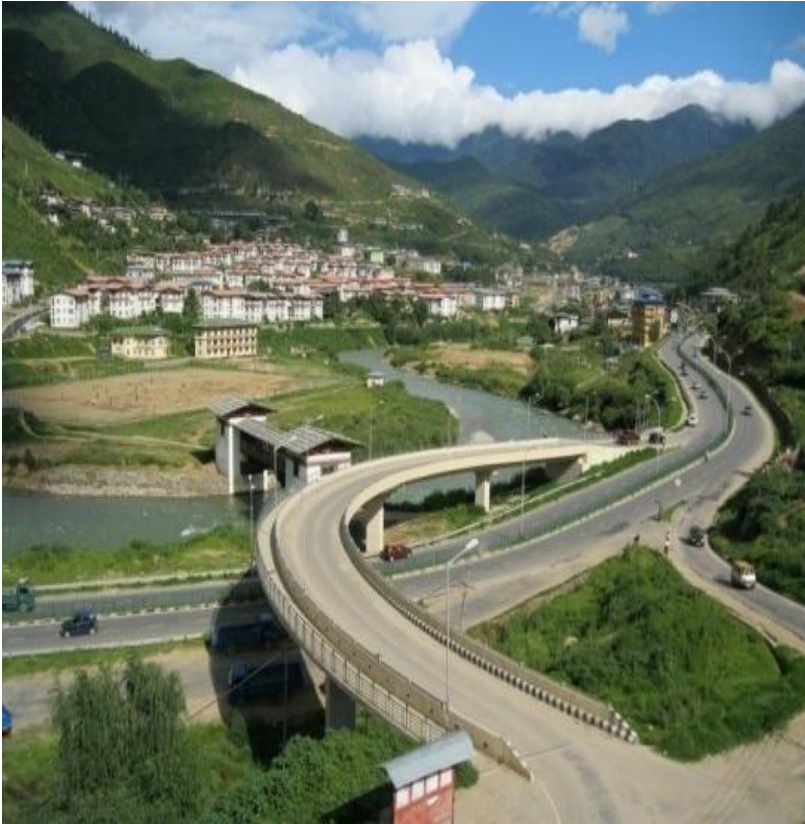


**9th Regional EST Forum in Asia:  
17-20 November 2015  
Kathmandu, Nepal**



**BHUTAN**

# Presentation Outline



- ❖ Country background
- ❖ Motorization trend
- ❖ Road crashes
- ❖ Implementation status of Bangkok 2020 Declaration
- ❖ Critical challenges faced
- ❖ Major plans



**China**

**Nepal**

**Bhutan**

**India**

**Bangladesh**

# Brief Country Profile



- ❖ **Area:** 38,394 sq km
- ❖ **Population:** 636,236 (of which 36.4% urban and 63.61% rural (2014 est.))
- ❖ **GDP at current price:** ~USD 1,740m (2014)
- ❖ **GDP per capita:** USD 2,440.4 (2014)
- ❖ **Terrain :** Mostly mountainous (591' - 24,770')
- ❖ **Forest cover:** 70% approximately
- ❖ **Arable land:** About 8%
- ❖ **Transport System:** Land and Air Transport
- ❖ **Total Vehicle Number:** 75,425 (Aug 2015)
- ❖ **Road Length (all types):** 10,578 Km (2013)

