

RECENT PROGRESS IN ROAD SAFETY IN THE ESCAP REGION

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ABSTRACT

Road safety in developing countries of the ESCAP region is a development issue of serious concern, considering its magnitude and consequent negative impacts on the economy, public health and general welfare of the people, particularly low-income groups. While many countries in the region have launched road safety programmes, recent data suggests that the overall situation in the region is still far from satisfactory.

The current article provides an update of overall progress in road safety in ESCAP member States and describes some of the measures which countries are implementing with regard to vulnerable road users (pedestrians, cyclists and motorcyclists) and road traffic related laws. It also describes several trends regarding safety along the Asian Highway, based on what data is available from countries. The last section describes a number of key road safety initiatives which are being implemented by multilateral agencies in support of the global Decade of Action for Road Safety (2011-2020).

INTRODUCTION

Road safety in developing countries of the ESCAP region is a development issue of serious concern, considering its magnitude and consequent negative impacts on the economy, public health and general welfare of the people, particularly low-income groups. In view of the gravity of the problem, many countries in the region have begun to implement road safety improvement programmes. As a result, some countries have made some progress in improving their road safety records. However, recent data suggests that the overall situation in the region is still far from satisfactory.

Globally, road crashes kill an estimated 1.24 million people and injure about 50 million each year. As reported in the Global Status Report on Road Safety 2013 by the World Health Organization, road traffic injuries are the 8th leading cause of death globally and the number one leading cause of death of young people (15-29 year old). While middle-income countries have the highest road traffic fatality rates, low-income countries shoulder a disproportionate share of road fatalities: despite having only 1 per cent of the global vehicle population and 12 per cent of global population, their share of global road fatalities is estimated to be 12 per cent.

The economic cost of road crashes has been estimated at between 1 and 3 per cent of gross domestic product (GDP) on average, and up to as high as 5 percent for some developing countries. For example, it is estimated that India loses around 750 billion rupees (\$17 billion) per year due to road traffic accidents, which is 2-3 per cent of the GDP². In the ASEAN subregion, the estimated cost of road crashes is more than 2.2 % of GDP. The estimated annual economic losses from road accidents in Cambodia and Myanmar are among the highest at 3.2 and 3 percent of their GDP, respectively³.

This paper provides a broad overview of the recent progress made by countries in the ESCAP region in road safety. The analyses and findings presented are based primarily on data received from the Global Health Observatory Data Repository⁴ of the World Health Organization (WHO) and the Global Status Report on Road Safety 2013.⁵ It also draws on information collected from member

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² Sikdar, P.K. and J.N. Bhavsar, Road safety scenario in India and proposed action plan, Transport and Communications Bulletin for Asia and the Pacific No. 79, p. page 5, available at: http://www.unescap.org/tdw/Publications/TPTS_pubs/bulletin79/b79_fulltext.pdf

³ UNESCAP Transport and Communications Bulletin for Asia and the Pacific No. 74, page 7

⁴ See, <http://apps.who.int/gho/data/node.main.A989?lang=en>

⁵ The WHO report is available at: http://www.who.int/violence_injury_prevention/road_safety_status/2013/en/index.html

countries by the ESCAP secretariat and data from the Asian Highway database maintained by ESCAP. The paper also discusses some recent multilateral road safety initiatives and activities in the region. Finally, it provides some policy recommendations for the consideration of relevant road safety stakeholders.

I. RECENT PROGRESS IN ROAD SAFETY IN ESCAP MEMBER COUNTRIES

1.1 The overall situation

The Global Status Report on Road Safety 2013 by the World Health Organization⁶ shows that 777,000, or more than half of the world's total road traffic deaths in 2010, occurred on roads in the ESCAP region. While the number of global fatalities in 2010 remained similar to that of 2007, road fatalities in the ESCAP region as a whole has risen considerably in 2010. The situation in most developing countries (which includes countries with high death tolls) further worsened. Nevertheless, between 2007 and 2010, 21 countries in the region succeeded in reducing the number of deaths on their roads. Table 1 shows road traffic deaths by subregion.

