Development
Participant: Ms. Nigar Novruzova
Country: Azerbaijan Democratic Republic
Name of Organization: "Baku International Sea Trade Port" CJSC

Roles and Responsibilities: We develop Port of Baku as a world class Green Port and logistics center, using the latest innovative Environmental practices. These developments will include the following key areas: energy, waste management, water and air quality, as well as sustainable business practices. Green ports and logistics are areas in which activities can reduce the environmental and energy footprint of freight distribution, including material management (storage and packing), waste management and physical distribution. The benefits of the project will include greater operational and cost efficiency, environmental improvements (reductions in water and air pollutants such as greenhouse gases) for users of the port and will likely translate to increased demand for Port of Baku's services.

Organization Chart: General Director- Head of HSE Department- Senior Specialist of HSE Department- Leading Specialist of HSE Department- Specialist of HSE Department- Junior Specialist of HSE Department.

Participant's Designation: Health, Safety & Environment (HSE) Leading Specialist

Participant's Responsibilities: To maintain and monitor effectiveness of Safety & Environmental; Management Systems (SMS & EMS); To carry out internal audit of SMS & EMS; To create Annual Environmental report; To review and monitor environmental aspects; To follow up/monitor the targets with regards of Sustainable Development Goals (SDG); To participate in establishing and follow up the annual target & objectives; KPI.

II. General Information of Country: Azerbaijan, officially the Republic of Azerbaijan, is a country in the South Caucasus region of Eurasia at the crossroads of Eastern Europe and Western Asia. It is bounded by the Caspian Sea to the east, Russia to the north, Georgia to the northwest, Armenia to the west and Iran to the south.

III. Overview, background and future trend: Environmental concerns in Azerbaijan have been summarized on numerous occasions. The National Environmental Action Plan (NEAP) of 1997 remains influential. More recent strategic documents (the 2001 State Program on Poverty Reduction and Economic Development [SPPRED] and the 2003 State Program for Environmentally Sustainable Economic Development) restate and add to environmental priorities without, however, suggesting the order in which they should be supported by public investments. A ranking strictly based on economic efficiency criteria is unlikely to emerge. More probable is a politically determined balance of attention to different broad

concerns (not unlike the case of the NEAP) only then followed by economics-supported prioritization within each broad category.

IV. Existing Law and Regulations: Azerbaijan has made significant strides in improving its economy over the past decade, as it embarked on a market-based economy and recovered from a significant downturn following the breakup of the Soviet Union. As a result, the government is now looking to implement a policy that will bring about the country's transition to a low-carbon, resource efficient and socially inclusive economy. This study presents an assessment of Azerbaijan's economy, looking at ways that will foster its transition to a green economy. Azerbaijan has one of the fastest growing economies in the world, largely due to its oil production. The country is well endowed with fossil fuel resources, and oil production has expanded dramatically in Azerbaijan's recent history. Between 1997 and 2008, oil production increased almost five-fold – 85 per cent of which was exported, giving the country a favorable current account balance and fiscal position. The expansion of oil production has produced remarkable growth rates in Azerbaijan, averaging 17 per cent between 1999 and 2009. Oil revenues have made it possible for the government to embark upon a highly expansionary fiscal policy to combat poverty and support growth while remaining in fiscal surplus. In addition, oil revenues have kept the country's trade balance in significant surplus. Azerbaijan is looking at ways to diversify its economy through a transition to a green economy that would allow for long-term economic stability and the creation of new economic assets while addressing environmental and social concerns as part of the economic structure.

In the interest of exploring the opportunities that a green economy presents for Azerbaijan, this study examined three key economic sectors – energy, agriculture and transport – and their related challenges in order to offer suggestions on how to ensure such a transition. The analysis revealed a few key priority areas for intervention which are summarized below:

Energy:

- Increase efficiency and renewable energy capacity;
- Provide subsidy and incentive reform in energy production; and
- Facilitate transition away from fossil fuels.

Agriculture:

- Promote stronger supply chains;
- Enhance public-private partnerships with agri-business;
- Support education and capacity building; and
- Enforce regulation on agricultural inputs and outputs.

Transport:

- Increase investment in public transit options;
- Enhance regulatory oversight; and
- Promote investment in clean vehicle technology.

A national stakeholder workshop on product-related economic instruments was held jointly with the Ministry of Ecology and Natural Resources on 21 May 2015 in Baku. The discussion focused on economic instruments such as taxes and extended producer responsibility for the management of environmentally harmful products (OECD).

V. Challenges / problems: The country faces challenges related to its fossil fuels, which are considered a finite resource and are expected to eventually reach its peak. Azerbaijan's economy relies heavily on the exploitation of its natural resources causing several environmental problems, most importantly a scarcity of water. By gaining energy mainly out of gas and oil and tolerating outdated vehicle standards, the country's CO2 emissions rank above regional average. For these reasons, Azerbaijan is seeking to diversify its economy, looking at other economic sectors beyond oil. The combination of these factors is providing the impetus for Azerbaijan's economy relies heavily on the exploitation of its natural resources causing several environmental problems, most importantly a scarcity of water. By gaining energy mainly out of gas and oil and tolerating outdated vehicle standards, the country's CO2 emissions rank above regional average. There exist several governmental programs on energy efficiency, renewable energies and ecological sustainable development. The main potential for green growth in Azerbaijan lies in the generation of energy, transportation and housing. Green jobs will emerge mainly in the sectors of alternative energy generation, construction and eco-tourism.

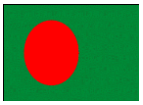
VI. Opportunities / way Forward: Alternative Energy Sources Projects in Azerbaijan

Windmills and Solar

Azerbaijan is one of those countries where windmills could be perfect fit due to geographical location. In particular, the Absheron peninsula, coastline of Caspian Sea and islands in the northwestern part of Caspian Sea, the Ganja-Dashkesan zone in the west of Azerbaijan and the Sharur-Julfa area of the Nakhchivan Autonomous Republic are favorable areas. In 1999, Japan's Tomen Company, together with the Azerbaijan Scientific Research Institute of Power Engineering and Energy, installed two towers with 30 and 40 meters in Absheron, average annual wind speed was determined to be 7.9-8.1 m/sec and feasibility study about the installation of wind.

In order to reduce greenhouse gas emissions and air pollution caused directly by Port of Baku, two principle strategies are available, namely the improvement of energy efficiency and the support of renewable energies at the port. Various measures are being taken with regard to the first strategy, while regarding the second one, the PoB has initiated a new project called "Promoting Green Ports and Connectivity in the Caspian Sea Region" together with the OSCE. The main component of the project is a feasibility study on investigating the technical, economic and environmental feasibility of the integration of renewable energy (wind, solar, geothermal) into the port operations at Port of Baku in Alat. In December 2018, presentation of this project took place at a conference in Vienna and the project will launch in the second quarter of 2019.

VII. Expectations from the training: Baku International Sea Trade Port develops to achieve "Green Port". Thus, the big expectations from the training are to learn the main steps to achieve continuous environmental, social and economic benefits through resource conservation, waste reduction and pollution prevention. Hope this course will provide with knowledge to contribute to the development of capacity to identify, prioritize and plan for the implementation of efficient green measures for the port and for other modes of freight transport through Azerbaijan and will have a comprehensive approach, covering the full range of underlying port and logistics activities, including shipping, trucking, railways, warehouses, refrigeration, packaging, cargo handling equipment, small harbor craft, employee vehicles, buildings and purchased electricity. Hope it will assist to implement the Green Development and Logistics Strategy and a range of green investments in the port and logistics activities. Also expecting that course will provide incentives for various users of the port to minimize carbon footprints from their operations.



2. Bangladesh

Country Presentations of Bangladesh

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TICA

Prepared by
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Assistant Director (Engineering)
Bangladesh Road Transport Authority(BRTA)
Ministry of Road Transport & Bridges
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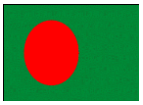
Country Profile of Bangladesh

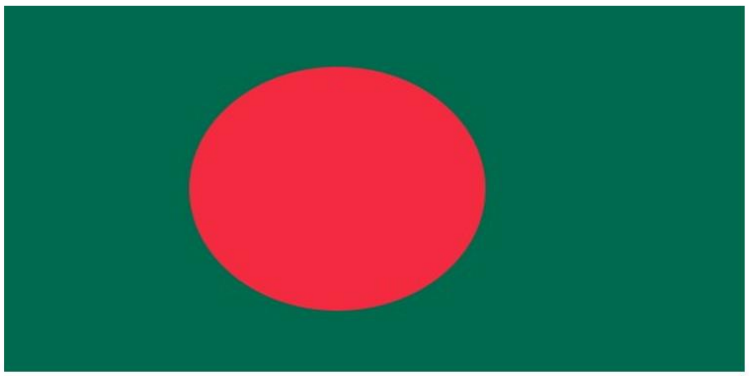
Name	: People Republic of Bangladesh
Area	: 147,570 sq. km
Population	: 160 million
Population Density	: 1050 persons per sq. km
▶Average Height	: 10m above sea level
▶Capital City	: Dhaka
▶Language	: Bengal
▶Religion	: Muslims 88.35%, Hindus 10.5%, Buddhists 0.6%
▶Currency	: Taka (1 USD = 84 Taka, 1 THB= 2.7 BDT)
▶Climate	: Sub-tropical
▶Temperature	: 8 - 23 ^{0}C in winter & 23 - 39 ^{0}C in summer
▶Average Rainfall	: Annually 1429 to 4338 mm
▶Standard Time	: GMT+6 hours

Bangladesh in World Map



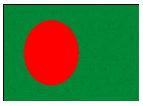
Bangladesh Map

National Flag



Economy:

- Bangladesh's economy has grown roughly 6% per year since 1996.
- GDP is $687 billion (2017est.)
- Current GDP growth is 7.0% (18/19)
- GDP Per Capita $4211.00(2017)
- Garment exports, the backbone of Bangladesh's industrial sector, more than 80% of total exports surpassed $25 billion in 2016(2nd largest after china)
- remittances from overseas Bangladeshis - which totaled about $15 billion and 8% of GDP in 2015. Most workforce living abroad 5.4 million (6th highest of the world)
- Industrial Production Growth Rate 8.4%(2016 est.) country comparison to the world: 9
- Labor force : 83.59 million. country comparison to the world: 7



Main Industry

- Garments,
- knitwear,
- agricultural products,
- frozen food (fish and seafood),
- jute and jute goods,
- leather
- Medicine

- Export Partners: US 13.9%, Germany 12.9%, UK 8.9%, France 5%, Spain 4.7% (2015)

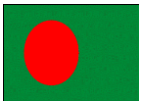
Import Items

- cotton
- machinery and equipment
- chemicals
- iron and steel
- foodstuffs
- electronics

- Import partners:
  China 22.4%, India 14.1%, Singapore 5.2% (2015)

My Job Responsibilities

- Issue of new vehicle registration
- Issue of fitness certificates
- Issue of route permit
- Issue of driving licenses
- Issue of registration of motor driving school
- Give training to the drivers
- Transferring the ownership of the vehicles



Operation of Transport and Logistics Industry

- Bangladesh Road Transport Authority under the ministry of road transport and bridges, is the one and only governing body to look after all the vehicles in the road. It established in the year 1987.
- Currently there are around 4 million vehicles in the road.
- Every year near about .5 million vehicles are adding in the road
- Every year our organizations earn 200 million USD from this sector
- Every year .5 million driving licenses are issued

Current Legal and Regulatory Environment on Logistics and Transport

- Though Bangladesh is in the higher side of in the rank of pollution caused by the transport system
- The government of Bangladesh is trying to ban the vehicles aged more than 20 years
- Already banned the vehicles with two stroke engine
- Banned two stroke mishuk and introduced 4 stroke compressed natural gas(CNG) in Dhaka City

Role of Government in Creating Secure Environment

- Bangladesh Government is trying to create secure environment for innovation and capability to capture advantages of promoting green freight and logistics
- Recently allowed UBER and PATHAO as ride sharing operation
- Introduced Private sector operated air conditioned busses
- Introduced call center just dialing 999 in any type of misconduct in the road
- Created Highways Police Department
- Introduced new road transport law/2017

Major Issues in Green Freight and Logistics in Bangladesh

- Insufficient Manpower(there is only 750 people to look after 4 million vehicles in the road)
- Least amount of Vehicle Inspection Center
- Least Amount of Dumping Stations
- Policy Support
- Intense Competition
- Quality of Fuels
- Economic Uncertainty

Future Projects

- 17(Seventeen) new training center is going to establish to train drivers
- 10 (ten) vehicle inspection center(VIC) is going to establish all over the country
- BRTA Office cum Motor Driving Testing, Training & Multipurpose Center (BMDTTMC) establishment

3. Burundi

I. Introduction

- **Name of the Training Course:** Green Freight and Logistics Development
- **Name of Participant:** NKUNZUBUMWE Liliane
- **Name of Country / Territory:** Burundi
- **Name of Organization / Department (which participant currently work for):**
Ministry of Transport, Public Works, Equipment and Land Use

- **Role and Responsibility of the Organization/ Department**

  - The main roles of the Ministry I am representing in this training include planning, building and rehabilitation of roads; the construction of public buildings and their rehabilitations, the urbanization of plots, the coordination of equipment, the regulation of transport as well as land use

- **Organization Chart:** (to be attached)

- **Participant's Designation and Responsibility**

  - Coordinator of Internal Control and Litigation Unit

II. General information of your country / territory

- **Briefly introduce your country/territory:**

  - The Republic of Burundi is a landlocked country amid the African Great Lakes region where East and Central Africa converge, with an area of 27,834 km^2. The population is 11 759 805 habitants (2018 report). The political capital is Gitega, having moved from Bujumbura in February this year. Burundi has been colonized by Germany and Belgium. Both Germans and Belgians ruled Burundi and Rwanda as a European colony known as Ruanda-Urundi. The president of the Republic of Burundi is His Excellency Peter NKURUNZIZA. The official languages of Burundi are Kirundi, French and English, Kirundi being recognized officially as the sole national language.

  - One of the smallest countries in Africa, Burundi has an equatorial climate. Burundi is one of the **poorest** countries in the world, ranking 184th out of 188 countries in the 2016 human development index. More than **65 percent** of the population lives in **poverty**. The majority of population are cultivators.

III. Overview, background and future trend of the development issue related to the training topic (i.e. food security, climate change, public health, rural de Food security:

- **Food security:** Burundi has the highest hunger score and is the 9th food security crisis in the world, sharing similar levels with Somalia, according to the 2018 World Food Security Report. More than **50% of the population is chronically food insecure** in a country where the total annual production of food would only cover for 55 days per person per year (FAO, Dec 2017). One in three Burundians is in need of urgent humanitarian assistance.

- **Climate change:** The climate change that is currently happening on the planet affects Burundi like other countries. Burundi naturally has two great seasons of which the rainy season and the dry season and are interfered with the small rainy season and the small dry season. Unfortunately, because of climate change, the seasons no longer respect their durations.

- **Public health:** Public health in Burundi has been in trouble since donors suspended their aid. The rate of mortality of children increased mostly caused by malaria and HIV AIDS. Currently, Burundi is doing its best to prevent EBOLA (haemorrhagic fever) raging in the neighbouring country, the Democratic Republic of Congo. All preventive measures have been put in place.

- **Rural development:** Burundi remains an overwhelmingly rural society, with just 13% of the population living in urban areas. The population density of around 315 people per square kilometre and is the second highest densely populated country in Sub-Saharan Africa.

- Describe overview, background and future trend of the issue in your country / territory.

  - ✓ In a global way, the situation of Burundians' everyday life has been put down by the various crises that have shaken the country since independence until 2015 during the popular insurrection to challenge the third term of the president of the Republic. Currently, the Burundian authorities are doing everything possible to bring lasting peace and thus to achieve sustainable development in all sectors of the country. There is progress now and it shows that the future is promising. In the environmental sector, Burundi is making reforestation campaigns to avoid drought and laws have been tightened to punish the promoters of bushfires.

IV. Existing laws and regulations of your country/territory concerning the issue (if any) - Describe existing laws and regulations/ legal aspect of your country / territory relevant to the issue:

- The Law and regulations regarding green transport in Burundi are under revision and they are yet to be approved by the National Assembly before promulgation.

V. Challenges / problems in your country/territory concerning the issue - Identify primary challenges and problems pertaining in your country/territory concerning the issue.

Settlement by rural populations has led to deforestation, soil erosion and habitat loss. Deforestation of the entire country is almost completely due to overpopulation, with a mere 600 km^2 remaining and an ongoing loss of about 9% per annum. In addition to poverty, Burundians often have to deal with corruption, weak infrastructure, poor access to health and education services, and hunger. Burundi is densely populated and has had substantial emigration as young people seek opportunities elsewhere. The World Happiness Report 2018 ranked Burundi as the world's least happy nation with a rank of 156.

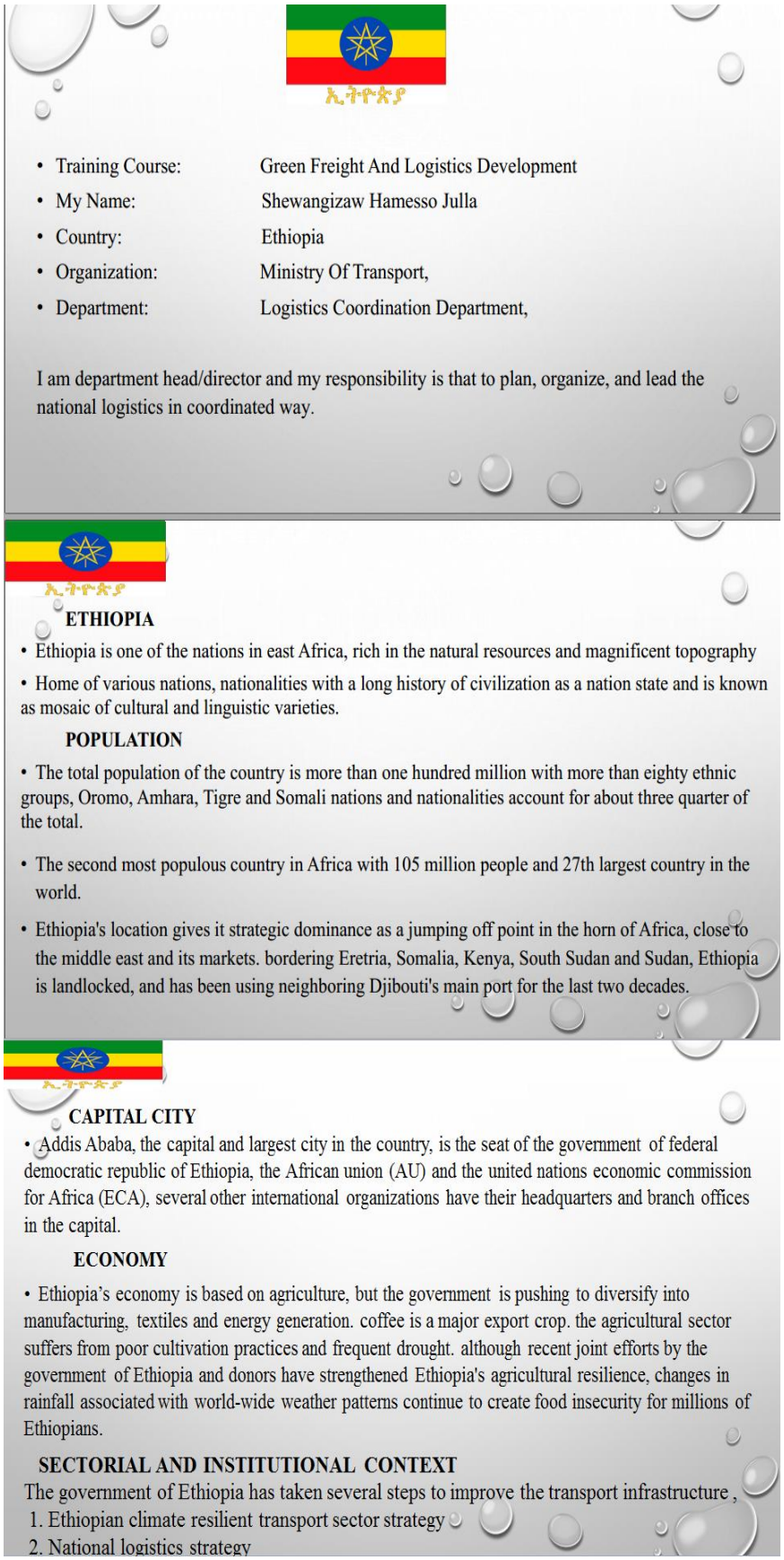
VI. Opportunities / Way forward in your country / territory concerning the issue - Identify biggest opportunity / way forward and how they can be facilitated and supported.

- The problem is taken over by the authorities who spend their time sensitizing the population on the merits of the healthy environment. The population together with the authorities do the community work every last Saturday of the month through which activities the trees are planted on the mountains and at the edge of roads and rivers. Sanitation activities are also done through these community works.

VII. Expectations from the training course - What do you expect to gain from the training program? - How do you expect to apply the knowledge/experience gained upon return to your country / territory?

- My participation in this training is of great importance because it will enable my country Burundi to gain experience in the planning and management of green transport. I will make a restitution of the mission to share my experiences with other executives of the different departments of the Ministry of Transport, Public Works, Equipment and Land Use.

4. Ethiopia



- Training Course: Green Freight And Logistics Development
- My Name: Shewangizaw Hamesso Julla
- Country: Ethiopia
- Organization: Ministry Of Transport,
- Department: Logistics Coordination Department,

I am department head/director and my responsibility is that to plan, organize, and lead the national logistics in coordinated way.

ETHIOPIA

- Ethiopia is one of the nations in east Africa, rich in the natural resources and magnificent topography
- Home of various nations, nationalities with a long history of civilization as a nation state and is known as mosaic of cultural and linguistic varieties.

POPULATION

- The total population of the country is more than one hundred million with more than eighty ethnic groups, Oromo, Amhara, Tigre and Somali nations and nationalities account for about three quarter of the total.
- The second most populous country in Africa with 105 million people and 27th largest country in the world.
- Ethiopia's location gives it strategic dominance as a jumping off point in the horn of Africa, close to the middle east and its markets. bordering Eretria, Somalia, Kenya, South Sudan and Sudan, Ethiopia is landlocked, and has been using neighboring Djibouti's main port for the last two decades.

CAPITAL CITY

- Addis Ababa, the capital and largest city in the country, is the seat of the government of federal democratic republic of Ethiopia, the African union (AU) and the united nations economic commission for Africa (ECA), several other international organizations have their headquarters and branch offices in the capital.

ECONOMY

- Ethiopia's economy is based on agriculture, but the government is pushing to diversify into manufacturing, textiles and energy generation. coffee is a major export crop. the agricultural sector suffers from poor cultivation practices and frequent drought. although recent joint efforts by the government of Ethiopia and donors have strengthened Ethiopia's agricultural resilience, changes in rainfall associated with world-wide weather patterns continue to create food insecurity for millions of Ethiopians.

SECTORIAL AND INSTITUTIONAL CONTEXT

The government of Ethiopia has taken several steps to improve the transport infrastructure ,

1. Ethiopian climate resilient transport sector strategy
2. National logistics strategy

➢ The Ethiopian climate resilient transport sector strategy sets the framework to deliver, an integrated , modern transport system with a strong focus on multimodal transportation links and customer service.

➢ The vision of the strategy is to ensure Ethiopia's national development, poverty reduction and climate resilience goals promoted by transport sector.

➢ With this context five strategic objectives define the future outcome

✓ Improve coordination of transport sector plans and results

✓ Improve public transport accessibility and safety

✓ Reduce exposure to the negative impacts of transport pollution on human health

✓ Increase non-motorized transport mode use in urban areas

✓ Reduce green house gas (GHG) emission from the transport system and network

EXISTING LAWS AND REGULATIONS

- Ethiopia has developed and adapted a national logistics strategy which helps improve understanding and coordination of the national logistics sector, and improve the sectors performance so it can support the complex business functions and also provide seamless connectivity.
- To mitigate pollution as an undesirable consequence or social and economic development activities; now, therefore, in accordance with article 55 (1) of the constitution of the federal democratic republic **of Ethiopia**, it is hereby proclaimed as follows…**'Environmental** pollution control pollution control **proclamation** no. 300/2002'' environmental policy of Ethiopia.
- The overall policy goal is to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole so as to meet the needs of the present generation without compromising the ability of future generation to meet their own needs.

THE ETHIOPIAN LOGISTICS PERFORMANCE CHALLENGES ARE:

- Challenges on trade and finance system,
- Excessive and disintegrated transit and customs procedures,
- Poor quality and competence of logistics service providers
- Monopolistic practice in the logistics service sector
- Logistics infrastructure deficit and management problem
- Logistics service providers & regulators gaps on institutionalization & capacity

THE WAY FORWARD

1. Fully implement the national logistics strategy.
2. Transform logistics service and efficiency of the operators.
3. Develop and strength logistics sector policies and legal frameworks.
4. Institute an efficient and reliable transit and customs system.
5. Implement reliable trade and finance system so as to enhance logistics facilitation role.
6. Develop logistics facility and infrastructure.
7. Strengthen institutional and human capital development and create efficient governance so as to lead logistics industry in a synchronized/integrated way.

MY EXPECTATION FROM THE TRAINING

Ethiopia's trade competitiveness features with many issues including long transit time, higher logistics cost, lower port lifting capacity, higher port dwell time, and fragmented service delivery are among others. Therefore I expect that I can get experience and scientific way of handling supply chain and share it to logistics community of my country for practical implementation.