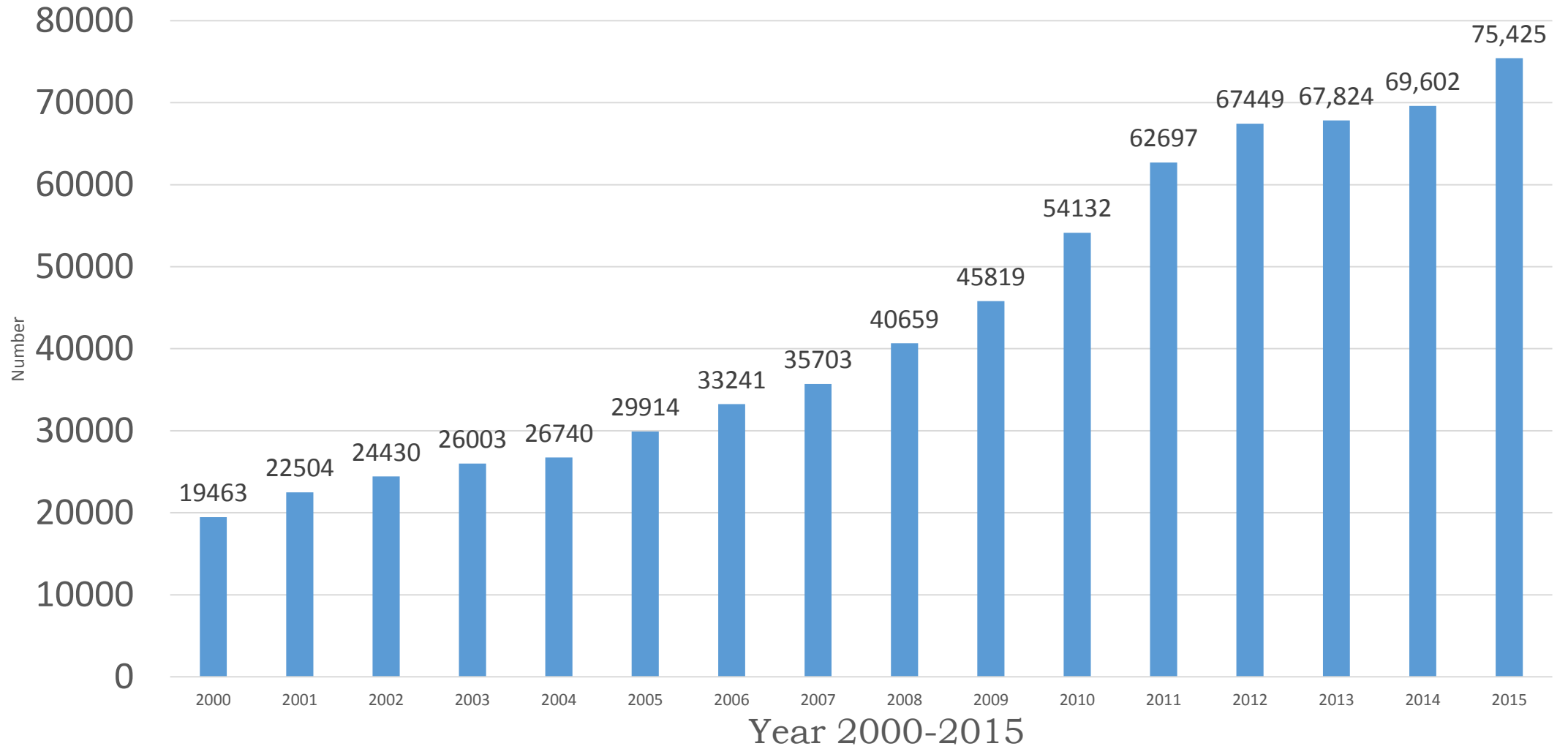
# Transport system in Bhutan



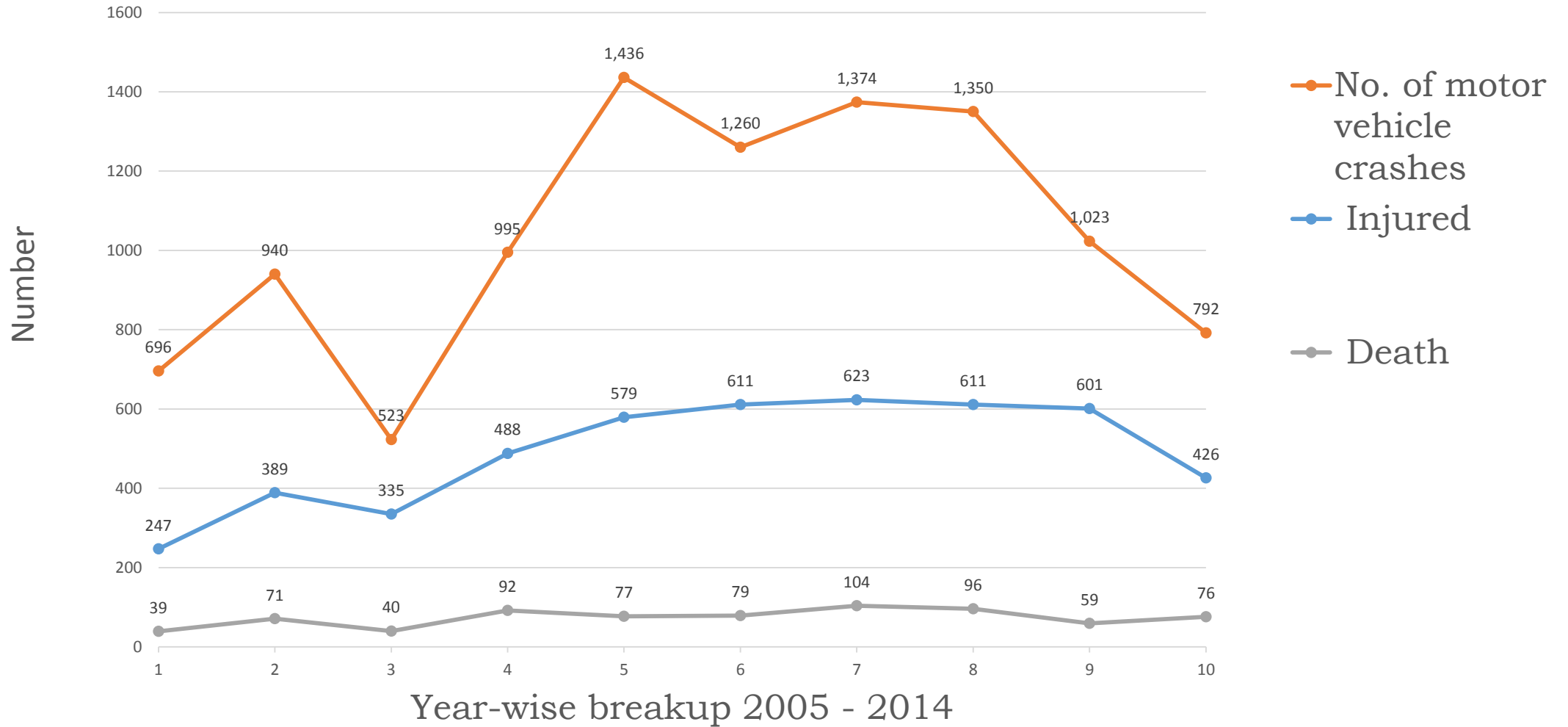
# Motorization trend

- ❖ Vehicle number in Bhutan is increasing every year
- ❖ 75,425 of total vehicles are import within the July 2014 – August 2015 (increased by 8%)
- ❖ Transport sector emitted 0.118 million tons of CO<sub>2</sub>-equivalent from fuel combustion, accounting to about 45% of all energy-related emissions or 7.5% of national GHG emissions

# Motorization Trend



# Vehicle crash





# Implementation status of Bangkok Declaration -1 / 3

## (1) Avoid unnecessary travel and reduce distances (goals 1-3):

- ❖ Most urban centers now have local area plans and follow integrated land use and transport planning process
- ❖ Established nationwide backbone fiber-optic network covering all 20 Districts and 192 (out of 205) Administrative Blocks
- ❖ Achieved mobile penetration of about 84% and Internet penetration of ~46.8%
- ❖ ICT as a substitute for travel has been conceived but face challenges;
- ❖ G2C Services through Community Centres , small scale telemedicine, health consultation through social media apps etc

# Implementation status of Bangkok Declaration - 2/3

## (2) Shift towards sustainable modes (goals 4-7):

- ❖ June 5 (coinciding with the World Environment Day) declared as “no vehicles day” in urban centers
- ❖ Have plan for BRT but remains unimplemented due to cost of related infrastructure and buses
- ❖ System of collecting parking fee in place in some bigger towns
- ❖ Tax and duties increased on vehicle imports including green tax
- ❖ Comfortable and smaller buses have replaced bigger buses for inter-district travel
- ❖ Non Motorised Transport slowly picking up

