



**Ministry of Public Works and Transport**

# **STRATEGIC AND ACTION PLAN FOR LOW-CARBON AND LOW-POLLUTION IN TRANSPORT SECTOR IN CAMBODIA**

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**Seminar on Action Plans in Low-carbon  
Phnom Penh, Cambodia, 22 April 2013**



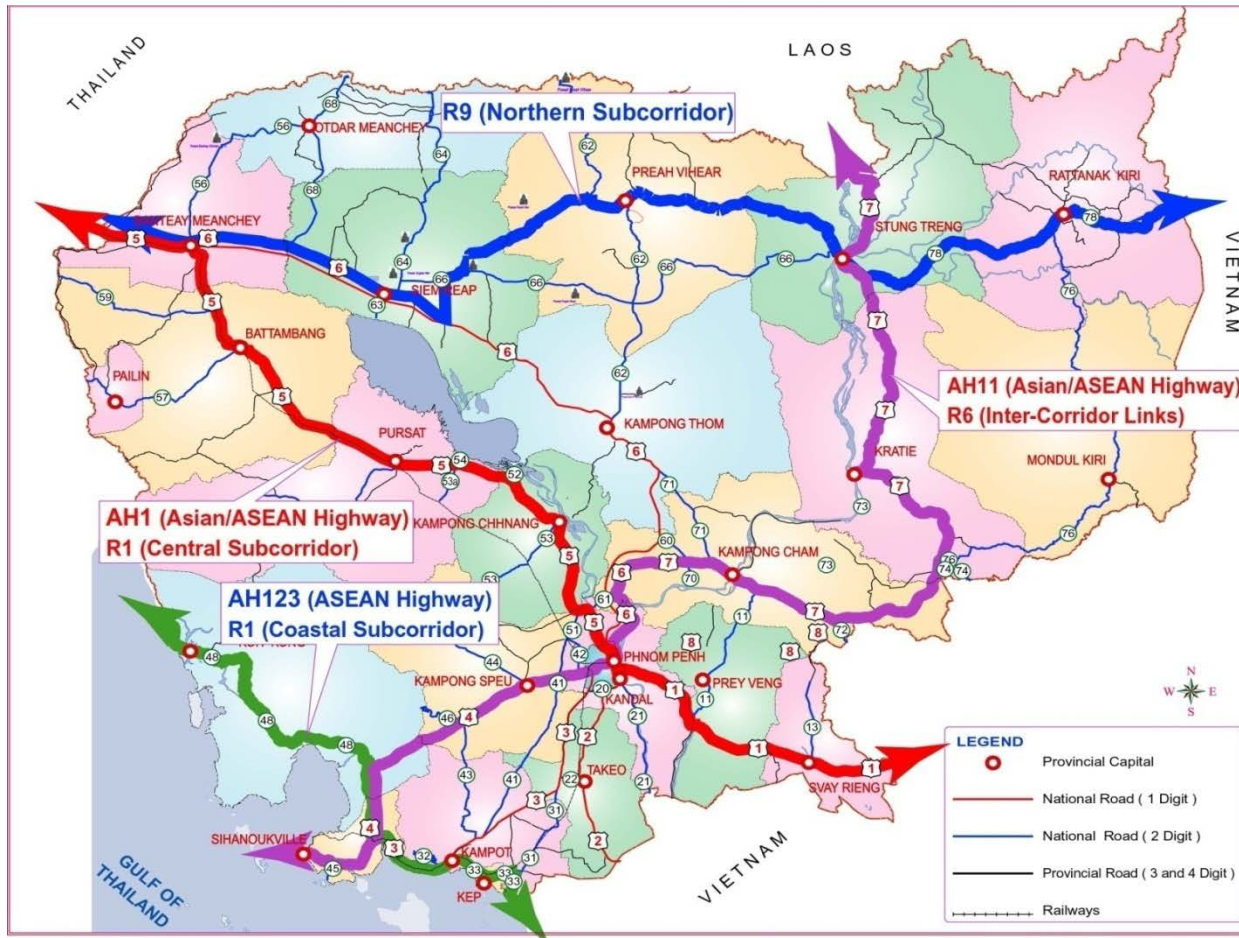
# STRUCTURE OF PRESENTATION

- 1.Public infrastructure status
- 2.Development of transport infrastructure
- 3.Current status of Transport
- 4.Issues and necessary actions for transport sector
5. Vision, Goals and Objectives
6. Strategic for GHG Mitigation in Transport Sector



