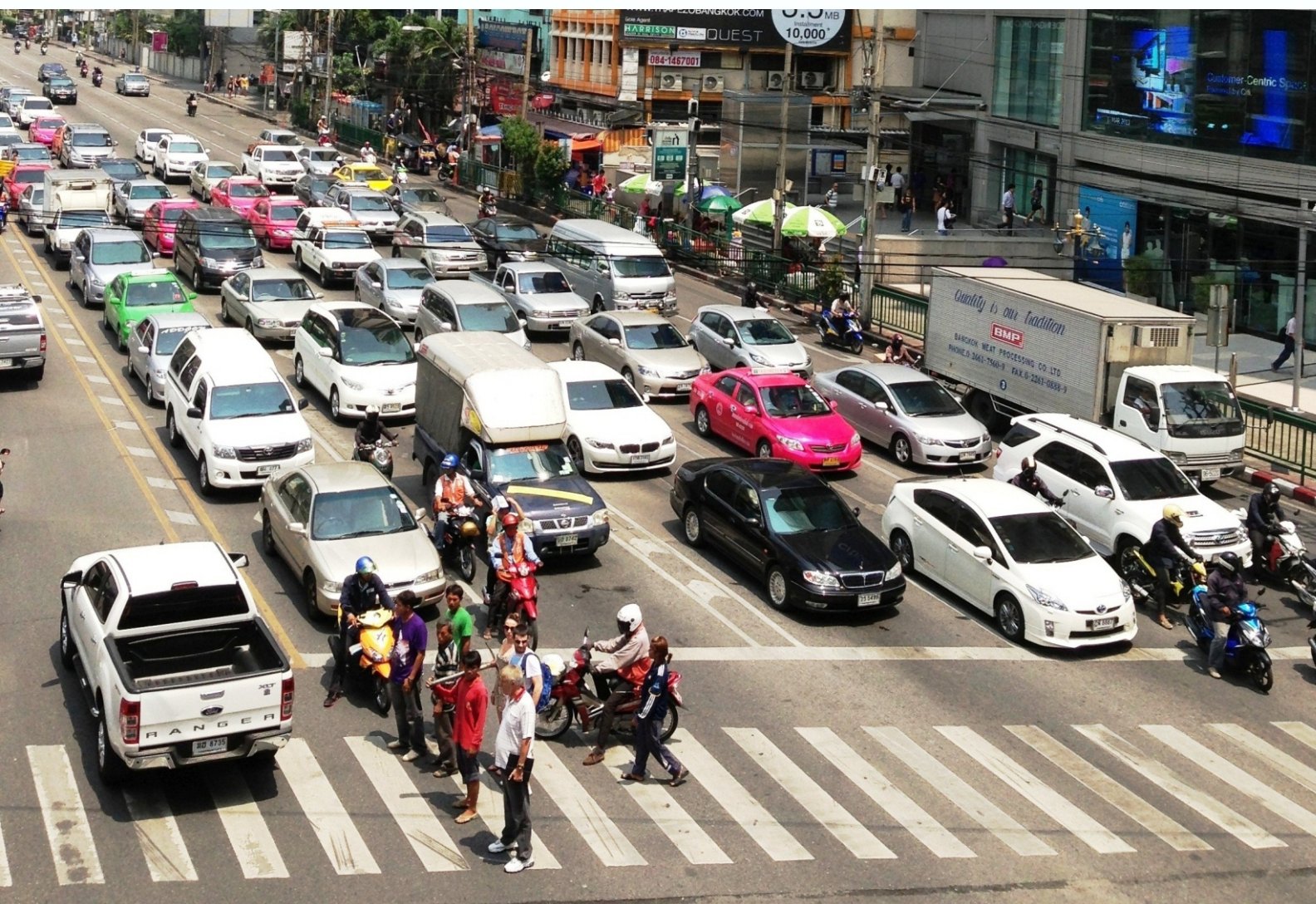


Regional strategy for road safety in South-East Asia



Regional strategy for road safety in South-East Asia

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1. Background

Around 1.25 million people die each year globally due to road traffic crashes and between 20 and 50 million more sustain non-fatal injuries.¹ Over 90% of the road deaths occur in low- and middle-income countries. In 2004 alone, 306 000 people were estimated to have been killed on SEAR roads. Road traffic injuries (RTI) are the ninth leading cause of death globally; current trends suggest that they will become the fifth by 2030, with the disparity between rich and poor countries further accentuated. These deaths and injuries have an immeasurable impact on the affected families and communities including direct and indirect costs resulting from these injuries. RTIs have captured global and regional attention and efforts to address the issues are being made by all partners concerned. (Table 1)

Table 1: Global and regional efforts for road safety

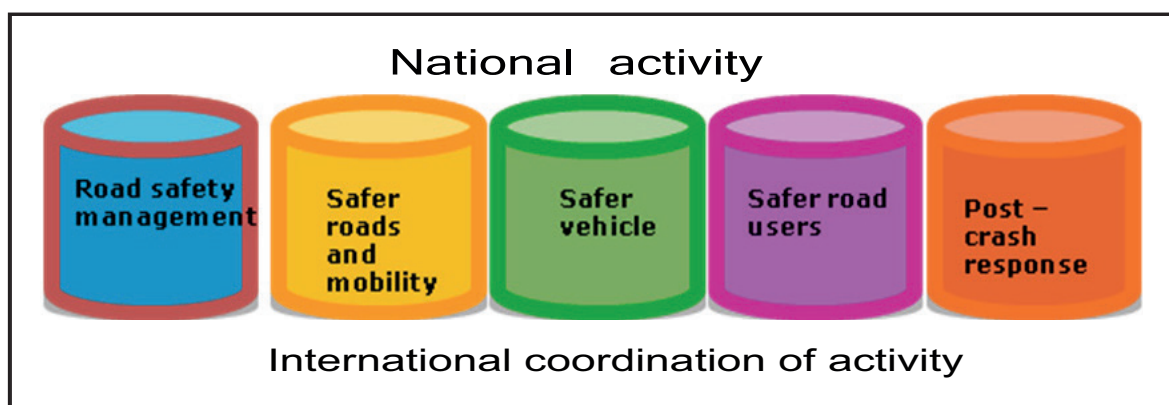
Year	Global effort	SEAR efforts
2002–2004	WHO and World Bank launched 'World Report on Road Traffic Injury Prevention' ²	Road safety is listed as regional priority in SEAR priorities for policy action ⁵
2009	WHO published the first Global Status Report on Road Safety ³	First regional status report on road safety ⁶ was published
2010	UNGA resolution 64/255 proclaimed 2011–2020 as Decade of Action for Road Safety ⁴	RC resolution was adopted urging prevention of RTI, motor cycle related injuries in particular ⁷
2011	Global launch of the Decade of Action 2011 – 2020	A regional factsheet on The Silent Epidemic of RTI in SEA Region was published

1.1 Decade of Action for Road Safety 2011–2020

In 2010, the United Nations General Assembly adopted Resolution 64/2551, which proclaimed the Decade of Action for Road Safety 2011–2020. The goal of the Decade is to stabilize and reduce the increasing trend in road traffic deaths, and to save an estimated five million lives globally over the period.

A Global Plan was developed to guide national responses and provide a practical tool for supporting Member States and stakeholders for developing national and local plans of action. The Decade plan also provides a framework for coordination of activities at regional and global levels. The overall framework of the decade is based on five “pillars” of activities (Figure 1). The expected outcome of the Decade of Action is to achieve a 50% reduction in the forecast level of fatalities by 2020.

Figure1: Five pillars that form the basis of national road safety activities over the Decade



Source: Decade on action on road safety 2011 – 2020

1.2 Resolution of the WHO Regional Committee for South-East Asia

Recalling World Health Assembly resolutions WHA56.24 on implementing the recommendations of the World Report on Violence and Health, WHA57.10 on Road Safety and Health, WHA58.23 on Disability, including Prevention, Management and Rehabilitation, and WHA60.22 on Health Systems: Emergency-Care System, and its own resolution SEA/RC47/R3 on Accident Prevention and Trauma Care Management, which recommends that Member States integrate prevention of traffic injuries into public health programmes and strengthen emergency and rehabilitation services,

The resolution SEA/RC47/R3 urges Member States:

- (a) to consider setting up trauma care and management facilities;
- (b) to introduce legislation, where required, and intensify efforts to enforce the safety laws, and
- (c) to improve community awareness programmes by using effective communication techniques to popularize safe practices.

