Safe System For Sustainable Pedestrian Safety In Bangladesh

Presented by

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Presentation Outlines

• Some Key Safety Facts in Bangladesh
• How Serious is the Pedestrian Safety Problem
• How are We Dealing with the Problem
• Improving Pedestrian Safety: The Safe System Context
• Sustainability of Pedestrian Safety
Pedestrians – Clearly the Most Vulnerable Road User Group

- Walking represents a significant share of all urban trips in developing countries.
- Nearly 60 percent of urban trips involved walking in Dhaka (especially for short trips)
Some Key Safety Facts in Bangladesh

- 20,000 fatalities each year (only 4,000 are reported).
- 70% of crash fatalities in rural areas with 50% on national and regional highways.
- 50% of crashes on less than 5% of the highway network.
- Predominant crash types are:
  - **Hit pedestrian (45%)**
  - Rear end (16.5%),
  - Head on (13.2%) and
  - Loss of control/overturning (9.3%)
Pedestrians – The Biggest Challenge

Some Characteristics

• Pedestrian fatalities are increasing

• Up to 70% of fatalities in urban areas, much higher in Dhaka (80%)

• About **one-third of total pedestrian fatalities are children** under 16 years

• Of the child fatalities **nearly 80% involved as pedestrians**
Pedestrians – the Biggest Challenge

Some Characteristics

• Pedestrian fatalities mostly at roadsides (45%), on road (38%) and at crossing points (12%).

• Most of the pedestrians fatalities occur while crossing the road (41%) and followed by walking on the road (39%), and standing on road (14%).

• Heavy vehicles viz. trucks are major contributors (72% of urban pedestrian fatalities).
The Road Factors in Pedestrian Injuries

- High speed of traffic (increases severity)
- Poorly maintained, obstructed footpaths
- Inadequate crossing facilities
- Lack of pedestrian crossing opportunities (traffic volume)
- Number of lanes to cross
- Complexity and unpredictability of traffic movements at intersection
- Inadequate separation from traffic
- Poor crossing sight distance
- Traffic mix and condition of vehicles
Road Infrastructure Safety: A Crucial Element

• iRAP – Bangladesh pilot project rated almost **98% of N2 and N3 highways as 2-star or less** (out of possible 5-star) for pedestrians

• iRAP-ADB Study - Further assessment of around 1400 km of highways: **97% of highway sections are 2-star or less for pedestrians**
Facts for Relatively Poor Star Ratings

- Absence of Footpaths and Crossings
- Non-compliance of Overpasses and Crossings
- Linear Settlements
The Safe System Approach

• Deaths and serious injuries are not acceptable.
• Need to provide infrastructure that manage crash energies to prevent death and serious injury.
• Develop a forgiving road transport system.
• The Safe System approach is very effective in preventing road deaths and serious injuries.
• Safe System potential in less motorized countries like Bangladesh is enormous.
• The systematic implementation of safe system approach can enhance the safety of pedestrians significantly.
Safe System Countermeasures for Pedestrian Safety

Safe Roads and Roadsides through Physical Separation

Pedestrian Fencing, Shoulders and Medians

Safe Speed For Pedestrians
Safe System Countermeasures for Pedestrian Safety continues

Traffic Calming

Raised Pedestrian Crossing  Roundabout  Raised Platform at Intersection

Speed Hump  Rumble Strips
## Effectiveness and Benefits of Different Countermeasures

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<thead>
<tr>
<th>Countermeasures</th>
<th>Cost</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Pedestrian Footpaths</td>
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<td>Pedestrian Crossings</td>
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<td>Countermeasures</td>
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<td>Grade Separated Crossing</td>
<td>High</td>
<td>• Full safe system if used correctly</td>
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<td>• BCR below cut-off</td>
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<td>Signalized Intersection</td>
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<tr>
<td>Star Ratings</td>
<td>Length (kms)</td>
<td>Percent</td>
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<tr>
<td>5 Stars</td>
<td>63.60</td>
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<td>1 Star</td>
<td>293.30</td>
<td>7%</td>
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</table>

+ Speed Management
Sustainability of Pedestrian Safety

- Sustainable transport strategies are those that meet the basic mobility needs of all
- Sustainable safety must cover the whole network, all vehicles, all road users
- Central to this is promoting infrastructure that maximize safety for pedestrians and other VRUs
- Prevailing road infrastructure deny pedestrians a safe place to walk
- Safe system road infrastructure measures are required to save lives
Conclusions

• **Pedestrians are the major victims** in crashes and the situation is rapidly deteriorating

• Road **infrastructure hazards are major contributors** to pedestrian fatalities

• Addressing **pedestrian safety is a priority issue** for Bangladesh

• **Safe system approach provides new paradigm** and opportunity for low and middle income countries

• **There is urgency** for making road infrastructure safer through **systematic application of Safe System**
THANK YOU