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Ministry of Physical Infrastructure and Transport

Department of Roads

Development Cooperation Implementation Division

**Accelerating Transport and Trade Connectivity in Eastern South Asia
(ACCESS) – Nepal Phase 1 Project**

**Road User Satisfaction Survey and Preparation of Necessary
Reports**

(Contract No.: ACCESS-DOR-BGC-QCBS-37)



Baseline Survey Report (Final)

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Executive Summary

The Road User Satisfaction Survey has been conducted under the initiation of Development Cooperation Implementation Division (DCID), a division within Department of Roads (DoR), along Butwal-Gorusinghe-Chandrauta (BGC) Road section to ensure that the concerns and interests of the road users are considered in the design, construction and operation of this road.

This report reflects the Road Baseline Survey conducted before the construction of Butwal-Gorusinghe-Chandrauta Road. The Road End-line Survey will be conducted 6 months after the completion of construction works along the same road and the responses from these two surveys will be compared to determine the change in Road Users' Satisfaction as a result of the construction of Butwal-Gorusinghe-Chandrauta Road.

A total of 817 respondents from various target groups were interviewed during the Road Baseline Survey. This included 489 Motorized Transportation Users, 254 Non-Motorized Commuters and 74 relevant Governmental and Non-Governmental Organizations/Associations within the vicinity of the project alignment.

The survey attempted to capture the responses from both male and female road users. The responses from 8% of female Motorized Transportation users, 35% of female Non-Motorized Commuters and 22% of female in Governmental and Non-Governmental Organizations/Associations was collected during the survey.

The responses were collected through a set of questionnaires prepared to capture seven survey attributes, namely, Road Condition, Traffic and Safety, Infrastructure & Facilities, Environment & Aesthetic Appeal, Accessibility & Connectivity, Emergency Services and GRID approach that draws on the overall road user's satisfaction level of the road.

The responses of each questionnaire were assigned score on a Likert Scale of 1 to 5; 1 being highly dissatisfactory and 5 being highly satisfactory. The satisfaction on each sub-attribute was determined based on weightage of the responses and the frequency of occurrence of any particular response within the sample size. The satisfaction score was calculated on the scale of 5. The satisfaction of each attribute as well as the overall road user satisfaction were also calculated as the weighted average of the responses of the road users.

Further, the responses were collected in terms of Yes/No Questionnaires, Multiple Choice Questionnaires, Limited Option Questionnaires and Subjective Questionnaires in order to capture the in-depth views and recommendations from the road users.

The satisfaction of road users towards each survey attribute is summarized below:

1. Road Condition

The satisfaction score of this attribute stands at 44% or 2.21 on a 5-point Likert Scale. This satisfaction score is based on the responses on Pothole Frequency, Visibility/ Clarity of Road Marking, Efficiency of Drainage System, Adequacy of Road Width and Existing Condition of Road Surface.

2. Traffic and Safety

The satisfaction score of this attribute stands at 42% or 2.11 on a 5-point Likert Scale. This satisfaction score is based on the responses on Congestion on Road, Installation of Guard Rails on Sharp Bends and Steep Slope of Roads, Accessibility of Pedestrian Crossing and Feeling of Safety while Travelling.

3. Infrastructures and Facilities

The satisfaction score of this attribute stands at 53% or 2.65 on a 5-point Likert Scale. This satisfaction score is based on the responses on Road-side facilities such as Public toilets/ Bathrooms, Restaurants/ shops for food/ drinks, Public taps/ Drinking Water, Medical Facilities and Rain Shelter/ Bus-stop, Accessibility to footpaths, Accessibility to cycling path and lanes and Quality and Coverage of street lights.

4. Accessibility and Connectivity

The satisfaction score of this attribute stands at 55% or 2.77 on a 5-point Likert Scale. This satisfaction score is based on the responses on Access provided by the road to key locations, Reliability of the road to reach destination on time, Trend of travel time over past two years, Connectivity and access provided by the road to other major roads and highways and Signages for directions and distance along the road.

5. Emergency Services

The satisfaction score of this attribute stands at 67% or 3.33 on a 5-point Likert Scale. This satisfaction score is based on the responses on Accessibility of emergency services and Post-Crash Response.

6. Environment and Aesthetic Aspects

The satisfaction score of this attribute stands at 49% or 2.43 on a 5-point Likert Scale. This satisfaction score is based on the responses on Cleanliness of the road and surroundings, Level of Noise and Level of air pollution.

7. GRID Approach

The satisfaction score of this attribute stands at 44% or 2.21 on a 5-point Likert Scale. This satisfaction score is based on the responses on Consideration of safety of wildlife in highway design, Adequacy of wildlife crossings such as overpass and underpass, Adequacy of signage warning of wildlife crossings, Efforts of highway authorities in addressing wildlife conservation concerns and Road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc.

The average overall satisfaction of the Butwal-Gorusinghe-Chandrauta road section from the baseline survey is observed to be 51% or 2.53 on a 5-point Likert Scale. The low satisfaction rating shows the need for upgradation of the road section. The respondents have suggested to complete the construction at least on a single side of the existing highway before scarifying the existing highway pavement to ensure hassle-free travelling in the road section for the commuters even during the construction period. Further, suggestions from the road users to enhance the road safety, road-side facilities and services are included in this report. These suggestions should be incorporated during the construction of Butwal-Gorusinghe-Chandrauta Road in order to ensure better connectivity and facilitation to the road users, thereby increasing the overall Road User's Satisfaction.

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ABBREVIATIONS

AADT	: Average Annual Daily Traffic
ACCESS	: Accelerating Transport and Trade Connectivity in Eastern South Asia
CBS	: Central Bureau of Statistics
DCID	: Development Cooperation Implementation Division
DoR	: Department of Roads
BG	: Butwal-Gorusinghe
GC	: Gorusinghe-Chandrauta
BGC	: Butwal-Gorusinghe-Chandrauta
GoN	: Government of Nepal
GRID	: Green, Resilient, and Inclusive Development
IRC	: Indian Road Congress
IRI	: International Roughness Index
km	: kilometers
MoPIT	: Ministry of Physical Infrastructure and Transport
NH	: National Highway
NPHC	: National Population and Housing Census
RAP	: Resettlement Action Plan
RUSI	: Road User Satisfaction Index
RUSS	: Road User Satisfaction Survey
SDI	: Surface Distress Index
SSRN	: Statistics of Strategic Roads networks
ToR	: Terms of Reference
VPD	: Vehicles per day

1. Introduction

1.1. Background

Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) is implemented by Government of Nepal, with financial support from World Bank. The proposed project is expected to enhance transport connectivity and trade through following components:

1. Digital System for Trade
2. Green and Resilient Transport and Trade
3. Institutional and Policy Strengthening for Transport and Trade
4. Contingency Emergency Response Component

A Road User Satisfaction Survey has been conducted under initiation of Development Cooperation Implementation Division (DCID), a division within Department of Roads (DoR), along Butwal-Gorusinghe-Chandrauta (BGC) Road section to ensure that the concerns and interests of the road users are considered in the design, construction and operation of this road. The survey is undertaken before and after the completion of the construction of Butwal-Gorusinghe-Chandrauta Road in order to measure the increase in percentage of road users satisfied with the improvements made to the road infrastructure for Butwal-Gorusinghe-Chandrauta Road.

This report is based on the Road Baseline Survey conducted at BGC Road Section and provides the details on the outcome of the survey.

1.2. Project Parties and Contract

The project is implemented by DCID, DoR through MoPIT and is funded by World Bank. DCID, DoR has commissioned SOILTEST-GEC JV to undertake the assignment for Road User Satisfaction Survey of Butwal-Gorusinghe-Chandrauta Road and prepare necessary reports.

The contract was signed on the 14th day of the month of April, 2024 between DCID, DoR and SOILTEST-GEC JV to carry out Road User Satisfaction Survey and Preparation of Necessary Reports with contract number of ACCESS-DOR-BGC-QCBS-37.

1.3. Project Location

Butwal-Gorusinghe-Chandrauta (BGC) road is a section of East-West Highway (NH01). It starts from at Butwal (Ch. 589+700 of East-West Highway), near Tinau Bridge, passes through Gorusinghe (Ch. 639+700) and ends at Chandrauta, making the project length of approximately 69.9 km. The project area is located in Rupandehi and Kapilvastu district of Lumbini Province. The project corridor traverses through the Butwal Sub-Metropolitan City, Sainamaina Municipality and Kanchan Rural Municipality of Rupandehi district and Banganga, Budhabhumi and Shivaraj Municipalities of Kapilvastu district.

The location map of this project is presented in Figure 1.1.

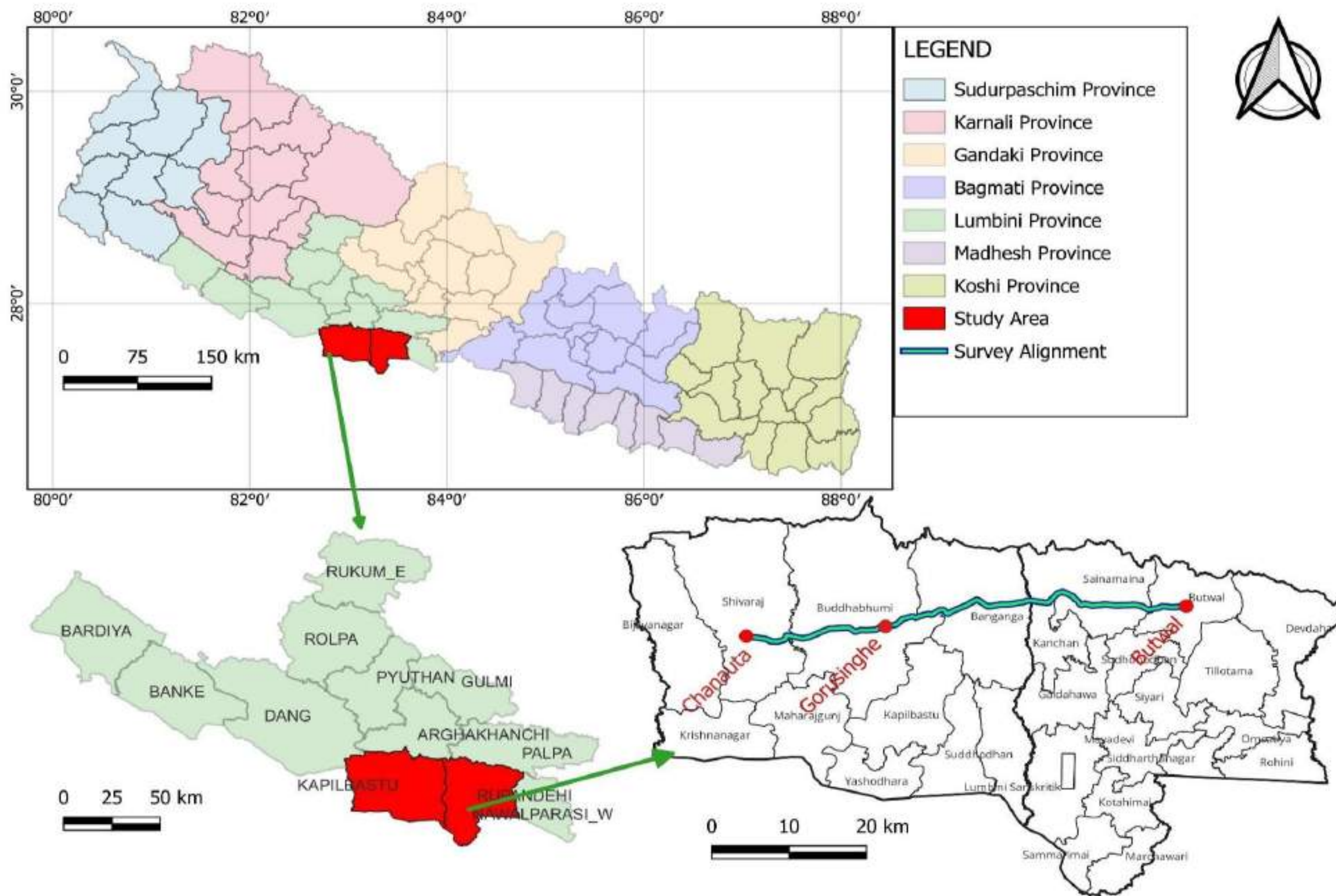


Figure 1.1: Project Location Map showing the road section under the project (Source: Department of Survey, 2024)

1.3.1. Survey Locations

The Road Users' Satisfaction Survey have been conducted at major intersections and city areas to include maximum number of public responses in the survey. A total of 10 survey locations were selection along the Butwal-Gorusinghe-Chandrauta Road Section. The descriptions of these survey locations are tabulated in Table 1.1 and shown along the Butwal-Gorusinghe-Chandrauta road alignment in Figure 1.2.

Table 1.1: Selected survey locations along the Butwal-Gorusinghe-Chandrauta Road

S.N.	Latitude	Longitude	Description	Road Link Id of BGC Road	Remarks	District
1	27°41'54.39" N	83°27'55.24" E	Mahendra Chowk	NH01-047	Major City Area	Rupandehi
2	27°41'21.89" N	83°26'39.41" E	Jholunge Pul Bus Stop	NH01-047	Major City Area	Rupandehi
3	27°41'14.81" N	83°20'30.73" E	At Murgiya Bazaar	NH01-048	Major City Area	Rupandehi
4	27°42'09.84" N	83°15'56.41" E	At Saljhandi bazaar	NH01-048	City Area	Rupandehi
5	27°41'12.08" N	83°10'41.00" E	At Charnumber	NH01-049/NH01-050	Major City Area	Kapilvastu
6	27°40'38.64" N	83°07'17.76" E	Koile Bangain	NH01-050	City Area	Kapilvastu
7	27°39'42.88" N	83°02'28.70" E	Gorusinghe Bazaar	NH01-051	Major City Area	Kapilvastu
8	27°39'36.21" N	82°59'17.42" E	At Imiliya	NH01-051	Major City Area	Kapilvastu
9	27°38'36.00" N	82°53'37.49" E	At Khairenipur	NH01-051	City Area	Kapilvastu
10	27°38'56.58" N	82°51'52.13" E	Chandrauta Chowk	NH01-052	Major City Area	Kapilvastu

1.3.2. Survey Duration

The field staff for the baseline survey were mobilized in the BGC section from 21st August 2024 to 15th September 2024. As presented in Table 1.1, the survey has been completed for all the 10 survey locations. The two surveyors who were especially trained for this survey and who successfully conducted and completed the Pilot Survey in Tikauli-Lothar Road section were deployed for this survey as well.

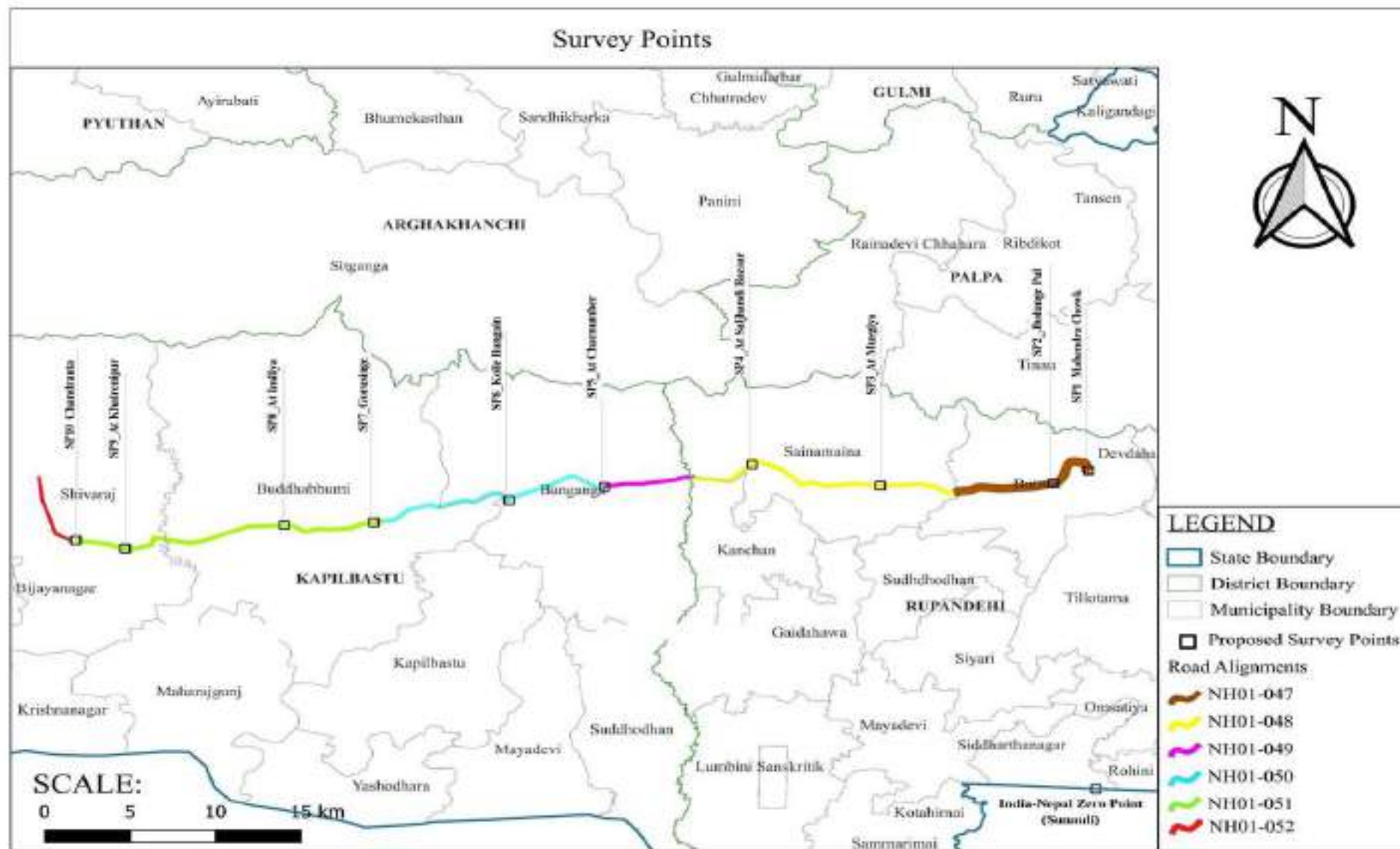


Figure 1.2: Survey locations along Butwal-Gorusinghe-Chandrauta Road

1.4. Scope of the Assignment

The major objective of this assignment is to conduct Road User Satisfaction Survey along the Butwal-Gorusinghe-Chandrauta road to collect the perceptions of road users on existing road sections, their expectations and the response of the road users after the completion of road construction, making it a citizen engagement approach.

The scope of works of this assignment is to undertake the Road User Satisfaction Survey along 69.9 km of Butwal-Gorusinghe-Chandrauta (BGC) road. The survey will be undertaken in two different phases as follows:

1. Prior to the commencement of construction of BGC road (Road Base-line Survey)
2. 6 months after the completion of construction of BGC road (Road End-line Survey)

1.4.1. Procedures to achieve Assignment Objectives

In order to achieve the objectives of the assignment, it is required to:

- i. Prepare the survey methodology and plan, finalize it in consultation with DCID, DoR and conduct the survey based on the approved survey methodology and plan
- ii. Propose and finalize the survey attributes and questionnaires to be used during the survey and finalize it to use in the survey
- iii. Finalize the pilot survey location to undertake the Road User Satisfaction Survey at approved location
- iv. Undertake the Road User Satisfaction Survey at BGC road prior to the commencement of construction incorporating findings from the Road User Satisfaction Survey at the pilot location
- v. Undertake the Road User Satisfaction Survey at BGC 6 months after the completion of upgrading of the road section
- vi. Calculate the Road User Satisfaction levels using Likert Scale scoring/ aggregation.
- vii. Make comparative analysis of the road user responses and satisfaction level before and after completion of construction works of BGC road
- viii. Prepare the reports of each survey and make presentation as required in ToR

1.5. Pilot Survey

A Pilot Survey was conducted along the 30km stretch of Tikauli-Lothar, a section located at eastern Chitwan along Mahendra Highway (NH01-034) and passing through Chitwan National Park, from 17th July 2024 to 22nd July 2024. This survey served as the preliminary survey before the commencement of main survey along BGC road (Road Base-line Survey) to evaluate the validity and effectiveness of the tools, methodology and questionnaires proposed for the main survey to achieve each of the scopes as given under the contract of this assignment. The pilot survey has helped to familiarize with the different scenarios while conducting Baseline Survey. The location map of the pilot survey is presented in Figure 1.3.

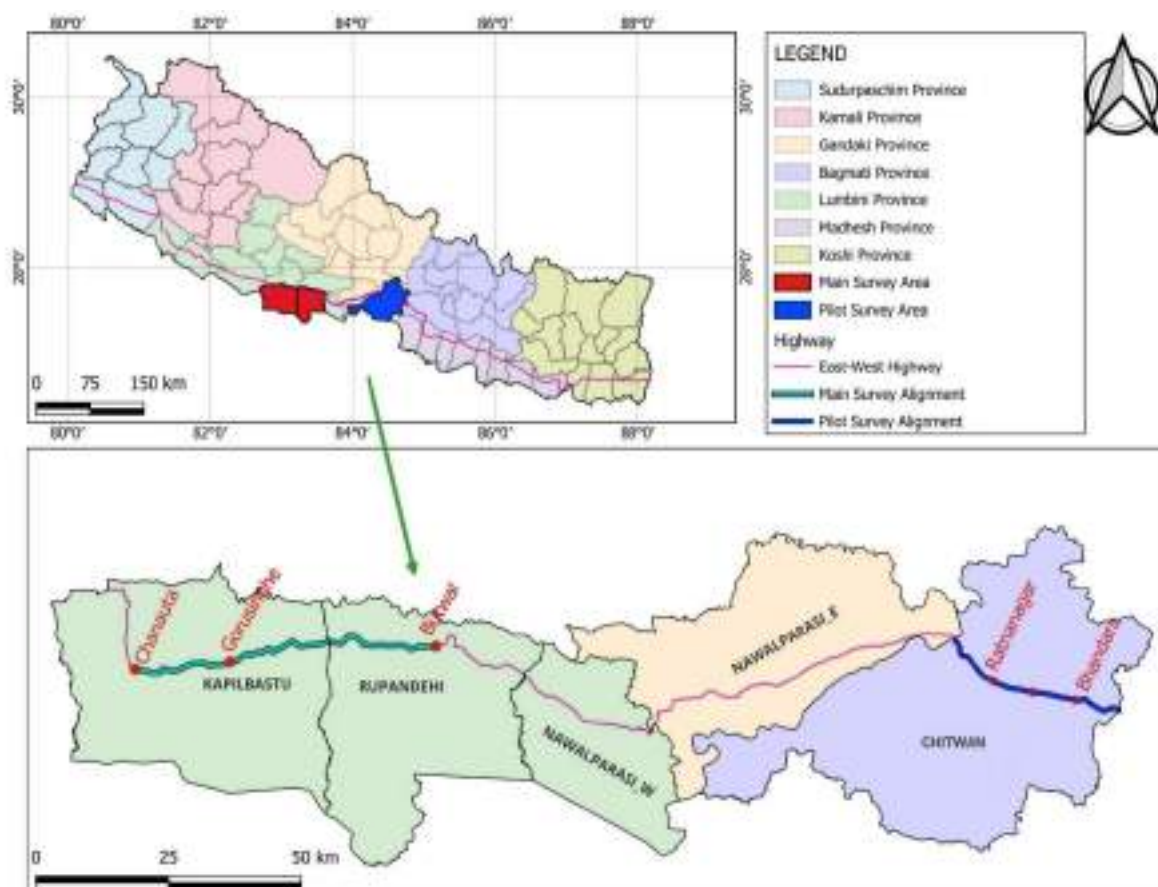


Figure 1.3: Map showing the alignment for Pilot Survey and its location from main survey route

Additionally, learnings from the experiences of Pilot Survey have been utilized to make proper modifications to the Final Report on Baseline Survey. Few highlights from the Pilot Survey are as follows:

1. The Pilot Survey provided greater understanding of the different perspectives and satisfaction levels of the various target groups.
2. The responses to the questionnaires were mathematically modelled or graphically represented during the pilot survey and these were further refined during the preparation of Baseline Survey Report.
3. No changes had to be made to the questionnaire on the grounds of incompatibility, incomprehensibility or interaction level with the respondents. The pilot survey was useful to verify the responsiveness/appropriateness of the questionnaires prepared during the Inception Phase.

2. Objective of Final Report

This final report on Road Base-line Survey is submitted as a fulfilment of the Road User Satisfaction Survey along Butwal-Gorusinghe-Chandrauta Road. This report acts as a detailed final report based on the findings from the baseline survey conducted on BGC Road. This report incorporates necessary modifications as per the comments and suggestions received from the client. This report shall also include discussions on the results, highlights on key findings and recommendation concerning the results. The results from this report shall act as the criteria, based on which, the changes in satisfaction and perception of the road user on the quality of road section shall be compared after conducting the end-line survey.

The results and findings from the analysis of 817 numbers of identified target groups have been presented in this report. The analysis and results for respondents of three target groups, i.e., for 489 Motorized Transportation users (out of population universe of 14777 VPD), 254 Non-Motorized commuters (out of population universe of 281082 residents in wards adjoining the BGC section, 141934 number of passenger on a given day in BGC section and 844 directly affected population by the BGC section) and 74 relevant government and non-government organizations like ward/ municipality office, forest office, police offices, hospitals, etc. are presented in this report.

The Final Report on Road Base-line Survey has been prepared based on the recommendations from the clients on draft report with analysis of required sample size for each of the identified sample groups. Some modifications have been made to this report like addition of section 5. Key Findings which highlights and complies the major findings from the analysis of the survey data, and inclusion of comprehensive analysis on the results and appropriate recommendations deduced from these results in section 6. Results and Recommendations. These changes are made based on the learnings from the experiences of Pilot Survey for compilation of a polished and comprehensible report.

3. Methodology

The methodology for the base-line survey has remained largely same as the pilot survey. The methodology implemented for the pilot survey has proved to be very effective which has been adopted for the baseline survey of BGC road as well. The final proposed questionnaire from the Pilot Survey Report has been used for the Base-Line survey of BGC Road. The surveyors who were trained before the inception of pilot survey for the data collection for Road User Satisfaction Survey (RUSS) and conducted the pilot survey have undertaken the base-line survey as well.

The data analysis and mathematical modelling methodology for this final report on baseline survey has remained largely the same as in the pilot survey report. As per the objectives of the final report, which was to update the pilot survey report based on its findings and experiences, the graphical representation of the results has been modified and updated as per the nature of data to best illustrate all the results in consolidated form. The graphs have been represented with focus on facilitating the readers better visualize and understand the results.

3.1. Methods for Data Collection

The questionnaires were prepared with a goal to promote the inclusion of communities and other stakeholders by collecting individual perspectives through simple, realistic and specific interrogations. There are distinguished three types of questionnaires as per main three types of identified target groups.

The questionnaires captured the main *seven survey attributes* to draw on the overall road user's satisfaction level of the road. The survey attributes are as follows:

1. Road Condition

2. Traffic and Safety
3. Infrastructure & Facilities
4. Environment & Aesthetic Appeal
5. Accessibility & Connectivity
6. Emergency Services
7. GRID approach that draws on the overall road user's satisfaction level of the road.

The sample of questionnaires used for the base-line survey along with the response of each target group is attached in the **Appendix A1, A2 and A3**. The response from the road users were collected by following approach:

1. Questionnaires and Surveys

- Structured questionnaires were distributed to drivers, passengers, pedestrians, and local residents and their responses were collected.

2. Interviews and Focus Group Discussion

- Face-to-face interviews were conducted with key stakeholders such as commercial drivers, business owners, and local authorities.
- Focus group discussions were organized with various governmental and non-governmental organizations.

3.2. Classification of Questionnaire

The responses are analyzed as per the nature of question used. There are mainly five types of question used in the questionnaire. They are listed below:

1. Likert scale-based questionnaires
2. Yes/No questionnaires
3. Multiple Choice questionnaires
4. Marking – Limited Option Questionnaires
5. Subjective questionnaires

1. Likert scale-based questionnaires

The responses of each questionnaire are assigned point on a Likert Scale of 1 to 5; 1 being highly dissatisfactory and 5 being highly satisfactory. The satisfaction on each sub-attribute is determined based on weightage of the responses calculated as per the frequency of occurrence of any particular response within the sample size. The satisfaction score is calculated on the scale of 5.

The satisfaction of each attribute as well as the overall road user satisfaction are also calculated as the weighted average of the responses of the road users. The responses of road users are graphically presented for each sub-attribute.

The responses are further categorized based on the identified target groups and the detailed analysis is presented in Appendix D.

2. Yes/No questionnaires

The questionnaires under this category are individually analyzed by determining the percentage of respondents for each response and are graphically presented under each section.

3. Multiple Choice questionnaires

The responses on the given questionnaire are tabulated and the percentage of respondents is determined for each response to assess the opinion of majority of the road users.

4. Marking – Limited Option Questionnaires

The percentage of road users with their marking to the given factors are calculated and the most contributing factor for various aspects of the road is determined.

5. Subjective questionnaires

The responses on subjective questionnaires varies for each road user. The summarized views of the respondents capturing the opinions of overall road user is discussed under the respective sections.

3.3. Computation of Satisfaction Level

The satisfaction level for each road attribute was calculated based on the analysis of collective ratings for each Likert Scale-based questionnaire. The satisfaction ratings are presented both in terms of Likert Rating (1 to 5) and in percentile form for better comprehensibility. The Likert scale ranges from 1 to 5 with 1 being the lowest rating and 5 being the highest. The lowest rating of 1 in Likert Scale corresponds to 20% satisfaction rating in percentile form and highest rating of 5 in Likert scale corresponds to 100% satisfaction rating in percentile form. Each unit increase of point in Likert Scale is equivalent to 20% in percentile form.

The overall average satisfaction is calculated based on the satisfaction rating of all seven attributes as defined in section 3.6 Attributes. The satisfaction rating for each attribute is derived from Likert scale-based question of respective attribute.

3.3.1. Likert Scale

Ratings for users' response to each sub-attribute was made on a point scale ranging from '1' to '5'. Additionally, to make it visually effective a color chart is used as shown in table below for the quick assessment of severity in scale.

Each response was given respective rating as presented in Table 3.1.

Table 3.1: Rating of Users Responses

Satisfaction Rating	Point
Highly Dissatisfactory	1
Dissatisfactory	2
Neutral (Neither Satisfactory nor Dissatisfactory)	3
Satisfactory	4
Highly Satisfactory	5

3.3.2. Weightage/ Percentage factors for each attribute

The weights for each of the attributes have not been mentioned or directed in the ToR by the client. The weights or the factors for each of the attributes are tabulated and assigned as per the frequency of

occurrence of any particular response within the sample size. The weightage for the attributes is selected based on the actual responses (frequency of each type of response) within the sample size.

In addition to the statistical computation of the weightage, the contribution, if any, from the similar studies and the expert's knowledge will be among the contributing factor. The statistical calculation included determination of deviations between each attribute using the responses from the questionnaires which further relies on the Likert scale. Hence, each attribute has an aggregated rating.

3.4. Sampling Design

To design an effective Road User Satisfaction Survey (RUSS) for the Butwal-Gorusinghe-Chandrauta road section of the Mahendra Highway before the commencement of upgrading work, it was required to consider the sampling methods applied to define our sample size that represents the characteristics of the target population.

3.4.1. Sampling Methods

Road User Satisfaction Survey is performed based on non-probability purposive sampling method in which the respondents are purposively selected from the universe of BGC road users. The selection depends upon availability, geographical proximity and expert's knowledge on the survey of similar scope. Flexibility in selection of respondents provides an opportunity to select the target groups that are more relevant to the given road section. This method will be effective in collecting meaningful feedbacks from the road users and determine their satisfaction ratio.

3.4.2. Sample Size

The universe for the survey needs to be large enough to ensure statistical reliability and validity of the results. The calculations of the sample sizes adopted for each user group are explained in the following section.

3.4.2.1. Sample Size for Motorized Transportation Group

For the Motorized Transportation group, the Annual Average Daily Traffic (AADT) of 14777 vehicles per day (VPD) travelling along the BGC road section (SSRN 2022/2023) is considered as the population universe. For the purpose of this survey, a minimum of 3% of the AADT was targeted to be surveyed. A total of 489 Motorized Transportation Users were questioned for this survey.

The data of average AADT of the Butwal-Gorusinghe-Chandrauta road section is given in the Table 3.2.

Table 3.2: AADT of road links under Butwal-Gorusinghe-Chandrauta Road

Road link Ids in BGC Road	Station Name	Road Link	AADT in vpd (2016/17)	AADT in vpd (2018/19)	AADT in vpd (2020/21)	AADT in vpd (2021/22)	AADT in vpd (2022/23)	Class
NH01-047	Butwal West (90)	Butwal - Bamaha Khola	13538	14882	24389	26723	30416	High (>1500 vpd)
NH01-048	No traffic count data available for this road link. Based on adjacent roads, this road may be classified as high class							
NH01-049	No traffic count data available for this road link. Based on adjacent roads, this road may be classified as high class							
NH01-050	Jitpur West (92)	Jitpur - Gorusinghe	6044	6917	12598	11931	10592	High (>1500 vpd)
NH01-051	Gorusinghe West (94)	Gorusinghe - Chandrauta	3595	8297	7467	7370	5962	High (>1500 vpd)

Road link Ids in BGC Road	Station Name	Road Link	AADT in vpd (2016/17)	AADT in vpd (2018/19)	AADT in vpd (2020/21)	AADT in vpd (2021/22)	AADT in vpd (2022/23)	Class
NH01-052	Chandrauta West (96)	Chandrauta - Dhan Khola	3810	13601	4044	14803	12138	High (>1500 vpd)
Average AADT in vpd							14777	High (>1500 vpd)

Source: ssrn.dor.gov.np/traffic_controller/get_summary

3.4.2.1. Sample Size for Non-Motorized Commuters

For the case of **Non-Motorized** target group, a sample size up to 5% of the total population directly affected by the BGC road was determined to be considered. The remaining population of the road section vicinity also needs to be considered in sampling.

In case of Butwal-Gorusinghe road section, a total of 120 households (HHs) will be directly affected by the upgradation of 50 km of the road section (*page 8, chapter 1 of RAP, BG road, September 2022*). The average household size is 5.5 (*page 17, chapter 2 of RAP, BG road, September 2022*). Hence, the total population of 660 nos. will serve as universe for Butwal-Gorusinghe road section. The approximate sample size up to 5 % of affected population will be taken during the road user satisfaction survey.

Table 3.3: Estimation of sample size for non-motorized road users for Butwal-Gorusinghe section

Road section	Household	Total population	Affected HH (Page 8, chapter 1 of RAP, BG road, September 2022)	Household size (Page 17, chapter 2 of RAP, BG road, September 2022)	Population affected by Butwal-Gorusinghe road (Universe for Road User Satisfaction Survey)	Sample size
B-G	54600	219906	120	5.5	660	Up to 33

In case of the Gorusinghe-Chandrauta however, the RAP of section is not available to us (this study group) during the preparation of this report. Hence, an approach of considering population within the Direct Impact Area or taking certain percentage of the total population was adopted to estimate the sample size.

The Direct Impact Area of the alignment will be taken as 25 m on either side from the centerline of the alignment for Highways (*National Road Standard, 2070*). This will represent approximately 1.75 sq. km. of area along the alignment. Similarly, the extraction of data from CBS can draw some estimated conclusion in considering the population size of Gorusinghe-Chandrauta section of the alignment.

However, these approaches shall be validated after the RAP of Gorusinghe-Chandrauta section has been concluded, given it occurs within the study period. Additionally, this shall be validated by DoR.

As in Butwal-Gorusinghe section, using the proportional translation into the Gorusinghe-Chandrauta section, the affected households and population size has been deduced as below so that our survey will target up to 5% of affected population, depending upon the demographics.

Table 3.4: Estimation of sample size for non-motorized road users for Goringhe-Chandrauta section

Road section	Household	Total population	Affected HH	Affected Population	Sample size
G-C	12468	61176	27	184	Up to 10

The wards and municipalities affected during the upgradation / construction of Goringhe-Chandrauta section have been listed as per the website www.sthaniya.gov.np/gis in Table 3.5 below.

Table 3.5: Affected municipalities and wards of Goringhe-Chandrauta section

Affected District	Affected Municipality	Affected Wards	Total Household, NPHC 2021 <i>Source: www.nepalindata.com</i>	Total Population, NPHC 2021 <i>Source: www.nepalindata.com</i>	Area (ha.)
Kapilbastu	Buddhabhumi	9	2441	11037	10955.2
	Shivaraj	3	1914	9320	4781.7
		4	1347	8141	1077.0
		5	3367	15566	847.8
		6	1216	7400	1664.5
		1	2183	9712	7971.2
	Total		12468	61176	27297.4

Source: www.sthaniya.gov.np/gis

In addition to the population directly affected by the BGC road section, the other section of population along the highway section also needs to be considered. The pedestrians, cyclists, local residents/ businesses, teachers/ students, farmers, market consumers, passengers, pilgrims and tourists (as defined in section 3.5.2) around the road section vicinity are to be taken into consideration in the sample size. So, to account for the road users from this segment, the overall population of all the wards connected by the highway section and the total number of passengers using the road section on a particular day is considered as the population universe. A sample size of one per two thousand (1:2000) is taken for this group.

For estimation of total number of passengers, vehicles generally used for public transport like bus, rickshaw, and motorized 3-wheelers are considered. The average passenger capacity for the big, mini and micro bus are taken from Bus Body Building Standard, 2018 of Nepal, and assumptions are taken for the rest.

The following Table 3.6 shows the AADT for public transportation vehicles in BGC road section and calculation of total passenger according to the vehicle capacity.

Table 3.6: Vehicle data and estimation of total number of passengers in BGC road section

Section Vehicle Type	Butwal West	Jitpur West	Goringhe West	Chandarauda West	Total number of vehicles	Average Passenger capacity of vehicle	Total Passenger
Big Bus	454	217	273	259	1203	56	67368
Mini Bus	1104	393	258	251	2006	20	40120
Micro Bus	782	347	144	77	1350	14	18900

Section Vehicle Type	Butwal West	Jitpur West	Gorusinghe West	Chandarauda West	Total number of vehicles	Average Passenger capacity of vehicle	Total Passenger
Motorized 3-Wheeler	1834	349	282	2599	5064	3	15192
Rickshaw	141	8	7	21	177	2	354
Source: http://ssrn.dor.gov.np/traffic_controller/get_detail and Bus Body Building Standard, 2018					Total=		141934

So, taking sample size of 5% for the affected population of Butwal-Gorusinghe and Gorusinghe-Chandrauta section, and sample of one per two thousand (1:2000) for the total population of all the wards connected by the highway section and the total number of passengers travelling through the road section on a particular day, the total sample size required is calculated in the following Table 3.7.

Table 3.7: Calculation of Required sample size for each Population Universe

S.N.	Population category/ Road section	Population	Sample Size Required	Remarks
1	Total population affected by the road in Butwal-Gorusinghe Section	660	33	5% of population
2	Total population affected by the road in Gorusinghe-Chandrauta Section	184	9	5% of population
3	Total population of wards connected by Butwal-Gorusinghe Section	219906	110	1 in 2000
4	Total population of wards connected by Gorusinghe-Chandrauta Section	61176	31	1 in 2000
5	Total Number of Passenger in Butwal-Gorusinghe-Chandrauta Section	141934	71	1 in 2000
Total=			254	

33 samples from population universe of 660 people affected by the road in Butwal-Gorusinghe section, 9 samples from population universe of 184 people affected by the road in Gorusinghe-Chandrauta section, 110 samples from population universe of 219906 overall population of wards connected by Butwal-Gorusinghe section, 31 samples from population universe 61176 overall population of wards connected by Gorusinghe-Chandrauta section and 71 samples from population universe of 141934 passengers in Butwal-Gorusinghe-Chandrauta section is calculated to be required. So, a total of 254 participants belonging to this user group is calculated as the required sample size for this survey and the same number has been surveyed for the purpose of this survey.

3.4.2.1. Sample Size for Government and Non-Governmental Organization/ Association

Similarly, 74 relevant and important **Government and Non-Governmental Organization/ Association** from the vicinity of BGC Road alignment were surveyed. The most significant organizations and associations like police office, road division office, ward and municipality office, hospitals, health posts, forest office, Red Cross society etc. were interviewed.

A total of 817 surveys were conducted during the baseline survey which includes 489 Motorized Transportation Users, 254 Non- Motorized Commuters and 74 Relevant Government and Non-Governmental Organization/ Association.

3.5. Target Groups

The Baseline Survey was conducted to be gender inclusive and includes representatives from each of the target groups. This Pilot Survey provided greater understanding of the different perspectives and satisfaction levels of the various target groups. The key target groups considered for the survey are:

- Motorized Transportation Users
- Non- Motorized Commuters
- Relevant Government and Non-Governmental Organization/ Association

The questionnaires used in the survey are color-coded for each target group to facilitate the survey works. The target groups, namely, Motorized Transportation Users, Non-Motorized Commuters and Relevant Government and Non-Governmental Organization/ Association are color-coded as green, blue and orange as shown below:

Table 3.8: Color-code used in questionnaires for each target group

Target group	Color-code
Motorized Transportation Users	
Non-Motorized Commuters	
Relevant Government and Non-Governmental Organization/ Association	

The detailed target groups surveyed are as follows, which represented a broad spectrum of road users for comprehensive and meaningful feedback.

3.5.1. Motorized Transportation Users

The responses of Motorized Transportation Users travelling to/from various places were collected. Gender inclusive approach was adopted during the selection of respondents. Some of the Motorized Transportation Users are as follows:

1. Drivers travelling to/from Dang, Kohalpur, Nepalgunj, Attariya, Dhangadhi to the west, Chitwan, Kathmandu, Hetauda, Sarlahi, Bardibas, Janakpur, Dharan, Jhapa to the east.
2. Local Bus Drivers to/from Butwal, Jholunge Pul Bus Stop, Murgiya, Salijhandi, Gorusinghe and Chandrauta
3. School bus drivers to/from Butwal, Jholunge Pul Bus Stop, Murgiya, Salijhandi, Gorusinghe and Chandrauta

3.5.2. Non-Motorized Commuters

The responses of Non-Motorized Commuters travelling to/from various places was collected. Gender inclusive approach was adopted during the selection of respondents. The surveyed Non-Motorized Commuters include:

- i. Pedestrians, Local Residents/Businesses, Teachers/ Students, Cyclists from Butwal, Murgiya, Salijhandi, Ranibagiya and other nearby places
- ii. Passengers to/from Dang, Kohalpur, Nepalgunj, Attariya, Dhangadhi to the west, Chitwan, Kathmandu, Hetauda, Sarlahi, Bardibas, Janakpur, Dharan, Jhapa to the east.
- iii. Pilgrims/ Tourists to/from Dang, Kohalpur, Nepalgunj, Attariya, Dhangadhi to the west, Chitwan, Kathmandu, Hetauda, Sarlahi, Bardibas, Janakpur, Dharan, Jhapa to the east.

3.5.3. Governmental/Non-Relevant Organization/Associations

The responses of members from Governmental/Non-Relevant Organization/Associations were collected based on Focus Group Discussions. The organizations mentioned below were approached during the pilot survey.

1. Maitri Yatayat, Pushpalal Chowk (Butwal)
2. Butwal Sub-Metropolition City Office, Butwal
3. Nepal Police Highway Safety and Traffic Management Office, Butwal
4. Rupandehi Merchant Asociation, Butwal
5. Paschim Nepal Bus Byabasai Pvt. Ltd, Hattbazar line (Butwal-4)
6. Province Youth Council Lumbini, Butwal
7. Road Division Butwal, Rupandehi
8. Vechile Fitness Test Center, Jholunge Pull (Butwal-13)
9. Livestock Development Office, Murgiya (Sainamaina-04)
10. Malmala Driving Center, Buddhanagar (Sainamaina-05)
11. Ward No 3 Office, Sainamaina Municipality-Rupandehi), Murgiya (Sainamaina-3)
12. Ward No 2 Office, Sainamaina Municipality, Kalika Uhjadiya (Sainamaina-2)
13. Ward No 1 Office, Sainamaina Municipality, Bankathawa Chowk (Sainamaina-1)
14. Area Police Office Runiyara, Rupandehi, Murgiya (Sainamaina-4)
15. Construction Allied Workers Union of Nepal, Pulchowk (Sainamaina-5)
16. Ward No 4 Office, Sainamaina Municipality, Woda No-4 (Sainamaina-4)
17. Agriculture Development Organization, Murgiya (Sainamaina-4)
18. Sainamaina Drinking Water Organization, Bankatta (Sainamaina-01)
19. Nepal Telecom Maintenance Station, Murgiya (Sainamaina-4)
20. Sainamaina Municipality, Buddhanagar-Rupandehi (Sainamaina-05)
21. Nepal Red-cross Society, District Office Rupandehi, Murgiya(Sainamaina-4)
22. Ward No 11 Office, Sainamaina Municipality, Saljhandi (Sainamaina-11)
23. Ward No 6 Office, Sainamaina Municipality, Kalauni (Sainamaina-6)
24. Fundamental Health Service, Sahamati Chowk (Sainamaina-09)
25. Ward No 8 Office, Sainamaina Municipality, Ramapur (Sainamaina-8)
26. Ward No 9 Office, Sainamaina Municipality, Ward No.9 (Sainamaina-9)
27. Ward No 7 Office, Sainamaina Municipality, Deupar (Sainamaina-7)
28. Ward No 10 Office, Sainamaina Municipality, Saljhandi (Sainamaina-10)
29. Ward No 1 Office, Banganga Municipality, Bairiya (Banganga -1)
30. Banganga Agricultural Development Sub-Division Office (Banganga-4)
31. District Traffic Police Office, Kapilvastu (Buddhabhumi-2)
32. Ward No 2 Office, Sainamaina Municipality, Ramapur (Banganga-2)
33. Sub-Division Forest Office, Banganga Municipality, Pipara (Banganga-2)

34. Pipara Kothi Women Service Community Forest Banganga Municipality, Pipara (Banganga-2)
35. Pipara Hospital, Kapilvastu (Banganga-2)
36. Post Office, Banganga Municipality, Pipara Kapilvastu (Banganga-2)
37. Ward No 4 Office, Banganga Municipality, Charnumber (Banganga-4)
38. Banganga Transport Business Committee, Banganga Municipality, Bairiya Banganga-1)
39. Siddharth Center for Social Development, Charnumber (Banganga-4)
40. Area Police Office Pipara, Pipara Chowk (Banganga-2)
41. Ward No 4 Office, Banganga Municipality, Gajeda (Banganga -4)
42. Area Administration Office, Banganga Municipality Jitpur (Banganga -4)
43. Ward No 7 Office, Banganga Municipality, Motipur (Banganga -7)
44. Phulbari Community Forest Users Committee, Banganga Municipality, Motipur (Banganga -7)
45. Ward No 7 Office, Banganga Municipality, Bodgau Chowk (Banganga -7)
46. Sub-Division Forest Office, Buddhabumi Municipality, Goringhe Chowk (Buddhabhumi -2)
47. Sub - Division Forest Office, Goringhe
48. Snake Bite Care Centre, Goringhe
49. Area Police Office, Goringhe Kapilvastu
50. Buddhi Health Post, Buddhi (Buddhabhumi-4)
51. Post Office Buddhabhumi Municipality, Goringhe Kapilvastu
52. Buddhabhumi Municipality, Ward No- 4 Buddhi
53. Buddhabhumi – 2, Goringhe
54. Postal Highway Project Office, Goringhe
55. Jayanagar Health Post, Goringhe
56. Buddhabhumi Municipality Hanuman Chowk, Buddhi
57. Citizen Wellness Centre, Buddhabhumi
58. Shree Shumsher Dal Ran
59. Citizen Wellness Centre, Shivraj
60. Basic Health Service Hospital, Shivraj
61. Shivraj Municipality, Chandrauta
62. Ward Police Office, Chandrauta
63. Division Forest Office, Kapilvastu (Gautambuddha)
64. Agriculture Department, Shivraj Municipality
65. General Post office Shivraj Municipality, Chandrauta
66. Shivraj Municipality Animal Service Branch, Chandrauta Kapilvastu
67. Shivraj Municipality Woda No – 5 Kapolap, Chandrauta
68. Area Administration Office, Chandrauta
69. Land Registry Office, Chandrauta
70. Malpot Office, Chandrauta Kapilvastu
71. Shivraj Municipality Ward -3, Khairanipur
72. Chanai Health Post, Khairanipur
73. Barkalpur Health Office, Buddhabhumi
74. Buddhabhumi – 9 Barkalpur

3.6. Attributes

The key survey attributes considered for this survey are following;

1. Road Condition
2. Traffic and Safety
3. Infrastructure and Facilities
4. Accessibility and Connectivity
5. Emergency Services
6. Environmental and Aesthetic Aspects
7. Green Resilient Corridor (GRID Approach)

Each attribute addresses the topics as enumerated below:

3.6.1. Road Condition

- Overall, Road Surface Quality (e.g., smoothness, presence of potholes)
- Road Markings and Signage (visibility and clarity)
- Lane Width and Shoulder Condition
- Pavement Condition during Different Weather Conditions

3.6.2. Traffic and Safety

- Traffic Congestion Levels (e.g., frequency and severity of traffic jams)
- Safety Measures and Features (e.g., guardrails, pedestrian crossings)
- Accident History or Perceived Risk (feeling of safety while traveling)
- Effectiveness of Traffic Management (e.g., traffic signals, roundabouts)
- Presence and Behavior of Traffic Police

3.6.3. Infrastructure and Facilities

- Availability and Condition of Rest Stops and Service Areas (public bathrooms, rain shelters, public taps for drinking water, etc.)
- Availability of Public Transportation (buses, taxis)
- Condition and Availability of Footpaths and Cycle Lanes
- Lighting Conditions at Night

3.6.4. Accessibility and Connectivity

- Ease of Access to Key Locations (e.g., schools, hospitals, police station, market etc.)
- Connectivity with Other Major Roads and Highways
- Signage for Directions and Distance Indicators

3.6.5. Emergency Services

- Availability and Visibility of Emergency Services (e.g., police station, hospitals, ambulance, roadside assistance etc.)
- Response Time and Effectiveness of Emergency Services

3.6.6. Environmental and Aesthetic Aspects

- Cleanliness and Maintenance of the Road and Surroundings
- Noise Levels (e.g., from traffic)
- Air Quality (perceived pollution levels)

3.6.7. Green Resilient Corridor (GRID Approach)

- Wildlife accident issues,
- Road safety to reduce Human-Wildlife conflicts,
- Road disturbance by the disaster events like landslide, flood, extreme weather events, etc.
- Adequate signage for warning of wildlife crossing
- Addressing the wildlife conservation concerns by highway authority
- Wildlife crossing structure, underpass and over pass

4. Data Analysis

This report is developed as an updated version of Pilot Report and Draft report for Baseline Survey, and acts as final report for Baseline Survey after required corrections and improvements done as per the recommendations from the client. The mathematical modelling methodology for this report is same as of the Pilot Survey Report. However, the graphical representations of the analysis of the collected data are represented in better suited graphs and charts for better visualization and understanding. The experiences and learning from the Pilot Survey have been a crucial aspect in this process.

A total of 817 surveys were conducted during pilot survey. The number of respondents from identified target groups interviewed during the survey are tabulated below.

Table 4.1: Number of respondents during pilot survey

Target Group	Number of surveys
Motorized Transportation Users	489
Non-Motorized Commuters	254
Relevant Government and Non-Governmental Organization/ Association	74
Total	817

In this report, analysis is undertaken for overall 817 surveys. The results are graphically illustrated and discussed in this section. The data analysis tables for the attributes for each target groups are attached in the Appendix D.

The results developed from the Baseline survey are presented as follows:

4.1. Demographic Analysis of Respondents

This section deals with the nature of respondents based on various factors. The respondents from Motorized Transportation Users, Non-Motorized Commuters and Governmental and Non-Governmental Organization/ Associations are categorized based on gender and age. Motorized Transportation Users and Non-Motorized Commuters are also categorized based on occupation and their frequency of travel. Only Motorized Transportation Users are categorized on basis of vehicle ownership.

The results derived from analysis of demographic data of the respondents are presented as follows:

4.1.1. Distribution by Gender

The majority of road users were male with only 18% of the overall 918 surveyed population being female. 37 out of 489, i.e., 8% of Motorized Transportation users were female which is the lowest female participation among the three user groups. 89 out of 254, i.e., 35% of non-motorized commuters were female which is the highest female portion. Out of 175 people surveyed in Governmental and Non-Governmental Organization/ Association, 38 people, i.e., 22% were female.

Proper efforts were made to keep the survey as inclusive as possible from all aspects. So, the data obtained demonstrates the gender disparity, especially in motorized transportation group and even in governmental and non-governmental organizations/ associations.

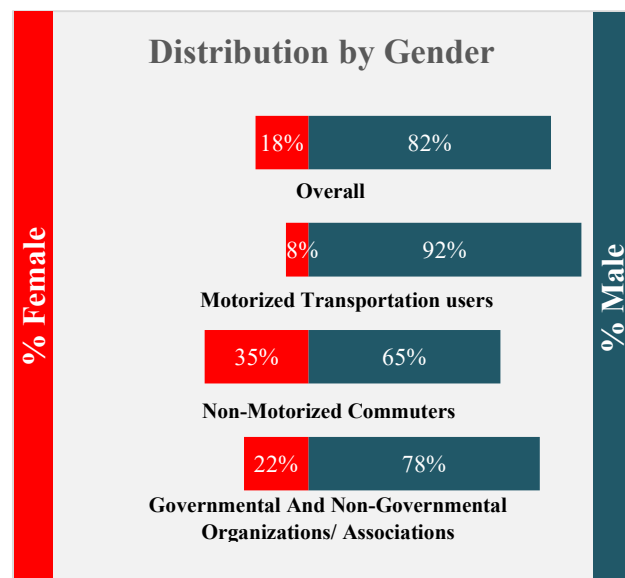


Figure 4.1: Distribution by Gender

4.1.2. Distribution by Age Group

Most of the interviewed population were from age group 36-45 with 278 out of 918 (30%) interviewees belonging to this age group. The age group 18 to 25 had least representation with 11% i.e., 102 out of 918 interviewees belonging to this age group.

34% out of 489 motorized users were of 36 to 45 age group, 26% out of 254 non-motorized users were of age group 55 and above and 30% out of 175 governmental and non-governmental organization personnel were from age group of 26 to 35 which is the highest for each user group.

7% of motorized users were from age group of 55 and above, 14% of non-motorized commuters and 6% of governmental and non-governmental organization personnel were from age group 18 to 25.

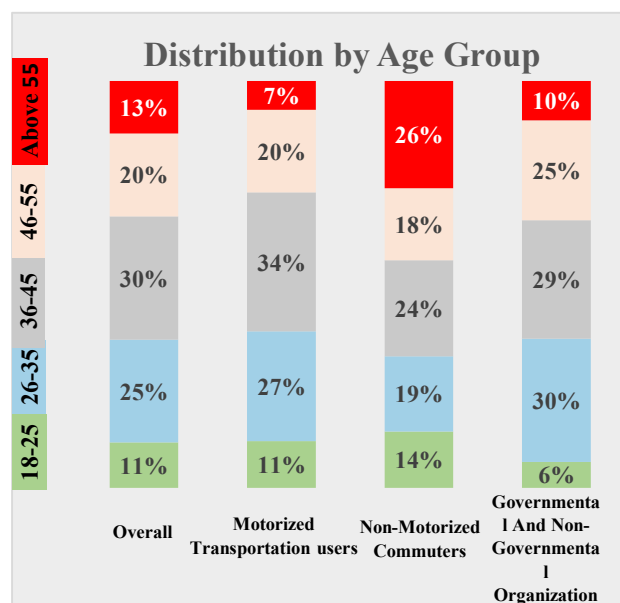


Figure 4.2: Distribution by Age Group

4.1.3. Distribution by Occupational Group

Majority of the surveyed population were engaged in business with 47% (430 out of 918) of the respondents involved in the sector. 61% (300 out of 489) of motorized users and 51% (130 out of 254) of non-motorized users were involved in business field. Labor was the least common occupation with 1% out of overall population and 2% out of non-motorized user group being involved in this occupation. 25% of overall population were involved in service followed by 17% of population involved in occupation other than agriculture, business, service, student or labor.

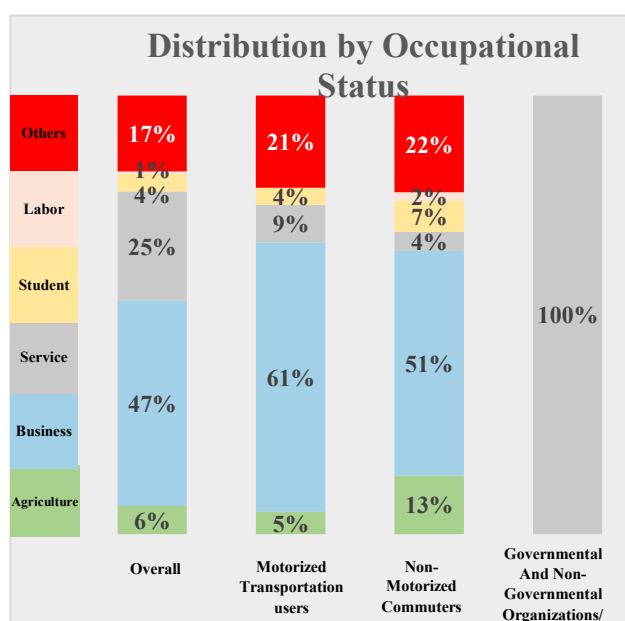
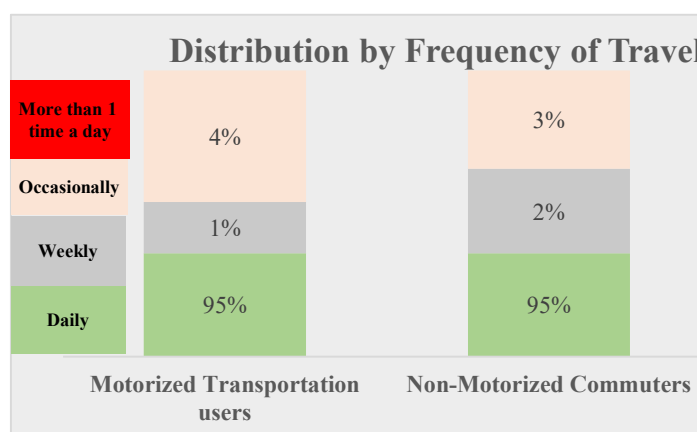


Figure 4.3: Distribution by Occupational Group

4.1.4. Distribution by Frequency of Travel

Majority of the travelers, i.e., 95% of motorized and non-motorized road users travelled on a daily basis. None of the respondents from either group have said to have travelled more than once a day.



4.1.5. Distribution by Vehicle Ownership

The respondents from Motorized Transportation Users are classified as vehicle owners and non-vehicle owners. 97% of the respondents interviewed from the motorized transportation user group owned the vehicle and the remaining 3% were non-vehicle owners.

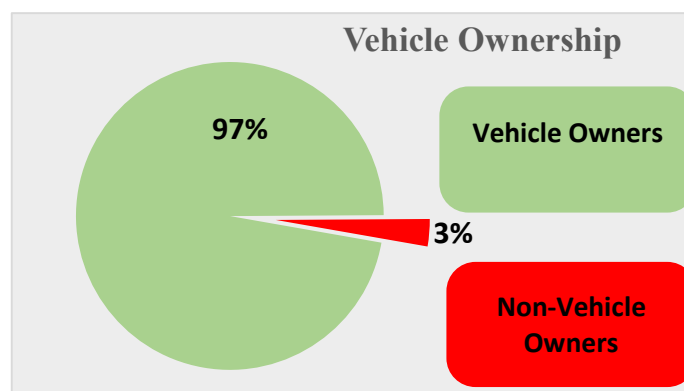


Figure 4.5: Distribution by Vehicle Ownership

4.2. Attribute Wise Analysis of Data

This section deals with analysis of the responses from the surveyed population. The responses collected for each sub-attribute are analyzed as per the nature of the question as defined in section 3.2. The Likert Scale based questions were used to establish overall Road User Satisfaction ratings and the results from other types of questions such as Yes/No questionnaires, Multiple Choice questionnaires, Marking-Limited Option questionnaires and Subjective questionnaires are analyzed to draw conclusive findings. These findings can provide crucial outlook towards the relevant condition and problems regarding the road section and also about the opinion of the road users. The constructive recommendations from the road users are crucial to improve the road section as per their needs and opinion.

The analyzed data are presented attribute wise as follows:

4.2.1. Road Condition

4.2.1.1. Pothole Frequency

Majority of road users of all groups have testified to have encountered potholes in the section frequently or very frequently with 74% of the overall population saying so. 61% of motorized transportation users say they have encountered potholes frequently or and 13% of them said they have encountered potholes very frequently. 5% of the respondents say they have rarely encountered potholes while 21% said they have encountered potholes occasionally. None of the respondents have testified the road section to be pothole free.

The satisfaction score on pothole frequency of the road section is 2.18 or 44%.

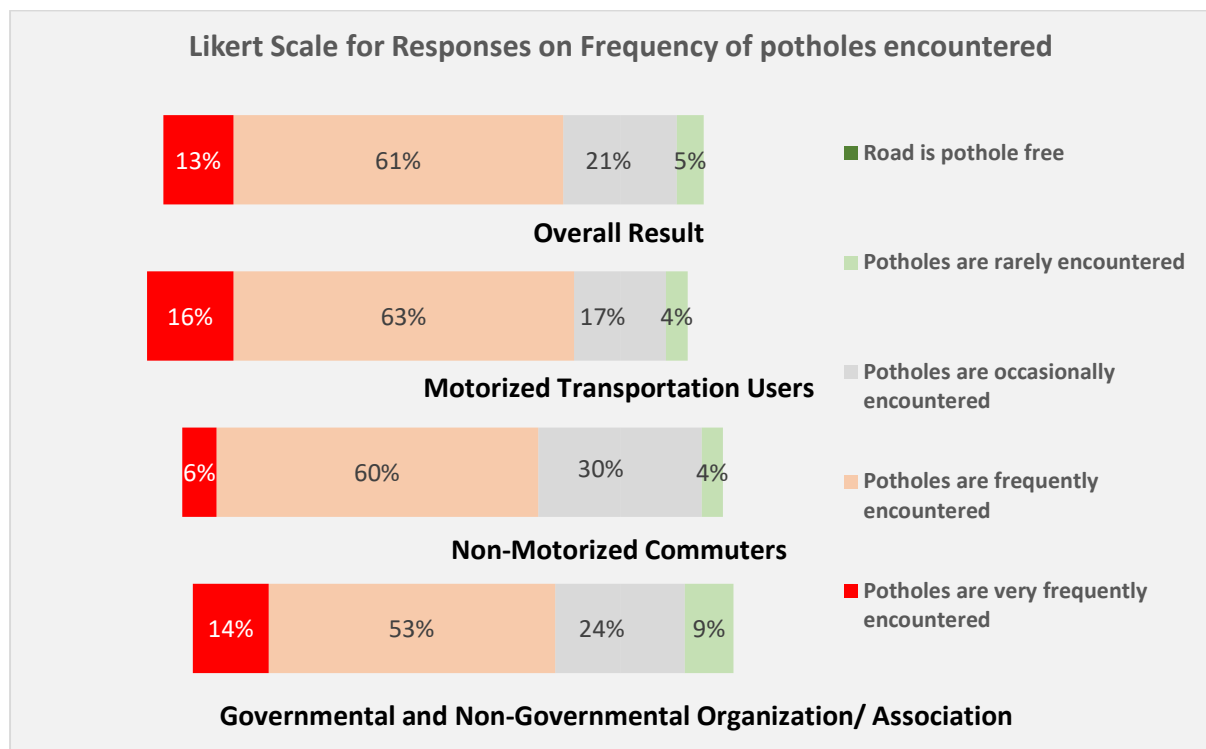


Figure 4.6: Potholes or uneven road surfaces

4.2.1.2. Visibility/ Clarity of Road Marking

66% of overall user group have rated the visibility and clarity of road marking as dissatisfactory or worse. Only 15% of the overall surveyed population have rated the visibility of road marking as satisfactory whereas 19% of them were neutral for this case. None of the respondents have rated the visibility and clarity road markings to be highly satisfactory.

The satisfaction score on visibility and clarity of road marking of the road section is 2.47 or 49%. This is the highest rated sub-attribute among the five sub-attributes of Road Condition.

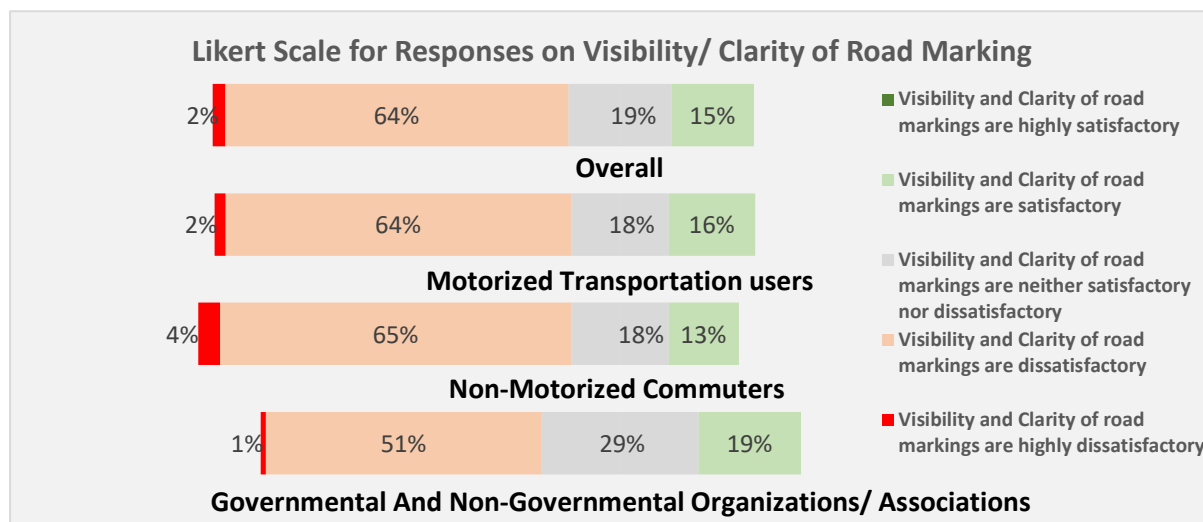


Figure 4.7: Visibility and clarity of road markings

4.2.1.3. Efficiency of Drainage System

Majority of road users have rated the drainage system of the existing road to be inefficient or worse. 77% of the respondents have rated the drainage system to be inefficient while 8% rate them to be highly inefficient. 6% of the overall respondents say that the drainage system is efficient and 9% of them rate the drainage system as neither efficient nor inefficient. Motorized transportation users have shown higher level of dissatisfaction with the drainage system of the section. None of the road user have rated the drainage systems to be highly efficient.