Table 1. Progress in reducing road traffic deaths in ESCAP region

Sub-region	Reported death (adjusted for 30-day definition) ¹		Estimated number of deaths (using a model)
	2007	2010	2010
Pacific ²	2,471	2,151	2,876
North and Central Asia ³	12,041	9,574	11,332
East and North-East Asia ⁴	145,950	108,455	319,064
South-East Asia ⁵	53,586	775,454	117,360
South and South-West Asia ⁶	151,203	172,361	326,381
ESCAP	365,251	367,995	777,013
<i>ESCAP as percentage of world total</i>	<i>55.23%</i>	<i>57.72%</i>	<i>62.67%</i>
World	661,319	637,584	1,240,000

Source: Based on information available at:

http://www.who.int/violence_injury_prevention/road_safety_status/2013/data/en/index.html

Notes:

1. For definitions of reported death and estimated deaths, see Global Status Report on Road Safety 2013 by WHO.
2. Australia, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu
3. Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
4. China, Democratic People's Republic of Korea, Japan, Mongolia, Republic of Korea and Russian Federation
5. Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam
6. Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka and Turkey

The data shows that the number of road traffic deaths in the Pacific and North and Central Asian subregions, and in some countries of other subregions (for example, Russian Federation and Turkey) has gone down. However, the situation in East and North-East Asia, South-East Asia and South and South-West Asia, the three most populous subregions of ESCAP, worsened in 2010.

⁶ The Global Status Report on Road Safety 2013 is available at: http://www.who.int/violence_injury_prevention/road_safety_status/en/index.html

The average road traffic death rate (deaths per 100, 000 population) for ESCAP countries in 2010 (18.7) was higher than the world average (18.1). Road traffic death rates in 14 countries (including China, India, Islamic Republic of Iran, Kazakhstan, Malaysia, Russian Federation, Thailand and Viet Nam) were higher than the global average. Of these countries, four countries succeeded in reducing their death rates from their previous levels in 2007.

By subregion, road traffic death rates in East and North-East Asia and South-East Asia were higher than the world average. At 19.8, the traffic death rate in South-East Asia was the highest among the five subregions of ESCAP. Table 2 provides death rates in 2010 for all subregions of ESCAP.

Table 2. Road traffic death rates (deaths per 100, 000 population)

	Number of countries	2010
Pacific ¹	12	8.05
North and Central Asia ²	8	15.67
East and North-East Asia ³	6	18.84
South-East Asia ⁴	11	19.78
South and South-West Asia ⁵	10	18.37
ESCAP	47	18.62
World		18.04

Notes: Death rates are based on point estimates of road traffic deaths. For list of countries in each sub-region, see notes at the bottom of table 1.

More recent data on road traffic deaths (unadjusted reported data of 2011 and 2012 as received by the ESCAP secretariat from countries) compared with similar data for previous years indicate that the upward trend of road traffic deaths may have declined, if not reversed, in some countries such as China and Viet Nam. However, the trend is still upwards in many other countries, such as Myanmar and Nepal.

It can also be noted from the data of 2011 and 2012 that in some countries, the increase in the number of road crashes and road traffic deaths has been substantially low compared with the increase in vehicle number or vehicle-km (for example, Turkey), which may also be considered as an indication of progress.

1.2 Road fatalities among pedestrians, cyclists and motorcyclists

Road fatalities among pedestrians, cyclists and motorcyclists (collectively referred to as vulnerable road users or VRUs) are a cause of serious concern in many countries of the ESCAP region. While globally half of road traffic deaths occur among VRUs, in 17 countries of the ESCAP region, more than half of all road traffic deaths are among such road users. In 8 countries (Cambodia, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Pakistan, Singapore and Thailand), more than 70 percent of road traffic deaths occur among VRUs.

Road traffic deaths among motorcycle riders account for between one-third and three-fourths of all road traffic deaths in 10 countries (including two small island countries) of the region. Motorcyclists alone share more than half of all road traffic deaths in four countries (Cambodia, Lao People's Democratic Republic, Malaysia and Thailand).

Over a third of road traffic deaths in low- and middle-income countries of the world are among pedestrians and cyclists, but less than 35 percent of low- and middle-income countries have policies in place to protect these road users.⁷ In the ESCAP region, pedestrian deaths are more than one-third of all road traffic deaths in eight Asian countries (Armenia, Azerbaijan, Bangladesh, Japan, Pakistan, Republic of Korea, Russian Federation and Tajikistan). In another eight countries (China, Georgia, Islamic Republic of Iran, Kazakhstan, Mongolia, Myanmar, Singapore and Sri Lanka) road

⁷ Global Status Report on Road Safety 2013, p. ix

traffic deaths among pedestrians are higher than the world average of 22 percent. Meanwhile, in China and Japan, deaths among cyclists account for more than 10 percent of traffic accident deaths.

