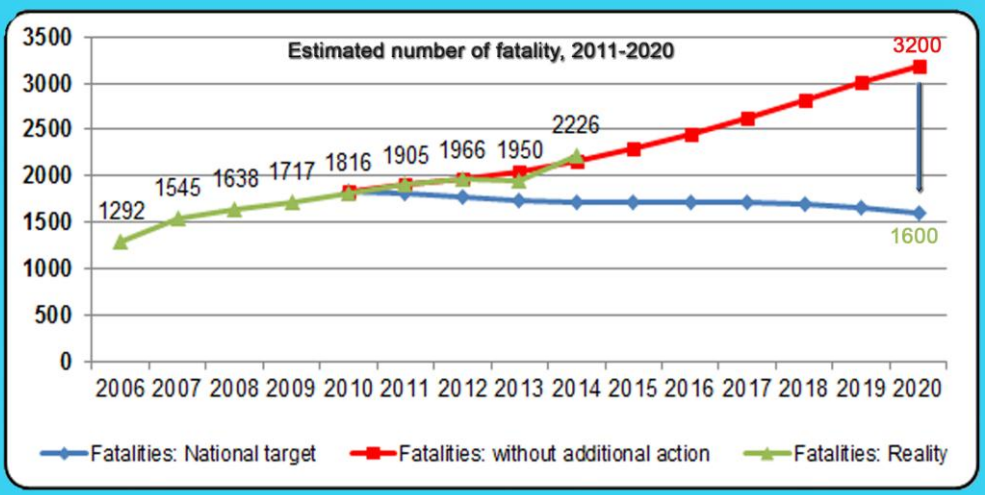
Kingdom of Cambodia

Nation Religion King

National Road Safety Committee

2014 SUMMARY REPORT
ROAD CRASHES AND CASUALTIES IN CAMBODIA



RCVIS
ROAD CRASH & VICTIM INFORMATION SYSTEM

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Glossary

○ Blackspot	a section of road with 300 meter length, that has 3 crashes with at least one person killed in one year period
○ Casualty	Person was killed or injured in a road crash
○ Fatality	Person was killed immediately or died within 30 days, as a result of the crash
○ Serious injury	Person was hospitalized for at least 6 days because of injuries sustained in the crash
○ Slight injury	Person was hospitalized less than 24 hours or not hospitalized as a result of the crash

I. Introduction

The Road Crash and Victim Information System (RCVIS)[1] in Cambodia has been progressively developed since 2004 by the Ministry of Public Works and Transport, the Ministry of Interior and the Ministry of Health, with the technical and financial support of Handicap International (HI). The RCVIS has been managed by the General Secretariat of the National Road Safety Committee (GSNRSC) since 2010, with support from HI. The system provides road safety stakeholders (government and civil society organisations) with accurate, continuous and comprehensive information for policy development, planning and evaluation of the impact of road safety initiatives.

II. 2014 Overview

- **4,645** crashes and **15,315** casualties were reported in 2014. Among them, **2,226** were fatalities and **6,005** were serious injuries (on average, more than **6** people died and almost **17** were injured every day). Even the number of fatalities decreased by 14% but serious injuries increased by 6% compared to 2013.

Table 1: Number of casualties by severity of injuries (2011 – 2014)

fatalities and injuries	2011	2012	2013	2014		2014 change over 2013	
	N	N	N	N	%	N	%
Fatalities	1905	1966	1950	2226	15%	276	14%
Severe injuries	5807	5349	5671	6005	39%	334	6%
Slight injuries	7661	7248	8109	6425	42%	-1684	-21%
No injuries	0	0	166	105	1%	-61	-37%
Unknown injuries	1281	1052	331	554	4%	223	67%
Total	**16654**	**15615**	**16227**	**15315**	**100%**	**-912**	**-6%**

- In contrast, it was estimated that the country invested only around 2.6 million US Dollar[2] for road safety interventions during the same year.

