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Major issues in transport

Improving road safety

Note by the secretariat

Summary

Road safety is an issue of serious concern to sustainable development, considering its magnitude and consequent negative impact on the economy, public health and general welfare of the people, particularly low-income groups. There were approximately 733,000 fatalities from road crashes in the region in 2013, more than half the worldwide total of 1.25 million fatalities. More efforts are needed to achieve Sustainable Development Goal targets 3.6 (by 2020, halve the number of global deaths and injuries from road traffic accidents) and 11.2 (by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety).

The present note highlights the recent progress made and initiatives taken by regional members and associate members on improving road safety, and reviews major causes of road crashes in the region and potential measures to address such causes, including rules and regulations for key risk factors such as speeding and drink-driving. It proposes an updated set of regional goals and targets which identify priority areas so that regional members and associate members may tailor their efforts towards improving the road safety situation in the region, with the support of the secretariat's road safety tools and capacity-building programme. It also contains a brief discussion of the ways forward, including the establishment of an international road organization.

I. Introduction

1. Many Governments in the region are grappling with the challenge of ensuring that their transport programmes result in safe operation. Transport safety, and road safety in particular, has been accorded high priority on the international development agenda because of its magnitude and impact on the society and economy.

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2. Road crashes cause human casualties every minute in the Asia-Pacific region. On average, every two minutes, three people are killed on the roads in the region. Every week, more than 14,000 lives in the region are taken away as a result of road crashes, leaving more than 14,000 families in difficulty owing to loss of their loved ones and, in many cases, loss of the ability to generate income. Thousands of hospital beds are occupied by injured people involved in road crashes. Road crashes are considered a global epidemic that results in substantial undesirable economic and social effects.

II. Road safety situation in the Asia-Pacific region

3. In this section, a broad overview is provided of recent road safety progress made in the region, based primarily on data received from the Global Health Observatory data repository[1] of the World Health Organization (WHO) and its *Global Status Report on Road Safety 2015*.[2]

A. Road traffic fatalities

4. The WHO *Global Status Report on Road Safety 2015* shows that more than 733,000 people were killed on the roads of the Economic and Social Commission for Asia and the Pacific (ESCAP) region in 2013. The figure for the region accounts for more than 58 per cent of the global total of 1.25 million road traffic deaths that year.

5. Given the size of their population, China and India have by far the highest number of road traffic fatalities in the region, at 261,367 and 207,551 per year respectively. The two countries account for almost two thirds of road traffic fatalities in the region.

6. Since 2010, there has been mixed progress in tackling road safety among members and associate members in the region. Table 1 shows a comparison of estimated road traffic fatalities between 2010 and 2013 in the region. It shows that road traffic fatalities have reduced overall from 777,000 to 733,000, representing a reduction of 5.6 per cent. A total of 23 member countries have shown progress in the reduction of fatalities, of which 18 have performed better than the region's average.

[1] World Health Organization, Global Health Observatory data repository. Available from http://apps.who.int/gho/data/node.main.A989?lang=en.

[2] World Health Organization, *Global Status Report on Road Safety 2015* (Geneva, 2015). Available from www.who.int/violence_injury_prevention/road_safety_status/2015/en/.

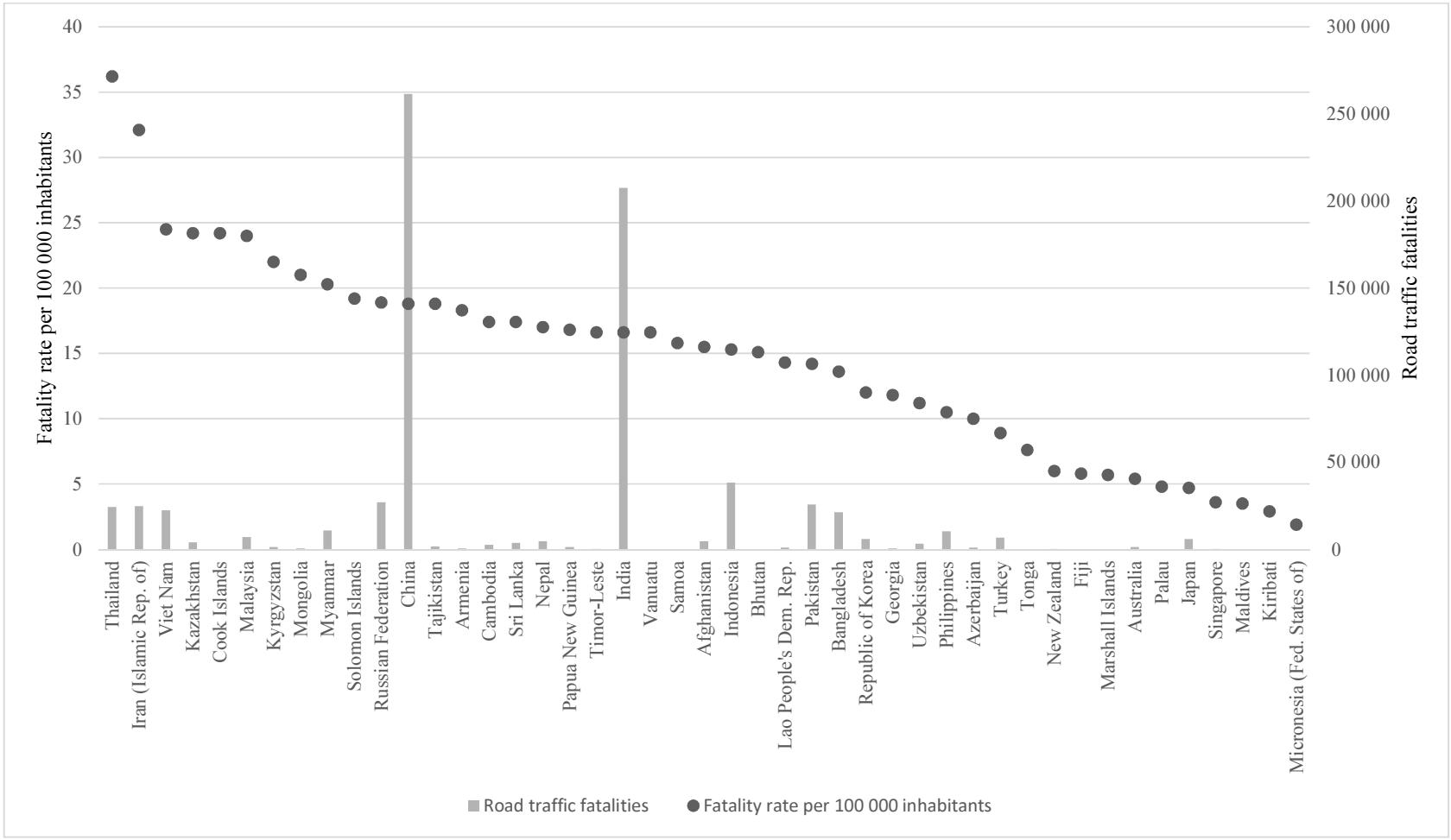
Table 1
Changes in the number of road traffic fatalities in ESCAP countries between 2010 and 2013
(Percentage)