The satisfaction score on efficiency of drainage system of the road section is 2.13 or 43%.

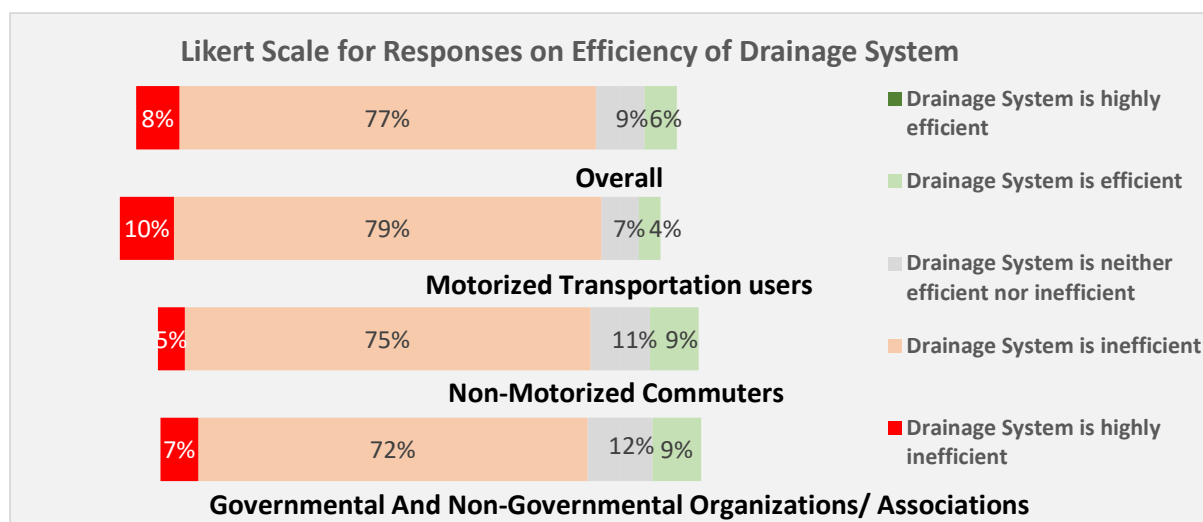


Figure 4.8: Efficiency of road drainage system

4.2.1.4. Adequacy of Road Width

This characteristic of the existing road also got very low rating by the road users. 85% of the road users say road width is inadequate, 3% say road width is highly inadequate, 7% say the width is adequate while rest are neutral. None of the respondents in any user group said the road width to be highly adequate. Higher portion of governmental and non-governmental organization/ association road users rated the width of road section to be inadequate.

The satisfaction score on adequacy of road width of the section is 2.15 or 43%.

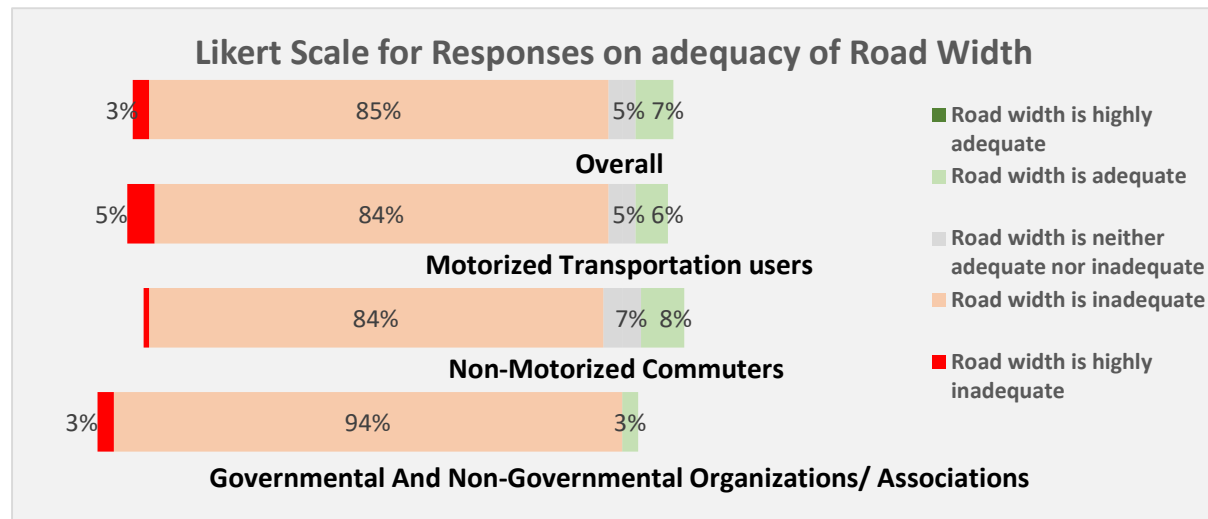


Figure 4.9: Adequacy of Road Width

4.2.1.5. Existing Condition of Road Surface

The road users demonstrated high level of dissatisfaction when asked about the existing condition of the road in the section. Only 2% of the overall respondents rated the condition of road surface to be satisfactory. 88% of the overall sampled population rated the road surface to be dissatisfactory, 1% rated the road surface to be highly dissatisfactory while 9% remained neutral. None of the respondents from any user group rated the condition of road surface to be highly satisfactory.

The satisfaction score on existing condition of road surface of the section is 2.12 or 42%. This is the lowest rating within the five sub-attributes of Road Condition.

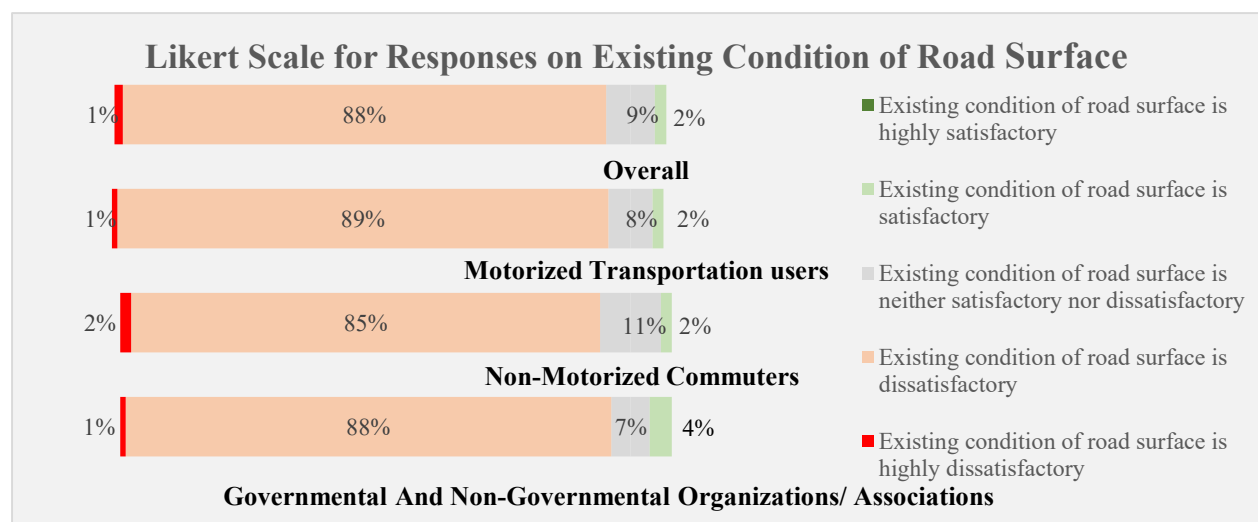


Figure 4.10: Existing condition of road surface

4.2.1.6. Satisfaction on Road Condition

The satisfaction rating for the road condition of the section has been assessed on basis of road user response on the pothole frequency, visibility/clarity of road markings, efficiency of drainage system, adequacy of road width and existing condition of road surface. The overall satisfaction rating for the road condition of the section stands at 2.21 (Likert Scale rating) or 44% (percentile).

Non-motorized commuters and governmental and non-governmental organization/ association have demonstrated slightly higher level of satisfaction with the road condition at 2.27 (45%) compared to 2.17 (43%) satisfaction ratings given by Motorized transportation users.

The respondents of the questionnaire have stated the existing condition of road surface to be the most dissatisfactory attribute with overall user rating of 2.12 or 42%. This is the lowest rated road characteristic by the non-motorized commuters as well with satisfaction rating of 2.15 or 43%. Motorized transportation users have rated the efficiency of drainage system as the least satisfactory sub-attribute with satisfaction rating of 2.06 or 41% while governmental and non-governmental organization/ association have rated adequacy of road width lowest at 2.03 or 41%.

Visibility/clarity of road markings is the highest rated feature by overall users with overall satisfaction rating of 2.47 or 49%. Motorized, non-motorized and governmental and non-governmental organization/ association road users have given highest satisfaction ratings to visibility/ clarity of road markings with score of 2.48 (50%), 2.41 (48%), and 2.65 (53%) respectively.

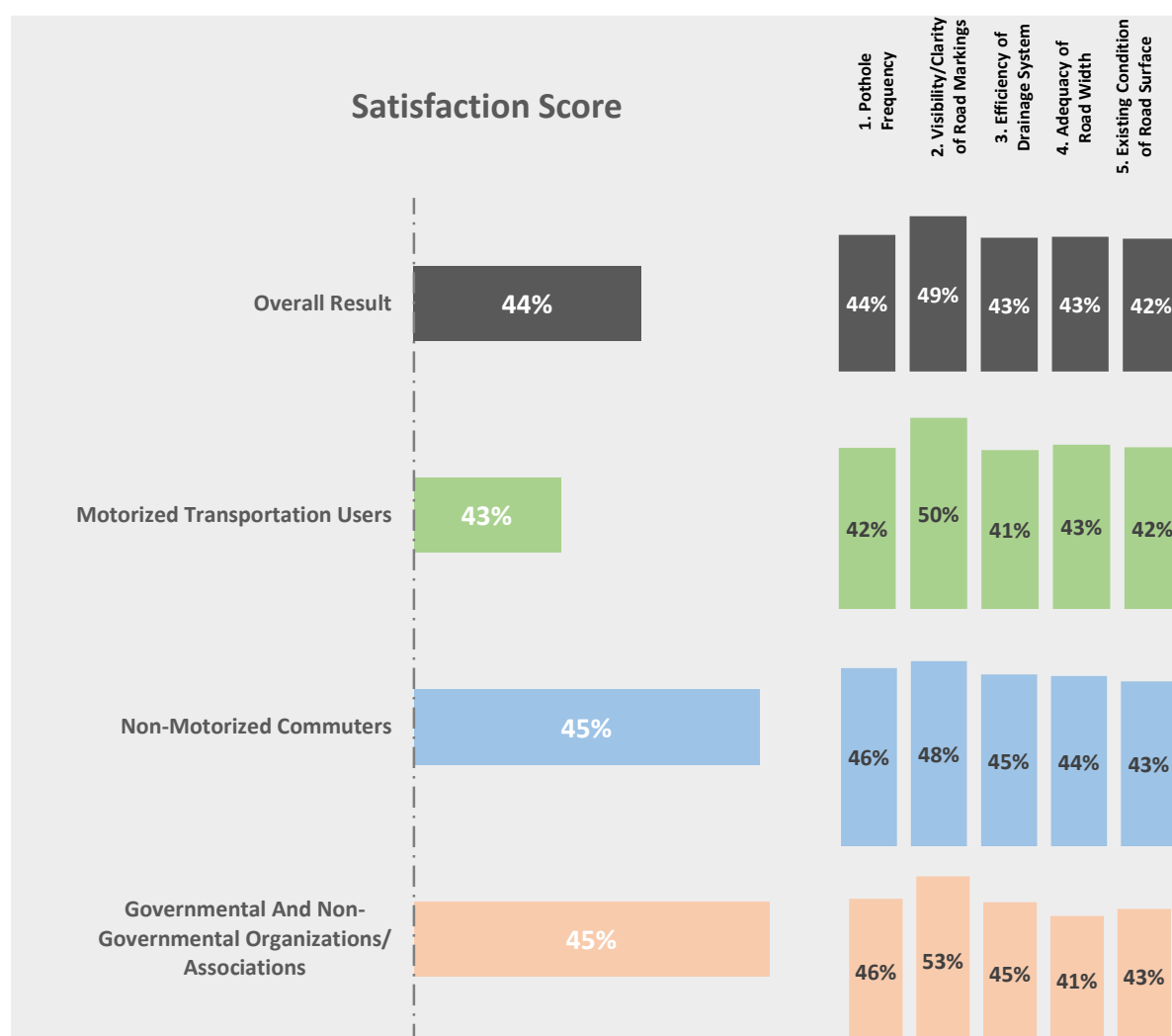


Figure 4.11: Satisfaction on Road Condition

4.2.1.7. Road Quality During Adverse Weather Condition

When asked about the road quality during adverse weather condition, a large portion of the respondents, i.e., 48% of overall users testified that they have observed significant degradation of road during adverse weather condition. Higher portion of the governmental and non-governmental organization/ association road users i.e., 73% of them testified on observing significant damage whereas 64% of the non-motorized road users contradicted with this and said that they have not observed significant damage of the road during adverse weather condition.

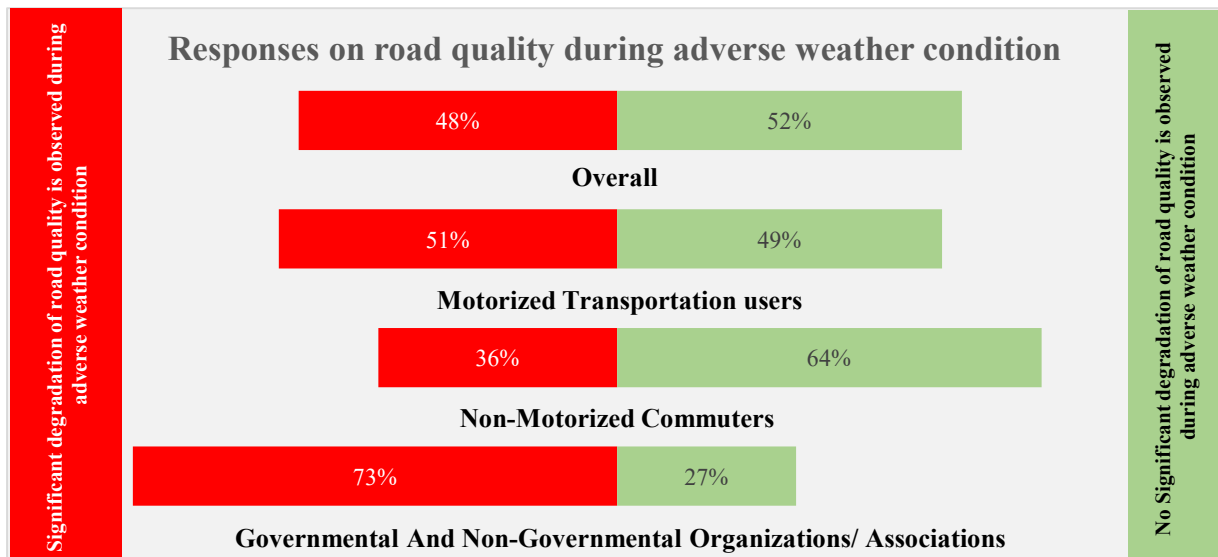


Figure 4.12: Quality of road during adverse weather condition

These are the top locations that undergoes significant degradation during adverse weather condition according to the road users:

1. *Ranibagiya*
2. *Pipara*
3. *Murgiya*
4. *Kalauni*
5. *Saljhandi*
6. *Sarauli*
7. *Imiliya*
8. *Charnumber*
9. *Sorauli*
10. *Sainamaina*
11. *ChorKhola*
12. *Ramapur*
13. *Basgadhi*
14. *DhanKhola*
15. *Kukarbalhi*

4.2.2. Traffic and Safety

4.2.2.1. Congestion on road

When asked about the status of road congestion in the road section, most of the respondents stated that the road had congestion problems. 66% of the surveyed population affirmed the road section to be congested while 17% of them testified to the road section being highly congested. 15% of the overall population were neutral about the congestion whereas only 2% said the road to be free from congestion. Less than 1% of road user testified to the road section being absolutely free of congestion. Higher portion of the governmental and non-governmental organization/ association road users said the road was congested and none of them stated the road to be congestion free.

The satisfaction score on congestion of the road section is 2.02 or 40%. This is the lowest rating within the four sub-attributes of Traffic and Safety.

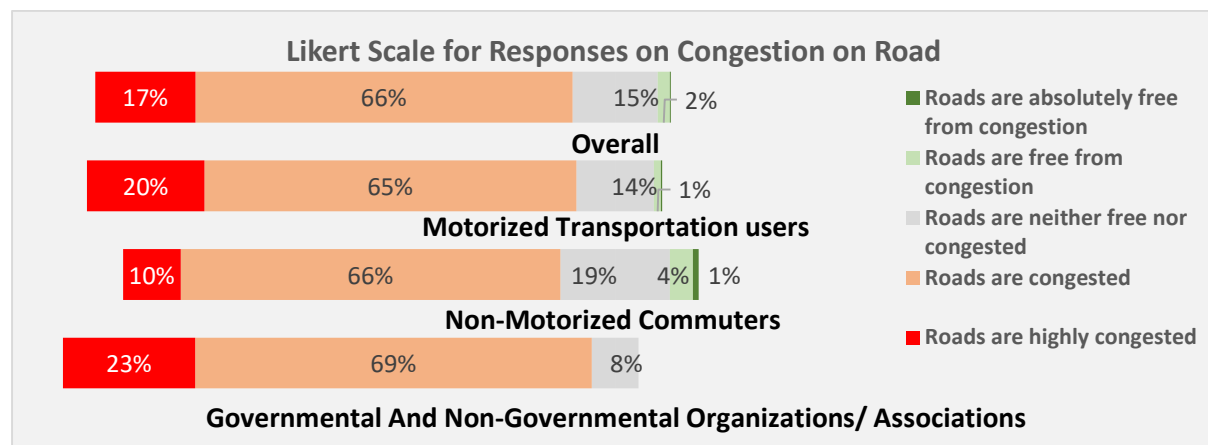


Figure 4.13: Congestion on road

4.2.2.2. Installation of Guard Rails

The road users have shown strong dissatisfaction with the installation of guard rails on sharp bends and steep slopes of the road section. 80% of the total population demonstrated their dissatisfaction with the guard rail installation status with 2% of them stating high level of dissatisfaction. Only 6% of the overall surveyed population expressed satisfaction with the guard rail installation status and 12% gave neutral rating. None of the respondents stated this sub-attribute to be highly satisfactory. 14% of the governmental and non-governmental organization/ association road users have rated the sub-attribute to be satisfactory which is the highest rating among the user group.

The satisfaction score on installation of guard rails in the road section is 2.22 or 44%. This is the highest rated sub-attribute within the four rating criteria of Traffic and Safety.

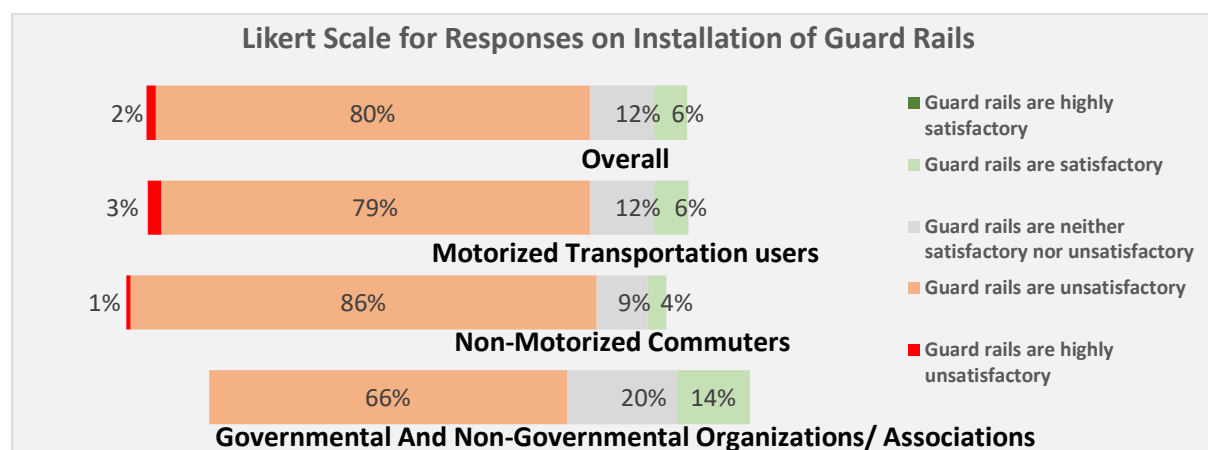


Figure 4.14: Guard Rail Status

4.2.2.3. Accessibility of Pedestrian Crossing on the Road

The road users have poorly rated the accessibility of pedestrian crossings as well. 10% of the total surveyed population state that the crossings are highly inaccessible while 81% of the total population rate the crossings to be inaccessible. While 5% of the road users stayed neutral, 4% of them have rated the crossings as accessible. None of the users have rated the crossings to be highly accessible.

The satisfaction score on accessibility of pedestrian crossing in the road section is 2.03 or 41%.

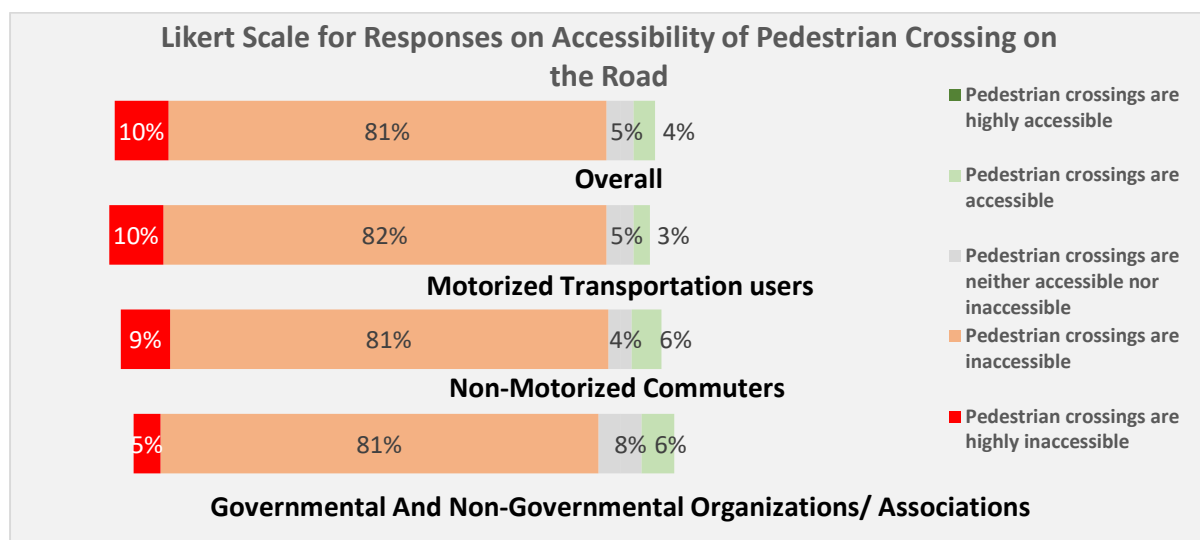


Figure 4.15: Accessibility of Pedestrian Crossing

4.2.2.4. Feeling of Safety While Travelling on Roads

The road users have reported on low level of safety while travelling on this section of road. 71% of the surveyed population stated they felt unsafe and 8% of the respondents said they felt very unsafe while travelling through this road section. While 15% stated they neither felt safe neither felt unsafe, 6% said they felt they were safe while travelling in this road section. None of the road users from any group have claimed they felt very safe while travelling here. Comparatively larger portion of motorized transportation users claim they feel unsafe in this road section.

The satisfaction score on feeling of safety while travelling in this road section is 2.18 or 42%.

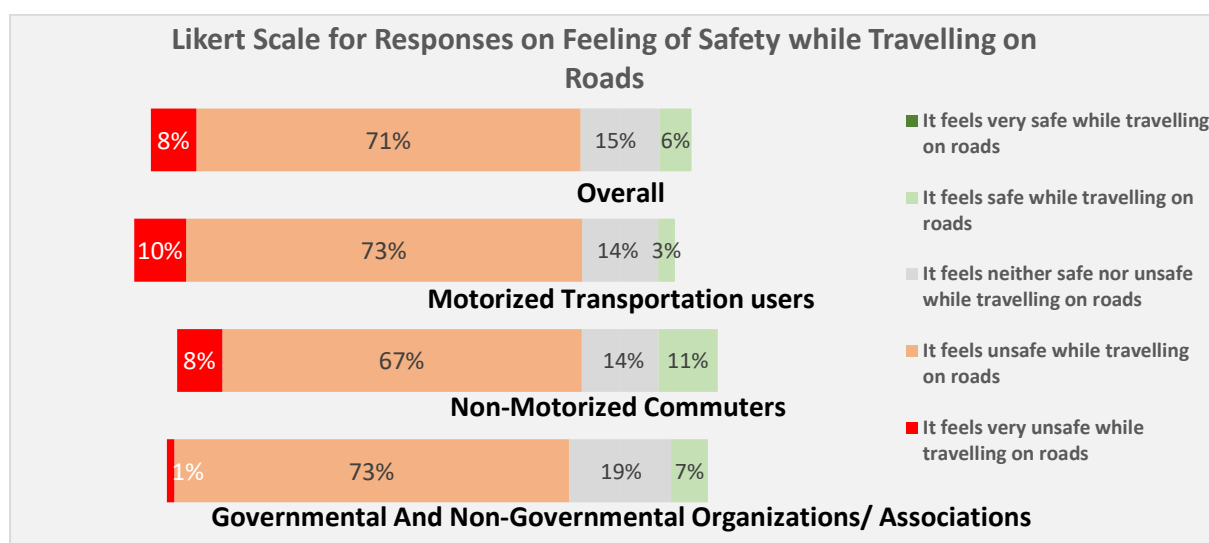


Figure 4.16: Feeling of Safety While Travelling on Roads

4.2.2.5. Satisfaction on Traffic and Safety

The overall satisfaction for Traffic and Safety condition of the road section has been assessed on the basis of four criteria which are congestion on the road, installation status of guard rails on sharp bends and steep slope of the road, accessibility of pedestrian crossing and feeling of safety while travelling. Based on these criteria, the overall satisfaction rating for traffic and safety of this road section stands at 2.11 (Likert Scale Rating) or 42% (percentile). This is the lowest rated attribute among the seven road attributes.

The motorized commuters have shown lower satisfaction rating than average with 2.07 or 41% satisfaction score. On the other hand, Governmental and Non-governmental Organization/ Associations have given higher than average satisfaction rating of 2.19 or 44% for traffic and safety condition of the road section.

The congestion on this road section is the worst rated criteria with overall satisfaction score of 2.02 or 40%. Installation of guard rails on sharp bends and steep slopes is the highest rated sub-attribute with satisfaction score of 2.22 or 44%.

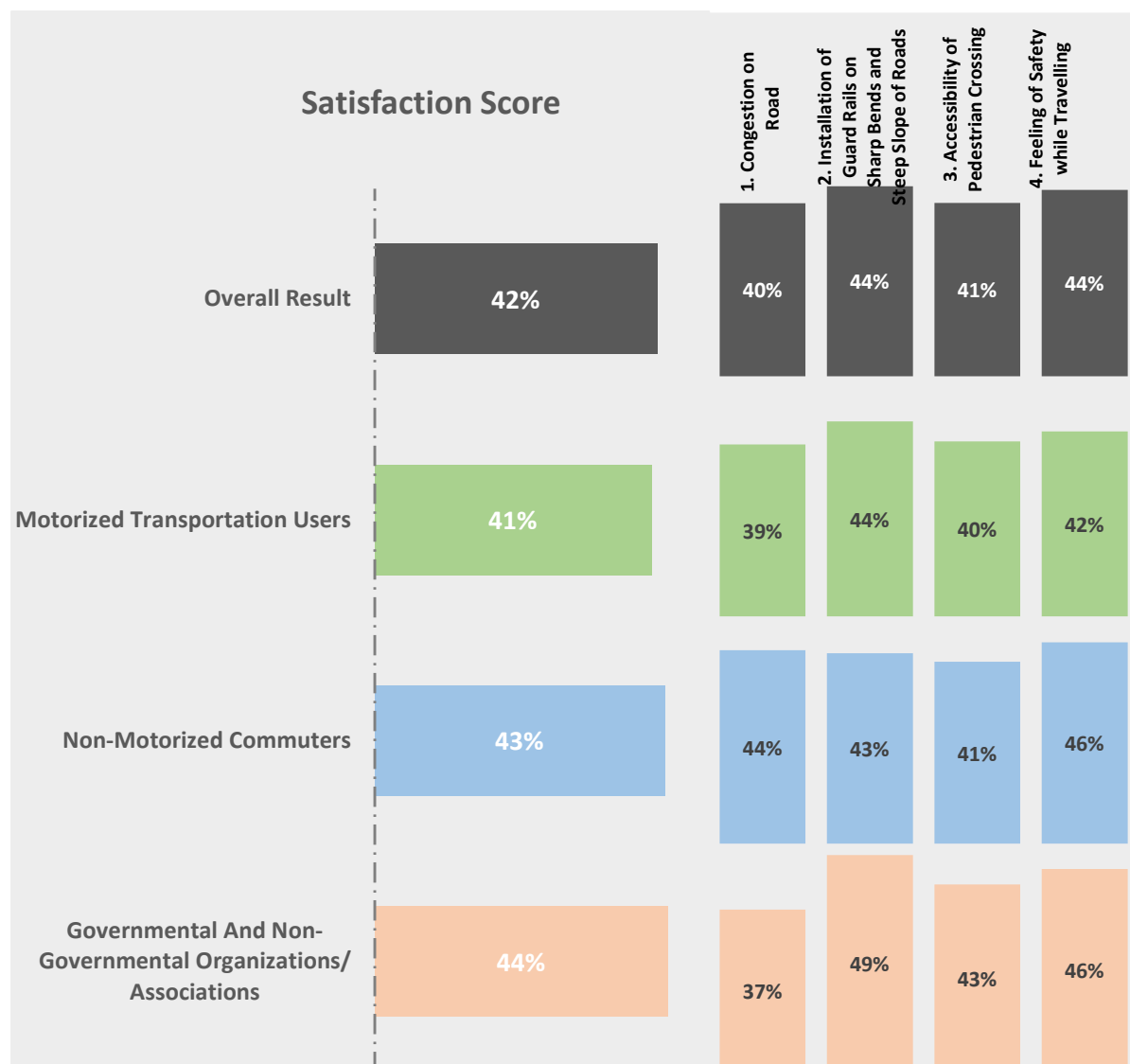


Figure 4.17: Satisfaction on Traffic and Safety

4.2.2.6. Road Signs, Police Posts and Patrolling

When asked about the **adequacy of road signs for safety of road users**, 84% of the overall road users interviewed said that the road signs were inadequate.

All three road user groups shared similar view on the adequacy road signs with 84% of motorized transportation users, 85% of non-motorized commuters and 80% of governmental and non-governmental organization/ association road users affirming inadequacy of road signs in the road section.

The road users demonstrated rather positive results when asked about the **availability of appropriate signs explaining the work-in progress** at sites of improvement and maintenance works. 86% of the surveyed road users stated that they found appropriate signs at these spots.

87% of motorized transportation users, 84% of non-motorized commuters and 89% of the governmental and non-governmental organization/ association agreed on adequacy of the road signs at the work-in-progress sites.

The road users were also asked about **availability and accessibility of police posts and patrolling vehicle** and 85% of the respondents confirmed to these being available and accessible.

86% of motorized transportation users, 79% of non-motorized commuters and 93% of governmental and non-governmental organization/ association affirmed to the availability and accessibility of police posts and patrolling vehicle in the road section.

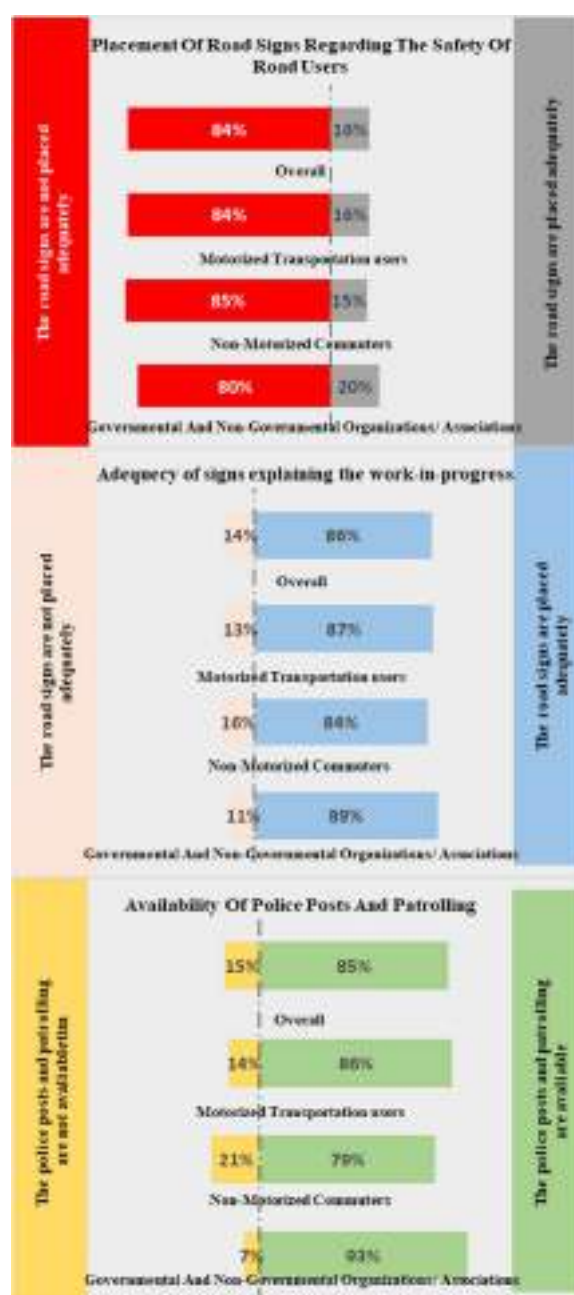


Figure 4.18: Road Signs, Police Posts and Patrolling

4.2.2.7. Locations Being Road Signs Most Effective

When asked about the most effective locations for placement of road signs, most of the respondents choose school and hospital periphery to be the most important places with 93% and 89% of them choosing the options respectively. This was followed by 77% of respondents picking high accident areas, 68% choosing pedestrian crossings and 68% specifying narrow road. Speed breakers, landslide and hazardous area and sharp bends were suggested as effective locations for road signs by 18%, 15% and 31% of the respondents respectively. Very low number of responses were received for any alternative areas.

The opinion of the motorized and non-motorized commuters does not vary significantly with overall average response when comparing the percentage response. On contrary, government and non-governmental organization/ association have given considerably higher priority for installation of road signages at narrow roads, sharp bends, pedestrian crossings, and high accident areas, while giving relatively lower priority to speed breakers and landslide/ hazardous area.

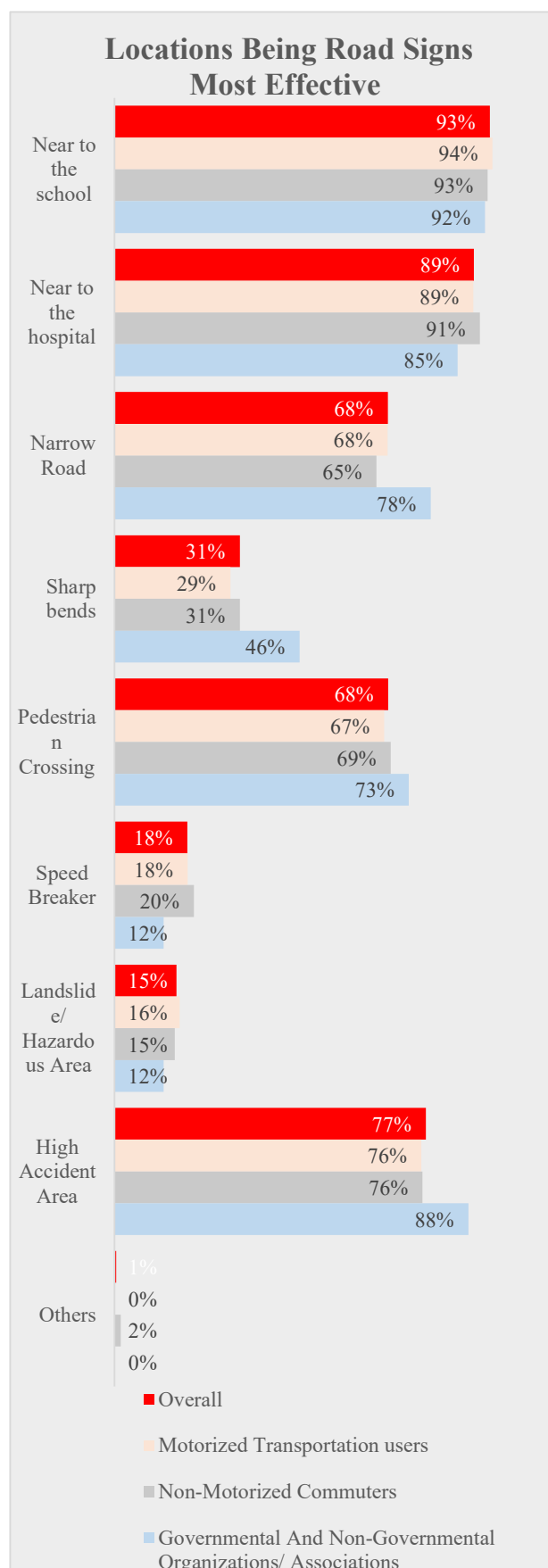


Figure 4.19: Locations for Most Effective Road Signs

4.2.2.8. Factors contributing to unsafe conditions on road

The road users have mainly held vehicle drivers' behavior for unsafe condition of roads. Over-speeding is rated as the most responsible cause for unsafe road condition with 92% of the road user rating over speeding to be most unsafe and 8% rating over speeding to be more unsafe factor. This is followed by other motorist behavior like aggressive driving, unusual overtaking, careless driving and narrow roads. Bad condition of road, lack of awareness of traffic rules, and heavy goods carrying vehicles are also rated to be considerably responsible for the unsafe condition on roads.

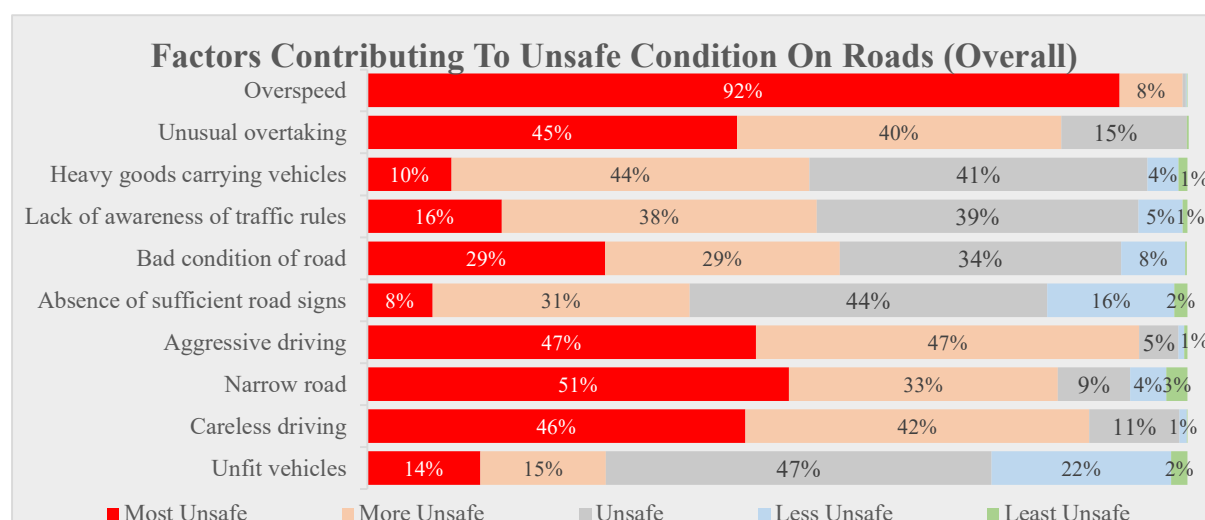


Figure 4.20: Factors contributing to unsafe conditions on road

The rating of road users for factors contributing to unsafe conditions of road is further analyzed based on gender.

Over-speeding is rated as the most responsible cause for unsafe road condition by the Male Road Users followed by Narrow Road, Aggressive Driving, Careless Driving, Unusual Overtaking, Bad Condition of Road, Lack of awareness of Road, Unfit Vehicles, Heavy goods carrying vehicles and Absence of sufficient road signs.

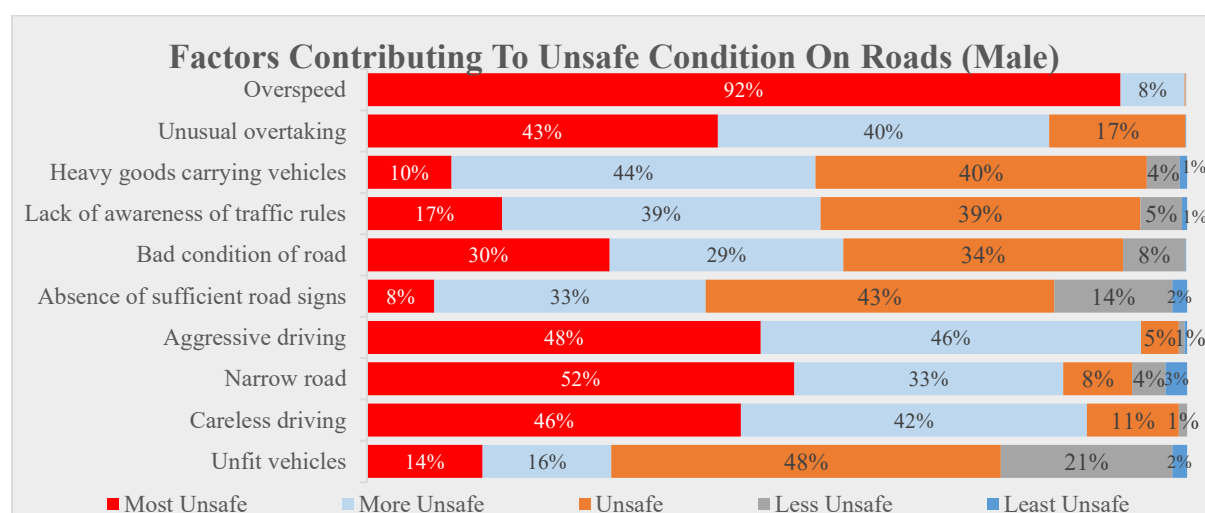


Figure 4.21: Factors contributing to unsafe conditions on road based on responses by Male Road Users

Similarly, Over-speeding is rated as the most responsible cause for unsafe road condition by the Female Road Users as well, followed by Careless Driving, Unusual Overtaking, Narrow Road, Aggressive Driving, Bad Condition of Road, Lack of awareness of Road, Unfit Vehicles, Heavy goods carrying vehicles and Absence of sufficient road signs.

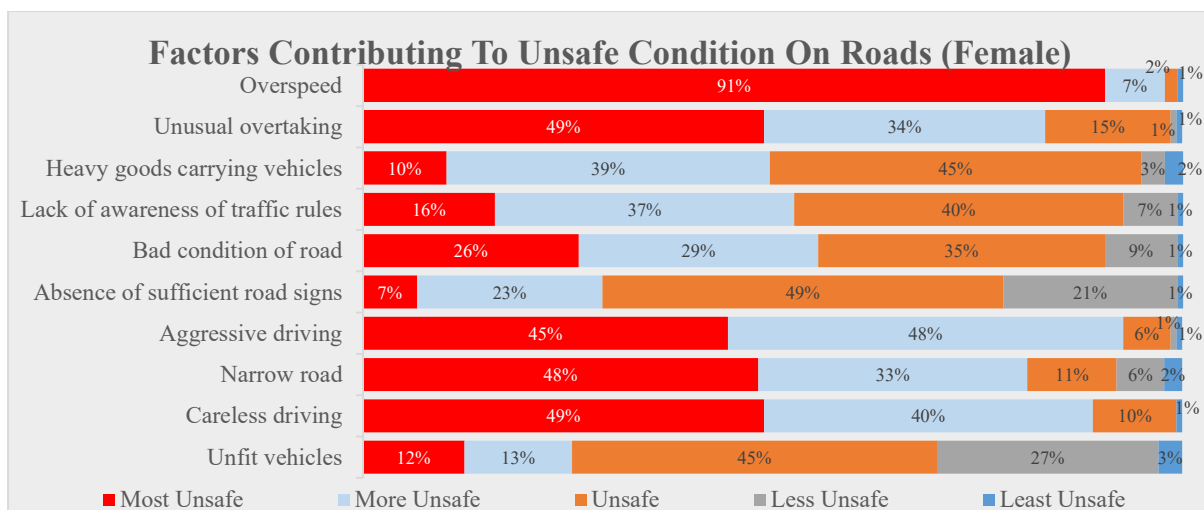


Figure 4.22: Factors contributing to unsafe conditions on road based on responses by Female Road Users

4.2.2.9. Factors Contributing to Accidents

Road user have attributed the road accidents mostly on the vehicle drivers' behavior. High speed is the highest rated cause of road accidents followed by use of alcohol while driving. 97% of the users consider high speed to be most unsafe factor leading to road accidents. 85% of the surveyed population rate use of alcohol unsafe out of which 47% consider it highly unsafe while driving. The road users have rated absence of street lights as one of the major factors causing road accidents as well which is followed by other factors like wild/ domestic animal crossing and bad condition of the road section.

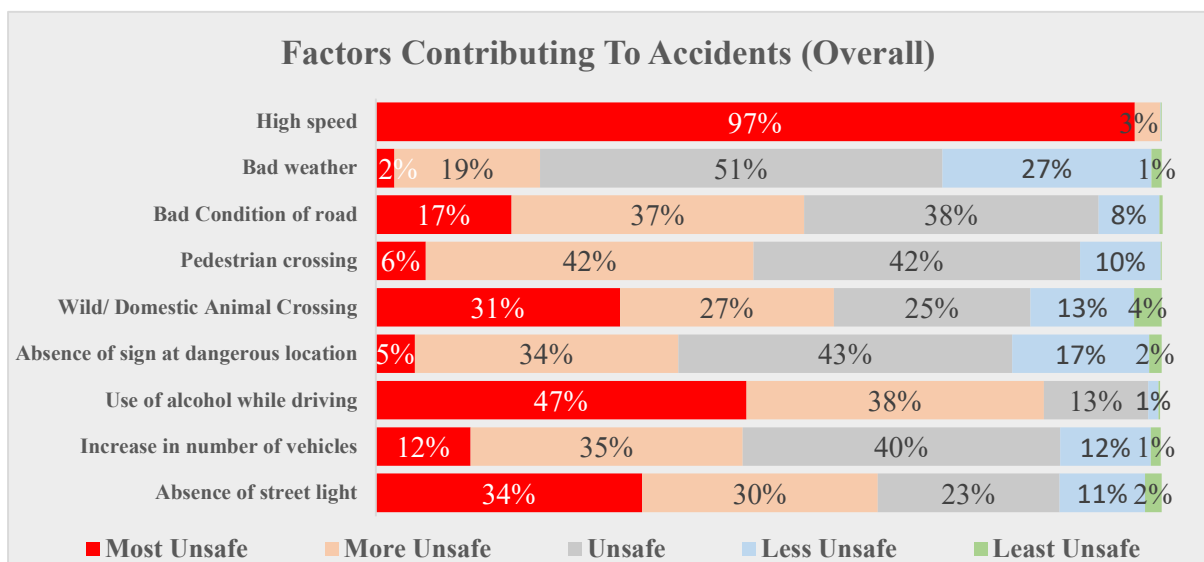


Figure 4.23: Factors Contributing to Accidents

4.2.2.10. What Road Users have to say on Traffic and Safety of the road section

How Safety can be enhanced

“The road needs to be widened with provisions of service lanes and overhead bridges for road crossings.” Narayan Raymajhi (Motorized User)

“Awareness needs to be raised for everyone regarding traffic rules. Also, drainage of proper size is needed. Timely maintenance of the potholes needs to be done” Amar Bahadur Khadel, Ward Chairman, Sainamaina Ward no. 2 (Gov/Non-Gov Org.)

“Street lights, Zebra crossings, Facility of Traffic Lights needs to be provided at necessary locations” Binita Gyawali (Non-motorized User)

“Traffic lights needs to be installed at required location. Proper provisions for U-Turns, road signages and guard-rail construction needs to be managed” Bhuwan Pandey (Motorized User)

Organizational Role to enhance Road Safety

“Our organization can assist in enhancing road safety by providing awareness programs on traffic safety” Diwakar Subedi, District Project Officer, Nepal Red Cross Society (Gov/Non-Gov Org.)

“Our organization can help by managing the street dogs and domestic animals which may pose danger to the road traffic” Dr. Madhav Poudel, Veterinary Officer, Livestock Development Office-Sainamaina-4 (Gov/Non-Gov Org.)

“Between Years 2075 and 2078, Sainamaina Municipality has removed the temporary illegal structures built around the road vicinity. The old passenger sheds along the road corridor were also demolished” Arun Khanal, Engineer, Sainamaina Municipality (Gov/Non-Gov Org.)

4.2.3. Infrastructures and Facilities

4.2.3.1. Facilities along the road

1. Public toilets/ Bathrooms

Only 11% of the overall surveyed group have said that they found public toilets and bathrooms along the road. 46% of the respondents who said these services are available along the road, have expressed satisfaction with the service, 1% of them rate the service as highly satisfactory, 18% rate the service as dissatisfactory while 8% rate the service highly dissatisfactory. 26% of the were neutral about the quality of these services.

The satisfaction rating on the public toilets/ bathrooms of the road section is 3.14 or 63%.

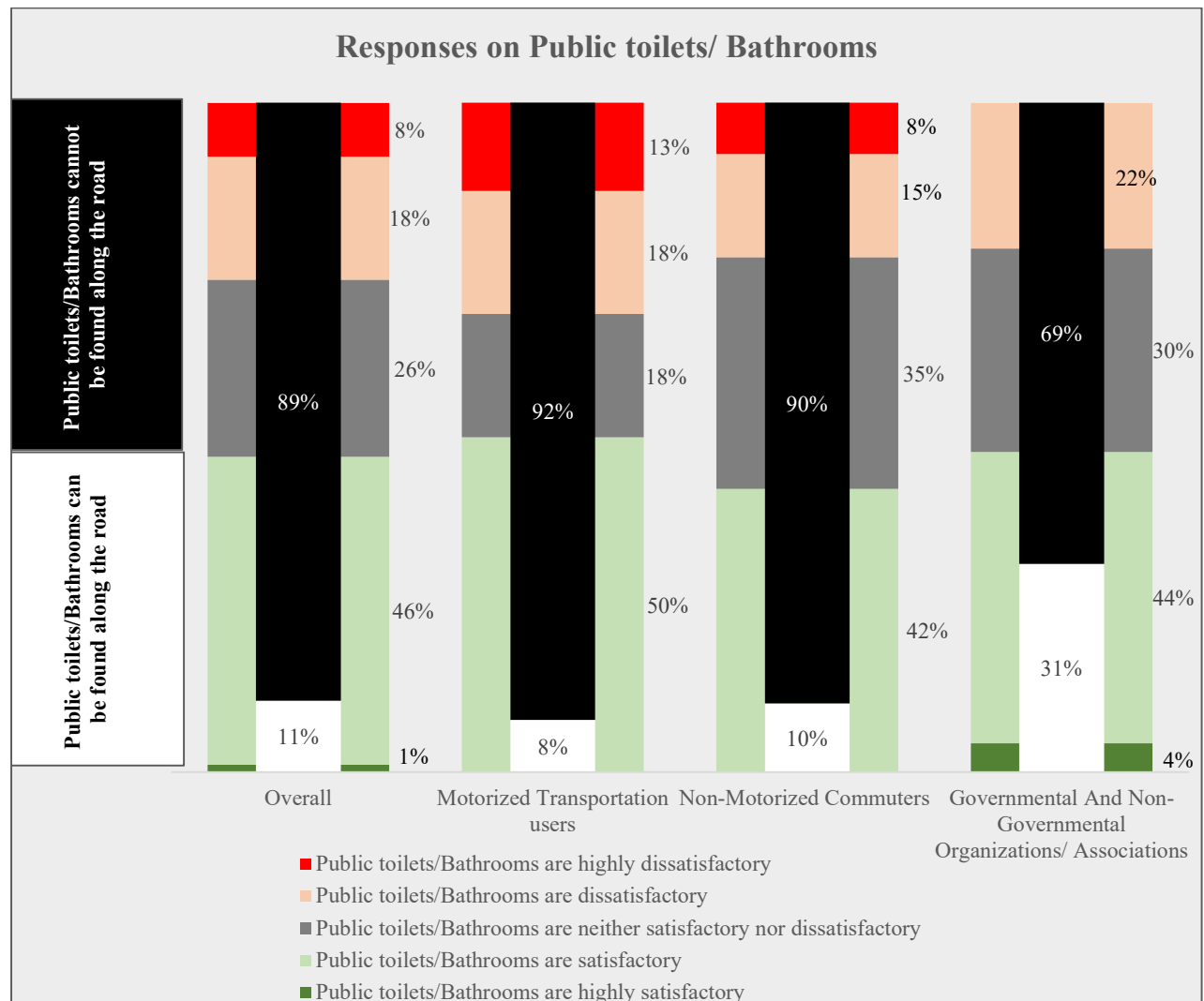


Figure 4.24: Availability of Public toilets/ Bathrooms

2. Restaurants/ Shops for Food and Drinks

96% of the road commuters have confirmed the availability of restaurants/ shops for food and drinks around the vicinity of road section. Majority of the road users have expressed satisfaction with this service with only 3% of the overall users giving negative rating to the restaurants and shops services in the road section

The satisfaction rating on the restaurants and shops for food and drinks in the road section is 3.89 or 78%. This is the highest rated sub-attribute out of the 8 rating criteria of the Infrastructure and Facilities.

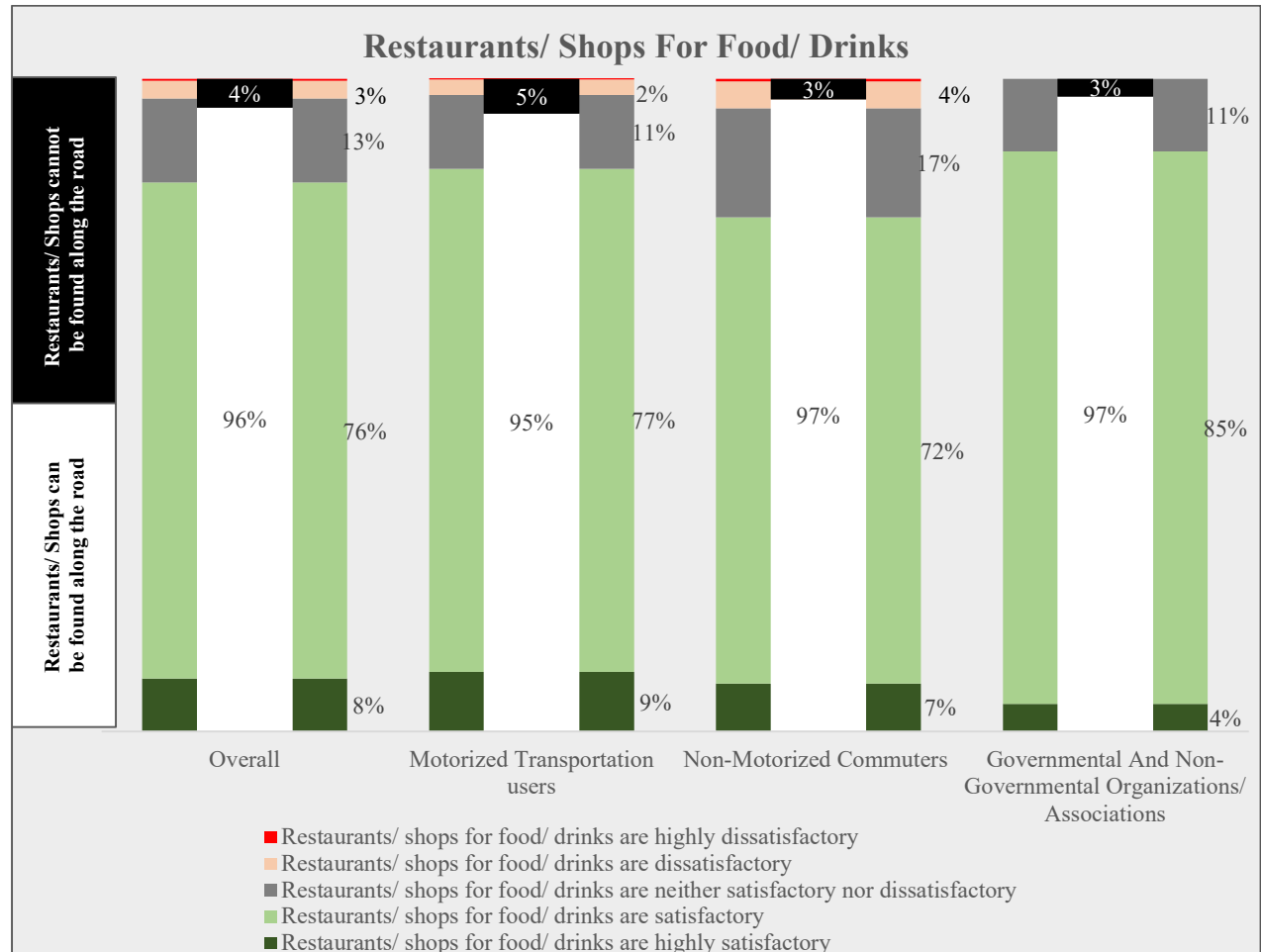


Figure 4.25: Availability of Restaurants/ Shops for Food and Drinks

3. Public Taps/ Drinking Water

Only 10% of the overall surveyed population have claimed that the public taps/ drinking water is available along the road section. 1% of the respondents who found public taps/ drinking water in the road section rated the service to be highly satisfactory while 36% of them rated the service as satisfactory, 28% rated the service dissatisfactory and 8% rated the service as highly dissatisfactory. 27% of them found the public taps and drinking water service as neither satisfactory nor dissatisfactory. Comparatively, larger number of non-motorized transportation users have expressed dissatisfaction with the public taps/ drinking water while higher number of government and non-governmental organization/ association have given positive rating.

The satisfaction rating on the public taps/ drinking water service in the road section is 2.95 or 59%.

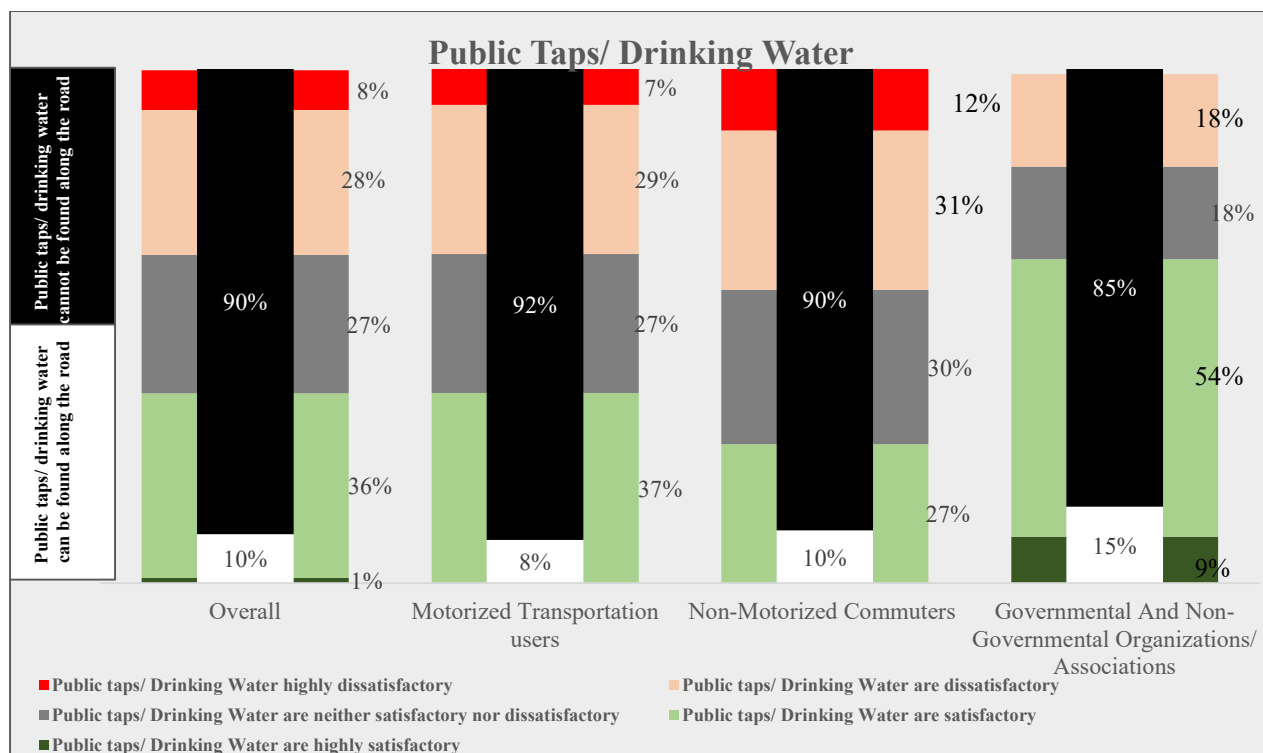


Figure 4.26: Availability of Public Taps/ Drinking Water

4. Medical Facilities

Most of the respondents have stated that medical facilities are available along the road section with 18% claiming its unavailability. 63% of the people who claimed availability of medical facilities have positively rated these services as satisfactory, 1% of them rated the facility to be highly satisfactory, 6% of them rated the facility to be dissatisfactory while 29% of them were neutral in their rating. Comparatively higher portion of government and non-governmental organization/ association have expressed satisfaction with the service. The satisfaction rating on the medical facilities in the road section is 3.57 or 71%.

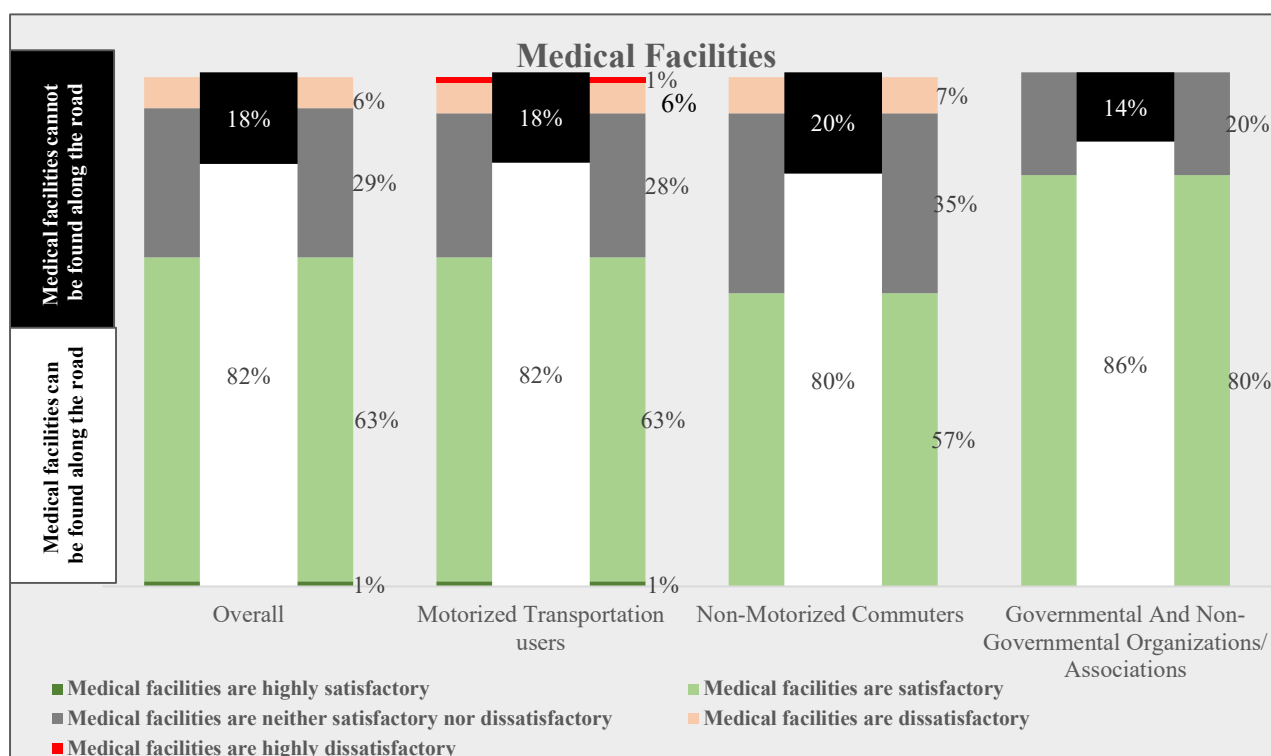


Figure 4.27: Availability of Medical Facilities

5. Rain Shelter-Cum- Bus Stop

32% of the surveyed population claimed the availability of rain shelters/ bus-stops whereas 68% claimed non-availability of these services. 38% of the people who claimed availability of these services rated the service to be satisfactory, 29% rated the service to be dissatisfactory while 5% claimed the rain shelter and bus stops to be highly dissatisfactory. 28% rated the service to be neither satisfactory nor dissatisfactory. Relatively higher portion of government and non-governmental organization/ association have expressed satisfaction with the service while higher portion of non-motorized commuters rated the facility negatively. The satisfaction rating on the rain shelter and bus stop in the road section is 3.0 or 60%.

