



**Government of Nepal**  
**Ministry of Physical Planning & Transport Management**



**Nepal Road Safety Action Plan**  
**(2013 – 2020)**

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## Acronyms

ADB	Asian Development Bank
DDC	District Development Committee
DfID	UK Department for International Development
DoC	Department of Customs
DoHS	Department of Health Services
DoLIDAR	Department of Local Infrastructure Development and Agriculture Roads
DoR	Department of Roads
DoTM	Department of Transport Management
DUDBC	Department of Urban Development & Building Construction
FNTE	Federation of Nepal National Transport Entrepreneurs
GoN	Government of Nepal
KVMTPD	Kathmandu Valley Metropolitan Traffic Police Division
LSGA 1999	Local Self Governance Act 1999
LSGR 1999	Local Self Governance Regulation 1999
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Home
MoHP	Ministry of Health and Population
MoLD	Ministry of Local Development
MoLJ	Ministry of Law and Justice
MoL	Ministry of Labour
MPPWTM	Ministry of Physical Planning, Works and Transport Management
NADA	Nepal Automobile Dealer Association
NBSM	Nepal Bureau of Standards and Metrology
NPC	National Planning Commission
NTLA	Nepal National Transport Labourers Association
RBN	Roads Board Nepal
RTA	Road-traffic accident
RTU	Road & Traffic Unit (DoR)
TP	Traffic Police
UNESCAP	United Nations Economic & Social Commission for Asia and Pacific
VDC	Village Development Committee
VTMA 1993	Vehicle & Transport Management Act 1993
VTMR 1994	Vehicle & Transport Management Regulation 1994
WB	World Bank
WHO	World Health Organisation

## 1. Background

As per UN estimates, nearly 1.3 million people die globally from road-traffic accidents (RTAs) annually or more than 3000 on a daily basis. In addition, 20– 50 million people are injured from these accidents and such injuries are the leading cause for disabilities. Compounded with these staggering statistics is the fact that 90 percent of fatalities from road traffic accident occur in low and middle-income countries that have less than half of the world's registered fleet. Road traffic injuries are one of the main causes of deaths for people between the age of 5 to 44 and results in a huge economic loss to countries worldwide. One estimate puts the global loss to be over US\$ 500 billion and between 1 and 3 % of the gross national product of the respective countries. Countries worldwide and especially developing countries can ill afford such massive losses. In addition, with increasing motorization worldwide, road traffic injuries are predicted to be the fifth leading cause of death around the world unless immediate, middle and long term interventions are not taken. In recognition of this fact, the UN Road Safety Collaboration (UNRSC) was established in April 2004 to better address road-safety issues globally and subsequently the UN Commission of Global Road-Safety issued a call for a decade of action to be dedicated to road-safety in its 2009 report.

This proposed Decade of Action on road-safety has been endorsed by the UNRSC and a wide range of public figures. As a result, the UNRSC released the Global Plan for the Decade of Action for road-safety -2011 to 2020 in May 2011.

The UN Global Action mandates member countries to develop their individual national plans for the decade (2011 to 2020) incorporating interventions under the following five pillars to road-safety.

- Road safety management
- Safer roads and mobility
- Safer vehicles
- Safer road users
- Post-crash response

In addition, the Global Action Plan recommends countries to develop their national action plans for the decade in a manner that is consistent or can be carried forward to the regional plans.

This document thus represents Nepal's national action plan on road-safety drafted in line to the Global Action Plan. All stakeholders are obliged to follow this action plan to improve and manage road-safety in an integrated manner. It also sets out the activities that concerned agencies need to implement to achieve the desired goals of reducing road traffic injuries and resultant economic losses in Nepal. As the first national action plan, it is anticipated that GoN will revise and update it in the future as necessary.

## 2. Nepal's Road Network and Vehicle Population

Nepal's strategic road network (SRN) lying under the Department of Roads (DoR) comprises the national Highways, feeder roads and strategically important urban roads. The local road network (LRN) which lies under the local bodies (district and village development committees, municipalities) comprise the district, urban and village roads and are coordinated by the Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR). **Table 1** shows the road network in Nepal.

**Table 1 Nepal Road Network**

Road Network	Road Standard (km)			Total (km)
	BT	GR	ER	
SRN (2009)	4,952	2,065	3,818	10,835
	28%	27%	45%	100%
LRN (2010)	Include 22,000 km village roads			30,000
	% NA	% NA	% NA	100%

Source: Statistics of SRN 2009; GoN/DoR & DoLIDAR.  
Note: LRN are only estimates in a bsence of official data.

**Table 2** shows the vehicle registrations in Nepal. The annual growth-rate of vehicle

registrations range from 9 to 17 % (16% - motor cycles, 13 % -overall fleet).

**Table 2 Total Vehicle Registrations in Nepal**

F.Y.	B	MB	MiB	Truck, Exc., Crane	Car, SUV	UV	3- wh	MC	TRA, p-tiller	Others	F.Y. Total	F.Y. Gross Total
2006-07	1,564	806	138	3,278	5,156	736	12	72,568	2,942	1,535	88,735	626,174
2007-08	1,419	1,179	31	3,594	4,741	1,588	18	69,666	3,297	206	85,739	711,913
2008-09	1,843	593	128	3,643	6,857	1,287	20	83,334	4,663	202	102,570	814,483
2009-10	1,888	780	145	4,524	12,268	1,975	9	168,707	11,460	31	201,787	1,016,270
2010-11	1,610	1,370	115	1,969	8,510	3,087	2	138,907	7,937	133	163,640	1,179,910

Source: GoN Department of Transport Management

There is however no system of recording the aging vehicles which are phased out or scrapped.

In recent years, there has been high growth-rate for light vehicles in addition to motor-cycles. In the urban areas, this trend is the impact from an expanding economy in an environment where efficient mass transportations are lacking.

highest rate in both Asia and the world. The fatality rate is actually higher than 17 if the number of vehicles phased out or scrapped and under-reporting are taken into consideration.

**Table 3** shows a recent comparison of Nepal's RTA injuries with that in the region.

### 3. Road Safety Status in Nepal

As per the police statistics, there were 8,656 road-traffic accidents in the fiscal year 2010-011 resulting in 1,689 fatalities, 4,071 serious injuries and 9,133 minor injuries. However, these figures may not truly reflect the actual number of casualties occurring in Nepal as past researches have indicated that RTAs are under-reported, particularly, the minor injuries. Taking these under-reporting into account, a recent study estimated that were 13,247 road traffic accidents in fiscal year 2009-010 resulting in 1,734 fatalities, 4,130 injuries (minor and serious) and 7,383 damage-only accidents. Comparing the road traffic fatalities with the cumulative number of vehicle registered in the country during this period (i.e. 1,016,270), Nepal's fatality rate in fiscal year 2009- 010 was 17 per 10,000 registered vehicles, which, is one of the

**Table 3** Regional Comparison of RTA Injuries with Nepal

Country	Year	RTA fatalities	RTA injuries	Vehicle Reg	Fatality per 10,000 vehicles	Injury to Fatality Ratio	Regional fatality per 10,000 veh	Regional Injury to fatality ratio
Nepal	2007	962	2,653	617,305	16	3:1	17	5:1
Afghanistan	2007	1,835	3,212	731,607	25	2:1	17	5:1
Bangladesh	2006	3,160	403,000	1,054,057	30	128:1	17	5:1
Bhutan	2007	111	724	35,703	31	7:1	17	5:1
India	2006	105,725	452,922	72,718,000	15	4:1	17	5:1
Maldives	2007	8	-	33,807	2	0:1	17	5:1
Pakistan	2007	5,565	12,990	5,287,152	11	2:1	17	5:1
Sri Lanka	2007	2,334	31,688	3,124,794	7	14:1	17	5:1
China	2006	89,455	431,139	145,228,994	6	5:1	6	5:1
Mauritius	2007	140	2,915	334,125	4	21:1	4	21:1
Malaysia	2007	6,282	21,363	1,682,515	37	3:1	13	28:1
Myanmar	2007	1,638	12,358	1,045,105	16	8:1	13	28:1
Philippines	2006	1,185	5,870	5,515,576	2	5:1	13	28:1
Singapore	2007	214	10,352	851,336	3	48:1	13	28:1
Thailand	2007	12,492	973,108	25,618,417	5	78:1	13	28:1

Source: Global Status Report on Road-Safety; UN World Health Organization; Geneva, Switzerland; 2009.

**Table 3** shows that Nepal's fatality-rate per registered vehicles is around the average rate within South-Asia (17 per 10,000 registered vehicles) but higher than the corresponding rate in South-east Asia and China. This table also substantiates the fact that there is gross under-reporting of RTA injuries in both Nepal and South-Asia as both the national and the regional average of the ratio of the RTA injuries to fatalities is less than 10:1<sup>1</sup>.

While in aggregate, recent past data show an increasing trend in both the RTA fatalities and injuries, the distribution of the casualties is not consistent across different regions of the country. While there is no official statistics on the accident rates in Nepal, **Table 4** shows the extrapolated RTA statistics classified by the different regions of the country.

<sup>1</sup> A ratio of the injuries to fatalities less than 10:1 is often taken as a yard-stick to determine under-reporting of RTA injuries.

