National Capacity Building Workshop
on Sustainable and Inclusive Transport Development

Dhaka, Bangladesh 11-12 August 2014

Road Safety in Urban Areas
What is the presentation about?

- Road Safety: Global and Regional status
- Road Safety in Urban Area and vulnerable Road Users
1.24 million people killed in 2010

By 2030 - the fifth leading cause of death, beating the rank of lung cancer and HIV/AIDS

Vulnerable age group: 15-29 years old: #1 leading cause of death

Economic loss from road fatalities and injuries: 1-3% of GDP, up to 5% in some developing countries

UN GA Resolution 64/255 of 2 March 2010 on Improving Road Safety Proclaimed the period 2011-2020 as the Decade of Action for Road Safety

Goal is to stabilize and then reduce the forecast level of road traffic fatalities around the world by increasing activities conducted at the national, regional and global levels

Road Safety Situation

Global Mandate

- Road Safety Management
- Safer Roads
- Safer Vehicles
- Safer Road Users
- Post-crash Response
The Declaration includes the goal “to save 600,000 lives and to prevent a commensurate number of serious injuries on the roads of Asia and the Pacific over the period 2007 to 2015.”

Regional Goals, Targets and Indicators (46 indicators)
Road Safety Situation

Regional Mandate

8 Goals

1. Make Road Safety a policy priority
2. Make Roads Safer for vulnerable road users
3. Make Roads Safer and build “forgiving roads”
4. Make vehicles safer and encourage responsible ads
5. Improving national and regional road safety system, management, & enforcement
6. Improving cooperation & fostering partnerships
7. Developing Asian Highway as a model for road safety
8. Providing effective education on road safety awareness

Overall Objective

50% reduction in fatalities and serious injuries on the roads of Asia and the Pacific over the period 2011 to 2020

25 Targets
36 Indicators
Road Safety Situation

Road Safety Situation in Asia-Pacific

Change in Road Traffic Deaths Between 2007 and 2010 (in percent)

- 777,000 deaths (approx. 62% of 1.24 m global road deaths)
- 11% increase compared to 2007
- At subregional level, 2 sub-regions show progress while other 4 regress (21 countries have reduced the death rates)
- Road traffic death rate in ESCAP (18.62) was higher than world average (18.04/100,000)

• Road traffic injuries are a leading cause of death and disability in the regions
Road Safety in Urban Areas

Urbanization

- 2009 was the first time ever that the majority of the world’s population lived in a city

In Asia

- ESCAP estimates: 1.6 billion people or 40% of total population live in urban areas in 2011.

- By 2030, it is estimated that 2.7 billion people will live in urban areas in Asia

- This continuous growth of urban residents has resulted in rapid increases of transport activities and private vehicle ownership
Road Safety in Urban Areas

Some common characteristics of urban areas in developing countries

- Rapid increase in population and motorization
- Densely populated
- Road users compete for limited space
- Traffic mix

→ Frequent and close interaction between vulnerable and motorized road users

→ Urban road safety is to a large degree an issue of vulnerable road user safety.
Motorcyclists, pedestrians and cyclists are more vulnerable in the region.

VRUs account for more than half (55%) of total deaths.

Bangladesh
• 40% are pedestrians
• almost 60% death from VRUs

Most countries still in early stages of road safety action implementation, though progress has been made.
“Enable increased mobility without compromising safety”

- The VRU or vulnerable road users such as two and three-wheeler users and pedestrians and are at greater risk and bear greater burden of injury due to variety and intensity of traffic mix (especially slow moving VS fast moving vehicles) and lack of separation from other road users (OECD)

- The VRU especially pedestrian and cyclists – to a certain degree are those from the poorest of the community (urban poor)

- Pedestrians often being neglected from the planning of urban road networks (designed for motor vehicles only) (DFID)

→ human traffic congestion
→ increased exposure of traffic accidents
Vulnerable Road Users

Target Actions

– Improve infrastructure safety designs and safe environment for VRUs (especially Non-Motorised Transport Users)

– Improve enforcement and changing behavior or road users to avoid dangerous traffic offences e.g. helmet wearing, speeding

– Awareness raising, Education and Campaigns

– Improve emergency response
One of the problems is inadequate separation of pedestrians from vehicles / separation of non-motorized slow moving to motorized fast moving vehicles

- Footpaths not available (low quality, obstructed, illegally used by motorized vehicles)
- Lack of road shoulders
- Lack of medians
- Few safe crossing points or long distances between safe crossing points
- No bicycle lanes
- Not enough light (night time)
Infrastructure Safety Designs