III. Evolution of data (2005-2014)

- In Cambodia, there were 7.9 fatalities per 10,000 registered vehicles, number higher than in Lao PDR (6.7) and Vietnam (2.08). The fatality

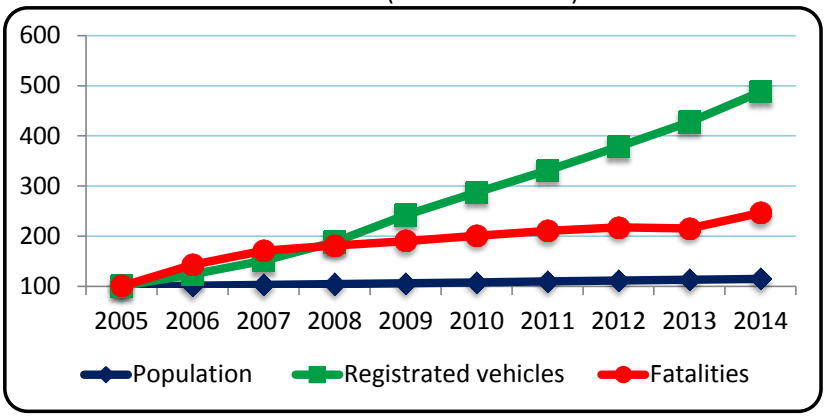
[1] Source: The data are reported by traffic polices and health facilities.

[2] International and local NGOs contributed around 58.52% of the total budget while the government contributed about 41.10% and private sector was about 0.38%.

rate per 100,000 inhabitants in Cambodia was 14.7, which was higher than in Vietnam (10.01), but similar Lao PDR (15.5).

- Over the last 9 years (2005-2014), the number of fatalities has doubled. At the same time, the population has increased by 15% and the number of registered motorized vehicles[3] has risen by 387% (about 80% of all registered vehicles were motorbikes).

Figure 1: Evolution of road fatalities, population and vehicles in Cambodia, 2005 – 2014 (base 100 = 2005)



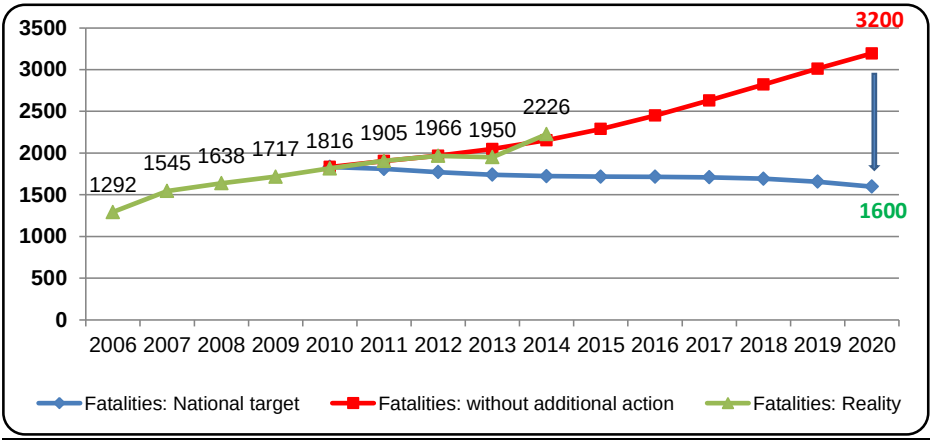
- It is estimated that unless additional road safety actions are taken, the number of fatalities in Cambodia will increase up to 3,200 by 2020[4]. Therefore, the Royal Government of Cambodia has committed to develop a national road safety action plan 2011-2020 in order to reduce the number of road fatalities in 2020 by 50% (or reducing it to 1,600 fatalities). This will save 7,350[5] lives if the target is achieved.

[3] Source: "Statistics of vehicles registered in 2014", Department of Land Transport, Ministry of Public Work and Transport. Registered vehicles in Viet Nam since 2000, National Traffic Safety Committee. Lao Vehicle registered in 2014, from HI Lao

[4] Source: "Cambodia census 2008" National Institute of Statistic Ministry of Planning.

