

# **Road Safety and its Socioeconomic Impact on the Poor**

**Workshop on Infrastructure and Poverty Reduction  
Organized by ADB Institute  
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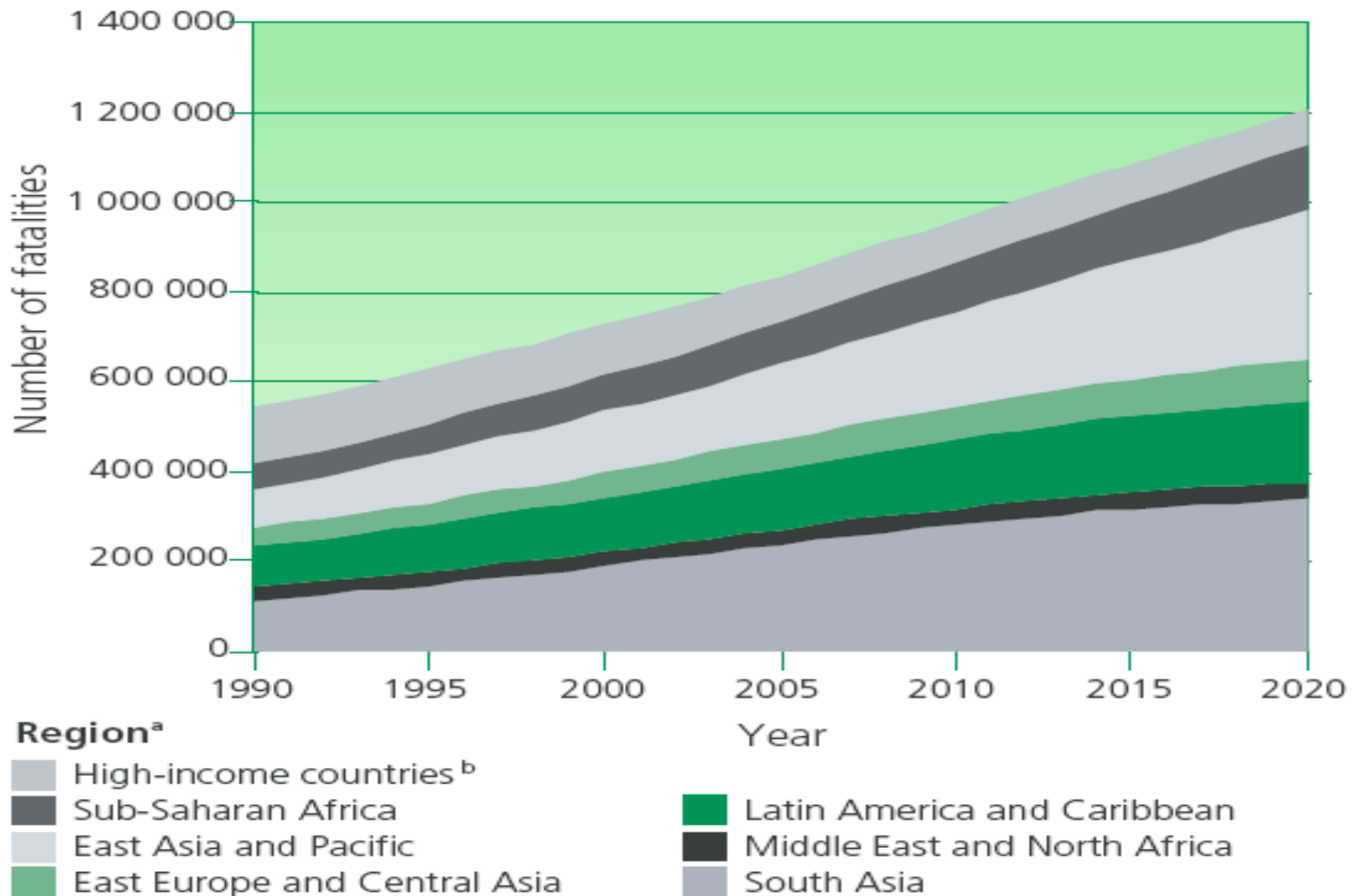
**Presentation by  
Charles M. Melhuish  
Lead Transport Sector Specialist  
Asian Development Bank**