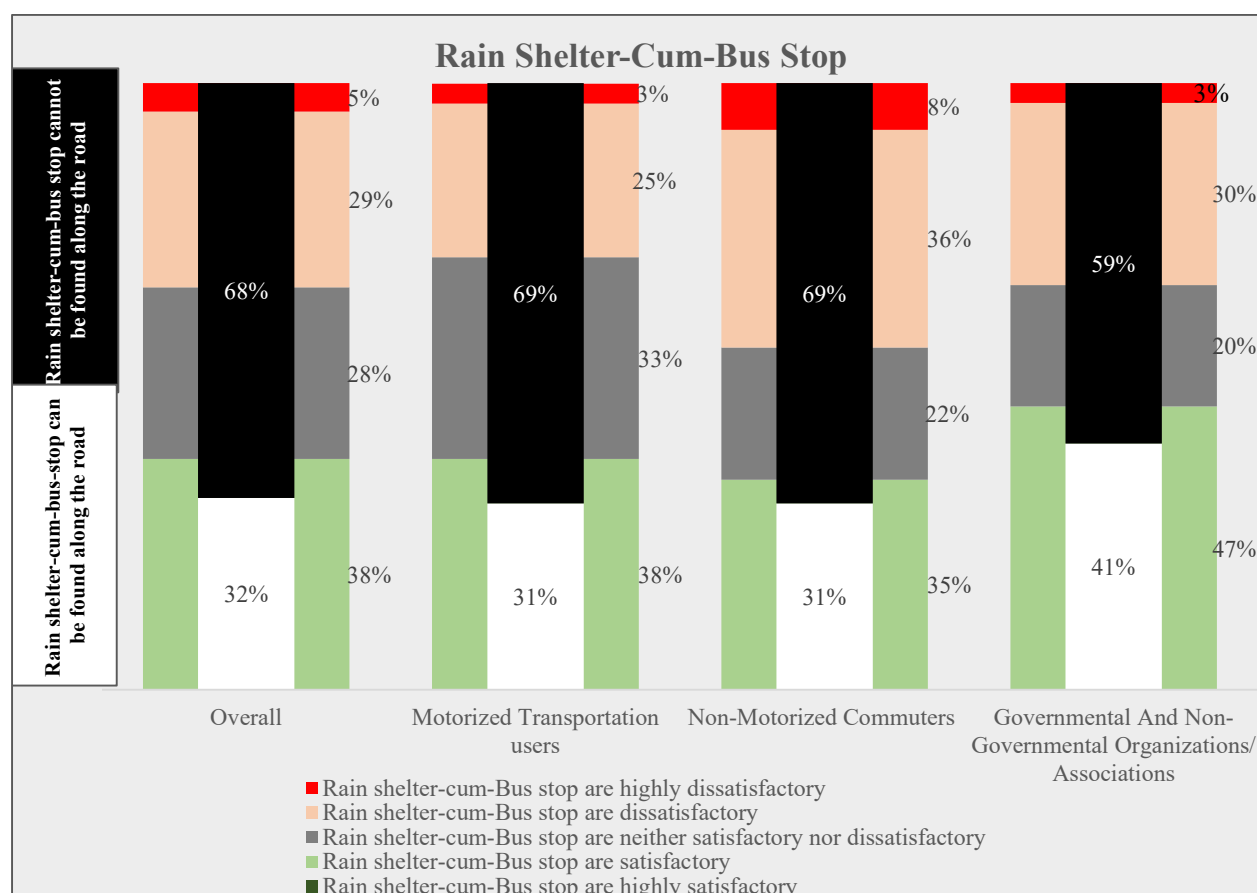


Figure 4.28: Availability of Rain Shelter-Cum- Bus Stop

4.2.3.2. Accessibility to Footpaths

The footpaths along the road sections are rated very poorly by the road users. None of the surveyed population claimed the footpaths to be highly accessible, 4% were neutral while 87% rated the footpaths to be inaccessible, and 6% stated that the footpaths were highly inaccessible. Only 3% of the commuters claimed the footpaths to be accessible.

The satisfaction rating on the accessibility to footpaths in the road section is 2.04 or 41%.

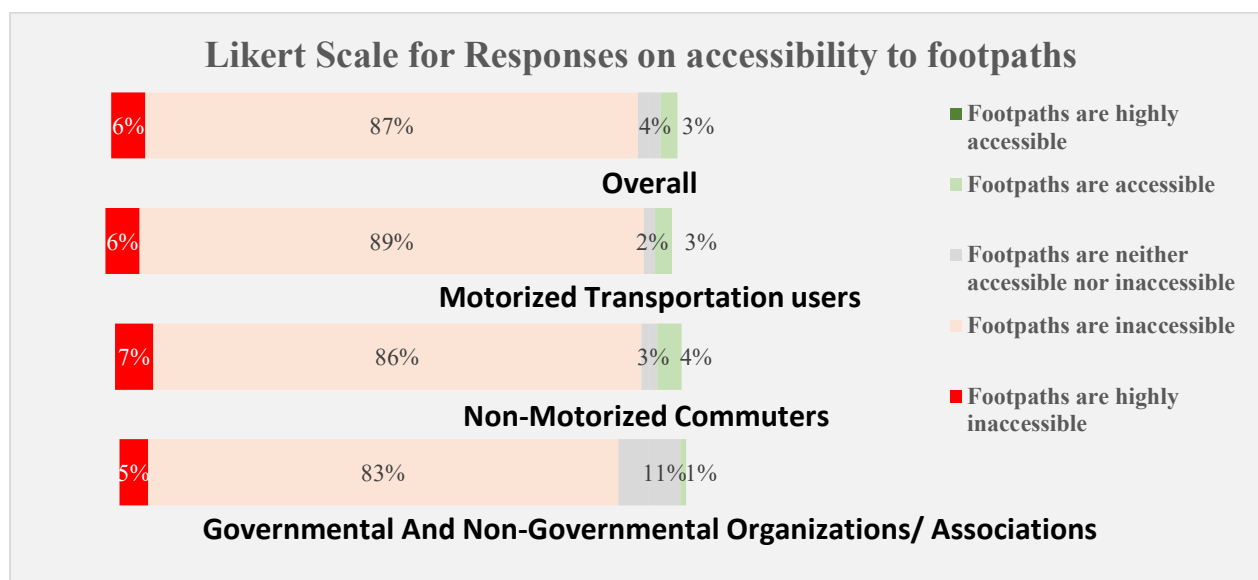


Figure 4.29: Accessibility to footpaths

4.2.3.3. Accessibility to Cycling Path and Lanes

The accessibility to cycling paths and lanes has been rated very poorly by the commuters. 3% of the surveyed population claimed the accessibility to cycling lanes to be highly dissatisfactory while 97% of the surveyed population rated it to be dissatisfactory. None of the surveyed interviewees expressed satisfaction or neutrality in this aspect.

The satisfaction rating on the accessibility to cycling path and lanes in the road section is 1.98 or 40%.

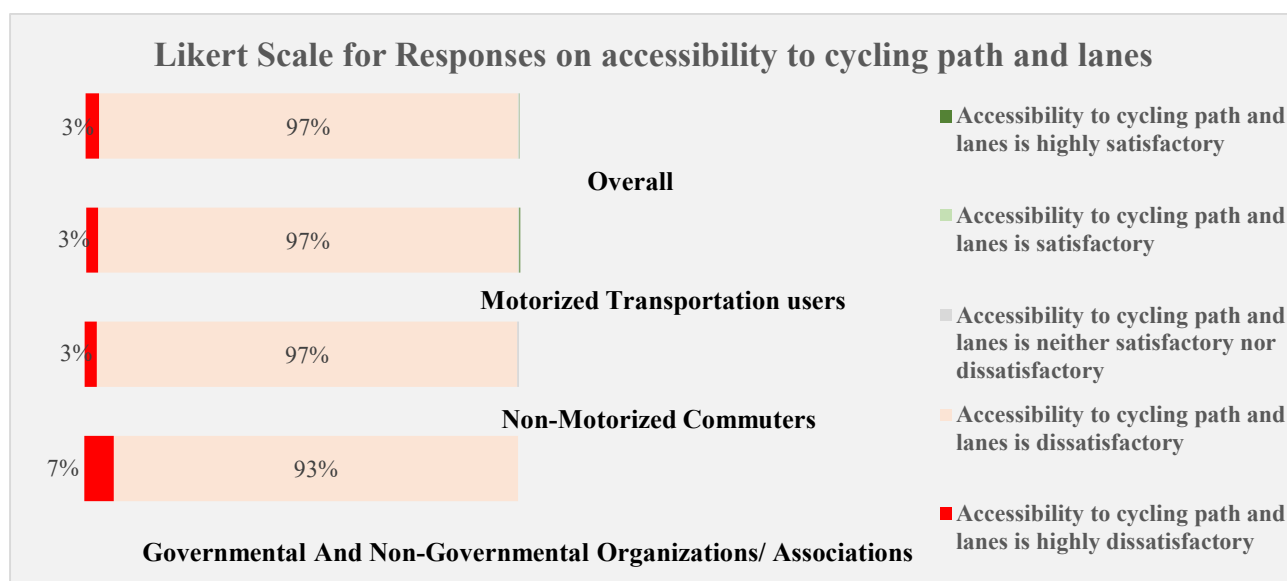


Figure 4.30: Accessibility of Cycling Path and Lanes

4.2.3.4. Quality and Coverage of Street Lights

Majority of the road users have expressed their dissatisfaction related to the quality and coverage of street lights as well. 60% of the respondents rate the quality and coverage of street lights to be dissatisfactory, 31% rate the road attribute highly dissatisfactory, 6% remained neutral while only 3% claimed the quality and coverage to be satisfactory. None of the respondents were highly satisfied with the quality and coverage of the street lights.

The satisfaction rating on the quality and coverage of street lights in the road section is 1.81 or 36%. This is the lowest rating among the 8 sub-attributes of the Infrastructure and Facilities.

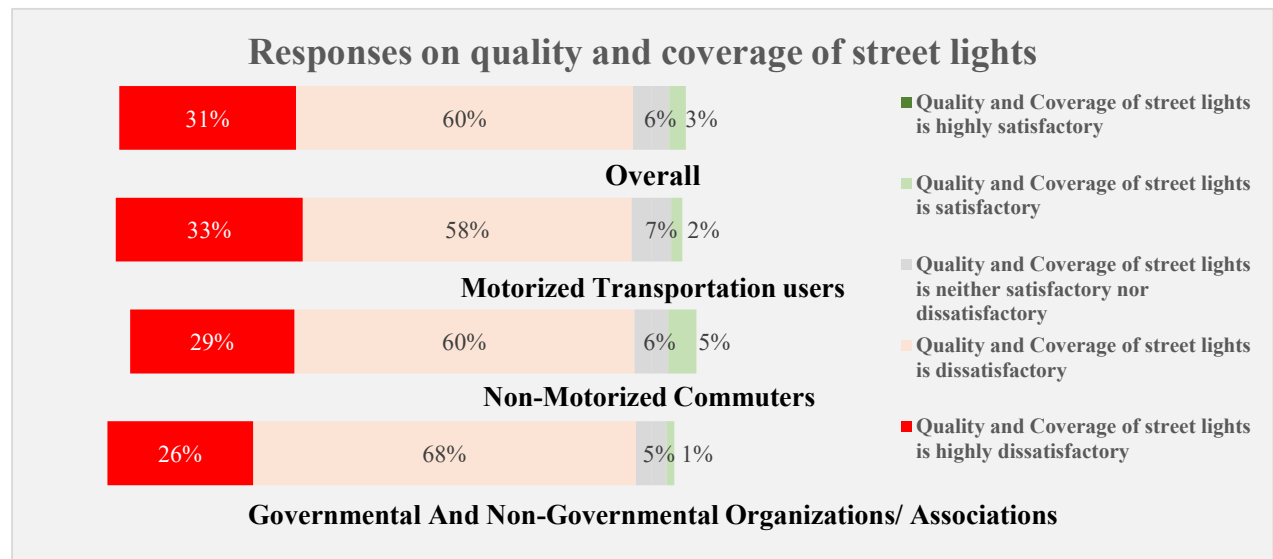


Figure 4.31: Quality and Coverage of Street Lights

4.2.3.5. Satisfaction on Infrastructure and Facilities

The infrastructures and facilities along the road corridor of the section has been evaluated based on the availability of road-side facilities like public toilets/ bathrooms, restaurants/ shops for food/ drink, public taps/ drinking water, medical facilities and rain shelter/ bus-stop, along with the accessibility to footpaths, cycling path and lanes and quality and coverage of street lights. The overall average satisfaction score stands at 2.65 (Likert Scale Rating) or 53% (percentile)

Governmental and non-governmental organization/ association have expressed higher level of satisfaction with the attribute with satisfaction rating of 2.76 or 55%. On contrary, non-motorized commuters have rated this attribute the least with satisfaction rating of 2.65 or 52%.

Quality and coverage of street lightings is the worst rated sub-attribute of road with 1.81 (36%) satisfaction score from overall surveyed population. Accessibility to footpaths and accessibility to cycling paths and lanes are also poorly rated by the respondents with 2.04 (41%) and 1.98 (40%) satisfaction rating respectively. Availability of restaurants/shops for food and drinks is the highest rated sub-attribute with satisfaction rating of 3.89 or 78% followed by medical facilities with rating of 3.57 or 71%.

Note: The satisfaction percentage shown for the availability of road-side facilities like public toilets/ bathrooms, restaurants/ shops for food/ drink, public taps/ drinking water, medical facilities and rain shelter/ bus-stop is representative for the total numbers of respondents who have said that these facilities are available at the road corridor. Also, the average overall satisfaction has been calculated assigning weightage to these sub-attributes based on the sample size (number of respondents).

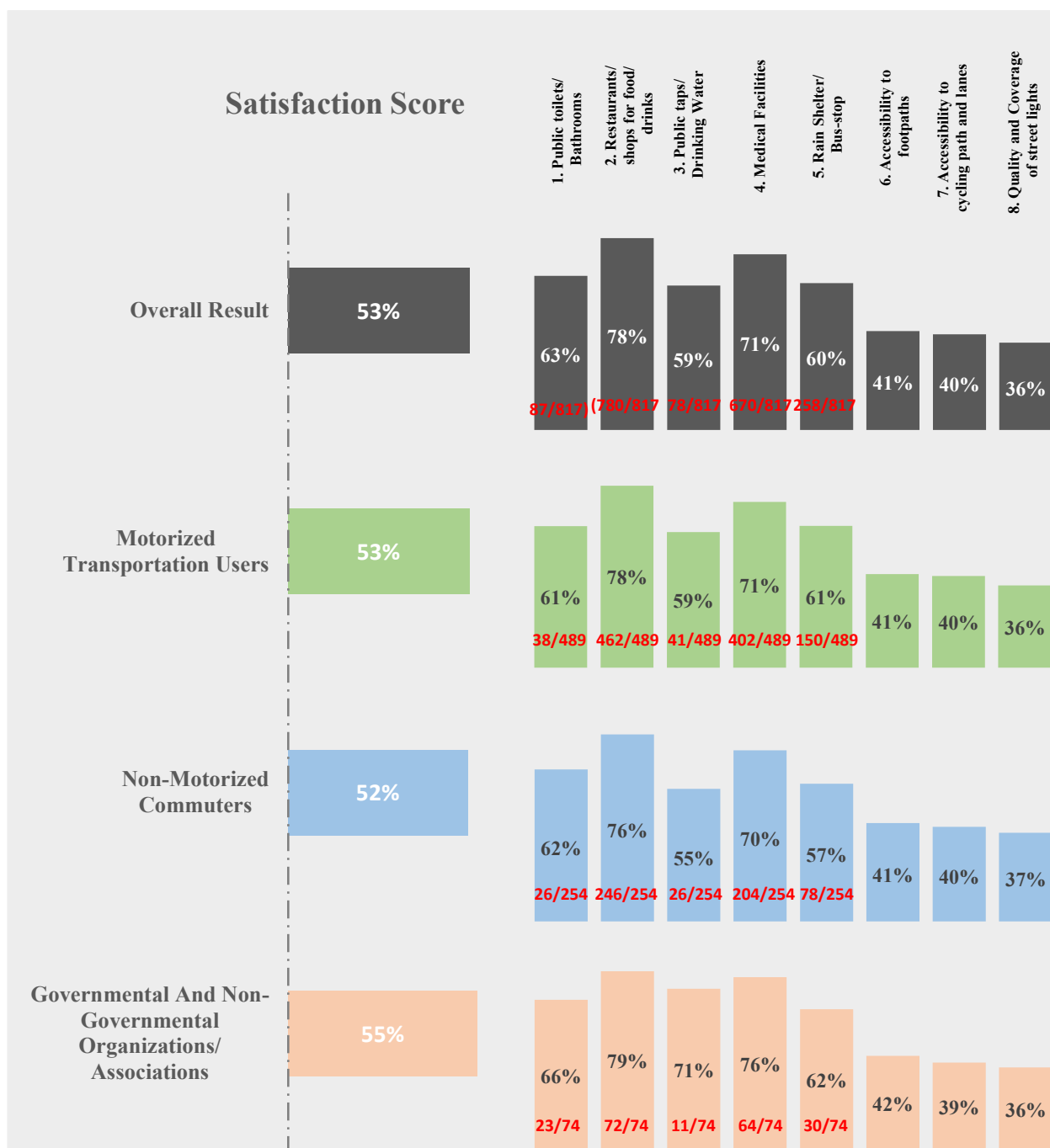


Figure 4.32: Satisfaction on Infrastructures and Facilities

4.2.3.6. Requirement of Lightings

When asked about the requirement of lightings, majority of the road users in each group have affirmed the requirement of street lightings at locations along the road. 89% of the overall surveyed users state that there are locations where street lightings are required. Relatively higher portion of government and non-governmental organization/ association personnel attested to requirement of lightings in the road section. On contrary, 13% of the non-motorized commuters state that there are no locations along the road section where lightings need to be installed which is the highest portion saying so among the road user groups.

The road users have pointed requirement of street lights in all the major settlements along the road alignment like Butwal, Ranibagiya, Sainamaina, Belbas, Murgiya, Salijhandi, Basgadi etc., with many even suggesting need street lights all over the highway or at least at every settlement area and junctions along the road section.

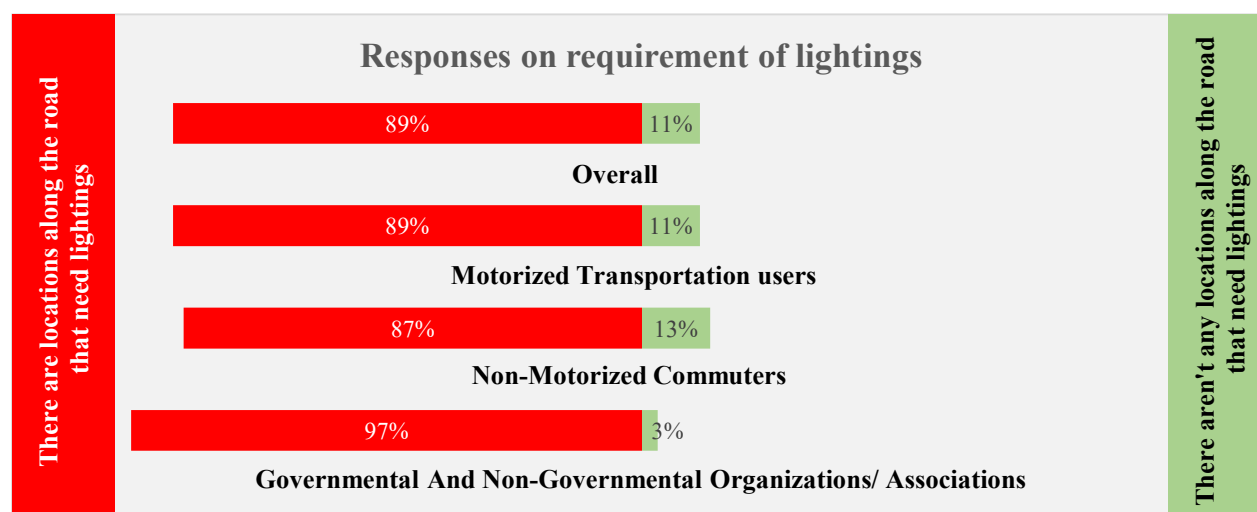


Figure 4.33: Requirement of Lightings

4.2.3.7. Time taken to travel to different public places

The commuters in the section were asked about the time taken for them to reach public places. The data shows that primary schools are accessible to 88% of commuters within 15 minutes, for 11% primary schools are accessible within 15 minutes to half an hour whereas 1% need 45 minutes to 1 hour to reach there. Higher secondary schools are accessible to 84% of the commuters within 15 minutes, 14% reach there within 15 to 30 minutes, 1% reach there within 45 minutes to 1 hour and another 1% need more than 1 hour to reach there. Colleges and universities are less accessible with 63% of the commuters reaching there within 15 minutes, 32% within 15 to 30 minutes, 1% within 30 to 45 minutes, 3% reaching within 45 minutes to 1 hour and 1% taking more than 1 hour.

Hospitals are even more inaccessible as per the time taken. 63% of the commuters reach there within 15 minutes, 26% reach within 15 to 30 minutes, 2% reach within 30 to 45 minutes, 6% reach within 45 minutes to 1 hour where as 3% of the commuters take more than 1 hour to access the hospitals.

It takes less than 15 minutes for 77% of the people to reach market. Similarly, 17% reach the market in 15 to 30 minutes, 1% reach in 30 to 45 minutes, 4% reach in 45 minutes to 1 hour and 1% of commuters take more than 1 hour. Police station are also less accessible with only 62% reaching there within 15 minutes. 31% of the commuters take 15 to 30 minutes to reach nearest police station, 4% take 30 to 45 minutes, 2% take 45 minutes to 1 hour and 1% take more than 1 hour. Similarly, 81% of the commuters take less than 15 minutes to reach the nearest ward office, 17% take 15 to 30 minutes and 2% take 45 minutes to 1 hour.

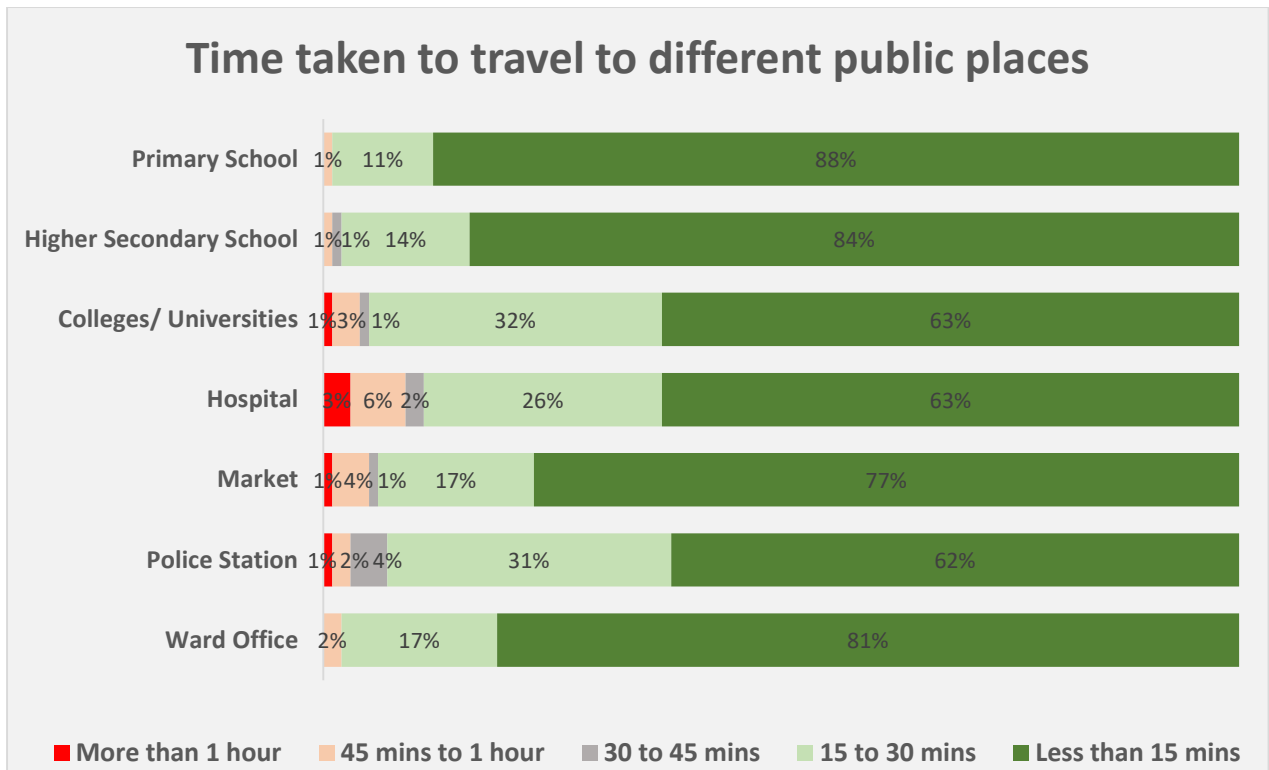


Figure 4.34: Time taken to travel to different public places

4.2.3.8. Most difficult time of day to find Public Transport

53% of the commuters have adjudged 8 AM to 10 AM to be the most difficult time of the day to find public transportation. 19% of the commuters said they find it difficult to find public transport from 8 PM to 10 PM and 14% said that 4 PM to 8 PM was the most difficult time. Motorized and non-motorized users have displayed similar pattern to this. Governmental and non-governmental organization/ association personnel have shown slightly different result with higher portion than average, i.e., 11% finding it difficult to find public transportation between 5 AM to 8 AM whereas lower portion than average, i.e., 7% finding it difficult to find public transportation between 8 PM to 10 PM.

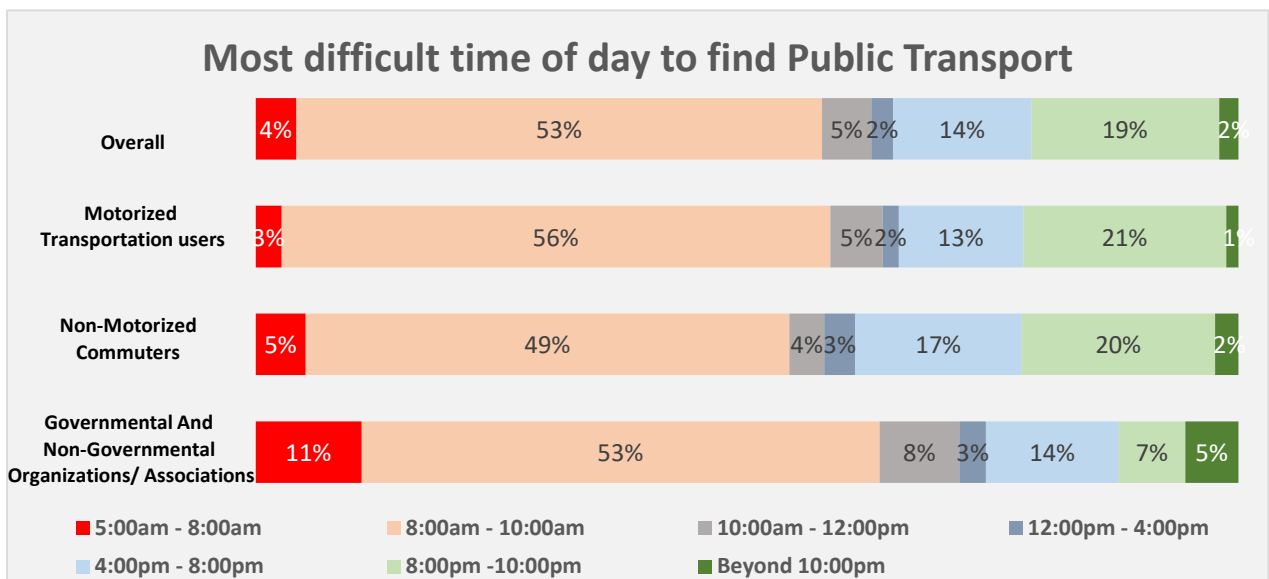


Figure 4.35: Most difficult time of day to find public transport

4.2.4. Accessibility and Connectivity

4.2.4.1. Access provided by the road to Key Locations

The road users have shown positive response to the access of the road to key locations like work places, residence, shops, school, hospital, farms etc. 61% of the overall surveyed population have rated the accessibility to key locations to be satisfactory. While 30% of overall respondents stated the access provided by the road was neither satisfactory nor dissatisfactory, 9% of the population expressed their dissatisfaction. None of the respondents have rated the accessibility to be highly dissatisfactory.

The satisfaction rating for the access provided by the road to key location is 3.53 or 71%. This is the highest rating among the 5 sub-attributes of Accessibility and Connectivity.

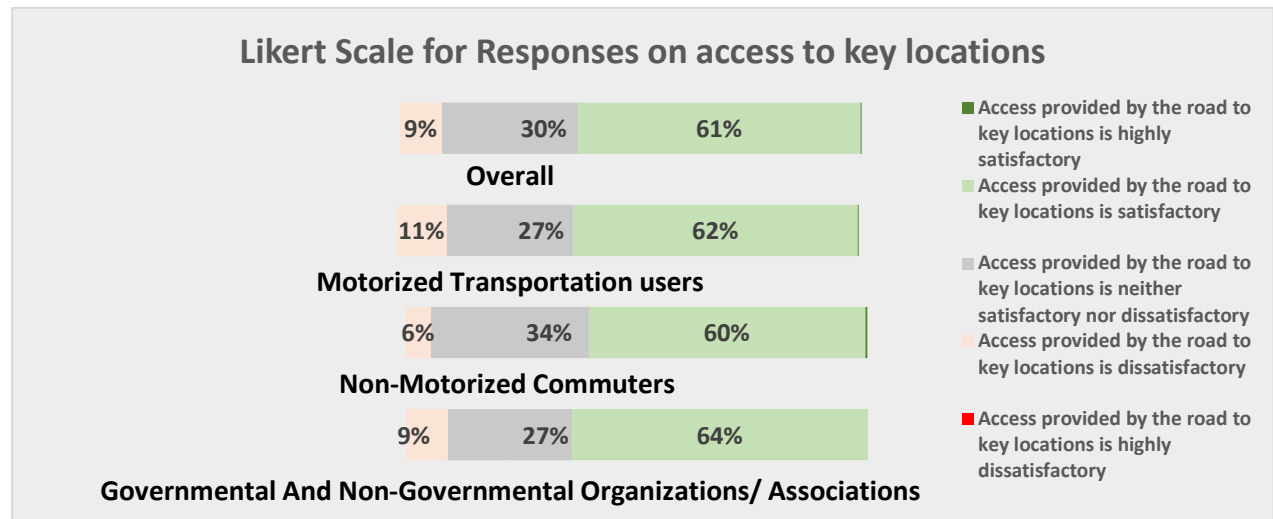


Figure 4.36: Access to key locations

4.2.4.2. Reliability of road to reach destination on time

Most of the commuters have stated that the travel time is unreliable. 63% of the respondents say that road is unreliable to reach the destination on time out of which 1% have said that the travel time is highly unreliable. 12% of the surveyed population said that travel time on this section of road is reliable while 25% gave neutral answers. None of the survey participants rated the road travel to be highly reliable.

The satisfaction rating for the reliability of road to reach the destination on time is 2.47 or 49%.

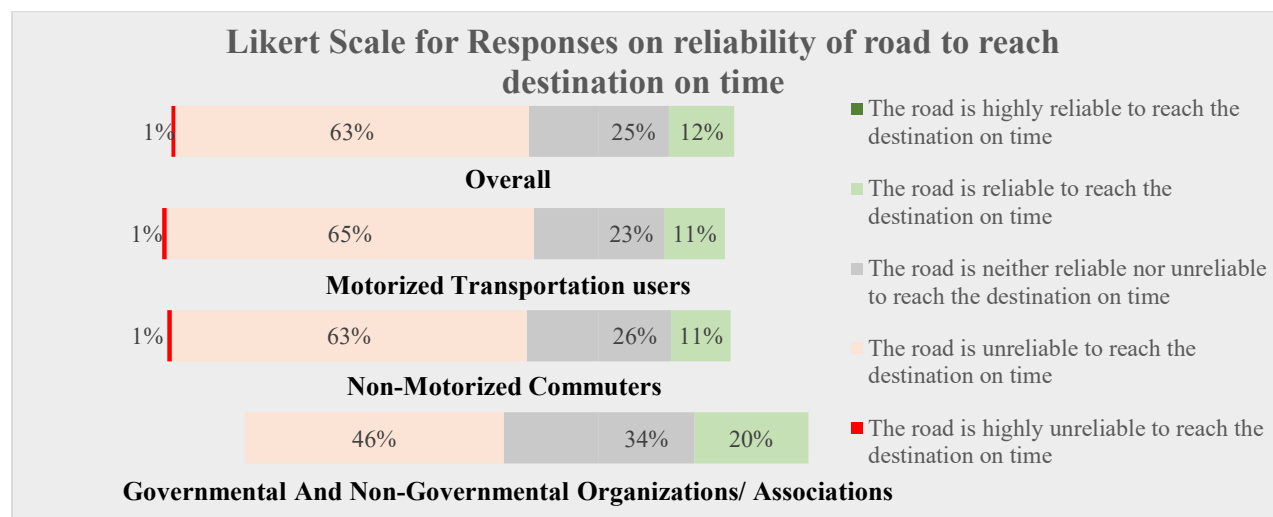


Figure 4.37: Reliability of Travel Time

4.2.4.3. Trend of Travel Time over Past Two Years

When asked about the trend of time travel over past two years, more than half of the overall respondents said that the travel time has increased. 65% attested on increase in travel time with 1% claiming there is substantial increase in travel time. 25% of the respondents believe the travel time has remained same over past two years while 9% believe travel time has reduced marginally.

The satisfaction rating for the trend of travel time over past two years is 2.44 or 49%.

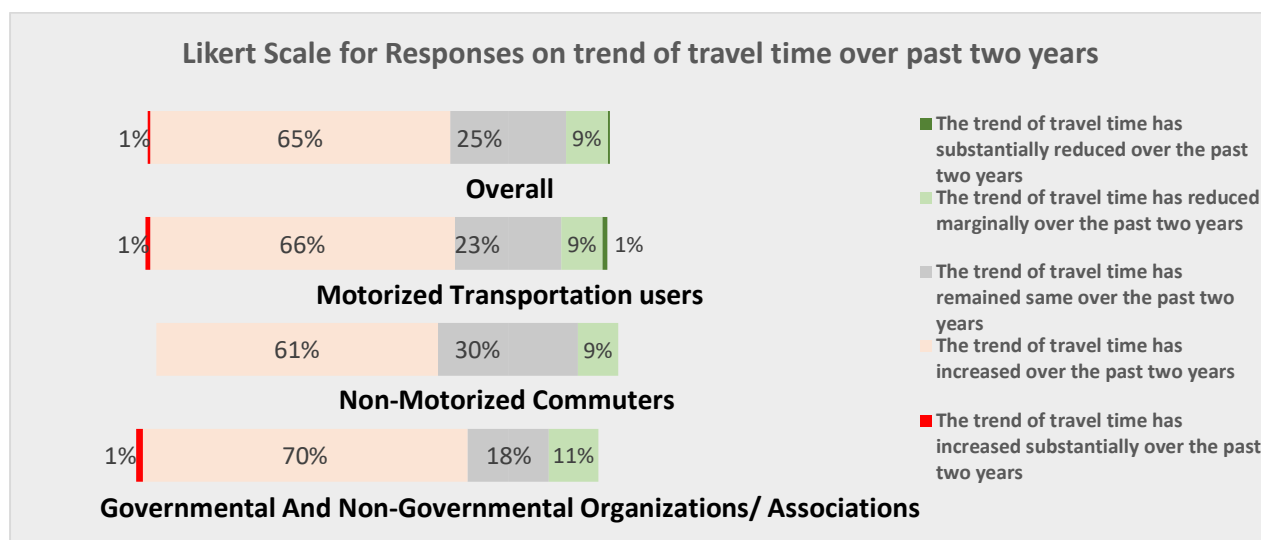


Figure 4.38: Trend of travel time over past two years

4.2.4.4. Connectivity and Access provided by the road to other Major Roads and Highways

The results on the opinion of road users on access provided by the road to other major roads and highways is divided. 32% of the road users rate the connectivity and access provided by the road section to be dissatisfactory, 30% gave neutral ratings whereas 38% think the connectivity and access is satisfactory. None of the respondents however have rated the connectivity to be highly satisfactory. Relatively larger portion of the governmental and non-governmental organization/ association demonstrated satisfaction with this attribute.

The satisfaction rating for the connectivity and access provided by the road to other major roads and highways is 3.06 or 61%.

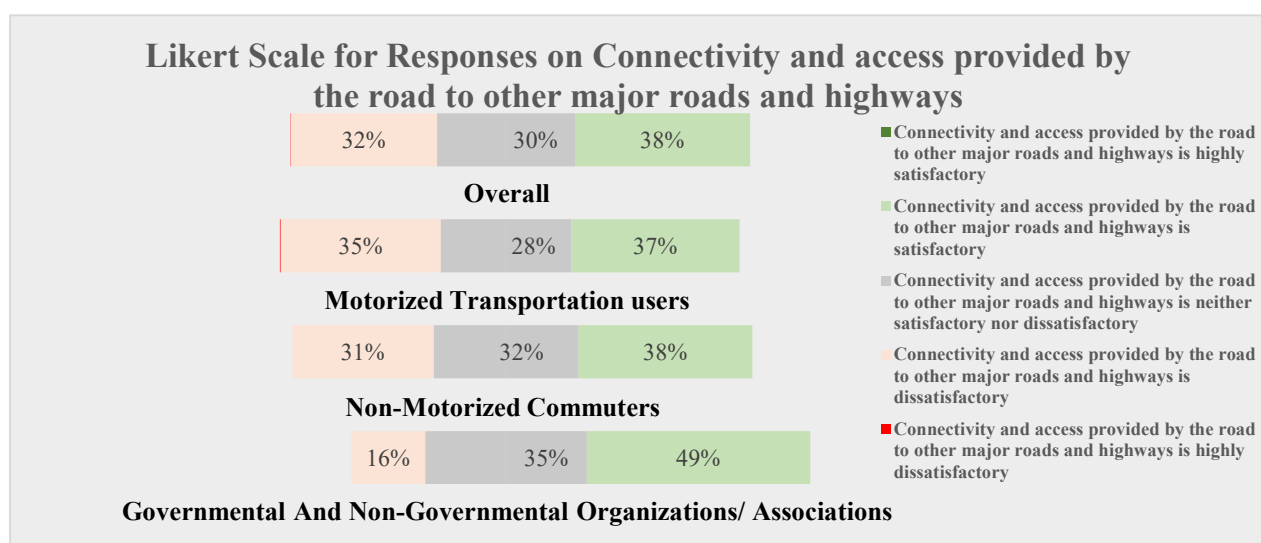


Figure 4.39: Connectivity and Access to Major Roads and Highways

4.2.4.5. Signages for Directions and Distance along the road

The respondents have shown substantial dissatisfaction when asked about the status of signages for directions along the road. 71% of the respondents have displayed dissatisfaction with the signages with 8% rating the status of signages to be satisfactory and 21% remaining neutral. None of the respondents have rated the signage installation status to be highly satisfactory.

The satisfaction rating for the signages for directions and distance along the road section is 2.37 or 47%. This is the lowest rated sub-attribute among the 5 rating factors of satisfaction for Accessibility and Connectivity.

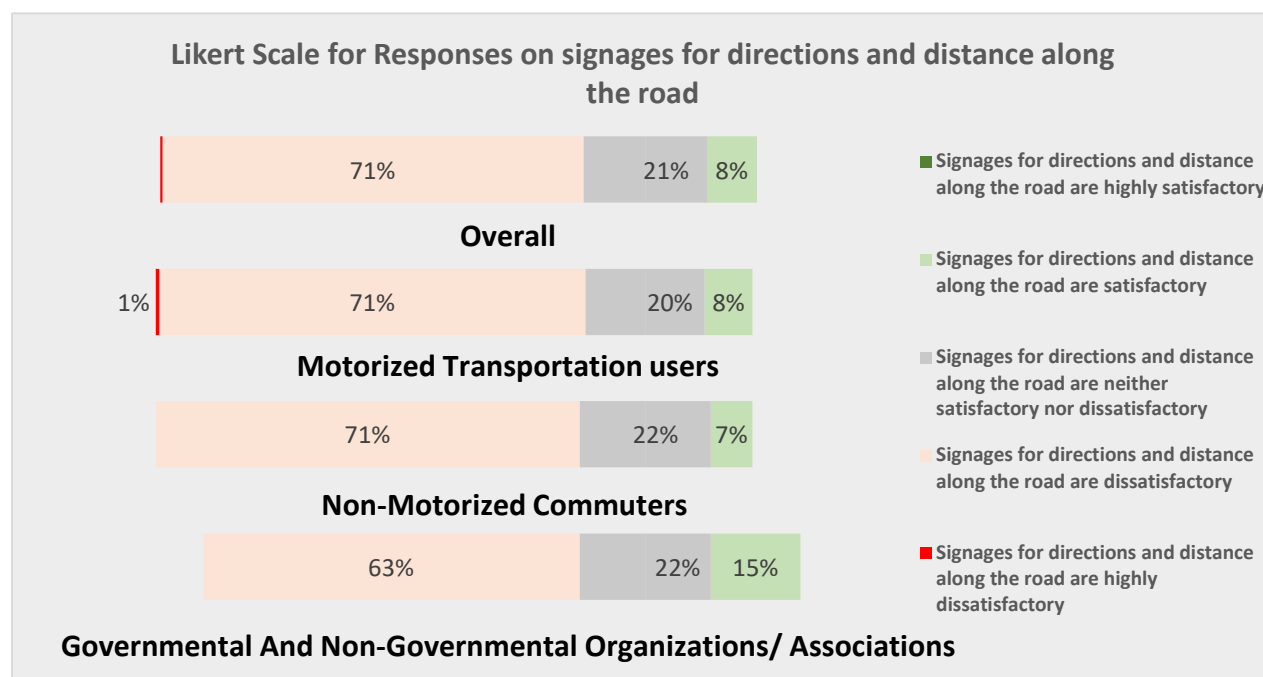


Figure 4.40: Signages for Directions and Distance

4.2.4.6. Satisfaction on Accessibility and Connectivity

The overall satisfaction on Accessibility and Connectivity of the road section has been assessed on the basis of five criteria which are Access provided by the road to key locations, Reliability of the road to reach destination on time, Trend of travel time over past two years, Connectivity and access provided by the road to other major roads and highways, and Signages for directions and distance along the road. The overall satisfaction rating for this attribute based on these criteria is determined to be 2.74 (Likert Scale) or 55% (percentile).

Highest satisfaction score is given by the governmental and non-governmental organization/ association with rating of 2.90 or 58% and lowest is assigned by motorized transportation user group with satisfaction score of 2.75 or 55% for this particular attribute.

The road users from each group have shown higher level of dissatisfaction regarding signages for directions and distances along the road with overall satisfaction rating of 2.37 or 47%. The respondents have rated the access of the road to key locations like work places, residence, shops, school, hospital, farms etc. substantially better than the rest with overall satisfaction score of 3.53 or 71% which is followed by connectivity and access provided by the road to major roads and highways which has satisfaction rating of 3.06 or 61%.

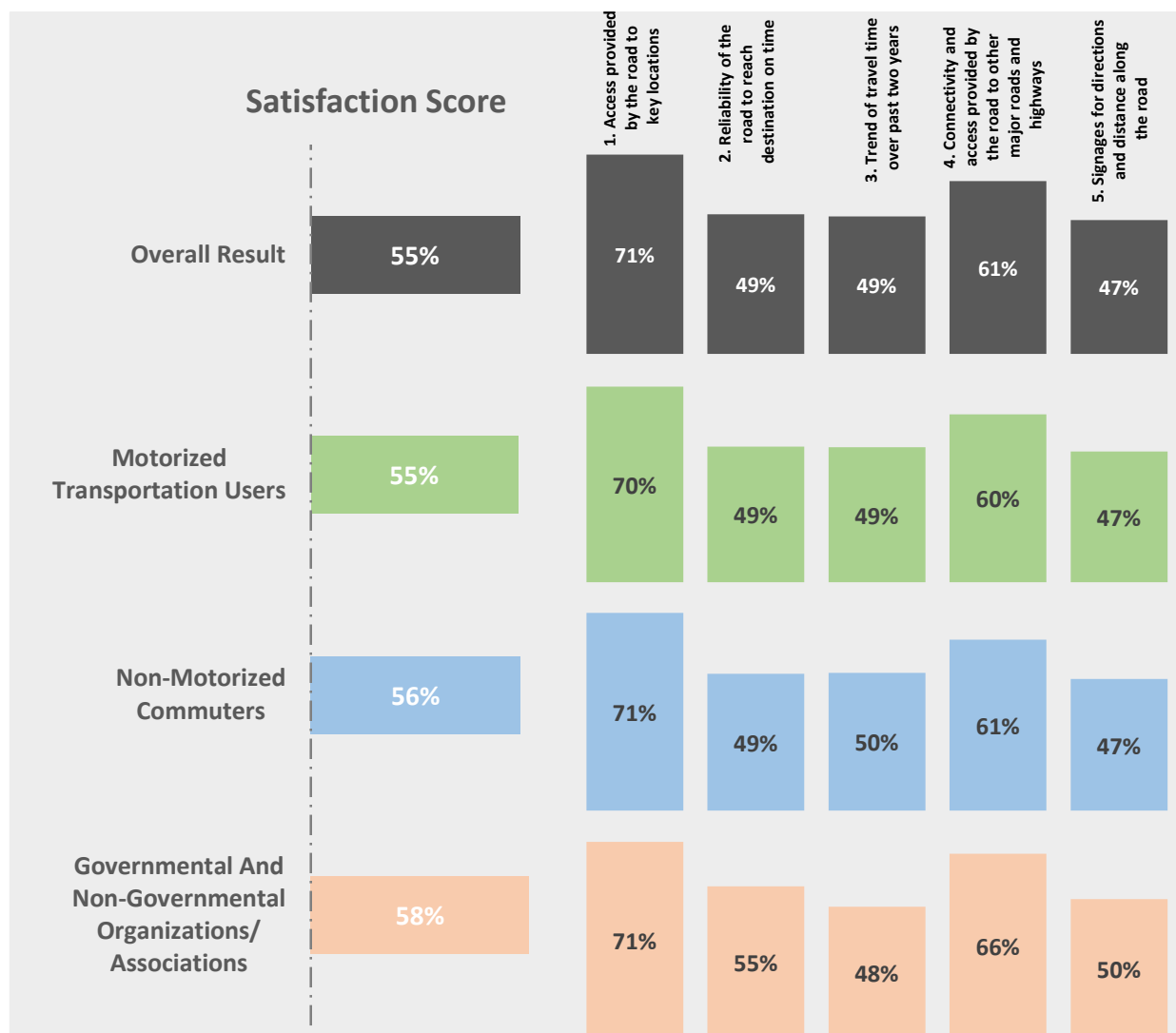


Figure 4.41: Satisfaction on Accessibility and Connectivity

4.2.5. Emergency Services

4.2.5.1. Accessibility of Emergency Services

Most of the road users have expressed satisfaction with accessibility of emergency services in the road section. Though none of the respondents stated the accessibility of emergency to be highly satisfactory, 56% of the overall respondents rated the accessibility to medical facility as satisfactory. 17% of the surveyed people however rated the accessibility to be dissatisfactory while 27% remained neutral. Relatively lower portion of governmental and non-governmental organization/ association have exhibited dissatisfaction regarding the accessibility of emergency services in this road section.

The satisfaction rating for the accessibility of emergency services along the road section is 3.39 or 68%. This is the higher rated sub-attribute of the 2 rating factors of Emergency Services.

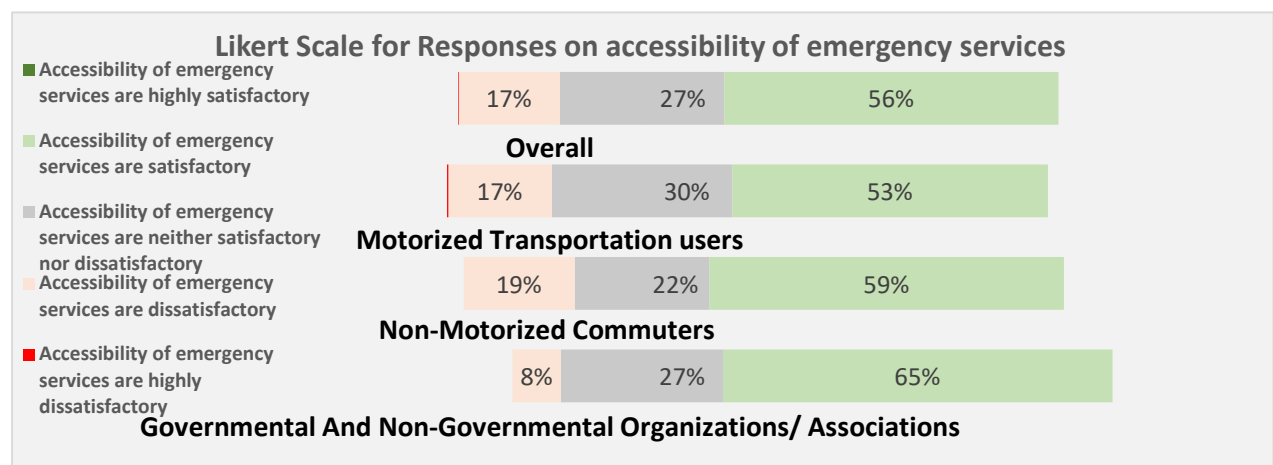


Figure 4.42: Accessibility of Emergency Services

4.2.5.2. Post-Crash Response

Larger portion of the respondents think that the post-crash response in this road section is quick despite considerable number differing with this opinion. 50% of overall respondents assess the post-crash response to be quick whereas 22% think the response to be slow and 1% rate the response to be very slow. 27% of the population have assessed the post-crash response to be neither slow nor quick. Larger portion than average, i.e., 72% of governmental and non-governmental organization/ association personnel have claimed the crash response to be quick. None of the respondents however claim the post-crash response to be very quick.

The satisfaction rating for the post-crash response in the road section is 3.27 or 65%. This is the lower rated sub-attribute of the 2 rating factors of Emergency Services.

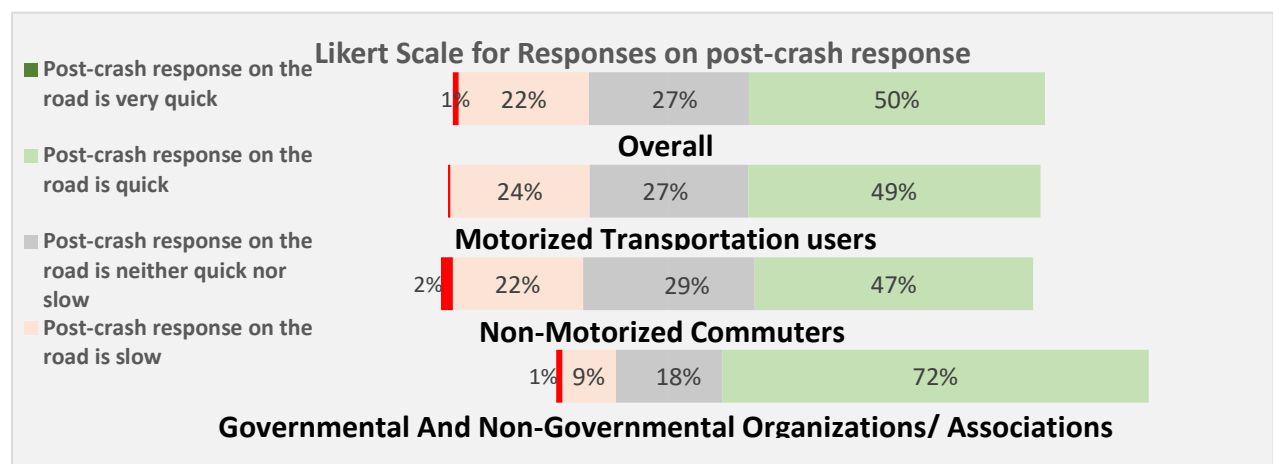


Figure 4.43: Post-crash Response

4.2.5.3. Satisfaction on Emergency Services

The satisfaction on Emergency Services has been evaluated based on the accessibility of emergency services and post-crash response along the road corridor. The overall satisfaction score for the attribute based on these two factors stands at 3.33 (Likert Scale rating) or 67% (percentile). This is the highest rating out of the seven designated road attributes.

The motorized transportation users and non-motorized commuters have demonstrated lower level of satisfaction with the attribute with 66% satisfaction rating. On the other hand, governmental and non-governmental organization/ association have given comparatively higher rating of 3.58 or 72%.

The accessibility of emergency services is the better rated factor between the two factors with overall satisfaction score of 3.39 (68%) compared to 3.27 (65%) on post-crash response.

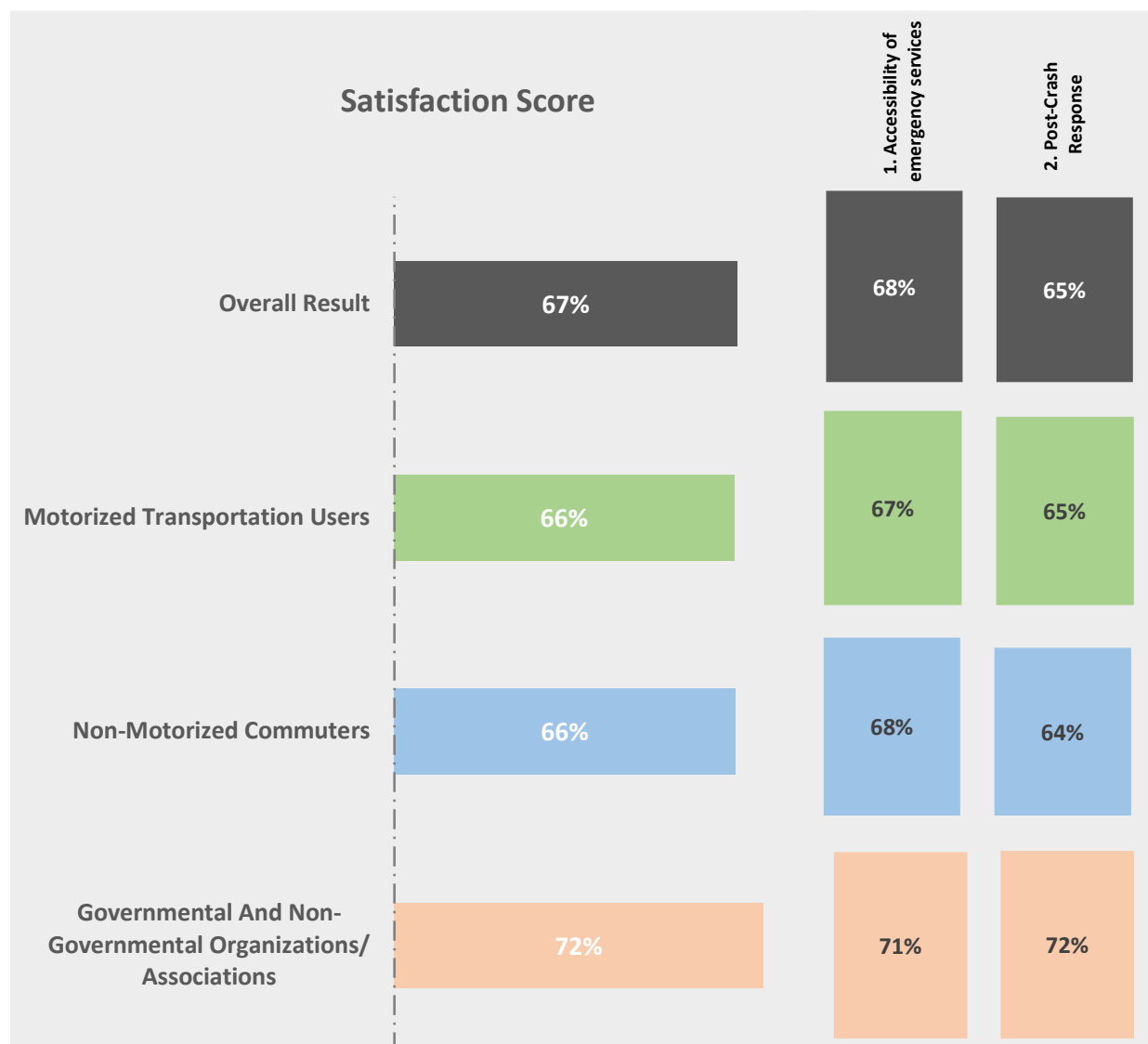
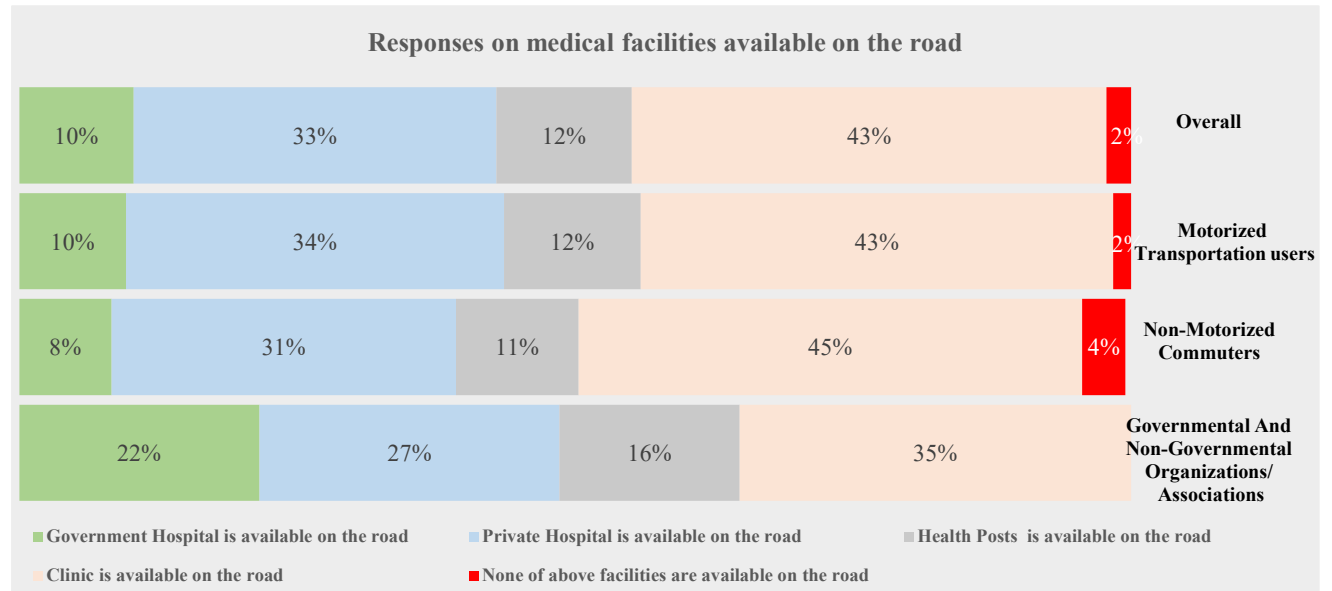


Figure 4.44: Satisfaction on Emergency Services

4.2.5.4. Medical Facilities on Road

When asked about what kind of medical facilities the road users get on this road section, most of the respondents, i.e., 43% respondents answered with clinics and this was followed by private hospital with 33% of the respondents saying so. 10% of the overall respondents stated government hospitals were available, 12% of them answered with health posts while 2% claimed that none of these were available around the road vicinity. Relatively larger portion of the governmental and non-governmental organization/ association personnel claimed governmental hospitals and health posts to be available at the road section vicinity.



4.2.6. Environment and Aesthetics

4.2.6.1. Cleanliness of Road and Surroundings

The road users were asked about the cleanliness of the road and surroundings. 26% of the respondents think that the cleanliness of road and surroundings is satisfactory, 47% rate this dissatisfactory and 3% assess the cleanliness highly dissatisfactory. 24% of the overall survey population gave neutral response on the cleanliness level. Near-similar ratings can be observed for each of the user groups. None of the respondents claimed the cleanliness level to be highly satisfactory.

The satisfaction rating for the cleanliness of road and surrounding along the road section is 2.80 or 56%. This is the highest rated sub-attribute among the 3 rating factors of Environment and Aesthetics.

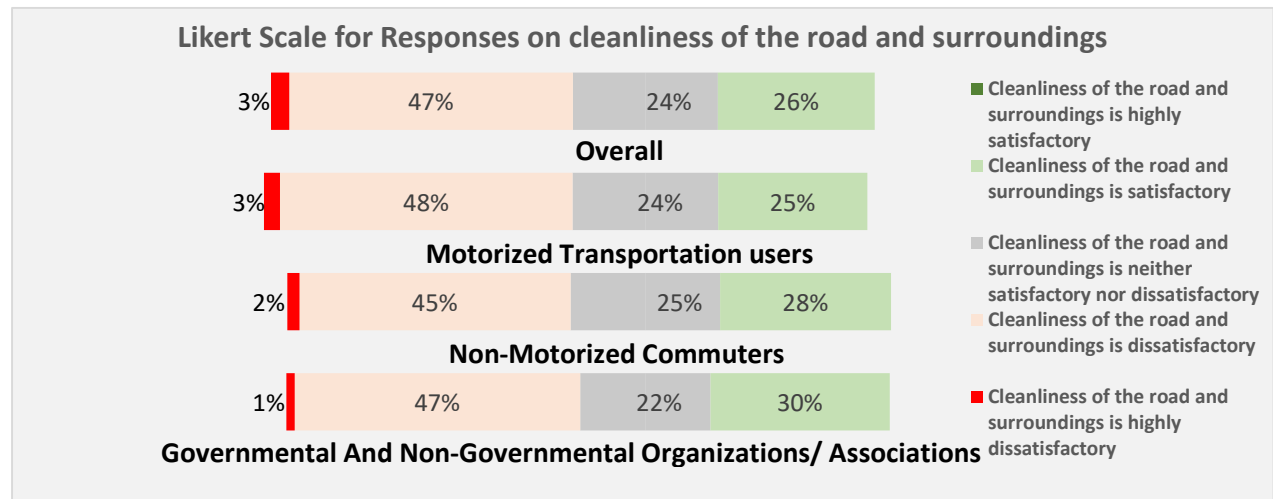


Figure 4.45: Cleanliness of road and surroundings

4.2.6.2. Noise Level

The respondents of the survey have expressed substantial dissatisfaction on the noise generated by the traffic. 67% of the respondents rate the noise generated by the traffic to be high and 10% rate the noise to be very high. Only 1 % of the respondents think that the noise level is low whereas 22% think that the noise generated is at medium level. None of the respondents claim the noise level to be very low.

The satisfaction rating for the noise level along the road section is 2.20 or 44%. This is the lowest rated sub-attribute among the 3 rating factors of Environment and Aesthetics.

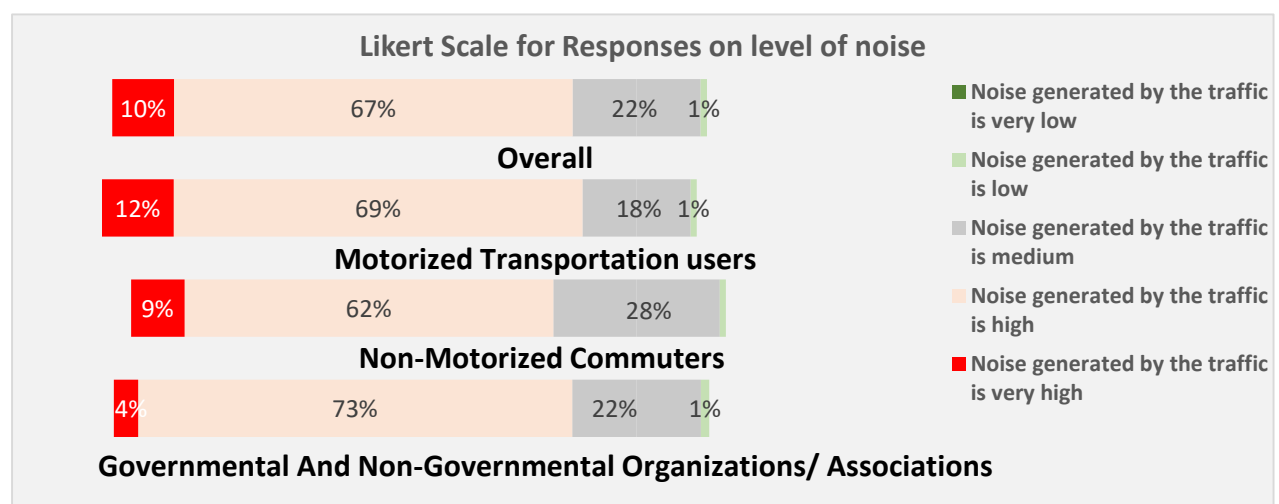


Figure 4.46: Noise Level

4.2.6.3. Level of Air Pollution Level

The respondents were fairly negative when asked to rate the level of air pollution in the road section with 2% rating the air pollution level as very high and 59% rating the pollution level as high. 36% of the surveyed road users have assessed the pollution level to be medium whereas only 3% think the air pollution level is low. None of the respondents rated the pollution level to be very low.

The satisfaction rating for the level of air pollution along the road section is 2.32 or 46%.

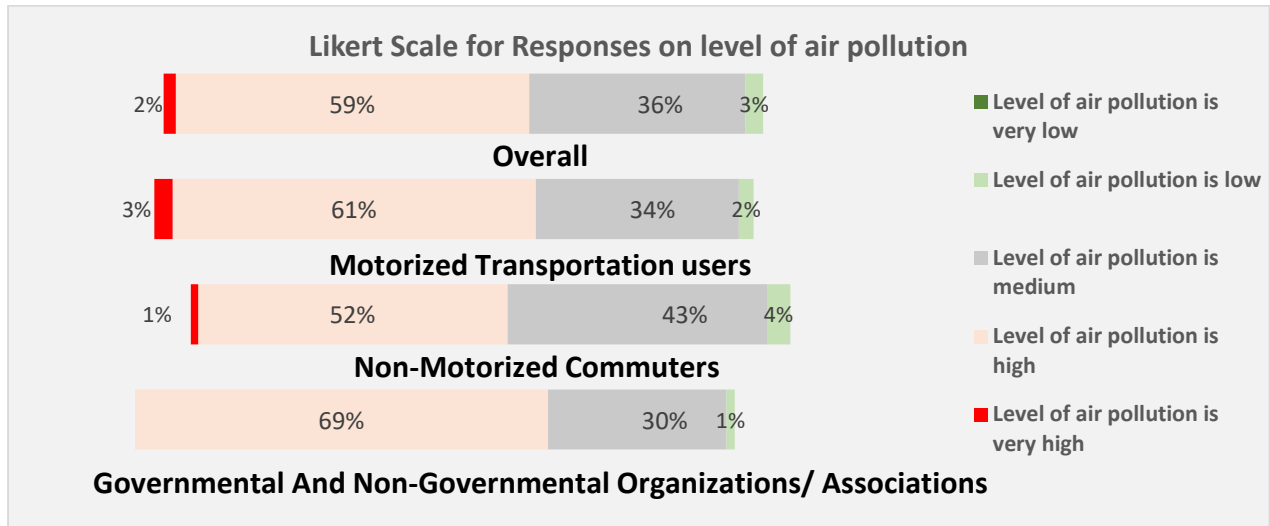


Figure 4.47: Level of air pollution

4.2.6.4. Satisfaction on Environment and Aesthetics

The overall satisfaction for Environment and Aesthetics condition of the road section has been assessed on the basis of three criteria which are Cleanliness of the road and surroundings, Level of noise and Level of air pollution. Based on these three criteria, the overall satisfaction rating on the road attribute was calculated to be 2.47 (Likert Scale rating) or 49% (percentile rating)

The satisfaction score of each user group is more or less similar. The motorized transportation users have rated the environment and aesthetics with satisfaction score of 2.38 or 48%, which is the lowest among the user groups. Similarly, non-motorized commuters have given highest rating of 2.5 or 50% for this attribute.