Countries where the number has reduced		*Countries where the number has not reduced*	
Country	*Change*	*Country*	*Change*
Palau	-66.67	Micronesia (Federated States of)	—
Kiribati	-50.00		
New Zealand	-31.66	Samoa	—
Marshall Islands	-25.00	Malaysia	0.62
Georgia	-24.96	Russian Federation	1.72
Singapore	-23.94	Viet Nam	3.55
Afghanistan	-23.76	Uzbekistan	4.28
Turkey	-23.65	Vanuatu	7.69
Lao People's Democratic Republic	-23.30	Cambodia	8.39
		Kazakhstan	13.35
Azerbaijan	-21.55	Bhutan	18.75
Pakistan	-14.44	Kyrgyzstan	19.37
Timor-Leste	-14.16	Mongolia	21.59
Republic of Korea	-12.57	Philippines	22.12
India	-10.16	Bangladesh	23.29
Japan	-9.87	Tajikistan	24.04
Indonesia	-9.79	Sri Lanka	29.33
Australia	-8.14	Tonga	33.33
Thailand	-7.89	Solomon Islands	36.71
Fiji	-5.56	Papua New Guinea	38.12
China	-5.30	Myanmar	50.61
Armenia	-2.15	Maldives	100.00
Nepal	-1.55	Cook Islands	150.00
Iran (Islamic Republic of)	-1.30		
	Regional average	**-5.60**	

Source: ESCAP calculations based on data from World Health Organization, *Global Status Report on Road Safety 2013: Supporting a Decade of Action* (Geneva, 2013) and *Global Status Report on Road Safety 2015* (Geneva, 2015).

7. The average road traffic fatality rate (deaths per 100,000 inhabitants) in the ESCAP region in 2013 (18.99 deaths per 100,000 inhabitants) was higher than the worldwide average (17.4 deaths per 100,000 inhabitants). Thailand and the Islamic Republic of Iran have significantly higher rates than the rest of the countries in the region at 36.2 and 32.1 deaths per 100,000 inhabitants, respectively. Figure I compares the WHO-estimated number of road traffic fatalities and the fatality rate per 100,000 inhabitants in the region.

Figure I
Estimated road traffic fatalities and fatality rates in the ESCAP region, 2013



Source: World Health Organization, *Global Status Report on Road Safety 2015* (Geneva, 2015).

8. As the WHO data for 2013 shows, the road traffic fatality rates in 14 countries – Thailand, the Islamic Republic of Iran, Viet Nam, Kazakhstan, Cook Islands, Malaysia, Kyrgyzstan, Mongolia, Myanmar, Solomon Islands, the Russian Federation, China, Tajikistan and Armenia – were higher than the regional average. Of these, however, five countries had reduced the death rates from their previous levels in 2010, namely Thailand, the Islamic Republic of Iran, Viet Nam, Malaysia and China. In the other nine members and associate members – the Cook Islands, Kazakhstan, Kyrgyzstan, Mongolia, Myanmar, Solomon Islands, the Russian Federation, Tajikistan and Armenia – the death rate had increased further over this period.

9. The road traffic fatality rate 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 (that is, the number of vehicles per kilometre of road), which shows a link between road safety and infrastructure development in general.

Road traffic fatalities on Asian Highway routes

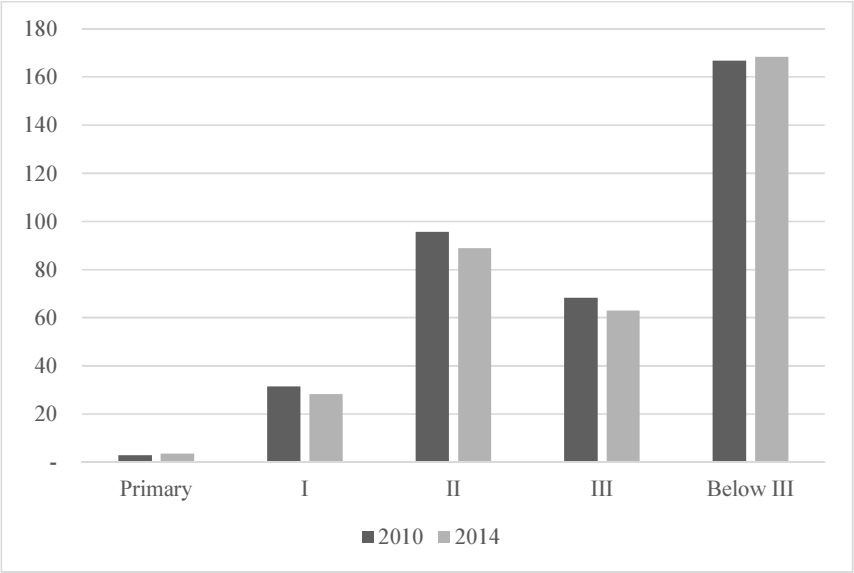
10. According to the data available from the ESCAP Asian Highway Database (see figure II), primary class Asian Highway routes have the best safety record, at 3.57 fatalities per billion vehicle-kilometres, while those below class III have the worst record, at 168.48 fatalities per billion vehicle-kilometres. This suggests that the upgrading of roads across all classes, especially to meet the minimum required standards for class III, is likely to result in a reduction in fatalities on the Asian Highway network. The average fatality rates for other classes of Asian Highway routes are 28.28 fatalities per billion vehicle-kilometres for class I, 88.88 fatalities per billion vehicle-kilometres for class II and 62.96 fatalities per billion vehicle-kilometres for class III.[3] The upgrading of roads to access-controlled primary class and other higher classes produces a significant reduction in fatalities. Substantial improvement in terms of safety can also be achieved when roads below class III are upgraded to the minimum required standards.