**Table 4 RTA Statistics Classified by the Different Regions of Nepal**

Year	Region	Nos. of RTAs	Population <sup>A</sup>	Cum. Vehicle Registered	RTA Statistics					
					Nos. of casualties		Per 100,000 population		Per 10,000 registered vehicles	
					Fatalities	Injuries	Fatal	Injury	Fatal	Injury
2004-05	KTM Valley	3,701	1,106,766	265,916	127	2,293	11	207	5	86
	East	545	5,486,815	44,191	176	301	3	5	40	68
	Central*	418	6,686,000	103,001	192	456	3	7	19	44
	West	636	2,250,679	50,185	245	1,124	11	50	49	224
	Mid-west	190	1,580,224	10,823	53	549	3	35	49	507
	Far-west	42	1,134,794	8,348	15	69	1	6	18	83
	<b>Total=</b>	<b>5,532</b>	<b>18,245,279</b>	<b>482,464</b>	<b>808</b>	<b>4,792</b>	<b>4</b>	<b>26</b>	<b>17</b>	<b>99</b>
2005-06	KTM Valley	1,989	1,149,383	292,697	93	2,132	8	185	3	73
	East	494	5,535,099	50,124	191	1,844	3	33	38	368
	Central*	486	6,813,034	115,192	213	1,018	3	15	18	88
	West	590	2,268,460	58,153	202	899	9	40	35	155
	Mid-west	248	1,607,720	12,576	40	415	2	26	32	330
	Far-west	87	1,151,703	8,697	78	198	7	17	90	228
	<b>Total=</b>	<b>3,894</b>	<b>18,525,399</b>	<b>537,439</b>	<b>817</b>	<b>6,506</b>	<b>4</b>	<b>35</b>	<b>15</b>	<b>121</b>
2006-07	KTM Valley	2,224	1,193,680	330,956	93	2,621	8	220	3	79
	East	406	5,583,808	60,923	166	1,034	3	19	27	170
	Central*	520	6,942,482	140,490	303	1,485	4	21	22	106
	West	800	2,286,380	69,089	226	1,585	10	69	33	229
	Mid-west	358	1,635,694	14,611	91	743	6	45	62	509
	Far-west	137	1,168,863	10,105	74	411	6	35	73	407
	<b>Total=</b>	<b>4,445</b>	<b>18,810,908</b>	<b>626,174</b>	<b>953</b>	<b>7,879</b>	<b>5</b>	<b>42</b>	<b>15</b>	<b>126</b>
2007-08	KTM Valley	2,211	1,287,575	373,841	120	2,774	9	215	3	74
	East	704	5,632,946	66,362	235	1,304	4	23	35	196
	Central*	648	7,074,389	168,494	242	1,585	3	22	14	94
	West	624	2,304,443	76,312	341	1,440	15	62	45	189
	Mid-west	302	1,664,156	15,319	146	619	9	37	95	404
	Far-west	148	1,186,279	10,586	47	186	4	16	44	176
	<b>Total=</b>	<b>4,637</b>	<b>19,149,787</b>	<b>710,914</b>	<b>1,131</b>	<b>7,908</b>	<b>6</b>	<b>41</b>	<b>16</b>	<b>111</b>
2008-09	KTM Valley	2,735	1,337,316	423,931	137	3168	9	207	3	65
	East	841	6,097,115	75,042	280	1630	4	21	31	174
	Central*	766	6,676,763	199,851	366	2241	4	24	12	79
	West	766	2,480,295	88,141	396	2039	14	58	39	163
	Mid-west	299	1,664,203	15,839	116	809	9	37	92	391
	Far-west	82	1,085,544	10,680	61	179	4	17	44	174
	<b>Total=</b>	<b>5,489</b>	<b>19,341,236</b>	<b>813,484</b>	<b>1,356</b>	<b>10,066</b>	<b>7</b>	<b>52</b>	<b>17</b>	<b>124</b>
2009-10	KTM Valley	4101	1,389,019	506,135	146	3865	11	278	3	76
	East	1232	5,732,522	106,563	366	2337	6	41	34	219
	Central*	796	7,345,769	240,897	481	2089	7	28	20	87
	West	790	2,340,997	124,406	452	2143	19	92	36	172
	Mid-west	402	1,722,572	22,562	211	836	12	49	94	371
	Far-west	114	1,221,894	14,708	78	243	6	20	53	165
	<b>Total=</b>	<b>7,435</b>	<b>19,752,773</b>	<b>1,015,271</b>	<b>1,734</b>	<b>11,513</b>	<b>9</b>	<b>58</b>	<b>17</b>	<b>113</b>

Source: Consultant's estimates based on published data from the Traffic Police and the Department of Transport Management.

<sup>A</sup>Projected based on 2001 and 2011 census data from the GoN Central Bureau of Statistics, Kathmandu.

\*Cumulative vehicle registrations for the central development region exclude the corresponding vehicles in Bagmati Zone.

**Table 4** shows that both the fatalities in terms of the population and registered vehicles first decreased but then increased within the Kathmandu Valley between the fiscal year 2004- 05 to 2006- 07. The trend was different in the other regions of the country. For example, the per capita fatality within the western region increased significantly in the fiscal year 2009- 010 while a significantly higher number of the population as well as the registered vehicle-fleet in the mid-west succumbed to RTA fatality from the fiscal year 2006-07 onwards. In terms of non-fatal RTA injuries, the population of Kathmandu is the most affected while amongst the vehicle fleet, those in the mid-west are the most affected in the country.

Though the RTA statistics presented in **Table 4** is slightly distorted from the actual scenario due to the assumptions involved in the data extrapolation, it is safe to conclude that the safety record varies by locations of the country with disparate trends. The following summarizes the findings of RTAs in Nepal based on past research and monitoring.

- About half of all the RTAs nationwide occur in the Kathmandu Valley alone where nearly half of the country's fleet ply.
- The severity of the RTA injuries in the Kathmandu Valley is less pronounced than in the rural areas.
- RTA fatalities amongst the vehicle fleet are higher in the regions outside the Kathmandu Valley.
- Pedestrians are the most vulnerable groups in road accidents because pedestrian-safety has not been considered.
- People between 15 to 40 years of age are most affected in road-accident followed by those above 50 years.
- In the urban areas, there is significant number of motor-cycle accidents.
- In the rural areas, there are significant number of trucks and bus accidents.
- Bus accidents along the long-distance routes are of serious concern accounting for 13% and 31% of all the fatalities and serious injuries, respectively.

- Single bus accidents where the vehicle runs over the hill-roads represent the fatal RTAs of catastrophic proportions.
- About 30 to 40% of the accidents happen after sunset when traffic is low.
- Driver negligence, drunk driving, random roadside parking, reckless pedestrian crossing, poor road conditions, etc., were the major causes responsible for the accidents.
- Accidents tend to cluster at the following locations.
  - Urban areas: intersections
  - Highways: bridge approaches, intersections, and roadside built-up areas.
- From a conservative estimate, the economic loss from RTAs in Nepal was at least NRs.<sup>2</sup> 2.7 billion (US\$ 41.2 million) annually or 0.4 % of the GNP<sup>3</sup> at 2007 price. When the accident under-reporting are adjusted, the loss was 0.8% of the GNP annually.

#### 4. Safety Issues in Nepalese Roads

There are numerous safety issues on the Nepalese hill roads (which form a substantial portion of the road network) such as poor visibility at blind corners; poor shoulders; unforgiving side-drains, inadequate safety barriers at steep vertical drops; unscientific location of passing bays in single lane roads; lack of climbing lanes; very steep gradients at numerous sections, narrow sections at built-up areas, etc..

<sup>2</sup> Nepali Rupees

<sup>3</sup>Report: "Cost of Road Traffic Accidents in Nepal"; GoNDoR Road Connectivity Sector I Project (ADB Grant 0051-NEP); N.D. Lea (Canada) - CEMAT- Soil Test- TMS JV: 2008.

**Figure 1 Hairpin Bends in Nepalese Hill Roads**



Source: "RSA: Galchhi- Trishuli- Syafrubesi Road"; GoN DoR/ADB RCSIP; N.D. Lea. (Canada) - CEMAT- Soil Test -TMS JV; Kathmandu, Nepal; 2007.

**Figure 2 Truck run-over accident in a hill-road of Nepal**



Source: "RSA: Narayanghat- Mugling HWY(Post Construction); DoR/IDA RMDP; SILT-Full Bright-CEMECA JV; Kathmandu, Nepal; June 2005.

Along the roads in the plains (Terai), unforgiving drains, inadequate pedestrian provisions, inadequate delineation at bridge/culvert crossings, narrow carriageway at build-up areas, etc., are the predominant safety issues.

## 5. Coordination Efforts

Horizontal coordination amongst the stakeholders to manage road-safety has been poor, ad-hoc, often hampered with duplication of activities from parallel committees set up under different agencies while interventions been arbitrarily implemented.

A National Road Safety Council was set up in Nepal during the nineties but this body has been defunct. There have been calls for reviving

such a council while some quarters have suggested designating a stakeholder as the lead agency. In both options, there have been calls for expanded jurisdiction and resources.

At the legislative level, the Parliamentary State Affairs and the Financial Labour Relation Committees within the country's then Legislative Assembly had recently monitored road-safety issues. Under the Interim Constitution, technical committees can be formed to specifically address road-safety as per the provisions of the Assembly. However, road-safety did not receive the due priority it demanded as the then Assembly was concentrated in the drafting of the Constitution and the country is in transition phase. Nevertheless, the provisions for technical committees will most likely be in place in the Constitution.

Recently, lawmakers, senior bureaucrats and traffic police have mooted for the establishment of a high-level road management board to improve traffic management in the Kathmandu Valley. While the first emphasis of such body is traffic management, such measures do enhance road-safety as well and encourage horizontal coordination.

## 6. Road Safety Strategy

The detailed formulation of the road-safety strategy is proposed as one of the activity of this action plan. However, the following is a brief outline of the strategy that will emerge.

**Vision:** Safe road-infrastructures and services backed with effective post-crash response and conducive environment resulting in little or no casualties from the RTAs.