Another resolution of the WHO Regional Committee for South-East Asia on Injury Prevention and Safety Promotion (SEA/RC63/R2) urges Member States:

- (1) to advocate for the establishment of a national mechanism or authority at the highest level, declare injury prevention and safety promotion a national agenda, direct, coordinate, monitor and evaluate, continue dialogue with all sectors including the private sector (such as industries, corporations and insurance agencies), and civil society organizations to enhance national action plans, strategies and multisectoral programmes to establish a national healthy public policy;
- (2) to establish or strengthen the existing injury management unit within ministries of health to plan, implement and coordinate injury prevention and safety promotion programmes, with appropriate budget and staff;
- (3) to play a more active role in advocacy for active participation of the non-health sector, lawmakers and politicians in injury prevention and safety promotion to ensure that due consideration is given to public health in their policies and decision-making;
- (4) to support and foster the full involvement of communities, civil society, the private sector, nongovernmental organizations, public health institutions and mass media when framing national policies, strategies and multisectoral programmes on injury prevention and safety promotion, including legislative measures;
- (5) to strengthen national injury surveillance and other injury-related data systems for generating evidence-based information for policies and programme development, and monitoring and evaluation of injury prevention and safety promotion programmes;
- (6) to address local priorities through policy, research and interventions emphasizing risk management and effective prevention of road traffic injuries, in particular motorcycle-related injuries; suicides; drowning, burns predominantly affecting females and children; and interpersonal violence;
- (7) to integrate injury prevention and safety promotion activities into public health programmes and policies, including strengthening them as part of the primary health care package;

- (8) to continue strengthening qualified pre-hospital emergency medical services, basic and professional acute trauma services in national and local hospital settings, and rehabilitation services for injured persons;
- (9) to create a network of national institutions, academia and individuals who practice injury prevention, care and safety promotion, and organize regular national conferences to share experiences and advance the agenda of injury prevention and safety promotion.

1.3 Second Global Status Report on Road Safety 2013

United Nations General Assembly (UNGA) resolution 64/2551 recommended the Second Global Road Safety Status Survey to measure progress of the Decade. Specific objectives of the second global status report on road safety are to:

- describe the road safety situation in all Member States using a standardized methodology and assess changes that have occurred since the publication of the first global status report in 2009;
- indicate the gaps in road safety nationally and thereby stimulate and prioritize road safety activities; and
- serve as a baseline for monitoring activities relating to the Decade of Action for Road Safety at the national and international levels.

Data were collected from WHO's 182 confirmed Member States with standardized country questionnaires. A regional questionnaire was also used to assess the regional concern on motorized 2/3 wheelers and road traffic injuries in children less than 15 years old. All the 11 Member States in the South-East Asia Region participated in the survey. Data collection in the Region was completed by the end of 2011. After validation, the data were endorsed by the governments before analysis.

2. Burden of road traffic injuries in the South-East Asia Region

The estimated road traffic death rate in SEAR is 18.5 per 100 000 population (Table 2). Thailand has the highest rate of 38.1 per 100 000 population followed by Timor-Leste (19.5), India (18.9), Indonesia (17.7) and Nepal (16.0). Maldives had the lowest rate with only 1.9 per 100 000 population. The rate is higher in middle-(19.5) than in low-income countries (12.7).

Table 2: Estimated road traffic fatality per 100 000 population in SEAR countries during the Second Global Status Survey on Road Safety, 2006–2011.

Country	Population ⁸	Reported data	Estimates of Road traffic deaths by WHO Geneva		Estimated death / 100 000
			Number	95% CI	
Bangladesh	148 692 128	2 958	17 289	15 415–19 164	11.6
Bhutan	725 940	79	96	88–104	13.2
Democratic People's Republic of Korea	24 346 229	-	2 614	2 378–2 850	10.7
India	1 224 614 272	133 938	231 027	-	18.9
Indonesia	239 870 944	31 234	42 434	37 195–47 673	17.7
Maldives	315 885	6	6	-	1.9
Myanmar	47 963 010	2 464	7 177	6 187–8 166	15.0
Nepal	29 959 364	1 689	4 787	4 206–5 367	16.0
Sri Lanka	20 859 949	2 483	2 854	2 602–3 105	13.7
Thailand	69 122 232	13 766	26 312	-	38.1
Timor-Leste	1 124 355	76	219	193–244	19.5
SEAR (All)	1 783 248 079	18 8693	-	-	18.5

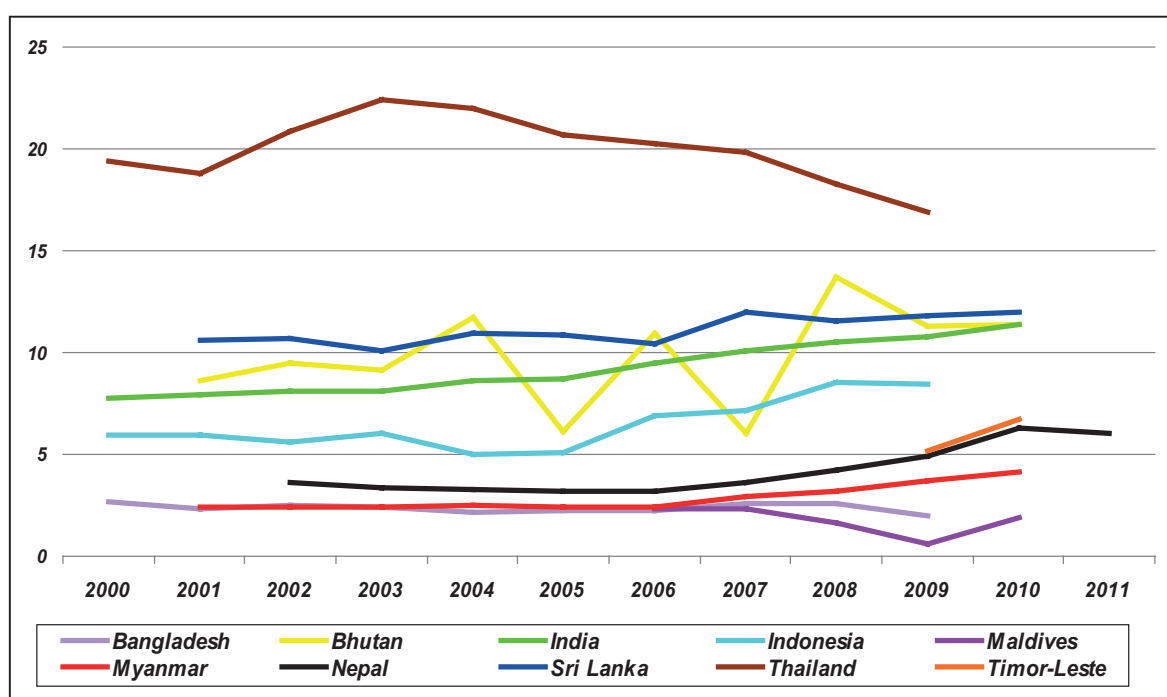
Population source: Department of Economic and Social Affairs of the United Nations Secretariat: Division of the World Population Prospects: The 2010 Revision, Highlights. New York: United Nations

Death Data source: **Bangladesh:** Police - Micro Analysis Accident Package (MAAP) 2009, **Bhutan:** Traffic Division, Royal Bhutan Police 2010, **India:** Accidental Deaths & Suicides in India 2009, **Indonesia:** Indonesia National Police, 2010, **Maldives:** Maldives Police Service 2010, **Myanmar:** Myanmar Police Force 2010, **Nepal:** Traffic Directorate, 2011, **Sri Lanka:** Registrar General's Department 2006, **Thailand:** Death certificate 2010, **Timor-Leste:** Police Records, 2010.

Source: Second Global Status report on Road Safety 2013

Figure 2: illustrates the reported trend in road traffic fatality per 100 000 population in SEAR countries over the period 2000 – 2011. All countries except Bangladesh, Maldives and Thailand showed an increasing trend in road traffic deaths. However, Thailand still has the highest mortality rate in the Region. In Bhutan, reported mortality trend estimates showed an irregular rise. India, Indonesia, Myanmar, Nepal, Sri Lanka, and Timor-Leste showed an increase in the mortality rate during the period 2000 to 2011.