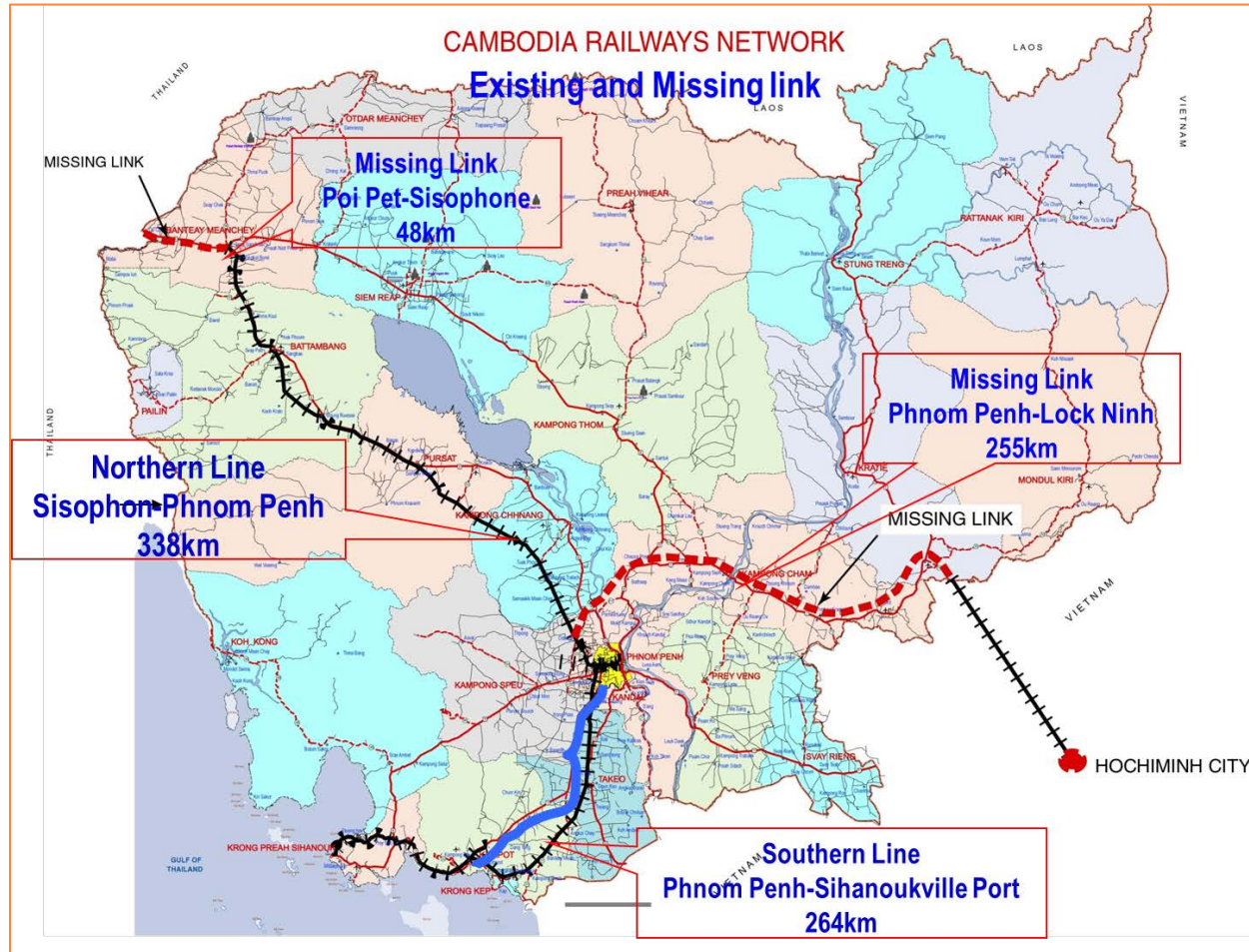
# 1. PUBLIC INFRASTRUCTURE STATUS

## Road System



ASEAN Highway and National Road Network in Cambodia

# Railway system

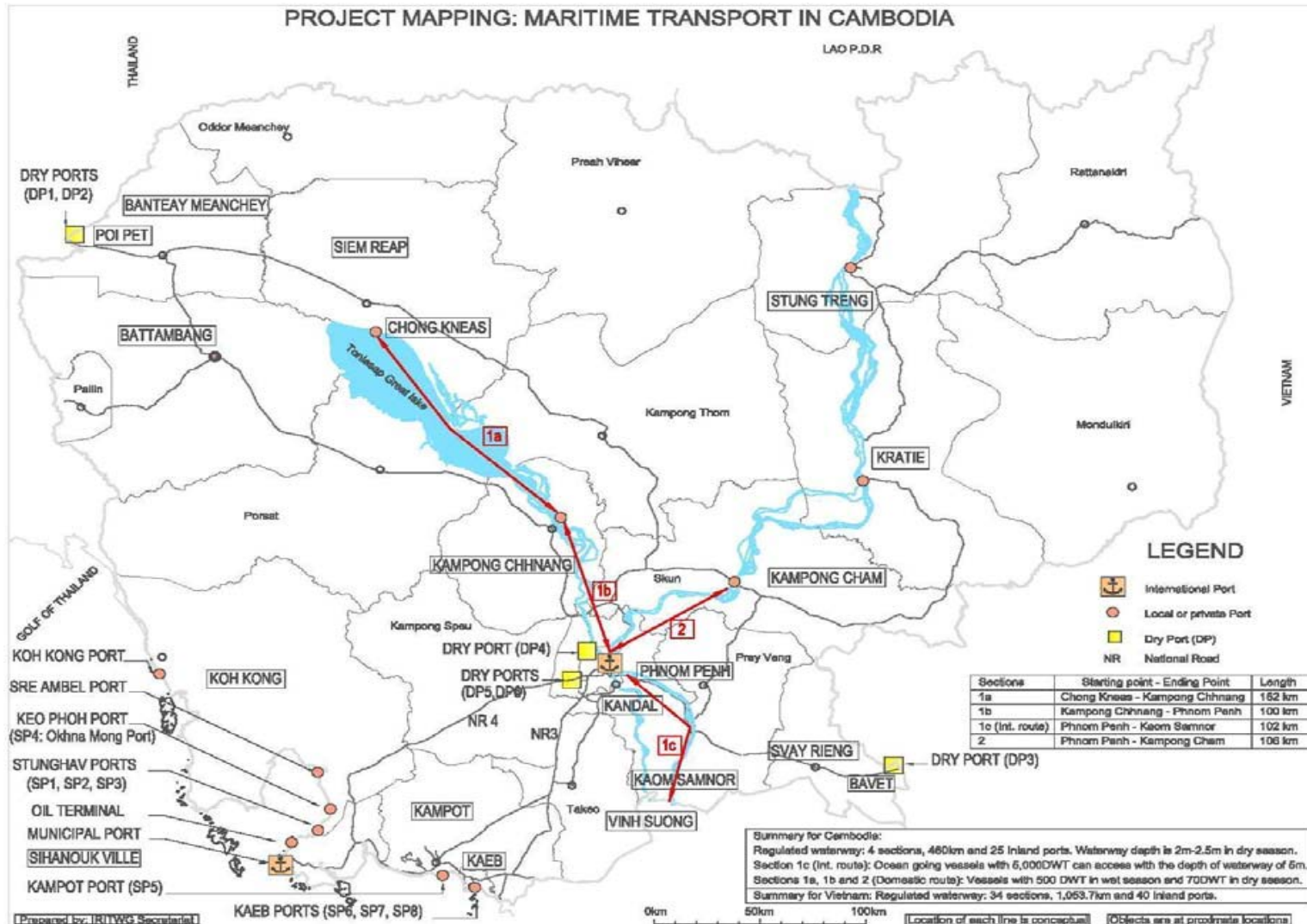


# Cambodia Railway Network

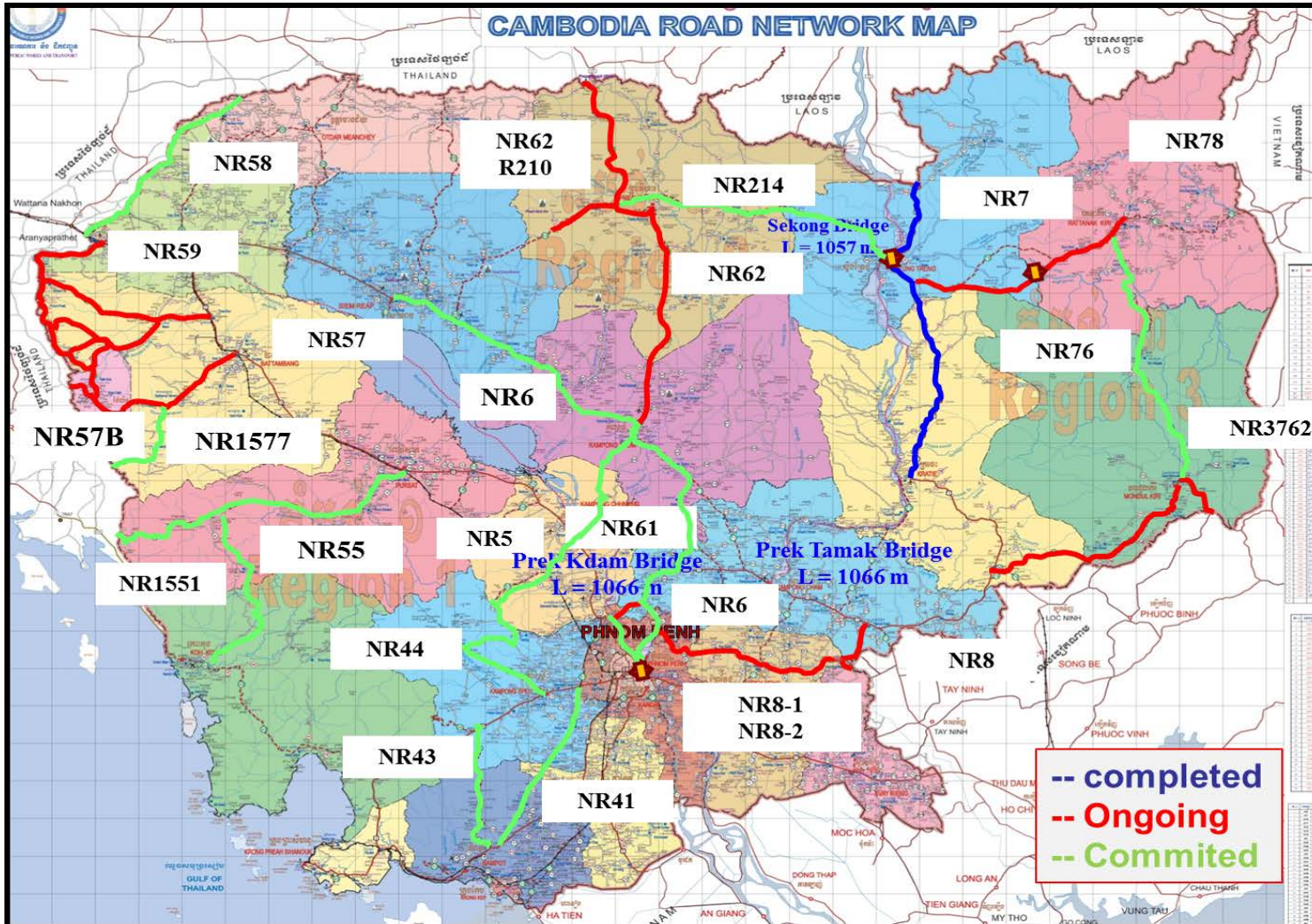