11. Studies show a strong correlation between infrastructure design and road safety. In many countries, the installation of barriers to separate opposing directions of traffic and/or different types of vehicles, the application of access-control principles, better geometric design of roads to increase the sight distance in curves and the improvement of road shoulders are examples of infrastructure-related measures that have contributed to a reduction in road accidents and fatalities wherever they have been applied. International experiences show that interventions in terms of road infrastructure to improve the driving environment can pay for themselves and the related financial investment can be recovered within a reasonable period of time.[4]

[3] See Economic and Social Commission for Asia and the Pacific, "Status of implementation of the Intergovernmental Agreement on the Asian Highway Network" (Bangkok, 2015). Available from www.unescap.org/sites/default/files/pre-ods/E-ESCAP-AHWG(6)-1-English.pdf.

[4] Ishtiaque Ahmed, "Road infrastructure and road safety", Transport and Communications Bulletin for Asia and the Pacific: Designing Safer Roads, No. 83 (Bangkok, Economic and Social Commission for Asia and the Pacific, 2013).

Figure II
Average fatality rates per billion vehicle-kilometres by Asian Highway route classification



Source: Based on information in the Asian Highway Database.

Note: The fatality rates for 2014 are based on reported fatalities on 32.18 per cent of the Asian Highway network (41,580 km in 24 countries) for which the required data was available as of June 2015. The fatality rates for 2010 are based on reported fatalities on 24.1 per cent of the Asian Highway network (34,370 km in 23 countries).

B. Cost of road crashes

12. In economic terms, road crashes cost Governments of the ESCAP region as much as 6 per cent of gross domestic product (GDP). Table 2 shows the estimated GDP loss due to traffic crashes in some of the countries in the region. The Islamic Republic of Iran has the highest percentage GDP loss from road crashes, at 6 per cent. Myanmar has the lowest percentage GDP loss, at 1 per cent. When converted into monetary terms, the economic cost of road crashes in the ESCAP region is estimated to be between 293 billion and 527 billion dollars.[5]

[5] These figures were arrived at by multiplying the total estimated percentage GDP loss of the 19 countries in 2013 by the 2013 GDP of the ESCAP region.

Table 2
Estimated losses due to road traffic crashes, 2013

	GDP loss (percentage)	*2013 national GDP in current prices (millions of United States dollars)*	*Loss (millions of United States dollars)*
Armenia	1.0	10 439	104.39
Australia	2.1	1 528 761	32 103.98
Bangladesh	1.6	153 505	2 456.08
Cambodia	2.1	15 450	324.45
India	3.0	1 936 088	58 082.64
Indonesia[a]	2.9-3.0	755 094	22 652.82
Iran (Islamic Republic of)	6.0	511 621	30 697.26
Japan	1.3	4 919 588	63 954.64
Lao People's Democratic Republic	2.7	10 760	290.52
Malaysia	1.5	313 158	4 697.37
Myanmar	0.5	62 141	310.71
Nepal	0.8	18 227	145.82
New Zealand	1.6	189 494	3 031.90
Philippines	2.6	272 067	7 073.74
Republic of Korea	1.0	1 305 605	13 056.05
Russian Federation[a]	1.9	1 524 917	28 973.42
Thailand	3.0	420 167	12 605.01
Turkey[a]	1.1	731 144	8 042.58
Viet Nam	2.9	171 222	4 965.44
Total estimated loss			**293 568.83**

Sources: Estimated percentage GDP loss obtained from World Health Organization, *Global Status Report on Road Safety 2013: Supporting a Decade of Action* (Geneva, 2013) and *Global Status Report on Road Safety 2015* (Geneva, 2015); 2010 and 2013 GDP obtained from ESCAP Online Statistical Database, accessed 2 June 2016; estimated loss obtained from secretariat's calculations.

[a] Data from 2010.

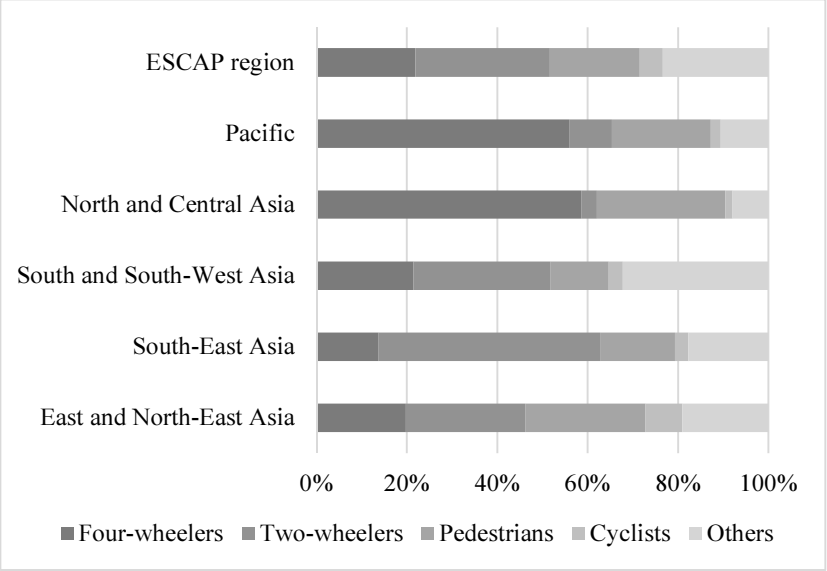
C. Vulnerable road users

13. Globally, 47 per cent of the total road traffic fatalities occur among vulnerable road users, namely motorcyclists, cyclists, and pedestrians. In the ESCAP region, road traffic deaths among vulnerable road users account for nearly 55 per cent of all road traffic fatalities. Motorized two- and three-wheelers account for the majority of deaths, at nearly 30 per cent. Pedestrians and cyclists account for a lower share, at 19.94 per cent and 5.06 per cent respectively. Figure III illustrates the distribution of road traffic deaths by road users in the ESCAP region.