In recent years, most developing countries in the region have experienced a rapid growth in their vehicle population. The rapid growth of motorized vehicles makes roads more dangerous for vulnerable road users. The high rate of deaths and injuries among VRUs in the region, however, are not merely due to growth of vehicle numbers or a different vehicle mix, which is common in many countries. There is also a clear link between road safety and provision adequate and appropriate infrastructure facilities for different types of road users. Although countries have taken initiatives in this respect, high rate of pedestrian deaths in many countries for example, clearly indicates inadequacy of appropriate type of infrastructure facilities as well as the road safety behaviour of all road users.

1.3 Road traffic related laws and enforcement

The World Health Organization identified five key risk factors in road safety, namely speed, drink-driving, helmets, seat-belts and child restraints. Each of these risk factors was considered to be essential components of a comprehensive national legislation on road safety.

In most countries, there are laws covering all of these risk factors except for child restraint laws. However, their level of enforcement widely varies between countries of the region. Also, in many countries these laws are not comprehensive to cover all aspects of the risk factors.

Table 3. Legislation on road safety in the ESCAP region

Subregion	National speed limit law	Drink-driving law	Helmet law	Seat-belt law	Child-restraint law	Mobile phone law
	Number of countries					
Pacific	4	4	4	4	4	4
North and Central Asia	7	7	7	7	5	7
East and North-East Asia	6	6	6	6	4	6
South-East Asia	11	11	9	8	4	10
South and South-West Asia	10	8	9	9	1	8
ESCAP	38	36	35	34	18	33

Notes: For this table, the Pacific subregion includes only Australia, Fiji, New Zealand and Papua New Guinea only. Other subregions are the same as given in Table 1.

As indicated in the Global Status Report, except in a few developing countries (for example, Azerbaijan, Uzbekistan, Turkey) and five developed countries of the region (Australia, Japan, New Zealand, Republic of Korea and Singapore) the level of enforcement of the laws in most of the countries may be considered as low to medium. In some developing countries, the level of enforcement for selected areas, particularly on drink-driving and the wearing of motorcycle helmets, was high, but not for all laws.

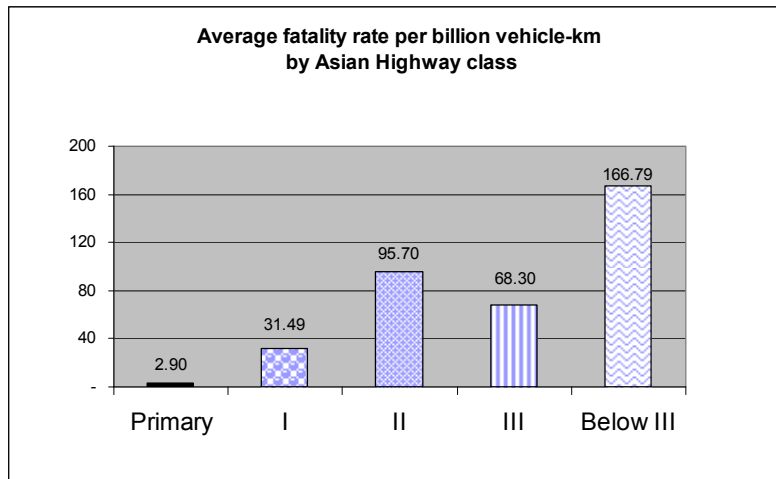
II. ROAD SAFETY ON THE ASIAN HIGHWAY

The number of road users killed in road traffic crashes per population has been particularly high in emerging economies and newly industrialized economies. Regardless of motorization level, higher road traffic death rates per population are also linked to higher vehicle densities (i.e., vehicles per kilometre of road), which shows an important link between road safety and infrastructure development in general.

This paper also makes an attempt to see if there is any link between road safety and the quality of road infrastructure using data from countries of the region. The Asian Highway Database maintained by ESCAP contains, among other data items, data on the number of road crashes and fatalities for Asian Highway sections. Road safety data (2010) are available for 45.5 per cent of the

length of the Asian Highway, including 695 road sections (or 46.6 per cent of all sections), covering 64,818 km in 24 countries. Figure 2 shows average fatality rates per billion vehicle-km by Asian Highway class. It clearly shows that the higher class of roads are generally much safer than the lower class of roads, and that significant improvement in road safety may be achieved through upgrading of Asian Highway routes and safer infrastructure design. These findings should also remain generally valid for all other similar roads that are not part of the Asian Highway network.

Figure 2: Average fatality rates per billion vehicle-km by Asian Highway class



Source: Based on information available from the Asian Highway database

Note: The fatality rates in the figure are based on reported fatalities on 24.12 per cent of the length of the Asian Highway network, which includes 485 road sections (or 32.5 per cent of all sections) covering 34,370 km of highways in 23 countries for which the required data for calculation was available in the Database.