5. Malaysia

I. Introduction

- Name of the Training Course: International Training on Green Freight and Logistics Development

- Name of Participant: Mr. Tengku Kahar Muzaffar

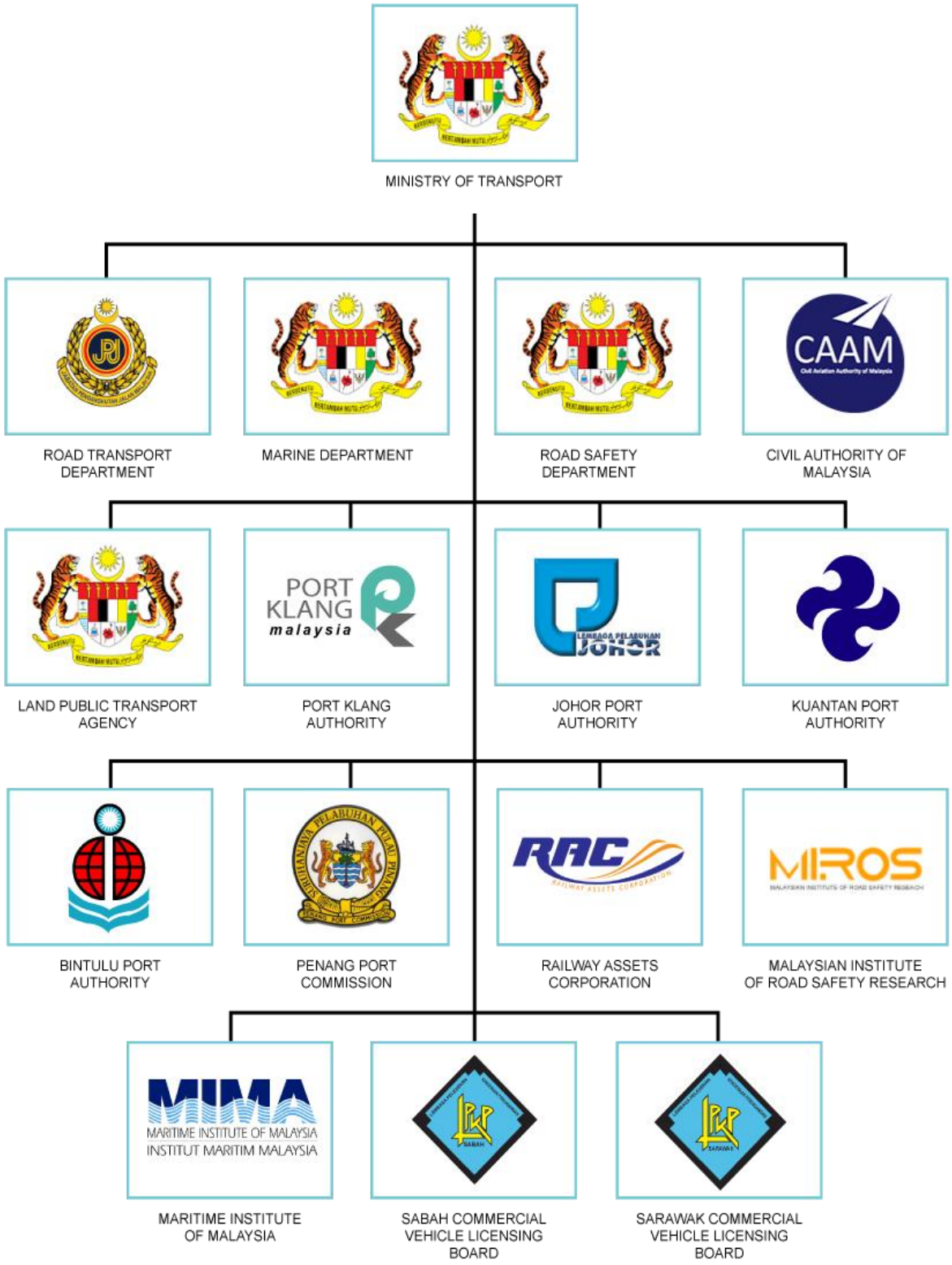
- Name of Country / Territory: Malaysia

- Name of Organization/ Department (which participant currently work for):
Ministry of Transport, Malaysia

- Role and Responsibility of the Organization/ Department:

1. To formulate and implement land transport, logistics, maritime and aviation policies;
2. To plan and execute land transport, logistics, maritime and maritime infrastructure projects;
3. To spearhead the integration of a holistic national transportation system;
4. To make available transport services delivery system for land transport, logistics, maritime and aviation;
5. To enforce laws related to land transport, logistics, maritime and aviation;
6. To determine fees and charges for services provided by the Ministry;
7. To regulate compliance to legislation, service and safety standards;
8. To facilitate businesses related to land transport, logistics, maritime and aviation industries;
9. To spearhead regional and international cooperation programs in the field of transport.

- Organization Chart:



- Participant's Designation and Responsibility:

Principal Assistant Secretary with roles to:

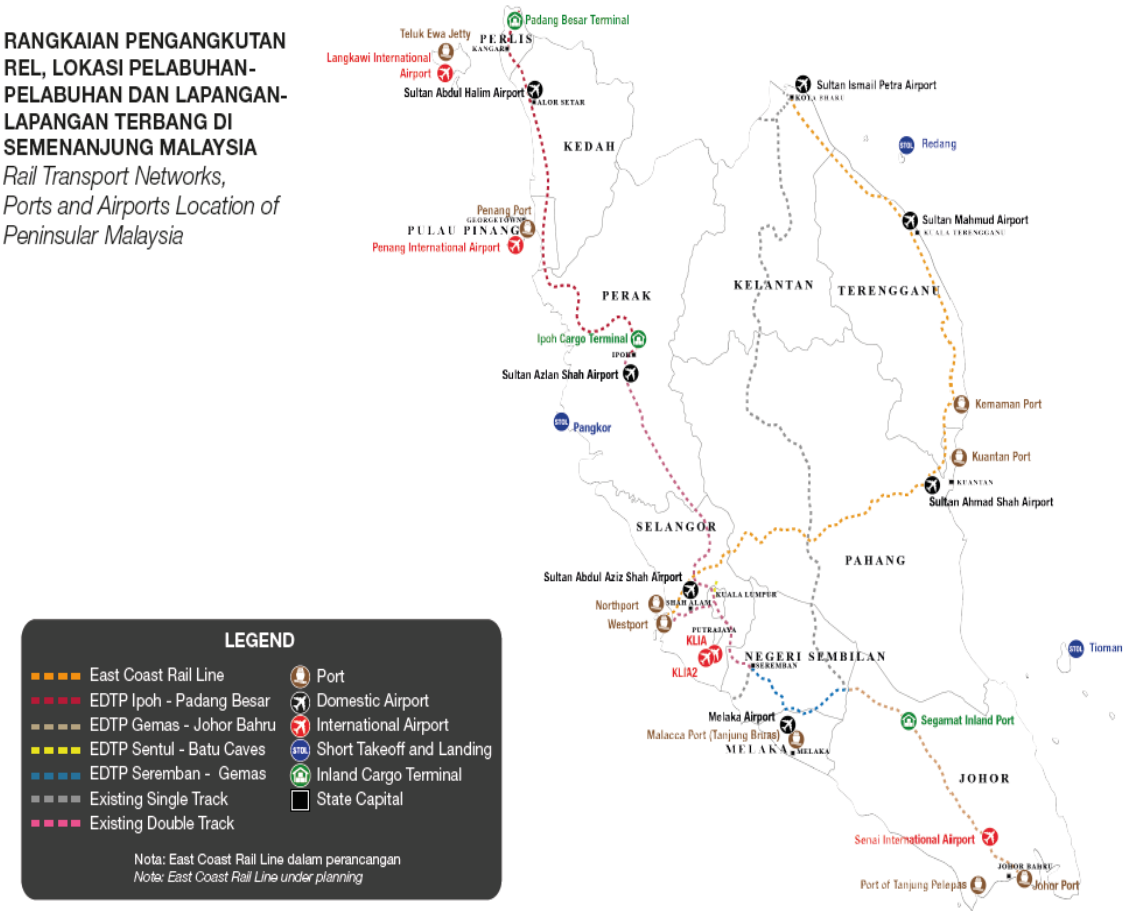
1) Formulate, Plan, and streamline new policies related to transport sector;
2) Monitor implementation of the policies related to transport sector;
3) Review existing policies;
4) Develop National Transport Policy and Transport Ministry's Strategic Plan.

II. General information of your country / territory

- Malaysia, being an open trading nation, is highly dependent on trade for its economic growth. Malaysia is easily accessible to major trading hubs and manufacturing bases in ASEAN that has a total population of 600 million consumers. Geographically strategic location, strong economic growth, high regional linkages and good infrastructure are strong fundamentals that can develop Malaysia into a regional logistics center.

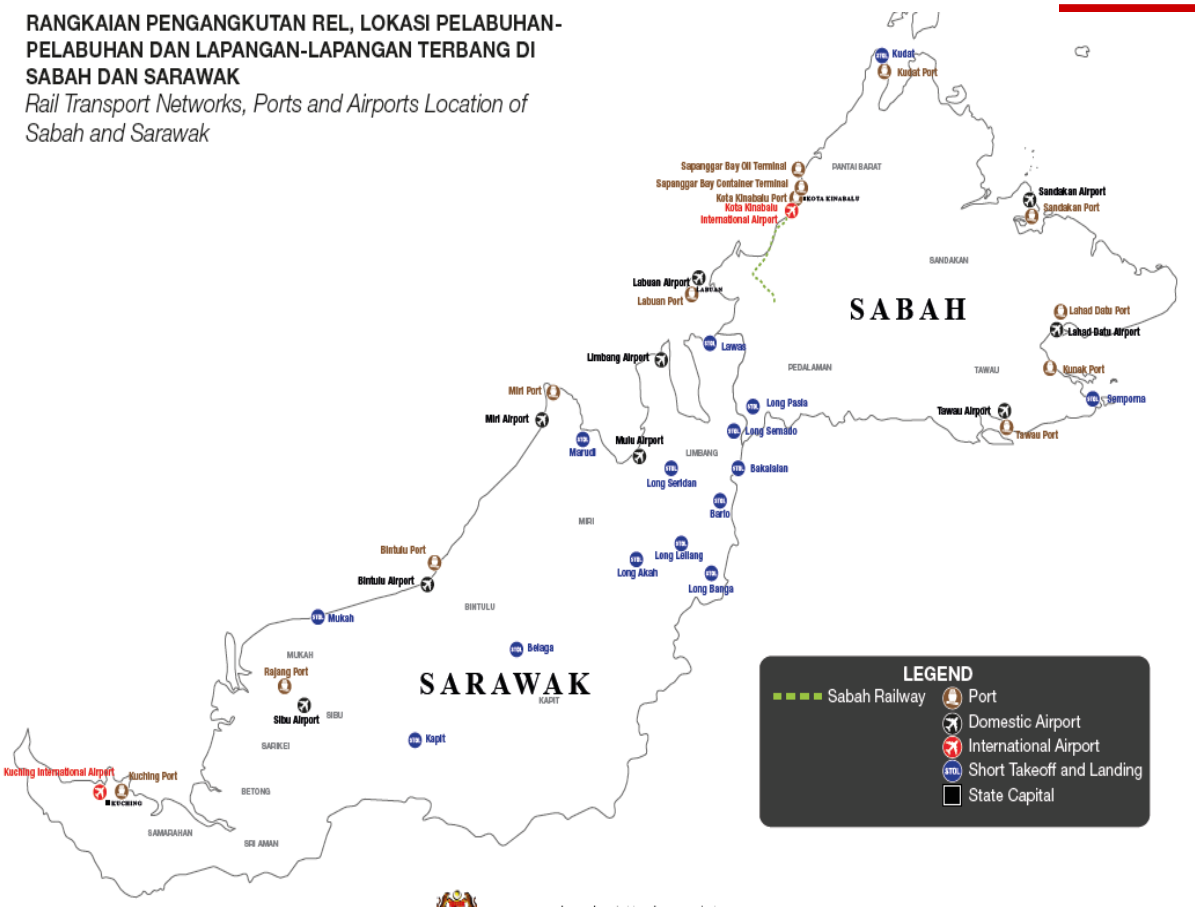
- The following maps show the main logistics nodes and network for Malaysia:

RANGKAIAN PENGANGKUTAN REL, LOKASI PELABUHAN-PELABUHAN DAN LAPANGAN-LAPANGAN TERBANG DI SEMENANJUNG MALAYSIA
Rail Transport Networks, Ports and Airports Location of Peninsular Malaysia

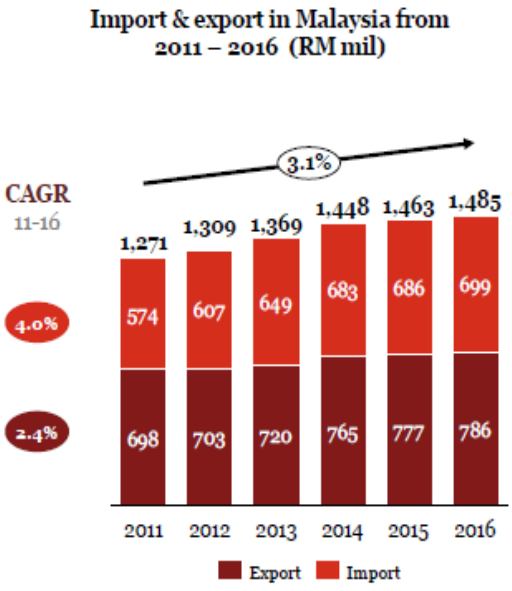


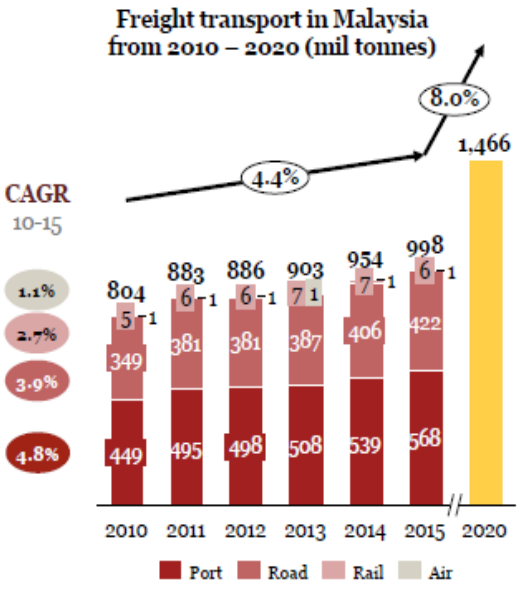
RANGKAIAN PENGANGKUTAN REL, LOKASI PELABUHAN-PELABUHAN DAN LAPANGAN-LAPANGAN TERBANG DI SABAH DAN SARAWAK

Rail Transport Networks, Ports and Airports Location of Sabah and Sarawak

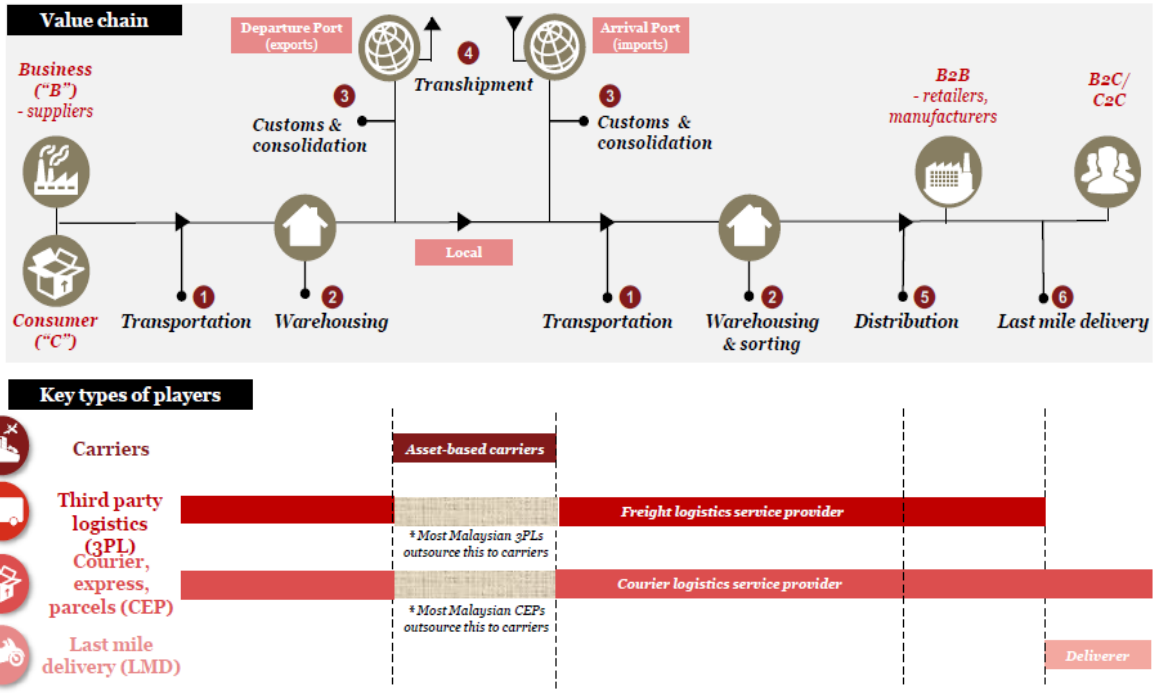


- Malaysia's logistics sector has a positive outlook, underpinned by stable trade growth (3.1%) and increasing freight transportation, where the freight volume is expected to grow 2x faster in year 2020 than from years 2010-2015[1]:





- Majority of logistics players in Malaysia operate across multiple parts of the value chain e.g. Third Party Logistics (3PLs) and Courier Express Parcels (CEPs)[1]:



- In recent years, the sector has seen logistics players acquiring 3PLs to gain scale, while interest in CEPs and LMDs has been growing[1].

	Carriers	3PLs	CEPs	LMDs
# of players	~10,000		122	
M&As (FY14 – FY17)	2	14	2	*(Growing interest from investors)*
Description	• CAPEX- and asset-heavy, as they manage own fleet of ships, airlines or trucks • Engaged by 3PL and CEPs for transhipment • Dominated by international freight players with extensive global presence	• Provides outsourcing services of supply chain functions to companies • Differentiating factors include niche logistics (i.e. cold chain) and full supply chain management (inventory to procurement)	• Provides services for B2B and B2C, from forefront (i.e. freight forwarding, transportation and warehousing), to LMD • Highly dependent on volume and scale • Expected to gain from boost in e-Commerce	• Start-ups that focus only on-demand LMD for B2C and C2C • Few M&As as most start-ups are in their infancy stage • Expected to gain from boost in e-Commerce
Examples (Local players)	MASKargo, MISC, MTT Shipping	Tiong Nam, CLS, Century, TASCO	POS Malaysia, GDEX, Nationwide Express	GoGet, DropIt.my, Neon Runner
(Foreign players)	Maersk, MSC, COSCO Shipping		FedEx, DHL, TNT	Ninja Van, Lalamove

1~PWC, October 2018

III. Overview, background and future trend of the development issue related to the training topic (i.e. food security, climate change, public health, rural development) in your country / territory

- Intensive use of E-commerce / IT:
    - The e-commerce contribution to GDP recorded RM49 billion in 2012 and increased to RM68 billion in 2015. The upward trend is expected to continue, almost doubling in 2020 with RM114 billion under business as usual scenario, and expected to hit RM170 billion with right interventions. According to a study by AT Kearney (2016), Malaysia is now at an inflection point of e-commerce growth, with an annual growth rate of 11%, with plenty of potential to accelerate.

- Growing demand for speed, efficiency, safety, lower cost, wider extent, more variety of goods and big volume of delivery.

- Outsourcing of logistics services where manufacturers, producers outsource activities such as freight transport, warehousing, freight forwarding, consolidation / splitting / tracking of consignments to 3PL companies.

- From 'port-to-port' to 'door-to-door'.

- Sophisticated supply chain management.

- Integration, consolidation, alliances; examples include[1]:
    - Transocean Holdings Bhd., a local company on 3PL, purchased Taipanco Sdn. Bhd. at RM140 million to leverage on both parties expertise;
    - TASCO Bhd., a local company, purchased Gold Cold Transport Sdn. Bhd. and MILS Cold Chain Logistics Sdn. Bhd. at RM216 million to capture niche segment to provide end-to-end solution to customers focusing on cold chain;
    - CJ Korea Express Asia (S) Pte Ltd, based in South Korea, bought a 31% stake in Century Logistics Holdings Bhd. at RM175 million, to establish logistics network in ASEAN
    - Yamato Asia (S) Pte Ltd based in Japan, bought an 11% stake in GD Express Carrier Bhd. at RM266 million, to establish cross border logistics in ASEAN in CEP, especially during the rapid growth of e-Commerce
    - Xin Hwa Holdings Bhd., a local company, bought a 50% stake in Yiwugou Ecommerce Sdn. Bhd., to diversity into the e-Commerce industry via online trading platform.

- Meeting shorter product life cycle.

- Globalized production / outsourcing.

- Trade liberalisation i.e. WTO, AFTA.

1~PWC, October 2018

IV. Existing laws and regulations of your country/territory concerning the issue (if any)

- The Logistics and Trade Facilitation Masterplan (2015-2020) serves as the main policies meant to:

    - Resolve bottlenecks in the logistics sector via decongesting ports and airports, reduce red tape / processes, and improve road and rail infrastructure.
    - Strengthen regulation;
    - Deploy technologies and human capital;
    - Elevate Malaysia to become a regional player.

- Mega projects based on the above include:

    - Digital Free Trade Zone – Alibaba logistics hub with centralised customs, warehousing and fulfilment functions
    - KLIA Aeropolis as the core of KLIA's air cargo and logistics ecosystem
    - Port Klang / Carey Island as a new port-industrial city on Carey Island to add 30 million TEUs. Port Klang upgrade to increase TEUs from 13 million in 2017 to 16 million in 2020.

- All port users at Malaysian ports are licensed by relevant Authorities. Examples are as follows:

    - Shipping Agents and Forwarding Agents are governed by the Royal Customs Department under the Customs Act 1967;
    - Terminal Operators are governed by the Port Authorities under the Port Authorities Act; and
    - Haulage Operators are governed by APAD under the Land Public Transport Act.

- Malaysia has 2 principal aviation regulators with regards to logistics, Civil Aviation Authority of Malaysia (CAAM) which oversees the technical regulations, and Malaysian Aviation Commission (Mavcom) which oversees the economical regulations. Relevant acts include Civil Aviation Act 1969 (amended), Malaysian Aviation Commission Act 2015, and the Civil Aviation Authority Act 2017.

- Empty depot operators outside the port and freight forwarders are not governed by any agencies. At the moment, there are no specific act or policies governing these operations.

- The National Transport Policy serves as the overarching policy that looks at all sectors including logistics which has 5 strategic thrusts:

    - **Strengthen the governance** to create a conducive environment for the transport sector
    - **Optimize, build & maintain** transport infrastructure, services and networks to maximize efficiency
    - **Enhance safety, integration, connectivity & accessibility** for seamless journey
    - Advance towards **green transport ecosystem**
    - **Expand global footprint** and promote internationalization of transport services

V. Challenges / problems in your country/territory concerning the issue

- Logistics sector not able to keep up to the advancements in the sector / global best practices and has lagged in terms of ranking:

    - The Logistics Performance Index (LPI), a global benchmarking index, has ranked Malaysia in 32nd position out of 160 countries in 2016 compared to 25th position in 2014. Malaysia lags transparency in customs clearance.

- Shortage of skilled logisticians:

    - Shortage of professionals partly due to limited universities with logistics courses. The industry is also marked by shortage of qualified goods vehicle drivers and experienced seafarers. Industry participants have highlighted low salary and minimal training as the main human capital issues.

- Fragmented with large number of players across the value chain:

    - Big global technology firms like Amazon and Alibaba are also compounding the challenges faced by logistics firms by continuously changing the pace of the e-commerce landscape and by offering a wealth of delivery options to consumers.

    - Many small logistics companies are faced with unprecedented challenges and are likely to lose out in the long-run due to their lack of resources to fully meet the demands of the e-commerce market. Some of their last-mile delivery challenges include the lack of new technology and automation in their operations. This can cause a further loss in data collection and in the correct use of information, which perpetuates their inability to measure up to market demands.

- Usage of IT platform is fragmented and isolated in the ports and logistics industry. All port users are not connected to a common IT platform for seamless connectivity in the country. As such, the U-Customs initiative has yet to kick start for this purpose.

- Congested traffic situation on Malaysian roads impede the progress of the logistics industry due to loss in productivity hours. In 2015, only 6.2 million tonnes were moved via rail, by right should be significantly cheaper, which constitute only 1.6% of land transport. Although a good rail infrastructure has been put in place, the rail service is still not optimised, utilising only 30% of the existing infrastructure. There is a huge potential to shift the transportation of freight from road to rail.

- Insufficient use of technology / automation / mechanisation that affected efficiency and contributing to high labour dependency.
- There is a pressing need for mobile app platforms to match shippers' loads with available trucks and truckers. Successful implementation will enable truckers to minimize empty haulage, save time and earn more and at the same time allow shippers to book a shipment cheaply and quickly. In developed countries such as USA, the Transfix mobile-app has enabled drivers to earn 25% more, with guaranteed payment within 24 hours of delivery.

VI. Opportunities / way forward in your country / territory concerning the issue

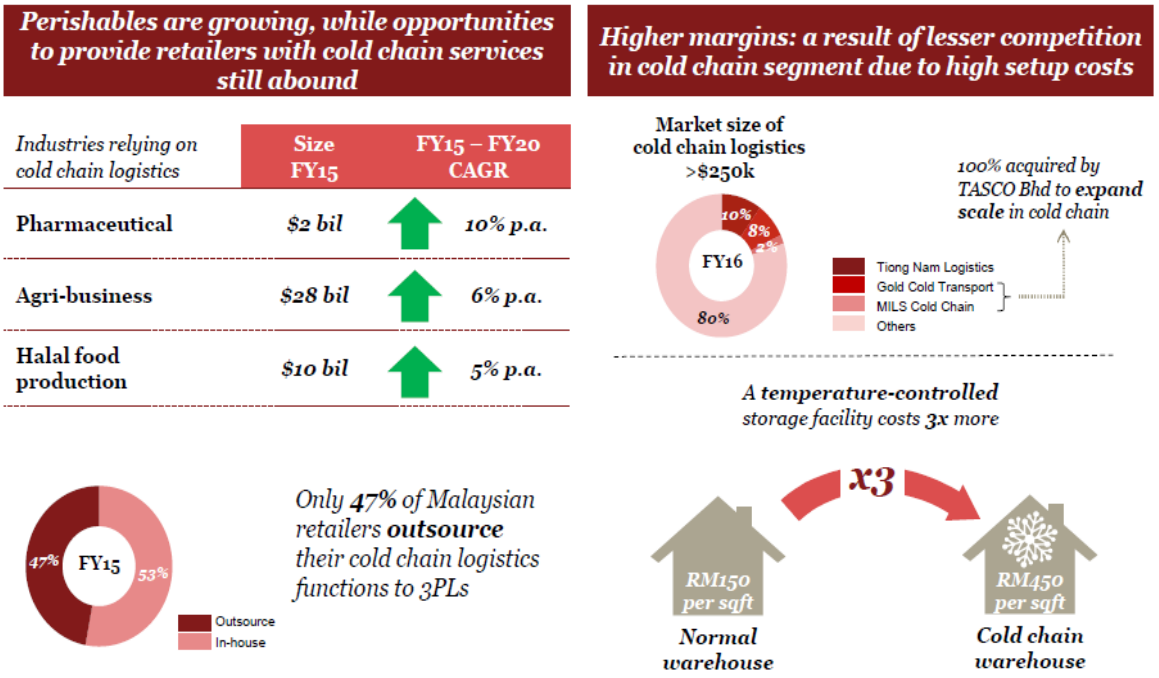
- Rail sector is increasing rapidly especially in Peninsular Malaysia that can create the vital link from Thailand to Singapore.

- Malaysia as a geographically strategic location within ASEAN that has both land and sea connectivity.