**Mission:**(i) To mitigate the loss of life, properties and economic loss from RTAs.

(ii) To complement the broader mission of the National Strategy on the Prevention and Control of Violence, Injuries and Disabilities<sup>4</sup>

<sup>4</sup> National Strategies for Prevention and Control of Violence, Injuries and Disabilities in Nepal; GoN

- (iii) To meet the targets of the UN Decade of Action.
- (iv) To provide a common framework for stakeholder agencies to implement the various interventions required to mitigate RTAs outcomes.

Central to the common framework that the stakeholders need to adopt is the recognition of the five pillars of road-safety outlined in the UN Global Plan for the Decade of Action.

A reflection of the background information of Nepal outlined in the previous section shows the following facts:

- Both RTA fatalities and injuries are increasing.
- Road-users are most exposed to RTAs in the Kathmandu Valley but casualties are less severe compared to other regions.
- RTAs are under-reported and analysis inadequate.
- Light vehicles, especially motor-cycles, dominate the vehicle fleet while mass transportation is lacking.
- Pedestrian, population within 15- 40 years are most vulnerable users.
- There is a high number of motor-cycle accidents in the urban areas.
- Single bus accidents represent the RTAs with the most severity in the rural areas.
- RTAs are mainly caused by reckless driving and pedestrian recklessly crossing the streets.
- Safe pedestrian access is lacking aggravating pedestrian-safety.
- Safe-design (forgiving road) is lacking.
- Stakeholders' interactions are ad-hoc and responsibilities are often duplicated.

### 6.1 Conceptual Structure for the NRSC

The establishment of a central agency that can effectively coordinate all the stakeholders involved in road-safety is the basic requirement for improving road-safety in any country. This need arises from the fact that road-safety concern virtually all sections of the society and government. Earlier discussions have pointed

out that the existence of the National Road-safety Council in Nepal headed by the Secretary of the Ministry of Labour and Transport Management. However, this council has been dormant since its establishment. The establishment of a centralized body such as the NRSC is the option that most of the countries globally have been pursuing to coordinate road-safety interventions. Some stakeholders have suggested designating a lead-agency coordinate road-safety in lieu of the NRSC given Nepal's past difficulty in coordinating road-safety activities. Nevertheless, there is now unanimous consensus that coordinating through the NRSC is the best option for Nepal and this option was endorsed during the last workshop conducted in 31 January, 2012.

The existing NRSC will be revitalized with higher authority to delegate and implement its various activities. To give it a legal standing, this council will be backed with the necessary act. This council will have the power to delegate all the stakeholders and request regular reporting required for monitoring the road-safety interventions.

There will be two phases to the revitalized NRSC. – (i) preliminary stage; (ii) fully empowered stage.

The NRSC will be at preliminary stage from the instant of its revitalization till the time that the appropriate act enacting the council is introduced. Though in the past, the NRSC was chaired by the Minister of Labour and Transport Management with representations from the main stakeholders as members, the revitalized NRSC in the preliminary stage will now be chaired by the Minister of Physical Planning, Works and Transport Management (MPPWTM) as per the latest ministerial re-organisation. The NRSC'S executive committee will be backed by a technical body to assist in the daily activities. During the preliminary stage, the NRSC will have limited authority to implement interventions across the board but will nevertheless set the pace to effectively coordinate and refine the activities proposed under this action plan. The council should be headed at the minister-level as it ensures higher priority that the council activities

demands in terms budget provisions and manpower resources allocations.

In the fully empowered stage, it will be appropriate for the NRSC executive committee to still be chaired by the Minister of the MPPWTM with the ministry's secretary acting as the member-secretary for the executive committee. This will take place when the NRSC Act with the above institutional structure is enacted. As per stakeholders' recommendations, the NRSC Act will have provision to either nominate or renew the chairmanship, membership of the executive committee on a rotating basis or annually and have the change published in the government gazette. The NRSC will have its own independent secretariat to execute its activities. The NRSC Act should also entrust the council to delegate the stakeholders, stipulate mandatory periodic and annual reporting from them and execute projects conducted under its programmes. The full details of the structure of the NRSC will be dwelt with as one of the activities proposed in this action plan.

Taking these facts into consideration, the following will be the broad strategies to adopt for road-safety improvements.

1. Ensure collaborative inputs from all the stakeholders to formulate an action plan incorporating the five pillars of road-safety and hence guarantee ownership.
2. To improve horizontal coordination, effectively manage the various interventions and champion road-safety issues, study the option of re-establishing a high-level NRSC with the legal authority to delegate various agencies.
3. Have the NRSC monitor the road-safety initiatives of different agencies. For some of the activities related to policy development, the NRSC will conduct the works in question itself.
4. Have the NRSC regularly disseminate its research findings, delegate specific responsibilities to the various stakeholders and legally mandate regular reporting requirements from them.
5. Enumerate the specific interventions required to reduce the RTA severity with reference to the good practices outlined in the UN Global Action Plan.
6. As a policy document developed and endorsed from the stakeholders, the concerned line agencies will follow this action plan to improve and manage road-safety in an integrated manner.
7. Amend the acts and regulations in order to accommodate road-safety requirements adequately and ensure an enabling policy.
8. Formulate a national target for RTA reduction. As signatory to the Busan Meeting, a target of 35~ 50 % reduction of RTA recommended by this meeting will form as a basis for setting the national target.
9. To ensure funds for road-safety interventions, seek endorsement from the Ministry of Finance and the National Planning Commission to recognise the principle of the first-year of returns as a basis for investment decision. Seek these agencies endorsement also to utilise the Roads Board Fund or to set a policy to mandatorily set aside a fixed portion (e.g. 10%) of the total cost of road-constructions to mobilise budget for road-safety interventions.
10. For maximising the positive impact, prioritise interventions according to their effectiveness in mitigating the RTA severity at specific locations. For example, overloading control and random vehicle inspections of buses will be adopted at rural areas to reduce single bus accidents.
11. Pedestrian-safety will be prioritised in the road-safety planning and the interventions proposed.
12. Development of forgiving roads and infrastructures will be advocated through necessary guidelines, incorporation in the design standards, etc.
13. A mechanism to evaluate the outcome of various interventions will be developed in the near future.
14. Research and development, awareness for the public and stakeholders and trainings will be the integral part of the road-safety interventions.
15. To improve the RTA database, an inter-agency referral mechanism to identify

potential accident-blackspots will be adopted. For example, a hospital should immediately refer such potential blackspots to DoR, traffic police, etc., based on the hospital's inference to its admission record for RTA injuries.

16. To develop in-house expertise and ensure commitments from the stakeholders, road-safety units will be formed at these agencies.
17. The activities relating to road-safety policy will also look into aligning them with the ISO traffic safety management standard - ISO 39001.
18. The establishment of a comprehensive injury-surveillance at the hospitals and health centres will be pursued to mitigate under-reporting of RTAs.
19. As this is the first national action plan, a monitoring mechanism to evaluate this

plan will be developed and updated as necessary.

## 6.2 Action Plan Implementation Impact, Risks

Upon implementation of the various interventions proposed under this action plan, it is expected that there will be positive impacts to various aspects concerning road-safety. There will be some challenges as well as risks if proposed interventions are not implemented in the right manner. It is necessary to take into account these risks when implementing the interventions.

**Table 5** shows the implementation impact and risks of the various interventions.

**Table 5** Action Plan Implementation Impacts and Risks

S.N.	Pillar	Main Activities Proposed	Impact Following Implementation	Risks
A (1)	<b>Pillar 1: Road Safety Management</b>	Establish the National Road Safety Council with sweeping authority.	<ul style="list-style-type: none"> <li>• Effective coordination with stakeholders.</li> <li>• Monitoring of road-safety improvements from an autonomous agency.</li> </ul>	<ul style="list-style-type: none"> <li>• Possibility of inadequate budget and manpower resources.</li> <li>• Lack of required autonomy and authority to effectively operate the council.</li> </ul>
A(2)		Train stakeholders	<ul style="list-style-type: none"> <li>• Institutional enhancement of agencies.</li> <li>• Skilled developed and manpower motivated.</li> <li>• More awareness for stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate budget provision.</li> <li>• Training organized ad-hoc.</li> <li>• Targeted individuals excluded in the trainings.</li> </ul>
		Amend the Vehicle & Transport Management Act 1993 (VTMA 1993), Local Self Governance Act 1999 (LSGA 1999) and develop various guidelines.	<ul style="list-style-type: none"> <li>• Conducive environment for road-safety improvements.</li> <li>• Reformed insurance policies to cover liabilities from RTAs.</li> </ul>	<ul style="list-style-type: none"> <li>• Omissions of the provisions required in the amended acts.</li> <li>• Difficulties encountered in enforcing the amendments.</li> </ul>