Cleanliness of the road and surroundings is the most satisfactory criteria for all user groups with satisfaction rating of 2.74 or 55%. On the other hand, level of noise in the road section has been rated as least favorable criteria with satisfaction rating of 2.13 or 43%.

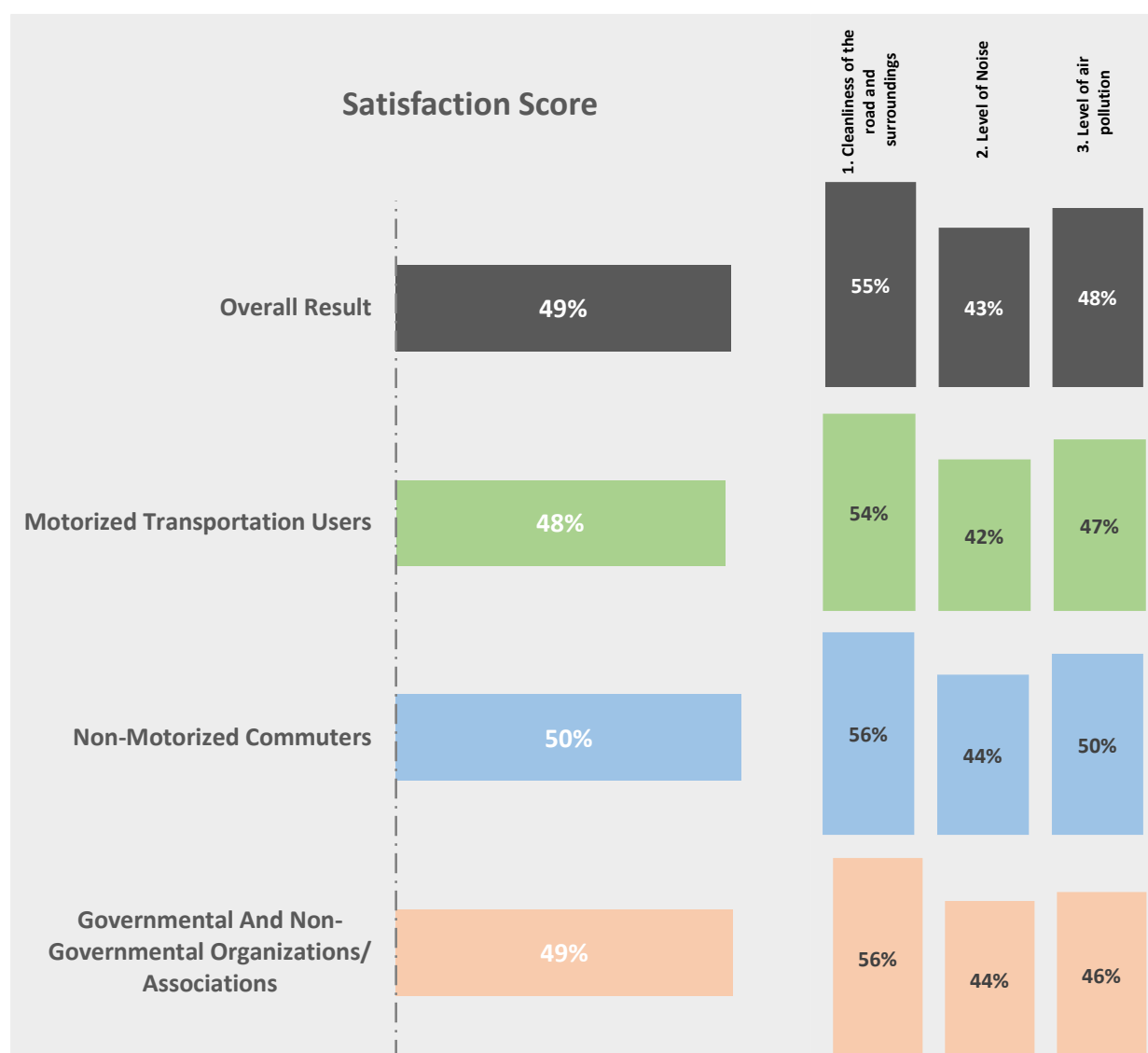


Figure 4.48: Satisfaction on Environment and Aesthetics

4.2.7. Green Resilient Corridor (GRID Approach)

4.2.7.1. Consideration of Safety of Wildlife in Highway Design

The interviewees were asked if the highway design accounted the safety of the wild animals to which majority of them have responded negatively. 94% of the respondents rate the highway design to be ineffective in ensuring wildlife safety whereas 1% said the design was highly ineffective. 5% of the demographics said the design was neither effective nor ineffective. None of the respondents consider the highway design to be highly effective regarding the safety of wildlife. Only 1% of the motorized transportation user and governmental and non-governmental organizations/ associations rate the highway design effective considering safety of wildlife.

The satisfaction rating for consideration of safety of wildlife in highway design of the road section is 2.05 or 41%.

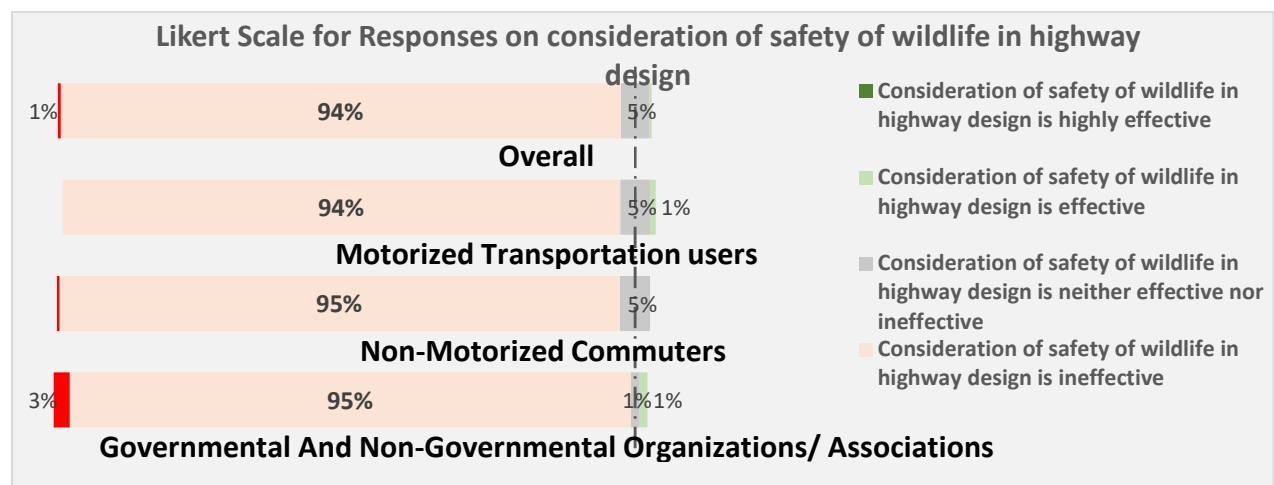


Figure 4.49: Consideration of safety of wildlife in highway design

4.2.7.2. Adequacy of Wildlife Crossings such as Overpass and Underpass

The response from the road users when asked about the adequacy of wildlife crossing such as overpass and underpass was highly negative. 98% of the surveyed road users said that the wildlife crossings are inadequate, 1% said these are highly inadequate and 1% respondents said these crossings are neither adequate nor inadequate. None other respondents claim the crossings to be adequate or highly adequate.

The satisfaction rating for adequacy of wildlife crossing along the road section is 1.99 or 40%. This is the lowest rated sub-attribute among the 5 rating criteria for GRID Approach.

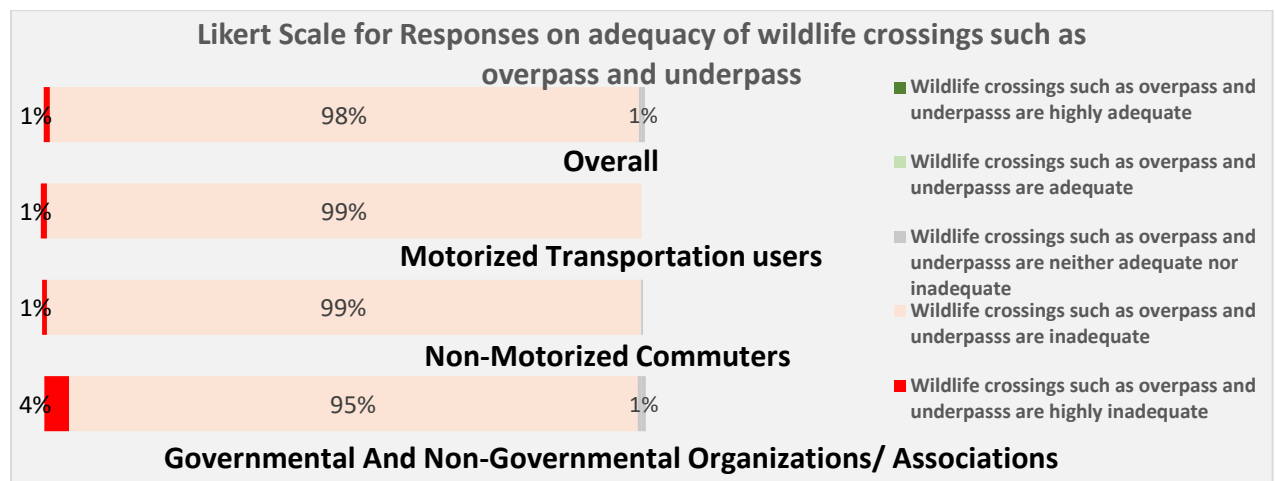


Figure 4.50: Adequacy of wildlife crossing

4.2.7.3. Adequacy of Signage Warnings for Wildlife Crossings

The road users were asked about the adequacy of signage warnings of wildlife crossings to which most of them reacted negatively. 94% of the overall surveyed population rate the signage warnings to be inadequate while 6% of them gave neutral responses. None other respondents have claimed the signage warnings of wildlife crossings to be adequate except 2% of the governmental and non-governmental organizations/ associations personnel. 1% of the governmental and non-governmental organizations/ associations personnel also believe the signages warnings to be highly inadequate.

The satisfaction rating for adequacy of signage warnings for wildlife crossings along the road section is 2.06 or 41%.

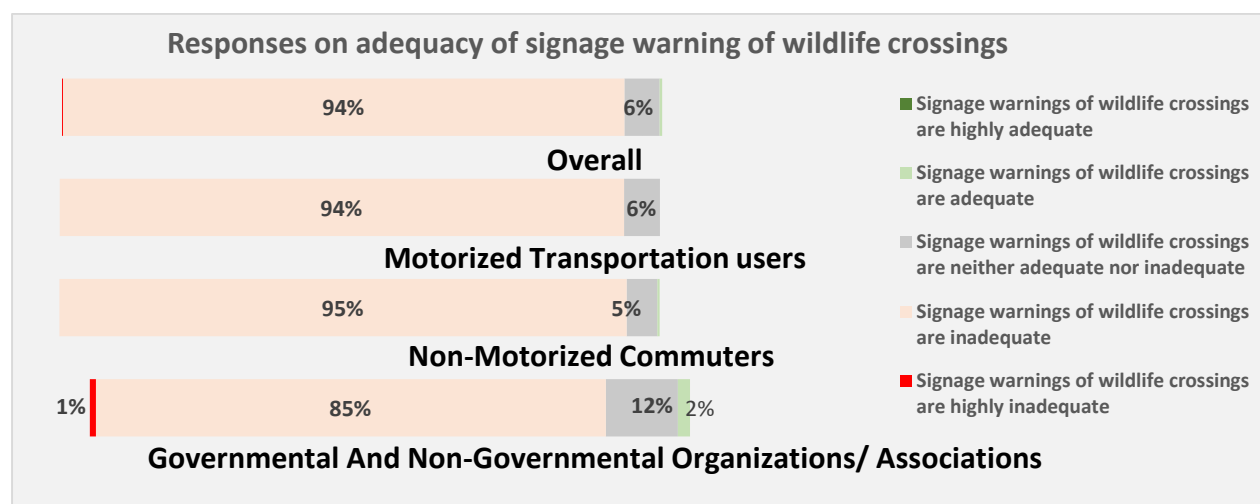


Figure 4.51: Adequacy of signage warnings for wildlife crossings

4.2.7.4. Efforts of Highway Authorities in Addressing Wildlife Conservation Concerns

The majority of road users when asked to rate the efforts of highway authorities in addressing wildlife conservation concerns have given poor ratings. 87% of the road users surveyed say the efforts of highway authorities in addressing wildlife conservation concerns are poor and 12% judge the efforts to be fair. 1% of the road users have rated the efforts of highway authorities to be good. None of the participants rated the efforts to be excellent or as very poor or excellent.

The satisfaction rating for efforts of highway authorities in addressing wildlife conservation concerns is 2.13 or 43%.

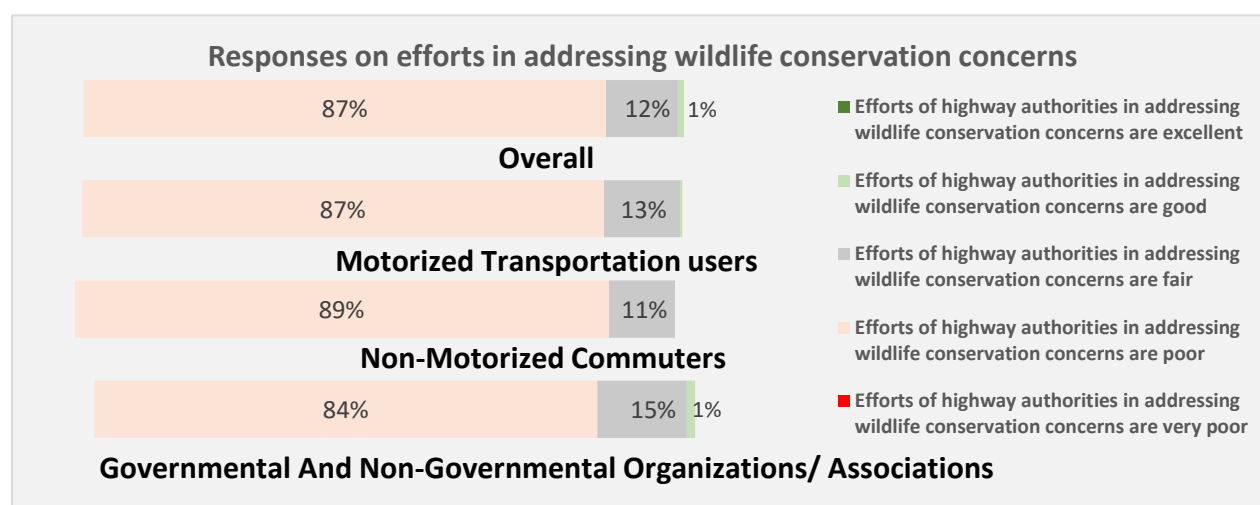


Figure 4.52: Efforts of highway authorities in addressing wildlife conservation concerns

4.2.7.5. Road Safety in terms of extreme weather, heavy rainfall, floods, landslides, etc.

Most of the road users have adjudged the road section to be unsafe in terms of extreme weather, heavy rainfall, floods, landslides etc. 51% of the surveyed demographic rate the road section unsafe during extreme weather. 33% of the respondents think the road is safe in terms of extreme weather and 16% were neutral on this topic. None of the road users have rated the road section to be very safe in terms of extreme weather. Comparatively higher portion of governmental and non-governmental organization/ association personnel rated the road unsafe with 1% of them rating the road to be very unsafe during extreme weather conditions.

The satisfaction rating for road safety in terms of extreme weather, heavy rainfall, floods, landslides etc. of the road section is 2.81 or 56%. This is the highest rated sub-attribute among the 5 rating criteria for GRID Approach.

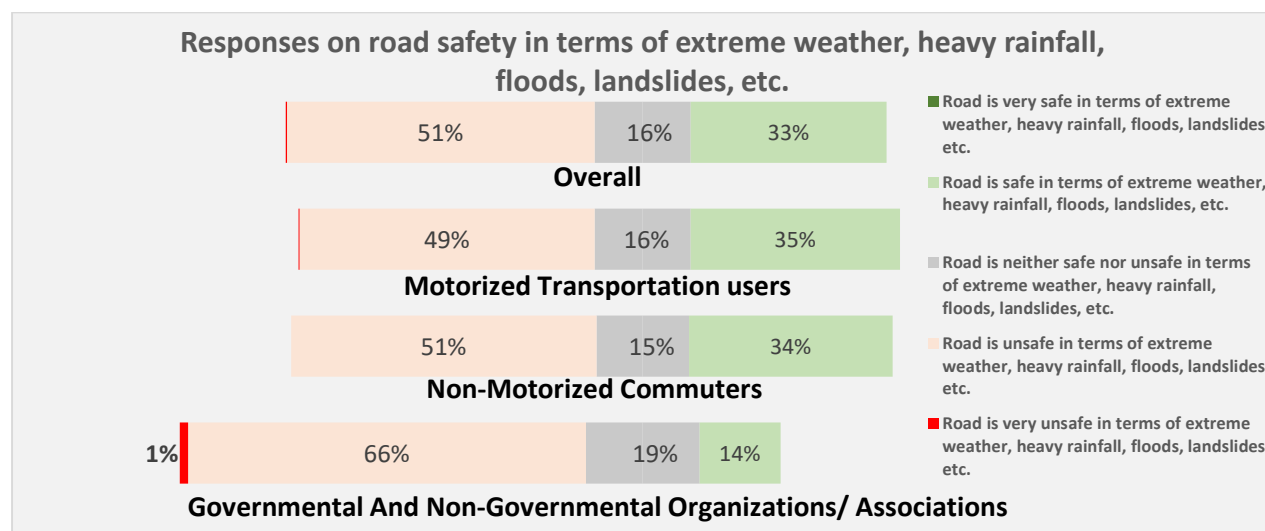


Figure 4.53: Road safety in terms of extreme weather, heavy rainfall, floods, landslides etc.

4.2.7.6. Satisfaction on GRID Approach

The satisfaction level on the initiatives related to wildlife and environment was assessed based on five key basis which were Consideration of safety of wildlife in highway design, Adequacy of wildlife crossings such as overpass and underpass, Adequacy of signage warning of wildlife crossings, Efforts of highway authorities in addressing wildlife conservation concerns, and Road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc. The overall satisfaction calculated on these bases is 2.21 (Likert Scale rating) or 44% (percentile rating).

The satisfaction ratings are nearly same for each road user group with least satisfaction rating being 2.15 or 43% as evaluated by governmental and non-governmental organization/ association.

The road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc. is calculated to be the factor with highest satisfaction score of 2.81 or 56%. On the other hand, adequacy of wildlife crossing such as overpass and underpass are the sub-attribute with lowest satisfaction score of 1.99 or 40%.



Figure 4.54: Satisfaction on GRID Approach

4.2.7.7. *Wildlife encountered on or near highway*

The road users were asked if they have encountered wildlife on or near highways along with the details of the encounter. 40% of the respondents said they have encountered wild animals. While 74% of the governmental and non-governmental organization/ association personnel confirmed encounters with wild animals, only 33% of the non-motorized commuters and 38% of motorized transportation users said they have encountered wildlife in the road section.

Monkey, spotted deer, porcupine, tiger, wild boar, fox, leopard, nilgai, rabbit were the animals that the respondents claimed to have encountered. Majority of the respondents stated that the wild animals were crossing the road when the encounter happened. Some respondents said they were grazing, running along the highway and some even claimed they saw the wild animals during attack on people (by a tiger at Ranibagiya).

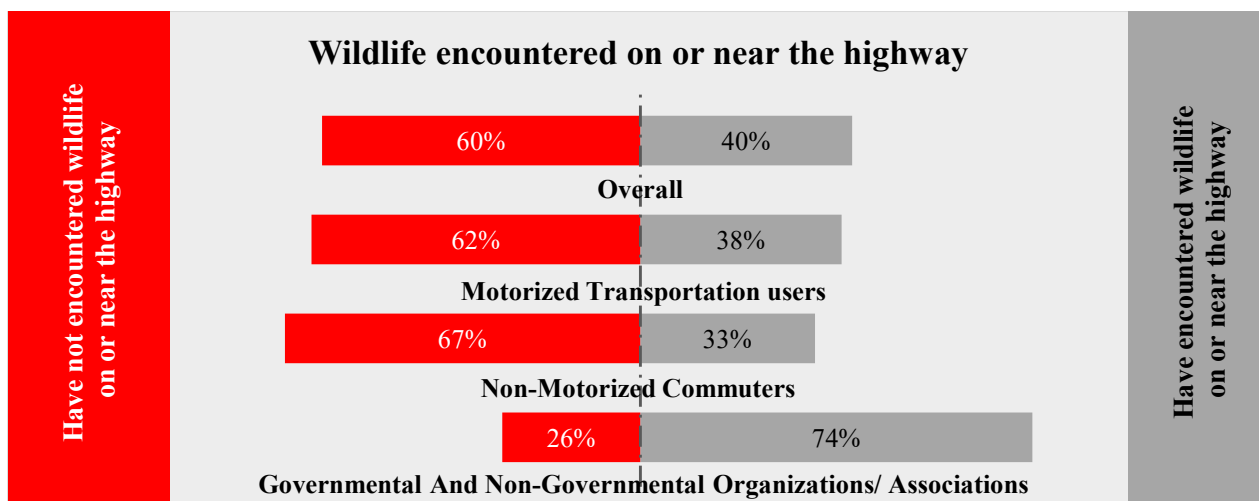


Figure 4.55: Wildlife encountered on or near highway

4.2.7.8. Awareness on environmental initiatives

The road users were asked if they were aware of any environmental initiatives to protect wildlife related to this highway. Majority respondents answered that they were not aware of any such initiatives. Only 1% of motorized transportation users and non-motorized commuters along with 3% of the governmental and non-governmental organizations/ associations claimed to be aware of such initiatives.

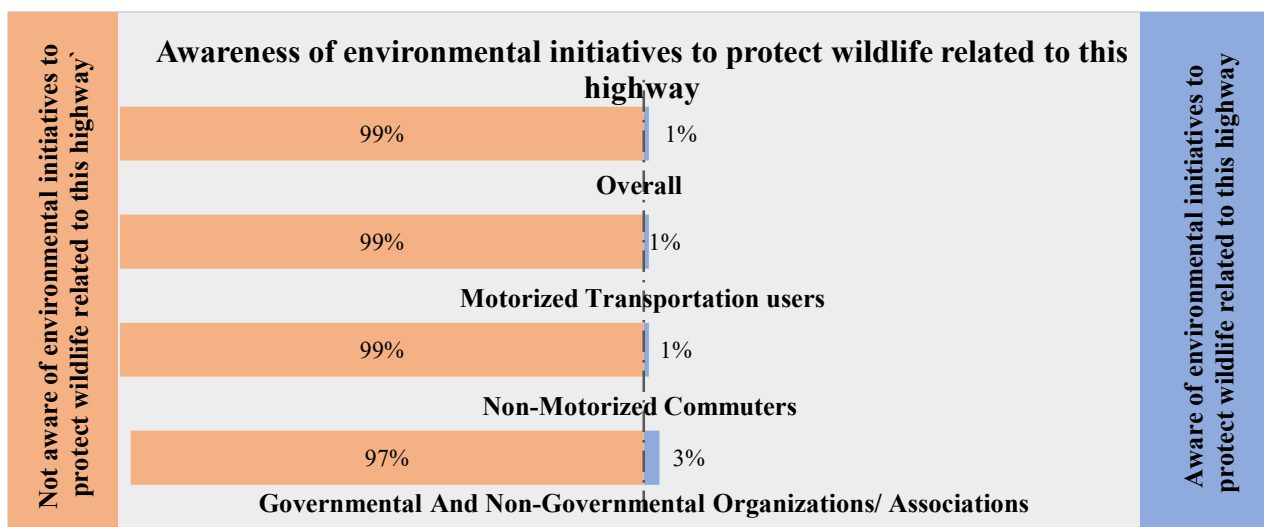


Figure 4.56: Awareness on environmental initiatives

4.2.7.9. What Road Users have to say on Wildlife and Environmental Issues

How human-wildlife conflicts can be reduced to enhance road safety

“Fruit bearing plants needs to be grown and ponds needs to be made inside forest. Wired fence also needs to be installed at the side of the roads.” Shraddha Chaudhary (Motorized User)

“Overpasses and underpasses need to be constructed for the animals. Speed limits has to be defined and implemented. Information signage boards and CCTVs needs to be installed at crucial areas. Orientation programs for the drivers also can be helpful.” Arun Khanal, Engineer, Sainamaina Municipality (Gov/Non-Gov Org.)

“The wildlife needs to be protected inside the forest. Domestic animals also need to be controlled around the highway vicinity.” Bhim Bahadur Pandey (Non-motorized User)

“Speed limits has to be implemented in the jungle areas with provision of Time Cards in order to implement the speed limits strictly. Additionally, underpasses are required for the crossing of wildlife” Hari Dhakal, Fundamental Health Service (Gov/Non-Gov Org.)

Government’s role on preventing natural disasters on highways

“The construction quality of road needs to be maintained. Proper drainage systems and retaining walls at required places has to be constructed.” Babita Paudel (Non-motorized User)

“Construction of proper cross-drainage structures, side drainage, retaining walls, river training works along with Bio-Engineering works and plantation on sides the road has to be done.” Rukmagat Basyal, Infrastructure Section Chief-Butwal Sub-Metropolition City Office (Gov/Non-Gov Org.)

“The drainage needs to be cleaned at least once every six months and throwing garbage inside them should be prohibited to ensure smooth outlet of water. The upgrading of highway needs to begin as soon as possible” Dharmaraj Aryal (Motorized User)

4.2.8. Non-Responsive Questions

The interaction level of respondents with each question can give directions for better design of questionnaire structure and also give clues about road user interaction behavior and satisfaction.

The non-response rate is found to be higher mostly in case of subjective questionnaires (as defined in section 3.2 Classification of Questionnaire). All other types of questions i.e., Likert scale-based questionnaires, Yes/No questionnaires, Multiple Choice questionnaires, and Marking – Limited Option Questionnaires have less than 1% non-responsiveness. Additionally, non-responsiveness is found to be the highest in the non-motorized commuter group and least in government and non-government organization/ associations. The non-responsiveness for each category of user group is demonstrated as follows:

4.2.8.1. Non-Responsive questions for Motorized Transportation users

Then non-responsiveness of the motorized transportation user group is the second highest among the three-user group and the non-responsiveness rate lags only slightly behind non-motorized commuter group for each question. This user group has given least number of responses when asked about innovative solutions or technologies that could improve road quality. Additionally, data shows that only 3% of the road users have made complaints to the related authorities regarding problems faced while travelling on the road section.

The level of non-interaction for each of the non-responsive cases are illustrated in the Figure 4.57.

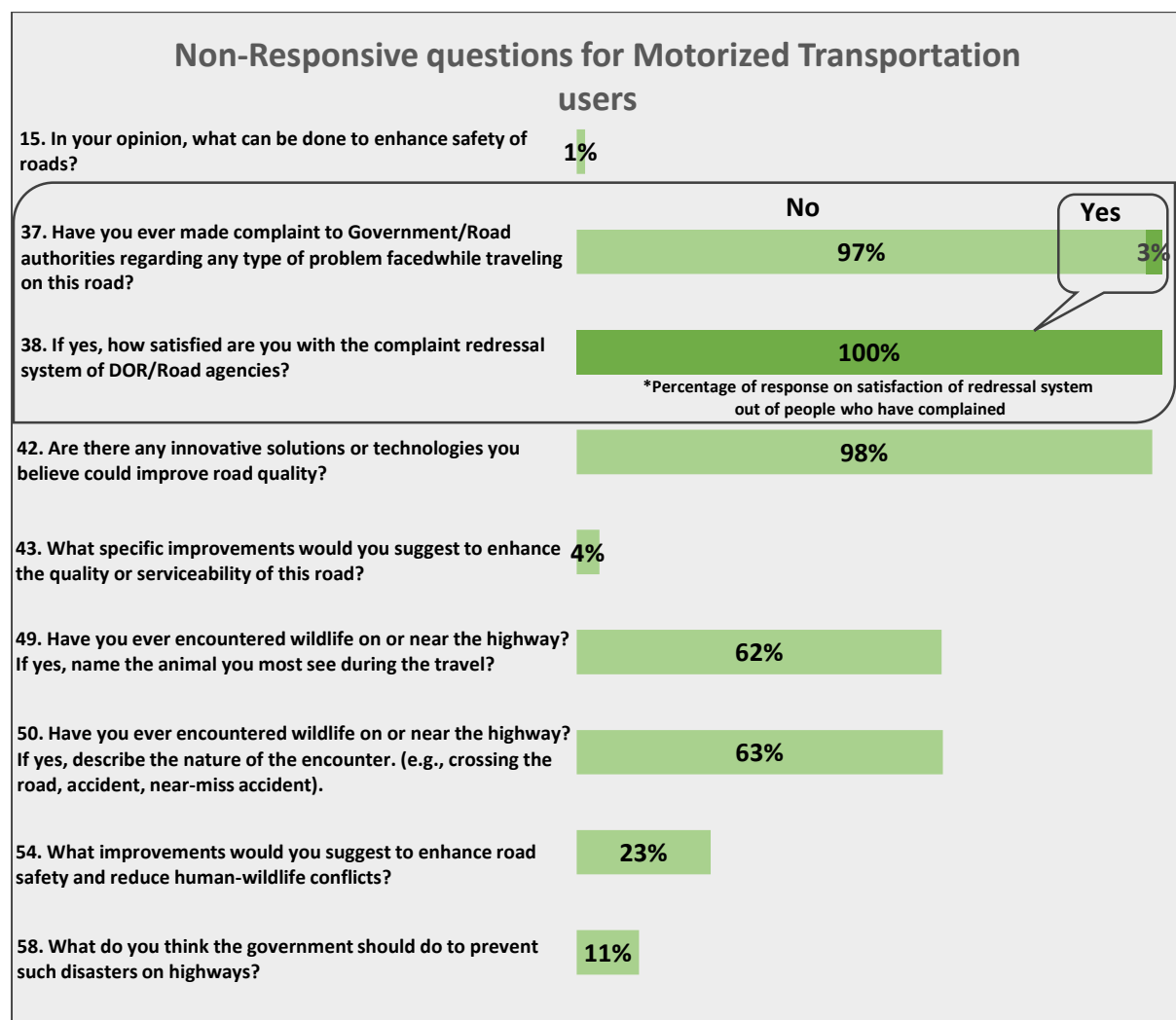


Figure 4.57: Non-Responsive questions for Motorized Transportation users.

4.2.8.2. Non-Responsive questions for Non-Motorized Commuters

The non-responsiveness of non-motorized commuters is the highest among the three user groups. None of the users in this group gave response when asked about innovative solutions or technologies that could improve road quality. The results shows that only 2% of the road users have made complaints to the related authorities regarding problems faced while travelling on the road section which is less than that of motorized transportation use group.

The level of non-interaction is illustrated in the Figure 4.58.

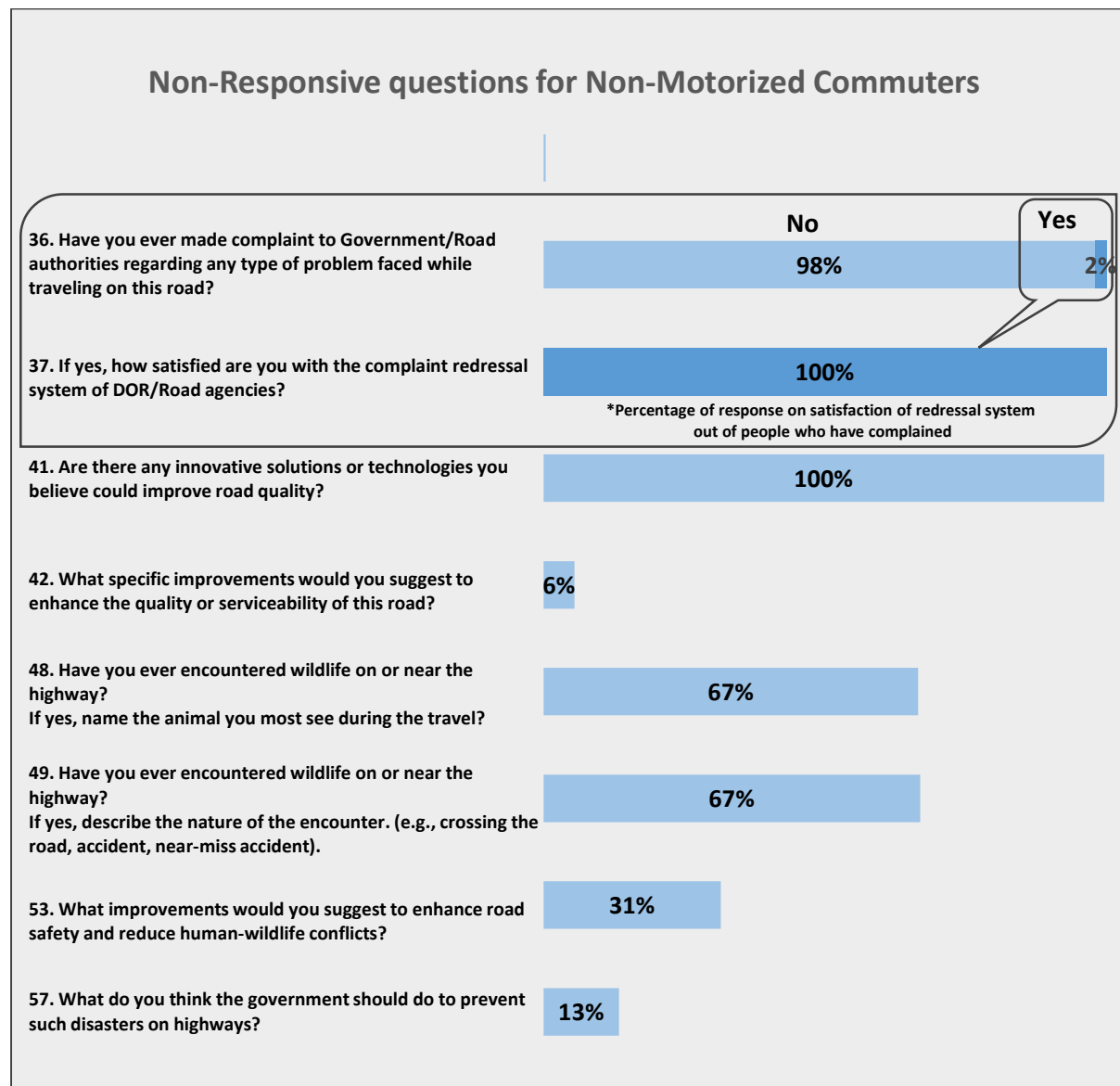


Figure 4.58: Non-Responsive question for Non-Motorized Commuters

4.2.8.3. Non-Responsive questions for Governmental and Non-Governmental Organizations/ Associations

The governmental and non-governmental organization/ associations have shown better level of responsiveness to the questions compared to other user groups. This user group has demonstrated least number of interaction when asked about innovative solutions or technologies that could improve road quality as well. 22% of the governmental and non-governmental organization/ association personnel have made complaint to the related authorities regarding problems faced while travelling on the road section which is substantially larger portion compared to the motorized and non-motorized user group.

The level of non-interaction for all the non-responsive cases are illustrated in the Figure 4.59.

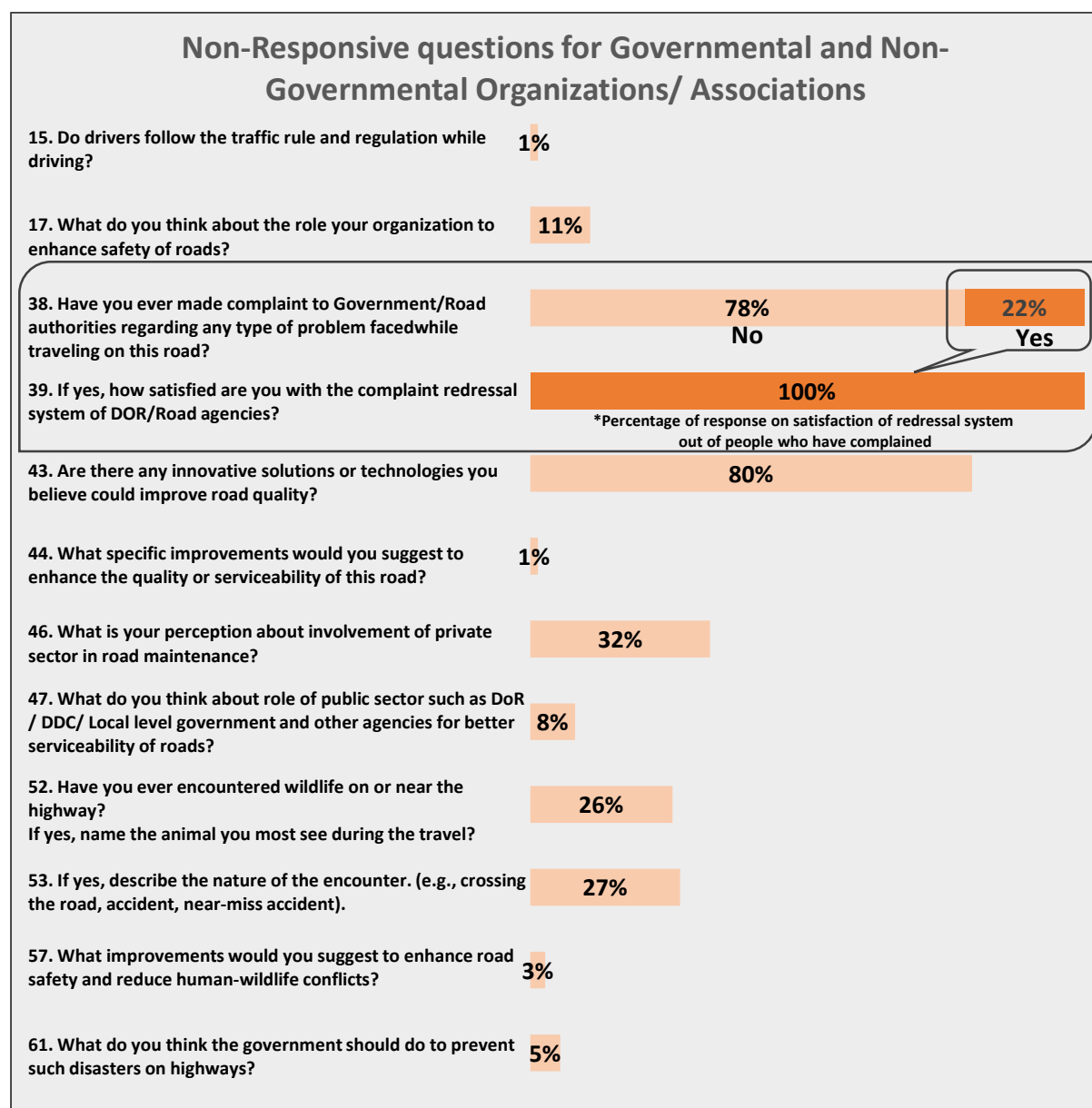


Figure 4.59: Non-Responsive questions for Governmental and Non-Governmental Organizations/ Associations

5. Key Findings

5.1. Demographic Analysis

A total of 489 Motorized Transportation users, 254 Non-motorized Commuters and 74 Governmental and Non-Governmental Organization/ Association were interviewed in this survey. The 74 Governmental and Non-Governmental Organization/ Association surveyed comprised of 175 participants. These are the key findings from the demographic analysis of the respondents:

- Out of 918 surveyed participants, 754 participants (92%) were male and 164 participants (8%) were female. Motorized transportation users had lowest female percentage of 8% while non-motorized commuters comprised of highest female proportion of 35%.
- 30% of the total participants were from age group 36 to 45 which is the highest overall where as 11% were from age group 18 to 25 which is the lowest.
- Most of the surveyed participants i.e., 47% were involved in business, followed by 25% people involved in service, while only 1% worked as labor.
- 95% of survey participants from Motorized and non-motorized group travelled on daily basis while none of the participants travelled more than one time a day.
- 97% of the surveyed participants of motorized transportation user group were the vehicle owner themselves.

5.2. Analysis of Attributes

The seven attributes (as defined in section 3.6 Attributes) were analyzed as per the nature of the questionnaire (as defined in section 3.2 Classification of Questionnaire). The Likert Scale based questions were used to establish overall Road User Satisfaction ratings and the summary of the results are given in section 5.2.1 Road User Satisfaction. The results from other types of questions such as Yes/No questionnaires, Multiple Choice questionnaires, Marking-Limited Option questionnaires and Subjective questionnaires are analyzed to draw conclusive findings which are summarized in section 5.2.2. Road Users' Opinions.

5.2.1. Road User Satisfaction Score

The average overall satisfaction rating based on various attributes of existing road is determined to be 2.53 (on Likert Scale Rating) equivalent to 51% (on percentile rating).

This rating is derived from the seven key attributes i.e., Road Condition, Traffic and Safety, Infrastructure and Facilities, Accessibility and Connectivity, Emergency Services, Environmental and Aesthetic Aspects, Green Resilient Corridor (GRID Approach) as defined in the section 3.6 of this report. This rating also assumes that all the attributes carry equal weightage.

The average overall satisfaction for motorized transportation users is 2.51 or 50% which is the lowest among the user groups. Non-motorized and governmental and non-governmental organization/ association road users have average overall satisfaction rating of 2.55 (51%) and 2.61 (52%) respectively.

Emergency Services has been rated as the most satisfactory attribute with 3.33 or 67%. Emergency services is the highest rated attribute by all of the three-road user group with satisfaction score of 3.3 (66%), 3.31 (66%) and 3.58 (72%) as rated by motorized, non-motorized and governmental and non-governmental organization/ association road users respectively.

Traffic and Safety is the least satisfactory attribute of the existing road as per the road users with overall satisfaction rating of only 42% or 2.11 rating on Likert Scale. This is the lowest rated attribute for all road user group with rating of 2.07 (41%), 2.17 (43%) and 2.19 (44%) satisfaction rating as rated by motorized, non-motorized and governmental and non-governmental organization/ association road users respectively.



Figure 5.1: Overall Road User Satisfaction

5.2.2. Road Users' Opinions

The data collected from Yes/No questionnaires, Multiple Choice questionnaires, Marking-Limited Option questionnaires and Subjective questionnaires (as defined in 3.2 Classification of Questionnaire) are analyzed and interpreted to draw recommendations for improvement of the quality of the road section. The results drawn from the road user opinion on these types of questions are presented below:

- 48% of the respondents claim that the road section undergoes significant degradation of road quality during adverse weather condition.
- Most of the road users (84%) suggest that the road signs for the safety of road users are inadequate.
- Most of the road users (86%) state that the road signs explaining work-in-progress are placed appropriately.
- Most of the road users (85%) affirm that the police posts and patrolling is available and accessible in the road section.
- Most of the users suggest that the most effective location for road signs would be near to the schools, near hospitals, high accident areas, pedestrian crossings and narrow roads.
- Over speeding is the most responsible cause for unsafe condition in roads and road accidents according to majority of the road users.

- Majority of the respondents say that the public facilities like public toilets or bathrooms, public taps for drinking water, rain shelters cum bus stops are not available along the road section where as majority affirm the availability of services like restaurants/ shops, and medical facilities.
- Majority of the respondents (89%) have voiced the requirement of street lightings along the road section.
- Public places and services like hospitals, police station, colleges and universities take longer time than other public places to reach.
- The time period of 8 AM to 10 AM is the most difficult time to find public transport according to the road users.
- Private hospitals and clinics are the most common medical facilities available along the road section according to the respondents whereas low number of the respondent claim that government hospitals and health posts are available.
- 40% of the road users have claimed to have seen wildlife near the highway section.
- Only 1% of the respondents were aware of any environmental initiatives to protect wildlife related to the highway.

5.3. Non-Responsive Questions

The number of the instances where the respondent opted not to answer certain question is quantified and analysed for comparison. The following results have been deduced from the analysis of non-responsiveness:

- The non-response rate is considerably higher in case of subjective type question (as defined in section 3.2)
- The non-responsiveness in Likert scale-based questions, Yes/No questions, Multiple Choice questions, and Marking – Limited Option questions (as defined in section 3.2) is less than 1%.
- The non-responsiveness is found to be highest in non-motorized commuters and lowest in government and non-government organization/ association road user group.
- 22% of the governmental and non-governmental organization/ association personnel have made complaint to the related authorities regarding problems faced while travelling on the road section while only 3% of motorized transportation user group and 2% of non-motorized commuters have testified to have done so.

6. Results and Recommendations

Based on the data analysis of each component, the results are discussed and the consequent recommendations are incorporated in the respective sections.

6.1. Results

6.1.1. Results from Demographic Analysis

The demographic analysis presents the following results:

- i. The female participation is very low, especially in case of motorized transportation users and in governmental and non-governmental organization/ associations.
- ii. The sample suggested age group of 36 to 45 to cover nearly a third of the road users.
- iii. Most of the road users were involved in business which was followed by other type of sector.
- iv. Majority of the road users had to travel on daily basis.
- v. Majority of the motorized transportation users were the vehicle owner.

6.1.2. Results from Analysis of Attributes

Based on the seven key attributes of the road sections, the average overall satisfaction of the road section is determined to be 2.53 (Likert Scale rating) equivalent to 51% (percentile rating). This can be considered a below par score. The best rated attribute of the road section is Emergency Services with satisfaction rating of 67% or 3.33 on Likert Scale and the worst rated attribute is Traffic and Safety with satisfaction rating of 42% or 2.11 on Likert Scale rating. Motorized road users have shown slightly lower satisfaction level than with average with satisfaction rating 2.51 or 50%.

The road section requires numerous immediate improvements and many key factors need to be addressed during the upgrading.

The detail discussion on each attribute based on the analysis of collected data are mentioned below:

i. Road Condition

The satisfaction score of this attribute stands at 44% or 2.21 on Likert Scale. The road users have expressed significant level of dissatisfaction on the condition of road with all 5 assessment factors, i.e., pothole frequency, visibility/clarity of road markings, efficiency of drainage system, adequacy of road width and existing condition of road surface getting very dissatisfactory ratings from majority of the road users.

Additionally, nearly half of the respondents stated that the road section undergoes significant degradation during adverse weather conditions.

ii. Traffic and Safety

The satisfaction score of this attribute stands at 42% or 2.11 on Likert Scale. This is the lowest satisfaction rating among the seven road attributes. The respondents have demonstrated high level of dissatisfaction on all four criteria that determines the satisfaction rating for this attribute, i.e., congestion on the road, installation status of guard rails on sharp bends and steep slope of the road, accessibility of pedestrian crossing and feeling of safety while travelling.

Majority of the surveyed road users also pointed out that the road signs for safety of road users are not placed adequately. On contrary, majority of the respondents have confirmed the availability/ accessibility of police posts and police patrolling. Majority of the respondents also reported to have seen signs explaining work-in-progress during maintenance/ improvement works.

When asked about most suitable locations for road signs, most of the respondents suggested school and hospital area, high accident areas, at pedestrian crossings and narrow roads. The respondents also attribute

unsafe conditions on roads and road accidents mainly to vehicle drivers' behavior like over-speeding, unusual overtaking, aggressive driving, careless driving, and use of alcohol while driving.

Many road users have suggested widening of road with provisions of proper service lanes, overhead bridges, streetlights, zebra crossings, proper drainage systems, U-turns, road signages, guard-rails and many more. They also suggested timely maintenance of potholes.

iii. Infrastructures and Facilities

The satisfaction score of this attribute stands at 53% or 2.65 on Likert Scale. This attribute has been evaluated based on the availability of road-side facilities like public toilets/ bathrooms, restaurants/ shops for food/ drink, public taps/ drinking water, medical facilities and rain shelter/ bus-stop, along with the accessibility to footpaths, cycling path and lanes and quality and coverage of street lights.

Majority of the respondents state that public toilets/ bathrooms, public taps/ drinking water and rain shelters/ bus-stops are not available around the road vicinity but the ones stating the availability of these services have given medium to low satisfaction score on these facilities. Majority respondents also state that restaurants/ shops for food/ drink and medical facilities are available and have given considerably good ratings to this component. The remaining factors like accessibility to footpaths, cycling path and lanes and quality and coverage of street lights have been rated poorly by majority of the respondents.

Majority of the respondents also propose need of street lightings at various locations with many even stating the requirement of street lightings on whole road section. The responses from commuters on time taken for them to reach various public places and services shows that places like hospitals, police stations, colleges and universities take longer time to reach demonstrating inaccessibility of such places. The respondents have also voted the time period of 8 AM to 10 AM as the most difficult time of the day to find public transport.

iv. Accessibility and Connectivity

The satisfaction score of this attribute stands at 55% or 2.74 on Likert Scale. Out of the five key factors governing the satisfaction rating two sub-attributes, i.e., access provided by the road to key locations and connectivity and access provided by the road to other major roads and highways has got relatively positive response from respondents. The factors like "reliability of the road to reach destination on time" and "trend of travel time over past two years" received very low ratings from respondents and the sub-attribute "signages for directions and distance along the road" got the lowest rating of 2.37 or 47%.

v. Emergency Services

The satisfaction score of this attribute stands at 67% or 3.35 on Likert Scale. This attribute got the highest satisfaction rating among the seven key attributes. The two key factors of this attribute, i.e., accessibility of emergency services and post-crash response along the road has got relatively good ratings from respondents despite getting many negative reviews as well.

The respondents state that the medical facilities for the road users is mainly dependent on Private hospitals and Clinics. Considerably low number of respondents have claimed availability of government hospitals and clinics along the road vicinity.

vi. Environment and Aesthetics

The satisfaction score of this attribute stands at 49% or 2.47 on Likert Scale. Out of the three key factors governing the satisfaction ratings of this attribute, cleanliness of road and surroundings has got relatively positive response from the interviewed people despite larger portion of people giving negative ratings. The other two factors, i.e., noise level and air pollution level of the surroundings have been rated poorly by majority of the respondents.

vii. Green Resilient Corridor (GRID Approach)

The satisfaction score of this attribute stands at 44% or 2.21 on Likert Scale. The attributes “Consideration of safety of wildlife in highway design”, “Adequacy of wildlife crossings such as overpass and underpass”, “Adequacy of signage warning of wildlife crossings”, and “Efforts of highway authorities in addressing wildlife conservation concerns”, got significantly negative ratings from the respondents. Only the road attribute “Road safety in terms of extreme weather, heavy rainfall, floods, landslides etc.” has got relatively positive satisfaction rating despite majority of the respondents negatively rating this attribute as well.

40% of the respondents have claimed to have seen wildlife including Monkey, spotted deer, porcupine, tiger, wild boar, fox, leopard, nilgai, rabbit etc. around the corridor of the road section. When the interviewees were asked if they were aware of any environmental initiatives to protect wildlife, almost all (99%) responded that they were not aware of any such initiatives.

The respondents recommended construction of underpasses and overpasses for wildlife crossing along with implementation of speed limits along forest area with introduction of time card systems on vehicles. The respondents also suggested fencing of highway corridor, plantation of fruit bearing plants and construction of ponds within the jungle to reduce human-wildlife conflicts.

The respondents also suggested on upgrading of highway with construction of Construction of proper and adequately sized cross-drainage structures, side drainage, retaining walls, river training works along with Bio-Engineering works and plantation on sides the road to minimize the effects of natural hazards on the road section.

6.1.3. Results from Non-Responsive Questions Analysis

The non-response rate in the questions with multiple choices or ratings is found to be less than 1%. This is less than the previously anticipated rate of 5%. The questions with higher non-response rate were subjective type questions or extension of main question. This can be considered normal as many people may not have proper knowledge related to the subject and can refuse to make any comments on the subject matter. Alternately, the extension question can become irrelevant based on the response to the main question.

The non-response rate is found to be high in motorized transportation users and non-motorized commuters compared to the governmental and non-governmental organization/ association road user group.

A very small portion of road users from motorized and non-motorized road user group have made complaints to the related authorities regarding problems faced while travelling on the road section. Substantially higher number of governmental and non-governmental organization/ association personnel said that they have made similar complaint. In addition, the response on satisfaction level of the redressal system is also negative (Appendix F, section 1.2).

6.2. Recommendations

The recommendations based on the analysis of collected data and suggestions from the road users to enhance the road condition and road user satisfaction are as follows:

6.2.1. Roadway maintenance

Satisfaction ratings on the road condition and suggestions from many respondents point towards the necessity of regular and proper maintenance of the existing road section along with its ancillary structures. Following factors need to be addressed to ensure efficient and comfortable commuting in the road section:

1. Pavement maintenance:

The satisfaction rating on pothole frequency and existing condition of road surface (section 4.2.1.1 and 4.2.1.5) suggest need of proper system for timely and proper maintenance of the pavement. The ratings collected on user experience including satisfaction ratings on overall quality of road, timely response on road problems, road maintenance works and road quality compared to the other sections (Appendix F, section 1.1, 1.3, 1.4 and 1.5) also provide supporting evidence for necessity of proper maintenance systems. Well trained and equipped workers need to be deployed in the road section to ensure efficient and quality maintenance works. Many respondents claiming significant degradation in road quality during adverse weather condition (section 4.2.1.7) suggests need of special attention in maintenance works during adverse weather conditions like monsoon. Special consideration needs to be given to the locations where road users have claimed to have observed significant degradation during adverse weather condition as listed in section 4.2.1.7 Road Quality During Adverse Weather Condition.

2. Drainage system maintenance:

The low satisfaction level on the efficiency of drainage system (section 4.2.1.3) suggest need of timely clearing, maintenance and upgrading of water outlets in the road section. The drainage system on the road including road side drainages, basins and cross-drainage structures needs to be cleared of debris and the damages to these structures need to be maintained to prevent damages to the road and ancillary structures and to prevent obstructions to the road users during monsoon or flooding. The existing drainage systems also need to be upgraded according to the requirement of the specific locations on road after proper planning and designing.

3. Road markings maintenance:

The visibility and clarity of road marking along the road is rated to be dissatisfactory by most respondents (section 4.2.1.2) which suggests need of periodic remarking of the road pavements. The existing road signages were found to be illegible, rusted or damaged. These road markings and signages need to be maintained, repainted or replaced as per necessity to ensure their visibility, clarity and legibility.

6.2.2. Upgrading of Road Section

A large number of respondents suggested the need of upgrading the road section with additional lanes. The low satisfaction rating on the adequacy of road width and existing condition of road surface (section 4.2.1.4 and 4.2.1.6) reinforces the need of upgrading of the road section. The ratings collected on user experience including satisfaction ratings on overall quality of road and road quality compared to the other sections (Appendix F, section 1.1 and 1.5) further corroborates the need of upgrading.

The respondents suggested that construction needs to be completed at least on a single side of the existing highway before scarifying the existing highway pavement to ensure hassle-free travelling in the road section for the commuters even during the construction period.

The respondents have suggested that the upgraded highway should incorporate international design and construction standards. They also recommended that the upgraded highway should incorporate the following factors:

- i. Efficient side drainage and cross drainage structures
- ii. Service lanes
- iii. Overhead pedestrian bridges
- iv. Streetlights
- v. Traffic lights
- vi. Zebra crossings
- vii. U-turns and intersections at suitable places
- viii. Proper road signages
- ix. Guard-rails
- x. Protection and retaining structures at vulnerable areas

Additionally, the highway design needs to be business and service sector friendly as large number of the road users in the section are engaged in business and service as their occupation (section 4.1.3). This can be achieved by strategic placement of service lanes, U-turns and intersections, overhead pedestrian bridges, zebra crossings, parking areas, roadside amenities etc. These structures and facilities need to be placed at optimum locations after proper study of the area and after careful consideration and coordination with the local concerned authorities. The upgraded highway design must ensure proper connectivity of the highway with other major roads, key locations and highways to further improve the status of accessibility of the road section (as defined in section 4.2.4.1 and 4.2.4.4). The highway design must not only ensure low impact on the connectivity and accessibility of business and service hotspots, they must further facilitate and enhance the business and trade activity in the region. The increase in economic activities in the region can also help mitigate the problems of gender disparity as reported in the survey (section 4.1.1). Also, the upgraded highway design and construction should incorporate all other recommendations mentioned in this section 6.2 Recommendations.

6.2.3. Safety considerations

The road users have shown low confidence regarding safety of travel in this road section which is evident by the low satisfaction rating received on the feeling of safety while travelling on roads (section 4.2.2.4). the following measures have been deduced from the ratings, recommendations and interpretation of the survey results to enhance safety standards of the road section:

1. Guard rails installation

The high level of dissatisfaction shown by road users on the status of guard rail installation on sharp bends and steep slopes of road (section 4.2.2.2) shows need of installation guard rails at required locations to reduce the risks of accidents.

2. Pedestrian and animal crossings

The low rating on accessibility of pedestrian crossings in the road section (section 4.2.2.3) tables the requirement of pedestrian crossings at the road section. The pedestrian crossings need to be added in form of overhead pedestrian bridges or zebra crosses for safety of pedestrians. The zebra crossings however must be added with integration of road signages or traffic lights to ensure safety of pedestrians and drivers.

Wild and domestic animals crossing the road is also a major factor contributing to accidents on the road as per the survey respondents (section 4.2.2.9). So, provisions for wild animal crossing can be done by highway authorities by construction of overpass or underpass, implementation of speed restrictions, etc. the cattle and livestock however need to be managed by the local concerned governing authority.

3. Road signages

There seems to be dire need of installation of road signages for safety of road users as majority of the respondents claim the road signages to be inadequate (section 4.2.2.6). The road signages needs to be placed strategically at the most effective spots to increase the road safety and for efficient traffic management. The surveyed people have mostly suggested school and hospital area, high accident areas, at pedestrian crossings and narrow roads as most effective places for placement of road signages (section 4.2.2.7). The signages also need to be maintained, repainted or replaced as per necessity to ensure their visibility, clarity and legibility at all times to inform road users of potential hazards and assist with safe navigation.

4. Traffic law implementation and awareness programs

Most of the users have attributed unsafe conditions on roads and road accidents mainly to vehicle drivers' behavior like over-speeding, unusual overtaking, aggressive driving, careless driving, and use of alcohol while driving (section 4.2.2.8 and 4.2.2.9). This needs to be addressed by strict enforcement of existing laws and conducting awareness campaigns dedicated to the drivers and pedestrians to ensure all the road users are aware of the traffic rules.

Speed limits need to be introduced at vulnerable road sections, no overtaking zones needs to be properly marked with road markings and signages. The drivers driving under influence of alcohol or other drugs also needs to be checked regularly. Any road user disregarding and breaking these traffic rules should be heavily penalized.

5. Road quality maintenance

The maintenance of pavement is crucial for safety of the commuters as many road users blame bad condition of roads as cause of unsafe road conditions and accidents (section 4.2.2.8 and 4.2.2.9). So, the maintenance of the roads should be done systematically as explained in 6.2.1 Roadway maintenance.

6.2.4. Traffic management

The results from public opinion on congestion of road, reliability of road to reach destination on time and trend of travel over past two years show poor standard of traffic management on the road section (section 4.2.2.1, 4.2.4.2 and 4.2.4.3). Following measures can be adopted to ensure smooth traffic management in the road section.

1. Public transportation

Encouraging use of public transport can be the most effective way to remedy the traffic problems. The survey results of the BGC road section however show that there are time periods in the day where the respondents have faced difficulty in finding public transportation (section 4.2.3.8). So, the distribution and timing of public transport should be planned strategically to address the peak hours and demand of public transportation. Efficient scheduling and reliable distribution of public transport encourages use of these services in commuters. Less people will be encouraged to use private vehicles which will reduce the traffic volume and eventually eases traffic management problems. The standard of the public transportation also needs to be maintained to top notch quality to encourage public transportation usage.

2. Traffic lights

Traffic lights can be very effective in managing the traffic flow at peak hours at the intersections and junctions and these have been recommended by many of the respondents (section 4.2.2.10). So, traffic lights need to be installed at these required places to control flow of traffic where traffic congestions are anticipated.

3. Signages for direction and distance

The signages for direction and distance are very crucial for conveying directions to the road users. These signages can help optimize the flow of traffic. The user satisfaction on this regard however is found to be poor from the survey results (section 4.2.4.5) and needs to be addressed by installing these signages at required locations.

4. Parking areas

Proper parking areas need to be designated for the local and long-distance vehicles to avoid vehicles parking near road pavements. These practices can not only ease traffic congestion, but also reduce road accidents.

6.2.5. Public infrastructures and amenities

Many respondents claim that most of the public infrastructures required for the commuters are not available at the road vicinity whereas the respondents who say these services are available also have demonstrated low level of satisfaction (section 5.4.5). There needs to be proper improvement in the quantity and quality of these services. The required improvements are discussed in following headings:

1. Roadside amenities

The facilities for drinking water, public bathrooms, restaurants and shops, rain shelters and bus stops, parking spots etc. need to be provided at specific distances where the local and long-distance travelers can rest, refresh and use the required services as per their needs. These infrastructures need to be friendly to people of all genders, people with disabilities, infants, children and people of old age. It needs to be ensured that all the amenities and facilities are accessible to everyone by providing wheelchair ramps and making the height and location of these facilities accessible to children and people using wheelchairs. These amenities can be established by attracting public and private sectors to invest in such facilities or the local governmental bodies can also take the responsibility of operating these services.

2. Footpaths

The road users have rated the accessibility to footpaths in the road section very poorly (section 4.2.3.2) which reinforces the need construction of footpaths for safety and convenience of the pedestrians. The footpaths however need to be friendly to people with disability. Tactile paving for blind people and ramps for people with wheelchairs should be incorporated to the footpath design.

3. Cycling lanes

The road user rating on the cycling lanes for the road section is very poor (section 4.2.3.3). So, cycling lanes needs to be introduced which can enhance safety of the cyclist, reduce traffic congestion as well as help encourage people to use cycles and consequently help the environmental initiatives.

4. Street lights

High number of people have recommended the need of street lights which can be corroborated by the ratings given by road users on quality and coverage of street lights and recommendation given by road users for requirement of lightings (section 4.2.3.4 and 4.2.3.6). So, street lights need to be installed at locations where they are required which can consequently enhance safety of the road section.

5. Medical facilities and emergency services

The medical facilities and emergency service require substantial improvements. The ratings on availability and satisfaction rating for medical services, accessibility of emergency services and post-crash response (section 4, 4.2.5.1 and 4.2.5.2). The emergency services like hospitals and police station are less accessible to the public which can be deduced from the data that these places take longer than usual to reach when compared to other public places (section 4.2.3.7). So, efforts need to be made by the concerned authorities to make these services available to public within the least time possible. The

number of hospitals, health posts, ambulance, police posts, police patrolling needs to be increased along with the service quality of these services.

The medical services also are largely dependent on private hospitals and clinics (section 4.2.5.4). The government also needs to setup hospitals and health posts and improve the service quality to provide better, reliable and affordable medical services to the road users.

6.2.6. Complaint Redressal System

The survey data suggests that a very low number of the respondents have made complaint to the related authorities regarding problems faced while travelling on the road section (section 4.2.8). But the majority of the road users who have made these complaints have negatively rated the complaint redressal system (Appendix F, section 1.2).

This user road user behavior and ratings points towards two possible reasons:

- Lack of information to the road users regarding the complaint redressal systems
- Lack of confidence of road users on the responsible road agencies on their concerns being addressed properly or being addressed at all

This situation can be resolved by implementation of following solutions:

1. Establishment of efficient complaint redressal mechanism

The DOR and other responsible road agency need to establish a proper mechanism for addressing the problems from the road user. A team dedicated to receive and address the complaints of the road users needs to be formed comprising of well-equipped and trained personnel. The communication within the redressal team also needs to be efficient for timely addressal of the complaints. The coordination of the responsible road agency with other government bodies like police force, National Disaster Risk Reduction and Management Authority etc. can also be crucial. Toll-free numbers and hotlines can further facilitate the road users in registering complaints.

2. Promotion of the redressal system

The complaint redressal system needs to be promoted to the road users so that they have proper information regarding where to complain in cases of inconveniences regarding road. The complaint redressal system can be promoted using social media, mass media (television, radio, newspaper, etc.), advertisement boards, awareness campaigns, advertisement boards etc.

6.2.7. Maintaining Environment and Aesthetics

Environment and Aesthetics are also necessary to ensure comfortable and enjoyable travelling at highways. The environment and aesthetics attribute are also poorly rated by the road users (section 4.2.6.4). Following measures can be implemented to enhance the environmental and aesthetics standard of the road section:

1. Launching environmental initiatives

The environmental initiatives can include various awareness programs, cleanliness programs around road surrounding, plantation of greenery around the road periphery, installation of dustbins and collection and disposal of these at proper locations. These activities can highly enhance the aesthetics and cleanliness of the road periphery.

2. Emission control of vehicles

Road users have shown low satisfaction with the level of air pollution in the road vicinity (section 4.2.6.3). Strict rules should be implemented regarding emission standards of vehicles on the highway and any vehicles failing these standards need to be restricted from being operated. This practice can greatly improve the air quality.

3. No horn zones and time

Road users have shown low satisfaction with the noise level in the road vicinity as well (section 4.2.6.3). So, use of unnecessary horns needs to be discouraged by implementing no horn zones or time at sensitive locations.

6.2.8. Wildlife and Environmental initiatives

The road users have demonstrated high level of dissatisfaction regarding the wildlife and environmental initiatives at the road section (section 4.2.7.6). Following mitigation measures can be taken to improve status of wildlife and environment:

1. Wildlife crossings

The respondents suggest that safety of wildlife is not considered in highway design and also suggest that the underpass and overpass for the wildlife crossing is highly inadequate. The low satisfaction ratings on consideration of safety of wildlife in highway design and adequacy of wildlife crossings demonstrates this fact (section 4.2.7.1 and 4.2.7.2). The wildlife crossings need to be increased and placed strategically for safety of both commuters and wild animals. Camera trap surveys can be effective tool to located the zones from where the wild animals cross the road. These data can be incorporated into highway design to place underpass or overpass at optimal places to reduce human wildlife interaction.

2. Signages for wildlife crossings

The negative ratings given by the commuters on adequacy of signages warnings or wildlife crossings shows that these signages are not places adequately or properly (section 4.2.7.3). So, these signages need to be placed properly at identified locations of wildlife crossings.

3. Fencing and other alternatives

Fencing of highway corridor at strategic locations, plantation of fruit bearing plants and construction of ponds within the jungle can help reduce human wildlife confrontations.

4. Speed limits and time restriction systems

Implementation of speed limits in wildlife sensitive areas with introduction of time card system can be implemented in the forest areas. The vehicles travelling will be prohibited to cross the forest area before designated time.