- There is a structural growth in E-Commerce expected at a CAGR of 11% growth:

    - Increasing trends of purchases via online
    - CEP market expected to grow at a CAGR of 15%

- Growing interest in niches segments, in particular cold chain, driven by healthy margins, increasing demand for perishables and lesser competition[1]:



- Recent wave of consolidation in the logistics market to:
    - Achieve greater scale where there is an expected to be 2 broad categories of logistics providers (i.e. Large integrated logistics players, and players focusing on niche markets).
    - Capitalize on the E-Commerce wave.

- Investment into smart warehouses / distribution centers (to increase turnaround required for e-Commerce activities).

- An SOP will be created in due course (underway) in governing the empty depots outside ports

- U-Customs may start by end of 2019 as the whole system is in final phase developed by the Royal Customs.
- Government through NLTF (National Logistics Task Force) is spearheading more reforms and changes in the overall performance of logistics sector.

1~PWC, October 2018

VII. Expectations from the training course

- What do you expect to gain from the training program?

A more in depth knowledge on the overall eco-system of the logistics sector, and how do the economic aspects correlate with the logistics industries infrastructural needs. Green

elements would also focus on environmental aspects which were not fully in the equation before.

- How do you expect to apply the knowledge/experience gained upon return to your country / territory?

Formulate / streamline relevant policies and implementation plans to serve the above purpose.

6. Mauritius

Green freight and logistics development

MAURITIUS

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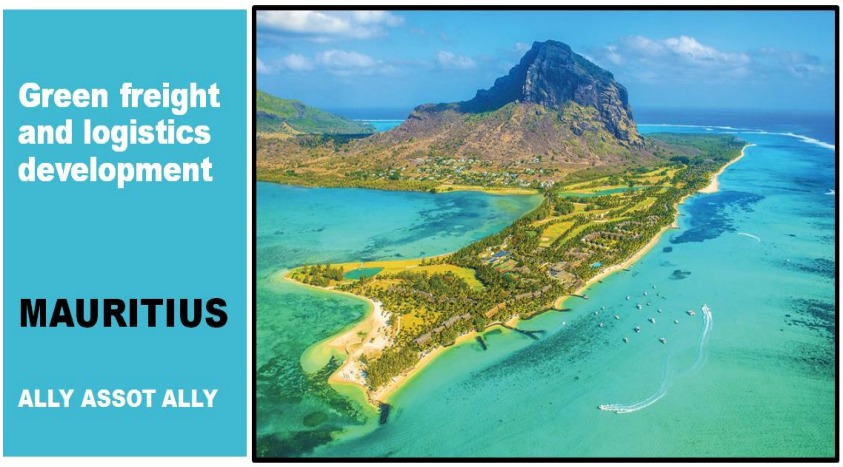
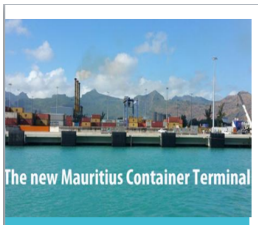


COUNTRY INFORMATION-

MAURITIUS

- The island state of Mauritius lies in the middle of the Indian Ocean.
- 1100 km away from Madagascar and 2300 km from Africa.
- Covers an area of 1800 square km.
- Democratic state and market economy since its independence from UK in 1968.
- 2011 census, Mauritius has a population of 1.3 million.
- GDP per capita is 11,280 USD
- Unemployment: 7 %
- Export: EU, US, SA, Mada Import: India, China, Fra, SA
- Industries: Tourism, Manuf, Con, Agri, Service



Operations of transport and logistics industry and the development of green freight and logistics from supply and demand sides

- Road transport is the only mode of internal transport in the country - road freight and passenger transport.
- The transport freight industry caters for two distinct forms of transport- (i) sugar transport and (ii) goods transport.
- Sugar transport can be divided into 2 stages - transport of 5.5 million tons of sugarcane from the fields to the factories and the transport of 500,000 tons of sugar from the factories to the port.
- Main category of goods transport: merchandise, food imports, textiles, fertilizers, cement and petroleum products.
- About 90,000 tons of goods are hauled daily.
- The road freight industry has flourished owing to economic development and the expansion of the supply chain.
- Green freight and logistics development witnessed in recent years
- Road infrastructure improvement
- increased use of LGV (30 tons), containers, transportation of goods in bulk and the use of refrigerated vehicles and less use of small goods vehicles
- Fuel consumption and GHG emissions are less when LGV are used on a per ton per km of goods hauled basis

Current legal and regulatory environment on logistics and transport

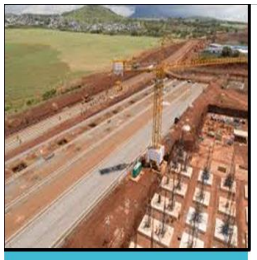
- Transport is regulated by the National Transport Authority (NTA), which is a department of the Ministry of Land Transport, Shipping & Port Development through the RTA, RTR & other subsidiary laws.
- The NTA is responsible for the registration and licensing of goods vehicles. A gv must hold a carrier's licence, an effective insurance policy, is roadworthy (opacity test) and pay a road tax to operate a vehicle.
- Driving licence
- The industry operates largely free of government regulation and there is no restriction on entry.
- Freight rates not regulated and in general, the supply of road freight services is more than adequate to meet demand.
- delicensing of goods vehicles over the age of 30 years

Role of government in creating a secure environment for innovation and capability of the need of the private sector and its capability to capture advantages of green freight and logistics.

- No custom & excise duty for freight vehicles as compared to private vehicles
- Low road tax
- Deregulations
- Sustainable road

Challenges facing both public and private sectors in green freight and logistics development

- Improved standard of living
- dominance of private car use
- Acute traffic congestion
- Freight veh prohibition



Future projects on green freight and logistics

- Introduction of Rail Passenger Transport in urban areas in 2020 - Metro Express project
- Shift from private to public transport
- Ease traffic congestion
- Greener freight and logistics transport
- Plan to use rail infrastructure for freight transport at night
- Extension of rail transport all over the island

Click to add title

THANK YOU FOR YOUR ATTENTION!

7. Mexico

I. Introduction

- Name of the training course:
International Training Program on Green Freight and Logistics Development
- Name of the participant: Mr. Abel Alejandri Villasuso
- **Name of country / territory:** México / Colima
- **Name of organization / department**:
Council of Science and Technology of the State of Colima

- Role and responsibility of the organization: To promote scientific research, technology and innovation, to contribute to the economic and social development, to design programs, regional strategies, promote public policies, linking of the sectors and institutions to impulse STI of the state of Colima and country.

- Organization Chart:

- Participant´s designation and responsibility: Coordinator for Communications, Marketing, Social Media, Logistics and International Projects Liaison.

II. General Information of your Country / Territory

Mexico is a country located in the lower part of North America, it is a democratic republic with 32 states, 1,964,375 km^2 of territory, neighboring to the north with the United States of America and to the south to Central America with Guatemala and Belice. Having around 125 million habitants, our main language is Spanish but we have many indigenous dialects, we are the second largest economy in Latin America, the number one Latin American tourism destination and the 6^{th} worldwide.

On the economic side we are the second largest economy in Latin America and the 15^{th} at worldwide level on nominal GDP, but its growth has lowered in the last few years been 2018 the lowest with 2% and the GDP per capita does not reflect as well as in other countries. We are the number 46 in the global competitiveness ranking according to the World Economic Forum. We are one of the most diverse countries in terms of climates,

biodiversity and species. A country with many traditions and culture, descendants of a mixture of Europeans and indigenous tribes with mostly catholic oriented religions.

The state of Colima is located on the central-western part of the country, it is a small state with around 735,000 habitants and 5,627 km2 of territory, we have 10 municipalities, and the main economic sectors or poles of growth circle around agroindustry, tourism, information technologies and logistics, contributing to a 0.6% of the national GDP, we hold the largest port of the country and number 3 in Latin America, according to the CEPAL ranking, Manzanillo moves around 3 million TEUs per year and keeps growing, with expansion plans for 2030 onwards on the Cuyutlan Lagoon that will increase the capacity to double.

III. Overview, background and future trend of the development issue related to the training topic

Colima has a healthy economic and innovation ecosystem with the quadruple helix members working together to improve their respective productive sectors, having a good relationship with the government and linking of institutions that generates strategies and projects coordinated with a long term vision.

In the Council of Science and Technology we have implemented strategies along the National Conference of Governors and many other institutions to promote the SDGs. We also have a direct link with the European Commission thru the JRC of Seville and programs such as IUC and Low Carbon. We are implementing the RIS3 strategies for regional

development to make interstate programs and coordination, also we promote the use of sustainable energies such as solar, biomass and wave power.

Logistics and transportation on our state represent one of the main economic sectors which has been growing. We have one of the main ports that connect Asia to America and world class highways that go to the center of the country which promotes commerce and industry. On that matter we also are impacted with environmental issues such as CO_2 from the transportation of goods.

IV. Existing laws and regulations of your country/territory concerning the issue.

The two main actors that regulate this: The Secretariat of Transportation and Communications (SCT) and the Secretariat of Environment and Natural Resources (SEMARNAT) along with the Integral Port Administration (API) and State Governments of several agencies.

Federal law of highways, roads and bridges
Federal law of general means of communication
Federal law of of ports
Federal law of railways
Federal law of environment protection and ecological balance
Transport regulations, Railway regulations and Port regulations
State law of sustainable mobility and environmental protection (Colima)
North American Free Trade Agreement now USMCA
And many other concerning specific industries.

There´s also programs implemented at the Federal level such as:

- Program for Green Transportation - Transporte Limpio (voluntary program not enforced by the law since 2010);
- Certifications of Green Ports (sustainable and clean)
- Modernization of Cargo Transports with no more than 6 years old thru federal financing.

V. Challenges/problems in your country/territory concerning the issue

The continuous growth of port activity, the increase of new companies drawn to the region, the lack of railways to get the goods out of the area, the increase of the usage of trucks with dual container platforms, maintenance of highways, pollution, maintenance of trucks, poor qualifications of drivers, have started to become a problem to the region, but specially to our state.

On the topic of the planned expansion of the port to the lagoon of Cuyutlan, it will represent not only a big investment but also will carry out big challenges on the logistic sector and how it interacts with the city and the other economic sectors such as tourism and agroindustry.

VI. Opportunities / way forward in your country/territory concerning the issue.

Since out state is small and the state and local government work together with the support of industry, academy and society we could implement pilot programs to promote the usage of new technologies, certifications, green check points for maintenance, or benefits for enterprises that abide by certain regulations and contribute to the overall strategy.

On the federal side we should plan to increase the capacity of the railways and expansion of the highways to get ahead of oversaturation and security issues. Continue training on with transportation agencies and promote law enforced programs to improve the CO_2 count on the delivery of goods.

Mexico as an emerging economy has many challenges ahead, but only with trained personnel and strategies thinking ahead we will sort out this situation to continue sustainable growth and contribute to mitigate climate change.

VII. Expectations from the training course.

My expectation of the course is to learn and bring back the transference of knowledge,the methodologies and programs that you have implemented and hear about the challenges that you have encountered in your region and how to meet expectations and get results coordinating government agencies, industry and society and getting to know new ways and technologies.

In the logistics sector alongside the Mexican Business Council of Foreign Trade, the Institute of Environment and Sustainable Development, the Ministry of Mobility and several more institutions we can institute training courses to pass along the expertise and implement pilot programs that can be replicated countrywide with the support of the National Conference of Governors that we are a part of in the Science and Technology Commission.

Overall we want to strengthen the logistics sector and contribute to the SDGs implementing actions in the short, middle and long term, that help us growth and keep our natural resources untainted and can coexist with society and the other productive sectors that give our population the means to live and grow.

8. Mongolia

I. Introduction

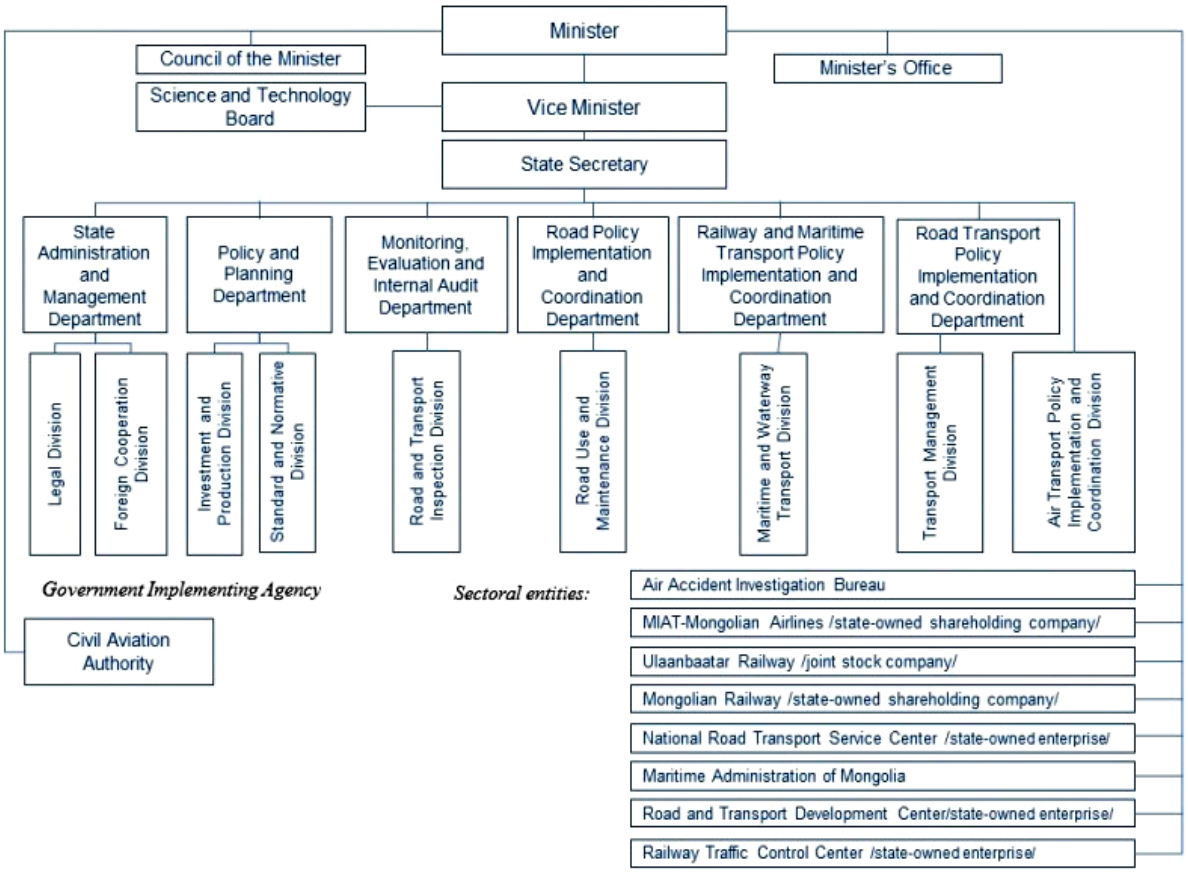
- Name of the Training Course:
International Training Program on Green Freight and logistics Development
- Name of Participant: Ms. Tseveennamjil Bayarjargal
- **Name of Country/Territory**: Mongolia
- Name of Organization/Department (which participant currently work for):
The Department of Road Transport Policy Implementation and Coordination, Ministry Road and Development of Mongolia (MRTD).

- Role and Responsibility of the Organization / Department:
Ministry of Road and Transport Development of Mongolia is a government policy-making and implementing body committed to creating and developing an efficient transport network that is safe, secure and convenient to meet the needs of users and supportive to the growth of the country's economy. It puts efforts into expanding and improving national key transport networks including road, railway and air transport and develops and implements policies and regulations that are inductive to strong competitiveness and progress within transport sector.

Main activities of the Department of Road Transport Policy Implementation and Coordination of MRTD:

- To develop legal environment of road transport of Mongolia;
- To develop road transport Policy;
- To develop international cooperation with other countries and International organizations;
- To cooperate with national organizations relating to road transport sector;
- Preparing to join International road transport agreements and conventions;
- To develop transport planning according to Urban planning
- To provide Road Transport Policy implementation;
- To develop and build road transport infrastructure;
- To support developing human resource of Road Transport sector;
- To approve freight and passenger transport routes;
- To conduct researches and studies relating road transport sector.

- Organization Chart the Ministry of Road and Transport Development of Mongolia:



- Participant's Designation and Responsibility:

I am senior officer of MRTD of Mongolia. I am in charging road transport planning and policy, especially international and domestic freight transport planning through logistics centers.

II. General information of your country/territory:

Mongolia is located in the heart of the Asian continent and covers an area of 1,566,500 square kilometres. It stretches about 2,400 kilometres from West to East and about 1,260 kilometres from North to South. It is bordered in the North by Russia and in the South, East and West by the People's Republic of China. The total length of the country's borderline is 8,158 kilometres. Capital city is Ulaanbaatar.

Mongolia is a country with an average altitude of 1,580 meters above sea level. The lowest point, Khonhk-Nuur, is 1,560 meters above sea level and the highest point is the mountain Nairamdal (Friendship) in the Mongolian Altai, which stands at 4,374 meters. The geography of the country is characterized by great diversity. In the Northwest the mountain ranges and ridges are overgrown with wild forests, lakes and tempestuous rivers. The Gobi Desert lies in the South occupying a little less than one-third of the Gobi Region, the rest being semi-desert grassland.

The official language of Mongolia is Mongolian and spoken by 95% of the population. A variety of dialects of Oirat and Buryat are spoken across the country, and there are also some speakers of Mongolian Khamnigan.

Today, Mongolian is written using the Cyrillic alphabet in Mongolia, although in the past it was written using the Mongolian script. But traditional alphabet is being slowly reintroduced through schools.

Mongolian cuisine is rooted in our nomadic history, and thus includes much diary content and meat, but few vegetables. Two of the most popular dishes are buuz (a meat-filled steamed dumpling) and khuushuur (a sort of deep-fried meat pie).

Figure 1. Map of Mongolia

Mongolia is a semi-presidential representative democratic republic with a directly elected President. The people also elect the deputies in the national assembly, the State Great Khural. The President appoints the Prime Minister, and nominates the Cabinet on proposal of the Prime Minister. Mongolia has a number of political parties: the largest are the Mongolian People's Party and the Democratic Party.


Figure 2. Capital city Ulaanbaatar of Mongolia

Mongolia's climate is extreme continental - an extreme climate with seven to nine months where the mean temperature remains below freezing point. Higher temperatures occur for two or three months in summer. The winter months begin from October and last until mid-April. The coldest months are from mid-December to the end of February or mid-March

when the temperature drops to below zero to minus 40 degrees centigrade and occasionally even lower.

Figure 3. Countryside of Mongolia

III. Overview, background and future trend of the development issue related to training topic (i.e. food security, climate change, public health, rural development) in your country/territory

The transport sector of Mongolia has a crucial importance in the country's socio-economic development and at micro levels it provides for transport needs of population, enhances economic performance and consumer satisfaction by contributing to cost savings of goods and services and at macro levels it affects national wealth generation, well-being of people as well as the environmental balance.

In comparison with other modes of transport and considering the territorial coverage and overall transport infrastructure development, the transport sector accounts for the 98 percent of passenger transport and 65 percent of freight transport in the country.

Domestic movement of goods use road as well as rail transport. Most agricultural production, such as food grains, meat, milk, and vegetables by farmers and cattle herders, is located far away from urban areas. Hence, road transport is the only available option in most cases.

While Mongolia's trade is concentrated with its neighbors in the north and south, the transport and logistics sector has a crucial role to play in ensuring timeliness and cost-effectiveness of freight movements.

With an estimated 60 million head of livestock, Mongolia produces large quantities of meat and dairy products, almost all of which is domestically consumed. As Mongolia develops its agricultural export industry, it must develop a cold-chain capacity to ensure food preservation during shipment. There are not enough warehouses and special vehicles using for transport of perishable goods. So, food security is very poor in Mongolia.

Mongolia has a mineral reserve such as coal, iron ore, copper, crude oil, and gold, and the mining industry has been economic growth in the recent past in Mongolia. Mining industries and mineral transport is a reason of harmful environment and public health.

Over the past few years Mongolia has seen adverse changes in the climate. There has been an increased frequency of drought and dzud. Streams are drying up and even major rivers are suffering from lower water levels. All of this has had a devastating impact on agriculture production and the incomes of rural people. It seems highly likely that this weather trend will continue.

Given this new adverse weather pattern it would be very difficult to achieve any development in the rural areas without changes being made in the traditional technologies used in both livestock herding and crop farming.

Although global warming may be blamed for a portion of the climate changes in Mongolia it must be duly acknowledged that human factors have also had a serious impact on the climate.

The livelihoods of rural people are declining and rural poverty is increasing because rural people continue to use outdated practices and technology in the changing environment. There is a much broader context to rural development than simply the food and agriculture, or the farming and herding, issues. Any plan for the rural areas needs to consider well the full range of environmental issues as well as the living and working conditions of all rural residents.

IV. Existing laws and regulations of your country/territory concerning the issue (if any)

The Sustainable Development Concept of Mongolia-2030 adopted by the Parliament of Mongolia in 2016 envisages a goal to enhance and expand national transport and logistics network that is able to sustain socio-economic development, develop and strengthen transit transport, establish new transport and logistics hubs and terminals based on agriculture, mining and industrial clusters as well as to introduce new modes of transport.

The Government Action Plan for 2016-2020 also stipulates the creation and development of an efficient transport and logistics network that is safe, secure and convenient to meet the needs of users and supportive to the growth of the country's economy, to strengthen transport field ties with international community and improve connectivity with regional and international transport network.

The Road Transport Policy was approved by 321 of the Resolution of Mongolian Government in 2018 and Action plan to implement Road Transport Policy was approved by 286 of the Order of the Minister of Road and Transport Development of Mongolia.

Intergovernmental Agreement on International Road Transport along the Asian Highway Network was signed by Mongolia, Russia and China in December 2016 and endorsed by the Parliament of Mongolia in 12 April 2018.

This agreement formally launches the operationalization of the shortest transport route connecting Europe and Asia and has a great significance in facilitating regional trade and transport exchange.

As of today, Mongolia has concluded bilateral intergovernmental agreement on international road transport with 10 countries including Russia, China, Kazakhstan, Ukraine, Turkey, Belarus, Kyrgyzstan, Latvia, DPRK, Hungary, and performing transport activities under these agreements.

In connection with increasing foreign trade of Mongolia, the need for transport service is increasing not only to the neighboring countries but also to the third countries. In order to meet this growing need the Government of Mongolia is working to expand the number of countries to sing the road transport agreement and already holding negotiations with Poland, Czech Republic, Slovakia, Poland, Lithuania, Germany. The singing of the agreement with these countries will allow direct and transit freight runs of Mongolian carriers to these countries and beyond.

There are total of 6200 international and national standards in Mongolia. 62 standards of them are used in road transport sector in Mongolia. 24% of all road transport standards have the same status as the International standards.

There are no any standards relating to logistics. We need to develop international standards relating to logistics and comply with them as National standards.

V. Challenges / problems in your country/territory concerning the issue

Ulaanbaatar, the capital city, is the destination of a major proportion of imports from the People's Republic of China and the Russian Federation, but its logistics infrastructure is still inadequate to meet the growing demand for trade. Most bulk commodities are transported by road, which exacerbates environment and economic issues in the country.

Some of Mongolia's imports are containerized, but transporting these containers experiences long lead times and uncertain delivery schedules due to inefficiencies in the supply chain. Multiple freight terminals are served by Ulaanbaatar Tumur Zam railway station, which creates an inefficient system leading to redundancy of assets, higher handling costs, and longer turnaround times. Significant delays lead to higher total costs for consumers.

Poor storage facilities and inefficient distribution mechanisms are the two major hindrances for the distribution, transport, and storage of domestically produced goods in Mongolia. This inefficient logistics system not only leads to highly priced goods, but creates congestion and pollution in urban areas.

Logistics are not very well developed in Mongolia. There are no regulations or legal frameworks for logistics services. Mongolia does not have any logistics hub including freight terminals, truck desks, cross-dock operations and distribution centers, etc. Imported goods from Russia and China are carried by truck from Zamyn-Uud and Altanbulag. There is no logistics center in Altanbulag. In Zamyn-Uud, Regional logistics center has been built in 2018 supported by ADB and also some warehouses are built there supported by private sectors.

Mongolia was ranked 102 out of 160 countries surveyed as per the 2018 Logistics Performance Index (LPI) published by the World Bank. This is a significant improvement from its rank of 135 in the 2014 LPI. However, this performance improvement has not been uniform across all parameters. However, LPI scores for infrastructure, international shipments, and logistics quality and competence have deteriorated since 2014, implying that transport and logistics infrastructure and services remain as the weak link in the country's logistics supply chains.

We need to develop logistics service in Mongolia and to prepare human resource in this sector.

VI. Opportunities/way forward in your country/territory concerning the issue

According to above mentioned Road Transport Policy, the Ministry of Road and Transport of Mongolia is focused on development of International trade and freight transport. For examples:

- Develop an integrated multimodal logistics facility. It can be addressed by replacing the existing system with an integrated multimodal logistics facility;
- Provide road and rail connectivity between the mines and border crossing points. Also, border infrastructure should be upgraded;
- Create urban consolidation centers. Movement, storage, and distribution of domestic goods can be streamlined and efficiently managed by implementing urban consolidation centers which will help plan, organize, and optimize movement of domestic goods within Ulaanbaatar and in provinces;
- Improve and develop agricultural supply chain. Logistics for domestic non-mining freight in Mongolia is dominated by transport and storage of agricultural products within the provinces to Ulaanbaatar;
- The country's extreme winters strongly influence the production cycles of its agricultural produce, thereby making proper temperature-controlled storage and transport facilities essential to reduce wastage and ensure round-the-year availability of perishable commodities;
- Implement a national electronic single window. It is essential that the Mongolia Customs General Authority, the General Agency for Specialized Inspection, and Mongolia Immigration and Border Security share and exchange information to minimize delays at borders. Implementation of a national electronic single window can achieve these objectives;
- Develop and adopt regulatory mechanisms for logistics efficiency. While a good relationship with Mongolia's neighbors is essential to further develop its trade potential and improve its logistics efficiency, promotion of the Trilateral Economic Corridor should be augmented by the creation of rail and road infrastructure along with the implementation of requisite regulatory mechanisms.