# Implementation status of Bangkok Declaration - 2/3

## ((3) Improve transport practices and technologies (goals 8-11)

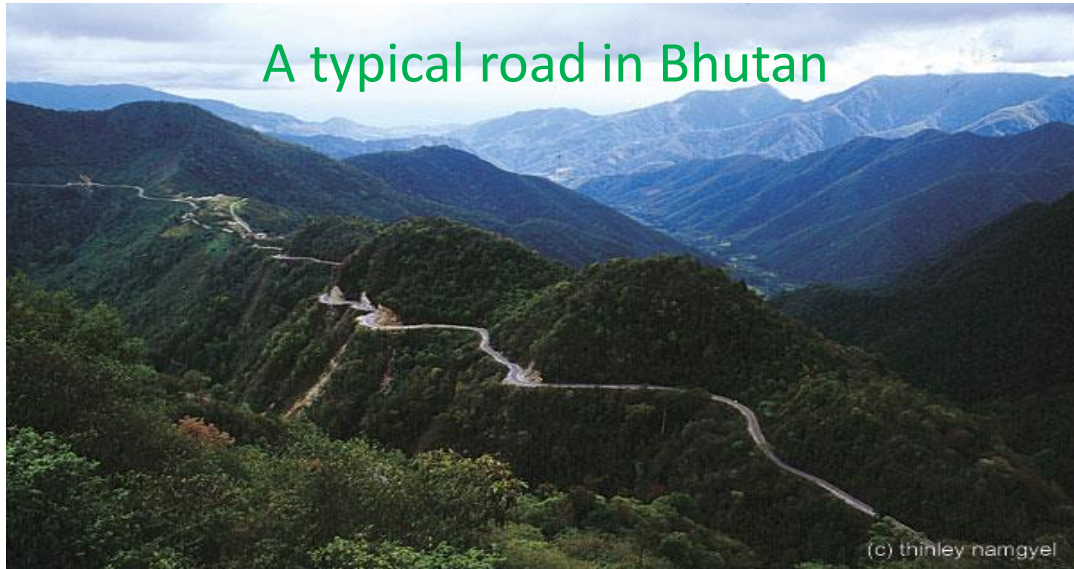
- ❖ Electric vehicle is a major initiative
  - number is small currently at 91 (including taxis) - 0.12% of total vehicle fleet)
  - Quick Charging Infrastructures being installed
  - zero tax on import of electric vehicles
  - Discussion with UNCRD to explore Light Railway Transport (LRT)
  - Exploring replacing ICE taxis with EV Taxis
- Ban on Import of Second hand Vehicles
- Compulsory Emission test and Fitness implemented
- Mobile Apps on Public Transport Service Information piloted
- Double Lane of Major Highways