14. The relative importance of the issue of the safety of vulnerable road users varies in different subregions. Approximately two thirds of road traffic fatalities are among vulnerable road users in South-East Asia and East and North-East Asia. These are the top two subregions with the highest distribution of deaths of vulnerable road users, at 68.56 per cent and 61.11 per cent respectively. The South and South-West Asia subregion's share of deaths of vulnerable road users is slightly less than half. In North and Central Asia and the Pacific, approximately one third of total road traffic deaths are among vulnerable road users.

15. Figure III shows the distribution of road traffic deaths by types of road users in the region and subregions. The figure illustrates the key issues at risk in each subregion. The subregion with the highest shares of fatalities of motorcyclists and motorized three-wheeler drivers and their passengers is South-East Asia, at nearly half of all fatalities. The second highest is South and South-West Asia, while in North and Central Asia and the Pacific, four-wheeler drivers and their passengers account for more than half of the total share of road traffic fatalities.

Figure III
Distribution of road traffic deaths by type of road user in the region and the subregions
(Percentage)



Source: ESCAP calculations based on data from World Health Organization, *Global Status Report on Road Safety 2015* (Geneva, 2015).

16. In many developing countries, pedestrians and non-motorized transport users are at a significant risk of road crashes because of the poor quality of the infrastructure. According to WHO, over 26 per cent of road traffic fatalities in low- and medium-income countries are among pedestrians and cyclists.[6] To reduce this risk, Governments need to make a greater effort to incorporate pedestrians and cyclists into infrastructure design and land-use planning.

[6] World Health Organization, Global Status Report on Road Safety 2015 (Geneva, 2015). Available from www.who.int/violence_injury_prevention/road_safety_status/2015/en/.

D. Key risk factors in road safety

17. The varying distribution of road traffic fatalities in each country and subregion indicates the wide range of issues and intensity of key risk factors that they face. Identifying the key risks helps to target policies and actions that can reduce road crashes and, in particular, to identify where funds can be utilized to reach optimal outcomes. For the ESCAP region, speeding, reckless driving and drink-driving have been identified among the top causes of traffic crashes (table 3).

Table 3
Top cause(s) of road crashes in ESCAP region countries

Country	*Top cause(s)*
Armenia	Violation by drivers
Bhutan	Speeding, drink-driving and reckless/inexperienced driving
Brunei Darussalam	Speeding
Georgia	Speeding
India	Drivers' fault
Lao People's Democratic Republic	No driving licence, drink-driving
Nepal	Negligence by drivers
Pakistan	Careless driving, dozing at wheel
Republic of Korea	Lack of awareness by drivers/pedestrians of road safety rules
Russian Federation	Violation by drivers, speeding
Sri Lanka	Overtaking, speeding (fatal crashes)
Tajikistan	Speeding
Thailand	Speeding

Source: Information collected from the countries.

18. WHO identifies five key risk factors in road safety: speeding, drink-driving, and not wearing helmets, seat belts and child restraints. Each of these risk factors is considered to be an essential component of comprehensive national legislation on road safety. Based on the *Global Status Report on Road Safety 2015* and information collected from the countries, table 4 provides a summary of current national laws covering each of these five risk factors for the five subregions. Most countries have adopted national legislation to tackle the issues of speeding, drink-driving, helmets and seat belts, while very few have specific laws regarding child restraints.[7] While the availability of laws is encouraging, their level of enforcement widely varies between countries of the region. Furthermore, in many countries these laws are not comprehensive and do not cover all aspects of the risk factors. These issues are described in more detail below.

[7] World Health Organization, *Global Status Report on Road Safety 2013: Supporting a* Decade of Action (Geneva, 2013).

Table 4
Number of countries with national laws covering each risk factor by subregion

Subregion	*Number of countries with laws*							
	On drink-driving	*That define drink-driving by blood alcohol concentration*[a]	*On seat belts*	*That apply to all occupants*	*On national speed limits*	*On helmets*	*That require minimum helmet standards*	*On child restraints*
East and North-East Asia	5	5	5	5	5	5	4	2
North and Central Asia	8	3	8	7	8	8	0	3
Pacific	11	7	5	4	9	9	6	3
South-East Asia	10	9	9	3	10	10	7	4
South and South-West Asia	9	4	8	4	10	9	6	1
ESCAP total	**43**	**28**	**35**	**23**	**42**	**41**	**23**	**13**

Sources: ESCAP calculations based on data from World Health Organization, *Global Status Report on Road Safety 2015* (Geneva, 2015), and information collected from the countries.

[a] Measured in terms of grams of alcohol per decilitre of blood.

1. Drink-driving

19. Drink-driving is one of the major causes of deaths in the ESCAP region. Particularly for countries in the Pacific, it is the major cause of road traffic deaths in many countries such as the Marshall Islands (100 per cent), Palau (100 per cent), Papua New Guinea (56 per cent), Australia (30 per cent) and Tonga (25 per cent). Despite having the highest rate of death from drink-driving, the Marshall Islands has no drink-driving law in place. For the South-East Asia subregion, drink-driving accounts for a third of total road traffic deaths in Viet Nam (34 per cent) and around a quarter in Thailand (25.8 per cent) and Malaysia (23.3 per cent). It also accounts for more than 20 and 30 per cent of road traffic deaths in Mongolia and Azerbaijan, respectively.

20. Most countries in the region have enacted national drink-driving legislation. However, not all of them include a definition of drink-driving by blood alcohol concentration. Out of 43 countries that have reported the existence of national drink-driving law, only 28 countries define the level of blood alcohol concentration.

21. Among the countries that have defined a maximum level of blood alcohol concentration, Australia, Bhutan, Fiji and New Zealand have set it at zero. For other countries, levels are between 0.02 and 1 grams per decilitre.