VII. Expectations from the training course

We are expecting:

- To gain new knowledge and best experiences in logistics service;
- To gain practical experiences in freight transport;
- To introduce global regulations and legal environments on freight transport and logistics services;
- To introduce logistic and road facilities;
- To know global and regional freight transport trend and future perspectives;

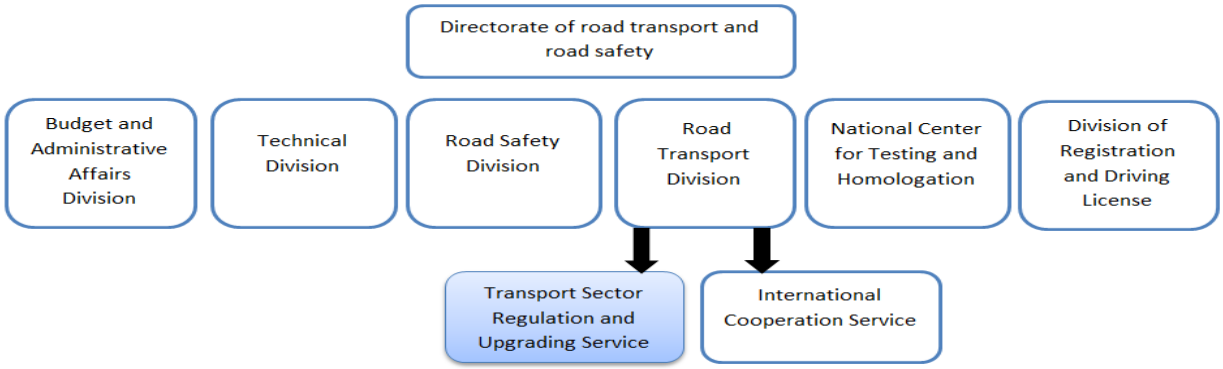
After training course, we are working to develop State Logistics Policy and Regulations, and to build 23 of logistics center and freight terminals according to Road Transport Policy.

9. Morocco

I. Introduction

- **Name of the Training Course:** International Training on Green Freight and Logistics Development
- **Name of Participant**: Guenbdar Firdaous
- **Name of Country / Territory**: Morocco
- **Name of Organization / Department (which participant currently work for):** Ministry of Equipment, Transport, Logistics and Water / Directorate of Road Transport and Road Safety
- **Role and Responsibility of the Organization/ Department**
  Regulation and Upgrading of the Road Transport Sector

- **Organization Chart:**



- **Participant's Designation and Responsibility:**
  - Management and upgrading of Moroccan transport;
  - Management of the vehicles of the public transport schedule;
  - Replying requests of transport companies' manager with following order.

II. General information of your country / territory

Morocco is a country located in the Maghreb region of North West Africa with an area of 710,850 km2 (274,460 sq mi). Its capital is Rabat, the largest city Casablanca. It overlooks the Mediterranean Sea to the north and the Atlantic Ocean to the west. Morocco's predominant religion is Islam, and its official languages are Arabic.

III. Overview, background and future trend of the development issue related to the training topic (i.e. food security, climate change, public health, rural development) in your country / territory

Morocco is strongly committed to face climate change challenges, despite its relatively insignificant GHG emissions. It has a clear vision and a committed policy for Climate Change issues, aiming to establish a strong coordination between the various measures and initiatives taken to face climate change and focus on a structural, dynamic, participatory and

flexible policy for establishing the basics resilient green growth to Climate Change. On the ground, this commitment is confirmed through operational and ambitious projects, such as the on-going implementation of a comprehensive policy to develop the use of renewable energies, particularly wind and solar power. Choosing Morocco to host COP 22 is itself a recognition from the international community of the country's efforts to contribute to face climate change challenges. As for the logistics sector, Morocco's Climate Change policy considers the national development strategy for logistics competitiveness a part of the sectorial programs and strategies implemented with the aim of reducing GHG emissions. Morocco has defined and implemented an integrated national strategy for developing the logistics sector by 2030, setting clear and quantified macroeconomic and environmental objectives with the aim of reducing CO2 emissions generated by road freight transport by around 35%. In order to achieve these objectives, the Moroccan strategy tackles five main areas:

- Developing a national network of logistics areas across the Kingdom;
- Optimizing the country's main supply chains: import / export, domestic distribution, flows of construction materials, agriculture products, and hydrocarbon flows;
- Enhancing skills and professionalizing logistics operators;
- Developing logistics trainings and skills;
- Setting up appropriate governance and regulation.

IV. Existing laws and regulations of your country / territory concerning the issue (if any)

Morocco has defined and implemented an integrated national strategy for developing the logistics sector by 2030, which takes almost all of these aspects into account. The strategy includes clear and quantified macroeconomic and environmental objectives, consisting particularly of reducing the CO2 emissions generated by road freight transport by around 35%. In general, the initiatives and actions planned or underway as part of this strategy aim at consecrating Green Logistics principles and go hand in hand with ODD and GHG emissions reduction objectives.

1- Massified flows for sustainable logistics;
2- Projects for sustainable logistics practices;
3- Efficient urban logistics to boost sustainable development in cities.

V. Challenges / problems in your country/territory concerning the issue

Identify primary challenges and problems pertaining in your country/territory concerning the issue.

VI. Opportunities / way forward in your country / territory concerning the issue

GEF Project is an opportunity for the Moroccan country to integrate climate change into the national strategy for developing logistics competitiveness and in the implementation of logistics platforms.

The GEF-Transport project is based on the National Charter for Environment and Sustainable Development, sectoral strategies, Sustainable Development Goals and Morocco's transition to a green economy.

VII. Expectations from the training course

From the training course, I expect to gain knowledge on procedures, formalities and practices in transport and logistics activities and management, and to understand strategies on transport and logistics planning and management to complement efficient logistics and green freight programs in the countries.

Indeed, I hope to acquire knowledge on this subject in order to be able to apply them on the project GEF of transport.

10. Myanmar

I. Introduction

- **Name of the Training Course:**
International Training Program on Green Freight and Logistics Development
- **Name of Participants**: Ms. Phyo Myat Myat Moe / Ms. Yu Myat Mon
- **Name of Country / Territory**: Myanmar
- **Name of Organization/Department (which participant currently work for)**:
Myanmar Railways, Ministry of Transport and Communications

- **Role and Responsibility of the Organization / Department:**

(a) To give effective support from passenger and freight sector for moving forward to building of a modern developed nation;
(b) To be a reliable rail business for the State and the people by utilizing existing resources such as human beings and facilities to promote capacity with the effective management;
(c) To increase the revenue for the State by utilizing rail land and at the same time to support for the development of rail related areas;
(d) To implement Transit-Oriented Development Projects under the PPP scheme.

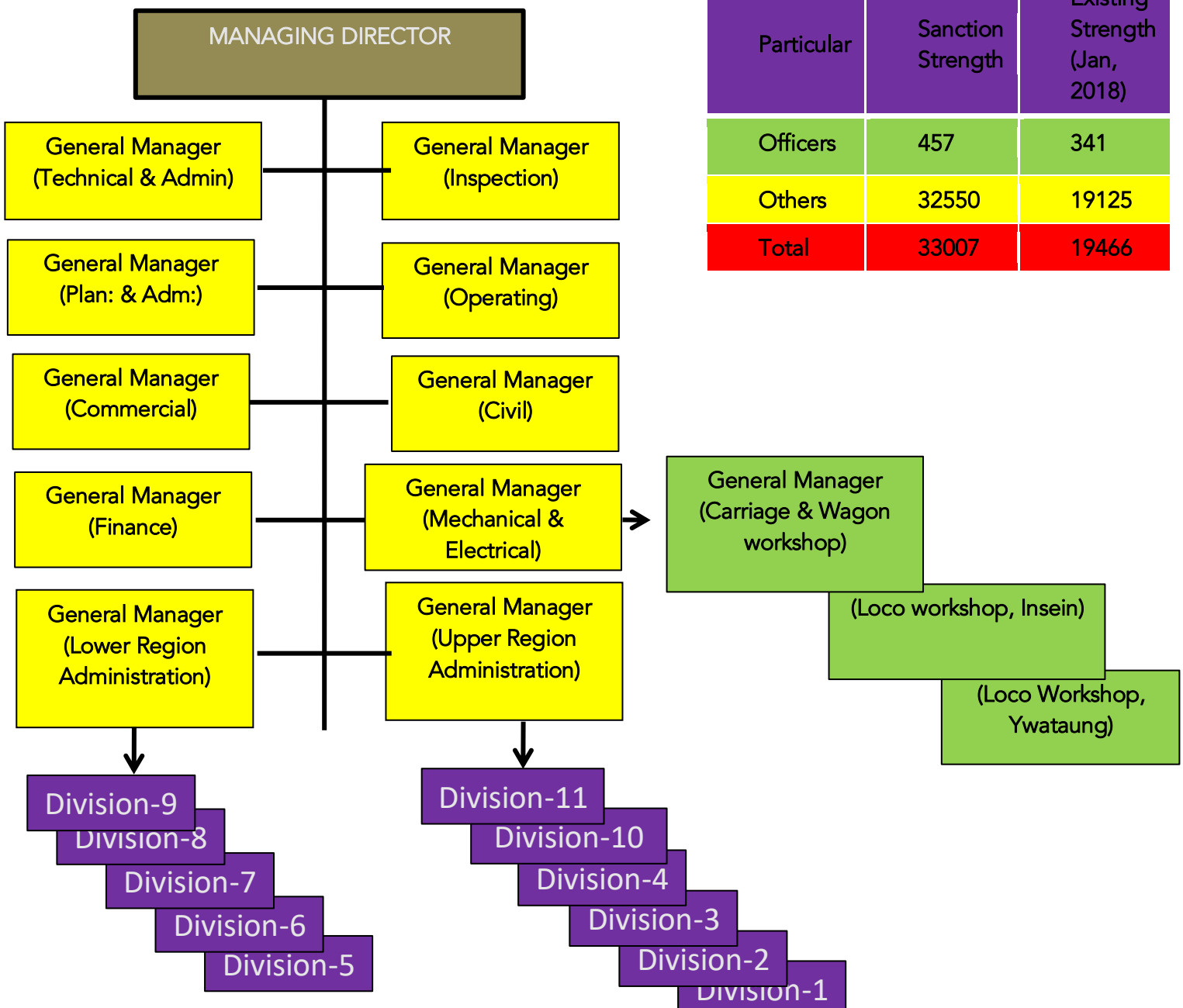
Organization Chart

Ministry of Transport and Communications

- Department of Civil Aviation
- Department of Marine Administration
- Directorate of Water Resources and Improvement of River Systems
- Department of Meteorology and Hydrology
- Road Transport Administration Department
- Post and Telecommunications Department
- Information, Technology and Cyber Security Department
- Myanmar National Airlines
- Myanmar Port Authority

- Inland Water Transport
- Myanma Shipyards
- Myanma Railways
- Road Transport
- Myanmar Posts and Telecommunications
- Myanmar Posts
- Myanmar Maritime University
- Myanmar Mercantile Marine College
- Central Institute of Transport and Communications

Myanmar Railways Organization Chart



Particular	Sanction Strength	Existing Strength (Jan, 2018)
Officers	457	341
Others	32550	19125
Total	33007	19466

- Participants' Designation and Responsibility:

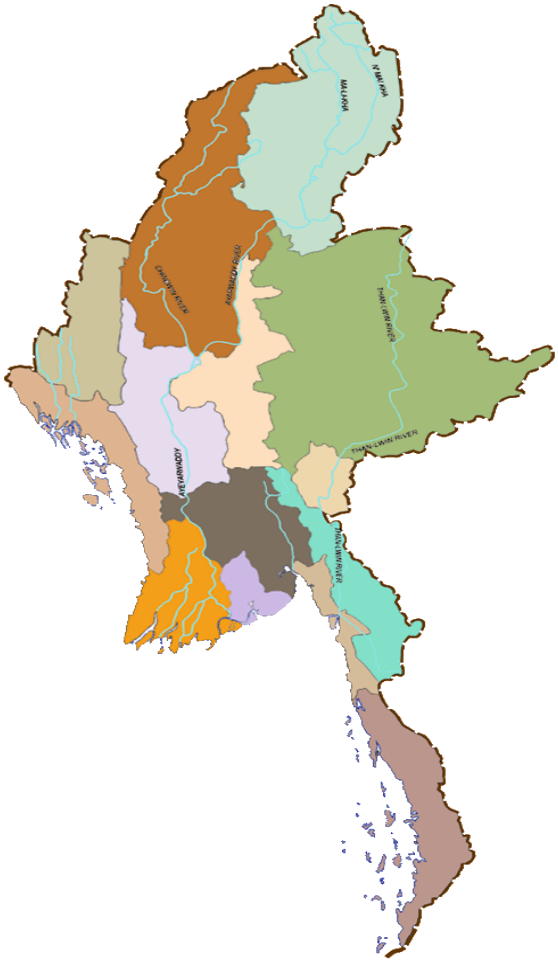
(For Ms. Phyoe Myat Myat Moe)

1. To assess the Myanmar Railways' Law, Rules and Regulations as well as Ministry's Transport Policy;
2. To monitor the activities including Dry Port, National Transport Master Plan Projects and on-going Railways Projects;
3. To Evaluate Myanmar Railways Goods and Transportation situation.

(For Ms. Yu Myat Mon)

1. To monitor commercial process;
2. To implement potential non-rail business to increase the revenue of the department;
3. To scrutinize rental fees payment for land lease in such business like dry port projects, hotel project, mixed-use development project under PPP scheme.

II. General Information of your country / territory



- Myanmar, one of the ASEAN countries and well-known for the geological situations in which rich of the natural resources are supplied. It is bordered by India and Bangladesh to West, Thailand and Laos to East, China to North and Northeast. Area is 261,228 sq. miles (6,77,000 sq. km),from east to west - 926 km, from north to south – 2090 km;

- Its population is over (53) million. There are 7 states and 7 regions, 68 districts and 333 townships. Nay Pyi Taw Council Area where Government Institutions situated;

- Myanmar is rich in Natural gases, timbers, beans, clothing, etc.

III. Overview, background and future trend of the development issue related to the training topic (i.e food security, climate change, public health, rural development) in your country / territory

- Myanmar has strong potentials for economic growth.
- Growing needs to construct Dry Port and improve transport network for enhancing trade logistics with the world and neighboring countries;

- Making intergovernmental agreement with UNESCAP and designated eight locations: Tamu, Monywa, Muse, Mandalay, Bago, Pyay and Mawlamyine;

- Out of eight, two Dry Ports Ywathargyi at Yangon and Mitinge at Mandalay are implementing under PPP Scheme;

- Selected Monwya and Mawlamyine for Feasibility Study.

IV. Existing laws and regulations of your country/territory concerning the issue (if any)

Myanmar has to reference at least eight laws for developing a dry port:

(1) Land Acquisition Act
(2) Development of Border Areas and National (3) Races Law
(4) Farmland Law
(5) Development Committees Law
(6) Transport Law
(7) Trade Law
(8) Customs Law
(9) Myanmar Investment Law

V. Challenges / problems in your country/territory concerning the issue

1. Cargo demand forecast will be 312 million tons in 2030 (up from 169 million tons at present cargo);
2. Volume of containers or trade cargo volume will be from 1.5 million TEUs to 5.1 million TEUs per year;

3. Major routes for transport of trade cargo overlap with the major routes for transport of domestic cargoes;
4. Present transport infrastructure will not be able to meet with rapidly increasing domestic and trade cargo volume;
5. Standard need to be upgraded to meet with the requirement of transport of valuable manufactured goods without damage;
6. Myanmar's freight transport cost is higher twice than Thailand and Vietnam (Yangon-Mandalay US$ 2.0 per km while US$ 0.9 per km);
7. Truck terminal capacity at major city almost saturated and cargo transport efficiency declining due to traffic congestion inside truck terminal;
8. Although railways provide lower transport cost with higher speed of haul of bulky cargoes, Myanmar cannot utilize due to substandard railway track and powerful locomotives;
9. By 2030, railway tracks will be improved and ICDs will be operational for container block trains operations (Yangon- Mandalay, Mandalay-Myitkyina, Bago- Mawlamyine railways lines are upgrading);
10. No multimodal freight transport is available due to absence of logistic providers and lack of logistics facilities that functions as transport hubs.

VI. Opportunities / way forward in your country /territory concerning the issue

Myanmar is strategic location. It is bordered with connected to ASEAN Highway and Trans Asia Railways that contributes to the development of dry ports. At the current situation, Myanmar Railways is upgrading railway lines. After the upgrading process, it will increase freight and passenger transportation.

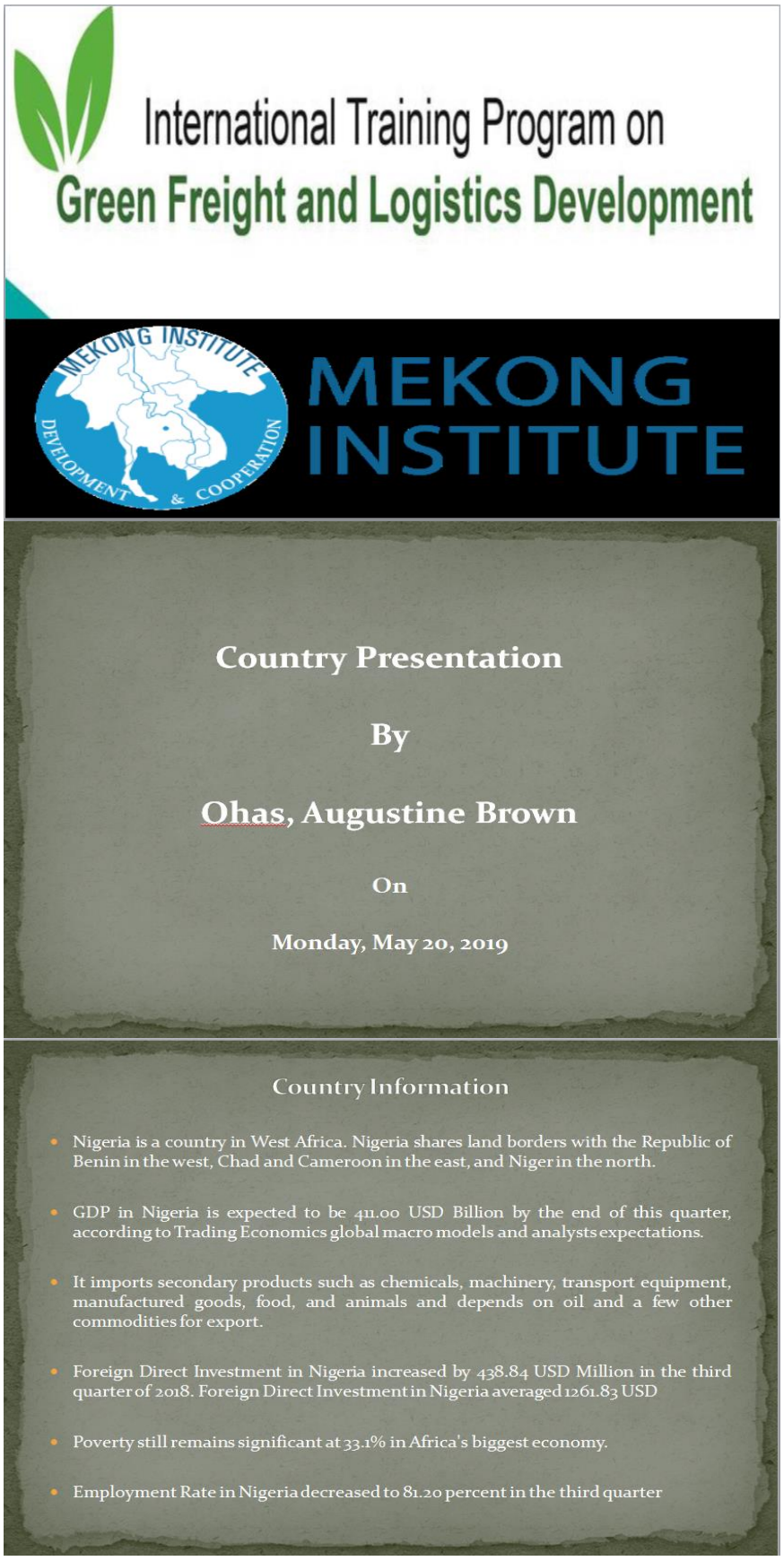
VII. Expectations from the training course.

- MR is implementing dry ports projects in Ywarthargyi (Yangon) and Myitnge (Mandalay);

- As its first experience, we need to learn experiences from Thailand and participants' countries.

- We have great expectations on the training that we will contribute to plans of reducing environmental and social impacts caused freight and logistics operations, and strategies for green freight and logistics development.

11. Nigeria


International Training Program on
Green Freight and Logistics Development
MEKONG INSTITUTE
Country Presentation
By
Ohas, Augustine Brown
On
Monday, May 20, 2019
Country Information
Nigeria is a country in West Africa. Nigeria shares land borders with the Republic of Benin in the west, Chad and Cameroon in the east, and Niger in the north.
GDP in Nigeria is expected to be 411.00 USD Billion by the end of this quarter, according to Trading Economics global macro models and analysts expectations.
It imports secondary products such as chemicals, machinery, transport equipment, manufactured goods, food, and animals and depends on oil and a few other commodities for export.
Foreign Direct Investment in Nigeria increased by 438.84 USD Million in the third quarter of 2018. Foreign Direct Investment in Nigeria averaged 1261.83 USD
Poverty still remains significant at 33.1% in Africa's biggest economy.
Employment Rate in Nigeria decreased to 81.20 percent in the third quarter

Current Development Status of Green Freight and Logistics in the Country

- The need for Green practices in the Nigerian Transport sector has become very imminent and the government of Nigeria has embarked on projects to improve on the Sustainability of the sector.
- Green practices such as the Implementation of Bus Rapid Transit Scheme,
- Creation of BRT lanes for faster movement of these Buses,
- Creation of parking zones that are free for most private car owners intending to access the major city centres,
- Levying of vehicle owners that park at unauthorized points within the metropolis
- And the introduction tricycles and motorcycles that are electric powered are currently adopted practices.

Current Legal and Regulatory Environment on Logistics and Transport

- Nigeria has created a Special Climate Change Unit (SCCU) within the Federal Ministry of Environment with the Secretariat in Abuja, Nigeria.
- Federal Ministry of Transportation . This is the ministry that has the mandate to regulate transportation in Nigeria.
- There are agencies under the Federal Ministry of Transportation that also act as regulators, Nigerian Ports Authority, Nigerian Maritime Administration and Safety Agency, National Inland Waterways, Nigerian Railways Cooperation.
- Nigeria was part of the Global Green Freight Action Statement issued at the 2014 UN Climate Summit in New York, the Global Green Freight Action Plan calls on governments, private sector, civil society, and other actors to work in concert to align and enhance existing green freight efforts, develop and support new green freight programs, and to incorporate black carbon reductions into green freight programs
- Nigeria has created a Special Climate Change Unit (SCCU) within the Federal Ministry of Environment with the Secretariat in Abuja, Nigeria. The Unit is created to implement the Convention and the protocol activities.

- The SCC Unit also has responsibility of coordinating the activities of the Inter-ministerial Committee on Climate Change with representation from the following ministries; Finance, Agriculture, water Resources, Energy Commission, Nigeria National Petroleum Corporation (NNPC), Nigerian Meteorological Agency (NIMET), industry, NGOs (Nigerian Environmental Study/Action Team), and Academic (Centre for Climate Change and Fresh Water Resources, Federal University of Technology Minna; Centre for Energy .
- Within the democratic political system of the country, the Senate has a standing committee on ecology (Senate Committee on Ecology) while the National House of Assembly has a standing Committee on Climate Change.
- Members of these Committees have facilitated the passing of a Climate Change Commission (CCC) Bill in both the House and Senate. However, there is still no timeframe as to the time the CCC will take off.
- In addition to the Committees, there is a National Council on the Environment, made up of representatives of governments at the Federal and State levels.
- The Council meets at irregular intervals to take stock of the state of the environment in Nigeria.

ROLE OF GOVERNMENT IN CREATING A SECURE ENVIRONMENT

- Make transport planning, policy and investment decisions based on the three sustainable development dimensions—social development, environmental (including climate) impacts and economic growth—and a full life cycle analysis.
- Integrate all sustainable transport planning efforts with an appropriately-balanced development of transport modes: integration vertically among levels of government and horizontally across modes, territories and sectors
- Create supportive institutional, legal and regulatory government frameworks to promote effective sustainable transport
- Build technical capacity of transport planners and implementers, especially in developing countries, through partnerships with international organizations, multilateral development banks, and governments at all levels, to ensure equitable access to markets, jobs, education and other necessities
- Foster an informed, engaged public as a crucial partner in advancing sustainable transport solutions.
- Establish monitoring and evaluation frameworks for sustainable transport, and build capacity for gathering and analyzing sound and reliable data and statistics.
- Increase international development funding and climate funding for sustainable transport.
- Promote sustainable transport technologies through outcome-oriented government investment and policies that encourage private sector investment and action through various incentive structures.
- Reinforce efforts toward preventing road traffic deaths and injuries.

MAJOR ISSUES (TWO – THREE POINTS), CHALLENGES FACING BOTH PUBLIC AND PRIVATE SECTORS IN GREEN FREIGHT AND LOGISTICS DEVELOPMENT.

- **Urban Population Growth**
- The continual growth of the population in Nigeria is a major factor affecting the success of Green practices in Nigeria Road Transport sector. There is a positive correlation between the population and the demand for Transport service. Mobogunie (2012) asserts a 4.8% growth in urban population annually and this has led to the migration of most rural dwellers to city in search of a batter life. He further forecasts that 50% of the current population of 160 million would migrate to urban centres in 2015(Mobogunie, 2012). This rise in population in most urban areas will lead to an increased emission level as a result of increase demand for mobility.
- **Low Standard of Living**
- Statistics from the National Bureau indicates that " 61.2 percent (against 51.6 percent in 2004) of the Nigerian population (about 112.47 million out of the 163 million Nigerians) were living on less than $1 a day at the end of 2010"(Chioma, 2013). Based on this, the level of poverty in the country therefore distorts the mentality of the average citizen from long term environmental issues to short term economic issue. It has therefore become very difficult to convince majority of the citizen about the need to pursue green practices.
- **Poor Transport Infrastructure**

FUTURE PROJECT(S) / PROGRAM(S) ON GREEN FREIGHT AND LOGISTICS

- There is massive rail project linking some cities, the major seaports and some Inland Container Terminals in the country
- Improvement in Vehicle Fuel Type and Economy
- Encouraging the Use of Bicycles
- Parking Zones at Reduced Tarrifs

Expectations

- Acquire new knowledge about green freight and logistics
- Know world best practices in green freight and logistics
- Explore connectivity and shared experiences from fellow participants

12. Palestine

I. Introduction

- **Name of the Training Course:** International Training Program on Green Freight and Logistics Development
- **Name of Participant**: Samer Ibrahim Mahmoud Dwaikat
- **Name of Country / Territory:** Palestine.
- **Name of Organization/Department (which participant currently work for**):
Environment Quality Authority (EQA)
- **Role and Responsibility of the Organization / Department:**

- The Responsibility of the EQA is:

Maintaining and Protecting the Environment, preserving human health, curbing and reduce the depletion of natural resources, combating desertification, preventing the aggravation of environment pollution, promoting the environmental awareness to ensuring achievement of sustainable environmental development.