# 1. PUBLIC INFRASTRUCTURE STATUS

## Maritime and waterway system



## 2.DEVELOPMENT OF TRANSPORT INFRASTRUCTURE



Road project map



# Railway's Reform and Rehabilitation

CAMBODIA RAILWAYS NETWORK

Existing and Missing link

Missing Link  
Poi Pet-Sisophon  
48km

## Rail Way Transport

Northern Line  
Sisophon-Phnom Penh  
338km

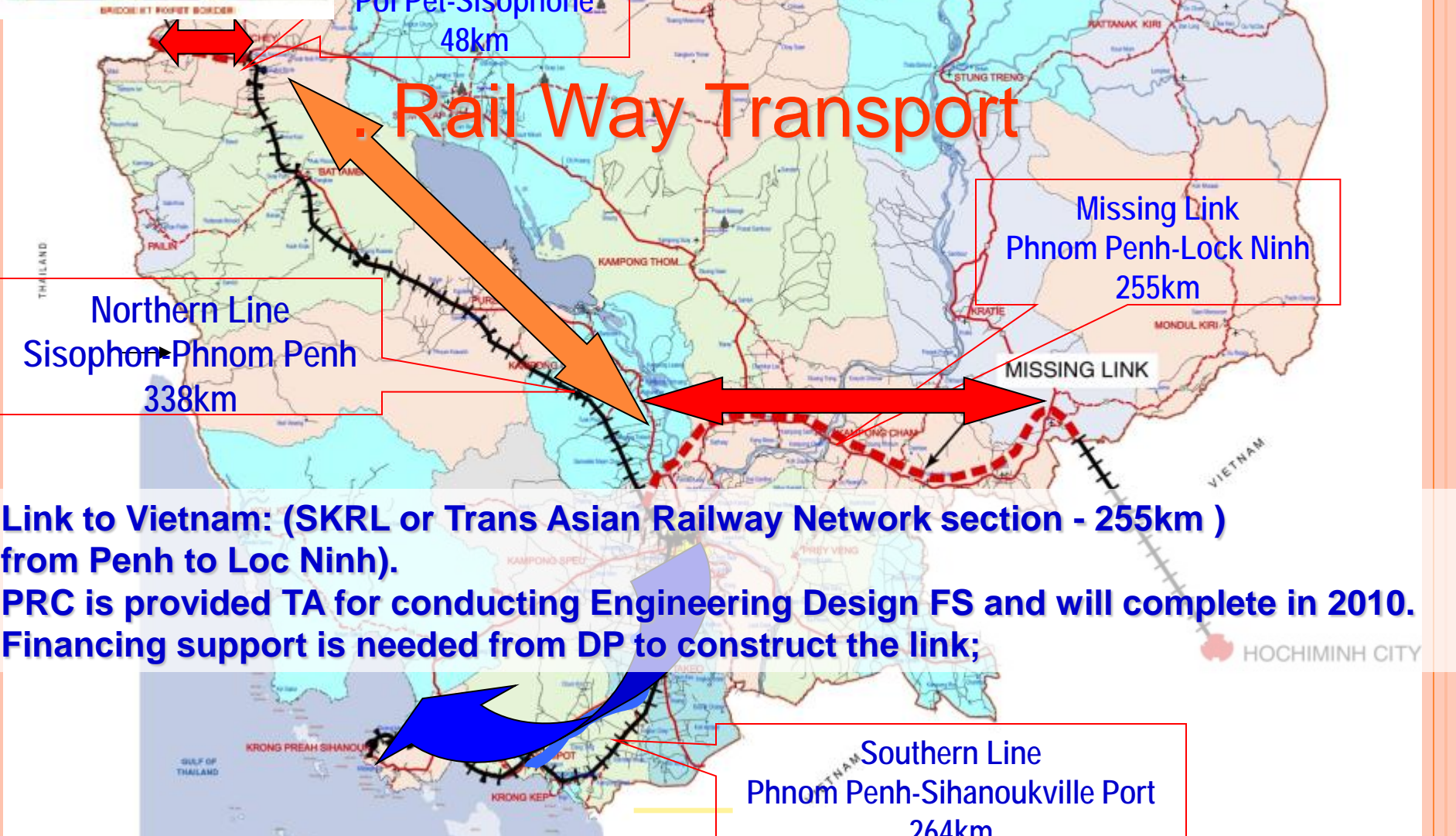
Missing Link  
Phnom Penh-Lock Ninh  
255km

MISSING LINK

Link to Vietnam: (SKRL or Trans Asian Railway Network section - 255km )  
from Penh to Loc Ninh).