22. In addition to putting in place the necessary legislation, countries are also strengthening their enforcement of laws on driving under the influence. For example, the Land Transportation Office of the Philippines announced that starting in March 2015, 150 breathalysers would be put to use to enforce the Anti-Drunk and Drugged Driving Act of 2013 (Republic Act

No. 10586).[8] Since 1 October 2014, the state of Victoria, Australia, has been implementing legislation that stipulates that individuals whose licence has been cancelled for drink-driving or -riding will be required to install an alcohol interlock for a minimum of six months in any vehicle that they drive once they have relicensed after their disqualification period.[9] In 2012-2013, three cities in China – Dalian, Suzhou and Jinhua – worked with WHO as it assessed existing legislation and advised on potential improvements, developing social marketing campaigns, hosting workshops and providing local implementers with the necessary equipment to improve drink-driving and speeding behaviours.[10]

2. Seat belts

23. A total of 35 countries in the ESCAP region have enacted national legislation on seat belts, of which 23 apply the seat-belt law to all occupants. While the national seat-belt laws are mostly in place in the majority of countries in the ESCAP region, the actual wearing rate can vary. In Australia, Japan and New Zealand, the wearing rate by all occupants is more than 90 per cent in most cases, with the sole exception of rear-seat passengers in Japan, which is relatively low at 68.2 per cent. For the Islamic Republic of Iran, the Republic of Korea and the Russian Federation, despite the application of seat-belt legislation to all occupants, the wearing rate of rear-seat passengers is considerably low – at 10 per cent, 19.4 per cent and 24 per cent respectively – when compared to the front-seat passenger and driver, at around 70 to 92 per cent. In many countries, the wearing rate by driver is lower than 50 per cent, namely China (36.7 per cent), Mongolia (42.1 per cent), India (26 per cent) and Turkey (43.6 per cent). Thailand, Malaysia and the Philippines have a relatively higher wearing rate by drivers at 58 per cent, 87.2 per cent and 79.7 per cent respectively.

3. Speed limit

24. According to the *Global Status Report on Road Safety 2015*, pedestrians and cyclists are especially at risk of injury as a result of excessive vehicle speeds. A cut of 5 per cent in average speeds can reduce the number of fatal crashes by as much as 30 per cent. Measures to reduce speed, in particular in an urban set-up where there is a high concentration of vulnerable road users, can contribute significantly to saving lives and avoiding injuries.

25. Most countries in the ESCAP region already have national speed limits in place. The speed limits applied in countries in the ESCAP region vary significantly, partly due to its topography, ranging from 30 kilometres per hour in Maldives to 110 kilometres per hour in Kazakhstan, Pakistan and Turkey. Appropriate speed limits may vary by type of road and their conditions.

26. Although most countries in the ESCAP region have imposed national speed limits, the effectiveness of overall enforcement varies substantially. On a scale of 1 to 10, the Democratic People's Republic of Korea and Turkmenistan reported the highest enforcement level at 10. South-East Asian countries, by average, have a lower enforcement level compared with the East and North-East Asia and North and Central Asia subregions. The

[8] See www.autoindustriya.com/auto-industry-news/anti-drunk-driving-law-finally-take-effect-march-12-2015.html.

[9] See www.tac.vic.gov.au/road-safety/tac-campaigns/tac-latest-campaigns.

[10] See www.who.int/violence_injury_prevention/road_traffic/countrywork/china_2012.pdf.

majority of countries in South-East Asia have enforcement levels between 5 and 6. The enforcement of speed limits is considerably low in Afghanistan (1), Bangladesh (3), India (3), Kiribati (3), Mongolia (2), Papua New Guinea (2) and Thailand (3).

27. Recent initiatives have been taken by countries in order to improve enforcement. For example, the Singapore Traffic Police installed 20 new digital speed-enforcement cameras in 2015.[11] The Government of Turkey launched a campaign in 2013 called "Think About Consequences, Slow Down Your Speed" to reduce the number of deaths and injuries resulting from excessive speeding. The prevention campaign consisted of television commercials, radio messages as well as outdoor and indoor printed advertisements on billboards and buses.[12] Similar awareness-raising campaigns were conducted in Australia and New Zealand. A Western Australia campaign called "Post-It Notes" launched as a television commercial in 2012 to generate awareness of speeding enforcement among 17- to 39-year-olds. The video shows several people putting Post-it notes on the dashboard to remind them not to speed.[13] The New Zealand Transport Agency released a road-safety advertisement campaign called "Mistakes", which targets speeding drivers. The advertisement shows two cars moments before an imminent high-speed collision. Time freezes and both drivers get out of their cars to reflect on their actions leading up to the crash.[14]

4. Helmet

28. Helmet-wearing issues are particularly serious in the South and South-West Asia and South-East Asia subregions, where two- and three-wheelers account for 30 to 50 per cent of all road traffic fatalities. A total of 42 countries in the ESCAP region have adopted national legislation on helmets.

29. However, helmet-wearing rates for different countries vary from 6.6 to 99 per cent. Tonga, the Marshall Islands, Malaysia and Viet Nam are among the countries with the highest helmet-wearing rate for both drivers and passengers. Rates in urban areas are typically higher than those in rural areas, probably owing to the varying levels of enforcement. The wearing rate by motorcycle drivers is also much higher than that of passengers: in Thailand, studies have found that the rate for rural passengers is only 12 per cent, as compared with 83 per cent for urban drivers.[15]

30. Another serious problem is that only 23 countries in the ESCAP region have requirements for minimum helmet standards. No countries in North and Central Asia require motorcycle helmet use to adhere to a quality standard. This is an important issue as wearing a good-quality helmet can

[11] See www.police.gov.sg/news-and-publications/media-releases/20150226_traff_digital_spped_enforcement_camera_system.

[12] See http://who.int/violence_injury_prevention/road_traffic/countrywork/turkey/turkey_press_release_sm_campaign.pdf.

[13] See www.youtube.com/watch?v=ya8dX_fE3aE.

[14] See www.drive.com.au/motor-news/new-zealands-hardhitting-road-safety-ad-20140109-30jh9.html.

[15] Kunnawee Kanitpong, Thailand Accident Research Center/Asian Institute of Technology/ThaiRoads Foundation, "Thailand road accident situation". Presentation available from http://mai.doh.go.th/DocLib13/PIARC%20Road%20Safety%20Manual%20Workshop%202015/Thailand%20Road%20Accident%20Situation.pdf.

reduce the risk of death from a road crash by 40 per cent and the risk of severe injury by over 70 per cent.[16] A low-quality helmet may protect passengers and drivers from the police but it will not protect the users from death and injury.

5. Child restraints

31. Among the five key risk factors, child restraint is one of the least familiar measures in the region. Only 13 countries in the region have enacted national child-restraint legislation. Despite the measures being less common for the region, they are very important. Given the differences in size and weight of children, child-restraint systems are necessary to protect infants and young children from injury during the crashes.

III. Challenges in improving road safety in the Asia-Pacific region

32. While many ESCAP member countries have been actively addressing the issue of road fatalities and serious injuries caused by road accidents in their countries, road safety still remains a huge challenge across the Asia-Pacific region and throughout the world.