- The Key My Responsibility Include and I would inform you I am the only employee in the department:

  - Analyze the economic effects of environmental resources, and those of plans, policies, and strategies;
  - Preparing economic studies for the exploitation of environmental resources and their implications;
  - Outlining the economic aspects of sustainable development of natural resources;
  - Analyzing the economic effects of pollution and resource over-exploitation;
  - Engaged in the developmental planning process on the national and regional level.

- Organizational Chart

The Organization Chart of Environment Quality Authority (EQA):

II. General Information of Palestine

Palestine is a rich country in both its history and culture. It is situated at the crossroads between Africa, Europe and the Middle East. Palestine has a unique blend of languages, cultures and beliefs. It is also home to some of the most significant religious monuments in the world, the following schedule describes the sociopolitical characteristics of the country, and the basics to start a business in the vibrant and emerging market of Palestine.

Official Name:	State of Palestine
Capital	Jerusalem
International code	+970
Internet code	.PS
Total Area:	6,450 km²
Climate:	300 Days of Sunshine Average temperatures: Winter: High: 16°C , Low: 7°C Summer: High: 27°C , Low: 15°C
Estimated Population End 2017*	4.85 million population
Principal Cities:	Jerusalem; Bethlehem; Hebron; Jenin; Jericho; Nablus; Ramallah & Al-Bireh; Gaza City; Rafah; Khan Younes
Languages:	Arabic (official language) English (common)
GDP at Constant Price 2017 (Value in Million USD) *	13,686.4
GDP per Capita at Constant Price 2017 (USD) *	3,072.4
GDP at Current Price 2017 (Value in Million USD) *	14,498.1
GDP per Capita at Current Price 2017 (USD) *	2,254.6
Total Registered Value of Exports 2017 (In Thousands USD) *	1,064,884
Total Registered Value of Imports 2017 (In Thousands USD) *	5,853,850
Percentage of Households Who have Computer (2017)	43.1
Number of Fixed Telephone Lines,2017	362,376
Used Currencies:	(Palestinian Pound: currently not in use) Currently used currencies: New Israeli Shekel (NIS) Jordanian Dinar (JD) US Dollar (USD); EURO

III. Overview, background and future trend of Green Freight and Logistic Development in Palestine

As we mention before in this document, the Palestinian economy is a growing one, that can easily accept all the new technologies, beside the existing laws are supporting this issue. And all this is depending on the development of the political issue and peace negotiations between State of Palestine and Israel and the control on the Palestinian borders and ports.

In November 2012, The General Assembly today voted to grant Palestine nonmember observer State status at the United Nation, this make us eligible to be a part of many international treaties and conventions like Basel Convention, Stockholm Convention, Rotterdam Convention, CBD, UNFCCC, Paris agreement and lately Montreal protocol.

Were many attempts from EQA (national focal point for the GCF) and other partner institutions are working on, to have the advantage of the fund donated by the Green Climate Fund.

Private sector is stimulated by the global development and the great concern of environment issues, especially which deal with green economy, which green fright is one of these important issues.

IV. Existing laws and regulations of Palestine concerning the Green Freight and Logistic Development.

Amended Palestinian Basic Law

Article 33

The enjoyment of a balanced and clean environment is a human right. The preservation and protection of the Palestinian environment from pollution for the sake of present and future generations is a national duty.

National Policy Agenda 2017-2022

Pillar 3: Sustainable Development
Resilient Communities: 28. Ensuring a Sustainable Environment and Adapting to Climate Change.

Law No. (7) For the Year 1999 Concerning the Environment

Article 31

The Ministry shall undertake to formulate, in coordination with the competent authorities, the quality specifications of the sea water and determine the standards, instructions and conditions necessary for controlling the marine pollutants.

Article 37

The Ministry shall formulate, in cooperation with the competent authorities, the rules and regulations for preventing or limiting the pollution of the marine environment resulting from the ships at the Palestinian ports and territorial waters.

Article 38

It shall be prohibited for all parties including the ships irrespective of their nationality to dispose or throw the oil, oil mix or any other pollutants in the territorial waters or the pure economic zone of Palestine.

Article 46

The competent authorities shall, upon licensing any installations, endeavor to avoid the environmental hazards by encouraging the transformation into the projects which use the less harmful materials or operations on the environment and give priority to such projects according to the basis of economic development.

Sectoral Environment Strategy 2017-2022
Strategic goals

No. 1: Levels of environmental pollution are low and controlled.
No. 3: The necessary steps to adapt to the effects of climate change and to reduce desertification, disasters and environmental emergencies are adopted.

Palestinian National Action Plan on Sustainable Consumption and Production (SCP-NAP)

Vision and Strategic Objectives: The long-term vision for sustainable consumption and production is: Sustainable consumption and production patterns are systematically and explicitly integrated in the national development agenda in Palestine and are being adopted and implemented by the various stakeholders in Palestine.

Climate Change Adaptation Strategy and Program of Action for the Palestinian Authority 2010

Climate change adaptation planning from the Palestinian Authority (PA), which includes all ministries consulted by the Project Team – EQA (as lead ministry), Palestinian Energy Authority, Palestinian Water Authority, Ministry of Agriculture, Ministry of Planning, and Ministry of Transport.

National Adaptation Plan (NAP) to Climate Change

The State of Palestine's National Adaptation Plan (NAP) provides:

1. An assessment of historic trends in climate in relation to the State of Palestine;
2. Identification and prioritization of vulnerabilities • Future climate-scenarios for the State of Palestine;
3. Identification and prioritization of adaptation options, including costing;
4. Future developments required for the State of Palestine's institutions to be able to participate in climate-modeling research;
5. An outline of the process for future monitoring and evaluation; and Next steps.

Ministry of transportation/ Port Authority goals

1. Protection and maintenance of the Palestinian maritime beaches in the seaports;

2. Reduced marine environmental pollution in commercial seaports and fishing areas.

Investment Promotion Law Palestine Law No. (1) for the year 1998

Article 2

The Investment Law aims to achieve the development objectives and priorities in Palestine by promoting investment.

Article 3

Any Investor may invest in any sector of the Palestinian economy; unless it contravenes other laws.

Article 10

Without prejudice to Article (11) and in furtherance of free market principles, the National Authority shall guarantee to all Investors free transfer of all financial resources out of Palestine, including capital, profits, dividends, capital gains, wages and salaries, interest and principal payments on debts, royalty payments, management fees, technical assistance and other fees, compensation payments for expropriations or unilateral termination of contracts for non-commercial reasons, judicial and arbitral awards and judgments, and any other kind of financial payment or resource. Investors may freely transfer all financial resources out of Palestine, at the applicable market currency exchange rates in effect the time of transfer, in a convertible currency acceptable to the Investor.

Nationally Determined Contributions (NDC)

- This document summarizes the Nationally Determined Contribution (NDC) of the State of Palestine;
- The State of Palestine recently completed its Initial National Communication Report 1 (INCR) and submitted it to the UNFCCC on November 11th 2016 highlighting its commitment to being an active player in tackling and responding to climate change;
- The State of Palestine is particularly vulnerable to the impacts of climate change, with severe implications for its economy, living standards and environment.

Challenges / problems or Opportunities / way forward in Palestine concerning the Green freight and logistic development?

The main Challenges are:

In state of Palestine fright procedure is a little bit complicated because of the lack of control on borders and ports, due to the state of Israeli occupation to the west bank and the suffocating siege on Gaza strip. Now, fright operations are mainly done through

Israeli borders and ports. In September 2001 the second uprising broke out (2001-2009), this led to:

- destruction of Gaza airport;
- incomplete work of Gaza harbour;
- spreading over 450 military checkpoints;
- closing main roads;
- closing over 1000 sub-streets with soil.

The streets infrastructure needs to rehabilitee in most places in west bank especially in Aghwar area, where most of the agriculture production exist. Some streets still made of base course, which affect mainly plant production and human health. While most of development budgets in Palestine mainly depend on foreign aid.

The main Opportunities

The Palestinian market is still a growing one were the chances is available for investors to invest in the green economy sector. The Law on The Encouragement of Investment in Palestine support the establishment of green business, were chapter four deal with INVESTMENT INCENTIVES, mainly through Customs exemptions.

V. Expectations from the training course

1. What do you expect to gain from the training program?

- A clear understanding of the various Indicators for Green Freight and logistic Development in Palestine;
- Share knowledge and experience with training partners;
- How to mainstreaming nonpublic sector in Green freight and logistic activities;
- A clear understanding Cost- Benefit analysis related to training topics; and
- How to reduce the cost of logistics and transport Activates to improve economic performance.

2. How do you expect to apply the knowledge/experience gained upon return to your country / territory?

- Knowledge transfer, which will be gain with our colleagues in my institution and other stakeholder;
- Adapting new knowledge in my institution strategies and policies;
- Enhancing my experience which will be led to improve my input in my work activities.

13. Philippines

I. INTRODUCTION

Training Course: International Training Program on Green Freight and Logistics Development
Participant: Ruby Maria O. Gumapon
Country: Philippines
Organization / Department: Philippine Ports Authority (PPA) Port Management Office Misamis Oriental / Cagayan de Oro

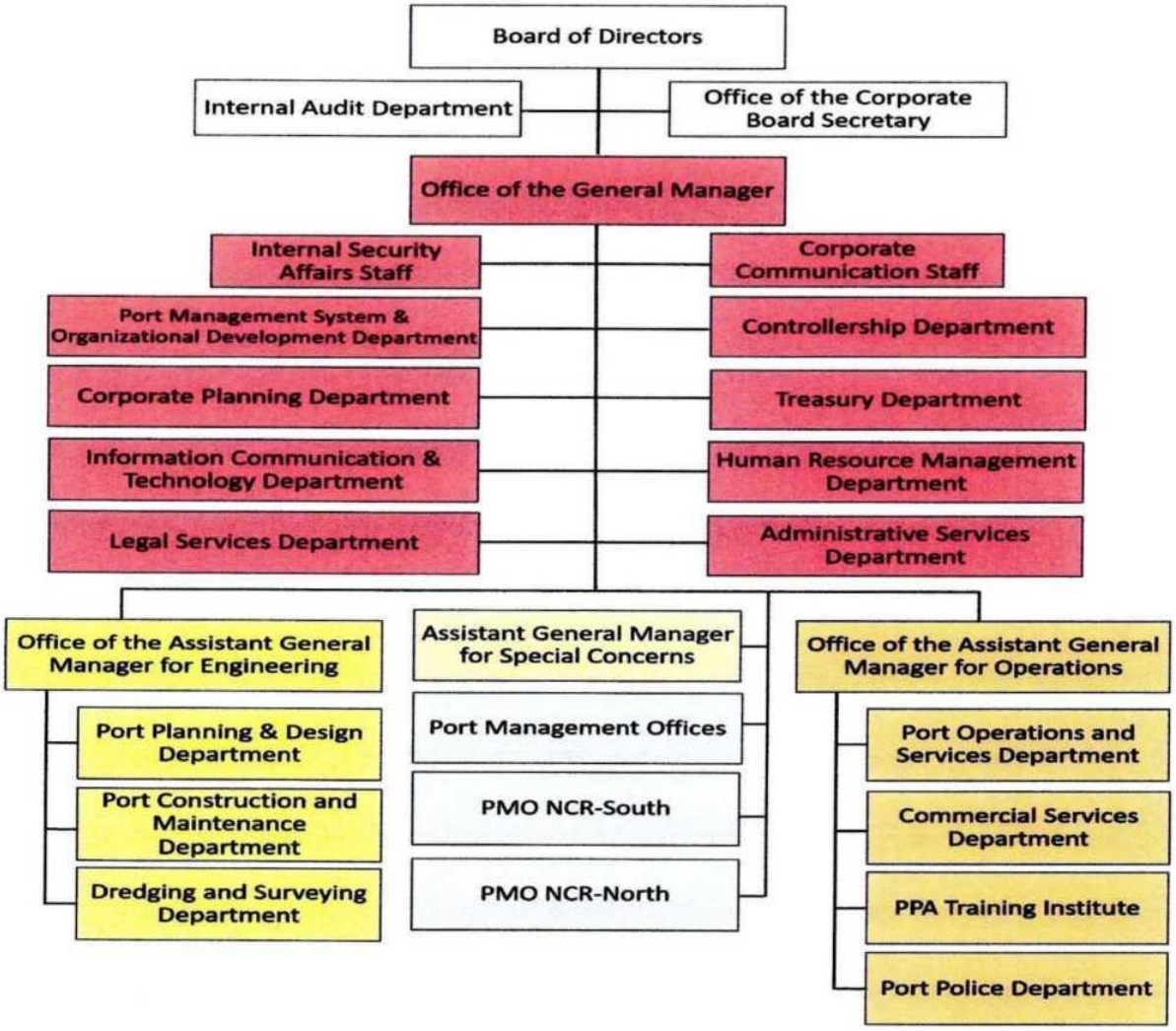
Role and Responsibility of the Organization / Department:

The Department of Transportation (DOTr) is the executive department of the Philippine government responsible for the maintenance and expansion of viable, efficient, and dependable transportation systems as effective instruments for national recovery and economic progress. The department is responsible for the country's land, air, sea communications infrastructure. It is the primary policy, planning, programming, coordinating, implementing and administrative agency to promote, develop and regulate a dependable and coordinated transport network in the country.

The Philippine Ports Authority ((PPA) is a government instrumentality with corporate functions created under Presidential Decree No 857, as amended, PPA is mandated to establish, develop, regulate, manage and operate a rationalized national port system in support of trade and national development. It is an attached agency of the DOTr and is the lead executing and regulatory agency in the planning, development, financing, operation, supervision, and maintenance of ports and port districts in the country. As part of its developmental function, the PPA prescribes rules and regulations that govern the operation of ports or any structure within a port district, formulates a comprehensive Port Development Plan to programme priority port development projects, and provides and assists in the provision of training programmes and training facilities for port operators and users. The regulatory functions of the agency, which has financial autonomy, include setting and collecting of administrative fees for port operations and services. By nature of the mandate of PPA, the organization is considered both as port authority and a port operator under the classification provided by the United Nations Conference on Trade and Development (UNCTAD, 1985).

At the organizational level, the power to formulate policies, set the corporate strategy to pursue strategic directions and thrusts of the PPA is vested with the PPA Board of Directors being the highest policy making body. Formulation of specific rules and regulations, standards and systems to pursue PPA policy issuances rests with PPA Head Office through the top management, while the implementation of policies, rules and regulations including standards and systems to meet PPA objectives and operational targets is the function of the port management offices (PMOs) (PPA, 2014).

Organization Chart - Philippine Ports Authority



Participant's Designation and Responsibility: Division Manager - Port Services Duties & Responsibilities:

1. Is primarily responsible to the Port Management Office Manager for an effective and efficient management and operation of the port;
2. Supervises and takes charge of the day to day activities / operations inside the port relative to cargo handling, and vessels' operation to carry out PPA's mandate to and to implement all PPA policies, systems and procedures and ensures the compliance thereto in the movement of vessels, cargoes, passengers and pedestrians in the ports directly managed by PPA;
3. Formulates and recommends policies, standards, rules and regulations on port operations relative to safety and environmental matters, systems and procedures in vessel and cargo handling operations for the efficient delivery of port services and confers with officials of other government agencies for proper coordination of all marine and port related activities;
4. Recommends action on application / request for license/permits to operate cargo

handling equipment and other port ancillary services and makes sure that only those with valid Permits to Operate are allowed to operate ancillary services inside the port;

5. Ensures that port operational policies and regulations on the documentation of vessels' entry / clearance, conduct of berthing meeting, provision of pilotage and tug services are properly conducted and monitored;
6. Ensures and monitors the proper handling of cargoes and that terms and conditions of the Cargo Handling Contract is compiled;
7. Conducts daily inspection of the port premises to ensure that port lay-out plan for operational / leased areas are delineated in coordination with the Engineering Services Division and for the accurate inventory of abandoned/overstaying cargoes with storage charges and proper stack piling and segregation of cargoes in the port area;
8. Implements the Port Management System (POMS) and the Front-end Invoicing and Receipting System (FIRST) in accordance to the MIS Project Implementation policies and procedures and ensures the timely submission of all required monthly operational reports and statistics;
9. Carry out the duties and responsibilities as PPA PMO Deputy Management Representative for the Integrated Management System (IMS) ISO 9001:2015 (Quality), ISO 14001:2015 (Environment), BS OHSAS 18001:2007 (Occupational Safety) for Vessel Entrance Clearance and Withdrawal and Entry of Cargoes at the Port of Cagayan de Oro;
10. Supervises the day-to-day work responsibilities and other port related activities of the twelve (12) PPA PSD personnel in Dock Operations, Harbor (Marine) Section, Safety and Environment and Statistics and monitors work activities and accomplishments of outsourced / hired twenty (20) Port Operations Management System-MIS encoders and fourteen (14) Gate Keepers;
11. Attends to meeting and other conferences called by other government agencies e.g. NEDA, DTI, MARINA, Coast Guard as directed by the Port Manager or in his behalf and acts as the Chairperson for the Bids and Awards Committee (BAC) for the procurement of goods, services and infrastructure projects of the PMO.

II. GENERAL INFORMATION OF THE COUNTRY:

The Philippines is an archipelagic country in Southeast Asia. Situated in the western Pacific Ocean, it consists of about 7,641 islands stretching across 300,000 square kilometers bordered by the waters of Bashi Channel to the north, Sulu and Celebes Sea to the south, the Pacific Ocean to the east, and South China Sea to the west. Luzon, Visayas and Mindanao are the three major group of islands. The country's population is estimated at 103.3 million based on 2016 census data of the Philippine Statistics Authority. The Philippine economy is the 34th largest in the world, with estimated 2018 gross domestic product (nominal) of $371.8 billion. The GDP is expected to be among the fastest-growing in Asia, at 6.9% and 6.8% projected annual growth in 2018 and 2019, respectively. Primary exports include semiconductors and electronic products, transport equipment, garments, copper products, coconut oil and fruits. Major trading partners include the United States,

Japan, China, Singapore, South Korea, the Netherland, Hong Kong, Germany, Taiwan and Thailand.

III. OVERVIEW, BACKGROUND AND FUTURE TREND OF THE DEVELOPMENT ISSUE RELATED TO THE TRAINING TOPIC:

Logistics is defined as the integration of transport, warehousing, freight forwarding and information services. Along with competitiveness of products and services, efficient logistics services can significantly contribute to a country's economy.

In the Philippines, transportation and logistics are considered main catalysts of economic growth. The country's transport system is intermodal in character, which includes inter-island as well as intra-island mobility, and typically combines air, sea and road transport modes.

LAND TRANSPORTATION

Transportation infrastructure is relatively underdeveloped. This is partly due to the mountainous terrain and the scattered geography of the island, and the result of consistently low investment in infrastructure by successive administrations. Buses, jeepneys, taxis, and motorized tricycles are commonly available in major cities and towns. Number of motor vehicles registered data was reported at 10,410,814 units in December 2017 and 9,251,565 units in December 2016. Land Transportation data is updated yearly averaging 3,533,732 units from December 1981 to 2017. In general, this increase in vehicle registrations is caused by the increase in population especially in the urban centers to cater to the transport needs of the people (Land Transportation Office).

The main roads are heavily congested particularly during rush hours, prolonging vehicle emissions as travel time is increased. The increase in purchase and registration of motorcycles can be attributed to the thought that the motor vehicles are faster, use less space and consume less fuel compared to cars. Those who can afford use cars because the mass transit system of the country is underdeveloped explaining the steady increase in car registrations (GIZ-CAA, Final Report on Green Freight Philippines, 2018).

Expressways and highways are mostly located on the island of Luzon including the Pan-Philippine Highway connecting the islands of Luzon, Samar, Leyte and Mindanao. The Cebu-Cordova Link Expressway in Cebu will be the first expressway outside Luzon, to be finished by 2021. Rail transport in the Philippines only plays a role in transporting passengers within Metro Manila and some provinces in Luzon.

EMISSION STANDARDS

Based on the latest National Emissions Inventory by source conducted in 2015, the majority (65%) of pollutants came from mobile sources such as cars, motorcycles, trucks and buses. Almost 21% were contributed by stationary sources such as power plants and factories. The

rest (14%) were from area sources such construction activities, open burning of solid wastes and kaingin in the uplands. (DENR-EMB, National Air Quality Status Report, 2015).
The DENR Department Administrative Order No. 2015-04 was issued in 2015, mandating that all new vehicles to be used or introduced in the Philippine market by January 1, 2016 be equipped with Euro 4/IV engines and compliant with Euro 4/IV emission limits/standards. Then, from 1 January 2018, all vehicles purchased, including trucks, must be equipped with Euro 4/IV engines and be compliant with Euro 4/IV limits/emission standards. Pursuant to Republic Act 4136, otherwise known as the Land Transportation and Traffic Code, motor vehicles, including heavy duty, are required to register annually at LTO. Requirements include Certificate of Emission Compliance (CEC) which is secured from private emission testing centres upon the mandatory inspection. The veracity of the results of the emission tests are in question as there are reported cases of falsification for profit of private emission testing centres. This issue can be rectified once a government-controlled and -run motor vehicle inspection system is in place. (DENR-EMB, National Air Quality Status Report, 2015)

MARITIME TRANSPORT

As an archipelago, inter-island travel using watercraft is often necessary. The busiest seaports are Manila, Batangas, Subic, Cebu, Davao, Cagayan de Oro and Zamboanga. The Strong Republic Nautical Highway (SRNH), an integrated set of highway segments and ferry routes covering 17 cities was established in 2003.

The Philippine Nautical Highway System, also the Road Roll-on/Roll-off Terminal System - the 919 kilometres (571 mi) nautical highway was opened to the public on April 12, 2003 as the Strong Republic Nautical Highway (SRNH) or otherwise known as Road-RoRo Terminal System (RRTS). It is one of the flagship programs of the Arroyo administration. Executive Order (EO) 170 and subsequent issuances mandated the policy of its integration with the national highway system. The blueprint for a nautical highway system in the archipelago was established by identifying the road-RoRo links that need to be developed, namely, the Western Nautical Highway (also called the Strong Republic Nautical Highway or SRNH), the Central Nautical Highway, and the Eastern Nautical Highway. The 919- kilometer SRNH was promoted in 2003 to enhance the accessibility of local destinations in the western part of the country; vehicles under their own power passing through such links shall not be burdened by transport procedures and costs, unless otherwise provided by law. The Nautical Highway aims to strengthen and enhance the efficiency of existing inter-island connections.

MARINE POLLUTION

Convention for the Prevention of Pollution from Ships (MARPOL) Chapter VI puts a limit to the main air pollutants contained in ships exhaust gas, including sulphur oxides and nitrous oxides, and it does not allow deliberate emissions of ozone depleting substances. It also includes energy-efficiency measures to reduce GHG emissions from ships.

Annex VI of the International Convention on the Prevention of Pollution from Ships, 1973/1978 (MARPOL) which initially covered discharges of ship-generated pollutants into the marine environment (under Annexes I to V), was subsequently amended by the Protocol of 1997 adopted by the International Maritime Organization (IMO) to include prevention of air pollution from ships (Annex VI).

MARPOL was ratified by the Philippines in 2000; to date, no enabling law has been passed to implement the convention. Protection of the marine environment from ship-generated waste is based on regulations that are by no means complete, and are most often confusing and unclear. There is no regulation governing ship emissions. Bills to implement MARPOL has been filed and re-filed in Congress under four Presidents since the convention was ratified. It is observed though that stamping out sources of air pollution focuses on land-based stationary and mobile structures such as manufacturing plants and transport units, e.g. cars, buses and jeepneys. The Clean Air Act of 1999 specifically mentions only those transport units operating in public streets and highways. House Bill No. 49 and House Bill No. 1843 on the Prevention of Pollution from Ships were filed in the 17th Congress. The proposed bills aim to transpose the MARPOL provisions into the Philippine maritime legal regime, such step being considered necessary to ensure effective implementation of the said convention on the prevention of marine and air pollution from ships, and at the same fulfill the country's commitment as Party to MARPOL. The draft bills stipulate that harmful substances from ship emissions must be controlled.

ENVIRONMENTAL PERFORMANCE OF PHILIPPINE PORTS

The environmental performance of Philippine ports is an aspect of operation that has virtually not been measured since the creation of the Philippine Ports Authority in the 1970s. Existing green initiatives by most port authorities (PA) and port operators (PO) in major Philippine ports are mostly implemented as part of the corporate social responsibility program.

Recently Philippine Ports Authority (PPA) is stepping up its 'green port' initiatives in all its ports nationwide after two of the country's top gateways were conferred with GPAS awards by the APEC Port Services Network (APSN).

The Port of Batangas and the Port of Cagayan de Oro received their respective GPAS awards from APSN recently.

The Green Port Award System (GPAS) program is a green evaluation system for ports in the APEC region. The program is intended to improve environmental awareness and increase the understanding of green port development strategy, with the aim of achieving a balance between economic development and environmental protection in the APEC ports community; promote the sustainable development of ports in the APEC region and protect the port environment for the benefit of the entire APEC community; contribute to the harmonization of regulations and improve interoperability of green port systems in the APEC region; and establish an APEC green port performance benchmark based on this program, and share best practices and encourage mutual assistance among APEC ports.

According to PPA General Manager Jay Daniel R. Santiago, the twin awards are testament to the initiatives of the PPA toward environmental protection through the reduction of carbon footprints in its port operations. As presented by PPA in the East Asia Seas Congress 2018, PPA's contribution to environmental protection and preservation are as follows:

1. International Standard Management Systems successfully implemented with the Port Safety Health and Environmental Management System (PSHEMS) duly recognized by PEMSEA in the ports of Batangas, Cagayan de Oro, Iloilo and General Santos;

2. Strict compliance with State required permits from other agencies e.g. DENR Permit to Operate PPA stand-by generator sets deployed in the ports nationwide; Environmental Compliance Certificate for PPA infrastructure projects;

3. Implemented Environmental protection and preservation measures

   3.1 Air Pollution - (a) provides Shore-Based-Power Supply (SBPS) for vessels or (cold ironing) in some PPA ports; and (b) Use of hydraulic hammers during pile driving activities to reduce both emissions and noise pollution;
   3.2 Marine Pollution Preservation - (a) conduct of water quality monitoring test; (b) Installation of Oil and Water Separator; and (c) Secured necessary Discharge Permits from DENR.

4. Implementation of earth-balling activities inside PPA ports and correspondingly secure Earth-Balling Permits from the DENR;

5. Established Carbon Sink Areas (tree parks) inside PPA ports;

6. Issuance and implementation of PPA Rules and Regulations on environmental protection and preservation along with the issuance of the PPA administrative Order No. 05-2018 otherwise known as Port Environmental Policy;

7. Adopted the use of clean and renewable energy inside PPA ports - installation of solar powered port lighting;

8. Implemented energy conservation and efficiency measures - replaced fluorescent lamps with LED lighting;

9. Implemented Resource Efficiency Usage and Reusage - constructed rainwater harvesting facility;

10. Participation in inter-agency projects aimed at protecting the environment; and strong partnership with International Organization e.g .Permanent International Navigational Congress (PIANC), APEC Port Services Network (APSN).