5. Promotion of Environmental Initiatives

Most of the road users seem to be unaware of any wildlife and environmental initiatives taken by concerned authorities which can be deduced by the response of the commuters on rating the efforts of highway authorities in addressing wildlife conservation concerns and also from responses on awareness on environmental initiatives (section 4.2.7.4 and 4.2.7.8). New and more effective programs need to be launched for protection of environment and wildlife. Also, these initiatives need to be promoted properly so that all the stakeholders can be benefited by these programs. Better communication with the public about the ongoing environmental initiatives is essential.

7. Conclusion

This final report on Road Base-line Survey of Butwal-Gorusinghe-Chandrauta section has been prepared based on the experiences and learnings of Pilot Survey Report. The Pilot Survey has been a very effective practice in establishing and improving the frameworks of the survey. This report presents the findings from Road Base-line Survey in graphical format to facilitate better visualization and understanding of the results. The results have been updated as per the nature of data to best illustrate all the results in consolidated form.

The results from the survey suggest that the road users are significantly dissatisfied with the existing condition of the road section. Majority of the attributes and the key factors related to them have received poor ratings from the surveyed road users. There are very few factors that the respondents have shown satisfaction with. Many road users also have recommended improvement and upgrading of the existing road section in terms of road width, accessibility, public infrastructures, road furniture and wildlife safety structures. The satisfaction level can be increased only by improvement in status of overall attributes of the road. These results from the data analysis strongly validates the decision of upgrading the Butwal-Gorusinghe-Chandrauta Road section.

Hence, based on the below par satisfaction level expressed by the surveyed road users, this can be safely concluded that the road section requires improvements and upgrading with consideration of all the results and recommendation included in this report. Only by integration of these results and recommendation within the design and scope of road upgrading project, increase in the road users' satisfaction can be expected.

8. Bibliography

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APPENDIX A1: Format of Questionnaires used in the survey for Motorized Transportation Users

Department of Roads

सडक विभाग

Questionnaire for

Road User's Satisfaction Survey along Butwal-Gorusinghe-Chanauta Road

बुटवल-गोरुसिङ्गे-चनौटा सडक प्रयोगकर्ताको सन्तुष्टि सर्वेक्षणको लागि प्रश्नावली

Questionnaire for Motorized Transportation Users

(सवारी चालकका लागि प्रश्नहरु)

Name of Interviewer: _____

Date: _____/_____/_____

अन्तर्वार्ताकर्ताको नाम:

मिति:.....

Details of Survey Station (सर्भे स्टेशनको विवरण)

Name of Road Link: _____

सडक खण्डको नाम

Survey Station No.: _____ District: _____ Village/Town: _____

सर्भे स्टेशन नम्बर

जिल्ला:

गाउँ/सहर

Demographic Information (जनसांख्यिकीय विवरण)

Name of Respondent: _____ Gender: a) Male b) Female c) Others

उत्तरदाताको नाम

लिंग

पुरुष

महिला

अन्य

Age: (a) 18-25 yrs (b) 26-35 yrs (c) 36-45 yrs (d) 46-55 yrs (e) Above 55 yrs

उमेर

१८-२५ वर्ष

२६-३५ वर्ष

३६-४५ वर्ष

४६-५५ वर्ष

५५ वर्ष भन्दा माथि

(Any person below 18 years is not to be interviewed)

(१८ वर्ष भन्दा कम उमेरका कुनै पनि व्यक्तिको अन्तर्वार्ता नलिने)

Driving Experience (years) _____

डाइभिड अनुभव (वर्ष)

Occupation: a) Agriculture b) Business c) Service d) Student e) Labor f) Others _____

पेशा

कृषि

व्यापार

सेवा

विद्यार्थी

मजदूर

अन्य

Type of Vehicle: a) Large Bus b) Mini-Bus c) Micro-bus d) Private Car/Jeep/ Utility Van e) Taxi

(सवारी साधनको प्रकार)

ठूलो बस

मिनि बस

माइक्रो बस

निजि कार / जिप

ट्याक्सी

f) Motorcycle g) Utility vehicle h) Tempo/Auto i) Tractor j) Truck/ Tanker k) others _____

मोटरसाइकल

सामान बोक्ने गाडी

ट्याम्पो/ अटो

ट्याक्टर

ट्रक/ ट्याङ्कर

अन्य

Purpose of Travel a) Business/ Job/ Agricultural work b) Visiting relatives/friends c) Shopping

यात्राको उद्देश्य

व्यापार/ जागिर/ कृषि

आफन्त/ साथीहरुलाई भेट्न

किनमेल

d) Sight-seeing/ Touring/ Leisure

e) Others _____

दर्शनीय स्थल/ पर्यटन/ फुर्सद

अन्य

Is this your own vehicle?

a) Yes

b) No

के तपाईंको आफ्नै गाडी हो ?

हो

होइन

Frequency of Travel: a) Daily b) Weekly c) Occasionally d) More than 1 time a day

यात्राको बारम्बारता

दिन दिनै

हप्ताको १ पटक

कहिले काहिँ

दिनको १ पटक भन्दा धेरै

Road Condition (सडकको अवस्था)

1. How often do you encounter potholes or uneven road surfaces?

तपाईंले खाल्डाहरु र असमान सडक सतहहरु कतिको भेटाउनु हुन्छ ?

a) none

b) Rarely

c) Occasionally

d) Frequently

e) Very Frequently

कतै भेटिदैन

विरलै

कहिलेकाहिँ

बारम्बार

अत्यन्तै बारम्बार

2. How satisfied are you with the visibility and clarity of road markings? तपाईं सडक चिन्हहरूको दृश्यता र स्पष्टतासँग कतिको सन्तुष्ट हुनुहुन्छ ?				
a) Highly satisfied अत्याधिक सन्तुष्ट	b) Satisfied सन्तुष्ट	c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट	d) Dissatisfied असन्तुष्ट	e) Highly dissatisfied अत्याधिक असन्तुष्ट
3. How efficient do you find the drainage system in road? तपाईं सडकमा ड्रेनेज प्रणाली कतिको प्रभावकारी पाउनुहुन्छ ?				
a) Highly efficient अत्याधिक प्रभावकारी	b) Efficient प्रभावकारी	c) Neither Efficient nor Inefficient न प्रभावकारी न अप्रभावकारी	d) Inefficient अप्रभावकारी	e) Highly Inefficient अत्याधिक अप्रभावकारी
4. What do you think about the width of this road? यो सडकको चौडाईको बारेमा तपाईं के सोच्नु हुन्छ ?				
a) Highly adequate अत्याधिक पर्याप्त	b) Adequate पर्याप्त	c) Neither adequate nor inadequate न पर्याप्त न अपर्याप्त	d) Inadequate अपर्याप्त	e) Highly inadequate अत्याधिक अपर्याप्त
5. How satisfied are you with existing condition of the road surfaces? सडकको अवस्था देखि तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?				
a) Highly satisfied अत्याधिक सन्तुष्ट	b) Satisfied सन्तुष्ट	c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट	d) Dissatisfied असन्तुष्ट	e) Highly dissatisfied अत्याधिक असन्तुष्ट
6. Are there any locations along road section where road quality degrades significantly during adverse weather condition? के यस सडकमा प्रतिकूल मौसमका बेला बाटो अवरुद्ध हुने स्थानहरू छन् ?				
a) Yes छन्	b) No छैनन्	Mention Location (if there is any) _____ छन् भने उल्लेख गर्नुहोस्		
Traffic and Safety (सवारी र सुरक्षा)				
7. How is vehicle congestion on this road? यो सडकमा सवारी साधनको चाप कस्तो छ ?				
a) Absolutely free from congestion भीडभाडले पूर्ण रूपमा मुक्त	b) Free from congestion भीडभाड मुक्त	c) Neither free nor congested न त भीडभाड मुक्त न त भीडभाड भएको	d) Congested भीडभाड भएको	e) Highly congested अत्याधिक भीडभाड भएको
8. How satisfied are you with the installation of guard rails on sharp bends and steep slopes of roads? अफ्यारो मोडहरू र ठाडो सडक छेउमा राखिएका बारहरूबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?				
a) Highly satisfied अत्याधिक सन्तुष्ट	b) Satisfied सन्तुष्ट	c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट	d) Dissatisfied असन्तुष्ट	e) Highly dissatisfied अत्याधिक असन्तुष्ट
9. How accessible do you find pedestrian crossing along the roads? तपाईं सडकमा पैदल यात्रीको लागि बाटो काट्ने स्थान कतिको पहुँचयोग्य पाउनुहुन्छ ?				
a) Highly accessible उच्च पहुँचयोग्य	b) Accessible पहुँचयोग्य	c) Neither Accessible nor Inaccessible न पहुँचयोग्य न पहुँच बाहिर	d) Inaccessible पहुँच बाहिर	e) Highly Inaccessible अत्याधिक पहुँच बाहिर
10. Are road signs adequately placed to enhance the safety of road users? सडक प्रयोगकर्ताको सुरक्षाको लागि सडक चिन्हहरू पर्याप्त मात्रामा राखिएका छन् ?				
			a) Yes छन्	b) No छैनन्

11. Where do you find the road signs most effective? **(Multiple Choice Question)**

सडक चिन्हहरु सबै भन्दा प्रभावकारी कुन ठाउँमा पाउनु हुन्छ ?

SN क्र.सं.	Road sign (सडक संकेत)	Tick (चिन्ह लाउनुहोस्)
1	Near to the school (विद्यालय नजिक)	
2	Near to the hospital (अस्पताल नजिक)	
3	Narrow road (साँघुरो बाटो)	
4	Sharp bends (अप्यारो मोडहरु)	
5	Pedestrian crossing (पैदलयात्रीले बाटो काट्ने स्थान)	
6	Speed breaker (स्पीड ब्रेकर)	
7	Landslide/hazardous area (पहिरो तथा अन्य जोखिमपूर्ण क्षेत्रहरु)	
8	High accident area (उच्च दुर्घटना क्षेत्र)	
9	Others (अन्य) _____	

12. Considering the safety aspect mark the following factors (*Note-1 for most unsafe and 5 for least unsafe factor*)

सुरक्षा पक्षलाई मध्यनजर राख्दै निम्न कारकहरु अंक दिनुहोस् (नोट-सबैभन्दा असुरक्षितको लागि १ र कम असुरक्षितको लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक) 1 for most unsafe and 5 for least unsafe
1	Over speed (तिब्र गति)	
2	Unusual overtaking (जथाभावी ओभरटेक)	
3	Heavy goods carrying vehicles (भारी सामान बोक्ने गाडीहरु)	
4	Lack of awareness of traffic rules (ट्राफिक नियम सम्बन्धि चेतनाको अभाव)	
5	Bad condition of road (सडकको खराब अवस्था)	
6	Absence of sufficient road signs (प्रयाप्त सडक संकेतहरुको अभाव)	
7	Aggressive driving (आक्रामिक ड्राइभिङ)	
8	Narrow road (साँघुरो बाटो)	
9	Careless driving (लापरवाही ड्राइभिङ)	
10	Unfit vehicles (अयोग्य गाडीहरु)	

13. How safe do you feel while traveling on these roads?

यस सडकमा यात्रा गर्दा तपाईं कतिको सुरक्षित महसुस गर्नुहुन्छ ?

a) Very safe b) Safe c) Neither safe nor unsafe d) Unsafe e) Very unsafe
 धेरै सुरक्षित सुरक्षित न सुरक्षित न असुरक्षित असुरक्षित धेरै असुरक्षित

A1 Questionnaire for **Motorized Transportation Users**

14. In your opinion, which of the following factors lead to most of the accidents? Mark the following factors.

(Note-1 for most accident-causing factor and 5 for least accident-causing factor.)

तलका मध्ये कुन कारणले बढी दुर्घटना निम्त्याउछ ? (सबैभन्दा बढी दुर्घटना निम्त्याउने कारणका लागि १ र कमका लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक) 1 for most accident-causing factor and 5 for least accident-causing factor
1	High speed (तिब्र गति)	
2	Bad weather (खराब मौसम)	
3	Bad Condition of road (सडकको खराब अवस्था)	
4	Pedestrian crossing (पैदल यात्रीले बाटो काट्नु)	
5	Wild/ domestic animal crossing (जङ्गली / घरेलु जनावरले बाटो काट्नु)	
6	Absence of sign at dangerous location (जोखिमपूर्ण स्थानमा संकेतको अभाव)	
7	Use of alcohol while driving (गाडी चलाउँदा मादक पदार्थको सेवन)	
8	Increase in number of vehicles (सवारी साधनको संख्यामा वृद्धि)	
9	Absence of street light (सडक बत्तिको अभाव)	

15. In your opinion, what can be done to enhance safety of roads?

तपाईंको विचारमा सडकको सुरक्षा बढाउन के गर्न सकिन्छ ?

16. Whenever there is any maintenance/improvement works in this road section, do you find appropriate sign/s explaining the work-in-progress?

यस सडकमा कुनै पनि मर्मत/सुधार कार्यहरु हुँदा उपयुक्त चिन्हहरु प्रयोग भएको फेला पार्नुहुन्छ ?

a) Yes

b) No

पाछु

पार्दिन

17. Do you find the availability and accessibility of police posts/ Police patrolling vehicle on this road?

के यस सडकमा प्रहरी चौकी-प्रहरी गस्ती गाडीहरु उपलब्ध छन् ?

a) Yes

b) No

छन्

छैनन्

Infrastructure and Facilities (सडकका पूर्वाधार र सुविधाहरु)

18. Do you find following facilities along this road? What is your satisfaction level on these facilities?

‘5’ for ‘very satisfied’

‘4’ for ‘satisfied’,

‘3’ for ‘neither satisfied nor dissatisfied’,

‘2’ for ‘Dissatisfied’,

‘1’ for ‘very dissatisfied’

के तपाईंले यस सडकमा निम्न सुविधाहरु भेट्नुहुन्छ? यी सुविधाहरु प्रति तपाईंको सन्तुष्टिको स्तर के छ ?

अत्याधिक सन्तुष्टका लागि ‘५’

सन्तुष्टका लागि ‘४’

न सन्तुष्ट न असन्तुष्टका लागि ‘३’

असन्तुष्टका लागि ‘२’

अत्याधिक असन्तुष्टका लागि ‘१’

SN क्र.सं.	Facilities (सुविधाहरु)	Do you find the facilities? के तपाईंले सुविधाहरु भेट्नुहुन्छ?		Satisfaction Level सन्तुष्टि स्तर
		Yes भेट्छु	No भेट्दिन	
1	Public toilets/ bathrooms (सार्वजनिक शौचालय / बाथरुम)	☐	☐	
2	Restaurants/ shops for food/ drinks (खाना खाने होटल/ रेष्टुरेन्ट)	☐	☐	
3	Public taps/ Drinking Water (सार्वजनिक धारा/ पिउने पानी)	☐	☐	
4	Medical facilities (स्वास्थ्य सुविधा)	☐	☐	
5	Rain shelter-cum-Bus stop (वर्षा आश्रय - बस विसौनी)	☐	☐	
6	Others (अन्य)	☐	☐	

19. How long does it take when you want to make a travel to different public places?

तपाईंलाई विभिन्न सार्वजनिक सुविधाको स्थानमा पुग्नको लागि कतिको समय लाग्दछ?

SN क्र.सं.	Places (स्थानहरु)	Time (समय)	
		Hours घन्टा	Minute मिनेट
1	Reach to the Primary school (प्राथमिक स्कूल पुग्न)		
2	Reach Higher Secondary School (उच्च माध्यमिक विद्यालय पुग्न)		
3	Reach Colleges/Universities (विश्वविद्यालय पुग्न)		
4	Reach to the hospital (अस्पताल पुग्न)		
5	Reach to the market (बजार पुग्न)		
6	Reach to Police Station (प्रहरी चौकी पुग्न)		
7	Reach to Ward Office (वडा कार्यालय पुग्न)		

20. What time of the day is the most difficult for you to find public transport facilities in this road?

यो सडकमा सार्वजनिक यातायात सुविधा लिन तपाईंलाई दिनको कुन समय सबैभन्दा गाह्रो हुन्छ ?

- | | | | |
|---------------------|----------------|-----------------------|------------------------|
| a) 5am–8am | b) 8am–10am | c) 10am–12pm | d) 12pm–4pm |
| विहान ५-८ बजे | विहान ८-१० बजे | विहान १०-१२ बजे | दिउँसो १२ - साँझ ४ बजे |
| e) 4pm–8pm | f) 8pm–10pm | g) Beyond 10pm | |
| साँझ ४ - राति ८ बजे | राति ८-१० बजे | राति १० बजे भन्दा पछि | |

21. How accessible do you find footpaths along the roads?

यस सडकमा फुटपाथ कतिको पहुँचयोग्य पाउनुहुन्छ ?

- | | | |
|--|-----------------|------------------------|
| a) Highly accessible | b) Accessible | |
| उच्च पहुँचयोग्य | पहुँचयोग्य | |
| c) Neither Accessible nor Inaccessible | d) Inaccessible | e) Highly Inaccessible |
| न पहुँचयोग्य न पहुँच बाहिर | पहुँच बाहिर | अत्याधिक पहुँच बाहिर |

22. How satisfied are you with the accessibility of cycling path and lanes?

तपाईं साइकल मार्ग र लेनहरुको पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

23. How satisfied are you with the quality and coverage of street lights on the road?

तपाईं सडकमा सडक बत्तिको गुणस्तर र पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

24. Are there any specific locations along road section that needs lightings?

यस सडक खण्डमा बत्तिको आवश्यक पर्ने कुनै विशेष स्थानहरु छन् ?

- | | |
|--------|-------|
| a) Yes | b) No |
| छन् | छैनन् |

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

Accessibility and Connectivity (सडकको पहुँच)

25. How satisfied are you with the access provided by this road to key locations like work places/ residence/ shops/ school/ hospital/farms?

यो सडकको कारणले काम गर्ने ठाउँ/बासस्थान/पसल/विद्यालय/अस्पताल फार्म जस्ता ठाउँहरु पुग्नका लागि गरेको प्रभाव प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

26. How reliable is this road to reach your destination on time?

समयमै गन्तव्यमा पुग्नको लागि यो बाटो कतिको भरपर्दो छ ?

- | | | | | |
|--------------------|-------------|------------|----------------|-------------------------|
| a) Highly reliable | b) Reliable | c) Neutral | d) Unreliable | e) Highly unreliable |
| अत्याधिक भरपर्दो | भरपर्दो | तटस्थ | भर पर्न नसकिने | अत्याधिक भर पर्न नसकिने |

27. What do you feel about the trend of travel time along this road section over past two years?

विगत दुई वर्षमा यस सडक खण्डमा यात्राको समयको प्रवृत्तिको बारेमा तपाईंलाई कस्तो लाग्छ ?

- a) Substantially reduced b) Reduced marginally c) Remained same d) Increased e) Increased substantially
पर्याप्त मात्रामा घटेको थोरै घटेको उस्तै रहेको बढेको उल्लेख्य रूपमा बढेको

28. How satisfied are you with the connectivity and access provided by this road to other major roads and highways?

यस सडकले प्रदान गरेको अन्य प्रमुख सडकहरु सँगको पहुँच प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

29. How satisfied are you with the signages for directions and distance along the road?

यस सडकमा रहेको दिशा र दूरीको बारेमा जानकारी दिने संकेतहरु प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

30. How has this road contributed in improving the local economy and business?

आर्थिक गुणस्तर र व्यापार बढाउन यस सडक कतिको प्रभावकारी रहेको छ ?

- a) Highly efficient b) Efficient c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्याधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्याधिक अप्रभावकारी

Emergency Services (आपतकालिन सुविधाहरु)

31. What type of medical facilities does the road user get on this road?

सडक प्रयोगकर्ताले यस सडक खण्डमा कस्ता स्वास्थ्य सुविधाहरु पाउँछन् ?

- a) Govt. hospital b) Private hospital c) Health posts d) Clinic e) None of above
सरकारी अस्पताल निजी अस्पताल स्वास्थ्य चौकी क्लिनिक कुनै पनि छैनन्

32. How satisfied are you with the accessibility of emergency services such as ambulances and fire truck, to different parts of the community?

समुदायमा एम्बुलेन्स तथा दमकल जस्ता आपतकालीन सुविधाहरुको पहुँचबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

33. What do you think about the post-crash response when an accident occurs on this road?

यस सडकमा दुर्घटना हुँदा दुर्घटना पछिको प्रतिक्रियाको बारे तपाईं के सोच्नु हुन्छ ?

- a) Very quick b) Quick c) Neither quick nor slow d) Slow e) Very slow
धेरै चाँडो चाँडो न चाँडो न ढिलो ढिलो धेरै ढिलो

User Experience (प्रयोगकर्ताको अनुभव)

34. How satisfied are you with the overall quality of roads?

सडकको समग्र गुणस्तर प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

35. Do you know who is responsible for road maintenance work?

के तपाईंलाई सडक मर्मतको जिम्मेवारी कसको हो भन्ने कुरा थाहा छ ?

- a) DoR b) DoLIDAR/DDC c) Municipality d) Any other agency _____ e) Do not know
सडक विभाग जि.वि.स. नगरपालिका / गाउँपालिका अन्य निकायहरु थाहा छैन

36. Have you ever made complaint to Government/Road authorities regarding any type of problem faced while traveling on this road?

के तपाईंले यस सडकमा यात्रा गर्दा भोग्नुभएका समस्याहरु बारे सडक अधिकारीहरूसँग कहिल्यै गुनासो गर्नुभएको छ ?

- a) Yes b) No
छ छैन

37. If yes, how satisfied are you with the complaint redressal system of DoR/Road agencies?

यदि छ भने, सडक विभाग/ सडक निकायहरुको गुनासो निवारण प्रणालीसँग कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

38. How satisfied are you with DOR or responsible road agencies resolving maintenance, quality and repairing related problem in time?

सडक मर्मत र गुणस्तर सम्बन्धि समस्याहरु समयमै समाधान गर्ने सडक विभाग र अन्य जिम्मेवार निकायहरुको कार्यबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

39. How satisfied are you with the road maintenance work?

तपाईं सडक मर्मतको कार्यबाट कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

40. Are there any specific locations where road maintenance is needed?

a) Yes b) No

सडक मर्मत गर्नुपर्ने कुनै खास स्थानहरु छन् ?

छन्

छैनन्

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

41. Are there any innovative solutions or technologies you believe could improve road quality?

के तपाईंलाई सडकको गुणस्तर सुधार गर्ने कुनै नयाँ प्रविधिबारे जानकारी छ ?

42. What specific improvements would you suggest to enhance the quality or serviceability of this road?

सडकको गुणस्तर तथा सेवा क्षमता वृद्धि गर्न के सुझाव दिन चाहनु हुन्छ ?

43. How satisfied are you with the quality of this road in comparison with other road sections in the region?

यस क्षेत्रका अन्य सडकको तुलनामा यस सडकको गुणस्तर सँग कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

Environment and Aesthetic Aspects (सडक वरपरको वातावरण र शौन्दर्यता)

44. How satisfied are you with the cleanliness of the road and surroundings?

तपाईं यस सडकको सरसफाईबाट कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

45. What do you feel about the noise level generated by the traffic in this road?

यस सडकमा गुड्ने सवारीबाट निस्कने ध्वनीको चाप तपाईं कतिको महसुस गर्नुहुन्छ ?

a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

46. What do you feel about the level of air pollution in this road?

यस सडकमा भएको वायु प्रदुषणको मात्रा प्रति तपाईंको धारणा के छ ?

a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

Green Resilient Corridor (GRID Approach)

47. Have you ever encountered wildlife on or near the highway? a) Yes b) No
के तपाईंले कहिल्यै राजमार्गमा वा नजिक वन्यजन्तु देख्नु भएको छ छन् छैनन्

48. If yes, name the animal you most see during the travel?
यदि छ भने, यात्रा गर्दा सबैभन्दा बढि कुन जनावरहरु देख्नुहुन्छ ?

49. If yes, describe the nature of the encounter. (e.g., crossing the road, accident, near-miss accident).
यदि देख्नु भएको छ भने वन्यजन्तु भेट्दाको प्रकृतिको वर्णन गर्नुहोस् (जस्तै बाटो पार गर्दै, दुर्घटनामा परेको, दुर्घटनाको निकट)

50. In your opinion, how well does the highway design consider the safety of wildlife?

सडकको डिजाइन वन्यजन्तुको सुरक्षाको लागि कतिको प्रभावकारी पाउनुहुन्छ ?

a) Highly effective b) Effective c) Neutral d) Ineffective e) Very Ineffective
अत्याधिक प्रभावकारी प्रभावकारी तटस्थ अप्रभावकारी अत्याधिक अप्रभावकारी

51. Do you believe that the highway has adequate wildlife crossings such as Overpass and Underpass?

के तपाईं यस राजमार्गमा वन्यजन्तुलाई बाटो माथि तथा बाटो मुनिबाट क्रसिंग गर्नको लागि पुलहरु पर्याप्त रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

a) Fully Agreed b) Agreed c) Neutral d) Disagree e) Fully Disagree
पूर्ण सहमत सहमत तटस्थ असहमत अत्याधिक असहमत

52. Do you believe that the highway has adequate signage warning of wildlife crossings?

के तपाईं यस राजमार्गमा वन्यजन्तु क्रसिंगको लागि चेतावनी दिने पर्याप्त साईनबोर्डहरु रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

a) Fully Agreed b) Agreed c) Neutral d) Disagree e) Fully Disagree
पूर्ण सहमत सहमत तटस्थ असहमत अत्याधिक असहमत

53. What improvements would you suggest to enhance road safety and reduce human-wildlife conflicts?

सडक सुरक्षालाई सुधार्न र मानव वन्यजन्तु द्वन्द्वलाई कम गर्न के के सुधारहरुको सुझाव दिन चाहनुहुन्छ?

54. Are you aware of any environmental initiatives to protect wildlife related to this highway?

के तपाईंलाई यो राजमार्गसँग सम्बन्धित कुनै वन्यजन्तुको संरक्षणमा केन्द्रित वातावरणीय प्रयासहरु भएको थाहा छ कि छैन ?

a) Yes छ b) No छैन

55. How would you rate the efforts of the highway authorities in addressing wildlife conservation concerns?

वन्यजन्तु संरक्षण गर्न सडक विभाग र सडक सम्बन्धि अधिकारीहरुको प्रयासलाई तपाईं कसरी मूल्यांकन गर्नुहुन्छ ?

a) Excellent b) Good c) Fair d) Poor e) Very Poor
उत्कृष्ट राम्रो मध्यम खराब धेरै खराब

56. How do you feel about the safety of the road in terms of extreme weather, heavy rainfall, floods, landslides, etc.?

अत्याधिक मौसम, भारी वर्षा, बाढी, पहिरो आदि दृष्टिकोणबाट सडकको सुरक्षाबारे तपाईंको धारणा कस्तो छ ?

a) Very Safe b) Safe c) Neutral d) Unsafe e) Very Unsafe
धेरै सुरक्षित सुरक्षित तटस्थ असुरक्षित धेरै असुरक्षित

57. What do you think the government should do to prevent such disasters on highways?

यस्ता विपत्तिहरुबाट राजमार्गलाई जोगाउन सरकारले के गर्नु पर्छ होला ?

APPENDIX A2: Format of Questionnaires used in the survey for Non-Motorized Commuters

Department of Roads

सडक विभाग

Questionnaire for**Road User's Satisfaction Survey along Butwal-Gorusinghe-Chanauta Road**

बुटवल-गोरुसिङ्गे-चनौटा सडक प्रयोगकर्ताको सन्तुष्टि सर्वेक्षणको लागि प्रश्नावली

Questionnaire for Non-Motorized Commuters

(सवारी साधन नचलाउने सडक प्रयोगकर्ताका लागि प्रश्नहरु)

Name of Interviewer: _____

Date: _____/_____/_____

अन्तर्वार्ताकर्ताको नाम:

मिति:.....

Details of Survey Station (सर्भे स्टेशनको विवरण)

Name of Road Link: _____

सडक खण्डको नाम

Survey Station No.: _____ District: _____ Village/Town: _____

सर्भे स्टेशन नम्बर

जिल्ला:

गाउँ/सहर

Demographic Information (जनसांख्यिकीय विवरण)

Name of Respondent: _____	Gender: a) Male	b) Female	c) Others
उत्तरदाताको नाम	लिंग	पुरुष	महिला अन्य

Age:	(a) 18-25 yrs	(b) 26-35 yrs	(c) 36-45 yrs	(d) 46-55 yrs	(e) Above 55 yrs
उमेर	१८-२५ वर्ष	२६-३५ वर्ष	३६-४५ वर्ष	४६-५५ वर्ष	५५ वर्ष भन्दा माथि

(Any person below 18 years is not to be interviewed)

(१८ वर्ष भन्दा कम उमेरका कुनै पनि व्यक्तिको अन्तर्वार्ता नलिने)

Occupation: a) Agriculture	b) Business	c) Service	d) Student	e) Labor	f) Others
पेशा	कृषि	व्यापार	सेवा	विद्यार्थी	मजदूर अन्य

Road User Type:	a) Pedestrians	b) Local Residents/ Entrepreneurs	c) Farmers	e) Market Consumers
सडक प्रयोगकर्ता किसिम	पैदल यात्री	स्थानिय बासिन्दा/उद्यमी	किसान	उपभोक्ता
	d) Passengers	f) Cyclists	g) Teachers/Students	h) Pilgrims/Tourists
	यात्रु	साइकल चालक	शिक्षक, विद्यार्थी	तिर्थयात्री, पर्यटक

Purpose of Travel	a) Business/ Job/ Agricultural work	b) Visiting relatives/friends	c) Shopping
यात्राको उद्देश्य	व्यापार/जागिर/कृषि	आफन्त/साथीहरुलाई भेट्न	किनमेल
	d) Sight-seeing/ Touring/ Leisure	e) Others	
	दर्शनीय स्थल/पर्यटन/फुर्सद	अन्य	

Frequency of Travel:	a) Daily	b) Weekly	c) Occasionally	d) More than 1 time a day
यात्राको बारम्बारता	दिन दिनै	हप्ताको १ पटक	कहिले काहिँ	दिनको १ पटक भन्दा धेरै

Road Condition (सडकको अवस्था)

1. How often do you encounter potholes or uneven road surfaces?

तपाईंले खाल्डाहरु र असमान सडक सतहहरु कतिको भेटाउनु हुन्छ ?

a) none	b) Rarely	c) Occasionally	d) Frequently	e) Very Frequently
कतै भेटिदैन	विरलै	कहिलेकाहिँ	बारम्बार	अत्यन्तै बारम्बार

2. How satisfied are you with the visibility and clarity of road markings?

तपाईं सडक चिन्हहरुको दृश्यता र स्पष्टतासँग कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

3. How efficient do you find the drainage system in road? यस सडकमा ड्रेनेज प्रणाली कतिको प्रभावकारी पाउनुहुन्छ ?				
a) Highly efficient अत्याधिक प्रभावकारी	b) Efficient प्रभावकारी	c) Neither Efficient nor Inefficient न प्रभावकारी न अप्रभावकारी	d) Inefficient अप्रभावकारी	e) Highly Inefficient अत्याधिक अप्रभावकारी
4. What do you think about the width of this road? यो सडकको चौडाईको बारेमा तपाईं के सोच्नु हुन्छ ?				
a) Highly adequate अत्याधिक पर्याप्त	b) Adequate पर्याप्त	c) Neither adequate nor inadequate न पर्याप्त न अपर्याप्त	d) Inadequate अपर्याप्त	e) Highly inadequate अत्याधिक अपर्याप्त
5. How satisfied are you with existing condition of the road surfaces? सडकको अवस्था देखि तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?				
a) Highly satisfied अत्याधिक सन्तुष्ट	b) Satisfied सन्तुष्ट	c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट	d) Dissatisfied असन्तुष्ट	e) Highly dissatisfied अत्याधिक असन्तुष्ट
6. Are there any locations along road section where road quality degrades significantly during adverse whether condition? के यस सडकमा प्रतिकूल मौसमका बेला बाटो अवरुद्ध हुने स्थानहरू छन् ?				
a) Yes छन्	b) No छैनन्	Mention Location (if there is any) _____ छन् भने उल्लेख गर्नुहोस्		
Traffic and Safety (सवारी र सुरक्षा)				
7. How is vehicle congestion on this road? यो सडकमा सवारी साधनको चाप कस्तो छ ?				
a) Absolutely free from congestion भीडभाडले पूर्ण रुपमा मुक्त	b) Free from congestion भीडभाड मुक्त	c) Neither free nor congested न त भीडभाड मुक्त न त भिडभाड भएको	d) Congested भीडभाड भएको	e) Highly congested अत्याधिक भीडभाड भएको
8. How satisfied are you with the installation of guard rails on sharp bends and steep slopes of roads? अप्यारो मोडहरू र ठाडो सडक छेउमा राखिएका बारहरूबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?				
a) Highly satisfied अत्याधिक सन्तुष्ट	b) Satisfied सन्तुष्ट	c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट	d) Dissatisfied असन्तुष्ट	e) Highly dissatisfied अत्याधिक असन्तुष्ट
9. How accessible do you find pedestrian crossing along the roads? तपाईं सडकमा पैदल यात्रीको लागि बाटो काट्ने स्थान कतिको पहुँचयोग्य पाउनुहुन्छ ?				
a) Highly accessible उच्च पहुँचयोग्य	b) Accessible पहुँचयोग्य	c) Neither Accessible nor Inaccessible न पहुँचयोग्य न पहुँच बाहिर	d) Inaccessible पहुँच बाहिर	e) Highly Inaccessible अत्याधिक पहुँच बाहिर
10. Are road signs adequately placed to enhance the safety of road users? सडक प्रयोगकर्ताको सुरक्षाको लागि सडक चिन्हहरू पर्याप्त मात्रामा राखिएका छन् ?				
			a) Yes छन्	b) No छैनन्

11. Where do you find the road signs most effective? **(Multiple Choice Question)**

सडक चिन्हहरु सबै भन्दा प्रभावकारी कुन ठाउँमा पाउनु हुन्छ ?

SN क्र.सं.	Road sign (सडक संकेत)	Tick (चिन्ह लाउनुहोस्)
1	Near to the school (विद्यालय नजिक)	
2	Near to the hospital (अस्पताल नजिक)	
3	Narrow road (साँघुरो बाटो)	
4	Sharp bends (अप्यारो मोडहरु)	
5	Pedestrian crossing (पैदलयात्रीले बाटो काट्ने स्थान)	
6	Speed breaker (स्पीड ब्रेकर)	
7	Landslide/hazardous area (पहिरो तथा अन्य जोखिमपूर्ण क्षेत्रहरु)	
8	High accident area (उच्च दुर्घटना क्षेत्र)	
9	Others (अन्य) _____	

12. Considering the safety aspect mark the following factors (*Note-1 for most unsafe and 5 for least unsafe factor*)

सुरक्षा पक्षलाई मध्यनजर राख्दै निम्न कारकहरु अंक दिनुहोस् (नोट-सबैभन्दा असुरक्षितको लागि १ र कम असुरक्षितको लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक) 1 for most unsafe and 5 for least unsafe
1	Over speed (तिब्र गति)	
2	Unusual overtaking (जथाभावी ओभरटेक)	
3	Heavy goods carrying vehicles (भारी सामान बोक्ने गाडीहरु)	
4	Lack of awareness of traffic rules (ट्राफिक नियम सम्बन्धि चेतनाको अभाव)	
5	Bad condition of road (सडकको खराब अवस्था)	
6	Absence of sufficient road signs (प्रयाप्त सडक संकेतहरुको अभाव)	
7	Aggressive driving (आक्रामिक ड्राइभिङ)	
8	Narrow road (साँघुरो बाटो)	
9	Careless driving (लापरवाही ड्राइभिङ)	
10	Unfit vehicles (अयोग्य गाडीहरु)	

13. How safe do you feel while traveling on these roads?

यस सडकमा यात्रा गर्दा तपाईं कतिको सुरक्षित महसुस गर्नुहुन्छ ?

a) Very safe b) Safe c) Neither safe nor unsafe d) Unsafe e) Very unsafe
 धेरै सुरक्षित सुरक्षित न सुरक्षित न असुरक्षित असुरक्षित धेरै असुरक्षित

14. In your opinion, which of the following factors lead to most of the accidents? Mark the following factors.

(Note-1 for most accident-causing factor and 5 for least accident-causing factor.)

तलका मध्ये कुन कारणले बढी दुर्घटना निम्त्याउछ ? (सबैभन्दा बढी दुर्घटना निम्त्याउने कारणका लागि १ र कमका लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक) 1 for most accident-causing factor and 5 for least accident-causing factor
1	High speed (तिब्र गति)	
2	Bad weather (खराब मौसम)	
3	Bad Condition of road (सडकको खराब अवस्था)	
4	Pedestrian crossing (पैदल यात्रीले बाटो काट्नु)	
5	Wild/ domestic animal crossing (जङ्गली / घरेलु जनावरले बाटो काट्नु)	
6	Absence of sign at dangerous location (जोखिमपूर्ण स्थानमा संकेतको अभाव)	
7	Use of alcohol while driving (गाडी चलाउँदा मादक पदार्थको सेवन)	
8	Increase in number of vehicles (सवारी साधनको संख्यामा वृद्धि)	
9	Absence of street light (सडक बत्तिको अभाव)	

15. In your opinion, what can be done to enhance safety of roads?

तपाईंको विचारमा सडकको सुरक्षा बढाउन के गर्न सकिन्छ ?

16. Whenever there is any maintenance/improvement works in this road section, do you find appropriate sign/s explaining the work-in-progress?

यस सडकमा कुनै पनि मर्मत/सुधार कार्यहरु हुँदा उपयुक्त चिन्हहरु प्रयोग भएको फेला पार्नुहुन्छ ?

a) Yes

b) No

पार्छु

पार्दिन

17. Do you find the availability and accessibility of police posts/ Police patrolling vehicle on this road?

के यस सडकमा प्रहरी चौकी-प्रहरी गस्ती गाडीहरु उपलब्ध छन् ?

a) Yes

b) No

छन्

छैनन्

Infrastructure and Facilities (सडकका पूर्वाधार र सुविधाहरु)

18. Do you find following facilities along this road? What is your satisfaction level on these facilities?

'5' for 'very satisfied'

'4' for 'satisfied',

'3' for 'neither satisfied nor dissatisfied',

'2' for 'Dissatisfied',

'1' for 'very dissatisfied'

के तपाईंले यस सडकमा निम्न सुविधाहरु भेट्नुहुन्छ? यी सुविधाहरु प्रति तपाईंको सन्तुष्टिको स्तर के छ ?

अत्याधिक सन्तुष्टका लागि '५'

सन्तुष्टका लागि '४'

न सन्तुष्ट न असन्तुष्टका लागि '३'

असन्तुष्टका लागि '२'

अत्याधिक असन्तुष्टका लागि '१'

SN क्र.सं.	Facilities (सुविधाहरु)	Do you find the facilities? के तपाईंले सुविधाहरु भेट्नुहुन्छ?		Satisfaction Level सन्तुष्टि स्तर
		Yes भेट्छु	No भेट्दिन	
1	Public toilets/ bathrooms (सार्वजनिक शौचालय / बाथरूम)	☐	☐	
2	Restaurants/ shops for food/ drinks (खाना खाने होटल/ रेष्टुरेन्ट)	☐	☐	
3	Public taps/ Drinking Water (सार्वजनिक धारा/ पिउने पानी)	☐	☐	
4	Medical facilities (स्वास्थ्य सुविधा)	☐	☐	
5	Rain shelter-cum-Bus stop (वर्षा आश्रय - बस विसौनी)	☐	☐	
6	Others (अन्य)	☐	☐	

19. How long does it take when you want to make a travel to different public places?

तपाईंलाई विभिन्न सार्वजनिक सुविधाको स्थानमा पुग्नको लागि कतिको समय लाग्दछ?

SN क्र.सं.	Places (स्थानहरु)	Time (समय)	
		Hours घन्टा	Minute मिनेट
1	Reach to the Primary school (प्राथमिक स्कूल पुग्न)		
2	Reach Higher Secondary School (उच्च माध्यमिक विद्यालय पुग्न)		
3	Reach Colleges/Universities (विश्वविद्यालय पुग्न)		
4	Reach to the hospital (अस्पताल पुग्न)		
5	Reach to the market (बजार पुग्न)		
6	Reach to Police Station (प्रहरी चौकी पुग्न)		
7	Reach to Ward Office (वडा कार्यालय पुग्न)		

20. What time of the day is the most difficult for you to find public transport facilities in this road?

यो सडकमा सार्वजनिक यातायात सुविधा लिन तपाईंलाई दिनको कुन समय सबैभन्दा गाह्रो हुन्छ ?

- | | | | |
|---------------------|----------------|-----------------------|------------------------|
| a) 5am-8am | b) 8am-10am | c) 10am-12pm | d) 12pm-4pm |
| विहान ५-८ बजे | विहान ८-१० बजे | विहान १०-१२ बजे | दिउँसो १२ - साँझ ४ बजे |
| e) 4pm-8pm | f) 8pm-10pm | g) Beyond 10pm | |
| साँझ ४ - राति ८ बजे | राति ८-१० बजे | राति १० बजे भन्दा पछि | |

21. How accessible do you find footpaths along the roads?

यस सडकमा फुटपाथ कतिको पहुँचयोग्य पाउनुहुन्छ ?

- | | | |
|--|-----------------|------------------------|
| a) Highly accessible | b) Accessible | |
| उच्च पहुँचयोग्य | पहुँचयोग्य | |
| c) Neither Accessible nor Inaccessible | d) Inaccessible | e) Highly Inaccessible |
| न पहुँचयोग्य न पहुँच बाहिर | पहुँच बाहिर | अत्याधिक पहुँच बाहिर |

22. How satisfied are you with the accessibility of cycling path and lanes?

तपाईं साइकल मार्ग र लेनहरुको पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

23. How satisfied are you with the quality and coverage of street lights on the road?

तपाईं सडकमा सडक बत्तिको गुणस्तर र पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

24. Are there any specific locations along road section that needs lightings?

यस सडक खण्डमा बत्तिको आवश्यक पर्ने कुनै विशेष स्थानहरु छन् ?

- | | |
|--------|-------|
| a) Yes | b) No |
| छन् | छैनन् |

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

Accessibility and Connectivity (सडकको पहुँच)

25. How satisfied are you with the access provided by this road to key locations like work places/ residence/ shops/ school/ hospital/farms?

यो सडकको कारणले काम गर्ने ठाउँ/बासस्थान/पसल/विद्यालय/अस्पताल फार्म जस्ता ठाउँहरु पुग्नका लागि गरेको प्रभाव प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

26. How reliable is this road to reach your destination on time?

समयमै गन्तव्यमा पुग्नको लागि यो बाटो कतिको भरपर्दो छ ?

- | | | | | |
|--------------------|-------------|------------|----------------|-------------------------|
| a) Highly reliable | b) Reliable | c) Neutral | d) Unreliable | e) Highly unreliable |
| अत्याधिक भरपर्दो | भरपर्दो | तटस्थ | भर पर्न नसकिने | अत्याधिक भर पर्न नसकिने |

27. What do you feel about the trend of travel time along this road section over past two years?

विगत दुई वर्षमा यस सडक खण्डमा यात्राको समयको प्रवृत्तिको बारेमा तपाईंलाई कस्तो लाग्छ ?

- a) Substantially reduced b) Reduced marginally c) Remained same d) Increased e) Increased substantially
पर्याप्त मात्रामा घटेको थोरै घटेको उस्तै रहेको बढेको उल्लेख्य रूपमा बढेको

28. How satisfied are you with the connectivity and access provided by this road to other major roads and highways?

यस सडकले प्रदान गरेको अन्य प्रमुख सडकहरु सँगको पहुँच प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

29. How satisfied are you with the signages for directions and distance along the road?

यस सडकमा रहेको दिशा र दूरीको बारेमा जानकारी दिने संकेतहरु प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

30. How has this road contributed in improving the local economy and business?

आर्थिक गुणस्तर र व्यापार बढाउन यस सडक कतिको प्रभावकारी रहेको छ ?

- a) Highly efficient b) Efficient c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्याधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्याधिक अप्रभावकारी

Emergency Services (आपतकालिन सुविधाहरु)

31. What type of medical facilities does the road user get on this road?

सडक प्रयोगकर्ताले यस सडक खण्डमा कस्ता स्वास्थ्य सुविधाहरु पाउँछन् ?

- a) Govt. hospital b) Private hospital c) Health posts d) Clinic e) None of above
सरकारी अस्पताल निजी अस्पताल स्वास्थ्य चौकी क्लिनिक कुनै पनि छैनन्

32. How satisfied are you with the accessibility of emergency services such as ambulances and fire truck, to different parts of the community?

समुदायमा एम्बुलेन्स तथा दमकल जस्ता आपतकालीन सुविधाहरुको पहुँचबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

33. What do you think about the post-crash response when an accident occurs on this road?

यस सडकमा दुर्घटना हुँदा दुर्घटना पछिको प्रतिक्रियाको बारे तपाईं के सोच्नु हुन्छ ?

- a) Very quick b) Quick c) Neither quick nor slow d) Slow e) Very slow
धेरै चाँडो चाँडो न चाँडो न ढिलो ढिलो धेरै ढिलो

User Experience (प्रयोगकर्ताको अनुभव)

34. How satisfied are you with the overall quality of roads?

सडकको समग्र गुणस्तर प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

35. Do you know who is responsible for road maintenance work?

के तपाईंलाई सडक मर्मतको जिम्मेवारी कसको हो भन्ने कुरा थाहा छ ?

- a) DoR b) DoLIDAR/DDC c) Municipality d) Any other agency _____ e) Do not know
सडक विभाग जि.वि.स. नगरपालिका / गाउँपालिका अन्य निकायहरु थाहा छैन

36. Have you ever made complaint to Government/Road authorities regarding any type of problem faced while traveling on this road?

के तपाईंले यस सडकमा यात्रा गर्दा भोग्नुभएका समस्याहरु बारे सडक अधिकारीहरूसँग कहिल्यै गुनासो गर्नुभएको छ ?

- a) Yes b) No
छ छैन

37. If yes, how satisfied are you with the complaint redressal system of DoR/Road agencies?

यदि छ भने, सडक विभाग/ सडक निकायहरुको गुनासो निवारण प्रणालीसँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

38. How satisfied are you with DOR or responsible road agencies resolving maintenance, quality and repairing related problem in time?

सडक मर्मत र गुणस्तर सम्बन्धि समस्याहरु समयमै समाधान गर्ने सडक विभाग र अन्य जिम्मेवार निकायहरुको कार्यबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

39. How satisfied are you with the road maintenance work?

तपाईं सडक मर्मतको कार्यबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

40. Are there any specific locations where road maintenance is needed?

- a) Yes b) No

सडक मर्मत गर्नुपर्ने कुनै खास स्थानहरु छन् ?

छन्

छैनन्

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

41. Are there any innovative solutions or technologies you believe could improve road quality?

के तपाईंलाई सडकको गुणस्तर सुधार गर्ने कुनै नयाँ प्रविधिबारे जानकारी छ ?

42. What specific improvements would you suggest to enhance the quality or serviceability of this road?

सडकको गुणस्तर तथा सेवा क्षमता वृद्धि गर्न के सुझाव दिन चाहनु हुन्छ ?

43. How satisfied are you with the quality of this road in comparison with other road sections in the region?

यस क्षेत्रका अन्य सडकको तुलनामा यस सडकको गुणस्तर सँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

Environment and Aesthetic Aspects (सडक वरपरको वातावरण र शौन्दर्यता)

44. How satisfied are you with the cleanliness of the road and surroundings?

तपाईं यस सडकको सरसफाईबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

45. What do you feel about the noise level generated by the traffic in this road?

यस सडकमा गुड्ने सवारीबाट निस्कने ध्वनीको चाप तपाईं कतिको महसुस गर्नुहुन्छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

46. What do you feel about the level of air pollution in this road?

यस सडकमा भएको वायु प्रदुषणको मात्रा प्रति तपाईंको धारणा के छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

Green Resilient Corridor (GRID Approach)

47. Have you ever encountered wildlife on or near the highway? a) Yes b) No
के तपाईंले कहिल्यै राजमार्गमा वा नजिक वन्यजन्तु देख्नु भएको छ छन् छैनन्

48. If yes, name the animal you most see during the travel?
यदि छ भने, यात्रा गर्दा सबैभन्दा बढि कुन जनावरहरु देख्नुहुन्छ ?

49. If yes, describe the nature of the encounter. (e.g., crossing the road, accident, near-miss accident).
यदि देख्नु भएको वन्यजन्तु भेट्दाको प्रकृतिको वर्णन गर्नुहोस् (जस्तै बाटो पार गर्दै, दुर्घटनामा परेको, दुर्घटनाको निकट)

50. In your opinion, how well does the highway design consider the safety of wildlife?

सडकको डिजाइन वन्यजन्तुको सुरक्षाको लागि कतिको प्रभावकारी पाउनुहुन्छ ?

a) Highly effective b) Effective c) Neutral d) Ineffective e) Very Ineffective
अत्याधिक प्रभावकारी प्रभावकारी तटस्थ अप्रभावकारी अत्याधिक अप्रभावकारी

51. Do you believe that the highway has adequate wildlife crossings such as Overpass and Underpass?

के तपाईं यस राजमार्गमा वन्यजन्तुलाई बाटो माथि तथा बाटो मुनिबाट क्रसिंग गर्नको लागि पुलहरु पर्याप्त रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

a) Fully Agreed b) Agreed c) Neutral d) Disagree e) Fully Disagree
पूर्ण सहमत सहमत तटस्थ असहमत अत्याधिक असहमत

52. Do you believe that the highway has adequate signage warning of wildlife crossings?

के तपाईं यस राजमार्गमा वन्यजन्तु क्रसिंगको लागि चेतावनी दिने पर्याप्त साईनबोर्डहरु रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

a) Fully Agreed b) Agreed c) Neutral d) Disagree e) Fully Disagree
पूर्ण सहमत सहमत तटस्थ असहमत अत्याधिक असहमत

53. What improvements would you suggest to enhance road safety and reduce human-wildlife conflicts?

सडक सुरक्षालाई सुधार्न र मानव वन्यजन्तु द्वन्द्वलाई कम गर्न के के सुधारहरुको सुझाव दिन चाहनुहुन्छ?

54. Are you aware of any environmental initiatives to protect wildlife related to this highway?

के तपाईंलाई यो राजमार्गसँग सम्बन्धित कुनै वन्यजन्तुको संरक्षणमा केन्द्रित वातावरणीय प्रयासहरु भएको थाहा छ कि छैन ?

a) Yes छ b) No छैन

55. How would you rate the efforts of the highway authorities in addressing wildlife conservation concerns?

वन्यजन्तु संरक्षण गर्न सडक विभाग र सडक सम्बन्धि अधिकारीहरुको प्रयासलाई तपाईं कसरी मूल्यांकन गर्नुहुन्छ ?

a) Excellent b) Good c) Fair d) Poor e) Very Poor
उत्कृष्ट राम्रो मध्यम खराब धेरै खराब

56. How do you feel about the safety of the road in terms of extreme weather, heavy rainfall, floods, landslides, etc.?

अत्याधिक मौसम, भारी वर्षा, बाढी, पहिरो आदि दृष्टिकोणबाट सडकको सुरक्षाबारे तपाईंको धारणा कस्तो छ ?

a) Very Safe b) Safe c) Neutral d) Unsafe e) Very Unsafe
धेरै सुरक्षित सुरक्षित तटस्थ असुरक्षित धेरै असुरक्षित

57. What do you think the government should do to prevent such disasters on highways?

यस्ता विपत्तिहरुबाट राजमार्गलाई जोगाउन सरकारले के गर्नु पर्छ होला ?

**APPENDIX A3 : Format of Questionnaires used in the
survey for Relevant Government and Non-Governmental
Organization/ Association**

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

Department of Roads

सडक विभाग

Questionnaire for

Road User's Satisfaction Survey along Butwal-Gorusinghe-Chanauta Road

बुटवल-गोरुसिङ्गे-चनौटा सडक प्रयोगकर्ताको सन्तुष्टि सर्वेक्षणको लागि प्रश्नावली

Questionnaire for Relevant Government and Non-Governmental Organization/ Association
(Focused Group Discussion)

(सरकारी, गैरसरकारी संस्था र व्यवसायी संघका लागि प्रश्नहरू)

Name of Interviewer: _____

Date: _____ / _____ / _____

अन्तर्वार्ताकर्ताको नाम:

मिति:.....

Details of Survey Station (सर्भे स्टेशनको विवरण)

Name of Road Link: _____

सडक खण्डको नाम

Survey Station No.: _____ District: _____ Village/Town: _____

सर्भे स्टेशन नम्बर

जिल्ला:

गाउँ/सहर

Demographic Information (जनसांख्यिकीय विवरण)

Name of the Office: कार्यालयको नाम:	_____		
Name of Respondents: उत्तरदाताहरूको नाम	Gender: लिङ्ग	Age: उमेर	Position: पद
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		

How many times does a driver take break in a day during long journey?

लामो यात्रामा चालकले दिनमा कति पटक ब्रेक लिन्छन् ?

Road Condition (सडकको अवस्था)

- How often do you encounter potholes or uneven road surfaces?
तपाईंले खाल्डाहरु र असमान सडक सतहहरु कतिको भेटाउनु हुन्छ ?
a) none b) Rarely c) Occasionally d) Frequently e) Very Frequently
कतै भेटिदैन विरलै कहिलेकाहीँ बारम्बार अत्यन्तै बारम्बार
- How satisfied are you with the visibility and clarity of Road markings?
तपाईं सडक चिन्हहरुको दृश्यता र स्पष्टतासँग कतिको सन्तुष्ट हुनुहुन्छ ?
a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट
- How efficient do you find the drainage system in road?
तपाईं सडकमा ड्रेनेज प्रणाली कतिको प्रभावकारी पाउनुहुन्छ ?
a) Highly efficient b) Efficient c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्याधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्याधिक अप्रभावकारी
- What do you think about the width of this road?
यो सडकको चौडाईको बारेमा तपाईं के सोच्नु हुन्छ ?
a) Highly adequate b) Adequate c) Neither adequate nor inadequate d) Inadequate e) Highly inadequate
अत्याधिक पर्याप्त पर्याप्त न पर्याप्त न अपर्याप्त अपर्याप्त अत्याधिक अपर्याप्त
- How satisfied are you with existing condition of the road surfaces?
सडकको अवस्था देखि तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?
a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट
- Are there any locations along road section where road quality degrades significantly during adverse weather condition?
के यस सडकमा प्रतिकूल मौसमका बेला बाटो अवरुद्ध हुने स्थानहरु छन् ?
a) Yes b) No Mention Location (if there is any) _____
छन् छैनन् छन् भने उल्लेख गर्नुहोस्

Traffic and Safety (सवारी र सुरक्षा)

- How is vehicle congestion on this road?
यो सडकमा सवारी साधनको चाप कस्तो छ ?
a) Absolutely free from congestion b) Free from congestion
भीडभाडले पूर्ण रुपमा मुक्त भीडभाड मुक्त
c) Neither free nor congested d) Congested e) Highly congested
न त भीडभाड मुक्त न त भीडभाड भएको भीडभाड भएको अत्याधिक भीडभाड भएको
- How satisfied are you with the installation of guard rails on sharp bends and steep slopes of roads?
अप्यारो मोडहरु र ठाडो सडक छेउमा राखिएका बारहरुबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?
a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट
- How accessible do you find pedestrian crossing along the roads?
तपाईं सडकमा पैदल यात्रीको लागि बाटो काट्ने स्थान कतिको पहुँचयोग्य पाउनुहुन्छ ?
a) Highly accessible b) Accessible
उच्च पहुँचयोग्य पहुँचयोग्य
c) Neither Accessible nor Inaccessible d) Inaccessible e) Highly Inaccessible
न पहुँचयोग्य न पहुँच बाहिर पहुँच बाहिर अत्याधिक पहुँच बाहिर
- Are road signs adequately placed to enhance the safety of road users?
सडक प्रयोगकर्ताको सुरक्षाको लागि सडक चिन्हहरु पर्याप्त मात्रामा राखिएका छन् ?
a) Yes b) No
छन् छैनन्

11. Where do you find the road signs most effective? (Multiple Choice Question)

सडक चिन्हहरु सबै भन्दा प्रभावकारी कुन ठाउँमा पाउनु हुन्छ ?

SN क्र.सं.	Road sign (सडक संकेत)	Tick (चिन्ह लाउनुहोस्)
1	Near to the school (विद्यालय नजिक)	
2	Near to the hospital (अस्पताल नजिक)	
3	Narrow road (साँघुरो बाटो)	
4	Sharp bends (अप्यारो मोडहरु)	
5	Pedestrian crossing (पैदलयात्रीले बाटो काट्ने स्थान)	
6	Speed breaker (स्पीड ब्रेकर)	
7	Landslide/hazardous area (पहिरो तथा अन्य जोखिमपूर्ण क्षेत्रहरु)	
8	High accident area (उच्च दुर्घटना क्षेत्र)	
9	Others (अन्य) _____	

12. Considering the safety aspect mark the following factors (Note-1 for most unsafe and 5 for least unsafe factor)

सुरक्षा पक्षलाई मध्यनजर राख्दै निम्न कारकहरु अंक दिनुहोस् (नोट-सबैभन्दा असुरक्षितको लागि १ र कम असुरक्षितको लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक) 1 for most unsafe and 5 for least unsafe
1	Over speed (तिब्र गति)	
2	Unusual overtaking (जथाभावी ओभरटेक)	
3	Heavy goods carrying vehicles (भारी सामान बोक्ने गाडीहरु)	
4	Lack of awareness of traffic rules (ट्राफिक नियम सम्बन्धि चेतनाको अभाव)	
5	Bad condition of road (सडकको खराब अवस्था)	
6	Absence of sufficient road signs (प्रयाप्त सडक संकेतहरुको अभाव)	
7	Aggressive driving (आक्रामिक ड्राइभिङ)	
8	Narrow road (साँघुरो बाटो)	
9	Careless driving (लापरवाही ड्राइभिङ)	
10	Unfit vehicles (अयोग्य गाडीहरु)	

13. How safe do you feel while traveling on these roads?

यस सडकमा यात्रा गर्दा तपाईं कतिको सुरक्षित महसुस गर्नुहुन्छ ?

a) Very safe b) Safe c) Neither safe nor unsafe d) Unsafe e) Very unsafe
धेरै सुरक्षित सुरक्षित न सुरक्षित न असुरक्षित असुरक्षित धेरै असुरक्षित

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

14. In your opinion, which of the following factors lead to most of the accidents? Mark the following factors.

(Note-1 for most accident-causing factor and 5 for least accident-causing factor.)

तलका मध्ये कुन कारणले बढी दुर्घटना निम्त्याउछ ? (सबैभन्दा बढी दुर्घटना निम्त्याउने कारणका लागि १ र कमका लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक) 1 for most accident-causing factor and 5 for least accident-causing factor
1	High speed (तिब्र गति)	
2	Bad weather (खराब मौसम)	
3	Bad Condition of road (सडकको खराब अवस्था)	
4	Pedestrian crossing (पैदल यात्रीले बाटो काट्नु)	
5	Wild/ domestic animal crossing (जङ्गली / घरेलु जनावरले बाटो काट्नु)	
6	Absence of sign at dangerous location (जोखिमपूर्ण स्थानमा संकेतको अभाव)	
7	Use of alcohol while driving (गाडी चलाउँदा मादक पदार्थको सेवन)	
8	Increase in number of vehicles (सवारी साधनको संख्यामा वृद्धि)	
9	Absence of street light (सडक बत्तिको अभाव)	

15. Do drivers follow the traffic rule and regulation while driving?

के चालकहरुले सवारी चलाउँदा ट्राफिक नियमको पालना गर्छन् ?

a) Yes

b) No

गर्छन्

गर्दैनन्

16. In your opinion, what can be done to enhance safety of roads?

तपाईंको विचारमा सडकको सुरक्षा बढाउन के गर्न सकिन्छ ?

17. What do you think about the role your organization to enhance safety of roads?

सडक सुरक्षाको लागि तपाईंको संघ / संस्थाको भूमिका के रहेको छ ?

18. Whenever there is any maintenance/improvement works in this road section, do you find appropriate sign/s explaining the work-in-progress?

यस सडकमा कुनै पनि मर्मत/सुधार कार्यहरु हुँदा उपयुक्त चिन्हहरु प्रयोग भएको फेला पार्नुहुन्छ ?

a) Yes

b) No

पार्छु

पार्दिन

19. Do you find the availability and accessibility of police posts/ Police patrolling vehicle on this road?

के यस सडकमा प्रहरी चौकी-प्रहरी गस्ती गाडीहरु उपलब्ध छन् ?

a) Yes

b) No

छन्

छैनन्

20. Do you think there should be provision for two or more drivers in long journey?

के तपाईंलाई लामो यात्रामा दुई वा सो भन्दा बढी चालकको व्यवस्था हुनु पर्छ जस्तो लाग्छ ?

a) Yes

b) No

लाग्छ

लाग्दैन

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

Infrastructure and Facilities (सडकका पूर्वाधार र सुविधाहरु)

21. Do you find following facilities along this road? What is your satisfaction level on these facilities?

'5' for 'very satisfied'

'4' for 'satisfied',

'3' for 'neither satisfied nor dissatisfied',

'2' for 'Dissatisfied',

'1' for 'very dissatisfied'

के तपाईंले यस सडकमा निम्न सुविधाहरु भेट्नुहुन्छ? यी सुविधाहरु प्रति तपाईंको सन्तुष्टिको स्तर के छ ?

अत्याधिक सन्तुष्टका लागि '५'

सन्तुष्टका लागि '४'

न सन्तुष्ट न असन्तुष्टका लागि '३'

असन्तुष्टका लागि '२'

अत्याधिक असन्तुष्टका लागि '१'

SN क्र.सं.	Facilities (सुविधाहरु)	Do you find the facilities? के तपाईंले सुविधाहरु भेट्नुहुन्छ?		Satisfaction Level सन्तुष्टि स्तर
		Yes भेट्छु	No भेट्दिन	
1	Public toilets/ bathrooms (सार्वजनिक शौचालय / बाथरुम)	☐	☐	
2	Restaurants/ shops for food/ drinks (खाना खाने होटल/ रेष्टुरेन्ट)	☐	☐	
3	Public taps/ Drinking Water (सार्वजनिक धारा/ पिउने पानी)	☐	☐	
4	Medical facilities (स्वास्थ्य सुविधा)	☐	☐	
5	Rain shelter-cum-Bus stop (वर्षा आश्रय - बस विसौनी)	☐	☐	
6	Others (अन्य)	☐	☐	

22. How long does it take when you want to make a travel to different public places?

तपाईंलाई विभिन्न सार्वजनिक सुविधाको स्थानमा पुग्नको लागि कतिको समय लाग्दछ?

SN क्र.सं.	Places (स्थानहरु)	Time (समय)	
		Hours घन्टा	Minute मिनेट
1	Reach to the Primary school (प्राथमिक स्कूल पुग्न)		
2	Reach Higher Secondary School (उच्च माध्यमिक विद्यालय पुग्न)		
3	Reach Colleges/Universities (विश्वविद्यालय पुग्न)		
4	Reach to the hospital (अस्पताल पुग्न)		
5	Reach to the market (बजार पुग्न)		
6	Reach to Police Station (प्रहरी चौकी पुग्न)		
7	Reach to Ward Office (वडा कार्यालय पुग्न)		

23. What time of the day is the most difficult for you to find public transport facilities in this road?

यो सडकमा सार्वजनिक यातायात सुविधा लिन तपाईंलाई दिनको कुन समय सबैभन्दा गाह्रो हुन्छ ?

a) 5am-8am

b) 8am-10am

c) 10am-12pm

d) 12pm-4pm

विहान ५-८ बजे

विहान ८-१० बजे

विहान १०-१२ बजे

दिउँसो १२ - साँझ ४ बजे

e) 4pm-8pm

f) 8pm-10pm

g) Beyond 10pm

साँझ ४ - राति ८ बजे

राति ८-१० बजे

राति १० बजे भन्दा पछि

24. How accessible do you find footpaths along the roads?

यस सडकमा फुटपाथ कतिको पहुँचयोग्य पाउनुहुन्छ ?

a) Highly accessible

b) Accessible

उच्च पहुँचयोग्य

पहुँचयोग्य

c) Neither Accessible nor Inaccessible

d) Inaccessible

e) Highly Inaccessible

न पहुँचयोग्य न पहुँच बाहिर

पहुँच बाहिर

अत्याधिक पहुँच बाहिर

25. How satisfied are you with the accessibility of cycling path and lanes?

तपाईं साइकल मार्ग र लेनहरुको पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied

b) Satisfied

c) Neither satisfied nor dissatisfied

d) Dissatisfied

e) Highly dissatisfied

अत्याधिक सन्तुष्ट

सन्तुष्ट

न त सन्तुष्ट न असन्तुष्ट

असन्तुष्ट

अत्याधिक असन्तुष्ट

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

26. How satisfied are you with the quality and coverage of street lights on the road?
तपाईं सडकमा सडक बत्तिको गुणस्तर र पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

27. Are there any specific locations along road section that needs lightings? a) Yes b) No
यस सडक खण्डमा बत्तिको आवश्यक पर्ने कुनै विशेष स्थानहरु छन् ? छन् छैनन्

Mention Location (if there are any) _____
छन् भने उल्लेख गर्नुहोस् _____

Accessibility and Connectivity (सडकको पहुँच)

28. How satisfied are you with the access provided by this road to key locations like work places/ residence/ shops/ school/ hospital/farms?
यो सडकको कारणले काम गर्ने ठाउँ/बासस्थान/पसल/विद्यालय/अस्पताल फार्म जस्ता ठाउँहरु पुग्नका लागि गरेको प्रभाव प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

29. How reliable is this road to reach your destination on time?
समयमै गन्तव्यमा पुग्नको लागि यो बाटो कतिको भरपर्दो छ ?

a) Highly reliable	b) Reliable	c) Neutral	d) Unreliable	e) Highly unreliable
अत्याधिक भरपर्दो	भरपर्दो	तटस्थ	भर पर्न नसकिने	अत्याधिक भर पर्न नसकिने

30. What do you feel about the trend of travel time along this road section over past two years?
विगत दुई वर्षमा यस सडक खण्डमा यात्राको समयको प्रवृत्तिको बारेमा तपाईंलाई कस्तो लाग्छ ?

a) Substantially reduced	b) Reduced marginally	c) Remained same	d) Increased	e) Increased substantially
पर्याप्त मात्रामा घटेको	थोरै घटेको	उस्तै रहेको	बढेको	उल्लेख्य रुपमा बढेको

31. How satisfied are you with the connectivity and access provided by this road to other major roads and highways?
यस सडकले प्रदान गरेको अन्य प्रमुख सडकहरु सँगको पहुँच प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

32. How satisfied are you with the signages for directions and distance along the road?
यस सडकमा रहेको दिशा र दूरीको बारेमा जानकारी दिने संकेतहरु प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

Emergency Services (आपतकालिन सुविधाहरु)

33. What type of medical facilities does the road user get on this road?
सडक प्रयोगकर्ताले यस सडक खण्डमा कस्ता स्वास्थ्य सुविधाहरु पाउँछन् ?

a) Govt. hospital	b) Private hospital	c) Health posts	d) Clinic	e) None of above
सरकारी अस्पताल	निजी अस्पताल	स्वास्थ्य चौकी	क्लिनिक	कुनै पनि छैनन्

34. How satisfied are you with the accessibility of emergency services such as ambulances and fire truck, to different parts of the community?
समुदायमा एम्बुलेन्स तथा दमकल जस्ता आपतकालीन सुविधाहरुको पहुँचबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

35. What do you think about the post-crash response when an accident occurs on this road?

यस सडकमा दुर्घटना हुँदा दुर्घटना पछिको प्रतिक्रियाको बारे तपाईं के सोच्नु हुन्छ ?