S.N.	Pillar	Main Activities Proposed	Impact Following Implementation	Risks
		Develop a national road-safety strategy and implementation modality.	<ul style="list-style-type: none"> <li>Guideline on required steps for improving road-safety.</li> <li>Directive on prioritization of long-term investments, stakeholder accountability, monitoring, national targets, integrated planning, alternative funding, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Required provisions omitted in the strategy.</li> <li>Strategy lacking legal standing.</li> </ul>
		Reliably, scientifically compile, analyze the RTA statistics and research on countermeasures.	<ul style="list-style-type: none"> <li>Improved mitigation and mechanism for RTAs.</li> <li>Supplement and development of research in suitable countermeasures for the country.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of long-term horizontal coordination between agencies.</li> <li>Low priority to research.</li> </ul>
<b>B(1)</b>	<b>Pillar 2: Safer Roads and Mobility</b>	Develop road-safety audit manual for non-strategic roads and gradually enforce safety audits in all roads (strategic and non-strategic).	<ul style="list-style-type: none"> <li>Safety perceived in all roads.</li> <li>Improvements in road-safety.</li> </ul>	<ul style="list-style-type: none"> <li>Road-safety audit manual for non-strategic roads not formulated.</li> <li>Safety audits not enforceable in all roads lacking legal mandate.</li> </ul>
<b>B(2)</b>		Introduce compliance policy for safety audits recommendations (strategic and non-strategic roads).	<ul style="list-style-type: none"> <li>Clear directives for implementing recommendations.</li> <li>Ensure stakeholder accountability for implementing recommendations.</li> </ul>	<ul style="list-style-type: none"> <li>Policy lacking legal mandate.</li> <li>Audit recommendation not complied in absence of legal mandate.</li> <li>Lack of mechanism to prosecute non-compliant agencies.</li> </ul>
<b>B(3)</b>		Develop design guideline for safer roads and construct required infrastructures.	<ul style="list-style-type: none"> <li>Guide on design of safe roads.</li> <li>Safety perceived from infrastructures.</li> </ul>	<ul style="list-style-type: none"> <li>Guideline not developed.</li> <li>Absence of design appropriate for the country.</li> </ul>
<b>B(4)</b>		Investigate accident blackspots for all road types and construct appropriate countermeasures.	Accident-blackspots mitigated	<ul style="list-style-type: none"> <li>Inadequate auditing.</li> <li>Lack of horizontal coordination amongst stakeholders on sustained basis.</li> <li>Countermeasures inappropriate for the country.</li> </ul>

S.N.	Pillar	Main Activities Proposed	Impact Following Implementation	Risks
B(5)		Enforce work-zone safety from construction to defect-liability period in all road project contracts.	Safety perceived throughout the road constructions.	<ul style="list-style-type: none"> <li>Lack of authority and difficulty enforcing work-zone safety.</li> <li>Work-zone safety not covered in the contracts.</li> </ul>
B(6)		Establish road-safety units in DoLIDAR and valley municipalities.	Institutional development of all agencies regarding road-safety and demonstrate their commitments.	<ul style="list-style-type: none"> <li>Units not established in all agencies.</li> <li>Inadequate manpower or competency.</li> </ul>
B(7)		Train stakeholders on safe roads and safety-audits.	Manpower skill development for safer roads, maintenance.	<ul style="list-style-type: none"> <li>Concerned staff excluded in the trainings.</li> <li>Lack of trained instructors.</li> <li>Lack of budget and low priority for the trainings.</li> </ul>
C(1)	<b>Pillar 3: Safer Vehicles</b>	Develop and introduce standards for safe vehicles, spares.	<ul style="list-style-type: none"> <li>Safety perceived.</li> <li>Introduce globally recognized environmental and differently-abled friendly practices and equipment.</li> </ul>	<ul style="list-style-type: none"> <li>Standard inadequately prepared.</li> <li>Failure to enforce the standard.</li> <li>Difficulty or deficiency in monitoring.</li> </ul>
C(2)		Amend VTMA 1993, VTMR 1997 and develop national transport policy to reinforce safer vehicles.	<ul style="list-style-type: none"> <li>Legal mandate to safer vehicle provisions.</li> <li>Regular revision of acts, regulations to be sensitive to road-safety.</li> <li>Incorporate safer vehicle provisions in the national transport policy.</li> </ul>	<ul style="list-style-type: none"> <li>Delay or difficulty in amending act, regulation.</li> <li>Omission of required safety provisions in the amended act, regulation.</li> <li>Omission of required safety issues in the national transport policy.</li> </ul>
C(3)		Review route-permit procedure.	<ul style="list-style-type: none"> <li>Gradual improvement in public transportation and passenger comfort.</li> <li>More regular roadside checks</li> <li>Introduce disciplined services.</li> </ul>	Weak monitoring due to manpower constraint.
C(4)		DoTM institutional development.	<ul style="list-style-type: none"> <li>Human resource development at DoTM.</li> <li>Scientific transport management.</li> </ul>	Inadequate budget provision.

S.N.	Pillar	Main Activities Proposed	Impact Following Implementation	Risks
C(5)		Financial incentives to promote in-vehicle safety devices.	Encourage use of in-vehicle safety devices.	Lack of discount in the use of devices.
C(6)		Improve vehicle inspection procedure.	<ul style="list-style-type: none"> <li>• Introduce scientific inspection.</li> <li>• Improve vehicle road-worthiness.</li> <li>• Better speeds and load (passengers/ weight) controls.</li> </ul>	<ul style="list-style-type: none"> <li>• No improvement in procedure.</li> <li>• Shortcoming or difficulty in monitoring.</li> </ul>
C(7)		Research major public vehicle accidents, school bus safety and initiate mitigation.	<ul style="list-style-type: none"> <li>• Minimise significant loss of life and properties.</li> <li>• Ensure safe journey in school buses.</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate budget provision, low priority to the research.</li> </ul>
C(8)		Basic repair and maintenance training for public vehicles.	<ul style="list-style-type: none"> <li>• Develop skilled manpower on basic repairs, maintenance on public vehicles.</li> <li>• Create opportunity to improve road-worthiness for public vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate budget provision, low priority accorded to the training.</li> <li>• Concerned crews being excluded in the training.</li> <li>• Training designed inadequately.</li> <li>• Shortage of trainers.</li> </ul>
D(1)	<b>Pillar 4: Safer Road-Users</b>	Amend VTMA 1993, VTMR 1997 to invigorate safe road-users.	Legal provisions accorded to safe road-users.	<ul style="list-style-type: none"> <li>• Difficulty amending the act, regulation.</li> <li>• Omission of required provisions in the amendments.</li> <li>• Inability to enforce the amended provisions.</li> </ul>
D(2)		Strictly enforce the rules on the seat-belts, helmets use, public transport safety and develop comprehensive code-of-conduct for all road-users.	<ul style="list-style-type: none"> <li>• Reductions in RTA fatalities.</li> <li>• Emergence of conscious, disciplined road-users.</li> <li>• Awareness shortcoming in the road-users identified.</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty enforcing the rules.</li> <li>• Inability to enforce code-of-conduct.</li> <li>• All users not considered in the code.</li> </ul>
D(3)		Public awareness campaign and research for all road-users.	Emergence of citizens responsive to road-safety.	<ul style="list-style-type: none"> <li>• Budget constraint for awareness, research.</li> <li>• Low priority to the programme.</li> </ul>

S.N.	Pillar	Main Activities Proposed	Impact Following Implementation	Risks
D(4)		Include road-safety education in school curriculum with regular revisions.	Increase awareness in road-safety at the school level itself.	<ul style="list-style-type: none"> <li>• Difficulty including in the school curriculum or inadequate preparation.</li> <li>• Budget constraints</li> <li>• Lack of trained instructors.</li> <li>• Low priority to the programme.</li> </ul>
D(5)		Train drivers and other road-users.	Increase awareness in the road-users.	<ul style="list-style-type: none"> <li>• Budget constraints, trainings not sustained.</li> <li>• Training design inappropriate.</li> <li>• Lack of qualified trainers.</li> <li>• Training participation discouraging.</li> </ul>
D(6)		Improve driving license procedure scientifically.	Develop experienced drivers.	<ul style="list-style-type: none"> <li>• Omission of the necessary provisions.</li> <li>• Difficulty implementing.</li> </ul>
D(7)		Establish road-safety units in the Department of Transport Management and institutional development of the traffic police.	<ul style="list-style-type: none"> <li>• Institutional development in transport management.</li> <li>• Skilled manpower development in traffic police.</li> <li>• Manpower resource enhanced.</li> </ul>	Budget constraints.
D(8)		Construct modern driving training centres and capacity enhancement.	Develop skilled manpower at the training centres.	Budget constraints, low priority and no continuity accorded to the trainings.
E(1)	<b>Pillar 5: Post-crash Response</b>	Introduce toll-free telephone number for RTA emergencies.	<ul style="list-style-type: none"> <li>• Reductions in the RTA fatalities.</li> <li>• Facilities for users.</li> </ul>	<ul style="list-style-type: none"> <li>• Delays in operation.</li> <li>• Budget constraints, low priority accorded.</li> </ul>
E(2)		Develop ambulance policy for post-accident treatments and emergency treatment training.	<ul style="list-style-type: none"> <li>• Reductions in post-accident fatalities.</li> <li>• Improvement in emergency services.</li> </ul>	<ul style="list-style-type: none"> <li>• Shortage of trainers.</li> <li>• Budget constraints, low priority and no continuity to the training.</li> <li>• Lack of horizontal coordination amongst agencies.</li> </ul>

S.N.	Pillar	Main Activities Proposed	Impact Following Implementation	Risks
E(3)		Develop strategy and introduce revolving fund for RTA victims and disabled.	Relief for low income groups regarding rehabilitation, disability.	<ul style="list-style-type: none"> <li>Budget constraints, low priority and no continuity to the programme.</li> <li>Misuse of funds</li> </ul>
E(4)		Open Trauma Care Centres and train for RTA injured.	<ul style="list-style-type: none"> <li>Increase facilities for trauma care.</li> <li>Develop skilled manpower in trauma-care.</li> </ul>	<ul style="list-style-type: none"> <li>Budget constraints, low priority and no-continuity to the programme.</li> <li>Shortage of skilled trainers.</li> <li>Concerned health-providers being excluded from the training.</li> </ul>
E(5)		Research and prioritise treatments for serious injuries from RTAs .	Reduction of fatalities from predominant RTA injuries.	<ul style="list-style-type: none"> <li>Budget constraints, low priority and no-continuity to the programme.</li> <li>Lack of required provisions.</li> </ul>
E(6)		Develop, introduce comprehensive injury surveillance system in hospitals, health centres.	<ul style="list-style-type: none"> <li>Improve the RTA database.</li> <li>Provide scientific basis for prioritizing RTA injuries, their treatments and research.</li> </ul>	<ul style="list-style-type: none"> <li>Budget constraints, low priority and no-continuity to the programme..</li> <li>Weak coordination between hospitals, health-centres and agencies.</li> <li>Database system ineffective, unscientific.</li> <li>Database inaccessible, non-transparent.</li> </ul>
E(7)		Establish road-safety unit in the Ministry of health and Population and institutionally enhance it.	<ul style="list-style-type: none"> <li>Create awareness towards road-safety in the health sector.</li> <li>Institutional development of the ministry.</li> </ul>	<ul style="list-style-type: none"> <li>Budget constraints and low priority.</li> <li>Lack of required manpower and other resources.</li> </ul>
E(8)		Develop ambulance network along the major highways, urban and rural roads.	Improve ambulance services and their access.	<ul style="list-style-type: none"> <li>Budget constraints and low priority.</li> <li>Lack of effective and prompt communication.</li> <li>Overall and inter coordination shortcoming between the ambulance services and</li> </ul>

## 7. Road Safety Action Plan

The following outlines the national road- safety action plan for the period 2013 – 2020. These plans are the product of one-on-one meetings, focused group discussions, correspondence with all the stakeholders, discussion workshops, etc., and was finalized after reaching consensus during the final workshop organized in December, 2011.