GREEN INITIATIVES of LAND TRANSPORT

In recent years, the freight and logistics sector of the Philippines has been growing steadily along with the national economy. As most of the freight transport activity is road-based, the sector's growth increases greenhouse gas (GHG) emissions from the transport sector. Therefore, initiatives to improve the overall efficiency of the sector are imperative, especially to mitigate negative environmental impacts. Greening freight transport logistics can help decouple transport impacts from economic growth. A crucial part of this is to ensure that goods are transported efficiently and with the least emissions.

Noting that road transport is the dominant mode of moving goods in the country, on April 5, 2018, the GIZ "Energy Efficiency and Climate Change Mitigation in the Land Transport Sector in the ASEAN Region" or Transport and Climate Change (TCC) Project together with Clean Air Asia (CAA) launched the study, "Green Freight and Logistics Policy Development in the Philippines: Assessing Freight Transportation in Support of a National Green Freight Program. The study focuses on understanding the trucking industry, including its structure and the needs of the stakeholders. It delves into how the industry operates, its structure, the relevance of the modes, the characteristics of the vehicles, and the operational characteristics of freight travel, among others.

The DOTr has implemented and still continue to promote rationalization projects for public transit, especially for buses and jeepneys which dominate the roads in terms of numbers. On the other hand, the Land Transportation Franchising and Regulatory Board (LTFRB) - Land Transportation Office (LTO) inspects motor vehicle emissions as per Republic Act 8749. Compliance to standards is the requirement for new and renewal of registration while penalties are imposed to those who exceed the limit. To reduce vehicular emissions, non-motorized transport (bicycle use) is being promoted as well as the use of 'cleaner fuels' such as liquefied petroleum gas (LPG) and compressed natural gas (CNG). In 2012, the transport sector accounted for the 38.72 kTOE (3.4%) of the total 1,146.41 kTOE LPG consumption of the country. Hybrid cars and electricity-powered vehicles are also gaining more support from the government, private and public sector. (DENR-EMB, National Air Quality Status Report, 2015)

IV. EXISTING LAWS and REGULATIONS

1. Executive Order (EO) 202 Series of 1987 - Creating the Land Transportation Franchising and Regulatory Board

For land transport services supporting the logistics supply chain - (e.g. trucking services), the Land Transportation Franchising Regulatory Board (LTFRB) was set up under Executive Order (EO) 202 series of 1987 as the economic regulator. Economic regulation covers regulation of routes and franchises to operate vehicles. The LTFRB also examines the appropriateness of the vehicle before granting approval of the franchise. For example, if the cargoes would be perishable goods or liquefied petroleum gas, the trucks to be used by the applicant should be technically equipped to handle such items. The LTFRB also regulates the maximum age of utility vehicles (15 years from manufacture) but this is not yet

being implemented at the time of writing. (GIZ-TCC)

2. Republic Act 8749 - An Act Providing for a Comprehensive Air Pollution Control Policy and For Other Purposes. This Act is known as *Clean Air Act of 1999.*

The Clean Air Act of 1999 is a comprehensive air quality management policy and program which aims to achieve and maintain healthy air for all Filipinos. It outlines the government's measures to reduce air pollution and incorporate environmental protection into its development plans. However, until now, it has not been fully enforced. The Clean Air Act sets the national total suspended particulate matter (TSP) target of 90 pg / Ncm but recorded data have exceeded it. Annual average concentration of PM10 and PM2.5 levels at monitoring stations close to roads often exceed the national ambient air quality standard of 60 pg / Ncm, according to the 2012-2014 data of the Environmental Management Bureau. Incidentally, there is a growing awareness of the health impacts of air pollution to health, estimated at $2.5 billion or about 1.55% of GDP in 2009 (Asian Development Bank, 2009), which magnifies the urgency to find low-emission and low-carbon transport alternatives, including for handling freight and logistics.

3. Department of Transportation Department Order 2017-0019 - Reiterating Department Order No. 2002-030 and Strengthening the Mandatory Age Limit for Bus Type Unit and Truck Unit and Trucks Subject of or Covered by Certificate of Public Conveyance (CPC), June 19, 2007.

DOTr issued Department Order (DO) 2017-09, which reinforces DO 2002030 on the mandatory 15year age limit for buses and trucks for hire covered by Certificate of Public Convenience (CPC). Enforcement of DO 2017-09 will require truckers to submit a certificate of date of manufacture, such as a sales invoice or other competent document. As per DO-2002-030, a unit that exceeds the minimum age, as specified by the time of expiration of the covering CPC, cannot file a new application for franchise, for extension of the validity of CPC, for substitution of unit, of for an increase in the number of units. A joint memorandum circular (JMC) from LTO and LTFRB is supposed to be issued within 30 days of effectivity of DO 2017-09 to implement the mandate of the policy. However, the JMC remains unreleased as DOTr is still considering the inclusion of roadworthiness as a possible main criterion, rather than vehicle age, in determining truck performance, as advocated by trucking associations. (GIZ-CAA, Final Report on Green Freight Philippines, 2018).

4. DENR Department Administrative Order No 2015-05 - Implementation of Vehicle Emission Limits for Euro 4/IV, and In-Use Vehicle Emission Standards, March 24, 2015

The DENR Department Administrative Order No. 2015-04 was issued in 2015, mandating that all new vehicles to be used or introduced in the Philippine market by January 1, 2016 be equipped with Euro 4/IV engines and compliant with Euro 4/IV emission limits / standards. Then, from 1 January 2018, all vehicles purchased, including trucks, must be equipped with Euro 4/IV engines and be compliant with Euro 4/IV limits/emission standards. Pursuant to Republic Act 4136, otherwise known as the Land Transportation and Traffic Code, motor vehicles, including heavy duty, are required to register annually at LTO.

Requirements include Certificate of Emission Compliance (CEC) which is secured from private emission testing centres upon the mandatory inspection. The veracity of the results of the emission tests are in question as there are reported cases of falsification for profit of private emission testing centres. This issue can be rectified once a government-controlled and -run motor vehicle inspection system is in place.

5. Other relevant policies and projects related to transport and logistics, as identified in the GIZ-CAA Study:

    a. Improvement of freight transportation complex, truck terminals and physical distribution centers. Broadly outlined as a future priority action listed in the Philippine National Implementation Plan on Environment Improvement in the Transport Sector (NIP);

    b. RA 9295 Domestic Shipping Development Act of 2004
    Regulatory reforms to improve shipping services includes:

- the removal of opportunities for incumbents to object to the granting of a certificate of public convenience;
- the removal of dry dock requirements and repair of domestic ships exclusively in the Philippines;
- facilitating the chartering of foreign vessels to operate in domestic routes by clarifying tax liabilities;
- the replacement of PPA share of cargo handling fees with a fixed rate to reduce conflict of interest; and providing more information on cargo flows and passenger services to the public.

    c. MMDA Resolution No. 3, s.2015: Reimplementing of uniform truck regulation in Metro Manila
    Covers cargo trucks that are identified through license plates, including trucks, vans, tankers or other delivery vehicles, whether loaded or empty, having a gross capacity weight of more than 4,500 kilos are not allowed to pass along 10 major routes, and a total truck ban is implemented in EDSA except on Sundays and holidays.

V. CHALLENGES / PROBLEMS:

1. Traffic Congestion - worsening traffic condition caused by the car-centric urban environment where motorized vehicles dominate the rods, and public transport system is neither efficient nor organized;

2. Increasing number of private vehicles and it is contributing to higher carbon dioxide emissions. As private vehicle ownership grows, freight delays and costs will also increase;

3. Fragmented approaches/lack of leadership and collaboration between and among government agencies and private organizations/stakeholders. There is no single agency

or office responsible for green freight and logistics or green programs of the transport sector for sustainable development in the country. There is a need for a close collaboration and a comprehensive strategy to harmonize the various initiatives made by inter-agency and multi-sector efforts.

4. Lack of Awareness and Technology

VI. OPPORTUNITIES / WAY FORWARD

1. GIZ-CAA Study on Freight Transport

On 05 April 2018, the GIZ "Energy Efficiency and Climate Change Mitigation in the Land Transport Sector in the ASEAN Region" or Transport and Climate Change (TCC) Project together with Clean Air Asia (CAA) launched the study, "Green Freight and Logistics Policy Development in the Philippines: Assessing Freight Transportation in Support of a National Green Freight Program."

The study recommends the establishment of a national program with various measures to "green" the freight and logistics sector to boost the country's logistics performance and economic growth while maintaining a healthy environment for all.

The recommendations were based on the assessment of the sector through the review of relevant policies, stocktaking of various stakeholders and their roles, and analysis of surveys and consultations with trucking and freight forwarding companies.

These recommended action are: Improve trucking data collection, monitoring and reporting framework; Professionalize the logistics industry; Improve truck efficiency; Consolidate SMEs in the trucking industry; Reduce empty miles; Decongest Manila, improve the efficiency and performance of freight operations in other urban areas; Enhance multimodal freight transport connectivity; Establish public-private partnership through Green Freight Programs; Participate in regional and international initiatives and Establish an interagency coordination for freight and logistics sector.

2. Build, Build, Build Program of the Duterte Administration

Recognizing the nation's critical infrastructure needs, the current administration targets to spend $180 billion on infrastructure projects under its Build, Build, Build program until 2022. The Department of Transportation (DOTr), Department of Public Works and Highways (DPWH), Bases Conversion Development Authority (BCDA), National Economic Development Authority (NEDA) and the Department of Finance are collaborating to implement the program. Tax legislation has been implemented to help provide funding, bringing in additional revenue for project execution in four stages for tax reform. As of June 2018, over 60 projects are listed in the program including 24 road, highway and bridge projects, 15 airport-related projects; and nine rail / subway projects. (http://www.build.gov.ph)

3. GEF-UNDP-IMO sponsored global Project

Pending enactment of Congress on the draft House Bill No. 49 and House Bill No. 1843 on the Prevention of Pollution from Ships, a framework of strategy for the implementation of MARPOL Annex VI is in progress as part of the ongoing GEF- UNDP-IMO-sponsored global Project on "Transforming the Global Maritime Transport Industry towards a Low Carbon Future through Improved Efficiency" (GloMEEP). The Project deals with the mitigation, control and prevention of emissions from ships with particular focus on fuel efficiency. The Philippines is one of ten countries participating in the GloMEEP Project and is keen on optimizing the expected benefits of implementing Annex VI. GloMEEP is a GEF-UNDP-IMO project aimed at supporting the uptake and implementation of energy efficiency measures for shipping, thereby reducing greenhouse gas emissions from shipping. (https://glomeep.imo.org).

4. Policy Initiative

4.1. DOTr as the competent national body to accredit and supervise Philippine multimodal transport operators. The Executive Order to formalise the creation of the DOTr-Office of Multimodal Transport and Logistics (DOTrOMTL) is in the pipeline for signature. The Executive Order will place all freight forwarders under the jurisdiction of a single agency, the DOTr-OMTL. Under the current setup, sea freight forwarders are accredited and supervised by the DTI-Fair Trade Enforcement Bureau (DTI-FTEB) while air freight forwarders are under the jurisdiction of DOTr-Civil Aeronautics Board (DOTr-CAB). DOTrOMTL will also accredit and supervise operations of cargo and delivery vehicles, which is currently being undertaken by the Land Transportation Franchising and Regulatory Board (LTFRB). (GIZ-CAA Study).

4.2 Project Repeal to amendment of Public Service Act Project by Department of Trade and Industry to delist transport and logistics from the list of public services enumerated in the Act requiring the 60:40 Filipino equity-foreign equity mix.11 It is intended that the opening of the logistics industry to foreign players will: (i) provide consumers with alternative transport service providers that can meet their consumption preferences; (ii) increase positive pressure for transport service providers to improve their services amidst competition from foreign entities; and (iii) drive down consumption costs for both cargo shippers and passengers.

5. Awareness raising activities on the benefits of green freight and giving more emphasis to business and economic benefits.

VII. EXPECTATION FROM THE TRAINING COURSE

What do you expect to gain from the training program?

1. To increase awareness and gain knowledge on the areas of freight and logistics and be able to learn from successful experiences and best practices on options for "greening" transport sector which may serve as guidelines in freight and transport

policy formulation;

2. To study and understand methods for data gathering to have accurate information on emissions inventory which will serve as input for port operational policy or regulations as well as to better communicate green policies to different port stakeholders; and

3. To partner and collaborate with international organization/partners in the field of green freight and logistics for benchmarking, sharing of information or technical support.

How do you expect to apply the knowledge / experience gained upon return to your country?

1. Consider to tap different port stakeholders like the shipping companies, logistics service providers, trade associations like trucking industry and retailers, shippers, other members of the port community to a forum for echo and sharing of knowledge gained from this training experience;

2. Establish a core group composed of different representatives from the Cargo Handling Operator, Service Providers (Harbor Pilots' Association, Tug Operators, Shipping Agents and the Philippine Shipping Liners' Association) and Truckers' Association and Freight Forwarders which will be the steering committee for the formulation of strategies to promote environmental advocacy programs, awareness campaign, information sharing on environmental issues and best practices and jointly scale up green freight efforts;

3. Encourage involvement and active participation of the local government units and other government agencies in the development of green freight program that is consistent and aligned with the national environmental initiatives and other global green freight programs;

4. Follow through the conduct of port air emissions inventory in the port of Cagayan de Oro. A baseline data was gathered in 2011 through a consultant by the AEAN German International Cooperation, (GIZ) in support to PPA PMO Misamis Oriental Cagayan de Oro to improve performance in the field of safety, health and environment under the project Sustainable Port Development in the Association of Southeast Asian Nations (ASEAN) Region. This activity will aid the port authority in creating strategies to reduce emissions from the area. The same may be proposed to PPA Higher Management for consideration to be done in all ports in the country on the basis that a big part of port air emissions come from cargo handling equipment, trucking / hauling vehicles, private cars and SUVs and other road transport units thus accurately account for the carbon footprint from the ports.

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2. Department of Transportation (dotr.gov.ph)
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5. Build, Build, Build (build.gov.ph)
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14. Samoa

1. Introduction

This Job Report is prepared as per the requirements by the Thailand International Cooperation Agency, Ministry of Foreign Affairs in partnership with the Public Service and Ministry of Foreign Affairs and Trade of Samoa for official nomination by the Ministry of Works, Transport and Infrastructure to attend the Green Freight and Logistics Development, Mekong Institution, Thailand 20th - 31st May 2019.

The Report is presented in order of requirements outlined for the Country Report to be filled in by the respective nominees.

Full Name of Participant

Name: Ms Elizabeth Ellie Toomata-Aimaasu

Designation: Principal Strategic Planning Officer, Land Transport Division, Ministry of Works, Transport and Infrastructure Level 4, TATTE Building-Sogi, Apia, SAMOA
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Key Roles and Responsibilities of the Organization / Department

i. MWTI

The Ministry of Works, Transport and Infrastructure (MWTI) plays a significant role in administering, regulating, monitoring and coordinating all transportation modes in Samoa i.e land, sea and air contributing to improving and sustaining improved livelihood and high quality standards of all infrastructure developments and in turn uphold a high living standard in Samoa. The Ministry is the lead implementing body for the Transport and Infrastructure Sector that sets the strategic focus and overarching objectives for the sector in order to achieve major transport and infrastructural projects and developments for Samoa.

The Ministry is tasked with all activities and issues relating to all forms of transportation and infrastructure in Samoa, that is land, sea, and air. The MWTI aims to provide high quality services and assistance to all our stakeholders and the public in order to affirm its vision which is to be proactive in maintaining its national and international standards as the regional leader in pursuing safety and security of all forms of Transportation and Infrastructure Regime.

Key Objectives of the Ministry of Works, Transport and Infrastructure

The Ministry is tasked with all activities and issues relating to all forms of transportation and infrastructure in Samoa, that is land, sea, and air. We aim to provide high quality services and assistance to all our stakeholders and the public in order to affirm our vision which is to

be proactive in maintaining its national and international standards as the regional leader in pursuing safety and security of all forms of Transportation and Infrastructure Regime.

Key Objective of the Ministry requires for the formulation of an overall Transport Sector Plan to strategically guide and monitor all Transport services within Samoa in accordance with the overall Strategy for the Development of Samoa 2016-2020.

Outline Functions of the Ministry as stated under the key mandate:

Section 4 of the *Ministry of Works Act 2002* (MoW Act 2002) establishes the functions of the Ministry and regulates the area of infrastructure as follows:

- To construct, maintain and manage the public assets to which this Act applies;
- To prepare policies relating to the management of the public assets to which this Act applies;
- To provide advice to the Minister and the Government in relation to the construction, maintenance and management of the public assets to which this Act applies;
- To exercise any of the powers relating to the public assets to which this Act applies conferred upon the Ministry any of its officers by this Act, or by any other law;
- To establish Business Units as provided for by Part III of this Act, and to manage, operate and support those business units to operate in accordance with laws relating to the commercial operations of public bodies and in accordance with government policy;
- To devolve functions to the private sector in accordance with this Act and any other applicable law;
- To regulate the construction of buildings and other structures in accordance with this Act and its Regulations, and to administer, enforce and apply the National Building Code; and
- To exercise any of the powers relating to planning and urban management as provided for by Part VI of this Act.

The Ministry of Transport Act 1978 (MOT Act 1978)[1] sets out the key mandate for the Ministry in the area of transport under section 4 as follows:

- To advise the Minister on the development of an efficient transport policy for Samoa;
- To undertake research into all aspects of transportation, including the economics of transport;
- To advise the Minister on investment in transport, with particular reference to priorities for Government and other expenditure;
- Other specific functions of the Ministry are provided for under the above legislations.

[1] MOT Act 1978 refers to the Ministry of Transport Act 1978.

Strategic Priorities of the Ministry:

- To ensure, through a structured development framework, Samoa complies with the requirements of the International Civil Aviation Organization (Chicago Convention), to enhance safety and security of civil aviation operations, activities and development in Samoa;

- To ensure through effective national policy and regulatory frameworks, Samoa complies and continue to meet international maritime requirements of safety and security for all maritime transportation and related activities;

- To establish, maintain and implement a policy framework for land transport that enables LTA to provide a safe, efficient and effective national road and drainage network for Samoa;

- To enhance road safety in Samoa and progressively reduce deaths and injuries from road crashes by 60% over the period 2015-2018;

- To provide the highest quality transport and infrastructure sector strategic policy, advice and plans to the Ministry and the Government in a timely manner. This includes ensuring that the advice provided is informed by research and/or consultation, integrated, is comprehensive and provides a complete picture of the implications and benefits of policy and plan options available;

- To consolidate the coordination and implementation of the Transport Sector Plan;

- To ensure that all the Building Structures in Samoa are sustainable and safe in accordance with requirements in the National Building Code and applicable regulations and standards;

- To conduct full review of the National Building Code to incorporate changes required because of the effects of climate change experienced globally;

- To facilitate implementation of performance management systems and capacity building systems in the reformed Ministry;

- To ensure the Safety and Security of all employees;

- To ensure the efficiency and effectiveness of the Financial Management System.

ii. Land Transport Division

The Land Transport Division of MWTI as per the Ministry of Works Act 2002 and relevant legislations is responsible in administering, enforcing and monitoring of requirements in accordance with approved standards of roads, drainages, seawalls and other land transport infrastructure assets to ensure quality and safe land transportation in Samoa.

The Principles Functions of the Ministry specific to Land Transportation monitoring are as follows:

- To construct, maintain and manage the public assets to which the Ministry of Works 2002 Act (MoW 2002) applies;

- To prepare policies relating to the management of the public assets to which the MoW Act 2002 applies;

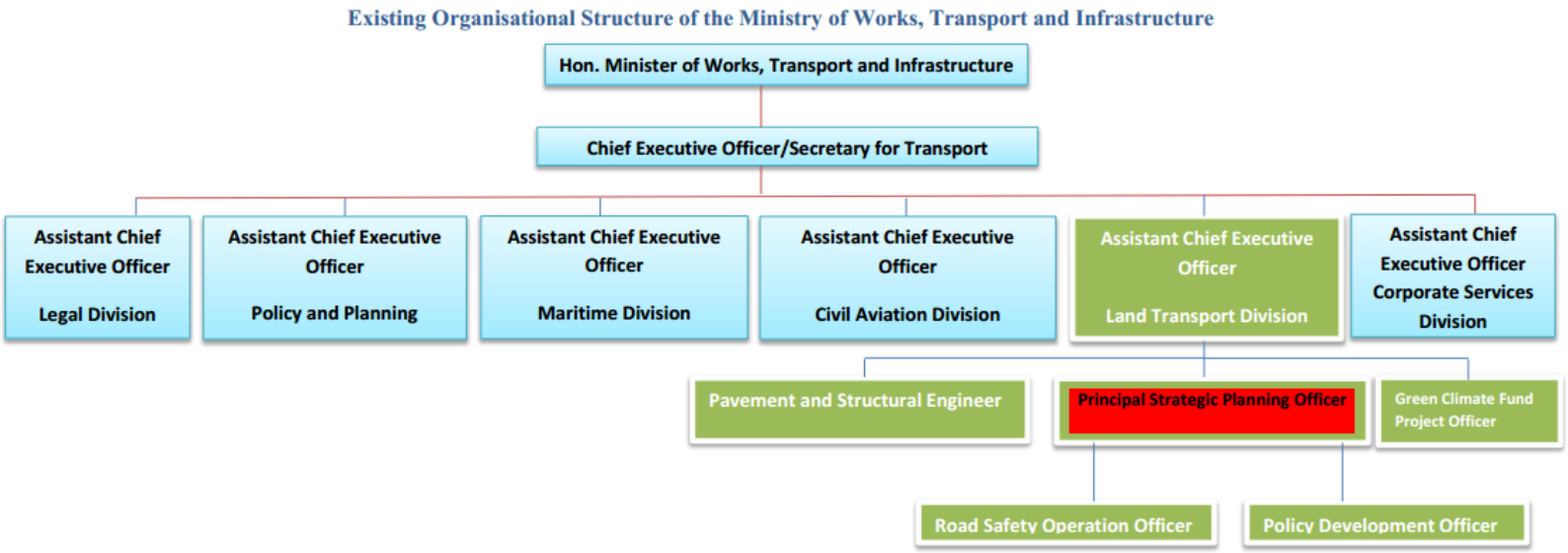
- To provide advice to the Minister and the Government in relation to the construction, maintenance and management of the public assets to which the MoW 2002 Act applies;

- To exercise any of the powers relating to the public assets to which the MoW Act 2002 applies conferred upon the Ministry or any of its officers by this Act, or by any other law;

- To regulate the construction of buildings and other structures in accordance with the MoW Act 2002 and its Regulations, and to administer, enforce and apply the National Building Code; and

- To exercise any of the powers relating to planning and urban management as provided for by Part VI of the MoW Act 2002.

4. MWTI & LAND TRANSPORT DIVISION ORGANISATIONAL CHART



KEY

Current position within the MWTI's Land Transport Division

2. General Information of Samoa

SAMOA

General Description

Samoa is a small island country in the southwest Pacific, comprised of four inhabited islands and six smaller, uninhabited islands of volcanic origin. Samoa has a total land area of around 2,900 km2. Samoa's two main islands, Upolu and Savai'i, are characterized by a rugged and mountainous topography. Around 46% of Upolu and 70% of Savai'i's total land area is covered by forest. Approximately 80 per cent of the 403 km coastline is sensitive'or highly sensitive'to erosion, flooding or landslip.

According to the latest *Population Census Report by the Samoa Bureau of Statistics 2016,* the current population of Samoa is less than a quarter of a million at 196,440. Between 70 and 80 per cent of the population live on or near the coast. Over 50% of Samoa's population live in the Apia urban area and northwest Upolu, an area of 311 km2, or 11% of the total land area. This has significant development implications for social and economic infrastructure, as well as increasing social concerns given the growing number of people residing outside traditional village settings and the associated social governance of different village groups.

The Samoan Government continues with its goal of providing good infrastructure and services for people regardless of where they reside, as evidenced by increased access to basic and essential services throughout the country. Customary and traditional rights, particularly regarding land tenure, persist as a major constraint to development; however work is in progress to determine ways by which customary owned land, much of which lies idle, could be accessed for development purposes while at the same time ensuring that ownership is not compromised.

Most of Samoa's important physical and social infrastructure is located along the coast. This highlights the importance of strengthening development policies and plans in ways that ensure climate and related pressures will not increase the vulnerability of communities or risks to infrastructure and other important assets.

Development Context

Samoa is a small, fairly liberalized economy, with a GDP of around USD 613 million. It is reliant on foreign imports and has a large trade deficit. Samoa is one of the world's 48 Least Developed Countries (LDCs) hence the need to take into full consideration Green Freight Logistics Development.

In March 2006 the United Nations (UN) reviewed Samoa's LDC status and in December 2007 recommended graduation to Developing Country status in December, 2010. Samoa requested that this decision be revisited in light of the global economic crisis and the disastrous tsunami in September 2009 which resulted in 155 deaths (more than five times the total number of deaths caused by cyclones from 1990 to 2010), the complete destruction of several coastal villages, and destruction of 20% of hotel tourist room capacity. Graduation out of LDC status is now set for January 2014. With an income per capita of USD 3,137 in 2007, Samoa is a medium human development country with a global Human Development Index (HDI) ranking of 94 out of 182. Samoa's HDI of 0.771 places it third in the Pacific region, behind only Australia and New Zealand.

Samoa's status in the Pacific HDI (4th out of 15) and the Human Poverty Index (1st, up from 4th in 1998) has been generally high. Samoa is making relatively good progress towards the achievement of its Millennium Development Goals (MDGs). However, indicators such as the number of households facing hardship are 12 raising important considerations that can no longer be ignored. The results of the Participatory Assessment on Poverty carried out in 2002 and 2008 suggest that hardship is becoming an integral part of daily life at the household level. There is also tendency for more households and individuals to be experiencing growing degrees of hardship and difficulty in meeting their basic expenditure needs. Main drivers are the low level of income generating opportunities, downsizing of one of the biggest employers in Samoa, and the rapid increase in prices of goods and services that are needed by households in Samoa.

Samoa's Economy

Samoa's economy has traditionally depended on development aid, family remittances from overseas, agriculture and fishing. Samoa is one of the highest recipients of remittances in the world, as a proportion of GDP. Only around 12% of Samoa's total population is engaged in formal paid employment. Two-thirds of Samoa's potential labor force is absorbed by subsistence village agriculture, a dominant sector in the Samoan economy. However, much of this labor force has been lost to emigration. Agriculture furnishes 90% of exports, mainly coconut cream, coconut oil and copra. Tourism is an expanding sector, and now accounts for 25 per cent of GDP; 122,000 tourists visited Samoa in 2007. Private sector growth is constrained by a narrow resource base, limited infrastructure, isolation, dependence on fuel imports, a lack of skilled labor, and a small domestic market.