PRC is provided TA for conducting Engineering Design FS and will complete in 2010.  
Financing support is needed from DP to construct the link;

Southern Line  
Phnom Penh-Sihanoukville Port  
264km





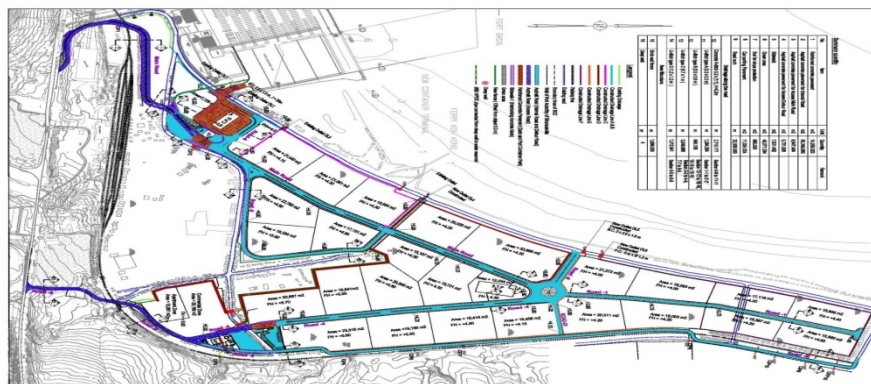
# The Development Plan of PAS for 05Year-Period (2009-2014)

are:

- SEZ Development Project (2009-2011)
- Multipurpose Terminal Project (2009-2014)
- Transfer the Old Jetty to be a Passenger Terminal (2010-2012)
- SEZ Development Project – Phase III (2011-2015)
- Reinforcement of Port Security and Safety in Maritime System (2010-2012)
- Study Next Development Plan of New Container Terminal with -14m draft (2010-2011).

## Sihanoukvill SEZ

- With 70ha
- Development Project (2009-2011)
- Project Cost = US\$ 35,000,000



## Multipurpose terminal Development

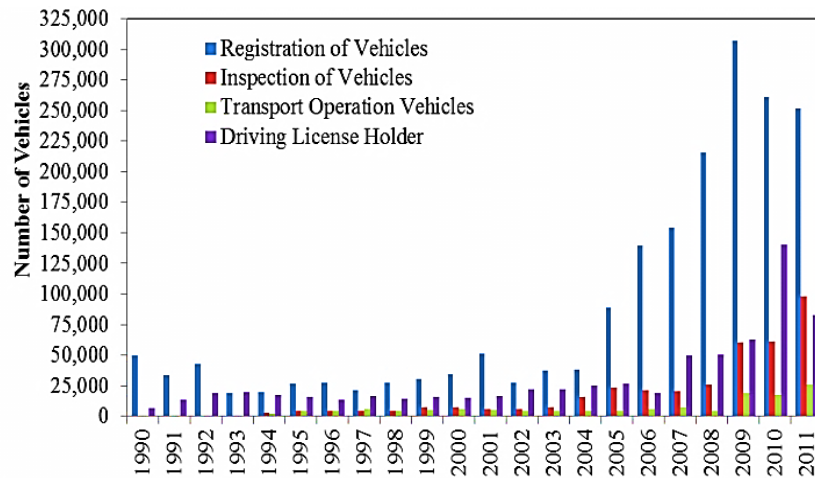
- Construction Period = 2011-2014
- Operation = May 2014
- Project Cost:US\$ 87,882,000