- | | | | | |
|---------------|----------|---------------------------|---------|--------------|
| a) Very quick | b) Quick | c) Neither quick nor slow | d) Slow | e) Very slow |
| धेरै चाँडो | चाँडो | न चाँडो न ढिलो | ढिलो | धेरै ढिलो |

User Experience (प्रयोगकर्ताको अनुभव)

36. How satisfied are you with the overall quality of roads?

सडकको समग्र गुणस्तर प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

37. Do you know who is responsible for road maintenance work?

के तपाईंलाई सडक मर्मतको जिम्मेवारी कसको हो भन्ने कुरा थाहा छ ?

- | | | | | |
|--------------------|----------------|------------------------|--------------------------|----------------|
| a) DoR | b) DoLIDAR/DDC | c) Municipality | d) Any other agency_____ | e) Do not know |
| सडक विभाग जि.वि.स. | | नगरपालिका / गाउँपालिका | अन्य निकायहरु | थाहा छैन |

38. Have you ever made complaint to Government/Road authorities regarding any type of problem faced while traveling on this road?

के तपाईंले यस सडकमा यात्रा गर्दा भोग्नुभएका समस्याहरु बारे सडक अधिकारीहरूसँग कहिल्यै गुनासो गर्नुभएको छ ?

- | | |
|--------|-------|
| a) Yes | b) No |
| छ | छैन |

39. If yes, how satisfied are you with the complaint redressal system of DoR/Road agencies?

यदि छ भने, सडक विभाग/ सडक निकायहरुको गुनासो निवारण प्रणालीसँग कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

40. How satisfied are you with DOR or responsible road agencies resolving maintenance, quality and repairing related problem in time?

सडक मर्मत र गुणस्तर सम्बन्धि समस्याहरु समयमै समाधान गर्ने सडक विभाग र अन्य जिम्मेवार निकायहरुको कार्यबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

41. How satisfied are you with the road maintenance work?

तपाईं सडक मर्मतको कार्यबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

42. Are there any specific locations where road maintenance is needed?

सडक मर्मत गर्नुपर्ने कुनै खास स्थानहरु छन् ?

- | | |
|--------|-------|
| a) Yes | b) No |
|--------|-------|

छन्	छैनन्
-----	-------

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

43. Are there any innovative solutions or technologies you believe could improve road quality?

के तपाईंलाई सडकको गुणस्तर सुधार गर्ने कुनै नयाँ प्रविधिबारे जानकारी छ ?

44. What specific improvements would you suggest to enhance the quality or serviceability of this road?

सडकको गुणस्तर तथा सेवा क्षमता वृद्धि गर्न के सुझाव दिन चाहनु हुन्छ ?

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

45. How satisfied are you with the quality of this road in comparison with other road sections in the region?

यस क्षेत्रका अन्य सडकको तुलनामा यस सडकको गुणस्तर सँग कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

46. What is your perception about involvement of private sector in road maintenance?

सडक मर्मत सम्भारमा निजी क्षेत्रको संलग्नता बारे तपाईंको धारणा के छ?

47. What do you think about role of public sector such as DoR / DDC/ Local level government and other agencies for better serviceability of roads?

सडकको स्तरोन्नतिका लागि सडक विभाग/जि.वि.स./स्थानीय सरकार लगायतका सार्वजनिक क्षेत्रहरूको भूमिकाको बारेमा तपाईंको के धारणा छ ?

Environment and Aesthetic Aspects (सडक वरपरको वातावरण र शौन्दर्यता)

48. How satisfied are you with the cleanliness of the road and surroundings?

तपाईं यस सडकको सरसफाईबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- | | | | | |
|---------------------|--------------|---------------------------------------|-----------------|------------------------|
| a) Highly satisfied | b) Satisfied | c) Neither satisfied nor dissatisfied | d) Dissatisfied | e) Highly dissatisfied |
| अत्याधिक सन्तुष्ट | सन्तुष्ट | न त सन्तुष्ट न असन्तुष्ट | असन्तुष्ट | अत्याधिक असन्तुष्ट |

49. What do you feel about the noise level generated by the traffic in this road?

यस सडकमा गुड्ने सवारीबाट निस्कने ध्वनीको चाप तपाईं कतिको महसुस गर्नुहुन्छ ?

- | | | | | |
|-------------|--------|-----------|---------|--------------|
| a) Very Low | b) Low | c) Medium | d) High | e) Very High |
| अत्याधिक कम | कम | मध्यम | बढि | अत्याधिक बढि |

50. What do you feel about the level of air pollution in this road?

यस सडकमा भएको वायु प्रदूषणको मात्रा प्रति तपाईंको धारणा के छ ?

- | | | | | |
|-------------|--------|-----------|---------|--------------|
| a) Very Low | b) Low | c) Medium | d) High | e) Very High |
| अत्याधिक कम | कम | मध्यम | बढि | अत्याधिक बढि |

Green Resilient Corridor (GRID Approach)

51. Have you ever encountered wildlife on or near the highway?

- | | |
|--------|-------|
| a) Yes | b) No |
|--------|-------|

के तपाईंले कहिल्यै राजमार्गमा वा नजिक वन्यजन्तु देख्नु भएको छ

छन्	छैनन्
-----	-------

52. If yes, name the animal you most see during the travel?

यदि छ भने, यात्रा गर्दा सबैभन्दा बढि कुन जनावरहरू देख्नुहुन्छ ?

53. If yes, describe the nature of the encounter. (e.g., crossing the road, accident, near-miss accident).

यदि देख्नु भएको वन्यजन्तु भेट्दाको प्रकृतिको वर्णन गर्नुहोस् (जस्तै बाटो पार गर्दै, दुर्घटनामा परेको, दुर्घटनाको निकट)

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

54. In your opinion, how well does the highway design consider the safety of wildlife?

सडकको डिजाइन वन्यजन्तुको सुरक्षाको लागि कतिको प्रभावकारी पाउनुहुन्छ ?

- | | | | | |
|---------------------|--------------|------------|----------------|----------------------|
| a) Highly effective | b) Effective | c) Neutral | d) Ineffective | e) Very Ineffective |
| अत्याधिक प्रभावकारी | प्रभावकारी | तटस्थ | अप्रभावकारी | अत्याधिक अप्रभावकारी |

55. Do you believe that the highway has adequate wildlife crossings such as Overpass and Underpass?

के तपाईं यस राजमार्गमा वन्यजन्तुलाई बाटो माथि तथा बाटो मुनिबाट क्रसिंग गर्नको लागि पुलहरु पर्याप्त रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

- | | | | | |
|-----------------|-----------|------------|-------------|-------------------|
| a) Fully Agreed | b) Agreed | c) Neutral | d) Disagree | e) Fully Disagree |
| पूर्ण सहमत | सहमत | तटस्थ | असहमत | अत्याधिक असहमत |

56. Do you believe that the highway has adequate signage warning of wildlife crossings?

के तपाईं यस राजमार्गमा वन्यजन्तु क्रसिंगको लागि चेतावनी दिने पर्याप्त साईनबोर्डहरु रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

- | | | | | |
|-----------------|-----------|------------|-------------|-------------------|
| a) Fully Agreed | b) Agreed | c) Neutral | d) Disagree | e) Fully Disagree |
| पूर्ण सहमत | सहमत | तटस्थ | असहमत | अत्याधिक असहमत |

57. What improvements would you suggest to enhance road safety and reduce human-wildlife conflicts?

सडक सुरक्षालाई सुधार्न र मानव वन्यजन्तु द्वन्द्वलाई कम गर्न के के सुधारहरुको सुझाव दिन चाहनुहुन्छ?

58. Are you aware of any environmental initiatives to protect wildlife related to this highway?

के तपाईंलाई यो राजमार्गसँग सम्बन्धित कुनै वन्यजन्तुको संरक्षणमा केन्द्रित वातावरणीय प्रयासहरु भएको थाहा छ कि छैन ?

- | | |
|----------|-----------|
| a) Yes छ | b) No छैन |
|----------|-----------|

59. How would you rate the efforts of the highway authorities in addressing wildlife conservation concerns?

वन्यजन्तु संरक्षण गर्न सडक विभाग र सडक सम्बन्धि अधिकारीहरुको प्रयासलाई तपाईं कसरी मूल्यांकन गर्नुहुन्छ ?

- | | | | | |
|--------------|---------|---------|---------|--------------|
| a) Excellent | b) Good | c) Fair | d) Poor | e) Very Poor |
| उत्कृष्ट | राम्रो | मध्ययम | खराब | धेरै खराब |

60. How do you feel about the safety of the road in terms of extreme weather, heavy rainfall, floods, landslides, etc.?

अत्याधिक मौसम, भारी वर्षा, बाढी, पहिरो आदि दृष्टिकोणबाट सडकको सुरक्षाबारे तपाईंको धारणा कस्तो छ ?

- | | | | | |
|---------------|----------|------------|-----------|----------------|
| a) Very Safe | b) Safe | c) Neutral | d) Unsafe | e) Very Unsafe |
| धेरै सुरक्षित | सुरक्षित | तटस्थ | असुरक्षित | धेरै असुरक्षित |

61. What do you think the government should do to prevent such disasters on highways?

यस्ता विपत्तिहरुबाट राजमार्गलाई जोगाउन सरकारले के गर्नु पर्छ होला ?

APPENDIX B: Site Photographs

Appendix B: Site Photographs

1. Motorized Transportation User Group



Figure 1 Road User Satisfaction Survey at Traffic Chowk Butwal



Figure 2 Road User Satisfaction Survey at Pushpalal Chowk, Butwal



Figure 3 Road User Satisfaction Survey at Nepalgunj Road, Butwal



Figure 4 Road User Satisfaction Survey at Jholunge Pul, Butwal

Appendix B: Site Photographs



Figure 5 Road User Satisfaction Survey at Pakhapani, Butwal



Figure 6 Road User Satisfaction Survey at Kaluwa, Butwal



Figure 7 Road User Satisfaction Survey at Ranibagiya, Sainamaina



Figure 8: User Satisfaction Survey at Chanauta Butwal

Appendix B: Site Photographs



Figure 9. Road User Satisfaction Survey at Bairiya, Banganga



Figure 10. Road User Satisfaction Survey at Dumara, Buddhabhumi



Figure 11. Road User Satisfaction Survey at Koile Bangain, Banganga



Figure 12. Road User Satisfaction Survey at Koile Bangain, Banganga

Appendix B: Site Photographs



Figure 13. Road User Satisfaction Survey at Dumara, Buddhabhumi



Figure 14. Road User Satisfaction Survey at Dumara, Buddhabhumi



Figure 15. Road User Satisfaction Survey at Dumara, Buddhabhumi



Figure 16 Road User Satisfaction Survey at Pipra, Banganga

Appendix B: Site Photographs

2. Non-Motorized Commuters User Group



Figure 17. Road User Satisfaction Survey at Check Point, Shivaraj



Figure 18 Road User Satisfaction Survey at Purano Bus-Park, Butwal



Figure 19 Road User Satisfaction Survey at Purano Bus Park, Butwal



Figure 20 Road User Satisfaction Survey at Pushpalal Chowk, Butwal

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Figure 21 Road User Satisfaction Survey at Pushpalal Chowk, Butwal



Figure 22 Road User Satisfaction Survey at Belbas, Butwal



Figure 23 Road User Satisfaction Survey at Nayagaun, Butwal



Figure 24 Road User Satisfaction Survey at Pushpalal Chowk, Butwal

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Figure 25 Road User Satisfaction Survey at Tamnagar, Sainamaina



Figure 26 Road User Satisfaction Survey at Sarauli, Sainamaina



Figure 27 Road User Satisfaction Survey at Murgiya



Figure 28 Road User Satisfaction Survey at Ranibagiya, Sainamaina

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Figure 29. Road User Satisfaction Survey at Check Point, Shivaraj



Figure 30 Road User Satisfaction Survey at Basgadhi, Sainamaina



Figure 31. Road User Satisfaction Survey at Dhankhola, Shivaraj



Figure 32 Road User Satisfaction Survey at Saljhandi, Sainamaina

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Figure 33. Road User Satisfaction Survey at Khairenipur, Shivaraj



Figure 34 Road User Satisfaction Survey at Nepalgunj Road, Butwal



Figure 35 Road User Satisfaction Survey at Arghakhanchi Chowk, Buddhabhumi



Figure 36 Road User Satisfaction Survey at Chandrauta, Shivaraj

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Figure 37 Road User Satisfaction Survey at Nepalgunj Road, Butwal



Figure 38 Road User Satisfaction Survey at Post Office, Pipra, Banganga



Figure 39 Road User Satisfaction Survey at Chappargaon, Banganga



Figure 40 Road User Satisfaction Survey at Chappargaon, Banganga

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Figure 41 Road User Satisfaction Survey at Dumara, Buddhabhumi



Figure 42. Road User Satisfaction Survey at Dumara, Buddhabhumi



Figure 43. Road User Satisfaction Survey at Khairenipur, Shivaraj



Figure 44 Road User Satisfaction Survey at Dumara, Buddhabhumi

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3. Governmental and Non-Governmental Organization/ Associations



Figure 45 Road User Satisfaction Survey at Area Police Office, Gorusinghe



Figure 46 Road User Satisfaction Survey at Ward Office, Gorusinghe



Figure 47 Road User Satisfaction Survey at Buddi Health Post, Buddhabhumi



Figure 48 Road User Satisfaction Survey at Chamber of Commerce Office, Rupandehi, Butwal

Appendix B: Site Photographs



Figure 49 Road User Satisfaction Survey at Siddhartha Social Development Center, Gajeda, Banganga



Figure 50 Road User Satisfaction Survey at Ward Office, Bodgaun, Banganga



Figure 51 Road User Satisfaction Survey at Area Police Office, Pipra, Banganga



Figure 52 Road User Satisfaction Survey at Butwal Sub-Metropolitan Office

Appendix B: Site Photographs



Figure 53 Road User Satisfaction Survey at Sainamaina Drinking Water Organization



Figure 54 Road User Satisfaction Survey at Basic Health Service Center, Sainamaina



Figure 55 Road User Satisfaction Survey at Maitri Yatayat, Traffic Chowk, Butwal



Figure 56 Road User Satisfaction Survey at Lumbini Province Traffic Police Office, Butwal

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Figure 57 Road User Satisfaction Survey at Civil Health Service Center, Chandrauta, Shivaraj



Figure 58 Road User Satisfaction Survey at District Traffic Police Office, Chandrauta, Shivaraj



Figure 59 Road User Satisfaction Survey at Ward Office, Sainamaina



Figure 60 Road User Satisfaction Survey at Ward Office, Sainamaina

Appendix B: Site Photographs



Figure 61 Road User Satisfaction Survey at Road Division Office, Butwal

Appendix B: Site Photographs

4. Problems related to road as seen at Butwal Chadrauta Gorusinghe Road Section



Figure 62 Absence of sky bridge and traffic light at Chadrauta



Figure 63 Water logging on road at Saljhandi



Figure 64 Absence of cycle lane at Khairanipur



Figure 65 Unmanaged parking at Chadrauta

Appendix B: Site Photographs



Figure 66 Unsafe Road at Murgiya



Figure 67 Potholes observed at Murgiya



Figure 68 Overtaking observed at Kalauni



Figure 69 Exposed Base at Kalauni

Appendix B: Site Photographs



Figure 70 Absence of Rain shelter/Bus Stop at Imiliya



Figure 71 Animal's dung over the road at Imiliya



Figure 72 Unmanaged domestic animals at Imiliya



Figure 73 Unmanaged domestic animals at Imiliya

Appendix B: Site Photographs



Figure 74 Police removing trees from the road side at Gorusinghe



Figure 75 Poor condition of Rain shelter/Bus stop at Bangain



Figure 76 Unmanaged cattle at Gorusinghe



Figure 77 Unmanaged dead animal at Gorusinghe

Appendix B: Site Photographs



Figure 78 Absence of footpath at Koile Bangain



Figure 79 Unmanaged cattle blocking the roadway at Koile Bangain



Figure 80 Absence of Footpath at Pipra



Figure 81 Unfit Vehicles causing air pollution at Saljhandi

Appendix B: Site Photographs



Figure 82 Absence of footpath at Saljhandi bridge



Figure 83 Overtaking in narrow road at Saljhandi



Figure 84 Unclear zebra crossing lines at Farline Jungle



Figure 85 Unmanaged Road signs at Farline Jungle

Appendix B: Site Photographs



Figure 86 Unmanaged domestic animals at Chandrapur

APPENDIX C1:
Sample Response of Motorized Transportation Users

A1 Questionnaire for Motorized Transportation Users

Department of Roads

सडक विभाग

Questionnaire for

Road User's Satisfaction Survey along Butwal-Gorusinghe-Chanauta Road

बुटवल-गोरुसिङ्गे-चनौटा सडक प्रयोगकर्ताको सन्तुष्टि सर्वेक्षणको लागि प्रश्नावली

Questionnaire for Motorized Transportation Users

(सवारी चालकका लागि प्रश्नहरु)

Name of Interviewer: Praywal Karki
अन्तर्वार्ताकर्ताको नाम:Date: 2074/08/21
मिति:

Details of Survey Station (सर्वे स्टेशनको विवरण)

Name of Road Link: NH-01-047

सडक खण्डको नाम

Survey Station No.: B-2

सर्वे स्टेशन नम्बर

District: Rupandehi

जिल्ला:

Village/Town: hotunge bridge

गाउँ/सहर

(Butwal-17)

Demographic Information (जनसांख्यिकीय विवरण)

Name of Respondent: Nakayan Raymang Gender: a) Male b) Female c) Others

उत्तरदाताको नाम

लिंग

पुरुष

महिला

अन्य

Age: (a) 18-25 yrs (b) 26-35 yrs (c) 36-45 yrs (d) 46-55 yrs (e) Above 55 yrs

उमेर

१८-२५ वर्ष

२६-३५ वर्ष

३६-४५ वर्ष

४६-५५ वर्ष

५५ वर्ष भन्दा माथि

(Any person below 18 years is not to be interviewed)

(१८ वर्ष भन्दा कम उमेरका कुनै पनि व्यक्तिको अन्तर्वार्ता नलिने)

Driving Experience (years) 6

डाइभिड अनुभव (वर्ष)

Occupation: a) Agriculture b) Business c) Service d) Student e) Labor f) Others E-Service

पेशा

कृषि

व्यापार

सेवा

विद्यार्थी

मजदुर

अन्य

Type of Vehicle: a) Large Bus b) Mini-Bus c) Micro-bus d) Private Car/Jeep/ Utility Van e) Taxi

(सवारी साधनको प्रकार)

ठूलो बस

मिनि बस

माइक्रो बस

निजी कार / जिप

ट्याक्सी

f) Motorcycle g) Utility vehicle h) Tempo/Auto i) Tractor j) Truck/ Tanker k) others

मोटरसाइकल

सामान बोक्ने गाडी

ट्याम्पो/अटो

ट्याक्टर

ट्रक / ट्याङ्कर

अन्य

Purpose of Travel a) Business/ Job/ Agricultural work b) Visiting relatives/friends c) Shopping

यात्राको उद्देश्य

व्यापार/जागिर/कृषि

आफन्त/साथीहरुलाई भेट्न

किनमेल

d) Sight-seeing/ Touring/ Leisure

e) Others

दर्शनीय स्थल/पर्यटन/फुर्यद

अन्य

Is this your own vehicle?

के तपाईंको आफ्नै गाडी हो ?

a) Yes

हो

b) No

होइन

Frequency of Travel: a) Daily b) Weekly c) Occasionally d) More than 1 time a day

यात्राको बारम्बारता

दैनिक

हप्ताको १ पटक

काहिने काहिने

दिनको १ पटक भन्दा धेरै

Road Condition (सडकको अवस्था)

1. How often do you encounter potholes or uneven road surfaces?

तपाईंले छाल्डाहरु र असमान सडक सतहहरु कतिबेला भेट्नु हुन्छ ?

a) none

कुनै भेटिदैन

b) Rarely

विरलै

c) Occasionally

कतिबेला

d) Frequently

सिर्म्बार

e) Very Frequently

अत्यन्तै बारम्बार

A1 Questionnaire for Motorized Transportation Users

2. How satisfied are you with the visibility and clarity of road markings?

तपाईं सडक चिन्हहरूको दृश्यता र स्पष्टतासँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्याधिक असन्तुष्ट

3. How efficient do you find the drainage system in road?

तपाईं सडकमा ड्रेनेज प्रणाली कतिको प्रभावकारी पाउनुहुन्छ ?

- a) Highly efficient b) Efficient c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्याधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्याधिक अप्रभावकारी

4. What do you think about the width of this road?

यो सडकको चौडाईको बारेमा तपाईं के सोच्नु हुन्छ ?

- a) Highly adequate b) Adequate c) Neither adequate nor inadequate d) Inadequate e) Highly inadequate
अत्याधिक पर्याप्त पर्याप्त न पर्याप्त न अपर्याप्त अपर्याप्त अत्याधिक अपर्याप्त

5. How satisfied are you with existing condition of the road surfaces?

सडकको अवस्था देखि तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्याधिक असन्तुष्ट

6. Are there any locations along road section where road quality degrades significantly during adverse weather condition?

के यस सडकमा प्रतिकूल मौसमका बेला बाटो अवस्था हुने स्थानहरू छन् ?

- a) Yes b) No Mention Location (if there is any)
छन् छैनन् छन् भने उल्लेख गर्नुहोस्

Pakhar Pani

Traffic and Safety (सवारी र सुरक्षा)

7. How is vehicle congestion on this road?

यो सडकमा सवारी साधनको चाप कस्तो छ ?

- a) Absolutely free from congestion b) Free from congestion
भीडभाडले पूर्ण रुपमा मुक्त भीडभाड मुक्त
c) Neither free nor congested d) Congested e) Highly congested
न त भीडभाड मुक्त न त भीडभाड भएको भीडभाड भएको अत्याधिक भीडभाड भएको

8. How satisfied are you with the installation of guard rails on sharp bends and steep slopes of roads?

अप्टारो मोडहरू र ठाडो सडक छेउमा राखिएका बारहरूबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्याधिक असन्तुष्ट

9. How accessible do you find pedestrian crossing along the roads?

तपाईं सडकमा पैदल यात्रीको लागि बाटो काट्ने स्थान कतिको पहुँचयोग्य पाउनुहुन्छ ?

- a) Highly accessible b) Accessible
उच्च पहुँचयोग्य पहुँचयोग्य
c) Neither Accessible nor Inaccessible d) Inaccessible e) Highly Inaccessible
न पहुँचयोग्य न पहुँच बाहिर पहुँच बाहिर अत्याधिक पहुँच बाहिर

10. Are road signs adequately placed to enhance the safety of road users?

सडक प्रयोगकर्ताको सुरक्षाको लागि सडक चिन्हहरू पर्याप्त मात्रामा राखिएका छन् ?

- a) Yes b) No

छन् छैनन्

A1 Questionnaire for Motorized Transportation Users

11. Where do you find the road signs most effective? (Multiple Choice Question)

सडक चिन्हहरू सबै भन्दा प्रभावकारी कुन ठाउँमा पाइनु हुन्छ ?

SN क्र.सं.	Road sign (सडक संकेत)	Tick (चिन्ह लाउनुहोस्)
1	Near to the school (विद्यालय नजिक)	✓
2	Near to the hospital (अस्पताल नजिक)	✓
3	Narrow road (साँघुरो बाटो)	✓
4	Sharp bends (अच्यारो मोडहरू)	✓
5	Pedestrian crossing (पैदलयात्रीले बाटो काट्ने स्थान)	✓
6	Speed breaker (स्पीड ब्रेकर)	✓
7	Landslide/hazardous area (पहिरो तथा अन्य जोखिमपूर्ण क्षेत्रहरू)	✓
8	High accident area (उच्च दुर्घटना क्षेत्र)	✓
9	Others (अन्य) _____	

12. Considering the safety aspect mark the following factors (Note-1 for most unsafe and 5 for least unsafe factor)

सुरक्षा पक्षलाई मध्यनजर राख्दै निम्न कारकहरू अंक दिनुहोस् (नोट-सबैभन्दा असुरक्षितको लागि १ र कम असुरक्षितको लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरू)	Mark (अंक)
1	Over speed (तिब्र गति)	1
2	Unusual overtaking (जवानाबी ओभरटेक)	2
3	Heavy goods carrying vehicles (भारी सामान बोक्ने गाडीहरू)	2
4	Lack of awareness of traffic rules (ट्राफिक नियम सम्बन्धि चेतनाको अभाव)	2
5	Bad condition of road (सडकको खराब अवस्था)	1
6	Absence of sufficient road signs (प्रधान सडक संकेतहरूको अभाव)	2
7	Aggressive driving (आक्रामक ड्राइभिङ)	1
8	Narrow road (साँघुरो बाटो)	3
9	Careless driving (लापरवाही ड्राइभिङ)	1
10	Unfit vehicles (अयोग्य गाडीहरू)	3

13. How safe do you feel while traveling on these roads?

यस सडकमा यात्रा गर्दा तपाईं कतिको सुरक्षित महसुस गर्नुहुन्छ ?

a) Very safe b) Safe c) Neither safe nor unsafe d) Unsafe e) Very unsafe
धेरै सुरक्षित सुरक्षित न सुरक्षित न असुरक्षित असुरक्षित धेरै असुरक्षित

A1 Questionnaire for Motorized Transportation Users

14. In your opinion, which of the following factors lead to most of the accidents? Mark the following factors.

(Note-1 for most accident-causing factor and 5 for least accident-causing factor.)

तलका मध्ये कुन कारणले बढी दुर्घटना निम्त्याउछ ? (सबैभन्दा बढी दुर्घटना निम्त्याउने कारणका लागि १ र कमका लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक)
1	High speed (तिब्र गति)	1
2	Bad weather (खराब मौसम)	2
3	Bad Condition of road (सडकको खराब अवस्था)	2
4	Pedestrian crossing (पैदल यात्रीले बाटो काट्नु)	2
5	Wild/ domestic animal crossing (जङ्गली / घरेलु जनावरले बाटो काट्नु)	2
6	Absence of sign at dangerous location (जोखिमपूर्ण स्थानमा संकेतको अभाव)	2
7	Use of alcohol while driving (गाडी चलाउँदा मादक पदार्थको सेवन)	1
8	Increase in number of vehicles (सवारी साधनको संख्यामा बृद्धि)	2
9	Absence of street light (सडक बत्तिको अभाव)	2

15. In your opinion, what can be done to enhance safety of roads?

तपाईंको विचारमा सडकको सुरक्षा बढाउन के गर्न सकिन्छ ?

Road widening, over bridge, service lane.

16. Whenever there is any maintenance/improvement works in this road section, do you find appropriate sign/s explaining the work-in-progress?

यस सडकमा कुनै पनि मर्मत/सुधार कार्यहरु हुँदा उपयुक्त चिन्हहरु प्रयोग भएको फेला पार्नुहुन्छ ?

a) Yes

b) No

होइन

पारिँन

17. Do you find the availability and accessibility of police posts/ Police patrolling vehicle on this road?

के यस सडकमा प्रहरी चौकी-प्रहरी गस्ती गाडीहरु उपलब्ध छन् ?

a) Yes

b) No

होइन

छैनन्

Infrastructure and Facilities (सडकका पूर्वाधार र सुविधाहरु)

18. Do you find following facilities along this road? What is your satisfaction level on these facilities?

'5' for 'very satisfied'

'4' for 'satisfied',

'3' for 'neither satisfied nor dissatisfied',

'2' for 'Dissatisfied',

'1' for 'very dissatisfied'

के तपाईंले यस सडकमा निम्न सुविधाहरु भेट्नुहुन्छ? यी सुविधाहरु प्रति तपाईंको सन्तुष्टिको स्तर के छ ?

अत्यधिक सन्तुष्टका लागि '५'

सन्तुष्टका लागि '४'

न सन्तुष्ट न असन्तुष्टका लागि '३'

असन्तुष्टका लागि '२'

अत्यधिक असन्तुष्टका लागि '१'

SN क्र.सं.	Facilities (सुविधाहरु)	Do you find the facilities? के तपाईंले सुविधाहरु भेट्नुहुन्छ?		Satisfaction Level सन्तुष्टि स्तर
		Yes भेटछु	No भेटिँन	
1	Public toilets/ bathrooms (सार्वजनिक शौचालय / बाथरूम)	☐	☒	1
2	Restaurants/ shops for food/ drinks (खाना खाने होटल/ रेष्टुरेन्ट)	☒	☐	4
3	Public taps/ Drinking Water (सार्वजनिक धारा/ पिउने पानी)	☐	☒	1
4	Medical facilities (स्वास्थ्य सुविधा)	☒	☐	2
5	Rain shelter-cum-Bus stop (बर्षा आश्रय - बस बिसौनी)	☐	☒	1
6	Others (अन्य)	☐	☐	

A1 Questionnaire for Motorized Transportation Users

19. How long does it take when you want to make a travel to different public places?

तपाईंलाई विभिन्न सार्वजनिक सुविधाको स्थानमा पुग्नको लागि कतिको समय लाग्दछ?

SN क्र.सं.	Places (स्थानहरू)	Time (समय)	
		Hours घन्टा	Minute मिनेट
1	Reach to the Primary school (प्राथमिक स्कूल पुग्न)		10
2	Reach Higher Secondary School (उच्च माध्यमिक विद्यालय पुग्न)		10
3	Reach Colleges/Universities (विश्वविद्यालय पुग्न)		25
4	Reach to the hospital (अस्पताल पुग्न)		25
5	Reach to the market (बजार पुग्न)		25
6	Reach to Police Station (प्रहरी चौकी पुग्न)		10
7	Reach to Ward Office (वडा कार्यालय पुग्न)		10

20. What time of the day is the most difficult for you to find public transport facilities in this road?

यो सडकमा सार्वजनिक यातायात सुविधा लिन तपाईंलाई दिनको कुन समय सबैभन्दा गाह्रो हुन्छ ?

- a) 5am-8am विहान ५-८ बजे
b) 8am-10am विहान ८-१० बजे
c) 10am-12pm विहान १०-१२ बजे
d) 12pm-4pm दिउँसो १२ - साँझ ४ बजे
e) 4pm-8pm साँझ ४ - राति ८ बजे
f) 8pm-10pm राति ८-१० बजे
g) Beyond 10pm राति १० बजे भन्दा पछि

21. How accessible do you find footpaths along the roads?

यस सडकमा फुटपाथ कतिको पहुँचयोग्य पाउनुहुन्छ ?

- a) Highly accessible उच्च पहुँचयोग्य
b) Accessible पहुँचयोग्य
c) Neither Accessible nor Inaccessible न पहुँचयोग्य न पहुँच बाहिर
d) Inaccessible पहुँच बाहिर
e) Highly Inaccessible अत्यधिक पहुँच बाहिर

22. How satisfied are you with the accessibility of cycling path and lanes?

तपाईं साइकल मार्ग र लेनहरूको पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied अत्यधिक सन्तुष्ट
b) Satisfied सन्तुष्ट
c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट
d) Dissatisfied असन्तुष्ट
e) Highly dissatisfied अत्यधिक असन्तुष्ट

23. How satisfied are you with the quality and coverage of street lights on the road?

तपाईं सडकमा सडक बतिको गुणस्तर र पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied अत्यधिक सन्तुष्ट
b) Satisfied सन्तुष्ट
c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट
d) Dissatisfied असन्तुष्ट
e) Highly dissatisfied अत्यधिक असन्तुष्ट

24. Are there any specific locations along road section that needs lightings?

यस सडक खण्डमा बतिको आवश्यक पर्ने कुनै विशेष स्थानहरू छन् ?

- a) Yes छिन्
b) No छैनन्

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

Sholungepel area ; Ramnagar area

Accessibility and Connectivity (सडकको पहुँच)

25. How satisfied are you with the access provided by this road to key locations like work places/ residence/ shops/ school/ hospital/farms?

यो सडकको कारणले काम गर्ने ठाउँ/बासस्थान/पसल/विद्यालय/अस्पताल फार्म जस्ता ठाउँहरू पुग्नका लागि गरेको प्रभाव प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied अत्यधिक सन्तुष्ट
b) Satisfied सन्तुष्ट
c) Neither satisfied nor dissatisfied न त सन्तुष्ट न असन्तुष्ट
d) Dissatisfied असन्तुष्ट
e) Highly dissatisfied अत्यधिक असन्तुष्ट

26. How reliable is this road to reach your destination on time?

27. समयमै गन्तव्यमा पुग्नको लागि यो बाटो कतिको भरपर्दो छ ?

- a) Highly reliable अत्यधिक भरपर्दो
b) Reliable भरपर्दो
c) Neutral तटस्थ
d) Unreliable अभरपर्दो नसकिने
e) Highly unreliable अत्यधिक भर पर्ने नसकिने

A1 Questionnaire for Motorized Transportation Users

28. What do you feel about the trend of travel time along this road section over past two years?

विगत दुई वर्षमा यस सडक खण्डमा यात्राको समयको प्रवृत्तिको बारेमा तपाईंलाई कस्तो लाग्छ ?

- a) Substantially reduced b) Reduced marginally c) Remained same d) Increased e) Increased substantially
पर्याप्त मात्रामा घटेको थोरै घटेको उस्तै रहेको बढेको उल्लेख्य रूपमा बढेको

29. How satisfied are you with the connectivity and access provided by this road to other major roads and highways?

यस सडकले प्रदान गरेको अन्य प्रमुख सडकहरु संगको पहुँच प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

30. How satisfied are you with the signages for directions and distance along the road?

यस सडकमा रहेको दिशा र दूरीको बारेमा जानकारी दिने संकेतहरु प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

31. How has this road contributed in improving the local economy and business?

आर्थिक गुणस्तर र व्यापार बढाउन यस सडक कतिको प्रभावकारी रहेको छ ?

- a) Highly efficient b) Efficient c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्याधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्याधिक अप्रभावकारी

Emergency Services (आपतकालिन सुविधाहरु)

32. What type of medical facilities does the road user get on this road?

सडक प्रयोगकर्ताले यस सडक खण्डमा कस्ता स्वास्थ्य सुविधाहरु पाउँछन् ?

- a) Govt. hospital b) Private hospital c) Health posts d) Clinic e) None of above
सरकारी अस्पताल निजी अस्पताल स्वास्थ्य चौकी क्लिनिक कुनै पनि छैनन्

33. How satisfied are you with the accessibility of emergency services such as ambulances and fire truck, to different parts of the community?

समुदायमा एम्बुलेन्स तथा दमकल जस्ता आपतकालीन सुविधाहरुको पहुँचबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

34. What do you think about the post-crash response when an accident occurs on this road?

यस सडकमा दुर्घटना हुँदा दुर्घटना पछिको प्रतिक्रियाको बारे तपाईं के सोच्नु हुन्छ ?

- a) Very quick b) Quick c) Neither quick nor slow d) Slow e) Very slow
धेरै चाँडो चाँडो न चाँडो न ढिलो ढिलो धेरै ढिलो

User Experience (प्रयोगकर्ताको अनुभव)

35. How satisfied are you with the overall quality of roads?

सडकको समग्र गुणस्तर प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

36. Do you know who is responsible for road maintenance work?

के तपाईंलाई सडक मर्मतको जिम्मेवारी कसको हो भन्ने कुरा थाहा छ ?

- a) DoR b) DoLIDAR/DDC c) Municipality d) Any other agency e) Do not know
सडक विभाग जि.वि.स. नगरपालिका / गाउँपालिका अन्य निकायहरु थाहा छैन

37. Have you ever made complaint to Government/Road authorities regarding any type of problem faced while traveling on this road?

के तपाईंले यस सडकमा यात्रा गर्दा भोग्नुभएका समस्याहरु बारे सडक अधिकारीहरूसँग कहिल्यै गुनासो गर्नुभएको छ ?

- a) Yes b) No
छ छैन

A1 Questionnaire for Motorized Transportation Users

38. If yes, how satisfied are you with the complaint redressal system of DoR/Road agencies?

यदि छ भने, सडक विभाग/ सडक निकायहरूको गुनासो निवारण प्रणालीसँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

39. How satisfied are you with DOR or responsible road agencies resolving maintenance, quality and repairing related problem in time?

सडक मर्मत र गुणस्तर सम्बन्धि समस्याहरू समयमै समाधान गर्ने सडक विभाग र अन्य जिम्मेवार निकायहरूको कार्यबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्याधिक असन्तुष्ट

40. How satisfied are you with the road maintenance work?

तपाईं सडक मर्मतको कार्यबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्याधिक असन्तुष्ट

41. Are there any specific locations where road maintenance is needed?

सडक मर्मत गर्नुपर्ने कुनै खास स्थानहरू छन् ?

- a) Yes b) No

छन् ~~छैनन्~~

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

42. Are there any innovative solutions or technologies you believe could improve road quality?

के तपाईंलाई सडकको गुणस्तर सुधार गर्ने कुनै नयाँ प्रविधिबारे जानकारी छ ?

43. What specific improvements would you suggest to enhance the quality or serviceability of this road?

सडकको गुणस्तर तथा सेवा क्षमता बढि गर्न के सुझाव दिन चाहनु हुन्छ ?

Road widening, Street light

44. How satisfied are you with the quality of this road in comparison with other road sections in the region?

यस क्षेत्रका अन्य सडकको तुलनामा यस सडकको गुणस्तर सँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्याधिक असन्तुष्ट

Environment and Aesthetic Aspects (सडक वरपरको वातावरण र शौन्दर्यता)

45. How satisfied are you with the cleanliness of the road and surroundings?

तपाईं यस सडकको सरसफाईबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्याधिक असन्तुष्ट

46. What do you feel about the noise level generated by the traffic in this road?

यस सडकमा गुड्ने सवारीबाट निस्कने ध्वनीको बाप तपाईं कतिको महसुस गर्नुहुन्छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम ~~बढि~~ अत्याधिक बढि

47. What do you feel about the level of air pollution in this road?

यस सडकमा भएको वायु प्रदूषणको मात्रा प्रति तपाईंको धारणा के छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम ~~बढि~~ अत्याधिक बढि

AI Questionnaire for Motorized Transportation Users

Green Resilient Corridor (GRID Approach)

48. Have you ever encountered wildlife on or near the highway?
के तपाईंले कहिल्यै राजमार्गमा वा नजिक वन्यजन्तु देख्नु भएको छ
a) Yes छन b) No छैन
49. If yes, name the animal you most see during the travel?
यदि छ भने, यात्रा गर्दा सबैभन्दा बढि कुन जनावरहरु देख्नुहुन्छ ?
50. If yes, describe the nature of the encounter. (e.g., crossing the road, accident, near-miss accident).
यदि देख्नु भएको छ भने वन्यजन्तु भेट्दाको प्रकृतिको वर्णन गर्नुहोस् । (जस्तै बाटो पार गर्दै, दुर्घटनामा परेको, दुर्घटनाको निकट)
51. In your opinion, how well does the highway design consider the safety of wildlife?
सडकको डिजाइन वन्यजन्तुको सुरक्षाको लागि कतिको प्रभावकारी पाउनुहुन्छ ?
a) Highly effective अत्याधिक प्रभावकारी b) Effective प्रभावकारी c) Neutral तटस्थ d) Ineffective अप्रभावकारी e) Very Ineffective अत्याधिक अप्रभावकारी
52. Do you believe that the highway has adequate wildlife crossings such as Overpass and Underpass?
के तपाईं यस राजमार्गमा वन्यजन्तुलाई बाटो माथि तथा बाटो मुनिबाट क्रसिग गर्नको लागि पुलहरु प्याप्त रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?
a) Fully Agreed पूर्ण सहमत b) Agreed सहमत c) Neutral तटस्थ d) Disagree असहमत e) Fully Disagree अत्याधिक असहमत
53. Do you believe that the highway has adequate signage warning of wildlife crossings?
के तपाईं यस राजमार्गमा वन्यजन्तु क्रसिगको लागि चेतावनी दिने प्याप्त साईनबोर्डहरु रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?
a) Fully Agreed पूर्ण सहमत b) Agreed सहमत c) Neutral तटस्थ d) Disagree असहमत e) Fully Disagree अत्याधिक असहमत
54. What improvements would you suggest to enhance road safety and reduce human-wildlife conflicts?
सडक सुरक्षालाई सुधार्न र मानव वन्यजन्तु द्वन्द्वलाई कम गर्न के के सुधारहरुको सुझाव दिन चाहनुहुन्छ ?
Domestic animal management
55. Are you aware of any environmental initiatives to protect wildlife related to this highway?
के तपाईंलाई यो राजमार्गसँग सम्बन्धित कुनै वन्यजन्तुको संरक्षणमा केन्द्रित वातावरणीय प्रयासहरु भएको थाहा छ कि छैन ?
a) Yes छ b) No छैन
56. How would you rate the efforts of the highway authorities in addressing wildlife conservation concerns?
वन्यजन्तु संरक्षण गर्न सडक विभाग र सडक सम्बन्धि अधिकारीहरुको प्रयासलाई तपाईं कुसरी मूल्यांकन गर्नुहुन्छ ?
a) Excellent उत्कृष्ट b) Good राम्रो c) Fair मध्यम d) Poor खराब e) Very Poor धेरै खराब
57. How do you feel about the safety of the road in terms of extreme weather, heavy rainfall, floods, landslides, etc.?
अत्याधिक मौसम, भारी वर्षा, बाढी, पहिरो आदि दृष्टिकोणबाट सडकको सुरक्षाबारे तपाईंको धारणा कस्तो छ ?
a) Very Safe धेरै सुरक्षित b) Safe सुरक्षित c) Neutral तटस्थ d) Unsafe असुरक्षित e) Very Unsafe धेरै असुरक्षित
58. What do you think the government should do to prevent such disasters on highways?
यस्ता विपत्तिहरुबाट राजमार्गलाई जोगाउन सरकारले के गर्नु पर्छ होला ?
Drainage System Management

APPENDIX C2:
Sample Response of Non-Motorized Commuters

A2-Questionnaire for Non-Motorized Commuters

Department of Roads

सडक विभाग

Questionnaire for

Road User's Satisfaction Survey along Butwal-Gorusinghe-Chanauta Road

बुटवल-गोरुसिङ्गे-चनौटा सडक प्रयोगकर्ताको सन्तुष्टि सर्वेक्षणको लागि प्रश्नावली

Questionnaire for Non-Motorized Commuters

(सवारी साधन नचलाउने सडक प्रयोगकर्ताका लागि प्रश्नहरू)

Name of Interviewer: Suresh Rai

अन्तर्वार्ताकर्ताको नाम:

Date: 2024/04/22

मिति:

Details of Survey Station (सर्वे स्टेशनको विवरण)

Name of Road Link: NH-01-047

सडक खण्डको नाम

Survey Station No.: B-1 District: Rupandehi Village/Town: Nepalgunj Road

सर्वे स्टेशन नम्बर

जिल्ला:

गाउँ/सहर

Demographic Information (जनसांख्यिकीय विवरण)

Name of Respondent: Rabita Poudel Gender: a) Male b) Female c) Others

उत्तरदाताको नाम

लिंग

पुरुष

महिला

अन्य

Age: (a) 18-25 yrs (b) 26-35 yrs (c) 36-45 yrs (d) 46-55 yrs (e) Above 55 yrs

उमेर १८-२५ वर्ष २६-३५ वर्ष ३६-४५ वर्ष ४६-५५ वर्ष ५५ वर्ष भन्दा माथि

(Any person below 18 years is not to be interviewed)

(१८ वर्ष भन्दा कम उमेरका कुनै पनि व्यक्तिको अन्तर्वार्ता नलिने)

Occupation: a) Agriculture b) Business c) Service d) Student e) Labor f) Others nothing

पेशा

कृषि

व्यापार

सेवा

विद्यार्थी

मजदूर

अन्य

Road User Type: a) Pedestrians b) Local Residents/ Entrepreneurs c) Farmers d) Market Consumers

सडक प्रयोगकर्ता किसिम

पैदल यात्री

स्थानीय वासिन्दा/उद्यमी

किसान

उपभोक्ता

d) Passengers

f) Cyclists

g) Teachers/Students

h) Pilgrims/Tourists

यात्रु

साइकल चालक

शिक्षक, विद्यार्थी

तिर्थयात्री, पर्यटक

Purpose of Travel a) Business/ Job/ Agricultural work b) Visiting relatives/friends c) Shopping

यात्राको उद्देश्य

व्यापार/जागिर/कृषि

आफन्त/साथीहरूलाई भेट्न

किनमेल

d) Sight-seeing/ Touring/ Leisure

e) Others

दर्शनीय स्थल/पर्यटन/फुर्सद

अन्य

Frequency of Travel: a) Daily b) Weekly c) Occasionally d) More than 1 time a day

यात्राको बारम्बारता

दिन दिनै

हप्ताको १ पटक

कहिले काहिँ

दिनको १ पटक भन्दा धेरै

Road Condition (सडकको अवस्था)

1. How often do you encounter potholes or uneven road surfaces?

तपाईंले खाल्डाहरू र असमान सडक सतहहरू कतिको भेटाउनु हुन्छ ?

a) none

b) Rarely

c) Occasionally

d) Frequently

e) Very Frequently

कुनै भेटिदैन

बिरलै

कहिलेकाहिँ

बारम्बार

अत्यन्तै बारम्बार

2. How satisfied are you with the visibility and clarity of road markings?

तपाईं सडक चिन्हहरूको दृश्यता र स्पष्टतासँग कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied

b) Satisfied

c) Neither satisfied nor dissatisfied

d) Dissatisfied

e) Highly dissatisfied

अत्यधिक सन्तुष्ट

सन्तुष्ट

न त सन्तुष्ट न असन्तुष्ट

असन्तुष्ट

अत्यधिक असन्तुष्ट

A2 -Questionnaire for Non-Motorized Commuters

3. How efficient do you find the drainage system in road?

यस सडकमा ड्रेनेज प्रणाली कतिको प्रभावकारी पाउनुहुन्छ ?

- a) Highly efficient b) Efficient ☒ c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्याधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्याधिक अप्रभावकारी

4. What do you think about the width of this road?

यो सडकको चौडाईको बारेमा तपाईं के सोच्नु हुन्छ ?

- a) Highly adequate b) Adequate ☒ c) Neither adequate nor inadequate d) Inadequate e) Highly inadequate
अत्याधिक पर्याप्त पर्याप्त न पर्याप्त न अपर्याप्त अपर्याप्त अत्याधिक अपर्याप्त

5. How satisfied are you with existing condition of the road surfaces?

सडकको अवस्था देखि तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied ☒ d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

6. Are there any locations along road section where road quality degrades significantly during adverse whether condition?

के यस सडकमा प्रतिकूल मौसमका बेला वाटो अवरुद्ध हुने स्थानहरू छन् ?

- ☒ a) Yes b) No Mention Location (if there is any)
छन् छैनन् छन् भने उल्लेख गर्नुहोस्

Tinaku bridge around

Traffic and Safety (सवारी र सुरक्षा)

7. How is vehicle congestion on this road?

यो सडकमा सवारी साधनको चाप कस्तो छ ?

- a) Absolutely free from congestion b) Free from congestion
भीडभाडले पूर्ण रुपमा मुक्त भीडभाड मुक्त
c) Neither free nor congested ☒ d) Congested e) Highly congested
न त भीडभाड मुक्त न त भीडभाड भएको भीडभाड भएको अत्याधिक भीडभाड भएको

8. How satisfied are you with the installation of guard rails on sharp bends and steep slopes of roads?

अप्यारो मोडहरू र डाढो सडक छेउमा राखिएका बारहरूबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied ☒ d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

9. How accessible do you find pedestrian crossing along the roads?

तपाईं सडकमा पैदल यात्रीको लागि वाटो काट्ने स्थान कतिको पहुँचयोग्य पाउनुहुन्छ ?

- a) Highly accessible b) Accessible
उच्च पहुँचयोग्य पहुँचयोग्य
c) Neither Accessible nor Inaccessible ☒ d) Inaccessible e) Highly Inaccessible
न पहुँचयोग्य न पहुँच बाहिर पहुँच बाहिर अत्याधिक पहुँच बाहिर

10. Are road signs adequately placed to enhance the safety of road users?

सडक प्रयोगकर्ताको सुरक्षाको लागि सडक चिन्हहरू पर्याप्त मात्रामा राखिएका छन् ?

- a) Yes ☒ b) No
छन् छैनन्

A2-Questionnaire for Non-Motorized Commuters

11. Where do you find the road signs most effective? (Multiple Choice Question)

सडक चिन्हहरु सबै भन्दा प्रभावकारी कुन ठाउँमा पाइनु हुन्छ ?

SN क्र.सं.	Road sign (सडक संकेत)	Tick (चिन्ह लाउनुहोस्)
1	Near to the school (विद्यालय नजिक)	✓
2	Near to the hospital (अस्पताल नजिक)	✓
3	Narrow road (साँघुरो बाटो)	
4	Sharp bends (अच्यारो मोडहरु)	
5	Pedestrian crossing (पैदलयात्रीले बाटो काट्ने स्थान)	✓
6	Speed breaker (स्पीड ब्रेकर)	✓
7	Landslide/hazardous area (पहिरो तथा अन्य जोखिमपूर्ण क्षेत्रहरु)	
8	High accident area (उच्च दुर्घटना क्षेत्र)	
9	Others (अन्य)	

12. Considering the safety aspect mark the following factors (Note-1 for most unsafe and 5 for least unsafe factor)

सुरक्षा पक्षलाई मध्यनजर राखी निम्न कारकहरु अंक दिनुहोस् (नोट-सबैभन्दा असुरक्षितको लागि १ र कम असुरक्षितको लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक)
1	Over speed (गति भत्ति)	1
2	Unusual overtaking (जबानाकी ओभरटेक)	1
3	Heavy goods carrying vehicles (भारी सामान बोक्ने गाडीहरु)	3
4	Lack of awareness of traffic rules (ट्राफिक नियम सम्बन्धि चेतनाको अभाव)	3
5	Bad condition of road (सडकको सराच अवस्था)	4
6	Absence of sufficient road signs (प्रधान सडक संकेतहरुको अभाव)	4
7	Aggressive driving (आक्रामिक ड्राइभिङ)	2
8	Narrow road (साँघुरो बाटो)	4
9	Careless driving (लापरवाही ड्राइभिङ)	2
10	Unfit vehicles (अयोग्य गाडीहरु)	4

13. How safe do you feel while traveling on these roads?

यस सडकमा यात्रा गर्दा तपाईं कतिको सुरक्षित महसूस गर्नुहुन्छ ?

a) Very safe b) Safe c) Neither safe nor unsafe d) Unsafe e) Very unsafe
धेरै सुरक्षित सुरक्षित न सुरक्षित न असुरक्षित असुरक्षित धेरै असुरक्षित

A2-Questionnaire for Non-Motorized Commuters

14. In your opinion, which of the following factors lead to most of the accidents? Mark the following factors.
(Note-1 for most accident-causing factor and 5 for least accident-causing factor.)

तलका मध्ये कुन कारणले बढी दुर्घटना निम्त्याउँछ? (सबैभन्दा बढी दुर्घटना निम्त्याउने कारणका लागि १ र कमका लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरू)	Mark (अंक)
1	High speed (तिब्र गति)	1
2	Bad weather (खराब मौसम)	3
3	Bad Condition of road (सडकको खराब अवस्था)	4
4	Pedestrian crossing (पैदल यात्रीले बाटो काट्नु)	3
5	Wild/ domestic animal crossing (जङ्गली / घरेलु जनावरले बाटो काट्नु)	1
6	Absence of sign at dangerous location (जोखिमपूर्ण स्थानमा संकेतको अभाव)	4
7	Use of alcohol while driving (गाडी चलाउँदा मादक पदार्थको सेवन)	2
8	Increase in number of vehicles (सवारी साधनको संख्यामा वृद्धि)	4
9	Absence of street light (सडक बत्तिको अभाव)	4

15. In your opinion, what can be done to enhance safety of roads?

तपाईंको विचारमा सडकको सुरक्षा बढाउन के गर्न सकिन्छ?

Slow speed.

16. Whenever there is any maintenance/improvement works in this road section, do you find appropriate sign/s explaining the work-in-progress?

यस सडकमा कुनै पनि मर्मत/सुधार कार्यहरू हुँदा उपयुक्त चिन्हहरू प्रयोग भएको फेला पार्नुहुन्छ?

☒ a) Yes

☐ b) No

पाछु

पार्दिन

17. Do you find the availability and accessibility of police posts/ Police patrolling vehicle on this road?

के यस सडकमा प्रहरी चौकी-प्रहरी गस्ती गाडीहरू उपलब्ध छन्?

☒ a) Yes

☐ b) No

हो

नैन

Infrastructure and Facilities (सडकका पूर्वाधार र सुविधाहरू)

18. Do you find following facilities along this road? What is your satisfaction level on these facilities?

'5' for 'very satisfied'

'4' for 'satisfied',

'3' for 'neither satisfied nor dissatisfied',

'2' for 'Dissatisfied',

'1' for 'very dissatisfied'

के तपाईंले यस सडकमा निम्न सुविधाहरू भेट्नुहुन्छ? यी सुविधाहरू प्रति तपाईंको सन्तुष्टिको स्तर के छ?

अत्यधिक सन्तुष्टका लागि '५'

सन्तुष्टका लागि '४'

न सन्तुष्ट न असन्तुष्टका लागि '३'

असन्तुष्टका लागि '२'

अत्यधिक असन्तुष्टका लागि '१'

SN क्र.सं.	Facilities (सुविधाहरू)	Do you find the facilities? के तपाईंले सुविधाहरू भेट्नुहुन्छ?		Satisfaction Level सन्तुष्टि स्तर
		Yes भेटछ	No भेट्दैन	
1	Public toilets/ bathrooms (सार्वजनिक शौचालय / बाथरूम)	☐	☒	1
2	Restaurants/ shops for food/ drinks (खाना खाने होटल/ रेष्टुरेन्ट)	☒	☐	5
3	Public taps/ Drinking Water (सार्वजनिक धारा/ पिउने पानी)	☐	☒	1
4	Medical facilities (स्वास्थ्य सुविधा)	☒	☐	4
5	Rain shelter-cum-Bus stop (वर्षा आश्रय - बस विसौती)	☒	☐	4
6	Others (अन्य)	☐	☐	

A2 -Questionnaire for Non-Motorized Commuters

19. How long does it take when you want to make a travel to different public places?

तपाईंलाई विभिन्न सार्वजनिक सुविधाको स्थानमा पुग्नको लागि कतिको समय लाग्दछ?

SN क.सं.	Places (स्थानहरू)	Time (समय)	
		Hours घन्टा	Minute मिनेट
1	Reach to the Primary school (प्राथमिक स्कूल पुग्न)		2
2	Reach Higher Secondary School (उच्च माध्यमिक विद्यालय पुग्न)		2
3	Reach Colleges/Universities (विश्वविद्यालय पुग्न)		30
4	Reach to the hospital (अस्पताल पुग्न)	1	
5	Reach to the market (बजार पुग्न)	1	
6	Reach to Police Station (प्रहरी चौकी पुग्न)	1	
7	Reach to Ward Office (वडा कार्यालय पुग्न)		15

20. What time of the day is the most difficult for you to find public transport facilities in this road?

यो सडकमा सार्वजनिक यातायात सुविधा लिन तपाईंलाई दिनको कुन समय सबैभन्दा गाह्रो हुन्छ ?

- a) 5am-8am
बिहान ५-८ बजे
- b) 8am-10am
बिहान ८-१० बजे
- c) 10am-12pm
बिहान १०-१२ बजे
- d) 12pm-4pm
दिउँसो १२ - साँझ ४ बजे
- e) 4pm-8pm
साँझ ४ - राति ८ बजे
- f) 8pm-10pm
राति ८-१० बजे
- g) Beyond 10pm
राति १० बजे भन्दा पछि

21. How accessible do you find footpaths along the roads?

यस सडकमा फुटपाथ कतिको पहुँचयोग्य पाउनुहुन्छ ?

- a) Highly accessible
उच्च पहुँचयोग्य
- b) Accessible
पहुँचयोग्य
- c) Neither Accessible nor Inaccessible
न पहुँचयोग्य न पहुँच बाहिर
- d) Inaccessible
पहुँच बाहिर
- e) Highly Inaccessible
अत्यधिक पहुँच बाहिर

22. How satisfied are you with the accessibility of cycling path and lanes?

तपाईं साइकल मार्ग र लेनहरूको पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied
अत्यधिक सन्तुष्ट
- b) Satisfied
सन्तुष्ट
- c) Neither satisfied nor dissatisfied
न त सन्तुष्ट न असन्तुष्ट
- d) Dissatisfied
असन्तुष्ट
- e) Highly dissatisfied
अत्यधिक असन्तुष्ट

23. How satisfied are you with the quality and coverage of street lights on the road?

तपाईं सडकमा सडक बत्तिको गुणस्तर र पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied
अत्यधिक सन्तुष्ट
- b) Satisfied
सन्तुष्ट
- c) Neither satisfied nor dissatisfied
न त सन्तुष्ट न असन्तुष्ट
- d) Dissatisfied
असन्तुष्ट
- e) Highly dissatisfied
अत्यधिक असन्तुष्ट

24. Are there any specific locations along road section that needs lightings?

यस सडक खण्डमा बत्तिको आवश्यक पर्ने कुन विशेष स्थानहरू छन् ?

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

pushpaul park

Accessibility and Connectivity (सडकको पहुँच)

25. How satisfied are you with the access provided by this road to key locations like work places/ residence/ shops/ school/ hospital/farms?

यो सडकको कारणले काम गर्ने ठाउँ/बासस्थान/पसल/विद्यालय/अस्पताल फार्म जस्ता ठाउँहरू पुग्नका लागि गरेको प्रभाव प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied
अत्यधिक सन्तुष्ट
- b) Satisfied
सन्तुष्ट
- c) Neither satisfied nor dissatisfied
न त सन्तुष्ट न असन्तुष्ट
- d) Dissatisfied
असन्तुष्ट
- e) Highly dissatisfied
अत्यधिक असन्तुष्ट

26. How reliable is this road to reach your destination on time?

समयमै गन्तव्यमा पुग्नको लागि यो बाटो कतिको भरपर्दो छ ?

- a) Highly reliable
अत्यधिक भरपर्दो
- b) Reliable
भरपर्दो
- c) Neutral
तटस्थ
- d) Unreliable
भर पर्ने नसकिने
- e) Highly unreliable
अत्यधिक भर पर्ने नसकिने

A2 -Questionnaire for Non-Motorized Commuters

27. What do you feel about the trend of travel time along this road section over past two years?

विगत दुई वर्षमा यस सडक खण्डमा यात्राको समयको प्रवृत्तिको बारेमा तपाईंलाई कस्तो लाग्छ ?

- a) Substantially reduced b) Reduced marginally c) Remained same d) Increased e) Increased substantially
पर्याप्त मात्रामा घटेको थोरै घटेको उस्तै रहेको बढेको उल्लेख्य रूपमा बढेको

28. How satisfied are you with the connectivity and access provided by this road to other major roads and highways?

यस सडकले प्रदान गरेको अन्य प्रमुख सडकहरूसँगको पहुँच प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

29. How satisfied are you with the signages for directions and distance along the road?

यस सडकमा रहेको दिशा र दूरीको बारेमा जानकारी दिने संकेतहरू प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

30. How has this road contributed in improving the local economy and business?

आर्थिक गुणस्तर र व्यापार बढाउन यस सडक कतिको प्रभावकारी रहेको छ ?

- a) Highly efficient b) Efficient c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्याधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्याधिक अप्रभावकारी

Emergency Services (आपतकालिन सुविधाहरू)

31. What type of medical facilities does the road user get on this road?

सडक प्रयोगकर्ताले यस सडक खण्डमा कस्ता स्वास्थ्य सुविधाहरू पाउँछन् ?

- a) Govt. hospital b) Private hospital c) Health posts d) Clinic e) None of above
सरकारी अस्पताल निजी अस्पताल स्वास्थ्य चौकी क्लिनिक कुनै पनि छैनन्

32. How satisfied are you with the accessibility of emergency services such as ambulances and fire truck, to different parts of the community?

समुदायमा एम्बुलेन्स तथा दमकल जस्ता आपतकालीन सुविधाहरूको पहुँचबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

33. What do you think about the post-crash response when an accident occurs on this road?

यस सडकमा दुर्घटना हुँदा दुर्घटना पछिको प्रतिक्रियाको बारेमा तपाईं के सोच्नु हुन्छ ?

- a) Very quick b) Quick c) Neither quick nor slow d) Slow e) Very slow
धेरै चाँडो चाँडो न चाँडो न ढिलो ढिलो धेरै ढिलो

User Experience (प्रयोगकर्ताको अनुभव)

34. How satisfied are you with the overall quality of roads?

सडकको समग्र गुणस्तर प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

35. Do you know who is responsible for road maintenance work?

के तपाईंलाई सडक मर्मतको जिम्मेवारी कसको हो भन्ने कुरा थाहा छ ?

- a) DoR b) DoLIDAR/DDC c) Municipality d) Any other agency e) Do not know
सडक विभाग जि.वि.स. नगरपालिका / गाउँपालिका अन्य निकायहरू थाहा छैन

36. Have you ever made complaint to Government/Road authorities regarding any type of problem faced while traveling on this road?

के तपाईंले यस सडकमा यात्रा गर्दा भोग्नुभएका समस्याहरू बारे सडक अधिकारीहरूसँग कहिल्यै गुनासो गर्नुभएको छ ?

- a) Yes b) No
छ छैन

A2 -Questionnaire for Non-Motorized Commuters

37. If yes, how satisfied are you with the complaint redressal system of DoR/Road agencies?

यदि छ भने, सडक विभाग/ सडक निकायहरूको गुनासो निवारण प्रणालीसँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

38. How satisfied are you with DOR or responsible road agencies resolving maintenance, quality and repairing related problem in time?

सडक मर्मत र गुणस्तर सम्बन्धि समस्याहरू समयमै समाधान गर्ने सडक विभाग र अन्य जिम्मेवार निकायहरूको कार्यबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

39. How satisfied are you with the road maintenance work?

तपाईं सडक मर्मतको कार्यबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

40. Are there any specific locations where road maintenance is needed?

- a) Yes b) No

सडक मर्मत गर्नुपर्ने कुनै खास स्थानहरू छन् ?

छन् छैनन्

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

41. Are there any innovative solutions or technologies you believe could improve road quality?

के तपाईंलाई सडकको गुणस्तर सुधार गर्ने कुनै नयाँ प्रविधिकारे जानकारी छ ?

42. What specific improvements would you suggest to enhance the quality or serviceability of this road?

सडकको गुणस्तर तथा सेवा क्षमता बढि गर्न के सुझाव दिन चाहनु हुन्छ ?

Widening road, Good Quality materials use.

43. How satisfied are you with the quality of this road in comparison with other road sections in the region?

यस क्षेत्रका अन्य सडकको तुलनामा यस सडकको गुणस्तर सँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

Environment and Aesthetic Aspects (सडक वरपरको वातावरण र शौन्दर्यता)

44. How satisfied are you with the cleanliness of the road and surroundings?

तपाईं यस सडकको सरसफाईबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

45. What do you feel about the noise level generated by the traffic in this road?

यस सडकमा गुड्ने सवारीबाट निस्कने ध्वनीको चाप तपाईं कतिको महसुस गर्नुहुन्छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

46. What do you feel about the level of air pollution in this road?

यस सडकमा भएको वायु प्रदूषणको मात्रा प्रति तपाईंको धारणा के छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

A2 -Questionnaire for Non-Motorized Commuters

Green Resilient Corridor (GRID Approach)

47. Have you ever encountered wildlife on or near the highway?
के तपाईंले कहिल्यै राजमार्गमा वा नजिक वन्यजन्तु देख्नु भएको छ
a) Yes छन b) No छैनन

48. If yes, name the animal you most see during the travel?
यदि छ भने, यात्रा गर्दा सबैभन्दा बढि कुन जनावरहरु देख्नुहुन्छ ?

Monkey

49. If yes, describe the nature of the encounter. (e.g., crossing the road, accident, near-miss accident).
यदि देख्नु भएको वन्यजन्तु भेटदाको प्रकृतिको वर्णन गर्नुहोस् (जस्तै बाटो पार गर्दै, दुर्घटनामा परेको, दुर्घटनाको निकट)

Hanging on electric wire.

50. In your opinion, how well does the highway design consider the safety of wildlife?

सडकको डिजाइन वन्यजन्तुको सुरक्षाको लागि कतिको प्रभावकारी पाउनुहुन्छ ?

a) Highly effective अत्याधिक प्रभावकारी b) Effective प्रभावकारी c) Neutral तटस्थ d) Ineffective अप्रभावकारी e) Very Ineffective अत्याधिक अप्रभावकारी

51. Do you believe that the highway has adequate wildlife crossings such as Overpass and Underpass?

के तपाईं यस राजमार्गमा वन्यजन्तुलाई बाटो माथि तथा बाटो मुनिबाट क्रसिंग गर्नको लागि पुलहरु प्याप्त रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

a) Fully Agreed पूर्ण सहमत b) Agreed सहमत c) Neutral तटस्थ d) Disagree असहमत e) Fully Disagree अत्याधिक असहमत

52. Do you believe that the highway has adequate signage warning of wildlife crossings?

के तपाईं यस राजमार्गमा वन्यजन्तु क्रसिंगको लागि चेतावनी दिने प्याप्त साईनबोर्डहरु रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

a) Fully Agreed पूर्ण सहमत b) Agreed सहमत c) Neutral तटस्थ d) Disagree असहमत e) Fully Disagree अत्याधिक असहमत

53. What improvements would you suggest to enhance road safety and reduce human-wildlife conflicts?

सडक सुरक्षालाई सुधार्न र मानव वन्यजन्तु द्वन्द्वलाई कम गर्न के के सुधारहरुको सुझाव दिन चाहनुहुन्छ?