The Samoan economy showed generally strong economic growth from 2002 to 2007. Real growth rates in total GDP were 3.2% in 2002, 5.6% in 2003, 4.6% in 2004, 5.2% in 2005, 0.5% in 2006 and 6.6% in 2007. These positive growth rates translated into real per capita income in excess of the LDC status of US$900 during the same period. However, recent overall economic performance has been unfavorable, with real GDP contracting by 3.2% and 1.8% in 2008 and 2009, respectively.

Samoa depends upon imported petroleum products for much of its energy needs. About 95% of the Samoan population has access to electricity. The Governments objective is to change Samoa's reliance on fossil fuels to a low carbon economy by 2020. The Samoan Government endorsed the National Energy Policy in 2007. It encourages the use of renewable energy sources such as solar, wind, coconut oil, hydro and energy from wastes. Currently Samoa generates up to 50% of its electricity from hydro power plants, but the reliability of this energy source is being increasingly compromised by prolonged droughts.
Fisheries are critical both for commercial purposes and the sustenance of the populace. According to the 2005 agricultural survey, a total of 5,060 households harvest fish, with 77% consuming all that they catch while 23% sell their surplus at market.

Environment and Resources

Samoa's water system services roughly 95% of the population, with the remainder receiving its supply exclusively from wells, springs and small rainwater reservoirs. Although water is widely available, only a small proportion of the population receives safe, treated water. In part, this is because some villages rely upon village-managed water supplies that are neither treated nor appropriately maintained.

Currently, there are twenty-two water schemes in Samoa: eighteen in Upolu and four in Savai'i. Land clearance in water catchments poses a significant risk to Samoa's water supply. Water quality is also threatened by the influx of pathogenic organisms - caused by discharges of untreated wastewater into otherwise clean supplies - that render water unfit for human consumption for extended periods of time. There is widespread disease from contaminated water supplies and poor sanitation systems. Diarrhoea and other respiratory infections continue to be the major cause of infant mortality whilst diabetes and other non-

communicable diseases continue to affect adults in growing numbers.

Household waste is composed mostly of organic refuse, but plastics and other inert materials constitute a significant and growing share of waste output. Management of residential waste has changed significantly over the last decade. Before a roadside collection service was established, residential waste was typically managed by individual households. Waste was burnt, or buried in shallow pits on the property. A roadside collection service began in the Apia urban area in 1997. By 2000 this was extended to whole of Upolu and Savai'i. In 2005, it was further expanded to cover the islands of Apolima and Manono.

All household waste collected by the roadside pick-up service is delivered to a centralized solid waste disposal site (SWDS). A semi-aerobic landfill system used at the Upolu SWDS opened in 2004. This replaced the old, unmanaged dump that had been in operation at the same site since 1995. Before 1995, waste was dumped in the Vaitoloa mangroves. The semi- aerobic landfill system used on Savai'i came into operation in 2006. Before that waste was dumped at the Vaia'ata quarry.

Samoa's Climate

Samoa's climate is characterized by high rainfall and humidity, near-uniform temperatures throughout the year, the dominance of south easterly trade winds and the occurrence of tropical cyclones. The latter are most common between December and February. Figure 1 shows that Samoa is in a zone of high cyclone frequency, with on average five cyclones with maximum wind speeds in excess of 250 kph occurring in any ten year period. The south easterly trade winds are directly associated with the meridional migration of the South Pacific Convergence Zone (SPCZ). The SPCZ is typically located north of the Samoan group in winter, but moves south of Samoa during the summer. The south easterlies prevail in winter months while the wind direction becomes more variable during summer. The close proximity of the SPCZ to Samoa during summer results in the winds being generally stronger than in winter.

Samoa has two seasons, marked by significant differences in rainfall. The annual rainfall is about 3,000 mm, with about 75% of the precipitation occurring between November and February. Samoa's topography has a significant effect on rainfall distribution. Because of the predominant easterly wind, the mountain ranges determine the distribution of rainfall. Wet areas are generally those located in the southeast and the relatively drier areas are located in the northwest of the main islands. Samoa is also vulnerable to anomalously long dry spells that coincide with the El Nino conditions.

A review of historical climate trends for Apia suggests that the daily maximum temperature increased by about 0.7°C over the 20th century while the daily minimum temperature increased by 0.2°C. Average annual precipitation decreased by about 49 mm over that century.

3. Overview, background and future trend of development issues related to the training topic (i.e food security, climate change, public health, rural development) in Samoa

3.1 Food Security Issues in Samoa vs Green Freight and Logistics Development in Samoa

According to World Bank Reports on Samoa's Food Security Issues and how they have assisted to address the issue, the following summarizes the current situation of Samoa's Food Security as one of the Small Islands Development States in relation to Green Freight and Logistics Development.

The current status of Samoa's situation is summarized as follows:

- Food security is a great challenge for Samoa and other Pacific countries due to changes in what people eat and high dependence on food imports;
- World Bank through SACEP project is helping farmers increase their income and help ensure access to markets for local produce;
- Grants, new tools and technology have helped local farmers increase the reach of local produce.

Apia, Samoa, September 9, 2014 - This year the third Small Island Developing States conference was held in Samoa - a beautiful tropical island country lying in the heart of the South Pacific. During the conference delegates in the capital Apia populated its busy hotels, restaurants and cafes.

The nation's food is a major part of Samoan culture, and ties to the land are key to people's cultural identity. "For Samoa," Prime Minister Tuilaepa Sailele Malielegaoi has remarked, "our food expresses our intimate relationship with the land, the sea and our ancestors."

4. Food security for small island economies

The country faces challenges of food security common to many small island economies. Across the Pacific, people's diets have changed radically over recent years. Corned beef and fatty meat imports have become staple parts of the local diet, alongside cheap white rice and imported cereals. Fast food, flour and fizzy drinks have proliferated across restaurant tables and supermarket shelves.

Aside from the significant public health concerns, high dependence on food imports can come at a big cost, particularly given the distance of many island countries from larger markets. In Vanuatu, for instance, the average household spends an estimated 15% of its food budget on imported rice, compared to just 6% on local crops.

High dependence on global commodity markets to meet basic needs also leaves people vulnerable when global prices spike. Following the food and fuel price crises of 2008, the cost of a bag of rice tripled. The tiny atoll nation of Kiribati was subsequently forced to turn to food aid and increasingly expensive transport subsidies to meet the needs of hungry residents.

Re-valuing food culture in the Pacific

But in Samoa, there are signs that things may slowly be changing. More of Apia's restaurants seem to be taking pride in marketing traditional Samoan cuisine made from local produce. A recent recipe book, produced at the request of the Prime Minister, features a tantalizing array of healthy Samoan dishes with ingredients "from the heart of Polynesia", while health promotion efforts look to inspire a growing interest in the origins of the food on people's plates.

The government is also starting to focus on rejuvenating its agricultural industry. A recent World Bank-assisted project is one example. The *Samoa Agriculture Competitiveness Enhancement Project* is working with farmers not only to increase their income, but also to ensure that local produce captures a growing share of the domestic food market.

Increasing the reach of local produce

The major thrust of the project has been its large-scale matching grant program, currently benefitting 190 commercial fruit and vegetable and livestock farmers - 50 from the initial pilot stage - to help them invest in the overall management of their farms.

Using these funds, Sara Ahhoy from Aleisa village has been able to construct a new nursery and 13 tunnel houses which help protect crops from heavy rain and minimize pests.

"I have seen a big difference in terms of the quantity of vegetables we are growing now," she explains. "When we grew them outside, pests were a problem but also not so many vegetables would be harvested. Now, this house of tomatoes has lasted three months already, and we're still harvesting. Before they would last just three or four weeks."

Today Sara is running a successful fruit and vegetable business which supplies hotels as well as Apia's main hospital. She grows a wide range of herbs - relatively new for Samoan farmers - as well as tomatoes, capsicums, salad vegetables, spring onions, and cabbages.

Other fruit and vegetable farmers have used the project to invest in new tools and technology; water storage and rock removal are major focus areas on many farms, as well as diversification of what is being grown. Aside from grants, multi-year research programs are experimenting with new varieties of vegetables to see what works best in Samoan soils and climate.

Meanwhile commercial livestock farmers have been able to access funds to restore depleted pasture, purchase new animals and construct critical fencing or shelters which were badly damaged by Tropical Cyclone Evan in 2012. All participating farmers are set to benefit from comprehensive business trainings and extension services.

Maximizing the potential of the land

It seems that the market is ripe for high quality local food that is distinctly Samoan. With the right support, and with partners such as the Small Business Enterprise Centre and the Development Bank of Samoa, the project aims to ensure farmers can take advantage of such opportunities: to connect them to buyers, enable them to improve the value of their goods, and increase the market for fresh, healthy and ultimately local produce.

This would be good for the economy and ultimately good for Samoa, and could set an important precedent for greater self-sufficiency in Pacific island countries.

5. Climate Change vs Green Freight and Logistics Development in Samoa

Climate Change vs Green Freight Logistics is not a new topic to the Government of Samoa. Samoa is currently implementing the SPCR Project.

As per the *Sustainable Development Goal 13: Climate Action,* Samoa is taking into full consideration the effects of climate change on the country nation-wide in relation to Green Climate Freight. This is though the achievement of the two main goals as follows:

- Comprehensive Green Freight Infrastructure should be planned, designed and built with climate resilience in mind; and
- Climate Change mitigation is a core principal of green freight logistics, and without addressing the freight sector, global climate goals cannot be realistically met.

The below summarizes a few of the ongoing climate change mitigation measures and development projects implemented at the national level by key Implementing Agencies of the Government of Samoa in order to help address climate change vulnerability and variability issues.

Specific to the Samoa Climate Resilience Project these are the key challenges and areas of intervention identified for the most relevant sectors including the Transport and Infrastructure Sector which MWTI operates under.

Description:

(a) Key challenges related to vulnerability to climate change / variability:

Damaging effects of climate change include floods, damage resulting from strong winds and high seas, coral bleaching and droughts, which is translating into major consequences for lives and livelihoods, and hence progress in achieving the Millennium Development Goals.

(b) Areas of Intervention — sectors and themes

Sectors: Roads and highways; general agriculture, fishing and forestry; flood protection; participation and civic engagement

Themes: Climate change; biodiversity; other environment and natural resources management; natural disaster management; water resources management; Investment Projects

Investment Project 1: Enhancing the climate resilience of the West Coast Road (Apia to Airport);
Investment Project 2: Enhancing the climate resilience of coastal resources and communities

Technical Assistance
Establishing a climate change adaptation trust fund for Samoa.

6. Rural Development vs Green Freight and Logistics Development in Samoa

7. Expected Outcomes from the Implementation of the Samoa Program for Climate Resilience (PPCR)

Coastal communities and resources, and key infrastructure, with enhanced resilience to climate change, including climate and weather extremes and variability;

- Increased engagement of civil society in initiatives to reduce the adverse consequences of climate change;
- Improved capacity of the Ministry of Finance and other government agencies to coordinate, manage and implement investments that enhance the resilience of Samoa to climate change;
- Lessons learned and success stories documented and shared, especially by way of the regional track of the PPCR - Pacific pilot; and
- A mechanism that will result in sustainable financing of initiatives that build on the CRIP.

The PPCR not only complements, but goes beyond currently available adaptation financing in providing finance for programmatic approaches to embed climate resilience in development planning, policies, and strategies. Importantly, PPCR is designed to catalyze a transformational shift from —business as usual sector-bysector and project-by-project approaches to adaptation. PPCR also promotes a participatory approach when preparing a broad-based strategy to achieving enhanced climate resilience at the national and sub-national levels, in the medium- and longer- terms.

In each participating country the PPCR is structured in two phases. Phase I aims to strengthen the enabling environment for addressing climate risks. It includes tasks such as facilitation of a cross-sector dialogue to arrive at a common vision of climate resilience in the medium and long-term, and formulation of a strategic approach for climate resilience.

During Phase I a Strategic Program for Climate Resilience (SPCR) (equivalent to the Climate Resilience Investment Program (CRIP) in Samoa) is prepared. This outlines an underlying investment program. Endorsement of the SPCR by the PPCR Sub- Committee (PPCR-SC) of the SPCR marks the transition to Phase II. Phase II focuses on implementing the SPCR through transformative actions such as support to policy reform, institutional capacity building, and scaling-up resilience building investments in key sectors.

PPCR is being implemented in nine pilot countries: Bangladesh, Bolivia, Kingdom of Cambodia, Republic of Mozambique, Nepal, Republic of Niger, Republic of Tanzania, Yemen, and Zambia. In addition, regional programs have been established in the Caribbean and the Pacific. Samoa was one of three countries selected for participation in the PPCR for the Pacific region, which also includes a regional track. Selection was on the basis of risk and vulnerability profiles (vulnerability to sea-level rise; risk of climate disasters; impacts on marine ecosystems; adaptive capacity) and the ability to eventually integrate climate resilience into development planning and sector policies, where relevant, and to promote scaling-up of actions and investments to achieve greater climate resilience. This entails preparedness on the part of Samoa to participate in the PPCR in terms of national policies and programs that support climate change or climate sensitive developmental issues and the institutional capacities and human resources to implement such activities. Such requirements imply the existence of stable and capable national systems of governance.

PPCR – Samoa

As an approved pilot country, Samoa is eligible to receive financial and technical assistance to support efforts for building climate resilience. PPCR also provides the added value of assisting the Government to manage its climate change adaptation resources efficiently and comprehensively, avoiding duplication and enabling a platform for leveraging support from both regional and international development partners, including the private sector. The pilot programs adopts a consultative process that involves all relevant stakeholders and facilitates collaboration and cooperation between multi-lateral development banks (MDBs) - the Asian Development Bank (ADB), the International Finance Corporation (IFC) and the World Bank (WB) - to jointly work in close collaboration with the Government, to both design and implement resilience building interventions. The WB Group and ADB jointly implement the Pacific PPCR pilot. This includes a regional component as well as national initiatives in Tonga, Papua New Guinea and Samoa.

In October 2009 Samoa submitted an expression of interest to participate in the PPCR. On August 29, 2010 the Government of Samoa formally submitted the Phase 1 proposal for the PPCR in Samoa. On October 13, 2010 the PPCR-SC approved US$500,000 in financing as part of the regional pilot programs for the Pacific. The funds are to support preparation of Samoa's CRIP and related activities.

In its expression of interest, Samoa identified the following as some of the key objectives and priorities relating to climate resilience:

- to develop and implement immediate and urgent project based activities to adapt to climate change and climate variability;
- to protect life and livelihoods of the people, infrastructure and environment;
- to incorporate adaptation measures and goals into national and sectoral policies, and development goals; and
- to increase awareness of climate change impacts and adaptation activities in communities, civil society and government.

The Government of Samoa appointed the Ministry of Finance (MoF) as the focal ministry for the PPCR. To the extent possible, the PPCR will use implementation frameworks that are already in place. In accordance with the PPCR Guidelines there have been several missions, led by the Government of Samoa, to assist in preparing the Phase 1 proposal as well as the CRIP. Annex 1 contains further background information on preparation and related matters.

Through participatory processes such as those related to preparing its National Adaptation Program of Action (NAPA) and the National Policy for Combating Climate, Samoa has already made considerable progress in analysis, policy development and planning related to climate change. Due to this strong enabling environment for adaptation that already exists in Samoa it was agreed that Phase 1 will have a short duration of around six months. For the same reason, preparation for Phase 2 began concurrently with the initiation of Phase 1 activities.

The Government of Samoa, in consultations with stakeholders proposed that the PPCR will focus investment interventions as follows:

- Investment Project 1: Enhancing the climate resilience of the West Coast Road (Apia to Airport); and
- Investment Project 2: Enhancing the climate resilience of coastal resources and communities.

In addition, a technical assistance project has been identified to assist Samoa in designing a climate change adaptation trust fund. Technical assistance would also be provided during preparation to undertake studies which will inform project design, and during implementation.

The design and implementation process of this pilot program will provide a platform for identifying synergies with new and on-going climate resilient initiatives and leverage funding, while avoiding duplication of effort and resources. The implementation will build on the comparative advantages of relevant stakeholders in Samoa, including government, civil society, the private sector, academia and bilateral and multilateral development assistance partners, in order to achieve a participatory, coherent and sustainable response to the threat of climate change.
The Samoa CRIP will also benefit from synergies with the Regional Track of the PPCR, though is not dependent on it. The synergies could include technical support for mainstreaming climate resilience, the transfer of lessons and best practices from elsewhere,

and assistance in the capture and analysis of relevant data to better understand the impacts of climate change. Lessons learned from Samoa's implementation of the CRIP will also be disseminated through the Regional Track.

In line with the PPCR guidelines, the Samoa's CRIP has been developed as a broad- based strategy for achieving climate resilience at the national level in the medium and longer-terms, using as its basis the Strategy for the Development of Samoa (SDS), the NAPA and other policy and planning instruments. The CRIP was prepared using inclusive and participatory processes (described below in paragraphs 18 to 23) involving all relevant stakeholders, with particular reference to the beneficiaries, especially women and the most vulnerable communities.

Presentation of the CRIP is divided into three parts. Part 1 provides the background and rationale; Part 2 identifies the proposed Investment Programs and summarizes the overall programmatic approach and justification for components in light of Samoa's agreed strategic approach to building climate resilience; and Part 3 concludes with the request for Preparation Grant funds to develop a quality investment program by financing analytical and design tasks.

Participatory Processes Used During Preparation of the CRIP

Following Samoa's acceptance of the offer to participate in the PPCR, the Ministry of Finance, as the Focal Point for the PPCR, invited government agencies to participate in a stock-take of ongoing climate adaptation activities in order to document the baseline for the formal joint mission that would launch the Program. During this time initial stakeholder roundtable meetings were also held, to ensure that all parties were fully informed on PPCR preparatory procedures as well as on opportunities to participate in preparing for, and implementing, the PPCR in Samoa. Every reasonable effort was made to ensure equitable and meaningful participation in these and subsequent meetings.

The first joint-mission held discussions with government agencies, donor partners, and representatives from civil society and private sector, in both roundtable and bilateral meetings. Among the many stakeholders, the private sector was found to be the least informed and engaged in the debate on climate change adaptation. This is possibly due to the lack of familiarity with the linkages between a global environmental issue (climate change) and their day-to-day business operations. The private sector is a key agent in the identification and implementation of climate adaptation measures, and thus deserves and is receiving full attention in the PPCR.

A follow-up technical mission took place in mid July 12 -16, 2010. This provided an opportunity to convene further meetings with the National Climate Change Country Team (NCCCT) as well as the following stakeholder groups: Government, private sector, non-governmental organizations (NGOs) and development partners. The meetings considered an initial draft of the Phase 1 proposal and suggested revisions. Three key messages arising from the discussions with national stakeholders were: (i) the PPCR must build on the extensive work undertaken in Samoa to date, and the wide experience that has resulted; (ii)

there is a need to ensure effective coordination and integration of PPCR with Samoa's many ongoing and planned activities related to climate change; and (iii) to the extent possible, coordination and implementation are to be achieved by making use of existing institutions. The CRIP continues the approach of elaborating and addressing these requirements.

Following the July mission several country-led, multi-stakeholder meetings were held. These culminated in Government endorsement of the Phase 1 proposal, including an indicative program for Phase 2. After the PPCR-SC approved the Phase 1 proposal on October 13, 2010 further inclusive, multi-stakeholder activities were undertaken as part of implementing the Phase 1 activities. This included preparation of the CRIP. One of the main outcomes of these consultations, facilitated by the second technical mission (December 13 to 17, 2010) and the Second Joint Mission (January 31 to February 11, 2011), was preparation of a draft CRIP. The detailed investment program was discussed, including in a national roundtable attended by representatives of the main stakeholder groups from Government, development partners and civil society, including the private sector.

At the roundtable and in other consultations, nongovernmental organizations (NGOs) highlighted the issue of their limited capacities, especially with respect to raising awareness and assisting communities and other stakeholders to address climate and other concerns. The recently established Civil Society Support Program (CSSP) provided details on their role in building capacity and in the harmonization of grant making for civil society in Samoa. In individual and joint meetings the private sector raised issues related to their limited awareness of the implications of climate change for the sector and how these might best be addressed. These concerns have been taken into account in the CRIP, including building awareness and capacity in the private sector, as well as their involvement in small infrastructure works at district and community levels and in the proposed road upgrade project. Ongoing meetings with Samoa's development partners held both jointly and on an individual basis, have helped ensure that the CRIP builds on their recent and planned efforts. The development partners also helped identify gaps that PPCR-Samoa might address. A multi-stakeholder meeting held immediately prior to finalizing the CRIP included representatives of Government, civil society, development partners and the private sector. The discussions helped to ensure that the CRIP represents a collective view of how Samoa might best enhance its climate resilience using PPCR resources. Further details on the stakeholders and the consultation processes are provided in Annex 2.

The above participatory processes were designed to ensure national ownership of PPCR-Samoa. This included reaching a consensus on up-to-date priorities for action by the public and private sectors, and agreeing on the Phase 2 investment program (i.e. the CRIP) and related activities.

Regional Perspective and Country Context

The Pacific Islands Region

The Pacific region is home to twenty-two Pacific island countries and territories. This large ocean of many small islands spreads over almost 20 million square kilometres, and hosts a population of approximately 9.5 million. This is expected to increase by 50% by 2030 as the

annual growth rate is around 1.9 percent per year. Although the Pacific region is geographically, culturally and economically diverse, all Pacific Island countries share a common feature of being highly vulnerable to the impacts of climate change due to their social, institutional and economic characteristics, including small size, food and water insecurity, limited economics of scale and isolation from markets, dependence on import foods and fuels, relative poverty and growing urbanization, fragile ecosystems and susceptibility to natural disasters.

The Pacific region is prone to natural disasters, most of which are weather - and climate-related, with flood, storms and wave surges associated with tropical cyclones being the predominant causes. It is considered to be one of the regions most at risk to the adverse consequences of climate change (IPCC, 2007). The special nature of the islands and their ocean surrounds have inspired the development of innovative methods and tools to assess their vulnerability to climate change, as well as pioneering efforts to use the findings to inform policy making, planning, resource mobilization and actions on the ground. Despite these efforts, Pacific Island countries have yet to see appreciable benefits in terms of reductions in the climate- related risks and vulnerabilities they face. With climate risks increasing in the Pacific, even greater and smarter effort is required.

Pacific Island countries have contributed little to the causes of anthropogenic climate change. But they are among the most vulnerable, being least able to adapt to its effects. The majority of people in the Pacific lives in rural areas and are dependent on local natural resources and ecosystems for their food, water, shelter and livelihoods. Livelihoods are primarily subsistent, and in many cases communities are already highly vulnerable to droughts, floods and other natural disasters. Limited access to markets, government services and transport infrastructure further reduces community resilience to external shocks and stresses.

The climate of the Pacific region shows considerable spatial and temporal variability. These patterns are influenced by many contributing factors, including the seasonally varying convergence zones (e.g. the South Pacific Convergence Zone) and the El Nino Southern Oscillation (ENSO). The latter is the dominant mode of year to year variability.

Most Pacific Island countries are located in tropical and sub-tropical regions with warm year-round temperatures and high to moderate rainfall. However, these average conditions obscure the relatively large inter-annual variations in climate as well as occurrences of extreme climatic events. These can cause considerable damage and disruption. Extremes of rainfall, temperature and tropical storms pose significant risks. The key climate-related hazard risks include flooding, drought and wind/storm surges from tropical cyclones. It is estimated that on average, between 78 cyclones per year occur in the Pacific region.
Disaster losses can represent a major portion of gross domestic product (GDP) for Pacific Island countries, and thus seriously impede economic and social development. However, the economic impacts of climate change and the costs of adaptation have yet to be assessed comprehensively at the regional and country level in the Pacific to inform national development strategies and investment decisions. The recent Economics of Adaptation to Climate Change (EACC) Samoa Country Study 4 is a notable exception and is proving

invaluable for preparation and implementation of the CRIP.
The recent, and considerable, national and regional efforts in disaster management (disaster risk reduction and disaster preparedness and response) appear to be delivering results, notably in the number of fatalities per disaster, but more recently in the number of people affected by disasters. This is despite population changes which now place more people at risk and despite indications that the intensities of tropical cyclones have increased in recent decades. Progress in implementing disaster-risk reduction in the region has been made possible by the assistance and / or the leadership of disaster-risk reduction and disaster-management development partners. Where a country has had success it is largely through the collaboration of the different government agencies of the implementing countries and or through strong partnership with community organizations or civil society organizations.

However, the reduced economic and social consequences of the extreme events experienced in the 2000s may also be due to the anomalous nature of that decade in that there have been relatively fewer tropical cyclones, and hence fewer extreme events of disastrous proportions. This is likely associated with the decade being dominated by La Nina conditions, during which cyclone frequency is low for much of the Pacific. Importantly, climate projections suggest that, as a result of global warming, conditions in the Pacific will become increasingly El Nino-like. For this reason, cyclone frequencies are likely to increase for much of the Pacific. Thus, the immediate future will likely see a change from the relatively benign conditions of the present decade to conditions more reminiscent of those of the 1980s, when El Nino conditions dominated, and the frequency of weather and climate extremes was much greater than now. On top of this, the intensity of tropical cyclones may well be substantially higher.

Thus, all available evidence points to a combination of natural variability and global warming resulting in a substantially higher number of extreme weather events in the foreseeable future. It is unclear if the recent and ongoing progress in disaster management, and especially in disaster-risk reduction, will be sufficient to protect people and property from a future increase in the number of potentially disastrous events brought about by a combination of climate variability and change.

Numerous studies suggest that global warming is likely to accentuate the spatial and temporal variations in weather and climate in the Pacific, including the differences from normal that result from ENSO events. Some countries will experience more floods and other countries will have more droughts. Generally, the countries with higher rainfalls will become wetter, while drier countries will experience more droughts. Increases in high sea-level events (e.g. storm surges), rainfall, extreme weather and climate events, air and sea temperatures, water shortages and erosion will cause increasingly significant economic and related problems for all sectors of the island economies and societies.

IPCC (2007) and others are projecting that the Pacific region will experience the following changes in the climate:

- Sea-level rise of 0.19 - 0.58 m by 2100, resulting in accelerated coastal erosion and

saline intrusion into freshwater sources;

- Surface air temperature increases of 1 - 4°C in the northern Pacific and 1 - 3°C in the southern Pacific by 2070, with associated increases in sea surface temperature of 1 - 3°C;
- Acidification of the ocean through increased absorption of CO2, causing pH to drop by an estimated 0.3 - 0.4 units by 2100, and impacting adversely on coral growth rates;
- Rainfall increases or decreases from -3% to +26% in the northern Pacific, and -14% to +15% in the southern Pacific, causing worse floods or droughts; whilst there are relatively large uncertainties in rainfall projections for the 10 Pacific region, much of the systematic change is likely to be associated with increased El Nino-like conditions; the consequences of such changes are more predictable for local areas as they can be based on previous responses to El Nino- like conditions; and
- Tropical cyclones becoming more intense, with increased peak wind speeds and higher mean and peak rainfall.