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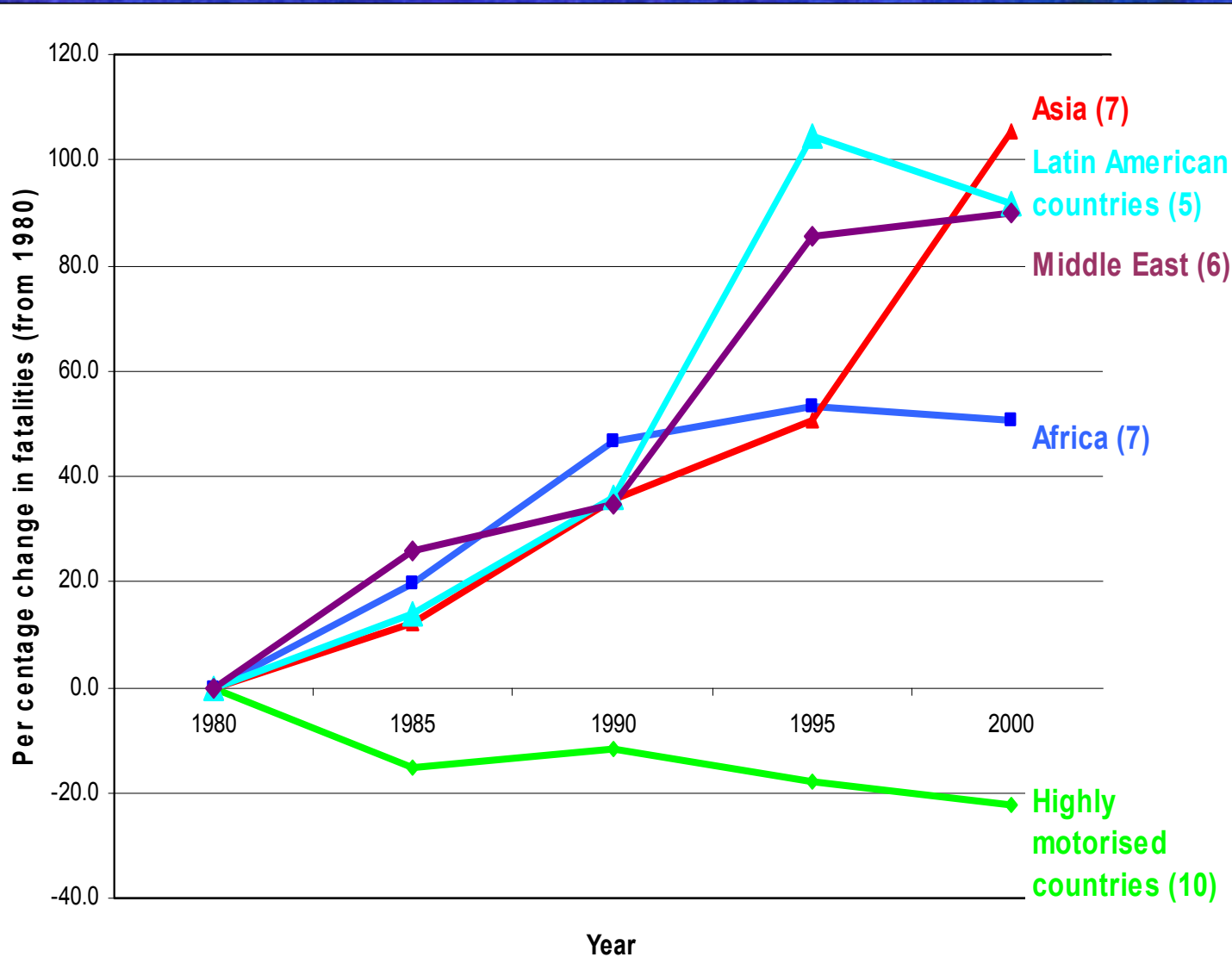
# Scale of the Problem

- **1.2 million deaths a year**
- **Over 3,000 everyday**
- **50 million injured a year**
- **137,000 every day; 5,700 per hour**
- **Economic impact – 2 to 3% of GDP**
- **Families pushed into poverty**
- **Needless waste of life and resources**