A. Meeting the global goal

33. Since 2003, the General Assembly has adopted seven resolutions calling for strengthened international cooperation and multisectoral national action to improve road safety. In its resolution 64/255 of 2 March 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 by increasing activities conducted at the national, regional and global levels.

34. In its latest resolution on the subject – resolution 70/260 of 15 April 2016 on improving global road safety – the General Assembly expresses its concern that, despite the stabilization of the global number of road traffic fatalities since 2013, the number of road traffic crashes remains unacceptably high, and crashes represent a leading cause of death and injury around the world. The resolution also invites member States and the international community to intensify both national and international collaboration with a view to meeting the ambitious road safety-related targets in the 2030 Agenda for Sustainable Development.[17]

35. Road safety is covered in Sustainable Development Goal 3 (ensure healthy lives and promote well-being for all at all ages) under target 3.6, to halve the number of global deaths and injuries from road traffic accidents by 2020, and in Goal 11 (make cities and human settlements inclusive, safe, resilient and sustainable) under target 11.2, to provide access, by 2030, to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

36. Since 2004, when the General Assembly, in its resolution 58/289 of 14 April 2004 on improving global road safety, invited WHO, working in

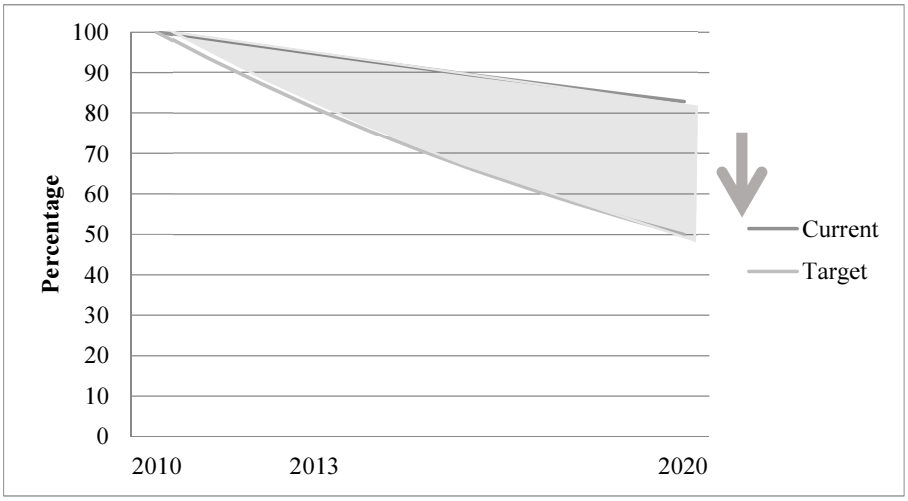
[16] See www.who.int/features/factfiles/roadsafety/facts/en/index5.html.

[17] General Assembly resolution 70/1.

close cooperation with the United Nations regional commissions, to act as a coordinator on road safety issues within the United Nations system, the secretariat has been supporting activities to raise awareness and change attitudes, analytical work, sharing of best practices, monitoring of change, expert group meetings and workshops. Through inter-agency collaboration, the secretariat has worked with a wide range of partners including concerned member countries, WHO and other UN agencies, the Asian Development Bank, the Global Road Safety Partnership, the International Road Transport Union, the International Road Federation, the World Road Association and, more recently, United Nations Road Safety Collaboration partners to improve road safety.

37. While the ESCAP region managed to reduce the fatality figure between 2010 and 2013 at an average rate of 1.9 per cent each year, this rate is far from sufficient to enable us to accomplish the Goal target 3.6. A reduction of less than 20 per cent will be achieved if the region continues at the current pace (see figure IV). It will be even more challenging considering the fact that the motorization rate in the region increased at an average of 7.2 per cent each year between 2010 and 2013.

Figure IV
Estimated reduction of road traffic fatalities, 2010-2020



Source: Economic and Social Commission for Asia and the Pacific.

38. Meeting the goal of a reduction of 50 per cent in road traffic fatalities and injuries for the region requires multifaceted approach. The Global Plan for the Decade of Action for Road Safety 2011-2020 lists measures and activities under five pillars to be carried out at the national level to improve road safety. While the Global Plan contains comprehensive guidelines, implementation of the measures recommended under pillars 1 (road safety management), 2 (safer roads and mobility), 3 (safer vehicles) and 4 (safer road users) would benefit substantially from an intergovernmental organization that sets standards and rules, ensures safe road operation and promotes sustainable development of the road sector through coordinated policy and regulatory frameworks.

39. While road traffic causes the highest number of fatalities worldwide, as well as being the major cause of greenhouse gas emissions and fossil fuel consumption, there is no such intergovernmental body that plays the coordinating and guiding roles as currently exists for other modes of

transport; for example, the International Maritime Organization for maritime transport, the International Civil Aviation Organization for air transport and the Organization for Cooperation between Railways and Intergovernmental Organisation for International Carriage by Rail for rail transport.

40. The existing non-governmental organizations for road transport – such as the World Road Association, the International Road Federation, and the International Road Transport Union – play significant roles in advocating on behalf of the road sector, promoting industry self-regulation, sharing experiences and providing services to their members. However, the road transport industry would gain improved efficiency, safety, security and environmental performance through the existence of a global intergovernmental platform that sets standards, establishes unified systems, and provides regulatory frameworks and technical assistance.

41. The initiative of an intergovernmental international road organization was discussed at the Regional Meeting on Renewing Regional Road Safety Goals, Targets and Indicators for Asia and the Pacific, held in Seoul on 28 and 29 July 2016. Most participants expressed general support for the initiative, to help improve the safety, security, efficiency and environmental performance of the road transport sector. In the area of road safety, such an organization, as an intergovernmental technical organization, would complement the work of WHO and other existing organizations in improving global road safety and in achieving the Sustainable Development Goals.