54. Are you aware of any environmental initiatives to protect wildlife related to this highway?

के तपाईंलाई यो राजमार्गसँग सम्बन्धित कुनै वन्यजन्तुको संरक्षणमा कोन्द्रत बातावरणीय प्रयासहरु भएका थाहा छ कि छैन ?

a) Yes छ b) No छैन

55. How would you rate the efforts of the highway authorities in addressing wildlife conservation concerns?

वन्यजन्तु संरक्षण गर्न सडक बिभाग र सडक सम्बन्धि अधिकारीहरुको प्रयासलाई तपाईं कसरी मूल्यांकन गर्नुहुन्छ ?

a) Excellent उत्कृष्ट b) Good राम्रो c) Fair मध्यम d) Poor खराब e) Very Poor धेरै खराब

56. How do you feel about the safety of the road in terms of extreme weather, heavy rainfall, floods, landslides, etc.?

अत्याधिक मौसम, भारी वर्षा, बाढी, पहिरो आदि दृष्टिकोणबाट सडकको सुरक्षाबारे तपाईंको धारणा कस्तो छ ?

a) Very Safe धेरै सुरक्षित b) Safe सुरक्षित c) Neutral तटस्थ d) Unsafe असुरक्षित e) Very Unsafe धेरै असुरक्षित

57. What do you think the government should do to prevent such disasters on highways?

यस्ता विपत्तिहरुबाट राजमार्गलाई जोगाउन सरकारले के गर्नु पर्छ होला ?

Make Quality road, Drainage, Retaining wall

APPENDIX C3:
Sample Response of Relevant Government
and Non-Governmental Organization/
Association

A3 - Questionnaire for Relevant Government and Non-Governmental Organization/ Association
(Focused Group Discussion)

Department of Roads

सडक विभाग

Questionnaire for

Road User's Satisfaction Survey along Butwal-Gorusinghe-Chanauta Road

बुटवल-गोरुसिङ्गे-चनौटा सडक प्रयोगकर्ताको सन्तुष्टि सर्वेक्षणको लागि प्रश्नावली

Questionnaire for Relevant Government and Non-Governmental Organization/ Association
(Focused Group Discussion)

(सरकारी, गैरसरकारी संस्था र व्यवसायी संघका लागि प्रश्नहरू)

Name of Interviewer: Pragya Karki
अन्तर्वार्ताकर्ताको नाम:

Date: 2084/08/28
मिति:

Details of Survey Station (सर्वे स्टेशनको विवरण)

Name of Road Link: NH-01-048

सडक खण्डको नाम

Survey Station No.: 84

सर्वे स्टेशन नम्बर

District: Rupandehi

जिल्ला:

Village/Town: Buddhangas

गाउँ/सहर

(Sainamaina-05)

Demographic Information (जनसांख्यिकीय विवरण)

Name of the Office:	<u>सुदाम्पा नगरपालिका बुद्धगाउँ सु-एफ</u>		
कार्यालयको नाम:			
Name of Respondents:	Gender:	Age:	Position:
उत्तरदाताहरूको नाम	लिंग	उमेर	पद
<u>अम्मा खड्का</u>	a) Male पुरुष ☒ b) Female महिला c) Others अन्य	<u>35</u>	<u>इन्जिनियर</u>
<u>चि (उज्ज्वी) पाई</u>	a) Male पुरुष ☒ b) Female महिला c) Others अन्य	<u>46</u>	<u>सि.सु.सि.सि.</u>
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		
	a) Male पुरुष b) Female महिला c) Others अन्य		

How many times does a driver take break in a day during long journey?

लामो यात्रामा चालकले दिनमा कति पटक ब्रेक लिन्छन्?

3

**A3 - Questionnaire for Relevant Government and Non-Governmental Organization/ Association
(Focused Group Discussion)**

Road Condition (सडकको अवस्था)

- How often do you encounter potholes or uneven road surfaces?
तपाईंले खाल्डाहरु र असमान सडक सतहहरु कतिको भेटाउनु हुन्छ ?
a) none b) Rarely c) Occasionally d) Frequently e) Very Frequently
कुनै भेटिदैन विरलै कहिलेकाहीँ बारम्बार अत्यन्तै बारम्बार
- How satisfied are you with the visibility and clarity of Road markings?
तपाईं सडक चिन्हहरुको दृश्यता र स्पष्टतासँग कतिको सन्तुष्ट हुनुहुन्छ ?
a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्यधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्यधिक असन्तुष्ट
- How efficient do you find the drainage system in road?
तपाईं सडकमा ड्रेनेज प्रणाली कतिको प्रभावकारी पाउनुहुन्छ ?
a) Highly efficient b) Efficient c) Neither Efficient nor Inefficient d) Inefficient e) Highly Inefficient
अत्यधिक प्रभावकारी प्रभावकारी न प्रभावकारी न अप्रभावकारी अप्रभावकारी अत्यधिक अप्रभावकारी
- What do you think about the width of this road?
यो सडकको चौडाईको बारेमा तपाईं के सोच्नु हुन्छ ?
a) Highly adequate b) Adequate c) Neither adequate nor inadequate d) Inadequate e) Highly inadequate
अत्यधिक पर्याप्त पर्याप्त न पर्याप्त न अपर्याप्त अपर्याप्त अत्यधिक अपर्याप्त
- How satisfied are you with existing condition of the road surfaces?
सडकको अवस्था देखि तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?
a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्यधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्यधिक असन्तुष्ट
- Are there any locations along road section where road quality degrades significantly during adverse weather condition?
के यस सडकमा प्रतिकूल मौसमका बेला बाटो अवस्था हुने स्थानहरु छन् ?
a) Yes b) No Mention Location (if there is any)
छन् छैनन् छन् भने उल्लेख गर्नुहोस्
*Kabuni, Kalika Chowk -
Sharkhuka.*

Traffic and Safety (सवारी र सुरक्षा)

- How is vehicle congestion on this road?
यो सडकमा सवारी साधनको चाप कस्तो छ ?
a) Absolutely free from congestion b) Free from congestion
भीडभाडले पूर्ण रूपमा मुक्त भीडभाड मुक्त
c) Neither free nor congested d) Congested e) Highly congested
न त भीडभाड मुक्त न त भीडभाड भएको भीडभाड भएको अत्यधिक भीडभाड भएको
- How satisfied are you with the installation of guard rails on sharp bends and steep slopes of roads?
अप्रसार मोडहरु र ठाडो सडक छेउमा राखिएका बारहरुबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?
a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्यधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्यधिक असन्तुष्ट
- How accessible do you find pedestrian crossing along the roads?
तपाईं सडकमा पैदल यात्रीको लागि बाटो काट्ने स्थान कतिको पहुँचयोग्य पाउनुहुन्छ ?
a) Highly accessible b) Accessible
उच्च पहुँचयोग्य पहुँचयोग्य
c) Neither Accessible nor Inaccessible d) Inaccessible e) Highly Inaccessible
न पहुँचयोग्य न पहुँच बाहिर पहुँच बाहिर अत्यधिक पहुँच बाहिर
- Are road signs adequately placed to enhance the safety of road users?
सडक प्रयोगकर्ताको सुरक्षाको लागि सडक चिन्हहरु पर्याप्त मात्रामा राखिएका छन् ?
a) Yes b) No
छन् छैनन्

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

11. Where do you find the road signs most effective? (Multiple Choice Question)

सडक चिन्हहरु सबै भन्दा प्रभावकारी कुन ठाउँमा पाइनु हुन्छ ?

SN क्र.सं.	Road sign (सडक संकेत)	Tick (चिन्ह लाउनुहोस्)
1	Near to the school (विद्यालय नजिक)	☒
2	Near to the hospital (अस्पताल नजिक)	☒
3	Narrow road (साँघुरो बाटो)	☒
4	Sharp bends (अप्ट्यारो मोडहरु)	☒
5	Pedestrian crossing (पैदलयात्रीले बाटो काट्ने स्थान)	☒
6	Speed breaker (स्पीड ब्रेकर)	☒
7	Landslide/hazardous area (पहिरो तथा अन्य जोखिमपूर्ण क्षेत्रहरु)	☒
8	High accident area (उच्च दुर्घटना क्षेत्र)	☒
9	Others (अन्य)	☒

12. Considering the safety aspect mark the following factors (Note-1 for most unsafe and 5 for least unsafe factor)

सुरक्षा पक्षलाई मध्यनजर राख्दै निम्न कारकहरु अंक दिनुहोस् (नोट-सबैभन्दा असुरक्षितको लागि १ र कम असुरक्षितको लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरु)	Mark (अंक) 1 for most unsafe and 5 for least unsafe
1	Over speed (तिब्र गति)	1
2	Unusual overtaking (जवाबार्थी ओभरटेक)	1
3	Heavy goods carrying vehicles (भारी सामान बोक्ने गाडीहरु)	2
4	Lack of awareness of traffic rules (दुर्घटक नियम सम्बन्धि चेतनाको अभाव)	3
5	Bad condition of road (सडकको खराब अवस्था)	2
6	Absence of sufficient road signs (उपयुक्त सडक संकेतहरुको अभाव)	2
7	Aggressive driving (आक्रामक ड्राइभिङ)	1
8	Narrow road (साँघुरो बाटो)	2
9	Careless driving (लापरवाही ड्राइभिङ)	2
10	Unfit vehicles (अयोग्य गाडीहरु)	3

13. How safe do you feel while traveling on these roads?

यस सडकमा यात्रा गर्दा तपाईं कतिको सुरक्षित महसुस गर्नुहुन्छ ?

a) Very safe b) Safe c) Neither safe nor unsafe d) Unsafe e) Very unsafe
धेरै सुरक्षित सुरक्षित न सुरक्षित न असुरक्षित असुरक्षित धेरै असुरक्षित

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

14. In your opinion, which of the following factors lead to most of the accidents? Mark the following factors.

(Note-1 for most accident-causing factor and 5 for least accident-causing factor.)

तलका मध्ये कुन कारणले बढी दुर्घटना निम्त्याउँछ ? (सबैभन्दा बढी दुर्घटना निम्त्याउने कारणका लागि १ र कमका लागि ५)

SN क्र.सं.	Factor contributing to accident (दुर्घटनाका कारणहरू)	Mark (अंक) 1 for most accident-causing factor and 5 for least accident-causing factor
1	High speed (तिब्र गति)	1
2	Bad weather (खराब मौसम)	3
3	Bad Condition of road (सडकको खराब अवस्था)	2
4	Pedestrian crossing (पैदल यात्रीले बाटो काट्नु)	2
5	Wild/ domestic animal crossing (जङ्गली / घरेलु जनावरले बाटो काट्नु)	3
6	Absence of sign at dangerous location (जोखिमपूर्ण स्थानमा संकेतको अभाव)	2
7	Use of alcohol while driving (गाडी चलाउँदा मादक पदार्थको सेवन)	1
8	Increase in number of vehicles (सवारी साधनको संख्यामा वृद्धि)	2
9	Absence of street light (सडक बत्तिको अभाव)	2

15. Do drivers follow the traffic rule and regulation while driving?

के चालकहरूले सवारी चलाउँदा ट्राफिक नियमको पालना गर्छन् ?

a) Yes

b) No

गर्छन्

गर्दैनन्

16. In your opinion, what can be done to enhance safety of roads?

तपाईंको विचारमा सडकको सुरक्षा बढाउन के गर्न सकिन्छ ?

Road widening, International design code, Zebra crossing, every corner, guardrails, Pedestrian crossing, & Kyb...

17. What do you think about the role your organization to enhance safety of roads?

सडक सुरक्षाको लागि तपाईंको संघ / संस्थाको भूमिका के रहेको छ ?

2075-2078, ghar bagar Takasa khali garkyo, 2078...

18. Whenever there is any maintenance/improvement works in this road section, do you find appropriate sign/s explaining the work-in-progress?

यस सडकमा कुनै पनि मर्मत/सुधार कार्यहरू हुँदा उपयुक्त चिन्हहरू प्रयोग भएको फेला पार्नुहुन्छ ?

a) Yes

b) No

पार्छु

पार्दैन

19. Do you find the availability and accessibility of police posts/ Police patrolling vehicle on this road?

के यस सडकमा प्रहरी चौकी-प्रहरी गस्ती गाडीहरू उपलब्ध छन् ?

a) Yes

b) No

छन्

छैनन्

20. Do you think there should be provision for two or more drivers in long journey?

के तपाईंलाई लामो यात्रामा दुई वा सो भन्दा बढी चालकको व्यवस्था हुनु पर्छ जस्तो लाग्छ ?

a) Yes

b) No

लाग्छ

लाग्दैन

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

Infrastructure and Facilities (सडकका पूर्वाधार र सुविधाहरु)

21. Do you find following facilities along this road? What is your satisfaction level on these facilities?

'5' for 'very satisfied' '4' for 'satisfied', '3' for 'neither satisfied nor dissatisfied',
'2' for 'Dissatisfied', '1' for 'very dissatisfied'

के तपाईंले यस सडकमा निम्न सुविधाहरु भेटनुहुन्छ? यी सुविधाहरु प्रति तपाईंको सन्तुष्टिको स्तर के छ?

अत्याधिक सन्तुष्टका लागि '५' सन्तुष्टका लागि '४' न सन्तुष्ट न असन्तुष्टका लागि '३'
असन्तुष्टका लागि '२' अत्याधिक असन्तुष्टका लागि '१'

SN क्र.सं.	Facilities (सुविधाहरु)	Do you find the facilities? के तपाईंले सुविधाहरु भेटनुहुन्छ?		Satisfaction Level सन्तुष्टि स्तर
		Yes भेटछ	No भेटदैन	
1	Public toilets/ bathrooms (सार्वजनिक शौचालय / बाबरुम)	☒	☐	3
2	Restaurants/ shops for food/ drinks (खाना खाने होटल/ रेष्टुरेन्ट)	☒	☐	4
3	Public taps/ Drinking Water (सार्वजनिक धारा/ पिउने पानी)	☐	☒	1
4	Medical facilities (स्वास्थ्य सुविधा)	☒	☐	3
5	Rain shelter-cum-Bus stop (वर्षा आश्रय - बस बिसीनी)	☐	☒	3
6	Others (अन्य)	☐	☐	

22. How long does it take when you want to make a travel to different public places?

तपाईंलाई विभिन्न सार्वजनिक सुविधाको स्थानमा पुग्नको लागि कतिको समय लाग्दछ?

SN क्र.सं.	Places (स्थानहरु)	Time (समय)	
		Hours घन्टा	Minute मिनेट
1	Reach to the Primary school (प्राथमिक स्कूल पुग्न)		5
2	Reach Higher Secondary School (उच्च माध्यमिक विद्यालय पुग्न)		5
3	Reach Colleges/Universities (विश्वविद्यालय पुग्न)		5
4	Reach to the hospital (अस्पताल पुग्न)		5
5	Reach to the market (बजार पुग्न)		5
6	Reach to Police Station (प्रहरी चौकी पुग्न)		5
7	Reach to Ward Office (वडा कार्यालय पुग्न)		5

23. What time of the day is the most difficult for you to find public transport facilities in this road?

यो सडकमा सार्वजनिक यातायात सुविधा दिन तपाईंलाई दिनको कुन समय सबैभन्दा गाह्रो हुन्छ?

a) 5am-8am b) 8am-10am c) 10am-12pm d) 12pm-4pm
बिहान ५-८ बजे बिहान ८-१० बजे बिहान १०-१२ बजे दिउँसो १२ - साँझ ४ बजे
e) 4pm-8pm f) 8pm-10pm g) Beyond 10pm
साँझ ४ - राति ८ बजे राति ८-१० बजे राति १० बजे भन्दा पछि

24. How accessible do you find footpaths along the roads?

यस सडकमा फुटपाथ कतिको पहुँचयोग्य पाउनुहुन्छ?

a) Highly accessible b) Accessible
उच्च पहुँचयोग्य पहुँचयोग्य
c) Neither Accessible nor Inaccessible d) Inaccessible e) Highly Inaccessible
न पहुँचयोग्य न पहुँच बाहिर अ पहुँच बाहिर अत्याधिक पहुँच बाहिर

25. How satisfied are you with the accessibility of cycling path and lanes?

तपाईं साइकल मार्ग र लेनहरुको पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ?

a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

**A3 - Questionnaire for Relevant Government and Non-Governmental Organization/ Association
(Focused Group Discussion)**

26. How satisfied are you with the quality and coverage of street lights on the road?
तपाईं-सडकमा सडक बतिको गुणस्तर र पहुँचबाट कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

27. Are there any specific locations along road section that needs lightings? a) Yes b) No
यस सडक खण्डमा बतिको आवश्यक पर्ने कुनै विशेष स्थानहरु छन् ? ~~छन्~~ छैनन्

Mention Location (if there are any)
छन् भने उल्लेख गर्नुहोस् Butwal - Chauraha.

Accessibility and Connectivity (सडकको पहुँच)

28. How satisfied are you with the access provided by this road to key locations like work places/ residence/ shops/ school/ hospital/farms?
यो सडकको कारणले काम गर्ने ठाउँ/बासस्थान/पसल/विद्यालय/अस्पताल फार्म जस्ता ठाउँहरु पुग्नका लागि गरेको प्रभाव प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

29. How reliable is this road to reach your destination on time?
समयमै गन्तव्यमा पुग्नको लागि यो बाटो कतिको भरपर्दो छ ?

a) Highly reliable	b) Reliable	c) Neutral	d) Unreliable	e) Highly unreliable
अत्याधिक भरपर्दो	भरपर्दो	तटस्थ	भर पर्ने नसकिने	अत्याधिक भर पर्ने नसकिने

30. What do you feel about the trend of travel time along this road section over past two years?
विषम दुई वर्षमा यस सडक खण्डमा यात्राको समयको प्रवृत्तिको बारेमा तपाईंलाई कस्तो लाग्छ ?

a) Substantially reduced	b) Reduced marginally	c) Remained same	d) Increased	e) Increased substantially
पर्याप्त मात्रामा घटेको	थोरै घटेको	उस्तै रहेको	बढेको	उल्लेख्य रुपमा बढेको

31. How satisfied are you with the connectivity and access provided by this road to other major roads and highways?
यस सडकले प्रदान गरेको अन्य प्रमुख सडकहरु सँगको पहुँच प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

32. How satisfied are you with the signages for directions and distance along the road?
यस-सडकमा रहेको दिशा र दूरीको बारेमा जानकारी दिने संकेतहरु प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

Emergency Services (आपतकालिन सुविधाहरु)

33. What type of medical facilities does the road user get on this road?
सडक प्रयोगकर्ताले यस सडक खण्डमा कस्ता स्वास्थ्य सुविधाहरु पाउँछन् ?

a) Govt. hospital	b) Private hospital	c) Health posts	d) Clinic	e) None of above
सरकारी अस्पताल	निजी अस्पताल	स्वास्थ्य चौकी	क्लिनिक	कुनै पनि छैनन्

34. How satisfied are you with the accessibility of emergency services such as ambulances and fire truck, to different parts of the community?
समुदायमा एम्बुलेन्स तथा दमकल जस्ता आपतकालीन सुविधाहरुको पहुँचबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

a) Highly satisfied	b) Satisfied	c) Neither satisfied nor dissatisfied	d) Dissatisfied	e) Highly dissatisfied
अत्याधिक सन्तुष्ट	सन्तुष्ट	न त सन्तुष्ट न असन्तुष्ट	असन्तुष्ट	अत्याधिक असन्तुष्ट

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

35. What do you think about the post-crash response when an accident occurs on this road?

सडकमा दुर्घटना हुँदा दुर्घटना पछिको प्रतिक्रियाको बारे तपाईं के सोच्नु हुन्छ ?

- a) Very quick b) Quick c) Neither quick nor slow d) ~~Slow~~ e) Very slow
धेरै चाँडो चाँडो न चाँडो न ढिलो ~~ढिला~~ धेरै ढिलो

User Experience (प्रयोगकर्ताको अनुभव)

36. How satisfied are you with the overall quality of roads?

सडकको समग्र गुणस्तर प्रति तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) ~~Dissatisfied~~ e) Highly dissatisfied
अत्यधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्यधिक असन्तुष्ट

37. Do you know who is responsible for road maintenance work?

के तपाईंलाई सडक मर्मतको जिम्मेवारी कसको हो भन्ने कुरा थाहा छ ?

- a) ~~DoR~~ b) DoLIDAR/DDC c) Municipality d) Any other agency _____ e) Do not know
सडक विभाग जि.वि.स. नगरपालिका / गाउँपालिका अन्य निकायहरू थाहा छैन

38. Have you ever made complaint to Government/Road authorities regarding any type of problem faced while traveling on this road?

के तपाईंले यस सडकमा यात्रा गर्दा भोग्नुभएका समस्याहरू बारे सडक अधिकारीहरूसँग कहिल्यै गुनासो गर्नुभएको छ ?

- a) Yes b) ~~No~~
छ छैन

39. If yes, how satisfied are you with the complaint redressal system of DoR/Road agencies?

थाहा छ भन्ने, सडक विभाग/ सडक निकायहरूको गुनासो निवारण प्रणालीसँग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) ~~Neither satisfied nor dissatisfied~~ d) Dissatisfied e) Highly dissatisfied
अत्यधिक सन्तुष्ट सन्तुष्ट ~~न त सन्तुष्ट न असन्तुष्ट~~ असन्तुष्ट अत्यधिक असन्तुष्ट

40. How satisfied are you with DOR or responsible road agencies resolving maintenance, quality and repairing related problem in time?

सडक मर्मत र गुणस्तर सम्बन्धि समस्याहरू समयमै समाधान गर्ने सडक विभाग र अन्य जिम्मेवार निकायहरूको कार्यबाट तपाईं कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) ~~Dissatisfied~~ e) Highly dissatisfied
अत्यधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्यधिक असन्तुष्ट

41. How satisfied are you with the road maintenance work?

तपाईं सडक मर्मतको कार्यबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) ~~Dissatisfied~~ e) Highly dissatisfied
अत्यधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट ~~असन्तुष्ट~~ अत्यधिक असन्तुष्ट

42. Are there any specific locations where road maintenance is needed?

सडक मर्मत गर्नुपर्ने कुनै खास स्थानहरू छन् ?

Mention Location (if there are any)

छन् भने उल्लेख गर्नुहोस्

butwal - charauro.

43. Are there any innovative solutions or technologies you believe could improve road quality?

के तपाईंलाई सडकको गुणस्तर सुधार गर्ने कुनै नयाँ प्रविधिबारे जानकारी छ ?

RCC structure asphalt.

44. What specific improvements would you suggest to enhance the quality or serviceability of this road?

सडकको गुणस्तर तथा सेवा क्षमता बृद्धि गर्न के सुझाव दिन चाहनु हुन्छ ?

Quality material, good path.

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

45. How satisfied are you with the quality of this road in comparison with other road sections in the region?

यस क्षेत्रका अन्य सडकको तुलनामा यस सडकको गुणस्तर संग कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

46. What is your perception about involvement of private sector in road maintenance?

सडक मर्मत सम्भारमा निजी क्षेत्रको संलग्नता बारे तपाईंको धारणा के छ ?

Unhassle permission pake kaim.

47. What do you think about role of public sector such as DoR / DDC/ Local level government and other agencies for better serviceability of roads?

सडकको स्तरोन्नतिको लागि सडक विभाग/जि वि स/स्थानीय सरकार लगायतका सार्वजनिक क्षेत्रहरूको भूमिकाको बारेमा तपाईंको के धारणा छ ?

Highway ko kam raddak gare garako ra,
Sabaithe onitara kam garne paryo.

Environment and Aesthetic Aspects (सडक वरपरको वातावरण र शौन्दर्यता)

48. How satisfied are you with the cleanliness of the road and surroundings?

तपाईं यस सडकको सरसफाईबाट कतिको सन्तुष्ट हुनुहुन्छ ?

- a) Highly satisfied b) Satisfied c) Neither satisfied nor dissatisfied d) Dissatisfied e) Highly dissatisfied
अत्याधिक सन्तुष्ट सन्तुष्ट न त सन्तुष्ट न असन्तुष्ट असन्तुष्ट अत्याधिक असन्तुष्ट

49. What do you feel about the noise level generated by the traffic in this road?

यस सडकमा गुड्ने सवारीबाट निस्कने ध्वनीको चाप तपाईं कतिको महसुस गर्नुहुन्छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

50. What do you feel about the level of air pollution in this road?

यस सडकमा भएको वायु प्रदूषणको मात्रा प्रति तपाईंको धारणा के छ ?

- a) Very Low b) Low c) Medium d) High e) Very High
अत्याधिक कम कम मध्यम बढि अत्याधिक बढि

Green Resilient Corridor (GRID Approach)

51. Have you ever encountered wildlife on or near the highway?

के तपाईंले कहिल्यै राजमार्गमा वा नजिक वन्यजन्तु देख्नु भएको छ ?

- a) Yes b) No
छैन छैनन्

52. If yes, name the animal you most see during the travel?

यदि छ भने, यात्रा गर्दा सबैभन्दा बढि कुन जनावरहरू देख्नुहुन्छ ?

Monkey

53. If yes, describe the nature of the encounter. (e.g., crossing the road, accident, near-miss accident).

यदि देख्नु भएको वन्यजन्तु भेट्दाको प्रकृतिको वर्णन गर्नुहोस् (जस्तै बाटो पार गर्दै, दुर्घटनामा परेको, दुर्घटनाको निकट)

Crossing the road, Grazing

54. In your opinion, how well does the highway design consider the safety of wildlife?

सडकको डिजाइन वन्यजन्तुको सुरक्षाको लागि कतिको प्रभावकारी पाउनुहुन्छ ?

- a) Highly effective b) Effective c) Neutral d) Ineffective e) Very Ineffective
अत्याधिक प्रभावकारी प्रभावकारी तटस्थ अप्रभावकारी अत्याधिक अप्रभावकारी

A3 - Questionnaire for **Relevant Government and Non-Governmental Organization/ Association**
(Focused Group Discussion)

55. Do you believe that the highway has adequate wildlife crossings such as Overpass and Underpass?

के तपाईं यस राजमार्गमा वन्यजन्तुलाई बाटो माथि तथा बाटो मुनिबाट कसिग गर्नको लागि पुलहरु प्याप्त रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

- | | | | | |
|-----------------|-----------|------------|-------------|-------------------|
| a) Fully Agreed | b) Agreed | c) Neutral | d) Disagree | e) Fully Disagree |
| पूर्ण सहमत | सहमत | तटस्थ | असहमत | अत्याधिक असहमत |

56. Do you believe that the highway has adequate signage warning of wildlife crossings?

के तपाईं यस राजमार्गमा वन्यजन्तु कसिगको लागि चेतावनी दिने पर्याप्त साईनबोर्डहरु रहेका छन् भन्नेमा विश्वस्त हुनुहुन्छ ?

- | | | | | |
|-----------------|-----------|------------|-------------|-------------------|
| a) Fully Agreed | b) Agreed | c) Neutral | d) Disagree | e) Fully Disagree |
| पूर्ण सहमत | सहमत | तटस्थ | असहमत | अत्याधिक असहमत |

57. What improvements would you suggest to enhance road safety and reduce human-wildlife conflicts?

सडक सुरक्षालाई सुधार्न र मानव वन्यजन्तु द्वन्द्वलाई कम गर्न के के सुधारहरुको सुझाव दिन चाहनुहुन्छ ?

Overpass - Underpass, Speed Limit, Awareness
Program, CCTV Installation, Illuminator Signage
based, Orientation class for drivers.

58. Are you aware of any environmental initiatives to protect wildlife related to this highway?

के तपाईंलाई यो राजमार्गसँग सम्बन्धित कुनै वन्यजन्तुको संरक्षणमा केन्द्रित वातावरणीय प्रयासहरु भएको थाहा छ कि छैन ?

- | | |
|----------|-----------|
| a) Yes छ | b) No छैन |
|----------|-----------|

59. How would you rate the efforts of the highway authorities in addressing wildlife conservation concerns?

वन्यजन्तु संरक्षण गर्न सडक विभाग र सडक सम्बन्धि अधिकारीहरुको प्रयासलाई तपाईं कसरी मूल्यांकन गर्नुहुन्छ ?

- | | | | | |
|--------------|---------|---------|---------|--------------|
| a) Excellent | b) Good | c) Fair | d) Poor | e) Very Poor |
| उत्कृष्ट | राम्रो | मध्यम | खराव | धेरै खराव |

60. How do you feel about the safety of the road in terms of extreme weather, heavy rainfall, floods, landslides, etc.?

अत्याधिक मौसम, भारी वर्षा, बाढी, पहिरो आदि दुष्टिकोणबाट सडकको सुरक्षामा तपाईंको धारणा कस्तो छ ?

- | | | | | |
|---------------|----------|------------|-----------|----------------|
| a) Very Safe | b) Safe | c) Neutral | d) Unsafe | e) Very Unsafe |
| धेरै सुरक्षित | सुरक्षित | तटस्थ | असुरक्षित | धेरै असुरक्षित |

61. What do you think the government should do to prevent such disasters on highways?

यस्ता विपत्तिहरुबाट राजमार्गलाई जोगाउन सरकारले के गर्नु पर्छ होला ?

Drainage, Gutter, bapur dekh
photo camera ko nikash chahiyo.

APPENDIX D: Detailed Data Analysis

Appendix D: Detailed Data Analysis

1. DEMOGRAPHIC ANALYSIS

1.1. Distribution by Gender

Table 1.1.1: Demographic Distribution by Gender

S.No.	Sub-attributes	Male		Female	
		Number	Percentage (%)	Number	Percentage (%)
1	Motorized Transportation Users	452	92%	37	8%
2	Non-Motorized Commuters	165	65%	89	35%
3	Governmental And Non-Governmental Organizations/ Associations	137	78%	38	22%
4	Overall Result	754	82%	164	18%

1.2. Distribution by Age Group

Table 1.2.1: Demographic Distribution by Age Group

S.N o.	Sub-attribute	Overall		Motorized Transportation users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/ Associations	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
1	18-25	102	11%	56	11%	35	14%	11	6%
2	26-35	232	25%	132	27%	47	19%	53	30%
3	36-45	278	30%	167	34%	60	24%	51	29%
4	46-55	187	20%	99	20%	45	18%	43	25%
5	Above 55	119	13%	35	7%	67	26%	17	10%
	Total	918		489		254		175	

Appendix D: Detailed Data Analysis

1.3. Distribution by Occupational Group

Table 1.3.1: Demographic Distribution by Occupational Group

S.No.	Sub-attribute	Overall		Motorized Transportation users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/Associations	
1	Agriculture	59	6%	25	5%	34	13%	0	0%
2	Business	430	47%	300	61%	130	51%	0	0%
3	Service	228	25%	42	9%	11	4%	175	100%
4	Student	37	4%	19	4%	18	7%	0	0%
5	Labor	5	1%	0	0%	5	2%	0	0%
6	Others	159	17%	103	21%	56	22%	0	0%
	Total	918		489		254		175	

1.4. Distribution by Frequency of Travel

Table 1.4.1: Demographic Distribution by Frequency of Travel

S.No.	Sub-attribute	Motorized Transportation users		Non-Motorized Commuters	
1	Daily	464	95%	241	95%
2	Weekly	7	1%	6	2%
3	Occasionally	18	4%	7	3%
4	More than 1 time a day	0	0%	0	0%
	Total	489		254	

1.5. Distribution by Vehicle Ownership

Table 1.5.1: Demographic Distribution by Vehicle Ownership

S.No.	Sub-attributes	Motorized Transportation Users	% Motorized Transportation Users
1	Vehicle Owners	475	97%
2	Non-Vehicle Owners	14	3%

Appendix D: Detailed Data Analysis

2. ROAD CONDITION

2.1. Pothole Frequency

Table 2.1.1: Number of respondents and their responses on frequency of potholes (Overall)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Road is pothole free	Never	5	0	0%	0
2	Potholes are rarely encountered	Rarely	4	38	5%	152
3	Potholes are occasionally encountered	Occasionally	3	177	21%	531
4	Potholes are frequently encountered	Frequently	2	496	61%	992
5	Potholes are very frequently encountered	Very Frequently	1	106	13%	106
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.18

Table 2.1.2: Number of respondents and their responses on frequency of potholes (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Road is pothole free	Never	5	0	0%	0	0	0%	0	0	0%	0
2	Potholes are rarely encountered	Rarely	4	21	4%	84	10	4%	40	7	9%	28
3	Potholes are occasionally encountered	Occasionally	3	82	17%	246	77	30%	231	18	24%	54
4	Potholes are frequently encountered	Frequently	2	306	63%	612	151	60%	302	39	53%	78
5	Potholes are very frequently encountered	Very Frequently	1	80	16%	80	16	6%	16	10	14%	10
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.09			2.32			2.30		

Appendix D: Detailed Data Analysis

2.2. Visibility/Clarity of Road Marking

Table 2.2.1: Number of respondents and their responses on Visibility/Clarity of Road Marking (Overall)

S.N	Results	Responses on Visibility/Clarity of Road Marking	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Visibility and Clarity of road markings are highly satisfactory	Highly Satisfied	5	0	0%	0
2	Visibility and Clarity of road markings are satisfactory	Satisfied	4	124	15%	496
3	Visibility and Clarity of road markings are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	156	19%	468
4	Visibility and Clarity of road markings are dissatisfactory	Dissatisfied	2	518	64%	1036
5	Visibility and Clarity of road markings are highly dissatisfactory	Highly Dissatisfied	1	19	2%	19
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)						2.47

Table 2.2.2: Number of respondents and their responses on Visibility/Clarity of Road Marking (User Groupwise)

S.N	Results	Responses on Visibility/Clarity of Road Marking	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Visibility and Clarity of road markings are highly satisfactory	Highly Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Visibility and Clarity of road markings are satisfactory	Satisfied	4	76	16%	304	34	13%	136	14	19%	56
3	Visibility and Clarity of road markings are neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	90	18%	270	45	18%	135	21	29%	63
4	Visibility and Clarity of road markings are dissatisfactory	Dissatisfied	2	314	64%	628	166	65%	332	38	51%	76
5	Visibility and Clarity of road markings are highly dissatisfactory	Highly Dissatisfied	1	9	2%	9	9	4%	9	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)				2.48			2.41			2.65		

Appendix D: Detailed Data Analysis

2.3. Efficiency of Drainage System

Table 2.3.1: Number of respondents and their responses on Efficiency of Drainage System (Overall)

S.N	Results	Responses on Efficiency of Drainage System	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Drainage System is highly efficient	Highly Efficient	5	0	0%	0
2	Drainage System is efficient	Efficient	4	52	6%	208
3	Drainage System is neither efficient nor inefficient	Neither Efficient nor Inefficient	3	69	9%	207
4	Drainage System is inefficient	Inefficient	2	630	77%	1260
5	Drainage System is highly inefficient	Highly Inefficient	1	66	8%	66
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)						2.13

Table 2.3.2: Number of respondents and their responses on Efficiency of Drainage System (User Groupwise)

S.N	Results	Responses on Efficiency of Drainage System	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Drainage System is highly efficient	Highly Efficient	5	0	0%	0	0	0%	0	0	0%	0
2	Drainage System is efficient	Efficient	4	22	4%	88	23	9%	92	7	9%	28
3	Drainage System is neither efficient nor inefficient	Neither Efficient nor Inefficient	3	33	7%	99	27	11%	81	9	12%	27
4	Drainage System is inefficient	Inefficient	2	386	79%	772	191	75%	382	53	72%	106
5	Drainage System is highly inefficient	Highly Inefficient	1	48	10%	48	13	5%	13	5	7%	5
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)				2.06			2.24			2.24		

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2.4. Adequacy of Road Width

Table 2.4.1: Number of respondents and their responses on Adequacy of Road Width (Overall)

S.N	Results	Responses on Adequacy of Road Width	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Road width is highly adequate	Highly Adequate	5	0	0%	0
2	Road width is adequate	Adequate	4	55	7%	220
3	Road width is neither adequate nor inadequate	Neither Adequate nor Inadequate	3	39	5%	117
4	Road width is inadequate	Inadequate	2	694	85%	1388
5	Road width is highly inadequate	Highly Inadequate	1	29	3%	29
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)						2.15

Table 2.4.2: Number of respondents and their responses on Adequacy of Road Width (User Groupwise)

S.N	Results	Responses on Adequacy of Road Width	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Road width is highly adequate	Highly Adequate	5	0	0%	0	0	0%	0	0	0%	0
2	Road width is adequate	Adequate	4	32	6%	128	21	8%	84	2	3%	8
3	Road width is neither adequate nor inadequate	Neither Adequate Nor Inadequate	3	23	5%	69	16	7%	48	0	0%	0
4	Road width is inadequate	Inadequate	2	410	84%	820	214	84%	428	70	94%	140
5	Road width is highly inadequate	Highly Inadequate	1	24	5%	24	3	1%	3	2	3%	2
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)				2.13			2.22			2.03		

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2.5. Existing Road Condition

Table 2.5.1: Number of respondents and their responses on Existing Road Condition (Overall)

S.N	Results	Responses on Existing Road Condition	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Existing condition of road surface is highly satisfactory	Highly Satisfied	5	0	0%	0
2	Existing condition of road surface is satisfactory	Satisfied	4	17	2%	68
3	Existing condition of road surface is neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	72	9%	216
4	Existing condition of road surface is dissatisfactory	Dissatisfied	2	716	88%	1430
5	Existing condition of road surface is highly dissatisfactory	Highly Dissatisfied	1	12	1%	12
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)						2.12

Table 2.5.2: Number of respondents and their responses on Existing Road Condition (User Groupwise)

S.N	Results	Responses on Existing Road Condition	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Existing condition of road surface is highly satisfactory	Highly Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Existing condition of road surface is satisfactory	Satisfied	4	8	2%	32	6	2%	24	3	4%	12
3	Existing condition of road surface is neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	38	8%	114	29	11%	87	5	7%	15
4	Existing condition of road surface is dissatisfactory	Dissatisfied	2	436	89%	872	215	85%	430	65	88%	130
5	Existing condition of road surface is highly dissatisfactory	Highly Dissatisfied	1	7	1%	7	4	2%	4	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)				2.10			2.15			2.14		

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2.6. Road Users Satisfaction on Road Condition

Table 2.6.1: Satisfaction on Road Condition (Overall)

S.No.	Sub-attribute	Sample Size	Satisfaction Score	% Satisfied
1	Pothole Frequency	817	2.18	44%
2	Visibility/Clarity of Road Markings	817	2.47	49%
3	Efficiency of Drainage System	817	2.13	43%
4	Adequacy of Road Width	817	2.15	43%
5	Existing Condition of Road Surface	817	2.12	42%
Average satisfaction score of road users on road condition			2.21	44%

Table 2.6.2: Satisfaction on Road Condition (User Groupwise)

S.N	Sub-attribute	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
		Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied
1	Pothole frequency	489	2.09	42%	254	2.32	46%	74	2.30	46%
2	Visibility/Clarity of Road Markings	489	2.48	50%	254	2.41	48%	74	2.65	53%
3	Efficiency of Drainage System	489	2.06	41%	254	2.24	45%	74	2.24	45%
4	Adequacy of Road Width	489	2.13	43%	254	2.22	44%	74	2.03	41%
5	Existing Condition of Road Surface	489	2.10	42%	254	2.15	43%	74	2.14	43%
Average Satisfaction			2.17	43%		2.27	45%		2.27	45%

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2.7. Road Quality During Adverse Weather Condition

Table 2.7.1: Road Quality During Adverse Weather Condition (Overall)

S. N	Responses on road quality during adverse weather condition	Number of Respondents (n)	Percentage of Respondents
1	Significant degradation of road quality is observed during adverse weather condition	395	48%
2	No Significant degradation of road quality is observed during adverse weather condition	422	52%
		817	

Table 2.7.2: Road Quality During Adverse Weather Condition (User Groupwise)

S.N	Results	Motorized Transportation Users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/Associations	
		Number of Respondents (n)	Percentage of Respondents	Number of Respondents (n)	Percentage of Respondents	Number of Respondents (n)	Percentage of Respondents
1	Significant degradation of road quality during adverse weather condition	249	51%	92	36%	54	73%
2	No Significant degradation of road quality during adverse weather condition	240	49%	162	64%	20	27%
	Total	489		254		74	

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3. TRAFFIC AND SAFETY

3.1. Congestion on Road

Table 3.1.1: Number of respondents and their responses on Congestion on Road (Overall)

S.N	Results	Responses on Congestion on Road	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of respondents	Satisfaction Score ($W_i n_i$)
1	Roads are absolutely free from congestion	Absolutely free from Congestion	5	2	0%	10
2	Roads are free from congestion	Free from Congestion	4	17	2%	68
3	Roads are neither free nor congested	Neither Free nor Congested	3	121	15%	363
4	Roads are congested	Congested	2	535	66%	1070
5	Roads are highly congested	Highly Congested	1	142	17%	142
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.02

Table 3.1.2: Number of respondents and their responses on Congestion on Road (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/ Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Roads are absolutely free from congestion	Absolutely free from Congestion	5	1	0%	5	1	1%	5	0	0%	0
2	No road is free from congestion	Free from Congestion	4	6	1%	24	11	4%	44	0	0%	0
3	Roads are neither free nor congested	Neither Free nor Congested	3	66	14%	198	49	19%	147	6	8%	18
4	Roads are congested	Congested	2	316	65%	632	168	66%	336	51	69%	102
5	Roads are highly congested	Highly Congested	1	100	20%	100	25	10%	25	17	23%	17
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				1.96			2.19			1.85		

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3.2. Installation of Guard Rails

Table 3.2.1: Number of respondents and their responses on Installation of Guard Rails (Overall)

S.N	Results	Responses on installation of guard rails	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of respondents	Satisfaction Score (W _i n _i)
1	Guard rails are highly satisfactory	Highly Satisfied	5	0	0%	0
2	Guard rails are satisfactory	Satisfied	4	50	6%	200
3	Guard rails are neither satisfactory nor unsatisfactory	Neither Satisfied nor Dissatisfied	3	97	12%	291
4	Guard rails are unsatisfactory	Dissatisfied	2	656	80%	1312
5	Guard rails are highly unsatisfactory	Highly Dissatisfied	1	14	2%	14
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.22

Table 3.2.2: Number of respondents and their responses on Installation of Guard Rails (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/ Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Guard rails are highly satisfactory	Highly Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Guard rails are satisfactory	Satisfied	4	31	6%	124	9	4%	36	10	14%	40
3	Guard rails are neither satisfactory nor unsatisfactory	Neither Satisfied nor Dissatisfied	3	58	12%	174	24	9%	72	15	20%	45
4	Guard rails are unsatisfactory	Dissatisfied	2	388	79%	776	219	86%	438	49	66%	98
5	Guard rails are highly unsatisfactory	Highly Dissatisfied	1	12	3%	12	2	1%	2	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.22			2.16			2.47		

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3.3. Accessibility of Pedestrian Crossing on the Road

Table 3.3.1: Number of respondents and their responses on Accessibility of Pedestrian Crossing on the Road (Overall)

S.N	Results	Responses on Accessibility of Pedestrian Crossing on the Road	Point on Likert Scale (W)	Number of Respondents (n)	Percentage	Satisfaction Score (W _i n _i)
1	Pedestrian crossings are highly accessible	Highly Accessible	5	0	0%	0
2	Pedestrian crossings are accessible	Accessible	4	31	4%	124
3	Pedestrian crossings are neither accessible nor inaccessible	Neither Accessible nor Inaccessible	3	40	5%	120
4	Pedestrian crossings are inaccessible	Inaccessible	2	667	81%	1334
5	Pedestrian crossings are highly inaccessible	Highly Inaccessible	1	79	10%	79
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.03

Table 3.3.2: Number of respondents and their responses on Accessibility of Pedestrian Crossing on the Road (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Pedestrian crossings are highly accessible	Highly Accessible	5	0	0%	0	0	0%	0	0	0%	0
2	Pedestrian crossings are accessible	Accessible	4	13	3%	52	14	6%	56	4	6%	16
3	Pedestrian crossings are neither accessible nor inaccessible	Neither Accessible nor Inaccessible	3	23	5%	69	11	4%	33	6	8%	18
4	Pedestrian crossings are inaccessible	Inaccessible	2	401	82%	802	206	81%	412	60	81%	120
5	Pedestrian crossings are highly inaccessible	Highly Inaccessible	1	52	10%	52	23	9%	23	4	5%	4
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				1.99			2.06			2.14		

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3.4. Feeling of Safety while Travelling on Roads

Table 3.4.1: Number of respondents and their responses on Feeling of Safety while Travelling on Roads (Overall)

S.N	Results	Responses on Feeling of Safety while Travelling on Roads	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of respondents	Satisfaction Score ($W_i n_i$)
1	It feels very safe while travelling on roads	Very Safe	5	0	0%	0
2	It feels safe while travelling on roads	Safe	4	48	6%	192
3	It feels neither safe nor unsafe while travelling on roads	Neither Safe nor Unsafe	3	119	15%	357
4	It feels unsafe while travelling on roads	Unsafe	2	581	71%	1162
5	It feels very unsafe while travelling on roads	Very Unsafe	1	69	8%	69
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.18

Table 3.4.2: Number of respondents and their responses on Feeling of Safety while Travelling on Roads (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	It feels very safe while travelling on roads	Very Safe	5	0	0%	0	0	0%	0	0	0%	0
2	It feels safe while travelling on roads	Safe	4	15	3%	60	28	11%	112	5	7%	20
3	It feels neither safe nor unsafe while travelling on roads	Neither Safe nor Unsafe	3	69	14%	207	36	14%	108	14	19%	42
4	It feels unsafe while travelling on roads	Unsafe	2	358	73%	716	169	67%	338	54	73%	108
5	It feels very unsafe while travelling on roads	Very Unsafe	1	47	10%	47	21	8%	21	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.11			2.28			2.31		

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3.5. Road Users Satisfaction on Traffic and Safety

Table 3.5.1: Satisfaction on Traffic and Safety (Overall)

S.No.	Sub-attribute	Sample size	Satisfaction score	% Satisfied
1	Congestion on Road	817	2.02	40%
2	Installation of Guard Rails on Sharp Bends and Steep Slope of Roads	817	2.22	44%
3	Accessibility of Pedestrian Crossing	817	2.03	41%
4	Feeling of Safety while Travelling	817	2.18	44%
Average satisfaction score of road users on traffic and safety			2.11	42%

Table 3.5.2: Satisfaction on Traffic and Safety (User Groupwise)

S.N	Sub-attribute	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
		Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied
1	Congestion on Road	489	1.96	39%	254	2.19	44%	74	1.85	37%
2	Installation of Guard Rails on Sharp Bends and Steep Slope of Roads	489	2.22	44%	254	2.16	43%	74	2.47	49%
3	Accessibility of Pedestrian Crossing	489	1.99	40%	254	2.06	41%	74	2.14	43%
4	Feeling of Safety while Travelling	489	2.11	42%	254	2.28	46%	74	2.31	46%
Average Satisfaction			2.07	41%		2.17	43%		2.19	44%

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3.6. Placement of Road Signs Regarding the Safety of Road Users

Table 3.6.1: Placement of Road Signs Regarding the Safety of Road Users (Overall)

S.N	Results	Number of Respondents (n)	Percentage of respondents
1	The road signs are placed adequately	131	16%
2	The road signs not are placed adequately	686	84%
		817	

Table 3.6.2: Placement of Road Signs Regarding the Safety of Road Users (User Groupwise)

S. N	Results	Motorized Transportation Users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/ Associations	
		Number of Respondents (n)	Percentage of respondents	Number of Respondents (n)	Percentage of respondents	Number of Respondents (n)	Percentage of respondents
1	The road signs are placed adequately	78	16%	38	15%	15	20%
2	The road signs not are placed adequately	411	84%	216	85%	59	80%
		489		254		74	

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3.7. Adequacy of signs explaining the work-in-progress

Table 3.7.1: Adequacy of signs explaining the work-in-progress (Overall)

S.N	Results	Number of Respondents (n)	Percentage of respondents
1	The road signs are placed adequately	704	86%
2	The road signs not are placed adequately	113	14%
		817	

Table 3.7.2: Adequacy of signs explaining the work-in-progress (User Groupwise)

S.N	Results	Motorized Transportation Users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/ Associations	
		Number of Respondents (n)	Percentage of respondents	Number of Respondents (n)	Percentage of respondents	Number of Respondents (n)	Percentage of respondents
1	The road signs are placed adequately	424	87%	214	84%	66	89%
2	The road signs not are placed adequately	65	13%	40	16%	8	11%
		489		254		74	

3.8. Availability of Police Posts and Patrolling

Table 3.8.1: Availability of Police Posts and Patrolling (Overall)

S.N	Results	Number of Respondents (n)	Percentage of respondents
1	The police posts and patrolling are available	691	85%
2	The police posts and patrolling are not available	126	15%
		817	

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Table 3.8.2: Availability of Police Posts and Patrolling (User Groupwise)

S. N	Results	Motorized Transportation Users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/ Associations	
		Number of Respondents (n)	Percentage of respondents	Number of Respondents (n)	Percentage of respondents	Number of Respondents (n)	Percentage of respondents
1	The police posts and patrolling are available	422	86%	200	79%	69	93%
2	The police posts and patrolling are not available	67	14%	54	21%	5	7%
		489		254		74	

3.9. Locations Being Road Signs Most Effective

Table 3.9.1: Locations Being Road Signs Most Effective (Overall)

S. N	Results	Locations Being Road Signs Most Effective	Number of respondents	Percentage of respondents
1	The road signs are most effective near schools	Near to the school	761	93%
2	The road signs are most effective near hospitals	Near to the hospital	728	89%
3	The road signs are most effective near narrow roads	Narrow Road	554	68%
4	The road signs are most effective near sharp bends	Sharp bends	254	31%
5	The road signs are most effective near pedestrian crossings	Pedestrian Crossing	555	68%
6	The road signs are most effective near speed breaker	Speed Breaker	148	18%
7	The road signs are most effective near landslide/hazardous area	Landslide/ Hazardous Area	126	15%
8	The road signs are most effective near high accident area	High Accident Area	631	77%
9	Others	Others	4	1%

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Table 3.9.2: Locations Being Road Signs Most Effective (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Motorized Transportation Users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/ Associations	
			Number of respondents for the provided options	Percentage of respondents	Number of respondents for the provided options	Percentage of respondents	Number of respondents for the provided options	Percentage of respondents
1	The road signs are most effective near schools	Near to the school	458	94%	235	93%	68	92%
2	The road signs are most effective near hospitals	Near to the hospital	435	89%	230	91%	63	85%
3	The road signs are most effective near narrow roads	Narrow Road	331	68%	165	65%	58	78%
4	The road signs are most effective near sharp bends	Sharp bends	141	29%	79	31%	34	46%
5	The road signs are most effective near pedestrian crossings	Pedestrian Crossing	327	67%	174	69%	54	73%
6	The road signs are most effective near speed breaker	Speed Breaker	89	18%	50	20%	9	12%
7	The road signs are most effective near landslide/hazardous area	Landslide/ Hazardous Area	79	16%	38	15%	9	12%
8	The road signs are most effective near high accident area	High Accident Area	372	76%	194	76%	65	88%
9	Others	Others	0	0%	4	2%	0	0%

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3.10. Factors Contributing to Unsafe Condition on Roads

Table 3.10.1: Factors Contributing to Unsafe Condition on Roads (Overall)

S.N	Factors Contributing to Unsafe Condition on Roads	Number of Respondents with respective Marking (Note: Rank 1 for most unsafe and Rank 5 for least unsafe)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	Overspeed	749	63	3	1	1	1	92%	8%	0%	0%	0%
2	Unusual overtaking	272	238	92	0	1	2	45%	40%	15%	0%	0%
3	Heavy goods carrying vehicles	84	356	337	31	9	2	10%	44%	41%	4%	1%
4	Lack of awareness of traffic rules	134	314	320	44	5	2	16%	38%	39%	5%	1%
5	Bad condition of road	237	234	280	64	2	2	29%	29%	34%	8%	0%
6	Absence of sufficient road signs	65	256	356	127	13	3	8%	31%	44%	16%	2%
7	Aggressive driving	387	381	39	6	3	2	47%	47%	5%	1%	0%
8	Narrow road	420	268	72	36	21	2	51%	33%	9%	4%	3%
9	Careless driving	377	342	90	7	1	2	46%	42%	11%	1%	0%
10	Unfit vehicles	113	125	384	179	16	3	14%	15%	47%	22%	2%

Table 3.10.2: Factors Contributing to Unsafe Condition on Roads (Motorized Users)

S.N	Factors Contributing to Unsafe Condition on Roads	Number of Respondents with respective Marking (Note: Rank 1 for most unsafe and Rank 5 for least unsafe)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	Overspeed	446	42	1	0	0	1	91%	9%	0%	0%	0%
2	Unusual overtaking	218	199	71	0	1	2	45%	41%	15%	0%	0%
3	Heavy goods carrying vehicles	51	214	200	20	4	2	10%	44%	41%	4%	1%
4	Lack of awareness of traffic rules	81	177	203	27	1	2	17%	36%	42%	6%	0%
5	Bad condition of road	139	147	168	35	0	2	28%	30%	34%	7%	0%
6	Absence of sufficient road signs	37	152	221	69	10	3	8%	31%	45%	14%	2%
7	Aggressive driving	231	227	26	4	0	2	47%	47%	5%	1%	0%
8	Narrow road	255	158	39	21	16	2	52%	32%	8%	4%	3%
9	Careless driving	223	208	54	4	0	2	46%	43%	11%	1%	0%
10	Unfit vehicles	70	75	227	108	9	3	14%	15%	46%	22%	2%

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Table 3.10.3: Factors Contributing to Unsafe Condition on Roads (Non-motorized Users)

S.N	Factors Contributing to Unsafe Condition on Roads	Number of Respondents with respective Marking (Note: Rank 1 for most unsafe and Rank 5 for least unsafe)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	Overspeed	243	8	2	0	1	1	96%	3%	1%	0%	0%
2	Unusual overtaking	108	100	44	1	1	2	43%	39%	17%	0%	0%
3	Heavy goods carrying vehicles	27	114	103	8	2	2	11%	45%	41%	3%	1%
4	Lack of awareness of traffic rules	37	100	98	16	3	2	15%	39%	39%	6%	1%
5	Bad condition of road	72	71	86	24	1	2	28%	28%	34%	9%	0%
6	Absence of sufficient road signs	27	77	107	41	2	3	11%	30%	42%	16%	1%
7	Aggressive driving	131	112	9	1	1	2	52%	44%	4%	0%	0%
8	Narrow road	118	91	29	12	4	2	47%	36%	11%	5%	2%
9	Careless driving	120	106	26	1	1	2	47%	42%	10%	0%	0%
10	Unfit vehicles	39	40	122	50	3	3	15%	16%	48%	20%	1%

Table 3.10.4: Factors Contributing to Unsafe Condition on Roads (Governmental and Non-Governmental Organization/ Association)

S.N	Factors Contributing to Unsafe Condition on Roads	Number of Respondents with respective Marking (Note: Rank 1 for most unsafe and Rank 5 for least unsafe)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	Overspeed	60	13	0	1	0	1	81%	18%	0%	1%	0%
2	Unusual overtaking	32	23	19	0	0	2	43%	31%	26%	0%	0%
3	Heavy goods carrying vehicles	6	28	34	3	3	3	8%	38%	46%	4%	4%
4	Lack of awareness of traffic rules	16	37	19	1	1	2	22%	50%	26%	1%	1%
5	Bad condition of road	26	16	26	5	1	2	35%	22%	35%	7%	1%
6	Absence of sufficient road signs	1	27	28	17	1	3	1%	37%	38%	23%	1%
7	Aggressive driving	25	42	4	1	2	2	34%	57%	5%	1%	3%
8	Narrow road	47	19	4	3	1	2	64%	26%	5%	4%	1%
9	Careless driving	34	28	10	2	0	2	46%	38%	14%	3%	0%
10	Unfit vehicles	4	10	35	21	4	3	5%	14%	47%	28%	5%

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3.11. Factors Contributing to Most of the Accidents

Table 3.11.1: Factors Contributing to Most of the Accidents (Overall)

S.N	Factors Contributing to Most of the Accidents	Number of Respondents with respective Marking (Note: Rank 1 for most accident-causing factor and Rank 5 for least accident-causing factor)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	High speed	789	26	0	1	1	1	97%	3%	0%	0%	0%
2	Bad weather	20	151	418	217	11	3	2%	19%	51%	27%	1%
3	Bad Condition of road	141	304	306	63	3	2	17%	37%	38%	8%	0%
4	Pedestrian crossing	52	341	339	84	1	3	6%	42%	42%	10%	0%
5	Wild/ Domestic Animal Crossing	254	222	204	108	29	2	31%	27%	25%	13%	4%
6	Absence of sign at dangerous location	41	274	347	142	13	3	5%	34%	43%	17%	2%
7	Use of alcohol while driving	386	309	109	11	2	2	47%	38%	13%	1%	0%
8	Increase in number of vehicles	99	283	330	94	11	3	12%	35%	40%	12%	1%
9	Absence of street light	277	245	189	89	17	2	34%	30%	23%	11%	2%

Table 3.11.2: Factors Contributing to Most of the Accidents (Motorized Users)

S.N	Factors Contributing to Most of the Accidents	Number of Respondents with respective Marking (Note: Rank 1 for most accident-causing factor and Rank 5 for least accident-causing factor)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	High speed	472	17	0	0	0	1	97%	4%	0%	0%	0%
2	Bad weather	12	89	249	132	7	3	3%	18%	51%	27%	1%
3	Bad Condition of road	77	176	202	33	1	2	16%	36%	41%	7%	0%
4	Pedestrian crossing	34	201	211	43	0	3	7%	41%	43%	9%	0%
5	Wild/ Domestic Animal Crossing	148	126	132	65	18	2	30%	26%	27%	13%	4%
6	Absence of sign at dangerous location	23	172	199	85	10	3	5%	35%	41%	17%	2%
7	Use of alcohol while driving	232	203	51	3	0	2	47%	42%	10%	1%	0%
8	Increase in number of vehicles	68	163	196	57	5	3	14%	33%	40%	12%	1%
9	Absence of street light	165	142	115	57	10	2	34%	29%	24%	12%	2%

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Table 3.11.3: Factors Contributing to Most of the Accidents (Non-motorized Users)

S.N	Factors Contributing to Most of the Accidents	Number of Respondents with respective Marking (Note: Rank 1 for most accident-causing factor and Rank 5 for least accident-causing factor)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	High speed	249	4	0	0	1	1	98%	2%	0%	0%	0%
2	Bad weather	7	46	136	63	2	3	3%	18%	54%	25%	1%
3	Bad Condition of road	43	96	88	26	1	2	17%	38%	35%	10%	0%
4	Pedestrian crossing	16	112	94	31	1	3	6%	44%	37%	12%	0%
5	Wild/ Domestic Animal Crossing	77	70	57	40	10	2	30%	28%	22%	16%	4%
6	Absence of sign at dangerous location	15	77	120	41	1	3	6%	30%	47%	16%	0%
7	Use of alcohol while driving	130	79	40	4	1	2	51%	31%	16%	2%	0%
8	Increase in number of vehicles	24	89	105	31	5	3	9%	35%	41%	12%	2%
9	Absence of street light	90	81	53	24	6	2	35%	32%	21%	9%	2%

Table 3.11.4: Factors Contributing to Most of the Accidents (Governmental and Non-Governmental Organization/ Association)

S.N	Factors Contributing to Most of the Accidents	Number of Respondents with respective Marking (Note: Rank 1 for most accident-causing factor and Rank 5 for least accident-causing factor)					Weighted Average of Marking Order	Percentage of respondents with respective Marking				
		1	2	3	4	5		1	2	3	4	5
1	High speed	68	5	0	1	0	1	92%	7%	0%	1%	0%
2	Bad weather	1	16	33	22	2	3	1%	22%	45%	30%	3%
3	Bad Condition of road	21	32	16	4	1	2	28%	43%	22%	5%	1%
4	Pedestrian crossing	2	28	34	10	0	3	3%	38%	46%	14%	0%
5	Wild/ Domestic Animal Crossing	29	26	15	3	1	2	39%	35%	20%	4%	1%
6	Absence of sign at dangerous location	3	25	28	16	2	3	4%	34%	38%	22%	3%
7	Use of alcohol while driving	24	27	18	4	1	2	32%	37%	24%	5%	1%
8	Increase in number of vehicles	7	31	29	6	1	3	10%	42%	39%	8%	1%
9	Absence of street light	22	22	21	8	1	2	30%	30%	28%	11%	1%

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4. INFRASTRUCTURES AND FACILITIES

4.1. Availability of Public toilets/Bathrooms

Table 4.1.1: Number of respondents and their responses on Availability of Public toilets/Bathrooms (Overall)

S.N	Results	Responses on Public toilets/Bathrooms	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Public toilets/Bathrooms are highly satisfactory	Very Satisfied	5	1	1%	5
2	Public toilets/Bathrooms are satisfactory	Satisfied	4	40	46%	160
3	Public toilets/Bathrooms are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	23	27%	69
4	Public toilets/Bathrooms are dissatisfactory	Dissatisfied	2	16	18%	32
5	Public toilets/Bathrooms are highly dissatisfactory	Very Dissatisfied	1	7	8%	7
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						3.14

Table 4.1.2: Number of respondents and their responses on Availability of Public toilets/Bathrooms (User Groupwise)

S. N	Results	Responses on Public toilets/Bathrooms	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Public toilets/Bathrooms are highly satisfactory	Very Satisfied	5	0	0%	0	0	0%	0	1	4%	5
2	Public toilets/Bathrooms are satisfactory	Satisfied	4	19	50%	76	11	42%	44	10	44%	40
3	Public toilets/Bathrooms are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	7	19%	21	9	35%	27	7	30%	21
4	Public toilets/Bathrooms are dissatisfactory	Dissatisfied	2	7	18%	14	4	15%	8	5	22%	10
5	Public toilets/Bathrooms are highly dissatisfactory	Very Dissatisfied	1	5	13%	5	2	8%	2	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				3.05			3.12			3.30		

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4.2. Availability of Restaurants/ shops for food/ drinks

Table 4.2.1: Number of respondents and their responses on Availability of Restaurants/ shops for food/ drinks (Overall)

S.N	Results	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Restaurants/ shops for food/ drinks are highly satisfactory	5	63	8%	315
2	Restaurants/ shops for food/ drinks are satisfactory	4	593	76%	2372
3	Restaurants/ shops for food/ drinks are neither satisfactory nor dissatisfactory	3	101	13%	303
4	Restaurants/ shops for food/ drinks are dissatisfactory	2	21	3%	42
5	Restaurants/ shops for food/ drinks are highly dissatisfactory	1	2	0%	2
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)					3.89

Table 4.2.2: Number of respondents and their responses on Availability of Restaurants/ shops for food/ drinks (User Groupwise)

S.N	Results	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/ Associations		
			Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Restaurants/ shops for food/ drinks are highly satisfactory	5	42	9%	210	18	7%	90	03	4%	15
2	Restaurants/ shops for food/ drinks are satisfactory	4	356	77%	1424	176	72%	704	61	85%	244
3	Restaurants/ shops for food/ drinks are neither satisfactory nor dissatisfactory	3	52	11%	156	41	17%	123	8	11%	24
4	Restaurants/ shops for food/ drinks are dissatisfactory	2	11	3%	22	10	4%	20	0	0%	0
5	Restaurants/ shops for food/ drinks are highly dissatisfactory	1	1	0%	1	1	0%	1	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)			3.92			3.81			3.93		

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4.3. Availability of Public taps/ Drinking Water

Table 4.3.1: Number of respondents and their responses on Availability of Public taps/ Drinking Water (Overall)

S.N	Results	Responses on Public taps/ Drinking Water	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Public taps/ Drinking Water are highly satisfactory	Very Satisfied	5	1	1%	5
2	Public taps/ Drinking Water are satisfactory	Satisfied	4	28	36%	112
3	Public taps/ Drinking Water are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	21	27%	63
4	Public taps/ Drinking Water are dissatisfactory	Dissatisfied	2	22	28%	44
5	Public taps/ Drinking Water highly dissatisfactory	Very Dissatisfied	1	6	8%	6
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.95

Table 4.3.2: Number of respondents and their responses on Availability of Public taps/ Drinking Water (User Groupwise)

S. N	Results	Responses on Public toilets/ Bathrooms	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/ Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Public taps/ Drinking Water are highly satisfactory	Very Satisfied	5	0	0%	0	0	0%	0	1	9%	5
2	Public taps/ Drinking Water are satisfactory	Satisfied	4	15	37%	60	7	27%	28	6	55%	24
3	Public taps/ Drinking Water are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	11	27%	33	8	30%	24	2	18%	6
4	Public taps/ Drinking Water are dissatisfactory	Dissatisfied	2	12	29%	24	8	31%	16	2	18%	4
5	Public taps/ Drinking Water highly dissatisfactory	Very Dissatisfied	1	3	7%	3	3	12%	3	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.93			2.73			3.55		

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4.4. Availability of Medical facilities

Table 4.4.1: Number of respondents and their responses on Availability of Medical facilities (Overall)

S.N	Results	Responses on Medical facilities	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Medical facilities are highly satisfactory	Very Satisfied	5	5	1%	25
2	Medical facilities are satisfactory	Satisfied	4	423	63%	1692
3	Medical facilities are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	197	29%	591
4	Medical facilities are dissatisfactory	Dissatisfied	2	40	6%	80
5	Medical facilities are highly dissatisfactory	Very Dissatisfied	1	5	1%	5
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						3.57

Table 4.4.2: Number of respondents and their responses on Availability of Medical facilities (User Groupwise)

S.N	Results	Responses on Public toilets/Bathrooms	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Medical facilities are highly satisfactory	Very Satisfied	5	5	1%	25	0	0%	0	0	0%	0
2	Medical facilities are satisfactory	Satisfied	4	255	63%	1020	117	57%	468	51	80%	204
3	Medical facilities are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	112	28%	336	72	35%	216	13	20%	39
4	Medical facilities are dissatisfactory	Dissatisfied	2	26	7%	52	14	7%	28	0	0%	0
5	Medical facilities are highly dissatisfactory	Very Dissatisfied	1	4	1%	4	1	1%	1	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				3.57			3.50			3.80		

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4.5. Availability of Rain shelter-cum-Bus stop

Table 4.5.1 Number of respondents and their responses on Availability of Rain shelter-cum-Bus stop (Overall)

S.N	Results	Responses on Rain shelter-cum-Bus stop	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Rain shelter-cum-Bus stop are highly satisfactory	Very Satisfied	5	0	0%	0
2	Rain shelter-cum-Bus stop are satisfactory	Satisfied	4	98	38%	392
3	Rain shelter-cum-Bus stop are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	73	28%	219
4	Rain shelter-cum-Bus stop are dissatisfactory	Dissatisfied	2	75	29%	150
5	Rain shelter-cum-Bus stop are highly dissatisfactory	Very Dissatisfied	1	12	5%	12
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						3.00

Table 4.5.2: Number of respondents and their responses on Availability of Rain shelter-cum-Bus stop (User Groupwise)

S.N	Results	Responses on Public toilets/Bathrooms	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Rain shelter-cum-Bus stop are highly satisfactory	Very Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Rain shelter-cum-Bus stop are satisfactory	Satisfied	4	57	38%	228	27	34%	108	14	47%	56
3	Rain shelter-cum-Bus stop are neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	50	33%	150	17	22%	51	6	20%	18
4	Rain shelter-cum-Bus stop are dissatisfactory	Dissatisfied	2	38	25%	76	28	36%	56	9	30%	18
5	Rain shelter-cum-Bus stop are highly dissatisfactory	Very Dissatisfied	1	5	4%	5	6	8%	6	1	3%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				3.06			2.83			3.10		