### 7.1 Activity for Pillar 1: Road Safety Management

**Objectives:** Set up a mechanism to improve capacity to manage road-safety through

- Adopt UN legal instruments
- Encourage creation of regional road-safety instruments
- Improve horizontal coordination amongst stakeholders
- Develop sustainable road-safety strategies and accident reduction targets
- improve accident data collection and research

#### Background

The legal provisions relevant to road-safety such as drivers' licensing, vehicle roadworthiness, loading, speed regulations, insurance requirements, etc., in Nepal are stipulated in the Vehicle Transport Management Act 1993. Road-safety is identified as a policy objective in the National Transport Policy 2001. However, both these documents do not elaborate on the road-safety requirements nor are these framed from the multi- sectors perspectives that road-safety demands.

The National Transport Policy 2001 outlines a long-term strategy to create an autonomous Road Transport Authority by merging the Department of Roads (DoR) and the Department of Transport Management. This move will simplify the coordination efforts between road infrastructures and transport management. This Authority should be assisted by the Traffic Police for enforcement of traffic and safety rules.

Though a National Road Safety Council was established in Nepal during the late nineties, it was not adequately resourced and is defunct now. There is no long-term road-safety strategy outlined for Nepal to date. However, Nepal is a signatory to the UNESCAP Meeting in Busan, Republic of Korea, which commits all the signatories to a 35 percent reduction in fatalities and serious injuries from RTAs.

The Traffic Sign Manual 1997 published by the DoR conforms to the UN World Convention on Road Signs and Signals 1968 (Vienna Convention). However, Nepal needs to harmonise its acts, regulations and policy with the existing UN conventions relating to road-safety.

Traffic police collects and compiles all the RTA data in Nepal through their network of local, district and regional offices. The Traffic Directorate at the Police Headquarters maintains consolidated statistics of RTAs in Nepal. These data are segregated by the five development regions in Nepal and includes statistics such as age, gender, vehicle involved and severity of injury. However, these consolidated data do not present the detailed analysis necessary for a comprehensive analysis of accidents.

Currently, there is no permanent network arrangement between the DoR and the Traffic Police for comprehensive accident analysis. However, during the late nineties, there was such collaboration between the DoR Traffic Engineering & Safety Unit (now renamed the Road & Traffic Unit, RTU) under the UK-assisted Road Maintenance Project (RMP). RMP had also installed the TRL MAAP for Windows accident software at TESU and the Valley Traffic Police Office, VTPO (now the Metropolitan Traffic Police Division, MTPD).

The ADB assisted Road Connectivity Sector I Project had studied improved accident data management in 2008 and proposed the indigenous development of software for accident data analysis. However, no progress has taken place regarding these studies.

In the area of heavy vehicle management, though the Government endorsed Heavy Vehicle Management Policy 2008 developed by

the DoR, it has not been implemented. This important document expands the existing 10.2 metric tonnes legal limits for axle-loads to cover for single to tandem axle of heavy vehicles in the country.

The Kathmandu Metropolitan Traffic Police Division is currently installing GPS devices in its patrol vehicles to improve accident response within the Kathmandu Valley. Such GPS units can be further utilized to improve the

referencing of the accident locations more precisely if the system is integrated to the accident reporting and the police database.

### Action Matrix for Pillar 1: Road Safety Management

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Revive the existing National Road Safety Council with necessary acts, higher authority and resume work.	Establish: Dec '13 + cont.	DoR, TP, MoHP, MoL, MPPWTM, DoTM, FNTE, MoL, NADA, MoLD, civil groups.	NRSC	7.66	12.44	25.23
Develop the national road-safety action plan	April, '13	All	DoR RTU	1.14		
Conduct training on road-safety & traffic rules.	Cont.	All	DoR RTU & TP	1.88	3.47	9.05
Develop and implement a pedestrianisation planning guideline and regulation.	March, '14	DoTM, MoLD, MPPWTM, NRSC, DoR, TP, DoLIDAR, DUDBC, MoLJ, fed. (DDCs, VDCs, muni.).	MoLD	12.04		
Review and update vehicle insurance policy regarding <ul style="list-style-type: none"> <li>• vehicle</li> <li>• passengers</li> <li>• crew</li> <li>• transport labourers</li> </ul>	Jan., '14	DoTM, MPPWTM, NRSC, FNTE, NTLA, Insurance Board, Insurance agencies.	DoTM	0.79		

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Identify amendments required in VTMA 1993, VTMR 1994, LSGA 1999 and LSGR 1999 to accommodate the following. <ul style="list-style-type: none"> <li>• Harmonization with the UN conventions, international agreements<sup>5</sup> on road-safety<sup>6</sup></li> <li>• Harmonise with pedestrian regulation.</li> <li>• Appropriate insurance cover and policy as per the previous review.</li> <li>• Expanded power delegated to Traffic Police.</li> <li>• Increase the traffic fine rates</li> </ul>	Jan. '14	DoTM, NRSC, MPPWTM, MoLJ, TP, MoF, FNNTTE, NTLA, Insurance Board, insurance agencies	DoTM	0.39		
Conduct workshops on required amendments in VTMA1993, VTMR 1994, LSGA 1999 and LSGR 1999 to promote road-safety for all users.	Feb. '14	DoR, DoTM, NRSC, TP, MoLJ, FNNTTE, NTLA	DoTM	2.90		
Amend VTMR 1994 and LSGR 1999 to harmonise with UN/int'l conventions, pedestrian regulation, prescribed third-party insurance cover and the previous workshop recommendations.	Jan. , '14	DoTM, MoLJ, MPPWTM, NRSC, DoR, TP, MoH, MoLD	MPPWTM	0.26		
Establish sound coordination mechanisms on managing road-safety including: <ul style="list-style-type: none"> <li>• Demarcate clear roles of the stakeholders</li> <li>• Regular information sharing</li> <li>• Integrated planning</li> <li>• Ensuring transport management committees at the district and central levels</li> </ul>	Aug., '13	All	NRSC	admin. costs		

<sup>5</sup> Special emphasis on the subject of helmet use, child restraints

<sup>6</sup> Convention on Road Traffic 1968, European agreement concerning the work of the crews of vehicles engaged in international road transport (AETR 1970)

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Develop a national road-safety strategy incorporating the following measures and process for the government endorsement at the cabinet or ministerial level <ul style="list-style-type: none"> <li>• Confirm long-term investment priorities</li> <li>• Promote ISO traffic safety management standard -ISO 39001</li> <li>• Establish improved system for data collection for baseline and monitoring.</li> <li>• Establish realistic and long-term national targets for improving road-safety. E.g.               <ul style="list-style-type: none"> <li>○ 2015: 35% RTA fatality reduction</li> <li>○ 2020: 50% RTA fatality reductions.</li> </ul> </li> </ul>	July '13	All	NRSC	0.83		
Investigate the following funding means for the road-safety activities: <ul style="list-style-type: none"> <li>• Adopt FYIRR for funding decision</li> <li>• Assign 10% of the road infrastructure cost</li> <li>• Use the Road Board funds.</li> <li>• Adopt PPP schemes with               <ul style="list-style-type: none"> <li>○ NADA</li> <li>○ FNTE</li> <li>○ Insurance agencies</li> </ul> </li> </ul>	Cont.	DoR, DoLIDAR, MoLD, fed. (muni., DDC, VDC), valley muni., NPC, MoF, RBN, NRSC, NADA, FNTE, insurance agencies.	NRSC	admin costs.	admin costs.	admin costs.
Develop mechanism to measure outcomes of various interventions.	Nov. '13	All	NRSC	admin costs		
Improve the data collection and analysis of road traffic accidents	<b>system</b> :Jun '14 + update	DoTM, DoR, TP, MoHP, NRSC	TP & DoR	10.63	10.63	43.43
Conduct research on counter-measures on all roads.	Cont.	All	NRSC	63.76	120.59	156.72
Conduct research on pedestrian safety	Cont.	MoLD, DoLIDAR, TP, DUDBC, .Fed. (DDCs, VDCs & muni.), NRSC	DUDBC	16.59	24.65	27.90