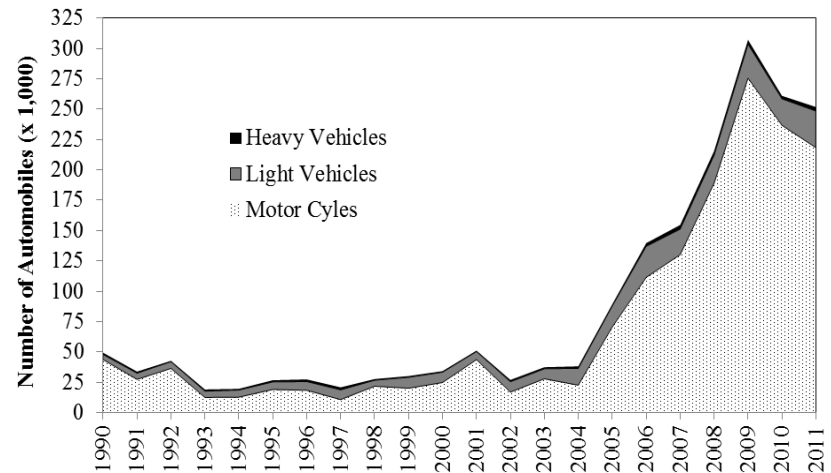




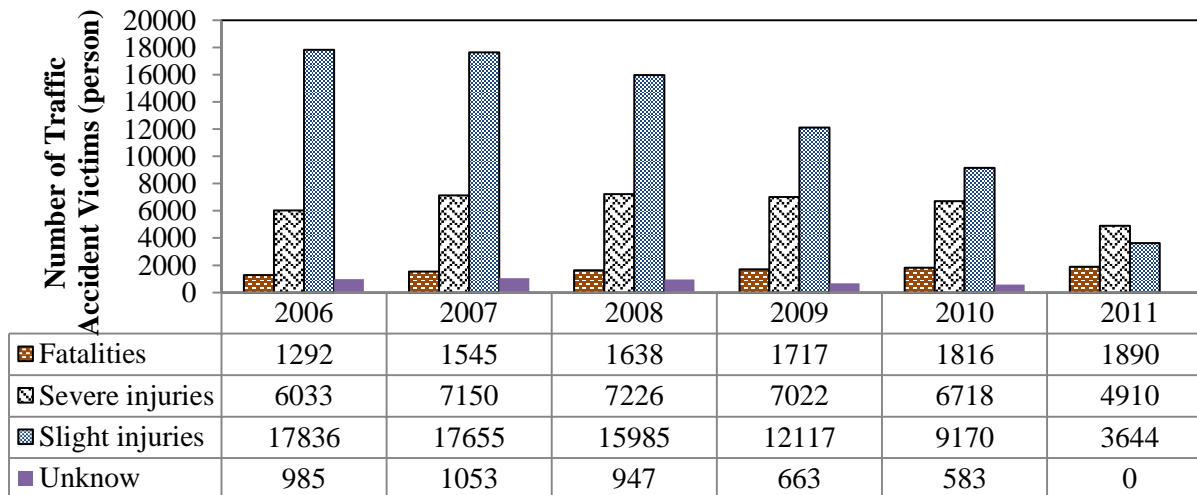
# 3. CURRENT STATUS OF TRANSPORT



Number of vehicles



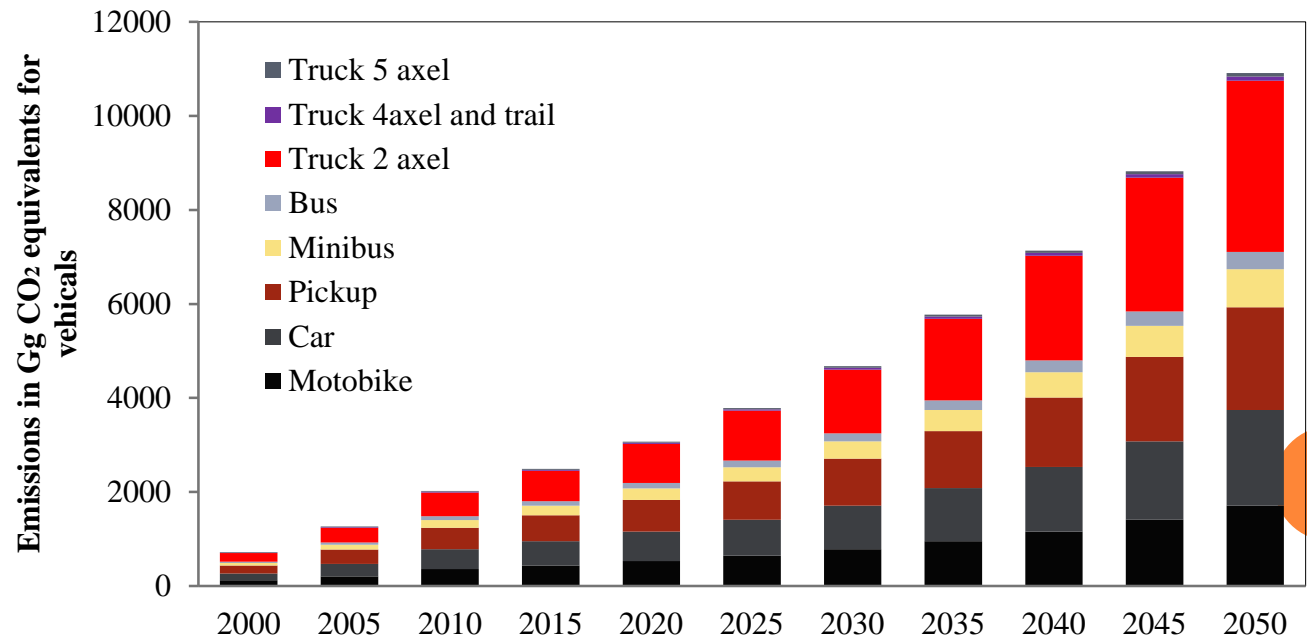
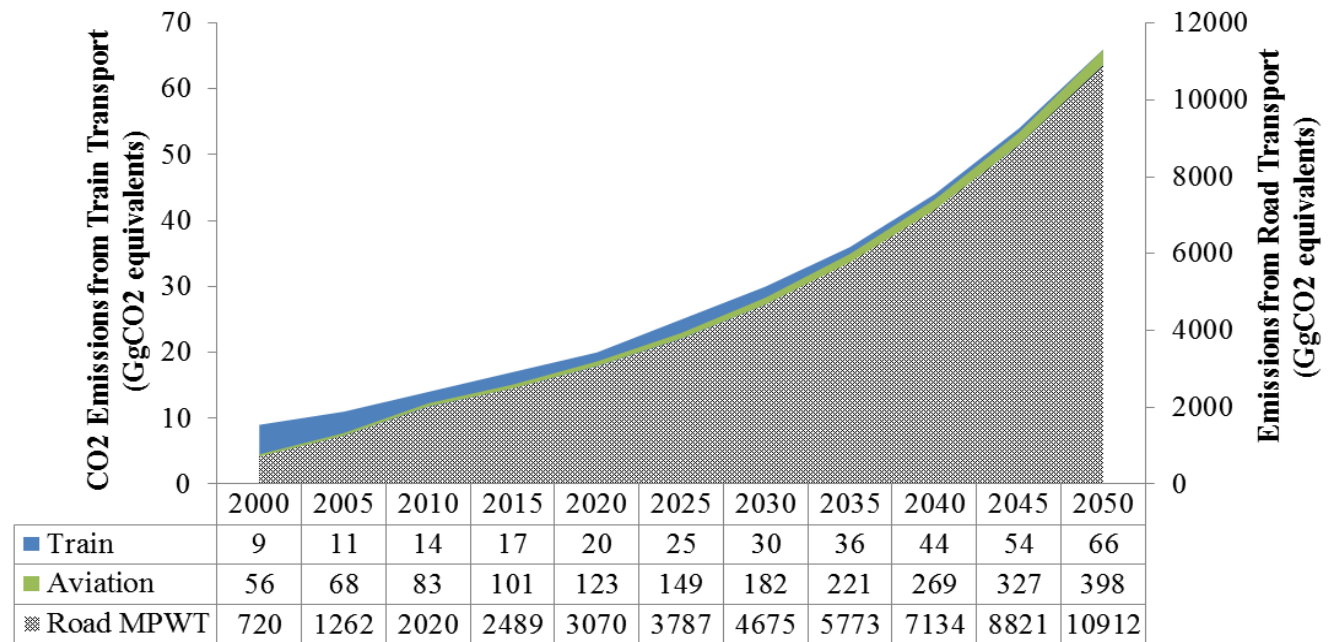
Number of registered automobiles