Figure 2: Reported road traffic fatality rates per 100 000 population, in SEAR countries, 2000 – 2011



Data Source for SEAR countries:

Bangladesh: Police FIR (First Information Report), **Bhutan:** Traffic Division, Royal Bhutan Police, **India:** Road Accidents in India, Ministry of Road Transport and Highways, Transport Research Wing, Government of India, **Indonesia:** Indonesian Police, **Maldives:** Maldives Police Service, **Myanmar:** Myanmar Police Force, **Nepal:** Traffic Directorate (Calendar year starts from July), **Sri Lanka:** Police records, **Thailand:** Thai Police Information System, **Timor-Leste:** Police records.

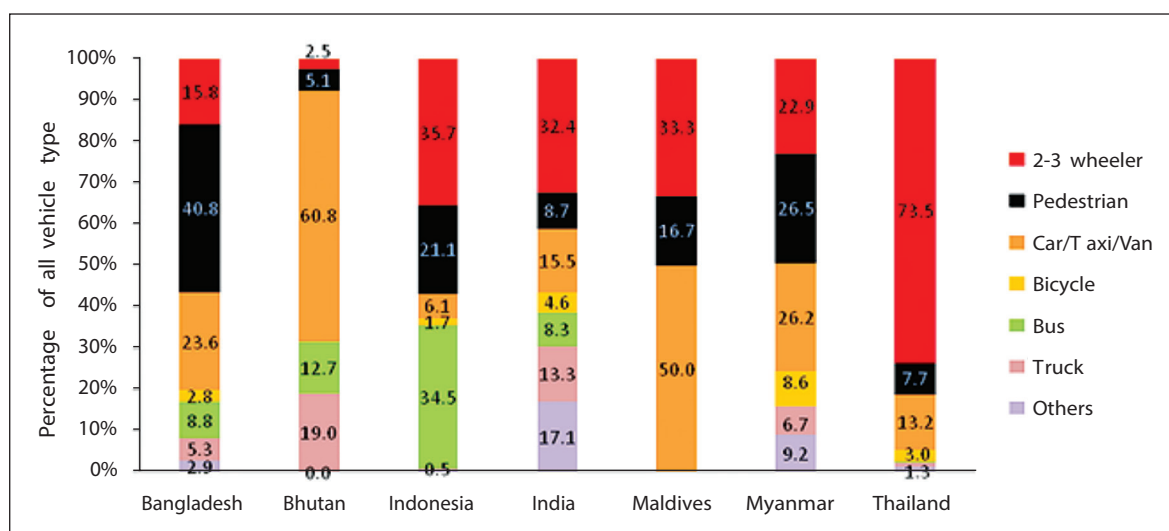
2.1 Epidemiology of road traffic deaths in SEAR

The highest proportion of road traffic deaths are in the age group of 15 – 29 years. The proportion ranges from 18% in Bangladesh to 66.7% in Maldives. Deaths of children (<15 years) were the highest in Timor-Leste (10.5%) followed by Bangladesh (9.3%), Indonesia (8.8%), Bhutan (7.6%), Myanmar (7.5%) and Thailand (6%). Elderly death (≥60 years) is the highest in Sri Lanka (21.5%) followed by Bhutan (16.5%) and Thailand (13.2%). Nepal and Timor-Leste do not have figures of road traffic deaths by age group.

The ratio between road traffic fatalities of males to females is 4.7. The country with the highest male-to-female ratio of road traffic fatality is Bangladesh (5.7) followed by India (5.3) and Nepal (5.0). The ratio is lowest in Bhutan (2.2) and Maldives (2.0).

Drivers and passengers of motorized two- and three-wheeled vehicles accounted for the highest proportion among road deaths in Thailand (73.5%), Indonesia (35.7%) and in India (32.4%). Pedestrians are the most affected group in Bangladesh (41% of all road traffic deaths) and Myanmar (27%); 21% of road deaths in India and 17% in Maldives are of pedestrians. Four-wheeler occupants are major contributors to the RTI death toll in Bhutan (60.8%) and Maldives (50%). Indonesia had significant underreported death cases of motorcycle drivers and passengers due to the changes in the data system in 2010 (Figure 3).

Figure 3: Distribution of road traffic deaths by type of road users in the South-East Asia Region, 2009 – 2010



Source: Global Status Report on Road Safety 2013

Bangladesh: Police - First information report 2009, **Bhutan:** Traffic Division, Royal Bhutan Police 2010, **India:** Accidental Deaths & Suicides in India 2009, **Indonesia:** Indonesia National Police, 2010, **Maldives:** Maldives Police Service 2010, **Myanmar:** Myanmar Police Force 2010, **Sri Lanka:** Registrar General's Department 2009, **Thailand:** National injury surveillance system 2010

2.2 Vehicle increase in the Region

The total number of registered vehicles in the Region has increased by 28.2% from 167.6 million in the first survey to 214.8 million in the second survey. India showed the highest increase by 44.7% from 72.7 million in 2009 to 105.2 million in 2012. In Myanmar, Nepal Timor-Leste and Bangladesh registered vehicles rose by 117%, 80%, 74% and 54% respectively (Table 4).

Table 4: Number and proportion of registered vehicles by type in SEAR countries: comparison between first and second global status report data of 2009 and 2011.

Member States	4-wheeled cars and light vehicles		2- or 3-wheeled vehicles		Heavy trucks		Buses		Other vehicles		Total number of registered motorized vehicles		% increase in vehicle registration
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012	
Bangladesh	25	32.57	62.2	60.05	5.9	5.02	3.3	2.34	3.6	0.02	1 054 057	1 624 559	54.1
Bhutan	56.6	65.15	20.9	15.78	12.6	12.35	0.5	0.48	9.4	6.24	35 703	54 025	51.3
DPR Korea*	Information not available												
India	16	13.32	71.4	71.68	3.3	5.26	1	1.29	8.3	8.45	72 718 000	105 242 000	44.7
Indonesia	15	11.21	73	82.75	8	4.53	4	1.51	-	-	63 318 522	72 692 951	14.8
Maldives	15.3	13.06	79.2	82.1	0.8	4.59	0.2	0.24	4.5	-	33 807	50 052	48.1
Myanmar	28.3	11.58	64.6	82.14	3.2	2.82	1.8	0.93	2.1	2.54	1 045 105	2 267 620	117.0
Nepal	15.8	11.37	69.2	75.58	5.4	4.07	2.7	2.98	6.9	6.01	617 305	1 108 040	79.5
Sri Lanka	17.8	15.67	62.9	66.52	7.7	7.5	2.6	2.13	9	8.18	3 125 794	3 630 847	16.2
Thailand	32.8	34.71	63	60.81	2.9	2.87	0.5	0.48	0.8	1.12	25 618 447	28 165 031	9.9
Timor-Leste	18.8	17.43	72.1	76.29	7.9	6.07	0.2	0.21	-	-	5 559	9 660	73.8

Source of data: 2nd Global Status Report for Road Safety 2012

* Democratic People's Republic of Korea

Bangladesh: Bangladesh Road and Transport Authority, **Bhutan:** Road Safety and Transport Authority (RSTA), **India:** Road Accidents in India, 2009, Ministry of Road Transport and Highways, Transport Research Wing, Government of India, **Indonesia:** Indonesia National Police , **Maldives:** Transport Authority, **Myanmar:** Road Transport Administration Department, **Nepal:** Department of Transport Management, **Sri Lanka:** Department of Motor Traffic, **Thailand:** Department of Transport, **Timor-Leste:** Ministry of Transport

The number of motorized two- and three-wheeled vehicles have particularly increased in most countries except Bangladesh, Bhutan and Thailand. Even in these countries, the number of two- or three-wheelers increased though the relative proportion remained static. In Myanmar the proportion of two- and three-wheeled vehicles increased from 65% in 2009 to 82% of all types of vehicles in 2012.

Motorcycles form the main bulk among motorized two- and three-wheelers in most countries. The number of registered four-wheeled vehicles have increased in Bangladesh (25% in 2009, 33% in 2012), Thailand (33% in 2009, 35% in 2012) while heavy trucks have increased in India (3% in 2009, 5.3% in 2012) (Table 4).

The number of registered vehicles per 1000 population (vehicle population ratio) is a significant indicator for exposure to risk of road traffic crashes. Vehicle population ratio is the highest in Thailand; it has 412.1 vehicles for 1000 population. The figure is 303.2 in Indonesia, 189.6 in Sri Lanka, 158.4 in Maldives and 93.9 in India. Bangladesh has the lowest number of registered vehicles (10.9/1000) (Table 5).