# Implementation status of Bangkok Declaration -3/3

## (4) Cross-cutting strategies (goals 12-20)

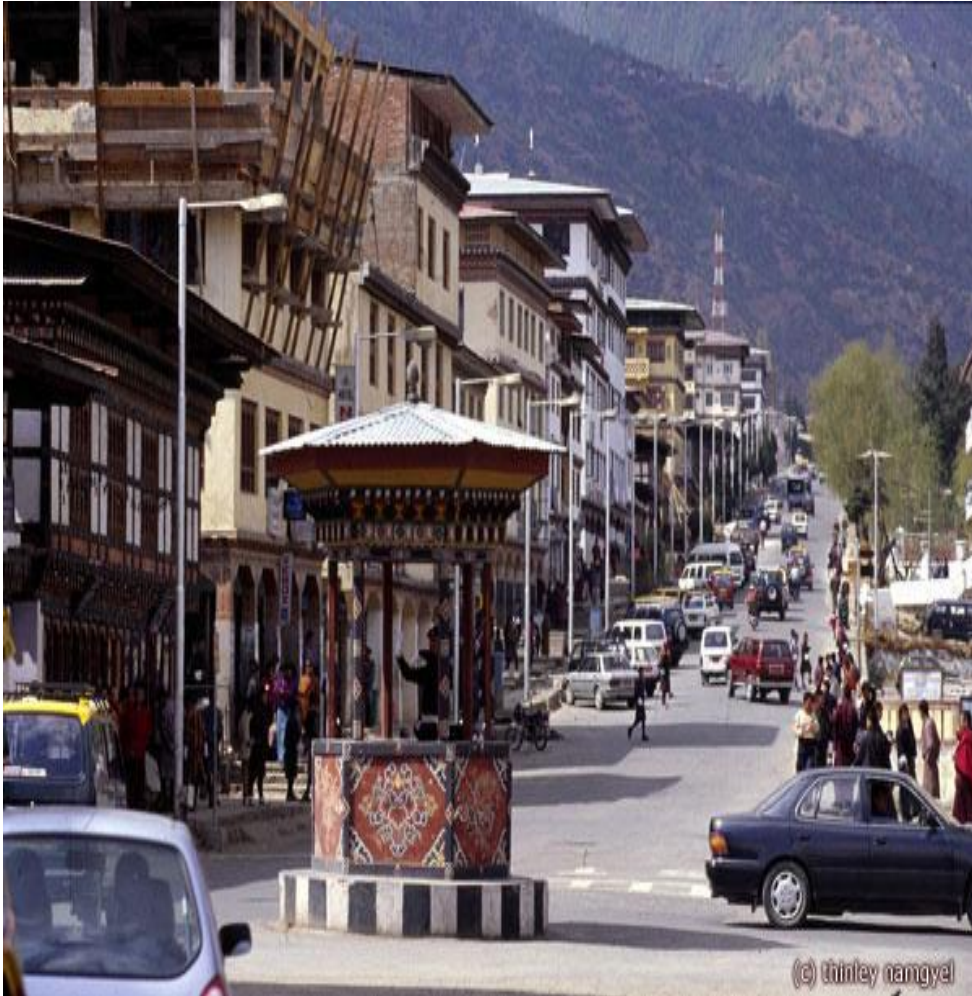
- ❖ Introduced reserved seats for people with special needs in city buses
- ❖ Zero Tolerance Traffic Violation: Fridays
- ❖ Interest subsidy to bus operators providing services to remote areas
- ❖ Fuel quality is being monitored regularly
- ❖ Emission testing is mandatory for all vehicles – once every year
- ❖ Defined life span for passenger transport buses and taxis
- ❖ Minimum of third party insurance is mandatory by law
- ❖ Eight air quality monitoring stations established

# Critical challenges – 1/2



- ❖ Non-motorized transport is slow:
  - quantity and quality of foot-paths
  - cycling has limitations due to terrain
  - people are reluctant to walk
- ❖ Funding constraint to augment city service
- ❖ Growing vehicle ownership with marginal increase in road network
- ❖ Vehicle crash still a major public health concern

## Critical challenges – 2/2



- ❖ Electric vehicles ownership low due to high initial cost, absence of charging stations, mileage constraints, uncertainty of battery life, etc
- ❖ Use of ITS in all forms is non-existence
- ❖ Freight industry remains largely unregulated
- ❖ People living in remote areas either pay high fare or are deprived of quality transport services due to low profitability
- ❖ PPP projects in the transport sector not seen as feasible due to low user base
- ❖ No single office or officials dedicated to EST – activities spread over many agencies

# Future plans

- ❖ ITS being piloted in the capital city (Installation of CCTVs, integrated bus sheds)
- ❖ Feasibility study for light rail transit system for the national capital region (under active consideration)
- ❖ Additional buses for urban transport committed
- ❖ Network of electric charging stations along the road system and cities ( One station installed and another four being installed in the Capital and along Paro-Thimphu Highway including the Airport and Paro)
- ❖ Aspiring to achieve Zero Emission in the road transport sector through promotion of electric vehicles.
- ❖ Replace ICE Taxis with EV Taxis
- ❖ Vehicle Emission Standards being reviewed to reduce pollution level
- ❖ Dry port designed
- ❖ Massive road network expansion program, especially those providing access to remote areas.

**Thank You**