# Road Traffic Fatalities Are Predicted To Increase by 67% by 2020

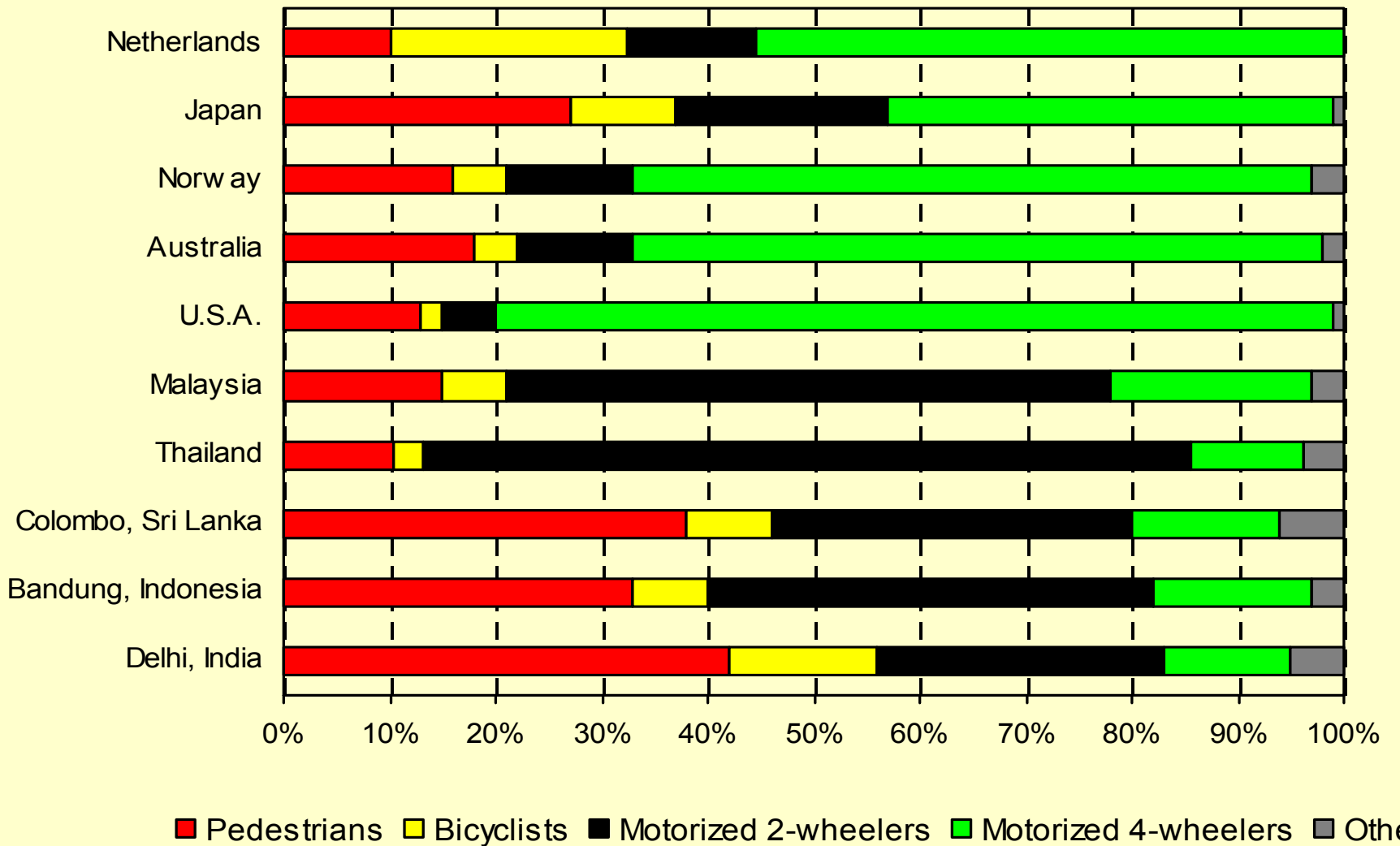


# Scope of the Problem



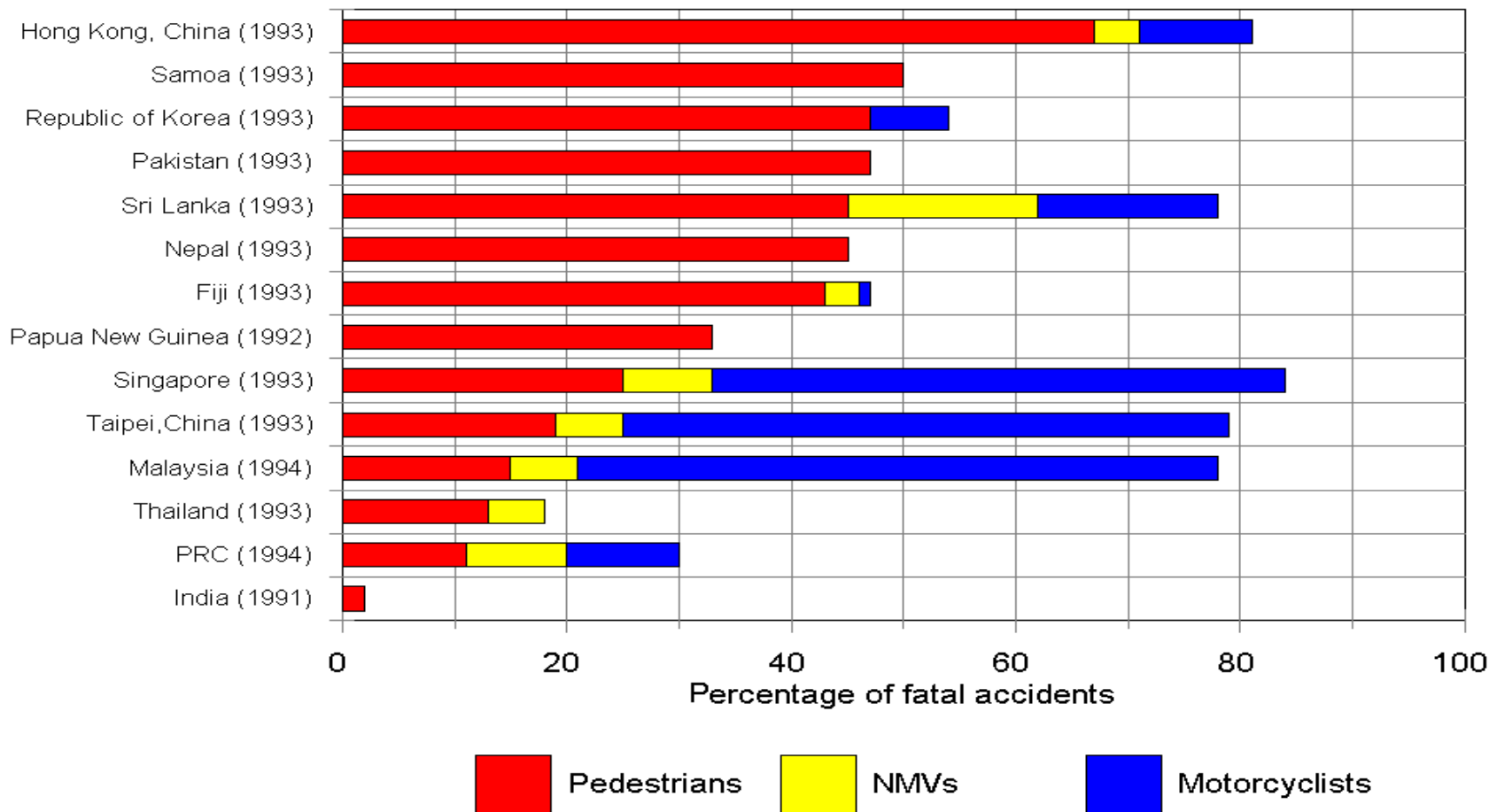
Traffic  
accident  
fatality  
trends  
1980–2000  
based on  
world region

# Most of Those Injured are Vulnerable Road Users



# Percentage of Fatal Accidents Involving Vulnerable Road Users

Country (year of data)