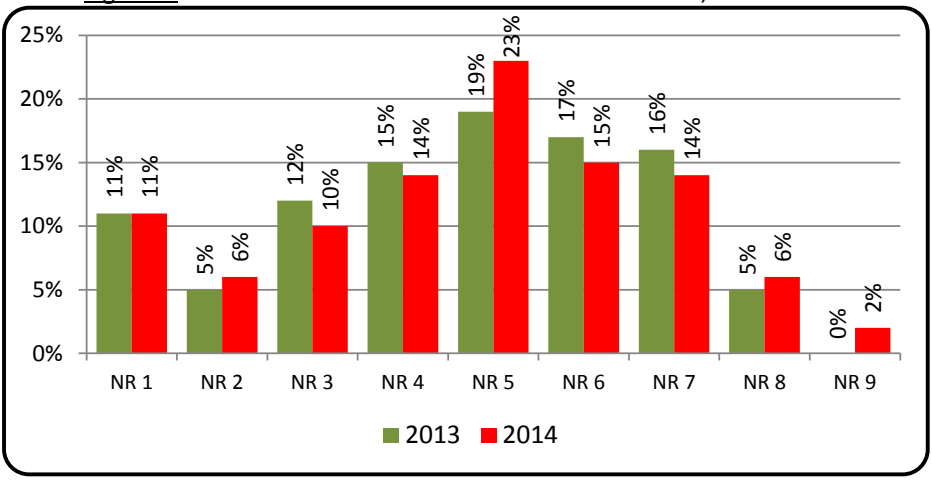
[5] These 7,350 lives include all lives that can be saved every year, from 2011 to 2020. The calculation has been conducted by the Institute for Road Safety Research (SWOV), The Netherlands.

Figure 2: Estimated number of fatality, 2011-2020



- Among all fatalities, 66% on National Road and the majority of them (70%) got crash on one digit national roads (National Road 1 to National Road 9). National road 5 accounted for the highest percentage of fatalities (23%).

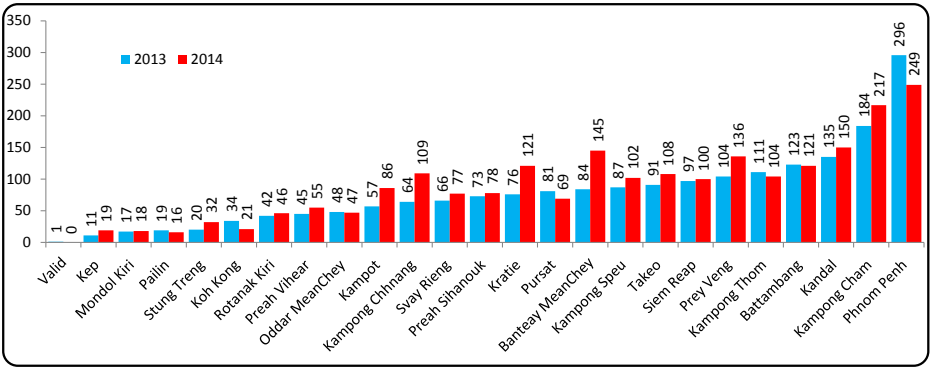
Figure 3: The number of fatalities on main national roads, 2013 – 2014



IV. Blackspots

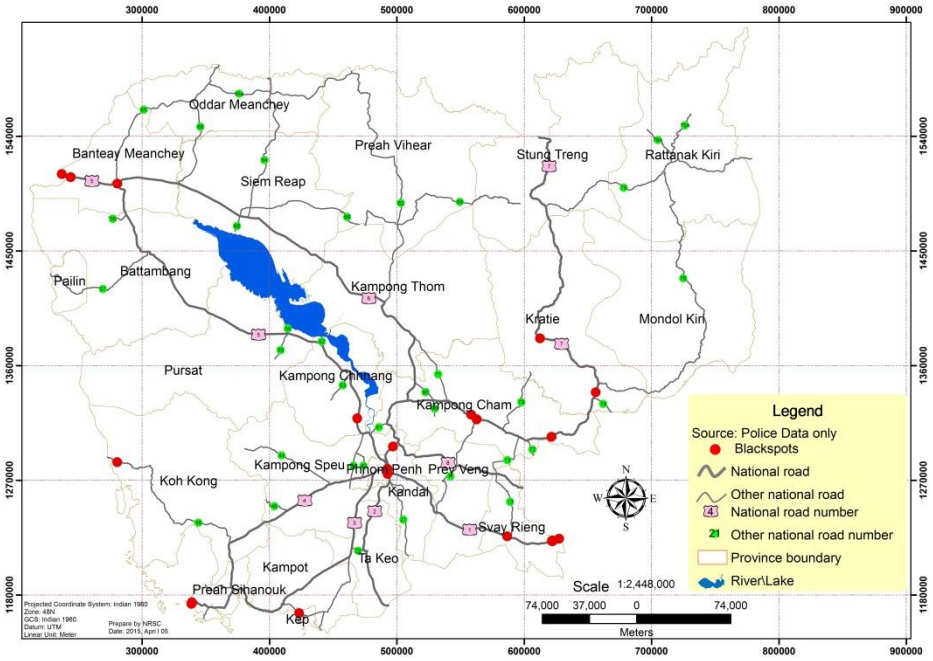
- The highest number of fatalities was observed in Phnom Penh (249), followed by Kampong Cham province (217) and Kandal province (150) in 2014.