B. Regional road safety goals, targets and indicators

42. The road safety issue has received a great deal attention from policymakers in the ESCAP region. In order to create a high level of regional road safety awareness and commitment, the Ministerial Conference on Transport held in Busan, Republic of Korea, from 6 to 11 November 2006 adopted the Ministerial Declaration on Improving Road Safety in Asia and the Pacific (E/ESCAP/63/13, chap. IV). The Ministerial Declaration included a goal to save 600,000 lives and to prevent a commensurate number of serious injuries on the roads of Asia and the Pacific over the period 2007 to 2015, and invited the members and associate members of the Commission to address road safety in the following areas:

(a) Making road safety a policy priority;

(b) Making roads safer for vulnerable road users, including children, senior citizens, pedestrians, non-motorized vehicle users, motorcyclists and persons with disabilities;

(c) Making roads safer and reducing the severity of accidents (building “forgiving roads”);

(d) Making vehicles safer and encouraging responsible vehicle advertising;

(e) Improving national and regional road safety systems, management and enforcement;

(f) Improving cooperation and fostering partnerships;

(g) Developing the Asian Highway as a model of road safety;

(h) Providing effective education on road safety awareness to the public, young people and drivers.

43. As mandated by the Ministerial Declaration, the regional road safety goals, targets and indicators for Asia and the Pacific were developed through a series of expert group meetings on improving road safety on the Asian Highway in 2007 and 2008.

44. The period covered by the regional goals in the Ministerial Declaration ended in 2015. However, the issue has not yet been resolved. With the global road safety mandate of the Decade of Action for Road Safety 2011-2020, there is a need to renew the regional road safety goals, targets and indicators.

45. In 2015, the General Assembly adopted the 2030 Agenda for Sustainable Development, which highlights road safety in Sustainable Development Goals 3 and 11. Despite the fact that 2015 marked the halfway point of the Decade of Action for Road Safety 2011-2020, there remains an urgent need to continue addressing the issue and mobilizing funds and resources to improve road safety.

46. The Second Global High-Level Conference on Road Safety, held in Brasilia in November 2015, mapped a way forward for global road safety that reconciled the Decade of Action and the Sustainable Development Goals through the Brasilia Declaration.[18]

47. The Brasilia Declaration includes 30 operative paragraphs that recommend actions in the following areas, each of which relates to pillars of the Global Plan for the Decade of Action for Road Safety 2011-2020:

(a) Strengthening road safety management and improving legislation and enforcement (pillar 1: road safety management);

(b) Promoting safer roads and the use of sustainable modes of transport (pillar 2: safer roads and mobility, but enlarged to include sustainability);

(c) Protecting vulnerable road users (pillar 4: safer road users, with greater emphasis vulnerable road users);

(d) Developing and promoting the use of safer vehicles (pillar 3: safer vehicles);

(e) Increasing awareness and building the capacity of road users (pillar 4: safer road users);

(f) Improving post-crash response and rehabilitation services (pillar 5: post-crash response);

(g) Strengthening cooperation and coordination towards global road safety (international activities covering all pillars).

48. Based on a comparison of the recommended actions in the Brasilia Declaration, the Global Plan for the Decade of Action for Road Safety 2011-2020 and the previous regional road safety goals, targets and indicators, and keeping in mind data availability, the Regional Meeting on Renewing Regional Road Safety Goals, Targets and Indicators for Asia and the Pacific, held in Seoul on 28 and 29 July 2016, and the Regional Meeting on Preparations for the Ministerial Conference on Transport, held in Bangkok on 10 and 11 August 2016, recommended the renewed regional road safety goals,

[18] See www.who.int/violence_injury_prevention/road_traffic/Final_Brasilia_declaration_EN.pdf?ua=1.

targets and indicators for Asia and the Pacific for 2016-2020 (table 5) to the third session of the Ministerial Conference on Transport for its consideration. This set of goals, targets and indicators will serve as guidelines for policy formulation and implementation as well as for assessment tools to determine progress in improving road safety at the national and regional levels.

Table 5
Renewed regional road safety goals, targets and indicators for Asia and the Pacific

Goals and targets	*Indicators for monitoring achievements*
Overall objective: 50 per cent reduction in fatalities and serious injuries on the roads of Asia and the Pacific over the period 2011 to 2020.	
(a) Reduce the fatality rates by 50 per cent from 2011 to 2020.	(1) Number of road fatalities (and fatality rates per 100,000 inhabitants).[a]
(b) Reduce the rates of serious road injuries by 50 per cent from 2011 to 2020.	(2) Number of serious road injuries (and injury rate per 100,000 inhabitants).
Goal 1: Making road safety a policy priority	
(a) Create a road safety policy/strategy, designate a lead agency and implement a plan of action.	(3) Information on existing national road safety policy, strategy, plan of action, and their implementation.[a]
	(4) Name of designated lead agency on road safety.[a] Description of responsibilities of local, regional and national government organizations, including related coordination mechanism at the national level.
	(5) National road safety reports or impact evaluation reports of government programmes.
(b) Allocate sufficient financial and human resources to improving road safety.	(6) Information on the amount of funding and number of qualified human resources allocated to road safety projects and programmes (public, private and donors) and research and development to create a safer road environment.
Goal 2: Making roads safer for vulnerable road users, including children, elderly people, pedestrians, non-motorized vehicle users, motorcyclists and persons with disabilities	
(a) Reduce by one third the pedestrian death rate in road crashes.	(7) Numbers of pedestrian deaths.[a]
(b) Increase the number of safe crossings for pedestrians (e.g. with subway, overhead crossings or traffic signals).	(8) Number of new safe crossings or improvements constructed or planned.