In all countries except Bhutan, motorcycles accounted for the largest proportion of registered vehicles. Except Bhutan, the proportion of registered vehicles ranges from 49% in Bangladesh up to 83% in Indonesia. The number of motorcycles per 1000 population was the highest in Indonesia (250.9) followed by Thailand (250.3) (Table 5)

Table 5: Number of registered vehicles and motorcycles (MC) per 1000 population in SEAR, 2009 – 2011

Country	Vehicle/1000 population	Motorcycle*/1000 population	Motorcycle# % of all vehicles
Bangladesh	10.9	5.3	48.8
Bhutan	79.4	12.5	15.8
India [#]	93.9	67.3	71.7
Indonesia [#]	303.2	250.9	82.7
Maldives	158.4	129.1	81.5
Myanmar	48.5	39.8	82.1
Nepal	39.4	29.5	75
Sri Lanka	189.6	100.7	53.1
Thailand	412.1	250.3	60.7

[#]Percentage of motorcycles of all registered vehicles [#] Three-wheeled vehicles are not separately registered officially in India and Indonesia at national level

Vehicle data Source: Second Global Status Report for Road Safety 2012

Bangladesh: Bangladesh Road and Transport Authority, 2010, **Bhutan:** Road Safety and Transport Authority, 2011, **India:** Road Accidents in India, 2009, Ministry of Road Transport and Highways, Transport Research Wing, Government of India, 2009, **Indonesia:** Indonesia National Police, 2010, **Maldives:** Transport Authority, 2011, **Myanmar:** Road Transport Administration Department, 2011, **Nepal:** Department of Transport Management, 2011, **Sri Lanka:** Department of Motor Traffic, 2010, **Thailand:** Department of transport, 2010

3. Purpose of the strategy

The main purpose of the strategy is to minimize the burden of road traffic injury in the SEA Region, based on the evidence generated by the Second Global Status Report on Road Safety 2013 through concerted action in alignment with UN and WHO frameworks as follows:

- Decade of Action for Road Safety 2011–2020;
- Resolution of the WHO Regional Committee for South-East Asia 2010;
- Recommendations of the Expert Group on Preventing Motorcycle Injuries in Children, WHO-SEARO 2010; and
- Strategic approaches for injury prevention and control, WHO-SEARO 2011.

4. Road safety situation in SEA Region according to the Second Global Status Report on Road Safety and target for the Decade of Action

In developing this document, the five pillars of the Decade of Action on Road safety have been considered:

Pillar 1: Road safety management

Recommendations by the Decade of Action for Road Safety:

Adhere to and/or fully implement UN legal instruments and encourage the creation of regional road safety instruments; and

- Encourage creation of multisectoral partnerships and designation of lead agencies with the capacity to develop and lead the delivery of national road safety strategies, plans and targets and underpinned by the data collection and evidential research to assess counter measure and road design and monitor implementation and effectiveness.

What did the second survey find?

Lead agency

- All Member States had a lead agency for road safety except India, Indonesia and Nepal. All lead agencies are interministerial committees except in Democratic People's Republic of Korea (Cabinet);
- The coordinating functions at the central government process are achieved in all the agencies while decision-making of central coordinating function is not existent in Sri Lanka. Coordination at different levels of the government is not existent in Sri Lanka and Timor-Leste.;

- All lead agencies, except in Myanmar, Sri Lanka and Thailand conduct a periodic review of legislation, and
- All country lead agencies established and supported data systems to monitor road safety outcomes except in Sri Lanka. Except Timor-Leste, all other lead agencies with data acquisition system conduct compilation and dissemination of the national statistics.

National strategy

- All Member States have a national strategy for road safety except three countries (Maldives, Nepal and Sri Lanka). All of them have one national level strategy except Timor-Leste. India and Thailand have both a national strategy and multiple strategies in different sectors and levels. Only Timor-Leste has strategies for different sectors.
- Full funding is not available for strategies in any of the countries; however, partial funding exists in all countries with a strategy.
- Three out of eight countries have national strategies in line with the Decade of Action for Road Safety;
- All Member States with a national strategy have measurable targets for fatal injuries, except India and Timor-Leste. In Bhutan, reduction of road traffic deaths from 15 to 5 per 10 000 vehicles is target by 2020. The Democratic People's Republic of Korea, has targeted a 2% decrease of road traffic deaths. A 50% reduction of deaths is targeted in Bangladesh, Indonesia and Myanmar. In Thailand a reduction to less than 10/100 000 population in 2020 is targeted;
- There are no measurable targets for non-fatal injuries in the national strategies of Member States except in Democratic People's Republic of Korea (where an annual decline of 1% is targeted),
- Five Member States had targets for reducing speed and alcohol-impaired driving and increasing seat belt use. Helmet wearing target exists only in Thailand.
- Increasing use of child restraints is targeted in two countries, while increasing motorcycle helmet use is targeted in six of nine countries with strategies.

Road traffic injury data system

- All countries have a vital registration system except Timor-Leste. However, only three of 10 countries could provide the number of RTI deaths at national level (Democratic People's Republic of Korea didn't

provide the information). In 2010, the vital registration system recorded 15 deaths in Bhutan, six deaths in Maldives and 13 766 deaths in Thailand. In Thailand and Maldives vital registration data are similar to reported data; however, it is only around 20% of reported deaths in Bhutan.

- Six countries could provide the number of road traffic injury cases present in emergency rooms (Bhutan, Indonesia, Maldives, Myanmar, Thailand and Timor-Leste). Thailand reported 857 206 cases in 2009.
- Two countries (Myanmar and Thailand) could provide the number of RTI cases admitted in hospital wards. Myanmar reported 5 370 cases in 2010 from five sentinel hospitals and Thailand reported 178 841 cases in 2009 from 33 hospitals.
- In Myanmar 74% of emergency cases were admitted, while in Thailand, 21% were admitted.
- All countries had a police information system that captured annual numbers of road traffic deaths and distribution by sex and fatality rates over the last 10 years. The distribution of deaths by age groups and road user type were not available in the police data in Nepal and Timor-Leste, while in India and Sri Lanka, the distribution of deaths by road user types use a broader age interval than the survey. Table 6 illustrates the summary findings for Pillar 1.

Table 6: Road safety management (Pillar 1) situation in SEAR Member States in 2012

Member States	Lead agency		Review of legislation by lead agency	National Strategy present	Target in the National strategy						Vital registration system /RTI death case available
	Present	Funded			Target for dead	Speed	Alcohol	Seat belt	Child Restraint	Helmet use	
Bangladesh	Yes	No	Yes	Yes	Yes	No	No	No	No	No	Yes/yes
Bhutan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes/No
DPR Korea*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes/No
India	No	NA	NA	Yes	No	No	No	No	No	No	Yes/No
Indonesia	No	NA	NA	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes/No
Maldives	Yes	Yes	Yes	No	NA	NA	NA	NA	NA	NA	Yes/Yes
Myanmar	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes/No
Nepal	No	NA	NA	No	NA	NA	NA	NA	NA	NA	Yes/No
Sri Lanka	Yes	No	No	No	NA	NA	NA	NA	NA	NA	Yes/No
Thailand	Yes	Yes	No	Yes	Yes	No	No	No	No	Yes	Yes/Yes
Timor-Leste	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No

Source: Global status report on road safety 2013

* Democratic People's Republic of Korea

Pillar 2: Safer road mobility

Recommendations by the Decade of Action for Road Safety:

Raise the inherent safety and protective quality of road networks for the benefit of all road users, especially the most vulnerable (e.g. pedestrians, bicyclists and motorcyclists). This will be achieved through:

- implementation of various road infrastructure agreements under the UN framework, road infrastructure assessment; and
- improved safety-conscious planning, design, construction and operation of roads.

What did the second survey find?

- Road inspection for new infrastructure projects are done in seven countries (except Bhutan, Maldives, Sri Lanka and Thailand).
- Only three countries are conducting a comprehensive routine inspection for all the existing roads (Bangladesh, Democratic People's Republic of Korea and Myanmar).
- Only two countries in the Region (India and Democratic People's Republic of Korea) had an independent agency for conducting road safety inspection other than the agency which conducts the construction and maintenance.
- Five countries have policies to separate road users as a way of protecting vulnerable road users, e.g. pedestrian lane, bicycle lane, motorcycle lane etc. but only the Democratic People's Republic of Korea has a policy at the national level; and

Three countries have conducted an International Road Assessment Programme (IRAP). Table 7 illustrates the summary findings for Pillar 2.