Figure 4: The number of fatalities in Phnom Penh and provinces, (2012-2013)



- 29 locations were identified as blackspots on the road networks in Cambodia in 2014.

Figure 5: Blackspots on the Cambodian road network, 2014

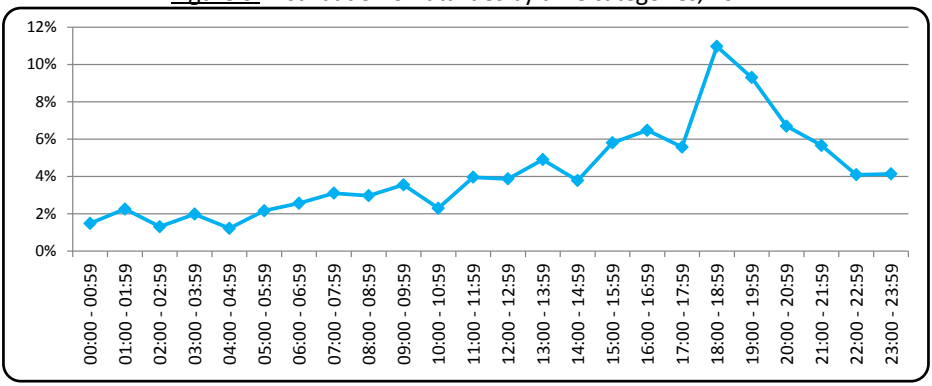


V. Victim Information 2014

1. Time information

- The peak was from 6 pm to 8 pm (20%).
- Sundays represented the highest number of fatalities (18%), followed by Saturdays (15%) and Friday (15%).
- The highest percentage of fatalities occurred in April (10%), November (10%) and January (9.9%).
- The number of fatalities during the main holidays[6] accounted for 10% of overall fatalities.

Figure 6: Distribution of fatalities by time categories, 2014

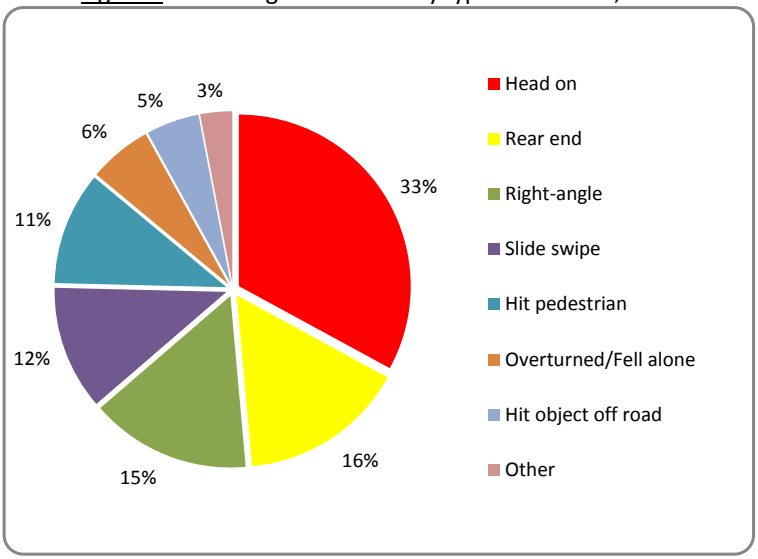


2. Type of collisions

- Head-on collisions accounted for 33% of the total fatalities, followed by hit pedestrian (12%) , rear-end collisions (16%) and right-angle (15%) .

[6] In January April and December Cambodia celebrated New Year Festival such as Chinese New Year (January), Khmer New Year (April) and International New Year(December).

Figure 7: Percentage of fatalities by type of collisions, 2014



3. Age Category

- Almost 64% of fatalities aged between 15 and 39 years old.
- Children under 15 years old accounted for 8% of the fatalities.
- The peak of fatalities reached people between 20 and 24 years old (23%).