According to the latest data available from the Asian Highway Database (2010),⁸ primary class Asian Highway roads have the best safety record in terms of fatalities per billion vehicle-km, while those below class III have the worst record. The upgrading of roads to access-controlled primary class and other higher classes has significant benefits in reducing fatality rates.⁹ Substantial improvement in terms of safety can also be gained when roads below class III are upgraded to the minimum class III standards. The road safety record for class II, however, show worse performance compared to class III, possibly due to other factors such as higher traffic flows, higher shares of motorized vehicles, and greater average travel speeds.

The upgrading of roads has also been linked to improved Asian Highway safety in many countries, particularly when the upgrades involved: (a) the construction of barriers to separate opposing directions of traffic and different types of vehicles; and/or (b) the improvement of road shoulders. Two companion articles in the current issue of the Bulletin discuss further the role of safe road infrastructure design in improving the road safety situation on the roads of the region.

III. MULTILATERAL APPROACHES TO ROAD SAFETY

With the alarming rate of increase in casualties from road crashes, the issue of road safety has been on the global and regional transport and development policy agenda. In order to focus global and regional attention on this issue, the United Nations General Assembly, has adopted seven resolutions calling for strengthened international cooperation and multisectoral national action to

⁸ In the Asian Highway Database (2010), road safety data are available for 45.5 per cent of the length of the Asian Highway, including 695 road sections (or 46.6 per cent of all sections), covering 64,818 km in 24 countries.

⁹ The average fatality rate for primary class roads was 2.90 fatalities per billion vehicle km, the lowest rate among all types of roads and 166.79 fatalities per billion vehicle km for below class III roads the highest among all types of roads; the average fatality rates for other classes of AH routes were 31.49 fatalities per billion vehicle km (class I), 95.70 fatalities per billion vehicle km (class II), and 68.30 fatalities per billion vehicle km (class III).

improve road safety situation since 2003. The United Nations Road Safety Collaboration (UNRSC) was established as an informal consultative mechanism to facilitate international cooperation and strengthen global and regional coordination among UN agencies and other international partners to implement UN General Assembly Resolutions. It is comprised of the World Health Organization (WHO) and the United Nations regional commissions, as well as other partners.

In its resolution 64/255 of 10 May 2010 on improving global road safety, the General Assembly proclaimed the period 2011-2020 as the Decade of Action for Road Safety with a goal to stabilize and then reduce the forecast level of road traffic fatalities around the world. It also requested the World Health Organization and the regional commissions of the United Nations system, in collaboration with the UNRSC and other stakeholders, to prepare a Plan of Action for the Decade as a guiding document to support the implementation of its objectives.

The Global Plan for the Decade of Action for Road Safety 2011-2020¹⁰ provides an overall framework for activities at the local, national, regional and global levels and calls upon member States to implement road safety activities in a holistic manner, giving due attention to five “pillars”¹¹: (a) building road safety management capacity, (b) improving the safety of road infrastructure, (c) further developing the safety of vehicles, (d) enhancing the behaviour of road users, and (e) improving emergency and other post-crash services.

Under the framework of the UNRSC, WHO and UN regional commissions are responsible for coordinating the regular monitoring of global progress in meeting the targets identified in the Plan of Action and to develop global status reports on road safety and other appropriate monitoring tools.¹² Among many monitoring efforts, the Global Status Report on road safety is one of the key monitoring tools. So far, WHO has launched two global status reports - the first in 2009, and the second report in May 2013.

A number of high-profile events have been organized which have drawn attention to road safety from the highest political levels. These global events include the first Ministerial Conference on Road Safety (November 2009), the launch of the Decade of Action for Road Safety (May 2011), the World Day of Remembrance for Road Traffic Victims (November 2012), the launch of the Global Status Report on Road Safety (March 2013), the first and second United Nation Global Road Safety Week (May 2012 and 2013), and the launch of the Global Alliance for Care of the Injured (May 2013).

The following sections describe some of the many initiatives which have been launched to support the Global Plan for the Decade of Action.

- **ESCAP Activities:**

ESCAP promotes a multilateral approach in the area of road safety, and has been working in partnership with the Asian Development Bank (ADB), the Global Road Safety Partnership (GRSP), the International Road Federation (IRF), the United Nations regional commissions and the World Health Organization (WHO).³ As a regional organisation, ESCAP advocates global and regional road safety best practices and supports the networking of road safety experts, government officials, and representatives from international organizations and charities active in the Asia Pacific region. It also organizes national workshops on road safety to help Governments to develop and refine their national road safety goals, targets and indicators in support of the Decade of Action for Road Safety, as well as disseminates road safety information, data and statistics collected from member States.