Table 7: Safer road mobility (Pillar 2) situation in SEAR Member States in 2012

Member States	Policy to separate vulnerable users	Safety review of new construction	Independent agency inspection	Conducted IRAP
Bangladesh	Yes	Yes	No	Yes
Bhutan	No	No	No	No
Democratic People's Republic of Korea	Yes	Yes	Yes	-
India	Yes	Yes	Yes	Yes
Indonesia	Yes	Yes	No	Yes
Maldives	No	No	No	No
Myanmar	Yes	Yes	No	No
Nepal	No	Yes	No	No
Sri Lanka	No	No	No	No
Thailand	No	No	No	No
Timor-Leste	No	Yes	No	No

Source: GSSRS 2013

Pillar 3: Safer vehicles

Recommendations by the Decade of Action for Road Safety:

Encourage universal deployment of improved vehicle safety technologies for both passive and active safety through a combination of:

- harmonization of relevant global standards;
- consumer information schemes; and
- incentives to accelerate uptake of new technologies.

What did the second survey find?

- Legislation/regulation requires both front and rear seat belts in four countries for manufactured/assembled cars (Bangladesh, Democratic People's Republic of Korea, Maldives and Thailand) and five countries for imported cars (Bangladesh, Democratic People's Republic of Korea, Maldives, Thailand, Timor-Leste).
- Except the Democratic People's Republic of Korea, no Member States has a comprehensive legislation/ regulation for crash avoidance technologies (anti-locking brake system (ABS), electronic stability control

and airbags). Timor-Leste has a regulation for only ABS and electronic stability control, but not for airbags.

- Five countries have applied for international or regional vehicle safety standards or features: India, Myanmar and Timor-Leste applied for new car assessment programme. Indonesia and Thailand applied for United Nations Economic Commission regulations for Europe (UNECE–WP.29). This regulation has provision for helmet, brake and wheel standard separately but not in combination.

Pillar 4:- Safer road users

Recommendations by the Decade of Action for Road Safety:

Develop comprehensive programmes to improve road user behaviour. Sustained or increased enforcement of laws and standards, combined with public awareness/ education to:

- increase seat-belt and helmet wearing rates; and
- to reduce drink-driving, speed and other risk factors.

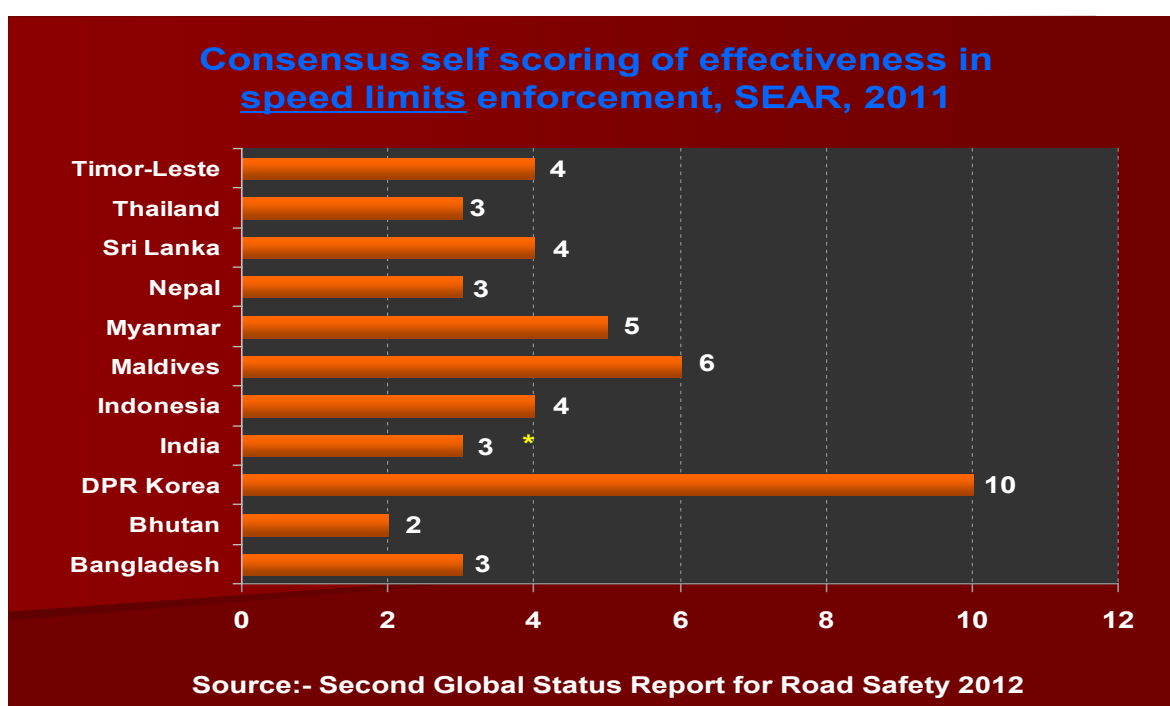
What did the second survey find?

Speed limits law

- All countries had national speed limits (urban, rural and highways), however, four countries had set a speed limit around schools (Bangladesh, India, Indonesia and Thailand).
- All Member States enforce speed limits by roadside police enforcement. Traffic calming measures are used in nine of them (except Democratic People's Republic of Korea and Sri Lanka). Design standards are used to control speed in six countries (except Bhutan, Democratic People's Republic of Korea, Maldives, Sri Lanka and Thailand), slow passing lanes in five countries (Bangladesh, Indonesia, Maldives, Myanmar and Nepal), while automated speed enforcement is only in India and Thailand.
- Fines are used to penalize speed limit transgressors in all countries and five countries use this as the only mechanism in India, Indonesia, Maldives, Nepal and Sri Lanka.
- Only the Democratic People's Republic of Korea has a comprehensive legislation/ regulation for crash avoidance technologies (anti-locking brake system, electronic stability control and airbags).
- Timor-Leste has a legislation/regulation for anti-locking brake system and electronic stability control but doesn't have a regulation for airbags.

- Five countries have applied international or regional vehicle safety standards or features, but India, Myanmar and Timor-Leste have applied only for new car assessment programme. However, these programmes do not cover motorcycles.
- United Nations Economic Commission for Europe (UNECE) regulations are applicable in Indonesia and Thailand and these regulations have provision for helmet, brake and wheel standard separately but not in combination.
- Countries also use license suspension (Bangladesh, Bhutan, Democratic People's Republic of Korea, Myanmar, Thailand and Timor-Leste). Vehicle impoundments are used in four Member States (Bangladesh, Democratic People's Republic of Korea, Myanmar and Timor-Leste). Two countries use penalty demerit points (Bhutan and Thailand) and two countries use prison/jail/detention terms (Bangladesh and Myanmar).

Figure 4: Effectiveness in speed limits enforcement in SEAR Member States, 2011

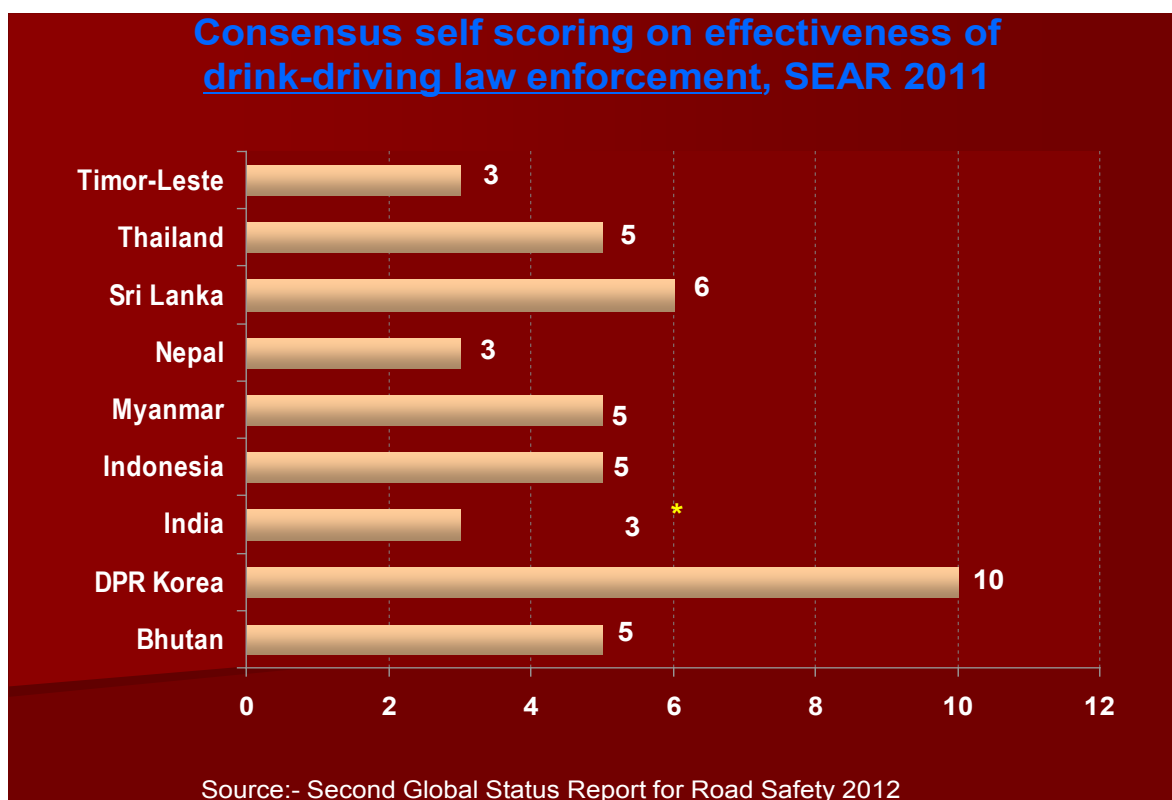


Drink driving laws

- All Member States have a drink driving law except Maldives. However, in three countries (Bangladesh, Indonesia and Nepal); the law is based on police assessment and not on Blood Alcohol Concentration (BAC).