Table 2: Number of fatalities by age categories, 2011 – 2014

Age Group	2011	2012	2013	2014		2014 change over 2013	
	N	N	N	N	%	N	%
0 - 4	35	36	37	54	2%	17	46%
5 - 9	72	65	79	63	3%	-16	-20%
10 - 14	51	55	35	58	3%	23	66%
15 - 19	234	246	240	186	8%	-54	-23%
20 - 24	391	409	419	515	23%	96	23%
25 - 29	301	327	267	328	15%	61	23%
30 - 34	171	180	213	231	10%	18	8%
35 - 39	137	135	129	174	8%	45	35%
40 - 44	125	106	117	120	5%	3	3%
45 - 49	95	116	112	141	6%	29	26%
50 - 54	96	100	112	122	5%	10	9%
>=55	185	188	190	234	11%	44	23%
Unknown	12	3	-	-	-	-	-
Total	1905	1966	1950	2226	100%	276	14%

4. Occupation

- Farmers represented the largest group of fatalities (42%), followed by workers (19%) and students (12%).
- Among student fatalities, university students accounted for 44% followed by primary school students (30%), high school students (14%) and secondary school students (12%).
- 1% of fatalities concerned tourists or expatriates.

Table 3: Number of fatalities by occupations, 2011 – 2014

Occupation	2011	2012	2013	2014		2014 Change over 2013	
	N	N	N	N	%	N	%
Farmer	703	757	753	932	42%	179	24%
Worker	336	338	371	422	19%	51	14%
Student	272	269	248	258	12%	10	4%
Child	47	43	51	69	3%	18	35%
House keeping/servant	52	47	21	15	1%	-6	-29%
Vendor/small business	56	77	89	118	5%	29	33%
Motor taxi driver	46	29	34	43	2%	9	26%
Car/Truck driver	45	38	46	43	2%	-3	-7%
Tourist/Expatriate	14	17	15	20	1%	5	33%
Government employee	126	141	132	107	5%	-25	-19%
Other	208	210	190	199	9%	9	5%
Total	**1905**	**1966**	**1950**	**2226**	**100%**	**276**	**14%**

5. Types of transportation

- Motorbike riders accounted for 73% of the total number of fatalities, followed by pedestrians (10%) and those traveling by family cars (6%) in 2014.

Table 4: Number of fatalities by type of transportation, 2011 – 2014

Type of transports	2011	2012	2013	2014		2014 Change over 2013	
	N	N	N	N	%	N	%
Motorbike	1262	1340	1351	1614	73%	263	19%
Pedestrian	254	207	246	223	10%	-23	-9%
Bicycle	51	77	45	66	3%	21	47%
Family car	144	155	138	128	6%	-10	-7%
Passenger vehicle	36	31	27	44	2%	17	63%
Goods vehicle	81	99	72	79	4%	7	10%
Agriculture vehicle	51	42	46	52	2%	6	13%
Other	26	15	25	20	1%	-5	-20%
Total	1905	1966	1950	2226	100%	276	14%

❖ Helmet Wearing

- Only 12% of motorbike drivers' casualties wore a helmet in the crashes.
- The wearing rate is higher among driver casualties (17%) than among passenger casualties (2%) in the crashes.
- 69% of the fatalities of motorbike drivers and passengers suffered from head injury in the crashes.

6. Contributing factors

Human errors[7] contributed to 95% of crashes and fatalities, the second contributor is vehicle defects (4.1%), follow by road environment (1.2%) and weather (0.4%).

- Among vehicle defects factor, the leading cause is break failure (1.4%) and tire blow out (0.9%)
- There are 3 major cause of road environment factor, pothole (0.4%), dust (0.4%)
- Over speeding (human error factor) is the leading cause of fatalities (43%) followed by drunk driving (17%).

Table 5: Number of fatalities by human error, 2011-2014

Human Error	2011	2012	2013	2014		2014 Change over 2013	
	N	N	N	N	%	N	%
Speed-related	978	1032	906	951	43%	45	5%
Drunking driving	272	254	290	381	17%	91	31%
Not respect right of way	141	175	187	184	8%	-3	-1%
Dangerous overtaking	136	182	222	246	11%	24	11%
Change lane without due care	57	26	65	77	3%	12	19%
Change direction without due care	32	28	48	96	4%	48	100%
Other	202	167	145	196	9%	51	35%
N/A	87	102	87	95	4%	8	9%
Total	**1905**	**1966**	**1950**	**2226**	**100%**	**276**	**14%**