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Conduct pilot project to evaluate traffic calming measures in Nepal	'15	DoR, RBN, fed. (muni., DDC, VDC), valley muni., NRSC	NRSC		43.25	
Training to stakeholders.	Cont.	All	DoTM	1.88	4.27	12.68
Training for traffic enforcement	Cont.	TP, DoTM	TP	1.88	4.27	12.68
Institutional strengthen DoR RTU	'13	DoR, MPPW/TM, NPC, MoF	DoR	17.09		
Gradually appoint transport inspectors at all Transport Management Offices. <sup>7</sup>	End '15	DoTM, TP, MoH, MPPW/TM, DoR, DoLIDAR, MoLD	DoTM	11.79	44.77	155.22

Note: VTMA = Vehicle Transport Management Act 1999

## 7.2 Activity for Pillar 2: Safer Roads and Mobility

### Objectives:

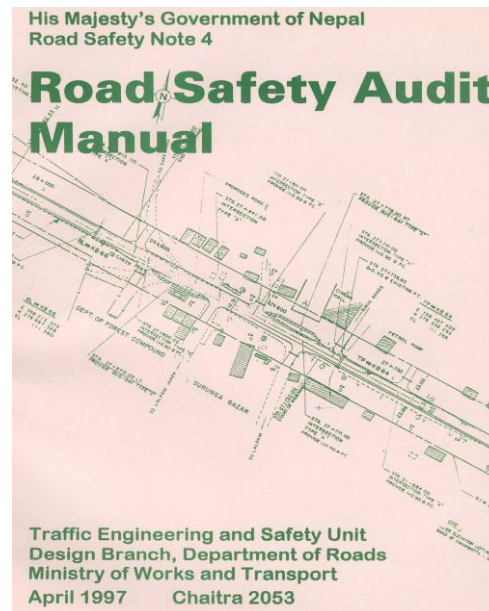
The objective of this pillar is to improve the inherent safety of the road networks for all road-users, especially the most vulnerable groups (e.g. pedestrians, bicyclists and motorcyclists). This will be achieved through:

- Adoption of UN and international standards for the design of safe roads.
- Road safety audits and assessment
- Incorporating safe design practice during design, construction and operation of roads.

### Background:

Since 1995, road-safety audits are mandatory for all new constructions, major maintenance and rehabilitation projects involving the national highways and feeder roads (strategic road network of Nepal). A road-safety audit manual is available to guide concerned engineers and experts about conducting road-safety audits. Though safety audits are prescribed at all stages of the project (feasibility, detail design, construction completion and prior to opening to traffic), DoR has not strictly enforced this requirement along the strategic road network of Nepal.

**Figure 3 DoR Road-Safety Audit Manual, 1997**



Source: GoN DoR

In addition to the audit requirement, there is no formal procedure for the DoR and the design team of a road project to commit or respond to the audit recommendations. For example, there is no formal requirement for DoR to issue an exemption letter explaining why certain audit recommendations cannot be met. Safety audits are often conducted at the advanced stage of the road project when there is limited option for any countermeasures and coordination between the project and the DoR RTU (which is responsible for road-safety) is often very poor.

There is no system of safety audits for the local road network, which, lie under the Department of Local Infrastructure and Agricultural Roads (DoLIDAR) or local bodies

There is no performance targets assigned during the project cycle of the road projects in the absence of national safety targets.

A number of DoR manuals covering drainage, safety barriers, delineation, traffic signs, remedial measures at accident sites, etc., are also available for safe designs. These manuals are taken as basis for evaluating the safety worthiness of road structures in Nepal.

**Action Matrix for Pillar 2: Safer Roads and Mobility**

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Pilot the road-safety audits (construction to opening stage) in the DoR RSDP roads..	Const.-stage: as applicable; Opening-stage: within 6 mo. of opening	DoR, World Bank	DoR		3.85	5.75
Enforce road-safety audits in all the donor aided DoR projects.	June 2014.	Donors, DoR, MPPWTM, NPC, MoF	DoR		Admin. costs	
Introduce mandatory procedures (compliance, exemption) of safety audit recommendations for strategic roads.	June '13	DoR, RBN, MoF, NPC, MPPWTM	DoR	0.41		
Implement road-safety audits in all the DoR projects.	From '15	DoR, MoF, NPC	DoR		admin costs	
Develop safety audit manual for non-strategic roads.	From '15	DoR, MoLD, DoLIDAR, donors, fed. (muni, DDC, VDC), NRSC, NPC, RBN	MoLD		2.24	
Introduce procedures (compliance, exemption) for safety audit recommendations at non-strategic roads.	From '15	DoLIDAR, DoR, MoLD, MoF, fed. (muni., DDC, VDC), NRSC	MoLD		1.50	
Conduct road-safety audits in non-strategic roads.	By '16	DoLIDAR, MoLD, donors, fed. (muni, DDC, VDC), NRSC, NPC, RBN	MoLD			16.11
Update existing safety manuals; develop guidelines on safe-road design and sustainable transport infrastructures for: <ul style="list-style-type: none"> <li>• urban communities</li> <li>• rural communities</li> <li>• Vulnerable road-users</li> </ul>	By '16	DUDBC, DoR, DoLIDAR, MoLD, fed. (muni., DDC, VDC), NPC, NRSC	NRSC	9.7	16.9	
Introduce road-safety impact assessment and controls in all land developments	By '16	All	DUDBC			4.55
Conduct blackspot analysis on strategic roads.	Cont.	DoR, TP	DoR	7.32	15.82	45.66
Construct countermeasures at the blackspots and hazard locations of the strategic roads.	Cont.	DoR, TP	DoR	23.90	87.39	179.42

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Install the following mass action countermeasures at blackspots, where appropriate, along the strategic roads <sup>8</sup> : <ul style="list-style-type: none"> <li>• safety-barriers</li> <li>• steel guard-rails</li> <li>• road-humps</li> <li>• rumble strips</li> <li>• Signals</li> <li>• NJ barriers</li> </ul>	16 July, 2013 onwards	DoR, donors	DoR	199.08	623.59	1769.69
Install following mass action countermeasures at appropriate blackspots and hazardous locations of the strategic roads: <ul style="list-style-type: none"> <li>• Footpaths</li> <li>• signs</li> <li>• Reflective road-markings</li> <li>• Bus-laybys</li> <li>• junction modifications including roundabout</li> <li>• hand-rails</li> </ul>	16 July '13 onwards	DoR, donors	DoR	74.50	242.56	742.95
Prioritise providing adequate delineation (signs, road-markings, reflective dividers) on all roads	Cont.	DoR, DoLIDAR, MoLD, local body	DoR, DoLIDAR, local body	Admin	admin	Admin
Identify sustainable operation for signals (solar-power) and start their uninterrupted operation.	March '14 onwards	DoR, NEA, MoF, TP, concerned municipality, signal suppliers	DoR	25.32	44.83	83.81
Construct pedestrian crossings (overheads, underpasses).	14 April 2013 onwards	Concerned municipalities, DoR, DUDBC	Concerned municipality	10.11	22.34	58.42
Install pelican signal-crossing at the recommended locations in: <ul style="list-style-type: none"> <li>• Kathmandu</li> <li>• Pokhara</li> <li>• Nepalgunj</li> <li>• Biratnagar.</li> </ul>	End '13	DoR, MoF, TP, concerned municipalities	DoR, concerned municipality	71.30		

<sup>8</sup> Include sections of the national highway that are part of the Asian Highway if possible.

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Strictly enforce DoR, DoLIDAR , municipalities and local bodies to: <ul style="list-style-type: none"> <li>eliminate high risk roads</li> <li>maintain roads pot-free</li> <li>control encroachments – streets, footpaths</li> <li>Adopt safe-design in hill-roads (e.g. more overtaking zones, setback distance, etc.).</li> <li>Develop toll-plazas at the national highways</li> <li>Control stray live stocks and indiscriminate roadside dumping of construction materials</li> </ul>	Toll plaza: '20 Others: '13	DoR, DoLIDAR, MoLD, fed. (DDCs, VDCs, muni.)	DoR, DoLIDAR			Admin, costs
Introduce mandatory provisions for work-zone safety planning in the construction contracts (from construction till defect liability period) in all roads.	June, 2013 onwards	DoR, DoLIDAR, MoLD, MoF, fed. (muni., VDC, DDC), NRSC	MoLD, DoR, DoLIDAR		Admin costs	
Make road authorities legally responsible for reporting annually their progress, findings and remedial works performed for road-safety.	Start '15	DoR, DoLIDAR, MoLD, fed. (muni., VDC, DDC), NRSC	MoLD, DoR , DoLIDAR		Admin. cost	
Establish road-safety units in DoLIDAR, and valley municipalities.	12 April, '13	DoLIDAR, MoLD, valley municipalities	MoLD, municipalities		6.13	17.18
Skill Training in safe-roads: (A) Safe-road infrastructures: 1 Int'l 1 month -RTU chief 2 Regional 10 days –RTU mid-level & other stakeholders (B) Auditor certification: regional 7 days: 1 DoR -- 10 no 2 DoLIDAR – 10 nos. 3 Other stakeholders – 5 nos.	Infra: 31 March. '13 Auditing: 1 May '13 onwards	DoR, DoLIDAR, MoLD	DoR, MoLD	9.6	12.5	18.9
Prioritise road-maintenance based on traffic volume	16 July, 2013 onwards	DoR, DoLIDAR, MoLD	DoR, MoLD	Admin costs		
Develop the following pedestrianized zones: <ul style="list-style-type: none"> <li>Saturday Market Zone (10 am – 6 pm) at Asan- Bhotahitti- Indrachowk area.</li> <li>Thamel- Sorrakhuttey area.</li> </ul>	End '14	MoLD, KMC, ADB, MPPWTM	KSUTP <sup>9</sup>	77.67	142.64	

<sup>9</sup> There is a budget of around US\$3 million allocated under KSUTP for these activities.