- Among the six countries with BAC-based law, limit for all types of drivers, in India, Sri Lanka and Timor-Leste are 0.03g/dl, 0.08 g/dl and 0.05 g/dl respectively. In Bhutan and Thailand for professional drivers the limit is 'zero', however for novices it is 0.08 g/dl and 0.05 g/dl respectively. In the Democratic People's Republic of Korea 'zero' alcohol limit is applicable for all drivers.
- Only Thailand had a national estimate for annual road traffic deaths due to alcohol impairment (25.8% of RTI deaths, injury surveillance system, 2010).
- Seven countries are enforcing the law by breath testing at specific locations or times (except Bangladesh, Indonesia and Timor-Leste). Of them, Democratic People's Republic of Korea, Nepal and Thailand are also enforcing through all-year-round random population breath testing.
- To penalize transgressors of drink driving law with fines, seven countries use license suspension or revocation (except Indonesia and Nepal), six countries use prison/jail/detention terms (except Democratic People's Republic of Korea, Nepal and Timor-Leste), five countries use vehicle impoundment (except Indonesia, Nepal, Sri Lanka and Thailand), three countries use penalty demerit points (Bhutan, Democratic People's Republic of Korea and Thailand), and two use assessment rehabilitation (Democratic People's Republic of Korea and Thailand).
- Democratic People's Republic of Korea uses mandatory treatment and Thailand uses community service while no country uses alcohol ignition interlock to penalize transgressors of drink driving law. Information on enforcement in Bangladesh is not available.
- In Nepal and Democratic People's Republic of Korea, all fatalities are tested for blood alcohol contents. In Democratic People's Republic of Korea all non-fatal injuries are also tested.
- Some of the non-fatal and fatal injuries are tested in Bhutan and Myanmar. India tests some of the fatal injuries but not any of the non-fatal injuries.
- None of the countries test drivers for substances other than alcohol, except Myanmar.

Figure 5: Effectiveness of drink driving law enforcement in SEAR Member States, 2011

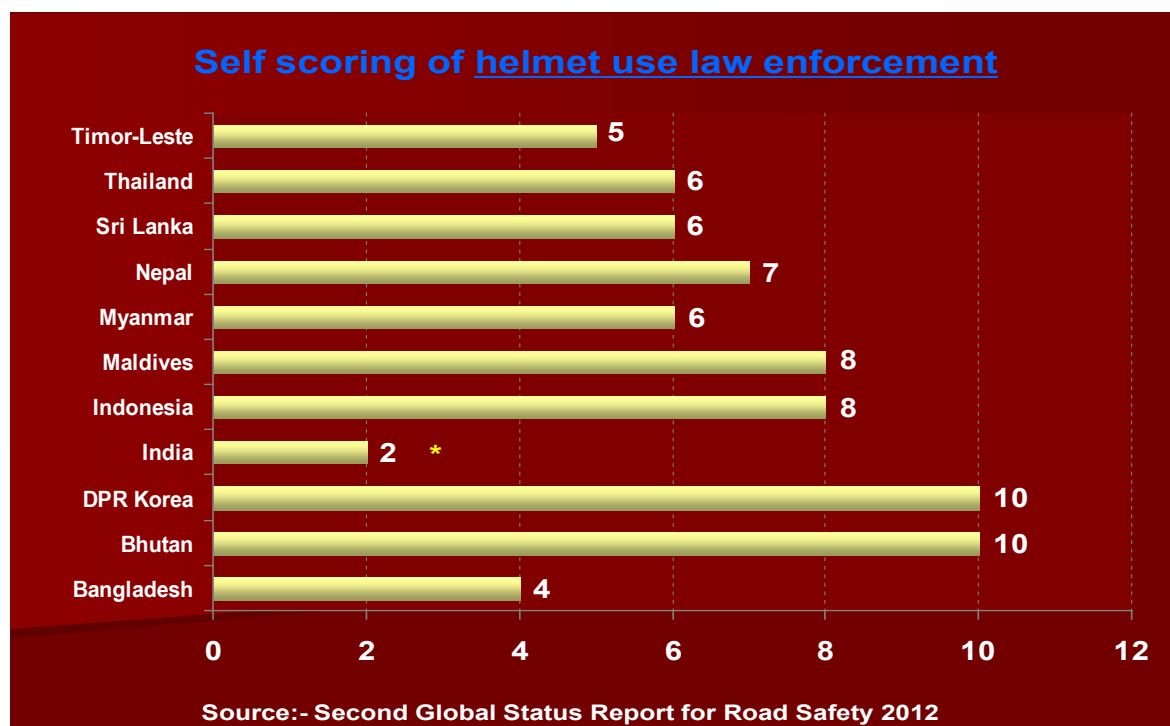


Motorcycle helmet law

- All Member States have a national motorcycle helmet law that requires helmet use by all drivers of motorized two-wheelers. (There are no exemptions in the law for children riding on motorcycle).
- All child passengers who are legally allowed to ride as passengers on motorized two-wheelers are required to use helmets). All Member States except Maldives require the use of motorcycle helmet on all road types and for all engine types.
- Most countries have no minimum age or height at which children are allowed to ride as passengers on motorized two-wheelers except in Democratic People's Republic of Korea (17 years old) and Timor-Leste (seven years old).
- All Member States are enforcing motorcycle helmet law by road checks or blocks.
- Estimated percentage of helmet wearing was available in five Member States. Among all riders the percentage in India is 20 – 35%, in Thailand 44%, in Myanmar 48 – 51%, in Indonesia 82% and in Sri Lanka the highest, at 96%.

- Helmet use rate among drivers is 50% in India, 53% in Thailand, 80% in Indonesia and 99% in Sri Lanka.
- Among passengers, the percentage is <10% in India, 19% in Thailand and 52% in Indonesia and highest 87% in Sri Lanka.