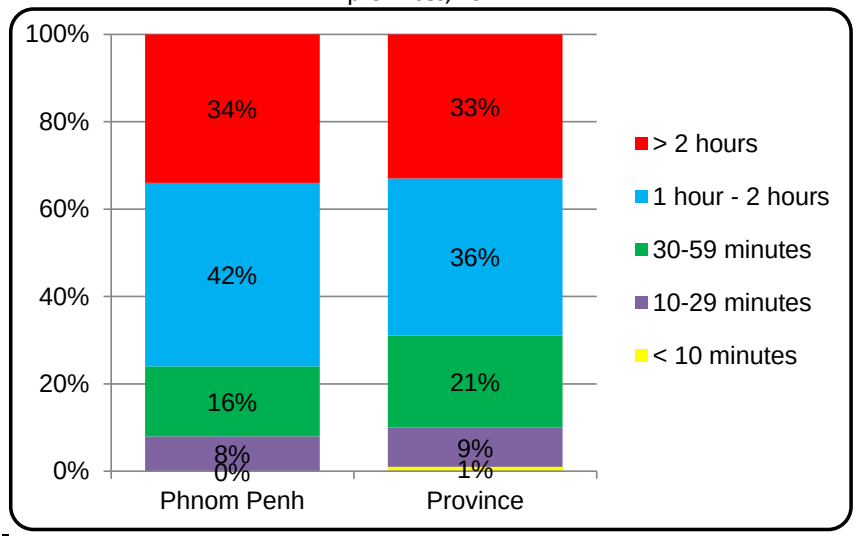
[7] Human errors include over speeding, drink driving, no respect of the rights of way, etc. However, there is no comprehensive analysis on the causes of road crashes due to road environment which led to a high share of human errors.

VI. Emergency response services

15% of the casualties were fatalities and 39% were severe injuries. Among fatalities, 69% of them died immediately at the scene of crashes, 25% died at a hospital and 7% died during the transfer from the crash scene to a medical facility.

- Only 24% of the casualties were transferred to a hospital by ambulance and 58% by the private transportation.
- Only 8% of casualties could reach the first health facility in less than 30 minutes in Phnom Penh municipality, while 10% in other provinces
- In Phnom Penh, most of casualties spent about 1-2 hours to reach health facilities, while in other provinces spent more than 2 hours.

Figure 8: Duration to arrive at the first hospital or health center in Phnom Penh versus provinces, 2014



VII. Conclusion

Road Crash and Victim Information System provides road safety stakeholders (government and civil society organizations) with accurate, continuous and comprehensive information for policy development, planning and evaluation of the impact of road safety initiatives.

- In 2014, number of crashes and number of injuries were significantly increased even though the number of fatalities was dropped down a small amount.

- National road is the most dangerous road which 66% of all road crash fatalities occurred.

- Phnom Penh city still stand at the first place compare to other province to have highest number of road crash fatalities.

- Driving at night time (from 6pm to 8pm), driving during weekend day, driving during Khmer big festival were much more at risk than driving on normal day.

- Youth and adult are the most vulnerable age group of road crash. This causes the cost of road crash higher and higher as they are active in labor force which supports the family's economy as well as the national economy. The majority of fatalities are farmers and workers.

- Motorbike is the most widely use in Cambodia and it is also the most hazardous vehicle as well. About 73% of fatalities were riding motorbike while having the crash.

- Human error is still the main cause of road crashes fatalities. However, other factors also contribute to the road crashes as well such as vehicle defected, road environment, and weather.

- Over speeding and drink driving is the major cause of road crash fatalities.

- Length of time to transport the victims to health facilities is also a very important part. In both Phnom Penh and other provinces, the casualties reached health facilities more than 1 hour after having the road crash.

VIII. Key recommendations

- Strengthen the RCVIS data collection system to ensure its accuracy, especially regarding road environment factor;
- Education in schools, universities and communities, especially along national roads and at high risk areas.
- Improve blackspot areas, pedestrian infrastructure and set up slow speed zones and separate lanes for motorbikes;
- Strengthen the traffic law enforcement, particularly on speeding, drink driving and helmet wearing;

- Promote road safety and traffic law public awareness campaigns and
- Improve the effectiveness and efficiency of the emergency medical services and ensure neutral treatments to all casualties;
- Promote and integrate Road Safety Policy and Action Plans into local development plans with adequate resources for the implementation.
- Strengthen the training and driving license application; and introduce demerit point system;
- Seek for other sources of funds to reinforce road safety program education in all aspects and the knowledge on road safety to all level of road user;
- Integrate road safety awareness and enforcement based on concrete planning.

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