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Relocate electrical and telephone poles obstructing mobility	continuous	Municipalities, NEA, NTC. DoR, DUDBC, TP	TP, NEA, NTC	2.60	6.74	14.14
Construct parking areas (passengers, trucks) and monitor.	By 2020	DoTM, DoR, DoLIDAR, TP, MoLD, MPPWTM, muni., FNTE, freight forwarders	DoTM, municipality concerned.	136.5	276.1	492.1

### 7.3 Activity for Pillar 3: Safer Vehicles

#### Objectives:

The objective of this pillar is to promote the universal adoption of both the active and passive technologies that are available for safe vehicles through the harmonization with the global standards, publicity and incentives for the consumers in their adoption.

#### Background:

In-vehicle safety features such as rear parking assistance, vehicle stability management, electronic stability programme, air bags, automatic braking system, etc., have been used in the higher end models of cars available in Nepal. However, use of safety features in public vehicles is uncommon in Nepal and nor is there any history in the country of tax discounts being offered as incentive in the use of such safety features.

Latest studies show that only 4% of the road accidents in Kathmandu Valley are attributed to the poor roadworthiness of the vehicle fleet, particularly public vehicles. However, poor condition of the public vehicles is one of the main causes resulting in accidents in the hill roads of Nepal. Therefore, there are a lot of rooms for improvements in the road-safety situation along Nepalese roads if the safety of the vehicles is enhanced and vehicles are strictly inspected regularly.

**Action Matrix for Pillar 3: Safer Vehicles**

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Develop and implement a safe-vehicle guideline through a task force including the following: <ul style="list-style-type: none"> <li>• Vehicle condition and loading capacity</li> <li>• Minimum criteria for vehicle inspections tests.</li> <li>• Closed driver cabins –public vehicles</li> <li>• Local body fabrication</li> <li>• Colour-code for school &amp; public bus</li> <li>• Enforce EURO 3 emission standard</li> <li>• Max. standees permissible in bus.</li> <li>• Controlling duplicate spares</li> <li>• Differently and elderly accessible vehicles</li> <li>• Encourage hybrid vehicles</li> </ul>	31 May, 2013	DoTM, TP, FNTE, NADA, MPPWTM, MoH, NRSC, NTLA, org. (seniors, (handicaps)	DoTM	13.3	Admin	Admin
Identify amendments required in VTMA 1993 and VTMR 1994 to incorporate the following: <ul style="list-style-type: none"> <li>• Harmonise with <i>DoR Heavy Vehicle Management Policy 2064 (2007)</i><sup>10</sup></li> <li>• Phasing out old vehicles.</li> <li>• Franchising vehicle inspection to private workshops</li> <li>• Prohibit freight on bus and mini-bus.</li> <li>• Comprehensive vehicle insurance<sup>11</sup></li> <li>• Prohibit slow-moving vehicles on highways</li> <li>• Heavy penalty for passengers travelling on vehicle roofs.</li> <li>• Safe-vehicle guideline</li> <li>• Better route permit procedures aligned with safety provisions</li> <li>• Improve insurance cover and introduce universal health care concept.</li> </ul>	End June, 2015	DoTM, MPPWTM, DoR, TP, MoL, NRSC	DoTM	0.02		

<sup>10</sup>This activity and subsequent related activities will take place parallel to similar activities proposed under Pillar 1: Road-Safety Management, to amend the VTMA 1993 and VTMR 1994.

<sup>11</sup>This requires incorporation of the policy on vehicle insurances including passengers, crew, third-party, transport labour, etc., recommended under Pillar 1: Road-Safety Management.

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Amend VTMR 1994 and VTMA 1993 as per the above review.	VTMR: End 2013 VTMA: End 2015	DoTM, MPPWTM, DoR, TP, MoL	MPPWTM	0.02	0.02	
Review the route permit procedures	Cont.	DoTM, FNTTE, TP, MPPWTM	DoTM	Admin cost	Admin cost	Admin cost
Set up a central transport management committee under the MPPWTM Secretary to better monitor transport management overall.	Cont.	MPPWTM, DoTM, TP, FNTTE, NTLA	MPPWTM	Admin cost	Admin cost	Admin cost
Incorporate and implement the following provisions in the proposed National Transport Policy 2068 (2011): <ul style="list-style-type: none"> <li>banning aging vehicles in the country</li> <li>control road-access based on vehicle dimension</li> <li>DoR Heavy Vehicle Management Policy 2064 ('07).</li> <li>Scientific licensing and route permits</li> <li>Promoting eco-friendly vehicles</li> <li>New vehicle standards</li> <li>Operating a state-owned public transport services</li> <li>Improve the insurance cover to accommodate the increasing compensation demands.</li> </ul>	End May, 2013	DoTM, MPPWTM, DoR, TP, FNTE, NRSC	MPPWTM	0.33		
Upgrade DoTM institutional capacity through: <ul style="list-style-type: none"> <li>International training for staff</li> <li>Computerised database</li> <li>ICT networking</li> <li>Staff incentive policy</li> <li>Added TMOs &amp; TMSCs<sup>12</sup></li> </ul>	March '13 onwards	DoTM, MPPWTM, ISP vendors, MoF, NPC, MoGA, NRSC	DoTM	15.2 (excl. TMOs expan.)	47.7 (excl. TMOs expan)	143.7 (excl. TMOs expan)
Strictly enforce restrictions on vehicle modifications stipulated in VTMA 1993, its amendment and guideline above.	March '13 onwards	DoTM	DoTM		Admin costs	Admin costs
Ensure all public vehicles are handicap accessible.	End '20	DoTM, FNTE	DoTM			Admin costs
Ensure all the seat belts, anchorages and standard safety features in vehicles meet the crash test standard.	Start '15	DoTM, NADA, NBSM	DoTM and NBSM		0.29	
Provide fiscal (e.g. reduced tax) and other incentives to promote safety features in vehicles.	Start '15	NADA, NBSM, MoF DoTM, MPPWTM	DoTM		Admin costs	

<sup>12</sup> TMO = Transport Management Office ; TMSC = Transport Management Service Centre

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Promote incentives to import vehicles with high safety features (electronic stability control, anti-lock braking, etc.) and discourage those with poor safety record.	Start '15	NADA, DoC, DoTM, MoF, FNNTTE	DoTM		Admin costs	
Introduce modern, scientific vehicle testing with strict enforcements	Start '15	DoTM, FNNTTE	DoTM		48.2	70.3
Improve inspections and enhance random checks on vehicle roadworthiness.	Cont.	TP, DoTM, FNNTTE	DoTM	168.13	357.71	621.73
Enhance random loading checks (axles, passenger) of public vehicles to control overloading.	Cont.	DoR, TP, DoTM, FNNTTE	DoTM	33.55	80.42	169.24
Franchise fitness tests at private auto-workshops and establish network	Franchise: '15 end.	DoTM, FNNTTE, workshops	DoTM		17.3	31.4
Encourage transport entrepreneurs to provide cash incentives to drivers with no accident record in the entire year.	Cont.	DoTM, FNNTTE, NTLA	DoTM	Admin costs.	Admin costs.	Admin costs.
Introduce embossed vehicle registration plates.	End May, 2013	DoTM, TP, MPPWTM, MoH	DoTM	Recouped from vehicle owners	Recouped from vehicle owners	Recouped from vehicle owners
Prohibit slow-moving vehicles along the highways.	End '13	DoTM, FNNTTE, fed. (NMV <sup>13</sup> , tempos)	DoTM	Admin costs		
Probe major accidents involving public vehicles for possible evidence of poor roadworthiness and establish mitigation measures.	Cont.	DoTM, FNNTTE	DoTM	0.51	1.30	3.65
Train mechanics and crews on vital maintenance of public vehicles (brakes, steering, clutch, tires, etc.)	Cont.	DoTM, FNNTTE	DoTM	6.17	14.01	37.14
Research on school-bus safety	Baseline - end '13 Update - end '15	DoTM, TP, schools	DoTM	2.88	2.88	6.79

<sup>13</sup> NMV = non-motorised vehicles

#### 7.4 Activity for Pillar 4: Safer Road Users

**Objectives:** The objective of this pillar is to develop comprehensive programmes to improve road-user behavior through the following activities:

- Sustained, stronger enforcement of traffic rules.
- Sustained road-safety awareness campaigns.
- Increased efforts to improve the use of seat-belts and helmets.
- Reduce drunk-driving and other risky behaviours
- Introduce better speed control
- Heavy penalty to undisciplined road-users including pedestrians.

#### Background:

As per the Vehicle & Transport Management Act 1992 (VTMA 1992), the drivers and the passengers at front-seat of four wheeled vehicles must wear seat-belts. In motor-cycles, helmets are necessary for both the driver and the pillion rider. Many vehicle drivers do not abide the seat-belt rule and nor the pillion-rider of motor-cycle abide the helmet rule. The motor-cycle drivers however, wear helmets prevalently with few exceptions in Nepal.

Road safety awareness and education campaigns are conducted on ad-hoc basis by the Traffic Police, DoR, DoTM and MoHP without horizontal coordination and are often project led. These types of awareness campaigns should invariably be build up as part of the contracts of road projects.

Traffic Police are experienced in conducting road-safety awareness campaigns at schools, to other target groups and very often collaborate with the private sponsors in delivering these campaigns. In the Kathmandu Valley, Traffic Police coordinates its awareness campaigns through its Road-Safety Cell in the Kathmandu Metropolitan Traffic Police Division. Traffic Police targets all road-users and conducts TRAFFIC WEEK for school-children and public twice annually. However, police suffers from lack of budget to run more campaign on a sustainable basis.

DoR has conducted road-safety campaigns for roadside schools, commercial drivers under various projects or as its regular programme under the RTU. However, these campaigns are not run consistently to effect the change in the users' behavior towards road-safety.