Key national stakeholder Groups involved in SPCR design 3:

- Ministry of Finance;
- National Climate Change Country Team;
- Ministry of Natural Resources and Environment;
- Ministry of Women, Community and Social Development;
- Ministry of Works, Transport and Infrastructure;
- Land Transport Authority;
- Samoa Water Authority;
- Electric Power Corporation;
- Ministry of Agriculture and Fisheries;
- Samoa Umbrella of Non-governmental Organizations (SUNGO);
- Samoa Women's Committee Development Organization;
- Pan Pacific South East Asia Women's Association (PPSEAWA);
- Samoa Chamber of Commerce;
- Women in Business Development Inc.
- Samoa Farmers Association;
- Secretariat Pacific Regional Environment Program (SPREP);
- Professional Engineers of Samoa;

Development Partners involved in SPCR / CRIP

- ADB;
- Aus AID;
- NZAID;
- European Union;
- JICA;
- UNDP

8. Existing Laws and Regulations of Samoa concerning the issue

There are a very few laws and regulations in Samoa concerning the issue of Green Freight and Logistics as listed below, however this will be explained in full detail during my presentation for this Course in Thailand:

- Import Administration Act 1984;
- Customs Tariff Amendment Act 2018;
- National Energy Policy;
- Land Transport Authority Act 2007;
- Waste Management Act 2010;
- Ministry of Works Act 2002;
- Quarantine and Biosafety Act 2005.

9. Challenges / problems in Samoa concerning the issue

The above explanation of Samoa's context in trying to address Climate Change issues through Climate Resilience Pilot Project sums up the existing challenges/problems in Samoa. However, narrowing it down to MWTI's internal roles and project management issues that can affect implementation of these identified projects is Existing Problems in Project Management relative to MWTI's Monitoring Roles (Land Transport Subsector) problematic Cases.

To name a few, the following presents the most common project management/legislative issues causing delays/issues with project implementation. These are summarized as follows:

- Duplication of relevant legislations i.e various legislations administered by several Government ministries causing major overlapping in implementation works and monitoring;
- Delay in procurement and funding disbursement allocation by the key implementing bodies i.e Finance Agencies causing major delays with construction and design implementation works;
- Limited Technical Capacity available locally for Technical Assistants to undertake major design and supervision works for major government projects resulting in majority of international consultancy and construction companies;
- Shortage of staff to undertake supervision and overall monitoring for major infrastructural works;
- Compliance with international donor partners Procurement and Project Management Guidelines e.g World Bank and UNDP against Samoa Tenders Board's existing guidelines;
- Climate variability due to climate change is a major challenge causing major delays in most of the civil works monitored by the Ministry through site inspection audits.

10. Opportunities and way forward in Samoa concerning the issue

Through this Course, Samoa will be able to learn lessons and up skill its personnel through capacity building in order to identify effective ways and measures to implement the following legislations in relation to Green Freight and Logistics development.

- Import Administration Act 1984;
- Customs Tariff Amendment Act 2018;
- National Energy Policy;
- Land Transport Authority Act 2007;
- Waste Management Act 2010;
- Ministry of Works Act 2002;
- Quarantine and Biosafety Act 2005.

Note*: Details will be covered and explained in detail during my presentation at the Course.*

11. Expectations from the training course

The Ministry of Works, Transport and Infrastructure (MWTI) is the 'sole regulator' of National Transportation whether of sea, air and land in Samoa. This includes regulation and monitoring of national transportation certification processes which includes vehicles and traffic registration. Given the rapid growth of the infrastructure industry in Samoa in terms of major project works and developments, this course will assist myself as a nominee of MWTI in understanding how green logistics and procedures and logistics management can assist with improved land transportation processes in Samoa. It is highly expected from this training that the following objectives be achieved in order for myself to bring practical lessons to help build consensus understanding of the Samoa Land Transport Subsector in order to achieve effective implementation of green logistics procedures and logistics management.

The following objectives include:

- Understanding significance of "green" or sustainable practices in the transport and logistics industry;
- Gaining knowledge on procedures, formalities and practices in transport and logistics activities in management;
- Understanding strategies on transport and logistics planning and management to complement efficient logistics and green freight programs in the countries;
- Enhance their knowledge and practices on effective implementation of green logistics procedures and logistics management;
- Be able to identify opportunities that can be developed into actions and projects applicable to the case of their respective countries.

15. Sri Lanka

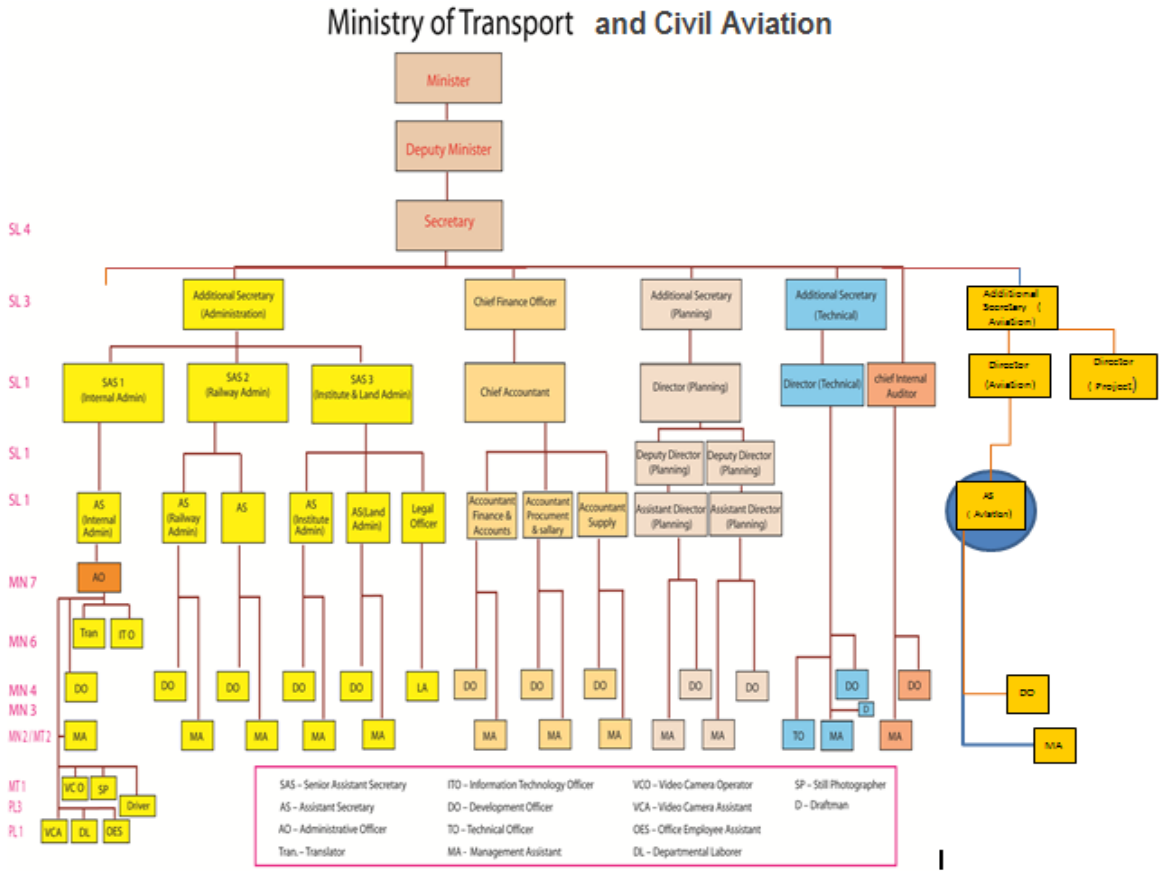
I. Introduction

1.1. Name of the Training Course - International Training Program on Green Freight Logistics Development
1.2. Name of the Participant - M. M. Renuka Rathnayaka
1.3. Name of the Country - Sri Lanka
1.4. Name of the Organization - Ministry of Transport and Civil Aviation

1.5. Role and Responsibility of the Organization –

- Formulation of policies, monitoring and evaluation programmes and projects, with respect to the transport sector and related subjects that come under the Department of Sri Lanka Railways, Sri Lanka Transport Board, National Transport Medical Institute, Department of Motor Traffic, National Transport Commission, **Civil Aviation Authority and Airport and Aviation Services (Sri Lanka) Ltd**.

1.6. Organization Chart -



1.7. Participant Designation and Responsibility - Designation – Assistant Secretary (Aviation)

- Administration and policy formation functions of aviation industry in Sri Lanka;
- Activities, related to the agreements between economies, which are processed to expand the international air services;
- Fulfilment of the state's international obligations in the field of civil aviation and ensure the constant implementation and enforcement of international standards and recommended practices;
    1. Enhanced safety, security, efficiency and regularity in civil aviation and consequential public confidence in the air transport system;
    2. Improved access and mobility of people and goods by air;
    3. Facilitating international trade;
    4. Conduct development and regulatory functions of airports;
    5. Regulation of progress, levy of charges and quality of delivery of services by airports.
- Promotion and execution of regulatory functions in relation to use of airports in Sri Lanka by other economies;
- Supervision and regulation of private air services.

II. General Information – Sri Lanka

Sri Lanka, officially the Democratic Socialist Republic of Sri Lanka, is located 18 miles (31 km) off the southern coast of India. It is often popularly referred to as the "Pearl of the Indian Ocean". Climate of Sri Lanka can be described as tropical, and quite hot with mean temperature of 28 – 32 ^{0}C. It's situated between the 6° 55' 54" N / 79° 50' 52" E.

Figure 1 Sri Lanka's Location

Sri Lanka divided into 9 provinces and subdivided into 25 districts. Colombo is the Capital of the Sri Lanka and also it is the major economic center and major administrative, Business, commercial and educational activities are concentrated to the city center.

This country is enriched with ancient and attractive destinations together with blue clean beaches around the Island which attracts many foreign and local tourists throughout the year.

Figure 2. Famous Places in Sri Lanka

The country's Per capita income is US $ 4073, Economic growth rate is 3.4% and Annual Average Inflation is 2.4% in year 2018.

Sri Lanka – Country Profile

AREA

	Sq.km.	'000 ha.	Mn. acres
Gross	65,610	6,561.0	16.2
Excluding Inland Waters	62,705	6,270.5	15.5

CLIMATE

Temperature (2017)	Low Country,	min. 24.4 °C (75.9) °F	max. 32.0 °C (89.6) °F
	Hill Country,	min. 16.6 °C (61.9) °F	max. 26.1 °C (79.0) °F
Annual Rainfall (Avg.) (2017) – 1,757 mm			

DEMOGRAPHY

Mid-year Population[b][c] ('000)	21,203 (2016)	21,444 (2017)
Population Growth (%)	1.1 (2016)	1.1 (2017)

Province	Mid Year Population (2017) '000	Land Area (Sq.km.)	Density of Population
Western	6,081	3,593	1,692
Central	2,722	5,575	488
Southern	2,611	5,383	485
Northern	1,119	8,290	135
Eastern	1,677	9,361	179
North Western	2,508	7,506	334
North Central	1,349	9,741	138
Uva	1,349	8,335	162
Sabaragamuwa	2,028	4,921	412
Total	**21,444**	**62,705**	**342**

Composition of Population (Census of Population and Housing – 2012)

By Ethnicity	%	By Religion	%
Sinhalese	74.9	Buddhist	70.1
Sri Lankan Tamil	11.2	Hindu	12.6
Indian Tamil	4.1	Islam	9.7
Sri Lankan Moor	9.3	Christian & Roman Catholic	7.6
Other	0.5	Other	0.0
By Sector	**%**	**By Age Groups**	**%**
Urban	18.2	0 – 14	25.2
Rural	77.4	15 – 59	62.4
Estate	4.4	60 & above	12.4

SOCIAL INDICATORS

Human Development Index (2015) (min.0.0, max. 1.0)	**0.766**
Life Expectancy, Years (2015) (Average)	**75.0**
Literacy Rate[a], % (2016)	
Average	93.1
Male	94.1
Female	92.2

ECONOMY

REAL SECTOR

GDP at Market Prices[d]	Rs Bn.	US$ Bn.
2015[e]	10,951	80.6
2016[b][e]	11,907	81.8
2017[b][e]	13,317	87.4
Per Capita GDP[d]	**Rs.**	**US$**
2015[e]	522,304	3,842
2016[b][e]	561,560	3,857
2017[b][e]	621,026	4,073
Growth of GDP (in Real Terms)[d]		**%**
2015[e]		5.0
2016[b][e]		4.5
2017[b][e]		3.3

Sectoral Composition of GDP[d], %

	Agri-culture	Indus-try	Servi-ces	Taxes less Subsidies on Products
2015[e]	7.7	26.2	56.6	9.4
2016[b][e]	7.1	26.6	56.7	9.6
2017[b][e]	6.8	26.9	56.7	9.6

Unemployment[a], % of Labour Force	
2015	4.7
2016	4.4
2017	4.2

Inflation : Change of CCPI[f]

Figure 3. Key Socio Economic Indicators in Sri Lanka

III. Over view of Freight Logistics

Sri Lanka being situated in a strategic location in the world, international logistics linked through our sea ports and airports while creating opportunities, which Sri Lanka can capitalize on. According to a survey conducted by the Ceylon chamber of Commerce it is identified that potential investors are most influenced by Sri Lanka's favorable geographic location and access to regional markets. Over 33% of the respondents stated that geographic location and access to regional markets are two of the most attractive factors when it comes to investment in Sri Lanka.

The freight sector accounts for about 11% of GDP in the Sri Lankan economy and 20% of the total service sector. Sri Lanka's service sector is about 60% and logistics and transport is a considerable fraction of that. Year by year growth has been above the overall GDP growth for the country and over the last five years this sector has contributed about 12% to the overall growth in GDP.

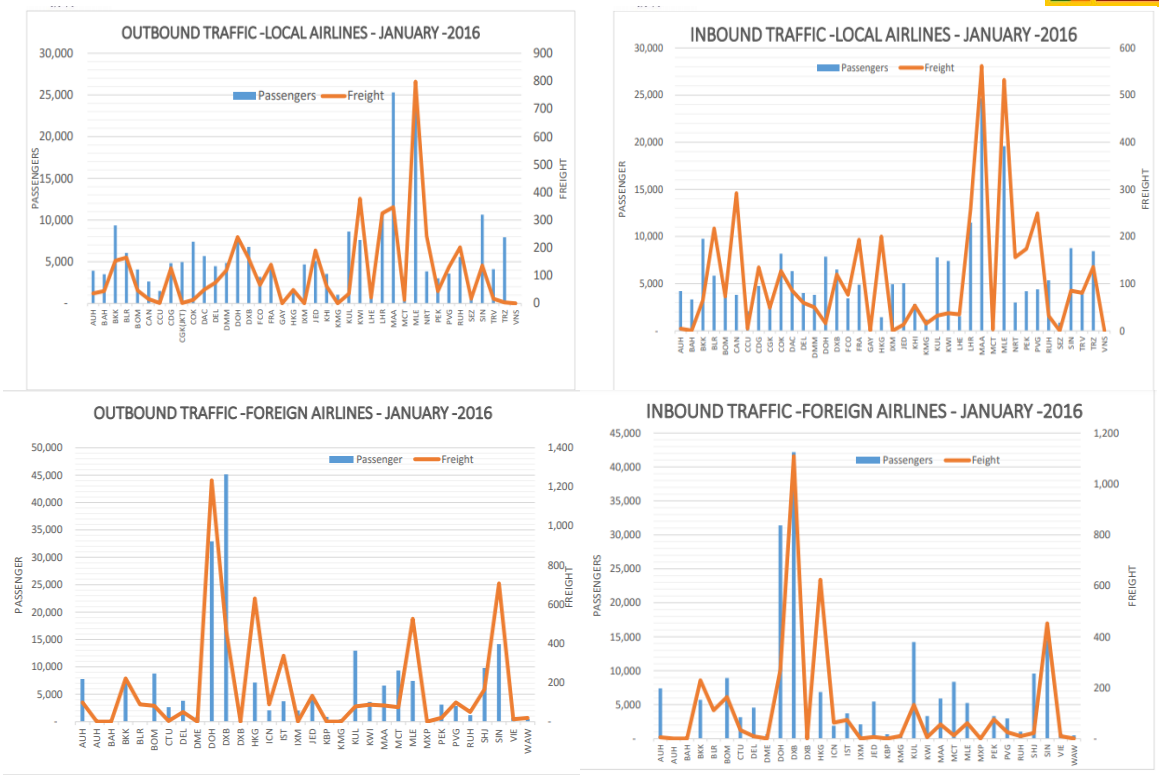
Transport such as shipping, aviation and related activities amount to 35% of Sri Lanka's total services exported. It shows that Sri Lanka have begun to leverage on the strategic advantage of location. Sri Lanka is expected to attract an increasing share of trade in the Indian Ocean. The liner shipping connectivity index, which measures how well countries are connected to global shipping networks, scores Sri Lanka at 72.46 ranking 16th of the world. Sri Lanka in a view to liberalize of air transport which reduces the cost of trade, especially in higher value-added supply chains such as parts and components, electronics, perishable food, cut flowers and also services such as tourism.

III.1. Domestic freight -

Most of goods are transported in domestic via Rail, land and ships in Sri Lanka and among that Rail freight transportation system is highly affordable. It is even considerably fast as well. Since railway connect every major cities of Sri Lanka which consist sea and air ports, its value in freight forwarding is unmatched. Arranging freight transport via railway is much easier than with other transport system such as Airlines and Ocean careers.

III. 2. International freight -

International freight transportation is carried out via Airline and Ocean careers. Air operation is handling through Bandaranaike International Airport (BIA) and Matthala Rajapaksha International Airport in Sri Lanka. Following graphs shows the statistical summary of passenger and freights transportation.



In year 2018, Bandaranaike International Airport (BIA) has recorded over 280,412,780 Metric Tons Per Annum (MTPA) of air cargo. The recorded growth rate is 2% year to year (2017 to 2018).

III.3. Sri Lankan cargo (Sri Lanka's National Air Carrier) –

Sri Lankan cargo with On-board Courier provided convenient and economical method in transporting goods. It enables customers to collect their cargo from the passenger belt. Pets, birds, live fish, horses, dogs, cats or even baby elephants are also transported by Sri Lankan cargo. Adhering to IATA standards all live animals undertaken for transport are given the best possible care in terms of comfort, appropriate food, hygiene and safety. Perishables such as fish, meat, dairy, fruit and vegetables are transported with extra care. Sri Lankan Cargo provides maximum security to valuable commodities such as banknotes, jewelry and gemstones from acceptance through to final delivery at destination. Specially developed containers, highly secured storage areas and constant surveillance guarantees the highest level of security for your valuables. Also vulnerable items receive infinite care with Sri Lankan Cargo. Mobile phones, camcorders or semi-precious goods are handled by trained cargo personnel ensuring safe movement globally.

III.5. Green freight logistics in Sri Lanka

Freight transport is responsible for around 90% of all logistics emissions globally. Logistics-related Green House Gas (GHG) emissions typically 3-15% of carbon footprint of consumer goods (Source: SLoCaT, World Economic Forum).

Sri Lanka is going to implement green logistics development initiatives to develop projects and already the strategies are mapped for developing the projects such as green warehousing facilities, e-Docs (Electronic Document Management System), e-Port Permits issue system, e RTGs and some e initiatives for logistics operations.

However, Sri Lanka is still in discussions with the relevant stakeholders with respect to some policies related to the Green Freight and Logistics. Policies should have to be aligned with sustainable freight for sustainable development.

IV. Existing Laws and Regulations

In relation to Air Transport

a. **Civil Aviation Act no 14 of 2010** – under section 78 of the Act prescribe the requirement for classification, packing, labelling and marking, handling and carriage of dangerous goods by air;
b. **Carriage by Air Act no 29 of 2018** - Civil Aviation Sri Lanka has enacted the provision of the convention for the unification of certain rules for international carriage by air which was concluded at Montreal in 1999 in terms of the Carriage by Air Act No 29 of 2018. This gives consumers better protection, compensation and facilities for faster cargo shipments;
c. Ratification of international air law instruments – Warsaw Convention;
d. Convention on the marking of plastic explosives for the purpose of detection – declaration done in accordance with article XIII, paragraph 2, of the convention, that Sri Lanka is not producer of plastic explosive;
e. Passing the regulation at the parliament regarding the civil aviation fees and charges including charges for transport dangerous goods by air was also done in the year 2018;
f. Regulation for "Safe transportation of Dangerous goods by air" – Sri Lanka is in the process of drafting operating regulation for the purpose of implementing standard and recommended practices (SARPs) relating to the carriage of dangerous goods by air

V. Challengers and problems in Sri Lanka

a. Lack of established laws and regulations in green freight logistics - Sri Lanka is still in discussions about some policies related to the Green Freight and Logistics with relevant stakeholders;
b. Limitation in the Cargo Handling
   During the last five years (2013-2018) average annual growth rate of Bandaranaike International Airport (BIA) cargo handling was noted as 8%. However, declared design capacity of Cargo Handling facility at BIA is 245,000 (MTPA) while in year 2018, (BIA) has recorded over 280,412,780 Metric Tons Per Annum (MTPA) of air cargo. Hence congestions were recorded in Cargo processing Zone operated by Sri Lankan Airlines and Cargo Village which managed by Airport and Aviation Services (SL) Ltd., (AASL);
   c. Lack of usage of new technologies e initiatives such as eRTGs etc;

d. Lack of Women participation
   In this sector the ratio is rather significant as 97.1% of the total numbers of people employed are men while only 2.9% are women.

VI. Opportunities and Way Forward in Sri Lanka

a. Rising demand for air transport services - Globally nearly 35% of trade is carried out through air transport and nearly half of the global air cargo is carried on passenger flights. So a growth in passenger flights has a knock on effect on cargo transport;
b. Rising demand for green operation due to the global warming, climate change and its adverse effects;
c. Air transport plays an imperative role when it comes to parts and components trade, especially for companies which are looking to get into huge global production networks. This is because of global specialization and the 'slicing and dicing of the entire production chain. If Sri Lanka wants to get into these global production networks, air transport connectivity will be important. We need to look at important things such as the bilateral services agreements. We also need to look at all factors encompassing the air services sector if we are serious about leveraging on it;
d. Global aviation contributes only about 2% of global greenhouse gas emissions. Therefore emission mitigation efforts towards sustainable growth of the industry can make enormous improvements in emission control and reduction in a planned and system-based manner to reduce the amount closest to the point of achieving near carbon neutrality. These integrated approaches are proposed to be used to harmonize the systems and processes that can essentially constitute the suggested framework of the Green Aviation Transport system

VII. Expectation from the Training Course

a. Identify the green freight logistic management systems in Thailand;
b. Acquire awareness of sustainable practices in the transport and logistics industry and its importance;
c. Experience the good practices and successful achievements in Thailand;
d. Identify the gaps of existing system with respect to the green freight logistics;
e. Mutual sharing of the experiences of different participants from different economies.

16. Tajikistan

Tajikistan has a particular role taking into account the geographical location, which is in the center of Asia as the connector countries of South-East Asia with the Middle East and Europe countries. History testifies that thousands of years ago, the Silk Road passed from Central Asia through Tajikistan and it was considered as one of the shortest ways to trade between Asia and Europe.

The Government of the Republic of Tajikistan significantly pays attention to the development of transport corridors, first of all the construction of new roads and rehabilitation of acting roads, the creation of modern infrastructure to provide necessary condition for transit and trade development, harmonization the domestic legislative acts with international obligation.

The purpose of creation of international transport corridors in the Republic of Tajikistan is effectiveness increase of foreign trade and transit traffic and provision warranty for their realization on base of international agreements and arrangement, consolidating economic security of the republic.

Republic of Tajikistan is also a member of 10 international transport programs, including UNESCAP, TRACEKA, CAREC, ECO, SPEKA, and ECO.

It should be noted that the Republic of Tajikistan is a transit country, which operates three corridors within the roads of Asia, 1 corridor in the framework of the European contract on international automobile highways and 4 corridors in the framework of the Central Asia Regional Economic Cooperation (CAREC).

The network of Tajikistan roads has formed in the typical conditions that it affects both the current traffic situations and the opportunities for further developments. This primarily relates to the complexity use of the transport machinery in large parts of mountainous country of Tajikistan.

In the specific natural and climatic conditions of the republic, when 93% of the territory is occupied by mountains, highway transport has strategic impotence among other types of the transport especially in providing of regular internal and international transportation.

Main objectives for the expansion of transport links with the Eurasian countries, including logistics:

Development of transport corridors through:

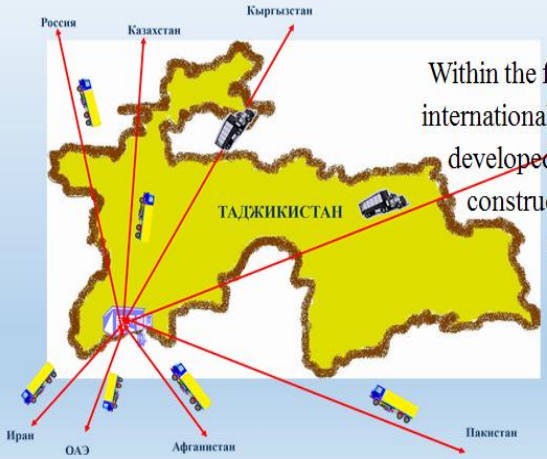
- the formation and development of transit transport corridors and ensure access to sea ports;
- in accordance with international standards of all transportation facilities, including logistics centers in order to increase the volume of transportation of goods and passengers;
- building of border terminals in accordance with modern international standards;
- purchase of vehicles for international transportations;

Implementation of investment projects, which allows transit dependence on roads be reduced from one country and expand opportunities accessing to seaports.

Implementation of these projects is expected from external active efforts in Tajikistan in cooperation with business partners in Central Asia, Europe and other neighboring countries.

- the establishment of no less than 4 boarder transport and logistics centers (Panji Poyon, Tursunzoda, Khujand and Khorog);
- construction and reconstruction of roads and bridges in accordance with international standards.

Boarder transport and logistics Center-Panji Poyon



Within the framework of the international project of TRACECA developed a feasibility study on construction of cross-border terminal Panji Poyon (border Afghanistan).

Boarder transport and logistics Center-Panji Poyon

The future logistics center project in Tursunzade.

Total project cost:
US $ 10 mln.
Payback period: 10 years
Return: 30%.