# Health Concern

Rank	1990	2020
1	Lower respir. infections	Ischaemic heart disease
2	Diarrhoeal diseases	Unipolar major depression
3	Perinatal conditions	<u>Road traffic injuries</u>
4	Unipolar major depression	Cerebrovascular Disease
5	Ischaemic heart disease	COPD
6	Cerebrovascular disease	Lower respir. infections
7	Tuberculosis	Tuberculosis
8	Measles	War
9	<u>Road traffic injuries</u>	Diarrhoeal Diseases
10	Congenital abnormalities	HIV



# Priority Solutions Need to be Adopted in DMCs

- **Speed**
- **Alcohol**
- **Seat-belts and child restraints**
- **Helmets**
- **Visibility**
- **Infrastructure for vulnerable road users**

# Current Distribution of Global Deaths and Licensed Vehicles

Region	Global Percentage of		
	Road Fatalities	Vehicles	Population
<b>Highly Motorized Countries</b>	<b>14</b>	<b>60</b>	<b>15</b>
<b>Asia/Pacific</b>	<b>44</b>	<b>16</b>	<b>55</b>
<b>Central/Eastern Europe</b>	<b>12</b>	<b>6</b>	<b>7</b>
<b>Latin America/Carribbean</b>	<b>13</b>	<b>14</b>	<b>8</b>
<b>Africa</b>	<b>11</b>	<b>2</b>	<b>11</b>
<b>Middle East/North Africa</b>	<b>6</b>	<b>2</b>	<b>4</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

# Forecast Road Traffic Fatalities by Region (% change from 1990 base year)

Region	1990	2000	2010	2020	Change (%) (2000-2020)
East Asia and Pacific	100	168	248	301	79
South Asia	100	155	244	379	144
Middle East and North Africa	100	136	178	229	68
Sub-Saharan Africa	100	136	184	244	79
Latin America and Caribbean	100	136	171	200	47
High Income Countries	100	-11	-23	-35	-27

# Reported and Estimated Traffic Deaths and Injuries in ASEAN (2003)

Country	Police-Reported		Estimated <sup>a</sup>	
	Deaths	Injuries	Deaths	Injuries
Brunei Darussalam	28	645	28	1,273
Cambodia	824	6,329	1,017	20,340
Indonesia	8,761	13,941	30,464	2,550,000
Lao PDR	415	6,231	581	18,690
Malaysia	6,282	46,420	6,282	46,420
Myanmar	1,308	9,299	1,308	45,780
Philippines	995	6,790	9,000	493,970
Singapore	211	7,975	211	9,072
Thailand	13,116	69,313	13,116	1,529,034
Viet Nam	11,319	20,400	13,186	30,999
<b>Total ASEAN</b>	<b>43,259</b>	<b>187,343</b>	<b>75,193</b>	<b>4,745,578</b>

<sup>a</sup> Based on local research, health statistics, sample surveys (where available), or international experience.

# Annual Economic Losses from Road Accidents (2003)

Country	Annual Economic Losses from Road Accidents	
	\$ Million	Percentage of Annual Gross Domestic Product
Brunei Darussalam	65	1.00
Cambodia	116	3.21
Indonesia	6,032	2.91
Lao PDR	47	2.70
Malaysia	2,400	2.40
Myanmar	200	3.00
Philippines	1,900	2.60
Singapore	457	0.50
Thailand	3,000	2.10
Viet Nam	885	2.45
<b>Total ASEAN</b>	<b>15,102</b>	<b>2.23</b>

# **Factors Influencing Accident Risks**

- 1. Rapidly expanding motorization**
- 2. Very high proportion of 2-wheeled vehicles**
- 3. High percentage of vulnerable road users: non-motorized vehicles, bicycles, pedestrians competing for road space**
- 4. In many areas, markets and other economic and social activities vie for road space**

# Unreliable Data

- **Absence of reliable accident data systems**
- **Poor knowledge about the number, causes and consequences of road crashes**
- **In Pakistan, police statistics under-report 18% of road traffic fatalities and 75% of injuries**
- **In Viet Nam, statistics under-report 50% fatalities and injuries are 35 times the official figures**

# Unreliable Data (2)

- **In India, 1.2 million are seriously injured and 5.6 million slightly injured each year**
- **In Indonesia, fatalities are 3.5 times larger than official figures and injuries are almost 200 times higher**