Figure 6: Helmet use law enforcement for motorcycles in SEAR Member States, 2011

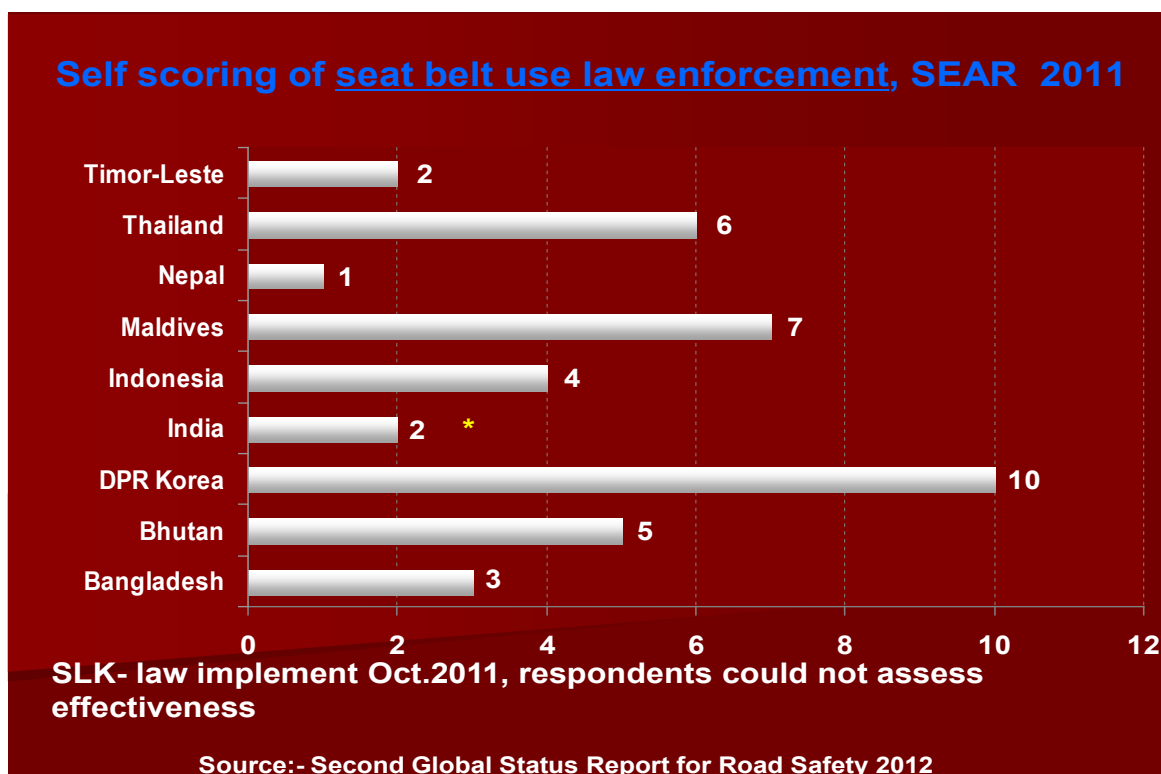


Seat belts and child restraints

- All Member States have a seat belt law except Myanmar. The law requires seat belt use on all roads.
- A comprehensive seat belt law requiring use of seat belt by both front and rear seats occupants exists in six (Bhutan, Democratic People's Republic of Korea, India, Maldives Nepal and Timor-Leste).
- Law is enforced by road checks or blocks. Additionally, mobile courts are used in Bangladesh.
- All countries are enforcing seat belt law by fines. License suspension or revocation and vehicle impoundment is only used in Democratic People's Republic of Korea and Timor-Leste. Penalty demerit points are used in Thailand and Timor-Leste.
- Estimates of seat belt wearing rates, in all drivers are: 27% in India, 79% in Sri Lanka and 61% in Thailand.

- Among front seat occupants only: 46% in Sri Lanka and 42% in Thailand. No estimates are available for rear seats or for all occupants.
- Only Timor-Leste has a child restraint law.

Figure 7: Seat belt use law enforcement, SEAR 2011



Mobile use while driving

- Three out of 11 countries are routinely collecting data on mobile phone use while driving. Maldives and Nepal are collecting data as a part of police crash report. Thailand police does not collect routine data on mobile phone use but the sentinel injury surveillance system does and also specific studies have been conducted.
- A national law regulating mobile phone use while driving is present in eight countries. India has the law at the state/provincial level while two countries (Myanmar and Nepal) do not have the law at all.
- Almost all countries that have the law prohibit the use of hand-held as well as, hands-free mobile phones and text messaging.
- Law does not prohibit the use of hand-held and hands-free mobile phones and text messaging in Sri Lanka and in Thailand. Only the use of mobile phone while driving is prohibited.

- *Graduated driver licensing for new car drivers*
- A graduated driver licensing (GDL) system is an initiative that allows for a controlled and supervised phasing in of many driver privileges over a period of time for new, young drivers. For example, Stage 1 may be an extended learner period, Stage 2 is a provisional or intermediate licence, and Stage 3 is a full licence.
- Four countries (Bangladesh, Bhutan, Myanmar and Timor-Leste) have a GDL system for new car drivers; however, the restrictions placed on new or young drivers are not the same (see table below).

Figure 8: Graduated drivers licensing facts in SEAR countries 2011

Graduated Driver Licensing in SEAR countries				
Only 4 of 11 countries had a graduated driver licensing				
Restriction	Bangladesh	Bhutan	Myanmar	Timor-Leste
Requirements for adult supervision	Yes	Yes	Yes	Yes
Requirements for minimum number of hours/ lessons of behind-the-wheel training	No	Yes	Yes	Yes
Restrictions on speed	No	Yes	Yes	Yes
Restrictions on alcohol consumption	Yes	Yes	Yes	Yes
Seat-belt requirements (e.g. enough seat-belts for each person in car)	Yes	Yes	No	Yes
Restrictions on maximum number of passengers	Yes	Yes	Yes	Yes
Restrictions on use of mobile phones	Yes	Yes	No	Yes
Restrictions on driving at night time	No	No	Yes	Yes
Restrictions on road type (e.g. cannot drive on motorways)	No	Yes	Yes	No
Restrictions on car type (e.g. engine size)	Yes	Yes	Yes	No

Source: *Second Global Status Report for Road Safety 2012*

In Bangladesh, the GDL system does not require a minimum number of hours/ lessons of behind-the-wheel training, restrictions on speed, driving at night or road type. Bhutan does not have restriction on driving at night. In Myanmar, the GDL system does not have restriction on mobile phone use, nor on compulsory seat belt wearing while in Timor-Leste, it does not restrict road type or car type.

Pillar 5: Post-crash response

Recommendations by the Decade of Action for Road Safety:

Increase responsiveness to post-crash emergencies and improve the ability of health and other systems to provide appropriate emergency treatment and longer-term rehabilitation for victims.

What did the second survey find?

Nationwide emergency access number

- Four countries have a nationwide emergency access number (Bhutan (112), Maldives (119), Thailand (1669) and Timor-Leste (110)). Thailand also has additional local access numbers.
- Four countries have multiple national numbers (Democratic People's Republic of Korea, India and Indonesia).
- Myanmar has state numbers.
- Bangladesh and Nepal do not have any emergency access numbers.

Capacity-building for national emergency and trauma care

- Five countries had a recognized specialty of emergency medicine for medical doctors (Democratic People's Republic of Korea, India, Indonesia, Nepal and Thailand)
- Four of 11 countries had formal post-graduate training programmes in emergency medicine recognized for nurses (Bhutan, Democratic People's Republic of Korea, India and Indonesia)

5. The recommended strategy

Following a review of the road safety situation in the South-East Asia Region, including burden of disease, existing road safety legislation with level of enforcement and targets for the Decade of Action for Road Safety 2011–2020, a strategy to address the problem has been proposed. The basic principles of the strategy are as follows:

1. Multisectoral approach:

- orchestrated action with health and non-health sector partnerships; and
- encouragement and facilitation of multisectoral involvement for sustainable road safety programmes including city planning.

2. Designation of lead agency

- designation of lead agency, chaired by the highest level of authority, with the capacity to develop and lead the delivery of national road safety strategies, plans, targets and budget.

3. Capacity-building of personnel working in road safety in different sectors

- building capacity among the people working on road safety e.g. lead agency, ministry of health and other related sectors, people to provide post-crash response (doctors/nurses, paramedics and first responders), academics and researchers.

4. Comprehensive programmes to improve road user behaviour

- adopt comprehensive legislation programmes that meet best practices on all key risk factors to address preventable causes of death, injury and disability; and
- Sustained or increased enforcement of laws and standards, licensing and graduate licensing system for new drivers, safe driving education.

5. Education and public awareness

- raise public awareness for increasing understanding of and support for safety provisions, legislative and enforcement measures on major risk factors, and standard road safety curriculum in early education;
- regulate and monitor the advertising and marketing process of the industry to comply with the law and not to promote risk behaviours or settings; and
- regular monitoring and control are required.

6. Integration of road traffic injury prevention with core health function

- integration of road traffic injury prevention and road safety promotion activities into public health policies, programmes and services including strengthening them as part of the primary health care package.

7. Sharing knowledge, evidence, information and networking

- support to national networking of national institutions, academia and individuals who practice road safety promotion to share experiences and advance the agenda of road safety at least every two years.

8. Data and research evidence generation for policy planning

- data generation through injury surveillance, research and surveys of major behaviours related to road safety in important determining groups, eg; police enforcement trend, parents support to road safety behaviours, operational research or registry for feeding policy planning;
- generating evidence for monitoring implementation and effectiveness of the programme; and
- encouraging research for newer technology and measures.

9. Improved vehicle safety

- ensuring improvement of vehicle safety in line with relevant global standards including uptake of new technologies, standard safety specification, and safety check list. A comprehensive policy package for pedestrian safety or motorcycle safety or car safety, should be developed relevant to the leading group of road death in each country in the Region.