Goals and targets		*Indicators for monitoring achievements*	
(c)	Make the wearing of helmets the norm and ensure minimum helmet quality, in order to reduce the motorcyclist death rate by one third (or reduce it to below the average motorcyclist death rate of the ESCAP region).	(9)	Number of motorcyclist deaths and motorcyclist deaths per 100,000 inhabitants.[a]
		(10)	Existing laws or administrative rules for the mandatory use of helmets and specifying minimum helmet quality standards. Information on helmet use (percentage).[a]
(d)	Ensure minimum child safety measures, in order to reduce the child death rate by one third.	(11)	Number of child fatalities in road crashes.
		(12)	Existing laws or administrative rules on measures for child safety in cars (child restraints) and on motorcycles (child helmets).[a]
		(13)	Use of child seat restraints and child helmets (percentage).[a]
(e)	Equip all school children with basic road safety knowledge.	(14)	Existing or planned education programmes on road safety in school, starting class and its coverage.
(f)	Ensure safe transportation access to elderly people and persons with disabilities.	(15)	Information on safe transportation access to elderly people and persons with disabilities.
Goal 3:	**Making roads safer and reducing the severity of road crashes ("self-explaining" and "forgiving roads")**		
(a)	Integrate a road safety audit into all stages of road development starting at the design stage, conduct road safety inspection, carry out necessary improvement works, and improve hazardous locations.	(16)	Number of, and information about, road safety audits carried out for road design, new road construction and major improvements.[a]
		(17)	Number of improvement programmes carried out to make roads "forgiving" (e.g. addressing black spots, removing or cushioning roadside obstacles).
(b)	Increase separate/secure road space for pedestrians and cyclists in urban and suburban areas (where space permits).	(18)	Existing length of pedestrian and bicycle tracks in kilometres per 100,000 people or per 10,000 kilometres of roads (along highways and city roads). Programme to construct pedestrian and bicycle track.
Goal 4:	**Making vehicles safer and encouraging responsible vehicle advertising**		
(a)	Make regular inspection of road vehicles mandatory and ensure enforcement of inspection (starting in urban areas).	(19)	Existing laws or administrative rules on vehicle inspection, frequency of inspection (annual), number of vehicle inspection facilities and organizations.
(b)	Ensure safety requirements for new vehicles are in line with international standards.	(20)	Existing laws and regulations specifying vehicle safety standards and implementation.

Goals and targets	*Indicators for monitoring achievements*
Goal 5: Improving national and regional road safety systems, management and enforcement	
(a) Accession/ratification and implementation of the United Nations instruments on road safety.	(21) Information on accession/ratification of United Nations instruments on road safety.[a]
(b) Implement a national (computerized) database, including a mobile reporting system where possible, that provides information on road crashes.	(22) Information on existing integrated road safety database and responsible organizations. (23) The existence of definitions of road fatality and serious injury being used for data collection, with an indication as to whether they are based on internationally accepted definitions.
(c) Aim to provide road safety at the stage of road network planning.	(24) Information about the incorporation of road safety at the stage of road network planning.
(d) Introduction of laws and regulations regarding mandatory use of helmets and seat belts, drinking and driving, use of mobile phones and speed limits.	(25) Information on laws or administrative rules on compliance regarding helmet use (including percentage use).[a] (26) Information on laws or administrative rules on compliance regarding seat-belt use and use of mobile phones (including percentage use).[a] (27) Information on laws or administrative rules on compliance regarding drinking and driving and speed limits.[a]
(e) Allow alcohol tests for prosecution (breathalyser and/or behavioural tests).	(28) Information on existing alcohol-level testing rules and types of tests and alcohol limits used and allowed for prosecution.[a]
(f) Make it the general practice to keep motorcycle headlights on at all times.	(29) Information on existing laws or administrative rules on keeping motorcycle headlights on while driving.
(g) Increase responsiveness to post-crash emergencies and improve the ability of health and other systems to provide appropriate emergency treatment and early rehabilitation for crash victims.	(30) Information on a single nationwide telephone number for use in case of emergencies including road crashes.[a] (31) Information on rehabilitation services.
(h) Apply new technologies in traffic management and intelligent transport systems, including navigation systems, to mitigate the risk of road traffic crashes and maximize response efficiency.	(32) Information on the use of intelligent transport systems in improving road safety.

Goals and targets		*Indicators for monitoring achievements*	
Goal 6: Improving cooperation and fostering partnerships			
(a)	Encourage and recognize initiatives sponsored by the private sector.	(33)	Number of major partnerships in the area of road safety, funding (private sector and public-private initiatives).
(b)	Create new and deepen existing partnerships with non-governmental organizations.	(34)	Number, scope and funding of major partnerships with non-governmental organizations.
Goal 7: Developing the Asian Highway network as a model of road safety			
(a)	Reduce the total number of fatalities and road crashes on the Asian Highway network.	(35)	Total number of fatalities and road crashes on the Asian Highway network in each country per year.[a]
(b)	Reduce the number of fatalities on all Asian Highway network segments to less than 100 per billion vehicle-kilometres.	(36)	Number of fatalities per billion vehicle-kilometres for each Asian Highway network segment per year.[a]
(c)	Increase resource allocation for measures related to road safety along the Asian Highway network.	(37)	Amount of resources allocated to safety-related works for Asian Highway network segments from Governments and donors.
(d)	Improve Asian Highway network segments to be forgiving to road users if a crash occurs; demonstrate best practice.	(38)	Information on road safety assessment and rating programme for the Asian Highway network.
Goal 8: Providing effective education on road safety awareness to the public, young people and drivers			
(a)	Carry out targeted awareness campaigns and training programmes.	(39)	Information on the number of national road safety awareness campaigns and training programmes carried out.
(b)	Introduction of policies to reduce work-related road traffic crashes.	(40)	Information on policies to regulate and improve professional drivers' work conditions.

Source: Economic and Social Commission for Asia and the Pacific.

[a] Available fully or partially in the *Global Status Report on Road Safety 2015*, the Asian Highway Database or United Nations records.

IV. Issues for consideration

49. Governments may wish to consider adopting the ESCAP road safety goals, targets and indicators for 2016-2020 as a means of developing more targeted activities in the region. Table 5 may form the basis for further consultations on this issue among members and associate members.

50. Governments are invited to provide further guidance on the following elements suggested for inclusion in the draft regional action programme for sustainable transport connectivity in Asia and the Pacific, phase I (2017-2021).

Immediate objective: Countries in the region are to be assisted in improving road safety situations and meeting their commitments under the Decade of Action for Road Safety 2011-2020 and Sustainable Development Goals 3 and 11.

Outputs

1. Study on measures to improve road safety, such as rules and regulations covering the key risk factors (e.g. speeding and drink-driving);

2. Study on technical standards for improving road safety;

3. Report on regional progress on the improvement of road safety;

4. Road safety tool/handbook for improving road safety at the national level;

5. Workshop/seminar/meeting/advisory service to support member countries on improving road safety.

Indicators of achievements

1. Measures taken by member States to implement policies and programmes on road safety in line with the goals of the Decade of Action for Road Safety 2011-2020 and the road safety targets in Sustainable Development Goals 3 and 11.

2. Measures taken by member States to improve road safety rules and regulations covering the key risk factors.

3. Road safety studies and tool/handbook for improving road safety at the national level shared through meetings and the ESCAP website.