Number of traffic accident victims in Cambodia in 2006-2011



# GHG emissions from transport sector (GgCO<sub>2</sub> equivalents) (MoE, 2010)



## 4. Issues and necessary actions for transport sector

### I. Road transport

Major Issues	Necessary Action Plans
<ul style="list-style-type: none"><li>-Improper inspection and maintenance</li><li>-Inefficient vehicle driving</li><li>-High fuel consumption</li><li>-Increasing the number of vehicles</li><li>-Using high emission vehicles</li><li>-Traffic congestion</li></ul>	<ul style="list-style-type: none"><li>-Establishment and Improvement of vehicle inspection maintenance system implement Euro4 by 2016</li><li>-Regulation of secondhand vehicle</li><li>-Conduct the assessment of number and types of vehicle, fuel quality and quantity</li><li>-Promotion of Eco-driving</li><li>-Develop and implement plans to introduce incentives for people to reduce car and motor use instead of other public transport system such as buses or trains.</li></ul>
<ul style="list-style-type: none"><li>-Increasing of the number of old/secondhand vehicles</li></ul>	<ul style="list-style-type: none"><li>-Provide training on the impact of GHG emissions from transport sectors</li><li>-Regulation on secondhand vehicle</li><li>-Enhance capacity of vehicle inspection &amp; maintenance</li></ul>
<ul style="list-style-type: none"><li>-Inconvenience for pedestrians</li></ul>	<ul style="list-style-type: none"><li>-Improve urban road management and infrastructure</li></ul>

### 2. Rail transport

Major Issues	Necessary Action Plans
<ul style="list-style-type: none"><li>-Rail line damaged heavily due to the civil war.</li><li>-No operation currently</li></ul>	<ul style="list-style-type: none"><li>-Expansion of railway network connected from city to province</li><li>*Rehabilitation of north line (P.P-Poipet: 385km)</li><li>*Rehabilitation of south line (P.P-Sihanoukville: 266km)</li><li>-Restore the missing lines</li></ul>
<ul style="list-style-type: none"><li>- Traffic congestion due to the increasing of automotive vehicles number, particularly the car vehicles.</li></ul>	<ul style="list-style-type: none"><li>-Promotion of Subway/Tramway within the city</li><li>-City Transport Master Plan</li><li>-Develop and implement plans for mass transit public transport system in Phnom Penh</li></ul>
<ul style="list-style-type: none"><li>-Freight movement is mainly by trucks</li></ul>	<ul style="list-style-type: none"><li>-Encourage private company to move freight by train</li><li>-Strengthen the activities in railway transport sector and also the department of Railway</li><li>-Improvement the human resource in related field</li></ul>



## 4. Issues and necessary actions for transport sector

### 3. Maritime transport

Major Issues	Necessary Action Plans
-lack of environmental protection	-Introduction of emission standards -Promotion of fuel switch -Regulation of second-hand ferry/vessel
-Poor port infrastructure	-Improvement of cargo handling system at port -Promotion of Onshore Power Supply -Improvement of port facilities
-Lack of data/information collection	-Development of local data in estimating emissions

### 4. Air transport

Major Issues	Necessary Action Plans
-Poor air transport operation and environmental control	-Promote Eco-Airport include some general activities, for instance, save energy by turning off the light, waste collection and so on. -Improve the air traffic control system -Expand the construction of airport infrastructure
-Lack of environmental monitoring	-Introduce the air quality monitoring at airport -Introduce the noise reduction technologies



## **5. Vision, Goals and Objectives**

### **Vision for Low-carbon and Low-pollution Transport Systems**

The amount of the emissions from transport sector will be reduced significantly to environment.