- **Multilateral Development Banks:**

Development banks participating in the Multilateral Development Bank Road Safety Initiative continue to harmonize practices over the Decade and have collaborated in the development of client capacity in road safety management in several countries, including Cambodia, China, and India. The World Bank developed projects incorporating the “safe system” philosophy and has started to build capacity at the government-level in China and India to manage the multisectoral road safety agenda.

¹⁰ Available from http://www.who.int/roadsafety/decade_of_action/plan/en/index.html.

¹¹ Based on the recommendations of the WHO World report on road traffic injury prevention and proposed by the Commission for Global Road Safety.

¹² Paragraph 17 of General Assembly Resolution 64/255.

- **International Road Assessment Programme (iRAP):**

The International Road Assessment Programme specializes in risk mapping or star rating roads for safety. It has applied the star rating in many countries, such as the three-star minimum targets in Bangladesh and India, and has also established ChinaRAP to focus on assessing road safety assessments in China.

- **Global New Car Assessment Programme:**

Launched in 2011, the Global New Car Assessment Programme serves as a platform for cooperation for new car assessment programmes and to encourage their development in all regions of the world, especially among rapidly motorizing countries supports the development of new car assessment programme in ASEAN. The ASEAN NCAP has conducted crash test and yielded satisfactory result.

- **Bloomberg Philanthropies Global Road Safety Programme:**

The Bloomberg Philanthropies Global Road Safety Programme continues to support implementation of practical measures to reduce road traffic deaths and injuries in Cambodia, China, India, the Russian Federation, Turkey and Viet Nam and the legislative improvements concerning several of the five behavioral risk factors in China and Viet Nam.

- **Global Road Safety Partnership (GRSP):**

The Global Road Safety Partnership focuses on building and supporting the humanitarian work of the International Federation of Red Cross and Red Crescent Societies through advocacy to reduce vulnerability and to prevent road crashes and provide an effective post-crash response. The Partnership continued with good-practice implementation in various countries including countries in Asia region.

- **WHO Global Alliance of Care for the Injured:**

The WHO Global Alliance of Care for the Injured was launched in May 2013 to provide guidance and support to Governments to improve the care of the injured. It advocates the systematic provision of essential trauma services.

IV. POLICY RECOMMENDATIONS

Analysis of road traffic death rates shows large differences between countries in the Asia Pacific region.¹³ Consequently, concerted action to significantly reduce the levels of road traffic deaths as well as injuries and property damage is urgently required. In view of limited resources and in order to optimize the impacts of future activities, priority areas within road safety should be identified according to the status and needs of countries.

Given the low level of road safety law enforcement in most developing countries of the region, governments should give greater attention to law enforcement and do more to enforce the road safety laws effectively.

In recent years, most developing countries in the region have experienced rapid growth in vehicle population. This trend, together with the changing vehicle mix and lack of appropriate infrastructure facilities to accommodate this mix, is resulting in a high rate of deaths and injuries among VRUs in the region. Although some authorities, particularly in major cities, have taken steps to address this gap, governments need to increase their investment in appropriate infrastructure facilities for all road users, as well as take urgent action to reduce high risk behaviour of different types of road users.

¹³ Refer to Tables 1 and 2 in this document.

Countries may also emulate the success of other countries by implementing similar measures which have proven to bring down road traffic deaths. As a case in point, Viet Nam's experience in increasing motorcycle helmet-use offers a model for many countries in the region. The high level of helmet law compliance is believed to have contributed significantly to the reduction of road accident deaths in the country in recent years.¹⁴

A number of countries have prepared or are in the process of finalizing draft national strategies and action plans on road safety. Governments should initiate policy measures and implement national road safety action plans and programmes according to the global, regional and national goals and targets, as well as establish effective mechanisms to monitor their achievements.

Finally, national, regional and global stakeholders should work hand in hand with governments to achieve more effective, stronger and wider collaboration.

¹⁴ See also, Kathryn Lankester and Greig Craft (1979). "Sustainable and replicable road safety solutions for the lower-and lower middle-income countries based on the Viet Nam model for increasing motorcycle helmet use", available at: http://www.unescap.org/ttdw/Publications/TPTS_pubs/bulletin79/b79_fulltext.pdf.