# **Constraints With Vehicle Insurance**

- 1. All DMCs have compulsory 3<sup>rd</sup> party no-fault insurance regulations in place**
- 2. Many vehicles remain uninsured**
- 3. Premiums are low leading to low compensation payments that are insufficient to cover medical treatment and other personal costs**

# **Constraints With Vehicle Insurance (2)**

- 4. Payments often only made after lengthy judicial processes**
- 5. Poor and corrupt enforcement hampers and influences payments**
- 6. Vehicle insurance does not appear to provide an adequate safety net for crash victims**
- 7. Few DMCs have policies to promote safe driving**

# **Impact of Road Crashes on the Poor**

**Results of a study undertaken in  
Bangladesh and Bangalore (India)**

- In Bangladesh, 83,199 households were sampled**
- In Bangalore, 19,797 households were sampled**

# Under-reporting

- **Surveys confirmed more people are being killed and seriously injured than police statistics indicate**
- **In Bangladesh, actual road deaths are 4 times more and serious injuries 75 times more**
- **In Bangalore, police report 10 injuries for every death. India Planning Commission estimates on average there are 15 hospitalized injuries and 70 minor injuries for every death**

# **Breadwinners Most At Risk**

- **In Bangladesh, few victims were heads of household; most were adult children who were the main income providers**
- **In urban areas, victims contributed 62% of total household income**
- **In rural areas, poor victims contributed 42% significantly more than non-poor 24%**

## **Breadwinners Most At Risk (2)**

- **In Bangalore, poor households also suffered disproportionately. Those killed contributed most to household income:**
  - Urban areas – 59%**
  - Rural areas – 75%**
- **In both cases, this was significantly more than non-poor households**

# Those At Risk

- Among all households, the most common road death was a male in the prime of life, between 16–45 years old
- One in every 4 deaths and 1 in 6 serious injuries to the poor involved a child (less than 16 yrs)
- The poor are killed and injured as VRUs: 7 out of 10 road deaths and injuries

# Impacts on Households

- While only one household member may be involved in a crash, the impacts are felt by the whole household. On average, this included another 4 persons
- Road crashes impose a double financial burden. They face unexpected medical and funeral costs and also lose the income of the victim or career

# Impacts on Households (2)

- In urban Bangladesh, poor households paid 3 months income on funerals
- In rural Bangladesh, poor households paid more than 4 months income on medical costs
- In both cases, these amounts were significantly higher percentage than non-poor households

# Impacts on Households (3)

- The poor have less job security and most of them were unable to return to work
- Thus, in addition to medical recovery time (average of 2 months) and career time, poor households lost further time in seeking new employment (in rural Bangladesh, job seeking took 57 days for the poor and 24 days for non-poor)

# Coping Strategy

- **Poor households went deeper into debt as borrowing money was the common response to costs incurred by a road crash**
- **Two-thirds of poor households in Bangladesh borrowed money, significantly more than non-poor households. Bangalore had similar results**
- **One-third of Bangladesh households sold an asset; 1 in 5 in Bangalore**

# Coping Strategy (2)

- Among poor households, 85% reported, at least one person gave up work to care for the injured
- Virtually no households received compensation from insurance (<1%)
- In Bangladesh, 13% of urban poor and 27% of rural poor households received a private settlement

# Consequences

- **7 of 10 poor families suffered a decrease in total household income, after one member was involved in a crash**
- **Less income means less food; many households reported decreased food consumption**
- **Burden from road crashes is high tipping many households into poverty**

## Consequences (2)

- In Bangalore, 71% of urban and 53% rural households were not poor before the fatal crash. For serious injuries, 17% of urban and 25% rural households
- In Bangladesh, 33% urban and 49% rural households were not poor before the fatal crash. For serious injuries 21% urban and 37% rural households were similarly affected



ADB

# arrive alive

ASEAN Commits to Cutting Road Deaths

ASEAN Regional Road Safety Strategy  
and Action Plan (2005–2010)

ADB

**Thank you.**

**For more information,**

**contact: [cmelhuish@adb.org](mailto:cmelhuish@adb.org)**