Vulnerable Road Users

Counterflow: Brazil

Counterflow: England

Source: GIZ
Infrastructure Safety Designs

Vulnerable Road Users
Infrastructure Safety Designs

Vulnerable Road Users

Pedestrian Zone Project in Korea

- speed in traffic of 23 km/h has been reduced to 16 km/h
- illegal parking of 59 vehicles/m has been reduced to 33 veh./m
- traffic volume of 427 vehicles/h has been reduced to 289 veh./h
- casualties of 10 pedestrians/km has been reduced to zero
- sales of stores have shown a 89.5% increase over preceding years

Source: KOTSA
Enforcement and Behavioral change

Issues and Concerns

Poor road user behavior - one of the major cause of accidents

Source: Mirror Star
Enforcement and Behavioral change

Issues and Concerns

Poor road user behavior - one of the major cause of accidents

Road Safety requires variety of measures. In addition to engineering, enforcement, awareness raising and education are needed

Behavioral and cognitive psychological theory:

people modify behaviors as a result of
- new information, experiences and perceptions
- rewards and punishment
Enforcement and Behavioral change

**Actions**

- *Increase awareness* of road safety risk factors and prevention measures
  >> public awareness campaign and training programme
  >> training and education (basic safety knowledge for school children)
- Implement social marketing campaigns to help influence attitudes and opinions on the need for road traffic safety programmes
- Law and Enhance *police enforcement*
  >> Effective enforcement requires capacity and resources
  >> Both prevention and detection
Enforcement and Behavioral change

Facts and Figures

• **Wearing a good-quality helmet can reduce the risk of death from a road crash by 40 per cent and the risk from severe injury by over 70%.**

• **A 5% cut in average speed can reduce the number of fatal crashes by as much as 30%.** Pedestrians and cyclists are especially at risk of an injury as a result of excessive vehicle speeds.

• **Above a blood-alcohol concentration (BAC) of 0.05 g/dl, the risk of road traffic crash increases dramatically.**

Source: WHO
Thank you

www.unescap.org/our-work/transport
Info.: escap-ttd@un.org
Thank you

www.unescap.org/our-work/transport
Info.: escap-ttd@un.org
Road Safety in Urban Areas

Urban Transportation Modes in Bangladesh

2010

Data source: MacroEconomic Meter
Road Safety in Urban Areas

Pedestrian Safety Best Practices
Road Safety in Urban Areas

Pedestrian Safety Best Practices
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Pedestrian Safety Best Practices
Road Safety in Urban Areas

Safe Environment for NMTs

Safe environment for non-motorised road users

Almost 200,000 lives of these non-motorised road users were lost in 2010. 91% in middle income countries - the rate of motorization has been surging.

Advantages of NMTs

> reduces air pollution and CO2 emission
> conserves fossil fuel
> low cost vehicle/infrastructure
> Healthy
> Faster on short distances esp in small cities

Policy to promote the use of non-motorised mode of transport: 17 Countries
Policy to separate VRUs from highspeed traffic: 7 Countries (National Level)
Road Safety in Urban Areas

Pedestrian Safety Best Practices
Road Safety in Urban Areas

Vehicle Composition: Major cities in Bangladesh

- Dhaka represents 10% of the country’s population, 1% of its landmass and over 40% of its vehicles.
- Every year around 37,000 cars are added to Dhaka's roads, 80% of which are private cars.
Road Safety Situation in Bangladesh

Table 3.1: Recorded Casualty Accidents by City (2009)

<table>
<thead>
<tr>
<th>City Name</th>
<th>Number of Accidents</th>
<th>Accident Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Accidents</td>
<td>(No. per 10,000 Population)</td>
</tr>
<tr>
<td></td>
<td>Fatal</td>
<td>Grievous Injury</td>
</tr>
<tr>
<td>Dhaka</td>
<td>315</td>
<td>113</td>
</tr>
<tr>
<td>Rajshahi</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Khulna</td>
<td>28</td>
<td>9</td>
</tr>
<tr>
<td>Chittagong</td>
<td>60</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Bangladesh Road Transport Authority (BRTA), 2010

- Most traffic accidents in Bangladesh cause a fatality (69%) and hit a pedestrian (60%)
- Underreporting is a major issue with some estimates placing the number of unreported accidents at as high as 60%
- The number of reported accidents is decreasing by an average of 11% per year

Population of 10 Largest Cities in Bangladesh

Data source: Government of Bangladesh, CASE Project
Vulnerable Road Users

Infrastructure Safety Designs

Source: Dhaka Tribune & Life in the Present Tense
Vulnerable Road Users

Source: Bangladesh Ministry of Communications, The Daily Star
Vulnerable Road Users

*Infrastructure Safety Designs*

Source: The Guardian, Design Your Dhaka
Vulnerable Road Users

Safe Environment for NMTs

Source: GIZ
Vulnerable Road Users

Safe Environment for NMTs

Shanghai

Bogotá

Curitiba

Buenos Aires

Source: GIZ