**Figure 4 Traffic Police conducting awareness class for students**



Courtesy: GoN Kathmandu Valley Traffic Police Division

During the late nineties under DoR, RMP had conducted road-safety awareness campaigns on a comprehensive basis and developed educational materials for primary schools in collaboration with the Ministry of Education. A training manual for the Traffic Police on road-safety awareness campaign was also developed then.

The MoHP has conducted a series of poster campaign on road-safety independently.

Drunk driving is one of the causes of road accidents and police have conducted on the spot the breathalyser tests to nab violators, albeit on ad-hoc basis. Though the Traffic Police has recently acquired radar guns, speed management using this equipment is still not regularly pursued.

The ongoing installations of mobile GPS devices in patrol vehicles in the Kathmandu Valley can provide an opportunity to improve accident response and better referencing of the accident locations.

**Action Matrix for Pillar 4: Safer Road Users**

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Review, amend VTMR, VTMA to <sup>14</sup> : <ul style="list-style-type: none"> <li>• harmonise with global safe practices for commercial vehicles;</li> <li>• Impose stiff penalty on both the vehicle-owner and passenger for allowing to travelling on vehicle-roof.</li> <li>• Improve driver license procedures to enhance safety</li> </ul>	VTMR -end '13 VTMA -1 July, 2015	TP, DoTM, MPPWTM, MoLJ, NRSC	MPPWTM	0.14	0.17	
Develop a comprehensive code-of-conduct for all road-users (drivers, pedestrians, street-vendors). <sup>15</sup>	End '13	TP, DoTM, MPPWTM, MoLJ, FNNT, vendors, NRSC	DoTM	.08		
Survey the road-users' attitude towards road-safety improvements.	14 April, 2013	TP, DoTM, MoLJ, NRSC	TP	2.54		
Conduct road-safety awareness campaigns for school children & pedestrians	Cont.	DoR, TP, DoTM, schools, DoE, civil societies	TP, DoE	9.13	19.32	55.90
Review/ develop posters and conduct poster campaigns on road-safety awareness.	Cont.	DoR, TP, DoTM, Advertising agencies	TP, DoR	10.58	22.80	59.37
Update the existing textbooks on road-safety for schools, publish and introduce in school curriculum.	Update: End 2013 Introduction: From 2014	DoR, TP, DoTM, DoE, NRSC	DoE	2.33		
Publicise road-safety through TV, radio and print media.	Cont.	DoR, TP, DoTM, TV, news and advertising agencies	TP, DoTM	34.60	64.57	132.11
Introduce regular road-safety education programmes for professional drivers.	1 March, 2013 onwards	DoTM, TP, FNNT, NTLA, drivers associations	DoTM	9.13	19.32	55.90

<sup>14</sup>To run parallel to review and amendment of the VTMR, VTMA activities under pillar 1: Safety Management and Pillar 3: Safer Vehicles.

<sup>15</sup>To follow VTMA amendments above to harmonise with the global safe practices for commercial vehicles and the review DoTM Code of Conduct for Public Transport, June 2011.

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Improve driver license system through: <ul style="list-style-type: none"> <li>• graduated licensing for novice drivers</li> <li>• equipment-controlled trials</li> <li>• One year probation for commercial drivers</li> <li>• Integrating the National Vehicle Registry</li> <li>• Improved examination procedures</li> <li>• Other requirements.</li> </ul>	End 2020	TP, DoTM, DoC, MoF, MPPWTM, equipment supplier	DoTM		45.57	95.43
Institutional support for TP: <ul style="list-style-type: none"> <li>• Training               <ul style="list-style-type: none"> <li>○ Int'l training</li> <li>○ Regular training</li> </ul> </li> <li>• Enforcement logistics</li> <li>• Improve speed controls:               <ul style="list-style-type: none"> <li>○ Random checks- radar guns – all vehicles</li> <li>○ Time-card monitor - public vehicles.</li> </ul> </li> </ul>	1 March, 2013 onwards	TP, DoTM	TP	18.3	44.4	118.5
Strictly enforce seat-belt and helmet rule as per VTMA 1993 and its amendment.	continuous	TP, DoTM	TP	Admin costs	Admin costs	Admin costs
Strictly enforce passenger and crew safety rules for commercial vehicles.	continuous	TP, DoTM	TP	Admin costs	Admin costs	Admin costs
Establish road-safety unit in DoTM and initiate research on safety for the vulnerable road-users	End 2015	DoTM, vulnerable users' org.	DoTM		38.51	66.18
Encourage PPP initiatives to establish adequate and state-of-the-arts driving training areas.	End 2015	DoTM, TP, FNNT, drivers assoc., NADA	DoTM		Admin cost	
Develop capacity of driving schools (guideline+ training)	End 2014	DoTM, TP, FNNT, drivers associations, NADA	DoTM	1.1	2.2	4.8
Install CCTV cameras at various junctions	1 April, 2013 onwards	TP, DoTM, MoH, vendors	TP	60.2	78.7	1117.9

### 7.5 Activity for Pillar 5: Post Crash Response

#### Objectives:

The objectives of this pillar are to improve the post-crashes response, improve capacity of the health-care systems to provide emergency treatments and long-term rehabilitation for crash victims.

#### Background:

To date, there is no data on the response time to the post-crash victims in Nepal. There are a limited number of ambulances run by the hospitals, private-sectors and social clubs. Prior to the launch of WHO 2004 initiatives to monitor road-safety injuries globally, there was no systematic reporting requirement on the part of the Ministry of Health to make it accountable towards road-safety.

Data management in hospitals and health care centres regarding RTAs is poor. However, there have been some limited project-led initiatives in this area in the recent past to develop RTA statistics within the participating hospitals. The MOHP is planning to introduce injury surveillances to record RTA cases. The ministry is also contemplating developing three level of care for crash victims (primary, secondary and tertiary). Nevertheless, priority for RTA cases remain low compared to other injuries as the former is still not the most predominant form of morbidity in the Country.

The health centres throughout the country are linked to the centre through GPS. In addition, the Kathmandu Metropolitan Traffic Police plans to install GPS devices on its patrol vehicles provide opportunities to improve emergency response within the Kathmandu Valley and other areas if the system is linked with the aim of enhancing post-crash response. .

#### Action Matrix for Pillar 5: Post-Crash Response

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Introduce a toll-free telephone number for medical emergencies	14 April, 2013	MoHP, NT, NMA, Hospitals	MoHP	0.70	1.53	4.43
Develop a national ambulance policy with: <ul style="list-style-type: none"> <li>Directives for response to post-crash victims</li> <li>Measures to improve the response time.</li> </ul>	End 2013	MoHP, DoHS, NMA, Hospitals	MoHP	1.36		
Provide trauma-care training to medical personnel at all levels (primary, secondary, tertiary) with expertise on treatment of road accident victims.	2015	MOHP, DoHS, NMA, hospitals, trauma and orthopedic societies.	MOHP	11.27	37.32	114.17
Investigate funding sources to assist rehabilitation of crash victims such as: <ul style="list-style-type: none"> <li>Health insurance</li> <li>Third-party cover in vehicle insurance</li> <li>Mutual recognition of other insurance (green card system)</li> <li>Other sources</li> </ul>	End 2013	MOHP, DoHS, NMA, hospitals, MoF Insurance Committee, insurance agencies.	MOHP	1.01		

Activity	Target Completion Date	Core Agency Concerned	Coordinating Agency	Budget Estimate (NRs Million)		
				Short-Term (2013 ~ 2014)	Medium-Term (2013~ 2016)	Long-Term (2013~ 2020)
Conduct medical research on major injuries of crash victims and prioritise care for such injuries at trauma centers.	1 March, 2013 onwards	MOHP, DoHS, NMA, hospitals, trauma and orthopedic societies.	MOHP	21.24	33.48	65.62
Ensure people with disabilities are not deprived from employment opportunities.	Continuous	MOH, NMA, hospitals, trauma, disadvantage groups, MoF and orthopedic societies.	MoHP	admin costs	admin costs	admin costs
Develop and maintain a comprehensive injury surveillance system in hospitals and health centers with the following. <ul style="list-style-type: none"> <li>Uniform, standard entry in trauma registry</li> <li>Expand control policy on drunk-driving</li> <li>Improved RTA reporting</li> </ul>	Develop: 14 April 2013 + update	MoHP, hospitals, health centers, district health offices, TP	MoHP	9.25	19.35	41.71
Establish road-safety unit at MoHP and provide the following institutional support <sup>16</sup> . <ul style="list-style-type: none"> <li>Inter-agency referral system (e.g. hospital referral of potential accident-blackspots)</li> <li>Networking with focal persons at the concerned agencies</li> </ul>	14 April 2013	MoHP, hospitals, health centres, district health offices, TP, DoTM, MPPWTM, DoR	MoHP	2.98	6.43	17.10
Train the emergency agencies (e.g. Traffic Police, Civilian Police Army, Fire-brigade, paramedics, etc.) to improve post-crash response to RTA victims.	14 April 2013	MoHP, TP, NA, Police, Fire-brigade, paramedics, district hospitals	MoHP	3.42	11.32	24.75
Set up a network of ambulance services along the major highways, urban and rural roads.	14 April 2013	MoHP, hospitals, health ctr., social org., TP, DoTM	MoHP	3.69	9.79	15.46
Develop a strategy and policy to fund medical rehabilitation and disability from RTAs	End '13	MoHP, hospitals, health ctr., social org. insurance board, insurance agencies	MoHP	1.36		

<sup>16</sup>This Unit will also liaise with traffic police, DoTM for inter-sectorial coordination with designated focal points in these agencies for post-crash trauma response

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