### **Goals and Objectives**

- To develop efficient, comfortable and safety transport system
- To introduce modern public transport system
- To enhance inspection and maintenance of vehicles
- To reduce traffic congestion
- To enhance traffic management
- To enhance the quality of fuel



## 6. Strategic for GHG Mitigation in Transport Sector

**STRATEGY 1:** To raise the public awareness about climate change caused by the emissions of greenhouse gases from transport sector.

**Goal:** To enhance the public awareness about the impact of the emissions of GHG from transport sector on climate in order to participate.


***Proposed Action:***

- Provide training related to the impact of the emissions of greenhouse gases from transport sector;
- Integrate GHG mitigation components in all transport development projects;
- Introduce GHG mitigation in transport sector into education program;
- Enhance the understanding of the importance of vehicle inspection.

**STRATEGY 2:** To Enhance inspection and maintenance of vehicles

**Goal:** To reduce the air pollutants and the emissions of GHG from vehicles

***Proposed Action:***

- Interrupt people producing modifying heavy vehicles which are not conformed to technical standards in the way of adopting legislation
  - Improve the existed I/M rules and regulations to undertake public awareness raising
  - Use video cameras to capture smoky vehicles on tapes and broadcasting
  - Increase taxes and import duties of old and second hand motorcycles
- 



### STRATEGY 3: Promote Public Transport in Major Cities

**Goal:** To reduce the use of cars and motorcycles to minimize fuel consumption

***Proposed Action:***

- Establish a Land-Use and Public Transport Planning Committee (LPTPC) to coordinate urban development and public transport
- Develop and implement plans for a mass transit public transport system in Phnom Penh
- Develop and implement plans to introduce incentives for people to reduce car use and use the public transport system once established.

### STRATEGY 4: Mitigation and low carbon development

**Goal:** To reduce the emissions from transport sector and promote green program in Cambodia

***Proposed Action:***

- Promote the greenbelt program with tree planting along national and provincial roads and urban roads;
- Build the capacity of the government, civil society and the private sector on carbon financing to access various global climate funds;
- Mainstream assessing the carbon footprint of transport operations



## STRATEGY 5: Capital-Intensive Urban Transport Infrastructure Development and Planning

**Goal:** To reduce travelling distance, fuel consumption and traffic congestion

***Proposed Action:***

- Develop capital-intensive underground and above ground mass transit and rapid rail systems;
- Encourage the use of bicycles and tricycles
- Improve walking and cycling facilities in the city such as side-walks and bike paths;
- Develop of a master plan for city transport

## STRATEGY 6: Efficient and Proven Transport Technology

**Goal:** To reduce the consumption of fuel by introducing advanced transport technologies

***Proposed Action:***

- Incorporating fuel-saving feature in new vehicles;
- Shifting the mix of new vehicles toward more efficient model;
- Model shifts to more efficient non-capital intensive mass transit options;
- Introduce technological leapfrogging to emerging sustainable transportation technology such as electric-driven bicycles, tricycles, buses, delivery vans, trucks, electric vehicles and locomotives.

## STRATEGY 7: Improve Petroleum-Based Fuel

**Goal:** To reduce the fuel consumption and GHG emissions through promoting alternative and renewable energy


***Proposed Action:***

- Promote low-sulfur gasoline to reduce sulfur oxide emission from vehicles;
- Promote Fischer-Tropsch diesel fuel produced from natural gas using a catalytic process which has the potential to lower emissions while achieving good performance;
- Improve fuel inspection regulation and fuel quality standard
- Enhance technical skills and facilities in fuel inspection

## STRATEGY 8: Shift long distance freight movement from truck to train

**Goal:** To reduce the fuel consumption and traffic congestion by shifting long distance freight movement from truck to train.

***Proposed Action:***

- Reconstruct the railway in Cambodia and restore the missing lines
  - Improve an efficient and cost effective railway system
  - Reform the railway system and reconstruct the institutional characters of the railway;
  - Encourage private company to move their freight by train;
  - Strengthen the capacity of government's staff in Department of Railway
- 



## STRATEGY 9: Enhanced Traffic Management

**Goal:** To improve efficiency traffic circulation systems for all road users in urban and community areas to reduce traffic congestion and fuel consumption

***Proposed Action:***

- Develop measure such as zone access restrictions or area licensing schemes; parking control; and segregated vehicle lanes;
- Improve urban road infrastructure and transport management;
- Private participation in public transport services and infrastructure;
- Traffic law enforcement and amendment
- Develop and improve logistic systems for freight movement

## STRATEGY 10: Promotion of efficient driving

**Goal:** To promote efficient driving in order to reduce the fuel consumption and GHG emissions

***Proposed Action:***

- Raise the awareness on smoothly accelerate,
- Try to look ahead to reduce braking too often,
- Put sufficient air into the tires and turning of the engine off one idle,
- Turn engine off at traffic light (especially motorbikes) and
- Purchase light colored vehicles because they need less air conditioning.



Thank You for Your Attention