10. Development of sustainable alternative commuting systems

- promoting non-motorized and safe public transport and separating vulnerable road users as a way of protecting them; and

- investment in safe public transport systems as a way of trying to mitigate some of the negative consequences associated with motorization for the rural setting in line with the urban setting; and a separate lane for vulnerable road users to protect them from heavy vehicles.

11. Improved roads and infrastructure

- raise the inherent safety and protective quality of road networks;
- implementation of various road infrastructure agreements under the UN framework, road infrastructure assessment; and
- improved safety-conscious city planning, design construction and operation of roads. Policies concerning neighbourhood schools with public transport facilities (including for free or subsidy for the same) should be considered by governments especially local governments.

12. Innovative mechanism for sustainable funding

- this is an important component to advance progress in road traffic injury prevention as it has various stakeholders, who need to focus their work in the same direction to achieve substantial reduction in mortality and morbidity.
- without a multisectoral budget for implementing the intervention harnessing all stakeholder activities together, the progress will not be substantial.
- innovative financing refers to a range of non-traditional mechanisms to raise additional funds for development aid through “innovative” projects such as micro-contributions, taxes, public-private partnerships and market-based financial transactions. Following are the sources for potential financing:
 - Alcohol excise and other taxes
 - Kerosene (heating/ lighting) excise and other relevant tax
 - Motor vehicle excise tax, risk tax, annual registration fee and other relevant tax
 - Fuel/petrol/oil excise and other relevant tax.
 - Auction car’s plate number
 - Road tax
 - Insurance
 - Penalty for violation of road traffic safety laws.

6. Recommended plan of action for the strategy by each pillar

This strategic document has been developed to achieve the targets of the Decade of Action on Road Safety by 2020 and lists the following priorities:

Pillar 1: Road safety management

- establish a lead agency in all Member States at the highest level of central government with sufficient budget and also the power to make decisions, manage resources, coordinate, monitor and evaluate the efforts of all government sectors, particularly health, transport, education and the police.
- enhance the function of facilitating review and revision of legislations to tighten loopholes in the existing lead agency in the Member States.
- strengthen the data systems in coordination with the lead agency to revise the national definition and standards e.g. road traffic deaths to be within 30 days of crash.
- to use standard classification of injuries of WHO ICD 10 –Chapter 20 external causes of morbidity and mortality etc, separating the road traffic injury data to identify road victim by road user types, age and sex, validation of data among vital registration systems, police information system and hospital-based systems; support research and surveys in RTI risk factors; collect data on interim indicators in order to allow countries to set and monitor targets relating to particular risk factors and monitoring of enforcement.
- allocate/distribute resources to each sector to implement and meet the national strategic targets.
- address local priorities through policy, research and interventions emphasizing risk management and effective prevention of road traffic injuries and strengthen research capacity and utilization in road safety; develop comprehensive policy package for protecting most vulnerable

road traffic victims, i.e. motorcycle riders (drivers and passengers) and pedestrians;

- support and foster the full involvement of communities, civil society, the private sector, nongovernmental organizations, public health institutions and the mass media when framing national policies, strategies and multisectoral programmes, including legislative measures;
- seek innovative mechanism for sustainable funding for multisectoral road safety project/programme. Ensure 10% of infrastructure investment for road safety; and
- support capacity building in multisectoral road safety team. Ensure at least 10% of national budget allocated to road construction for multisectoral road safety project / programmes.

Pillar 2: Safer roads and mobility

- review the standards of city planning, road design, construction and operation for alignment with the safe system approach, principles and response to national and local problems;
- apply the star rating system to national road network mapping;
- implement systematic road safety audit, formulate and implement safe road policies and practices and infrastructure investment plans for safety;
- strengthen national police fatal crash report systems to include accurately the elements of risk factors for road users and environment;
- actively address the safety and mobility needs of pedestrians, and motorcyclists who are the most vulnerable road users in the national road and infrastructure policy and implementation;
- separate vulnerable road users (e.g. motorcycle lanes, separated cycle lanes) from other heavy vehicles as an important way of protection and promote safe and sustainable non-motorized transport; and
- establish a specialist road safety or traffic unit to monitor and improve the safety of the road network.

Pillar 3: Safer vehicles

- participate in the international or regional standards for vehicle safety, especially the United Nations World Forum for harmonization of Vehicle Standards (WP.29);

- establish/develop a checklist or combined set of vehicle standards for safety of motorcycles or national preferred motorcycle product profile for safety with reference to the brakes, wheels and tyre standards from the WP.29, and the engine and speed according to the specification of each model of motorcycle;
- encourage implementation of new car assessment programmes in all regions of the world in order to increase the availability of consumer information about the safety performance of motor vehicles;
- encourage agreement to ensure that all new motor vehicles are equipped with seat belts and anchorages that meet regulatory requirements and pass applicable crash test standards (as minimum safety features);
- encourage universal deployment of crash avoidance technologies with proven effectiveness such as Electronic Stability Control and Anti-Lock Braking Systems in motorcycles;
- encourage the use of fiscal and other incentives for motor vehicles that provide high levels of road user protection and discourage import and export of new or used cars that have reduced safety standards;
- encourage application of pedestrian protection regulations and increased research into safety technologies designed to reduce risks to vulnerable road users; and
- encourage managers of governments and private sector fleets to purchase, operate and maintain vehicles that offer advanced safety technologies and high levels of occupant protection.

Pillar 4: Safe road users

- ensure the development/existence of national laws for six important risk factors i.e.; speeding, drink driving, non-use of motorcycle helmet, seat belt and child restraints, and the use of mobile phone while driving;
- review the hierarchy of roads that reflect road function (urban/rural/highways) and ensure existence and compliance to the speed limits with respect to influencing factors such as road design, roadside use, traffic mix and flow, presence of vulnerable road users and vehicle quality factors;
- ensure sufficient resources for effective and efficient law enforcement for road safety;
- monitor and evaluate the enforcement at national and local level by applying performance indicators for the concerned organizations, with accountability;

- use strong social marketing campaigns as important activities in increasing public understanding and acquiring support for a new or more stringent legislative measure;
- develop specific policy and measures to enhance motorcycle rider's safety, including children transported by motorcycles according to WHO SEARO expert group recommendations for preventing child motorcycle injuries, 2011;
- review and revise licensing process for motorcycle riders to include GDL system;
- implement multisectoral intervention programmes of safe system approach, especially for areas with high motorcyclist, pedestrian and cycling activities; and
- promote establishment of graduate driver licensing systems for new drivers.

Pillar 5: Post-crash response

- establish national programmes for road traffic crash victim insurance and post-crash emergency care trauma with nation-wide emergency access telephone number;
- continue strengthening qualified pre-hospital emergency medical services, basic and professional acute trauma services in national and local hospital settings, and rehabilitation services which include early and long term rehabilitation services for injured persons;
- establish national formal postgraduate programmes in emergency medicine for doctors and nurses;
- develop hospital trauma care systems and evaluate the quality of care through the implementation of good practices on trauma care systems and quality assurance;
- encourage a thorough investigation into the crash and the application of an effective legal response to road deaths and injuries and therefore encourage fair settlements and justice for the bereaved and injured;
- provide encouragement and incentives for employers to hire and retain people with disabilities; and
- encourage research and development into improving post-crash response.

Road traffic injuries (RTIs) are the ninth leading cause of death globally; current trends suggest that they will become the fifth by 2030, with the disparity between rich and poor countries further accentuated. These deaths and injuries have an immeasurable impact on the affected families and communities including direct and indirect costs resulting from these injuries. Road Traffic Injuries have attracted global and regional attention and efforts to address the problems are being taken by all partners concerned. The reported trend in road traffic fatality per 100 000 population in SEAR countries over the period 2000-2011 has shown an increasing trend in all countries except Bangladesh, Maldives and Thailand. However, Thailand has the highest mortality rate in the Region. In Bhutan reported mortality trend estimates were irregular rise. India, Indonesia, Myanmar, Nepal, Sri Lanka, and Timor-Leste showed increase in mortality rate over the period since 2000 to 2011. Drivers and passengers of motorized two- and three-wheeler vehicles accounted for the highest proportion among road deaths in Thailand, Indonesia and in India. Pedestrians are the most affected group in Bangladesh and Myanmar. 21% of road deaths in India and 17% in Maldives are of pedestrians. Four-wheeler occupants are the major contributors in RTI death toll in Bhutan and Maldives.

This document provides the strategy to address the problem with 12 basic principles. The plan of action for the strategy is also included in this document.



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