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4.6. Accessibility to footpaths

Table 4.6.1: Number of respondents and their responses on Accessibility to footpaths (Overall)

S.N	Results	Responses on accessibility to footpaths	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Footpaths are highly accessible	Highly Accessible	5	0	0%	0
2	Footpaths are accessible	Accessible	4	26	3%	104
3	Footpaths are neither accessible nor inaccessible	Neither Accessible nor Inaccessible	3	28	4%	48
4	Footpaths are inaccessible	Inaccessible	2	714	87%	1428
5	Footpaths are highly inaccessible	Highly Inaccessible	1	49	6%	49
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.04

Table 4.6.2: Number of respondents and their responses on Accessibility to footpaths (User Groupwise)

S.N	Results	Responses on Public toilets/Bathrooms	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Footpaths are highly accessible	Very Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Footpaths are accessible	Satisfied	4	14	3%	56	11	4%	44	1	1%	4
3	Footpaths are neither accessible nor inaccessible	Neither Satisfied nor Dissatisfied	3	13	2%	39	7	3%	21	8	11%	24
4	Footpaths are inaccessible	Dissatisfied	2	434	89%	868	219	86%	438	61	83%	122
5	Footpaths are highly inaccessible	Very Dissatisfied	1	28	6%	28	17	7%	17	4	5%	4
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.03			2.05			2.08		

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4.7. Accessibility to cycling path and lanes

Table 4.7.1: Number of respondents and their responses on Accessibility to cycling path and lanes (Overall)

S.N	Results	Responses on accessibility to cycling path and lanes	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Accessibility to cycling path and lanes is highly satisfactory	Highly Satisfied	5	1	0%	5
2	Accessibility to cycling path and lanes is satisfactory	Satisfied	4	1	0%	4
3	Accessibility to cycling path and lanes is neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	2	0%	6
4	Accessibility to cycling path and lanes is dissatisfactory	Dissatisfied	2	788	97%	1576
5	Accessibility to cycling path and lanes is highly dissatisfactory	Highly Dissatisfied	1	25	3%	25
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						1.98

Table 4.7.2: Number of respondents and their responses on Accessibility to cycling path and lanes (User Groupwise)

S.N	Results	Responses on Public toilets/Bathrooms	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Accessibility to cycling path and lanes is highly satisfactory	Very Satisfied	5	1	0%	5	0	0%	0	0	0%	0
2	Accessibility to cycling path and lanes is satisfactory	Satisfied	4	1	0%	4	0	0%	0	0	0%	0
3	Accessibility to cycling path and lanes is neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	1	0%	3	1	0%	3	0	0%	0
4	Accessibility to cycling path and lanes is dissatisfactory	Dissatisfied	2	473	97%	946	246	97%	492	69	93%	138
5	Accessibility to cycling path and lanes is highly dissatisfactory	Very Dissatisfied	1	13	3%	413	7	3%	7	5	7%	5
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				1.99			1.98			1.93		

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4.8. Quality and Coverage of street lights

Table 4.8.1: Number of respondents and their responses on Quality and Coverage of street lights (Overall)

S.N	Results	Responses on quality and coverage of street lights	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Quality and Coverage of street lights is highly satisfactory	Highly Satisfied	5	0	0%	0
2	Quality and Coverage of street lights is satisfactory	Satisfied	4	24	3%	96
3	Quality and Coverage of street lights is neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	52	6%	156
4	Quality and Coverage of street lights is dissatisfactory	Dissatisfied	2	486	60%	972
5	Quality and Coverage of street lights is highly dissatisfactory	Highly Dissatisfied	1	255	31%	255
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)						1.81

Table 4.8.2: Number of respondents and their responses on Quality and Coverage of street lights (User Groupwise)

S.N	Results	Responses on Public toilets/Bathrooms	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Quality and Coverage of street lights is highly satisfactory	Very Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Quality and Coverage of street lights is satisfactory	Satisfied	4	12	2%	48	11	5%	44	1	1%	4
3	Quality and Coverage of street lights is neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	32	7%	96	16	6%	48	4	5%	12
4	Quality and Coverage of street lights is dissatisfactory	Dissatisfied	2	283	58%	566	153	60%	306	50	68%	100
5	Quality and Coverage of street lights is highly dissatisfactory	Very Dissatisfied	1	162	33%	162	74	29%	74	19	26%	19
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)				1.78			1.86			1.82		

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4.9. Road Users Satisfaction on Infrastructure and Facilities

Table 4.9.1: Satisfaction on Infrastructure and Facilities (Overall)

S.No.	Sub-attribute	Sample Size	Satisfaction Score	% Satisfied
1	Road-side facilities			
1.1	Public toilets/ Bathrooms	87	3.14	63%
1.2	Restaurants/ shops for food/ drinks	780	3.89	78%
1.3	Public taps/ Drinking Water	78	2.95	59%
1.4	Medical Facilities	670	3.57	71%
1.5	Rain Shelter/ Bus-stop	258	3.00	60%
2	Accessibility to footpaths	817	2.04	41%
3	Accessibility to cycling path and lanes	817	1.98	40%
4	Quality and Coverage of street lights	817	1.81	36%
Average satisfaction score of road users on infrastructure and facilities			2.65	53%

Table 4.9.2: Satisfaction on Infrastructure and Facilities (User Groupwise)

S.N	Sub-attribute	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/ Associations		
		Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied
1	Road-side facilities									
1.1	Public toilets/ Bathrooms	38	3.05	61%	26	3.12	62%	23	3.30	66%
1.2	Restaurants/ shops for food/ drinks	462	3.92	78%	246	3.81	76%	72	3.93	79%
1.3	Public taps/ Drinking Water	41	2.93	59%	26	2.73	55%	11	3.55	71%
1.4	Medical Facilities	402	3.57	71%	204	3.50	70%	64	3.80	76%
1.5	Rain Shelter/ Bus-stop	150	3.06	61%	78	2.83	57%	30	3.10	62%
2	Accessibility to footpaths	489	2.03	41%	254	2.05	41%	74	2.08	42%
3	Accessibility to cycling path and lanes	188	1.99	40%	254	1.98	40%	74	1.93	39%
4	Quality and Coverage of street lights	489	1.78	36%	254	1.86	44%	74	1.82	36%
Average Satisfaction			2.65	53%		2.62	52%		2.76	55%

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4.10. Requirements of Lightings

Table 4.10.1: Requirement of Lightings (Overall)

S.N	Responses on requirement of lightings	Number of Respondents (n)	Percentage of Respondents
1	There are locations along the road that need lightings	729	89%
2	There aren't any locations along the road that need lightings	88	11%
		817	

Table 4.10.2: Requirement of Lightings (User Groupwise)

S. N	Results	Motorized Transportation Users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/ Associations	
		Number of Respondents (n)	Percentage of Respondents	Number of Respondents (n)	Percentage of Respondents	Number of Respondents (n)	Percentage of Respondents
1	There are locations along the road that need lightings	436	89%	221	87%	72	97%
2	There aren't any locations along the road that need lightings	53	11%	33	13%	2	3%
		489		254		74	

4.11. Time taken to travel to different public places

Table 4.11.1: Time taken to travel to different public places (Overall)

S.N	Percentage of respondents on time taken to travel to different public places	More than 1 hour	45 mins to 1 hour	30 to 45 mins	15 to 30 mins	Less than 15 mins
1	Primary School	0%	1%	0%	11%	88%
2	Higher Secondary School	0%	1%	1%	14%	84%
3	Colleges/ Universities	1%	3%	1%	32%	63%
4	Hospital	3%	6%	2%	26%	63%
5	Market	1%	4%	1%	17%	77%
6	Police Station	1%	2%	4%	31%	62%
7	Ward Office	0%	2%	0%	17%	81%

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Table 4.11.2: Time taken to travel to different public places (User Groupwise)

S. N	Percentage of respondents on time taken to travel to different public places	Motorized Transportation users					Non-Motorized Commuters					Governmental And Non-Governmental Organizations/ Associations				
		More than 1 hour	45 mins to 1 hour	30 to 45 mins	15 to 30 mins	Less than 15 mins	More than 1 hour	45 mins to 1 hour	30 to 45 mins	15 to 30 mins	Less than 15 mins	More than 1 hour	45 mins to 1 hour	30 to 45 mins	15 to 30 mins	Less than 15 mins
1	Primary School	0%	0%	0%	11%	89%	0%	0%	0%	15%	85%	0%	0%	1%	5%	93%
2	Higher Secondary School	0%	1%	1%	14%	84%	0%	2%	0%	17%	81%	0%	0%	0%	7%	93%
3	Colleges/ Universities	0%	3%	1%	31%	65%	3%	4%	1%	37%	56%	0%	1%	4%	20%	74%
4	Hospital	4%	5%	3%	25%	63%	2%	9%	2%	30%	57%	1%	1%	3%	13%	82%
5	Market	0%	2%	1%	18%	78%	1%	8%	1%	21%	70%	0%	0%	1%	1%	97%
6	Police Station	1%	1%	4%	32%	63%	0%	6%	4%	36%	53%	0%	0%	0%	11%	89%
7	Ward Office	0%	1%	0%	16%	83%	0%	4%	1%	21%	74%	0%	0%	0%	7%	93%

4.12. Most difficult time of day to find Public Transport

Table 4.12.1: Most difficult time of day to find Public Transport (Overall and User Groupwise)

S.N	Percentage of respondents on most difficult time of day to find Public Transport	Overall	Motorized Transportation users	Non-Motorized Commuters	Governmental And Non-Governmental Organizations/ Associations
1	5:00am - 8:00am	4%	3%	5%	11%
2	8:00am - 10:00am	53%	56%	49%	53%
3	10:00am - 12:00pm	5%	5%	4%	8%
4	12:00pm - 4:00pm	2%	2%	3%	3%
5	4:00pm - 8:00pm	14%	13%	17%	14%
6	8:00pm -10:00pm	19%	21%	20%	7%
7	Beyond 10:00pm	2%	1%	2%	5%

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5. ACCESSIBILITY AND CONNECTIVITY

5.1. Access provided by the road to key locations

Table 5.1.1: Number of respondents and their responses on Access provided by the road to key locations (Overall)

S.N	Results	Responses on access to key locations	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Access provided by the road to key locations is highly satisfactory	Highly satisfied	5	2	0%	10
2	Access provided by the road to key locations is satisfactory	Satisfied	4	500	61%	2000
3	Access provided by the road to key locations is neither satisfactory nor dissatisfactory	Neither Satisfied nor Dissatisfied	3	241	30%	723
4	Access provided by the road to key locations is dissatisfactory	Dissatisfied	2	74	9%	148
5	Access provided by the road to key locations is highly dissatisfactory	Highly Dissatisfied	1	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						3.53

Table 5.1.2: Number of respondents and their responses on Access provided by the road to key locations (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Access provided by the road to key locations is highly satisfactory	Never	5	1	0%	5	1	0%	5	0	0%	0
2	Access provided by the road to key locations is satisfactory	Rarely	4	301	62%	1204	152	60%	268	47	64%	188
3	Access provided by the road to key locations is neither satisfactory nor dissatisfactory	Occasionally	3	134	27%	402	87	34%	78	20	27%	60
4	Access provided by the road to key locations is dissatisfactory	Frequently	2	53	11%	106	14	6%	8	7	9%	14
5	Access provided by the road to key locations is highly dissatisfactory	Very Frequently	1	0	0%	0	0	0%	0	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				3.51			3.55			3.54		

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5.2. Reliability of the road to reach destination on time

Table 5.2.1: Number of respondents and their responses on Reliability of the road to reach destination on time (Overall)

S.N	Results	Responses on reliability of road to reach destination on time	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	The road is highly reliable to reach the destination on time	Highly reliable	5	0	0%	0
2	The road is reliable to reach the destination on time	Reliable	4	95	11%	380
3	The road is neither reliable nor unreliable to reach the destination on time	Neutral	3	203	25%	609
4	The road is unreliable to reach the destination on time	Unreliable	2	513	63%	1026
5	The road is highly unreliable to reach the destination on time	Highly unreliable	1	6	1%	6
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.47

Table 5.2.2: Number of respondents and their responses on Reliability of the road to reach destination on time (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	The road is highly reliable to reach the destination on time	Never	5	0	0%	0	0	0%	0	0	0%	0
2	The road is reliable to reach the destination on time	Rarely	4	53	11%	212	27	11%	108	15	20%	60
3	The road is neither reliable nor unreliable to reach the destination on time	Occasionally	3	113	23%	339	65	25%	195	25	34%	1575
4	The road is unreliable to reach the destination on time	Frequently	2	319	65%	638	160	63%	320	34	46%	3868
5	The road is highly unreliable to reach the destination on time	Very Frequently	1	4	1%	4	2	1%	2	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.44			2.46			2.74		

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5.3. Trend of travel time over past two years

Table 5.3.1: Number of respondents and their responses on Trend of travel time over past two years (Overall)

S.N	Results	Responses on trend of travel time over past two years	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	The trend of travel time has substantially reduced over the past two years	Substantially Reduced	5	3	0%	15
2	The trend of travel time has reduced marginally over the past two years	Reduced marginally	4	74	9%	296
3	The trend of travel time has remained same over the past two years	Remained Same	3	205	25%	615
4	The trend of travel time has increased over the past two years	Increased	2	530	65%	1060
5	The trend of travel time has increased substantially over the past two years	Increased Substantially	1	5	1%	5
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.44

Table 5.3.2: Number of respondents and their responses on Trend of travel time over past two years (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	The trend of travel time has substantially reduced over the past two years	Never	5	3	1%	15	0	0%	0	0	0%	0
2	The trend of travel time has reduced marginally over the past two years	Rarely	4	44	9%	176	22	9%	88	8	11%	32
3	The trend of travel time has remained same over the past two years	Occasionally	3	115	23%	345	77	30%	231	13	18%	39
4	The trend of travel time has increased over the past two years	Frequently	2	323	66%	646	155	61%	310	52	70%	104
5	The trend of travel time has increased substantially over the past two years	Very Frequently	1	4	1%	4	0	0%	0	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.43			2.48			2.38		

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5.4. Connectivity and access provided by the road to other major roads and highways

Table 5.4.1: Number of respondents and their responses on Connectivity and access provided by the road to other major roads and highways (Overall)

S.N	Results	Responses on Connectivity and access provided by the road to other major roads and highways	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Connectivity and access provided by the road to other major roads and highways is highly satisfactory	Highly Satisfied	5	0	0%	0
2	Connectivity and access provided by the road to other major roads and highways is satisfactory	Satisfied	4	311	38%	1244
3	Connectivity and access provided by the road to other major roads and highways is neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	245	30%	735
4	Connectivity and access provided by the road to other major roads and highways is dissatisfactory	Dissatisfied	2	260	32%	520
5	Connectivity and access provided by the road to other major roads and highways is highly dissatisfactory	Highly Dissatisfied	1	1	0%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						3.06

Table 5.4.2: Number of respondents and their responses on Connectivity and access provided by the road to other major roads and highways (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Connectivity and access provided by the road to other major roads and highways is highly satisfactory	Never	5	0	0%	0	0	0%	0	0	0%	0
2	Connectivity and access provided by the road to other major roads and highways is satisfactory	Rarely	4	179	37%	716	96	38%	384	36	49%	144
3	Connectivity and access provided by the road to other major roads and highways is neither satisfactory nor dissatisfactory	Occasionally	3	139	28%	417	80	31%	240	26	35%	78
4	Connectivity and access provided by the road to other major roads and highways is dissatisfactory	Frequently	2	170	35%	340	78	31%	156	12	16%	24
5	Connectivity and access provided by the road to other major roads and highways is highly dissatisfactory	Very Frequently	1	1	0%	1	0	0%	0	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				3.01			3.07			3.32		

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5.5. Signages for directions and distance along the road

Table 5.5.1: Number of respondents and their responses on Signages for directions and distance along the road (Overall)

S.N	Results	Responses on signages for directions and distance along the road	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Signages for directions and distance along the road are highly satisfactory	Highly Satisfied	5	0	0%	0
2	Signages for directions and distance along the road are satisfactory	Satisfied	4	69	8%	276
3	Signages for directions and distance along the road are neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	169	21%	507
4	Signages for directions and distance along the road are dissatisfactory	Dissatisfied	2	576	71%	1152
5	Signages for directions and distance along the road are highly dissatisfactory	Highly Dissatisfied	1	3	0%	3
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.37

Table 5.5.2: Number of respondents and their responses on Signages for directions and distance along the road (User Groupwise)

S.N	Results	Responses on Frequency of potholes encountered	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Signages for directions and distance along the road are highly satisfactory	Never	5	0	0%	0	0	0%	0	0	0%	0
2	Signages for directions and distance along the road are satisfactory	Rarely	4	39	8%	156	19	7%	76	11	15%	44
3	Signages for directions and distance along the road are neither satisfactory nor dissatisfactory	Occasionally	3	98	20%	294	55	22%	165	16	22%	48
4	Signages for directions and distance along the road are dissatisfactory	Frequently	2	349	71%	698	180	71%	360	47	63%	94
5	Signages for directions and distance along the road are highly dissatisfactory	Very Frequently	1	3	1%	3	0	0%	0	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.35			2.37			2.51		

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5.6. Road Users Satisfaction on Accessibility and Connectivity

Table 5.6.1: Satisfaction on Accessibility and Connectivity (Overall)

S.No.	Sub-attribute	Sample Size	Satisfaction Score	% satisfied
1	Access provided by the road to key locations	817	3.53	71%
2	Reliability of the road to reach destination on time	817	2.47	49%
3	Trend of travel time over past two years	817	2.44	49%
4	Connectivity and access provided by the road to other major roads and highways	817	3.06	61%
5	Signages for directions and distance along the road	817	2.37	47%
Average satisfaction score of road users on accessibility and connectivity			2.77	55%

Table 5.6.2: Satisfaction on Accessibility and Connectivity (User Groupwise)

S.N	Sub-attribute	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
		Sample Size	Satisfaction Score	% Satisfied	Sample Size	Satisfaction Score	% Satisfied	Sample Size	Satisfaction Score	% Satisfied
1	Access provided by the road to key locations	489	3.51	70%	254	3.55	71%	74	3.54	71%
2	Reliability of the road to reach destination on time	489	2.44	49%	254	2.46	49%	74	2.74	55%
3	Trend of travel time over past two years	489	2.43	49%	254	2.48	50%	74	2.38	48%
4	Connectivity and access provided by the road to other major roads and highways	489	3.01	60%	254	3.07	61%	74	3.32	66%
5	Signages for directions and distance along the road	489	2.35	47%	254	2.37	47%	74	2.51	50%
Average Satisfaction			2.75	55%		2.79	56%		2.90	58%

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6. EMERGENCY SERVICES

6.1. Accessibility of emergency services

Table 6.1.1: Number of respondents and their responses on Accessibility of emergency services (Overall)

S.N	Results	Responses on accessibility of emergency services	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Accessibility of emergency services are highly satisfactory	Highly Satisfied	5	0	0%	0
2	Accessibility of emergency services are satisfactory	Satisfied	4	455	56%	1820
3	Accessibility of emergency services are neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	224	27%	672
4	Accessibility of emergency services are dissatisfactory	Dissatisfied	2	137	17%	274
5	Accessibility of emergency services are highly dissatisfactory	Highly Dissatisfied	1	1	0%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						3.39

Table 6.1.2: Number of respondents and their responses on Accessibility of emergency services (User Groupwise)

S.N	Results	Responses on accessibility of emergency services	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Accessibility of emergency services are highly satisfactory	Highly Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Accessibility of emergency services are satisfactory	Satisfied	4	257	53%	1028	150	59%	600	48	65%	192
3	Accessibility of emergency services are neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	147	30%	441	57	22%	171	20	27%	60
4	Accessibility of emergency services are dissatisfactory	Dissatisfied	2	84	17%	168	47	19%	94	6	8%	12
5	Accessibility of emergency services are highly dissatisfactory	Highly Dissatisfied	1	1	0%	1	0	0%	0	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				3.35			3.41			3.57		

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6.2. Post-Crash Response

Table 6.2.1: Number of respondents and their responses on Post-Crash Response (Overall)

S.N	Results	Responses on post-crash response	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Post-crash response on the road is very quick	Very Quick	5	0	0%	0
2	Post-crash response on the road is quick	Quick	4	413	50%	1652
3	Post-crash response on the road is neither quick nor slow	Neither Quick nor Slow	3	219	27%	657
4	Post-crash response on the road is slow	Slow	2	177	22%	354
5	Post-crash response on the road is very slow	Very Slow	1	8	1%	8
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						3.27

Table 6.2.2: Number of respondents and their responses on Post-Crash Response (User Groupwise)

S.N	Results	Responses on post-crash response	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Post-crash response on the road is very quick	Very Quick	5	0	0%	0	0	0%	0	0	0%	0
2	Post-crash response on the road is quick	Quick	4	241	49%	964	119	47%	476	53	72%	212
3	Post-crash response on the road is neither quick nor slow	Neither Quick nor Slow	3	131	27%	393	75	29%	225	13	18%	39
4	Post-crash response on the road is slow	Slow	2	115	24%	230	55	22%	110	7	9%	14
5	Post-crash response on the road is very slow	Very Slow	1	2	0%	2	5	2%	5	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				3.25			3.21			3.59		

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6.3. Road Users Satisfaction on Emergency Services

Table 6.3.1: Satisfaction on Emergency Services (Overall)

S.No.	Sub-attribute	Sample Size	Satisfaction Score	% Satisfied
1	Accessibility of emergency services	817	3.39	68%
2	Post-Crash Response	817	3.27	65%
Average satisfaction score of road users on emergency services			3.33	67%

Table 6.3.2: Satisfaction on Emergency Services (User Groupwise)

S.N	Sub-attribute	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
		Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied
1	Accessibility of emergency services	489	3.35	67%	254	3.41	68%	74	3.57	71%
2	Post-Crash Response	489	3.25	65%	254	3.21	64%	74	3.59	72%
Average Satisfaction			3.30	66%		3.31	66%		3.58	72%

6.4. Medical facilities available on the road

Table 6.4.1: Medical facilities available on the road (Overall)

S. N	Results	Responses on medical facilities available on the road	Number of Respondents (n)	Percentage of Respondents
1	Government Hospital is available on the road	Government Hospital	84	10%
2	Private Hospital is available on the road	Private Hospital	266	33%
3	Health Posts are available on the road	Health Posts	100	12%
4	Clinic is available on the road	Clinic	349	43%
5	None of above facilities are available on the road	None of above	18	2%
			817	

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Table 6.4.2: Medical facilities available on the road (User Groupwise)

S. N	Results	Responses on medical facilities available on the road	Point on Likert Scale (W)	Motorized Transportation Users		Non-Motorized Commuters		Governmental And Non-Governmental Organizations/Associations	
				Number of Respondents (n)	Percent age of Respondents	Number of Respondents (n)	Percent age of Respondents	Number of Respondents (n)	Percent age of Respondents
1	Government Hospital is available on the road	Government Hospital	5	47	10%	21	8%	16	22%
2	Private Hospital is available on the road	Private Hospital	4	166	34%	80	31%	20	27%
3	Health Posts are available on the road	Health Posts	3	60	12%	28	11%	12	16%
4	Clinic is available on the road	Clinic	2	208	43%	115	45%	26	35%
5	None of above facilities are available on the road	None of above	1	8	2%	10	4%	0	0%
				489		254		74	

Appendix D: Detailed Data Analysis

7. ENVIRONMENT & AESTHETICS

7.1. Cleanliness of the road and surroundings

Table 7.1.1: Number of respondents and their responses on Cleanliness of the road and surroundings (Overall)

S.N	Results	Responses on cleanliness of the road and surroundings	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Cleanliness of the road and surroundings is highly satisfactory	Highly Satisfied	5	0	0%	0
2	Cleanliness of the road and surroundings is satisfactory	Satisfied	4	215	26%	860
3	Cleanliness of the road and surroundings is neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	197	24%	591
4	Cleanliness of the road and surroundings is dissatisfactory	Dissatisfied	2	386	47%	772
5	Cleanliness of the road and surroundings is highly dissatisfactory	Highly Dissatisfied	1	19	3%	19
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.74

Table 7.1.2: Number of respondents and their responses on Cleanliness of the road and surroundings (User Groupwise)

S.N	Results	Responses on cleanliness of the road and surroundings	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Cleanliness of the road and surroundings is highly satisfactory	Highly Satisfied	5	0	0%	0	0	0%	0	0	0%	0
2	Cleanliness of the road and surroundings is satisfactory	Satisfied	4	121	25%	484	72	28%	288	22	30%	88
3	Cleanliness of the road and surroundings is neither satisfactory nor dissatisfactory	Neither Satisfied Nor Dissatisfied	3	118	24%	354	63	25%	189	16	22%	48
4	Cleanliness of the road and surroundings is dissatisfactory	Dissatisfied	2	237	48%	474	114	45%	228	35	47%	70
5	Cleanliness of the road and surroundings is highly dissatisfactory	Highly Dissatisfied	1	13	3%	13	5	2%	5	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.71			2.80			2.80		

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7.2. Level of Noise

Table 7.2.1: Number of respondents and their responses on Level of Noise (Overall)

S.N	Results	Responses on level of noise	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Noise generated by the traffic is very low	Very Low	5	0	0%	0
2	Noise generated by the traffic is low	Low	4	9	1%	36
3	Noise generated by the traffic is medium	Medium	3	176	22%	528
4	Noise generated by the traffic is high	High	2	547	67%	1094
5	Noise generated by the traffic is very high	Very High	1	85	10%	85
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.13

Table 7.2.2: Number of respondents and their responses on Level of Noise (User Groupwise)

S.N	Results	Responses on level of noise	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Noise generated by the traffic is very low	Very Low	5	0	0%	0	0	0%	0	0	0%	0
2	Noise generated by the traffic is low	Low	4	5	1%	20	3	1%	12	1	1%	4
3	Noise generated by the traffic is medium	Medium	3	89	18%	267	71	28%	213	16	22%	48
4	Noise generated by the traffic is high	High	2	336	69%	672	157	62%	314	54	73%	108
5	Noise generated by the traffic is very high	Very High	1	59	12%	59	23	9%	23	3	4%	3
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.08			2.21			2.20		

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7.3. Level of air pollution

Table 7.3.1: Number of respondents and their responses on Level of air pollution (Overall)

S.N	Results	Responses on level of air pollution	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Level of air pollution is very low	Very Low	5	0	0%	0
2	Level of air pollution is low	Low	4	23	3%	92
3	Level of air pollution is medium	Medium	3	298	36%	894
4	Level of air pollution is high	High	2	478	59%	956
5	Level of air pollution is very high	Very High	1	18	2%	18
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.40

Table 7.3.2: Number of respondents and their responses on Level of air pollution (User Groupwise)

S.N	Results	Responses on level of noise	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Level of air pollution is very low	Very Low	5	0	0%	0	0	0%	0	0	0%	0
2	Level of air pollution is low	Low	4	12	2%	48	10	4%	40	1	1%	4
3	Level of air pollution is medium	Medium	3	166	34%	498	110	43%	330	22	30%	66
4	Level of air pollution is high	High	2	296	61%	592	131	52%	262	51	69%	102
5	Level of air pollution is very high	Very High	1	15	3%	15	3	1%	3	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.36			2.50			2.32		

Appendix D: Detailed Data Analysis

7.4. Road Users Satisfaction on Environment and Aesthetic Aspects

Table 7.4.1: Satisfaction on Environment and Aesthetic Aspects (Overall)

S.No.	Sub-attribute	Sample Size	Satisfaction Score	% Satisfied
1	Cleanliness of the road and surroundings	817	2.74	55%
2	Level of Noise	817	2.13	43%
3	Level of air pollution	817	2.40	48%
Average satisfaction score of road users on environment and aesthetic aspects			2.43	49%

Table 7.4.2: Satisfaction on Environment and Aesthetic Aspects (User Groupwise)

S.N	Sub-attribute	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
		Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied	Sample size	Satisfaction score	% satisfied
1	Cleanliness of the road and surroundings	489	2.71	54%	254	2.80	56%	74	2.80	56%
2	Level of Noise	489	2.08	42%	254	2.21	44%	74	2.20	44%
3	Level of air pollution	489	2.36	47%	254	2.50	50%	74	2.32	46%
Average Satisfaction			2.38	48%		2.50	50%		2.44	49%

Appendix D: Detailed Data Analysis

8. GREEN RESILIENT CORRIDOR

8.1. Consideration of safety of wildlife in highway design

Table 8.1.1: Number of respondents and their responses on Consideration of safety of wildlife in highway design (Overall)

S.N	Results	Responses on consideration of safety of wildlife in highway design	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Consideration of safety of wildlife in highway design is highly effective	Highly Effective	5	0	0%	0
2	Consideration of safety of wildlife in highway design is effective	Effective	4	3	0%	12
3	Consideration of safety of wildlife in highway design is neither effective nor ineffective	Neutral	3	39	5%	117
4	Consideration of safety of wildlife in highway design is ineffective	Ineffective	2	771	94%	1542
5	Consideration of safety of wildlife in highway design is highly ineffective	Very Ineffective	1	4	1%	4
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)						2.05

Table 8.1.2: Number of respondents and their responses on Consideration of safety of wildlife in highway design (User Groupwise)

S.N	Results	Responses on consideration of safety of wildlife in highway design	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _{ini})
1	Consideration of safety of wildlife in highway design is highly effective	Highly Effective	5	0	0%	0	0	0%	0	0	0%	0
2	Consideration of safety of wildlife in highway design is effective	Effective	4	2	1%	8	0	0%	0	1	1%	4
3	Consideration of safety of wildlife in highway design is neither effective nor ineffective	Neutral	3	25	5%	75	13	5%	39	1	1%	3
4	Consideration of safety of wildlife in highway design is ineffective	Ineffective	2	461	94%	922	240	95%	480	70	95%	140
5	Consideration of safety of wildlife in highway design is highly ineffective	Very Ineffective	1	1	0%	1	1	0%	1	2	3%	2
Weighted Average of Satisfaction Score ($\Sigma W_{ini} / \Sigma n$)				2.06			2.05			2.01		

Appendix D: Detailed Data Analysis

8.2. Adequacy of wildlife crossings such as overpass and underpass

Table 8.2.1: Number of respondents and their responses on Adequacy of wildlife crossings such as overpass and underpass (Overall)

S.N	Results	Responses on adequacy of wildlife crossings such as overpass and underpass	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Wildlife crossings such as overpass and underpass are highly adequate	Fully Agreed	5	0	0%	0
2	Wildlife crossings such as overpass and underpass are adequate	Agreed	4	1	0%	4
3	Wildlife crossings such as overpass and underpass are neither adequate nor inadequate	Neutral	3	3	1%	9
4	Wildlife crossings such as overpass and underpass are inadequate	Disagree	2	802	98%	1604
5	Wildlife crossings such as overpass and underpass are highly inadequate	Fully Disagree	1	11	1%	11
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						1.99

Table 8.2.2: Number of respondents and their responses on Adequacy of wildlife crossings such as overpass and underpass (User Groupwise)

S.N	Results	Responses on adequacy of wildlife crossings such as overpass and underpass	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Wildlife crossings such as overpass and underpass are highly adequate	Fully Agreed	5	0	0%	0	0	0%	0	0	0%	0
2	Wildlife crossings such as overpass and underpass are adequate	Agreed	4	1	0%	4	0	0%	0	0	0%	0
3	Wildlife crossings such as overpass and underpass are neither adequate nor inadequate	Neutral	3	1	0%	3	1	0%	0	1	1%	3
4	Wildlife crossings such as overpass and underpass are inadequate	Disagree	2	481	99%	962	251	99%	502	70	95%	140
5	Wildlife crossings such as overpass and underpass are highly inadequate	Fully Disagree	1	6	1%	6	2	1%	2	3	4%	3
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				1.99			2.00			1.97		

Appendix D: Detailed Data Analysis

8.3. Adequacy of signage warning of wildlife crossings

Table 8.3.1: Number of respondents and their responses on Adequacy of signage warning of wildlife crossings (Overall)

S.N	Results	Responses on adequacy of signage warning of wildlife crossings	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W_{in_i})
1	Signage warnings of wildlife crossings are highly adequate	Fully Agreed	5	0	0%	0
2	Signage warnings of wildlife crossings are adequate	Agreed	4	3	0%	12
3	Signage warnings of wildlife crossings are neither adequate nor inadequate	Neutral	3	48	6%	144
4	Signage warnings of wildlife crossings are inadequate	Disagree	2	764	94%	1528
5	Signage warnings of wildlife crossings are highly inadequate	Fully Disagree	1	2	0%	2
Weighted Average of Satisfaction Score ($\Sigma W_{in_i} / \Sigma n$)						2.06

Table 8.3.2: Number of respondents and their responses on Adequacy of signage warning of wildlife crossings (User Groupwise)

S.N	Results	Responses on adequacy of signage warning of wildlife crossings	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W_{in_i})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W_{in_i})	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W_{in_i})
1	Signage warnings of wildlife crossings are highly adequate	Fully Agreed	5	0	0%	0	0	0%	0	0	0%	0
2	Signage warnings of wildlife crossings are adequate	Agreed	4	1	0%	4	1	0%	4	1	2%	4
3	Signage warnings of wildlife crossings are neither adequate nor inadequate	Neutral	3	26	6%	78	13	5%	39	9	12%	27
4	Signage warnings of wildlife crossings are inadequate	Disagree	2	461	94%	922	240	95%	480	63	85%	126
5	Signage warnings of wildlife crossings are highly inadequate	Fully Disagree	1	1	0%	1	0	0%	0	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_{in_i} / \Sigma n$)				2.06			2.06			2.14		

Appendix D: Detailed Data Analysis

8.4. Efforts of highway authorities in addressing wildlife conservation concerns

Table 8.4.1: Number of respondents and their responses on Efforts of highway authorities in addressing wildlife conservation concerns (Overall)

S.N	Results	Responses on efforts in addressing wildlife conservation concerns	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Efforts of highway authorities in addressing wildlife conservation concerns are excellent	Excellent	5	0	0%	0
2	Efforts of highway authorities in addressing wildlife conservation concerns are good	Good	4	3	1%	12
3	Efforts of highway authorities in addressing wildlife conservation concerns are fair	Fair	3	101	12%	303
4	Efforts of highway authorities in addressing wildlife conservation concerns are poor	Poor	2	713	87%	1426
5	Efforts of highway authorities in addressing wildlife conservation concerns are very poor	Very Poor	1	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.13

Table 8.4.2: Number of respondents and their responses on Efforts of highway authorities in addressing wildlife conservation concerns (User Groupwise)

S.N	Results	Responses on efforts in addressing wildlife conservation concerns	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score ($W_i n_i$)
1	Efforts of highway authorities in addressing wildlife conservation concerns are excellent	Excellent	5	0	0%	0	0	0%	0	0	0%	0
2	Efforts of highway authorities in addressing wildlife conservation concerns are good	Good	4	2	0%	8	0	0%	0	1	1%	4
3	Efforts of highway authorities in addressing wildlife conservation concerns are fair	Fair	3	62	13%	186	28	11%	84	11	15%	33
4	Efforts of highway authorities in addressing wildlife conservation concerns are poor	Poor	2	425	87%	850	226	89%	452	62	84%	124
5	Efforts of highway authorities in addressing wildlife conservation concerns are very poor	Very Poor	1	0	0%	0	0	0%	0	0	0%	0
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.13			2.11			2.18		

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8.5. Road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc.

Table 8.5.1: Number of respondents and their responses on Road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc. (Overall)

S.N	Results	Responses on road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Point on Likert Scale (W)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Road is very safe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Very Safe	5	0	0%	0
2	Road is safe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Safe	4	266	33%	1064
3	Road is neither safe nor unsafe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Neutral	3	131	16%	393
4	Road is unsafe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Unsafe	2	418	51%	836
5	Road is very unsafe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Very Unsafe	1	2	0%	2
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)						2.81

Table 8.5.2: Number of respondents and their responses on Road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc. (User Groupwise)

S.N	Results	Responses on road safety in terms of extreme weather, heavy rainfall, etc.	Point on Likert Scale (W)	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
				Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)	Number of Respondents (n)	Percentage of Respondents	Satisfaction Score (W _i n _i)
1	Road is very safe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Very Safe	5	0	0%	0	0	0%	0	0	0%	0
2	Road is safe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Safe	4	170	35%	680	86	34%	344	10	14%	40
3	Road is neither safe nor unsafe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Neutral	3	78	16%	234	39	15%	117	14	19%	42
4	Road is unsafe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Unsafe	2	240	49%	480	129	51%	258	49	66%	98
5	Road is very unsafe in terms of extreme weather, heavy rainfall, floods, landslides, etc.	Very Unsafe	1	1	0%	1	0	0%	0	1	1%	1
Weighted Average of Satisfaction Score ($\Sigma W_i n_i / \Sigma n$)				2.85			2.83			2.45		

Appendix D: Detailed Data Analysis

8.6. Road Users Satisfaction on GRID Approach

Table 8.6.1: Satisfaction on GRID Approach (Overall)

S.No.	Sub-attribute	Sample Size	Satisfaction Score	% Satisfied
1	Consideration of safety of wildlife in highway design	817	2.05	41%
2	Adequacy of wildlife crossings such as overpass and underpass	817	1.99	40%
3	Adequacy of signage warning of wildlife crossings	817	2.06	41%
4	Efforts of highway authorities in addressing wildlife conservation concerns	817	2.13	43%
5	Road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc.	817	2.81	56%
Average satisfaction score of road users on environment and aesthetic aspects			2.21	44%

Table 8.6.2: Satisfaction on GRID Approach (User Groupwise)

S.N	Sub-attribute	Motorized Transportation Users			Non-Motorized Commuters			Governmental And Non-Governmental Organizations/Associations		
		Sample Size	Satisfaction Score	% Satisfied	Sample Size	Satisfaction Score	% Satisfied	Sample Size	Satisfaction Score	% Satisfied
1	Consideration of safety of wildlife in highway design	489	2.06	41%	254	2.05	41%	74	2.01	40%
2	Adequacy of wildlife crossings such as overpass and underpass	489	1.99	40%	254	2.00	40%	74	1.97	39%
3	Adequacy of signage warning of wildlife crossings	489	2.06	41%	254	2.06	41%	74	2.14	43%
4	Efforts of highway authorities in addressing wildlife conservation concerns	489	2.13	43%	254	2.11	42%	74	2.18	44%
5	Road safety in terms of extreme weather, heavy rainfall, floods, landslides, etc.	489	2.85	57%	254	2.83	57%	74	2.45	49%
Average Satisfaction			2.22	44%		2.21	44%		2.15	43%

Appendix D: Detailed Data Analysis

8.7. Wildlife encountered on or near the highway

Table 8.7.1: Wildlife encountered on or near the highway (Overall and User Groupwise)

S.N	Results	Overall	Motorized Transportation users	Non-Motorized Commuters	Governmental And Non-Governmental Organizations/ Associations
1	Have encountered wildlife on or near the highway	40%	38%	33%	74%
2	Have not encountered wildlife on or near the highway	60%	62%	67%	26%

8.8. Awareness of environmental initiatives to protect wildlife related to this highway

Table 8.8.1: Awareness of environmental initiatives to protect wildlife related to this highway (Overall and User Groupwise)

S.N	Results	Overall	Motorized Transportation users	Non-Motorized Commuters	Governmental And Non-Governmental Organizations/ Associations
1	Aware of environmental initiatives to protect wildlife related to this highway	1%	1%	1%	3%
2	Not aware of environmental initiatives to protect wildlife related to this highway	99%	99%	99%	97%

APPENDIX E: Respondent Details

Appendix E: Respondent Details

Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
1	Kosit Bahadur Mahat	M	36-45	Service	Daily	Yes
2	Narayan Prasad Regmi	M	46-55	Others	Daily	Yes
3	Shri Prasad Chaudhary	M	18-25	Others	Occasionally	Yes
4	Narayan Raymajhi	M	26-35	Others	Daily	Yes
5	Bijan Sapkota	M	26-35	Others	Daily	Yes
6	Ramesh B K	M	36-45	Agriculture	Occasionally	Yes
7	Anil KC	M	26-35	Others	Daily	No
8	Ghanashyam Sharma	M	Above 55	Business	Daily	Yes
9	Puspha Pun	F	36-45	Others	Daily	Yes
10	Bhojraj Panthi	M	36-45	Business	Daily	Yes
11	Shraddha Chaudhary	F	26-35	Business	Daily	Yes
12	Khem Prasad Neupaney	M	Above 55	Others	Daily	Yes
13	Ramesh Ghimirey	M	46-55	Others	Daily	Yes
14	Bishnu Prasad Pandey	M	36-45	Business	Daily	Yes
15	Ruk Bahadur Gurung	M	46-55	Service	Daily	Yes
16	Sandesh Khatri	M	18-25	Others	Daily	Yes
17	Dharmaraj Aryal	M	26-35	Business	Daily	Yes
18	Nirmala Aryal	F	26-35	Business	Daily	Yes
19	Sankar Kafle	M	26-35	Business	Daily	Yes
20	Thakur kharel	M	Above 55	Business	Daily	Yes
21	Saugat G.C	M	18-25	Student	Daily	Yes
22	Min bahadur khadka	M	18-25	Others	Daily	No
23	Sushila Kuwanr	F	18-25	Student	Daily	Yes
24	Mahendra Prasad Doju	M	46-55	Business	Daily	Yes
25	Ramesh Biswakarma	M	18-25	Business	Daily	Yes
26	Anup Bhusal	M	46-55	Business	Daily	Yes
27	Bhuparaj Neupane	M	26-35	Business	Daily	Yes
28	Albert Ghart	M	26-35	Business	Daily	Yes
29	Anish Miyor	M	26-35	Business	Daily	Yes
30	Thaman Thapa	M	36-45	Others	Daily	Yes
31	Hari Karki	M	46-55	Business	Daily	Yes
32	Basanta Rana	M	36-45	Business	Daily	Yes
33	Sarbe Shrestha	M	Above 55	Business	Daily	Yes
34	Debendra Kumar Shrestha	M	46-55	Business	Daily	Yes
35	Daya Bhandari	M	Above 55	Business	Daily	Yes
36	Thaneswor Gaire	M	Above 55	Business	Daily	Yes
37	Anil Pandey	M	26-35	Business	Daily	Yes
38	Gokarna raj Giri	M	36-45	Business	Daily	Yes
39	Bharatmani Paudel	M	36-45	Business	Daily	Yes
40	Shishir Pandey	M	18-25	Student	Weekly	Yes
41	Madan Ghimirey	M	36-45	Business	Daily	Yes

Appendix E: Respondent Details

Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
42	Suraj Yogi	M	36-45	Business	Daily	Yes
43	Ram Prasad Banjade	M	26-35	Business	Daily	Yes
44	Mahesh G.C	M	18-25	Others	Daily	No
45	Arjun Pokhrel	M	36-45	Business	Daily	Yes
46	Asmita Basnet	F	18-25	Business	Daily	Yes
47	Basanta Thapa	M	46-55	Business	Daily	Yes
48	Naresh Joshi	M	36-45	Business	Daily	Yes
49	Sabin Bajracharya	M	46-55	Business	Daily	Yes
50	Madan Sapkota	M	26-35	Others	Daily	Yes
51	Sarita Adhikari	F	46-55	Service	Daily	Yes
52	Sitaram Basyal	M	36-45	Business	Daily	Yes
53	Narayan Prasad Bhandari	M	46-55	Others	Daily	Yes
54	Ashik Chettri	M	18-25	Service	Daily	Yes
55	Anil udaya	M	36-45	Others	Daily	Yes
56	Bhuwan pandey	M	26-35	Others	Daily	Yes
57	Asmita Banjade	F	26-35	Student	Daily	Yes
58	Rabindra kunwar	M	26-35	Business	Daily	Yes
59	Tikaram Khanal	M	36-45	Others	Daily	Yes
60	Prakash Rayamajhi	M	36-45	Others	Daily	Yes
61	Bim Bahadur Gaha Magar	M	46-55	Others	Daily	Yes
62	Prem Prasad Sharma	M	46-55	Business	Daily	Yes
63	Hari kuwar	M	46-55	Others	Daily	No
64	Junu Thapa	F	36-45	Others	Daily	Yes
65	Rita Adhikari	F	36-45	Others	Daily	Yes
66	Narayan Aryal	M	36-45	Business	Daily	Yes
67	Bhim Prasad Bhattarai	M	36-45	Service	Daily	Yes
68	Padam Bahadur Rana	M	46-55	Business	Daily	Yes
69	Bindu bhandari	F	36-45	Business	Daily	Yes
70	Rohit Gupta	M	36-45	Others	Daily	Yes
71	Arun B.K	M	36-45	Service	Daily	Yes
72	Bhakta Thapa	M	36-45	Business	Daily	Yes
73	Yubraj Ghimire	M	36-45	Business	Daily	Yes
74	Arjun Basyal	M	26-35	Business	Daily	Yes
75	Rajiv Pantha	M	36-45	Business	Daily	Yes
76	Ashok Tiwari	M	26-35	Business	Daily	Yes
77	Gopal K.C	M	36-45	Business	Daily	Yes
78	Ghanasyam Gyawali	M	36-45	Others	Occasionally	Yes
79	Tikaram Kharel	M	46-55	Service	Daily	Yes
80	Bhanu Bhakta Neupaney	M	36-45	Business	Daily	Yes
81	Basanta Pandey	M	26-35	Service	Daily	Yes

Appendix E: Respondent Details

Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
82	Prakash Bahadur Pun	M	36-45	Service	Daily	Yes
83	Chantamani Neupaney	M	46-55	Business	Daily	Yes
84	Mazon Thapa	M	18-25	Business	Daily	Yes
85	Bishnu Khadaka	F	26-35	Business	Daily	Yes
86	Sugrim Gupta	M	18-25	Business	Daily	Yes
87	Ganesh Sunar	M	36-45	Business	Daily	Yes
88	Deepak Dhakal	M	Above 55	Business	Daily	Yes
89	Gokul Aryal	M	18-25	Student	Daily	Yes
90	Subash Pariyar	M	36-45	Service	Daily	Yes
91	Rajan Poudel	M	26-35	Service	Daily	Yes
92	Manish B.K	M	18-25	Service	Daily	Yes
93	Yagya Raj Khanal	M	46-55	Service	Daily	Yes
94	Sunil Sunar	M	18-25	Service	Daily	Yes
95	Sagar khanal	M	26-35	Others	Daily	Yes
96	Shyam Karki	M	46-55	Business	Daily	Yes
97	Nabin Gautam	M	46-55	Business	Daily	Yes
98	Narayan Aryal	M	46-55	Business	Daily	Yes
99	Sahaj Ghimire	M	36-45	Agriculture	Daily	Yes
100	Bikram Gaha Magar	M	26-35	Business	Daily	Yes
101	Jivan Darji	M	26-35	Business	Daily	Yes
102	Raj kKumar Thapa	M	36-45	Business	Daily	Yes
103	Govinda Raimajhi	M	26-35	Others	Daily	Yes
104	Bishnu Tharu	M	26-35	Others	Daily	No
105	Prakash Poudel	M	36-45	Business	Daily	Yes
106	Amit Thakur	M	26-35	Others	Daily	Yes
107	Krishna Prasad Neupane	M	46-55	Business	Daily	Yes
108	Deepak Chettri	M	36-45	Business	Daily	Yes
109	Keshab Bhattra	M	26-35	Business	Daily	Yes
110	Om Prakash Aryal	M	46-55	Business	Daily	Yes
111	Bharat Gautam	M	36-45	Business	Daily	Yes
112	Ganga chapagai	M	36-45	Business	Daily	Yes
113	Dadhiram Bhandari	M	26-35	Others	Daily	No
114	Bishnu Gautam	M	26-35	Business	Daily	Yes
115	Shiva Gautam	M	26-35	Business	Daily	Yes
116	Gunakhar Aryal	M	46-55	Business	Daily	Yes
117	Mukunda Pokhrel	M	36-45	Business	Daily	Yes
118	Dilliraj Joshi	M	26-35	Service	Daily	No
119	Arbaj Alam	M	18-25	Business	Daily	Yes
120	Ramesh Gyawali	M	26-35	Business	Daily	Yes
121	Subod Dhakal	M	36-45	Service	Daily	Yes
122	Rajendra Panti	M	26-35	Agriculture	Daily	Yes

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Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
123	Paras Shrestha	M	46-55	Business	Daily	Yes
124	Baburam Poudel	M	36-45	Business	Daily	Yes
125	Bijaya Chaudhary	M	18-25	Others	Daily	No
126	Sunil Rai Das	M	26-35	Others	Daily	Yes
127	Madhu Gautam	M	36-45	Business	Daily	Yes
128	Shankar Prasad Upadhya	M	Above 55	Business	Daily	Yes
129	Bishnu Prasad Bhandari	M	Above 55	Service	Daily	Yes
130	Atom Darlami	M	18-25	Others	Daily	No
131	Santa Bahadur Thapa	M	46-55	Business	Daily	Yes
132	Jageshwar Ghimirey	M	46-55	Business	Daily	Yes
133	Gikrulla	M	36-45	Business	Daily	Yes
134	Bhagwati Aryal	F	26-35	Business	Daily	Yes
135	Baburam Sunar	M	36-45	Business	Daily	Yes
136	Kashi ram Pokhrel	M	36-45	Business	Daily	Yes
137	Pramila sharma	F	36-45	Business	Occasionally	Yes
138	Ganga Ramu Pandey	M	36-45	Business	Daily	Yes
139	Bibakar Dhakal	M	46-55	Business	Daily	Yes
140	Amrit Gyawali	M	26-35	Business	Daily	Yes
141	Tamlal Ghimirey	M	46-55	Business	Daily	Yes
142	Rahul Tharbin	M	18-25	Others	Daily	Yes
143	Dhan Maya Adhikari	F	46-55	Business	Daily	Yes
144	Subash Sunar	M	36-45	Business	Daily	Yes
145	Om Nath Chaudhary	M	26-35	Business	Daily	Yes
146	Gyaneswor Pokhrel	M	46-55	Business	Daily	Yes
147	Suresh Adhikari	M	46-55	Business	Daily	Yes
148	Rajesh Adhikari	M	36-45	Business	Daily	Yes
149	Biswanath Dumre	M	46-55	Business	Daily	Yes
150	Bishnu Prasad Sharma	M	36-45	Business	Daily	Yes
151	Nirmala Panta	F	46-55	Business	Daily	Yes
152	Ramesh Shastri	M	36-45	Others	Daily	Yes
153	Pradip Bhattarai	M	36-45	Others	Daily	Yes
154	Kapil Gyawali	M	36-45	Business	Weekly	Yes
155	Ankit Adhikari	M	26-35	Business	Daily	Yes
156	Hari Adhikari	M	26-35	Business	Daily	Yes
157	Kishnu Bhandari	F	26-35	Business	Occasionally	No
158	Rohit Khanal	M	18-25	Business	Daily	Yes
159	Tulsiram Koirala	M	46-55	Agriculture	Daily	Yes
160	Mitra Mani Khanal	M	36-45	Business	Daily	Yes
161	Kalpana Adhikari	F	26-35	Business	Daily	Yes
162	Narayan Kandel	M	36-45	Others	Daily	Yes
163	Jeban Pokhrel	M	36-45	Agriculture	Daily	Yes

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Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
164	Dilliraj Gautam	M	Above 55	Others	Daily	Yes
165	Netra Ghimire	M	46-55	Business	Daily	Yes
166	Baburam Panta	M	36-45	Others	Daily	Yes
167	Deepak Lamtari	M	36-45	Business	Daily	Yes
168	Kamal Bhandari	M	36-45	Business	Daily	Yes
169	Aawash Gyawali	M	18-25	Student	Daily	Yes
170	Prakash Shahi	M	36-45	Business	Daily	Yes
171	Kartik Verma	M	26-35	Business	Daily	Yes
172	Ramesh Biswakarma	M	36-45	Business	Daily	Yes
173	Kiran Neupane	M	36-45	Business	Daily	Yes
174	Rm Chandra Ghimire	M	46-55	Business	Daily	Yes
175	C.K Panti	M	36-45	Business	Daily	Yes
176	Basanta Bhattra	M	26-35	Business	Daily	Yes
177	Sanker B.K	M	36-45	Agriculture	Daily	Yes
178	Yubraj Ghimire	M	26-35	Others	Daily	Yes
179	Bishnu Pandey	M	36-45	Business	Daily	Yes
180	Govinda Gaha	M	26-35	Business	Daily	Yes
181	Sujan Raila	M	26-35	Others	Daily	Yes
182	Sher Bahadur Gewali	M	26-35	Others	Daily	Yes
183	Tahalsign Thapa	M	Above 55	Service	Daily	Yes
184	Tulsi Pokhrel	F	36-45	Business	Daily	Yes
185	Sagar kharel	M	46-55	Business	Daily	Yes
186	Santosh Kumar	M	26-35	Others	Daily	Yes
187	Raj Pokhrel	M	26-35	Business	Occasionally	Yes
188	Bijaya Sharma	M	36-45	Business	Daily	Yes
189	Ram Prasad Bhattra	M	36-45	Others	Daily	Yes
190	Tika Ram Ghimirey	M	Above 55	Business	Daily	Yes
191	Yadav Prasad Ghimirey	M	36-45	Others	Daily	Yes
192	Bhabiswor Pandey	M	36-45	Others	Daily	Yes
193	Madhu Belbasey	M	36-45	Business	Daily	Yes
194	Rajendra Aryal	M	36-45	Business	Daily	Yes
195	Milan Shrestha	M	36-45	Business	Daily	Yes
196	Ramesh Tharu	M	18-25	Business	Daily	Yes
197	Bikram Kunwar	M	18-25	Others	Daily	Yes
198	Kul Bahadur Karki	M	Above 55	Others	Daily	Yes
199	Ramesh Karki	M	46-55	Business	Daily	Yes
200	Ramesh Kumar Ghimirey	M	36-45	Business	Daily	Yes
201	Ashok Ghimirey	M	Above 55	Business	Daily	Yes
202	Bishwo Raj Paudel	M	Above 55	Business	Daily	Yes
203	Shankar Pandey	M	Above 55	Others	Daily	Yes
204	Krishna Prasad Gaire	M	46-55	Business	Daily	Yes

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Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
205	Sabina Sunar	F	26-35	Business	Daily	Yes
206	Amit Kuwar	M	18-25	Service	Daily	Yes
207	Sagar Neupane	M	36-45	Others	Daily	Yes
208	Loknath Pandey	M	46-55	Service	Daily	No
209	Tamarjan Rana	M	Above 55	Agriculture	Daily	Yes
210	Hari Prasad Ghimire	M	Above 55	Others	Daily	Yes
211	Padam Pariyar	M	26-35	Service	Daily	Yes
212	Bishnu Poudel	M	26-35	Business	Daily	Yes
213	Man Bahadur B.K	M	36-45	Others	Daily	Yes
214	Janak Ale	M	36-45	Service	Daily	Yes
215	Santa Bahadur Baral	M	46-55	Business	Daily	Yes
216	Shyam Bista	M	46-55	Business	Daily	Yes
217	Anuj Chettri	M	18-25	Student	Daily	Yes
218	Pradeshi Tharu	M	26-35	Business	Daily	Yes
219	Teklal Ghimire	M	46-55	Business	Daily	Yes
220	Giri Raj Ghimire	M	36-45	Business	Daily	Yes
221	Bishnu Bhusal	M	46-55	Business	Daily	Yes
222	Pashupati Chaudhary	M	26-35	Service	Daily	Yes
223	Arman Pokhrel	M	18-25	Business	Daily	Yes
224	Sabin Baral	M	18-25	Student	Daily	Yes
225	Shanker Prasad Khanal	M	Above 55	Business	Daily	Yes
226	Pradeep Kewat	M	18-25	Student	Daily	Yes
227	Til bahadur B.K	M	36-45	Business	Daily	Yes
228	Pramod Agrahi	M	36-45	Business	Daily	Yes
229	Nawaraj Sapkota	M	26-35	Business	Daily	Yes
230	Dhaniswor Poudel	M	36-45	Business	Daily	Yes
231	Sabitra Subedi	F	26-35	Business	Daily	Yes
232	Ganga Thakur	M	26-35	Business	Daily	Yes
233	Chotu Thakur	M	26-35	Business	Daily	Yes
234	Tulsiram Bhandari	M	36-45	Business	Daily	Yes
235	Narayan Khatiy	M	36-45	Business	Daily	Yes
236	Bhuwananda Khanal	M	36-45	Others	Daily	Yes
237	Baburam Giri	M	26-35	Others	Daily	Yes
238	Tulsi Bhandari	M	Above 55	Agriculture	Daily	Yes
239	Damodar Khanal	M	Above 55	Agriculture	Daily	Yes
240	Anupam Panthi	M	26-35	Others	Daily	Yes
241	Nisahanta PSSSanti	M	26-35	Student	Daily	Yes
242	Harish Thakur	M	46-55	Agriculture	Daily	Yes
243	Chintamani Khanal	M	36-45	Agriculture	Daily	Yes
244	Subash karki	M	36-45	Business	Daily	Yes
245	Suresh Adhikari	M	26-35	Business	Daily	Yes

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Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
246	Basudev Khanal	M	46-55	Business	Daily	Yes
247	Malika Khanal	F	26-35	Business	Daily	Yes
248	Dilip Kurmi	M	26-35	Others	Daily	Yes
249	Roshan KC	M	26-35	Business	Daily	Yes
250	Anil Raidas	M	18-25	Service	Daily	Yes
251	Bishnu Prasad Poudel	M	46-55	Service	Daily	Yes
252	Hari Prasad Bhattarai	M	46-55	Service	Daily	Yes
253	Himlal Subedi	M	36-45	Service	Daily	Yes
254	Arjun Khanal	M	26-35	Business	Daily	Yes
255	Arjit Singh Katuwal	M	36-45	Business	Daily	Yes
256	Sabitra Gairey	F	26-35	Others	Daily	Yes
257	Chakra Pani Belbasey	M	46-55	Others	Daily	Yes
258	Hari Prasad Ghimirey	M	26-35	Business	Daily	Yes
259	Shree Niwas Tharu	M	36-45	Business	Daily	Yes
260	Karam Bhusen	M	36-45	Business	Daily	Yes
261	Sushil Puri	M	46-55	Agriculture	Weekly	Yes
262	Umanath Yadav	M	36-45	Agriculture	Daily	Yes
263	Nares Lonia	M	46-55	Business	Daily	Yes
264	Keshav Poudel	M	26-35	Business	Daily	Yes
265	Keshav Dharmi	M	26-35	Service	Daily	Yes
266	Pralad B.K	M	36-45	Business	Daily	Yes
267	Dinesh Chaudhary	M	26-35	Business	Daily	Yes
268	Aditya sah	M	26-35	Business	Daily	Yes
269	Bishnu Thapa	M	Above 55	Agriculture	Daily	Yes
270	Dhana Bahadur DC	M	Above 55	Others	Occasionally	Yes
271	Janaki Mahat	F	18-25	Student	Occasionally	Yes
272	Ramesh Neupane	M	18-25	Student	Occasionally	Yes
273	Maya Devi Mahat	F	26-35	Student	Occasionally	Yes
274	Saiyad Abdul Hasid Hasni	M	46-55	Business	Daily	Yes
275	Devlal Sapkota	M	26-35	Business	Daily	Yes
276	Mukti Bhattarai	M	36-45	Business	Daily	Yes
277	Babu Ram Panthi	M	26-35	Business	Daily	Yes
278	Smile Khan	M	36-45	Service	Daily	Yes
279	Saru Khanal	F	18-25	Business	Daily	Yes
280	Manoj Gahatraj	M	26-35	Business	Daily	Yes
281	Ganesh Kunwar	M	18-25	Business	Daily	Yes
282	Hari Prasad Bhattarai	M	18-25	Business	Daily	Yes
283	Balram Murasini	M	46-55	Business	Daily	Yes
284	Dinesh Adhikari	M	36-45	Service	Daily	Yes
285	Ravi Sharma	M	46-55	Business	Daily	Yes
286	Nahin Khan	M	26-35	Business	Daily	Yes

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Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
287	Raj Agarwal	M	36-45	Business	Daily	Yes
288	Baburam Bhusal	M	26-35	Service	Daily	Yes
289	Baburam Gaise	M	36-45	Service	Daily	Yes
290	Rohit Kumar Gupta	M	18-25	Business	Daily	Yes
291	Dhurba Poudel	M	46-55	Business	Daily	Yes
292	Rajulla Ansari	M	36-45	Business	Daily	Yes
293	Nawaraj Poudel	M	26-35	Business	Daily	Yes
294	Surendra Kunwar Jaiswal	M	26-35	Business	Daily	Yes
295	Jitendra Kaluwar	M	18-25	Business	Daily	Yes
296	Rudra Bahadur Rawat	M	46-55	Business	Daily	Yes
297	Rahul Neupaney	M	18-25	Student	Daily	No
298	Gaurav Neupaney	M	18-25	Business	Daily	No
299	Sankar Adhikari	M	36-45	Business	Daily	Yes
300	Sita Khanal	F	36-45	Business	Daily	Yes
301	Sabitra Neupaney	F	26-35	Business	Daily	Yes
302	Nabin Aryal	M	46-55	Business	Weekly	Yes
303	Hiralal Kunwar	M	26-35	Business	Daily	Yes
304	Laxmi Aryal	F	36-45	Business	Daily	Yes
305	Dewraj Kunwar	M	36-45	Agriculture	Daily	Yes
306	Kiran Gairey	M	36-45	Business	Daily	Yes
307	Mahendra Chaudhary	M	18-25	Student	Daily	Yes
308	Dewan Dhami	M	26-35	Others	Occasionally	Yes
309	Raj Kumar Rana	M	46-55	Business	Daily	Yes
310	Prakash Tamang	M	26-35	Others	Weekly	Yes
311	Bishnu Bd.Kumal	M	26-35	Business	Daily	Yes
312	Mamu Bd.Kaucha	M	46-55	Agriculture	Daily	Yes
313	Durga Bd.Ghasti	M	36-45	Business	Daily	Yes
314	Khagendra Poudel	M	26-35	Business	Daily	Yes
315	Sunil Kami	M	36-45	Business	Daily	Yes
316	Piru Ale	M	36-45	Business	Daily	Yes
317	Tika Ram Adhikari	M	Above 55	Business	Daily	Yes
318	Chotey Lal Kushi	M	26-35	Others	Daily	Yes
319	Shalikgram Poudel	M	36-45	Business	Daily	Yes
320	Hari Narayan Mauriya	M	26-35	Service	Daily	Yes
321	Leknath Subedi	M	26-35	Business	Daily	Yes
322	Mohommand Khan	M	18-25	Business	Daily	Yes
323	Jayand Gupta	M	Above 55	Business	Daily	Yes
324	Akmal Khan	M	18-25	Business	Daily	Yes
325	Hiralal Gaire	M	36-45	Business	Daily	Yes
326	Nabina Adhikari	F	26-35	Business	Daily	Yes
327	Pardeshi Tharu	M	26-35	Business	Daily	Yes

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Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
328	Buddhi Bahadur Tamang	M	36-45	Business	Daily	Yes
329	Krishna Kumar Pasi	M	26-35	Others	Daily	Yes
330	Kiran Poudel	M	26-35	Business	Daily	Yes
331	Harka Bahadur Gurung	M	36-45	Business	Daily	Yes
332	Binod Kumar Bista	M	18-25	Others	Occasionally	Yes
333	Tej Prasad basyal	M	36-45	Others	Daily	Yes
334	Khem Prasad Khanal	M	46-55	Business	Daily	Yes
335	Ananda Neupaney	M	26-35	Business	Daily	Yes
336	Rabi Luitel	M	26-35	Business	Daily	Yes
337	Krishna Panti	M	36-45	Others	Daily	Yes
338	Dharma Datta Bhandari	M	46-55	Others	Daily	Yes
339	Naryaan Acharya	M	46-55	Business	Daily	Yes
340	Prem Bahadur Chaudhary	M	26-35	Business	Daily	Yes
341	Deepak Chaudhary	M	26-35	Others	Daily	Yes
342	Min Bahadur Tharu	M	26-35	Business	Daily	Yes
343	Man Bahadur Giri	M	26-35	Business	Daily	Yes
344	Mootilal Bhusal	M	36-45	Agriculture	Occasionally	Yes
345	Sima Poudel	F	18-25	Student	Daily	Yes
346	Prasant Ghimirey	M	18-25	Business	Daily	Yes
347	Ramananda Gupta	M	36-45	Business	Daily	Yes
348	Shyam Chaudhary	M	46-55	Business	Daily	Yes
349	Kiran Gurung	M	36-45	Business	Daily	Yes
350	Sashi Shah	M	36-45	Business	Daily	Yes
351	Devu kurmi	M	46-55	Business	Daily	Yes
352	Sima Gupta	F	26-35	Student	Daily	Yes
353	Hari Adhikari	M	26-35	Others	Daily	Yes
354	Sandip Bhatrai	M	26-35	Business	Daily	Yes
355	Suresh K.C	M	36-45	Business	Daily	Yes
356	Pratap kumar Giri	M	Above 55	Business	Daily	Yes
357	Rajesh Tharu	M	36-45	Business	Daily	Yes
358	Bhim Thapa	M	46-55	Business	Daily	Yes
359	Manish Roka	M	18-25	Student	Daily	Yes
360	Baburam Ghimirey	M	46-55	Business	Daily	Yes
361	Tulsiram Pokhrel	M	Above 55	Agriculture	Daily	Yes
362	Sonu Poudel	F	26-35	Business	Daily	Yes
363	Bholnath Aryal	M	46-55	Business	Daily	Yes
364	Shanta Bikram Poudel	M	46-55	Business	Daily	Yes
365	Bimal Thapa Magar	M	26-35	Business	Daily	Yes
366	Deepak Bhusal	M	36-45	Business	Daily	Yes
367	Lilaram Chaudhary	M	36-45	Business	Daily	Yes
368	Shyam Sundar Gupta	M	36-45	Agriculture	Occasionally	Yes

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Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
369	Toklal Ghimirey	M	36-45	Business	Daily	Yes
370	Ambika K.C	F	36-45	Business	Daily	Yes
371	Tul Bahadur Suryabansi	M	36-45	Business	Daily	Yes
372	Anmol Sing	M	26-35	Business	Daily	Yes
373	Dasrath Tharu	M	36-45	Business	Daily	Yes
374	Radheysyam Tharu	M	26-35	Others	Daily	Yes
375	Iswori Chandra Harijung	M	Above 55	Others	Daily	Yes
376	Tilak Prasad Poudel	M	46-55	Others	Daily	Yes
377	Prakash Banjade	M	46-55	Business	Daily	Yes
378	Arbind kumar Gupta	M	36-45	Business	Occasionally	Yes
379	Asish Adhikari	M	18-25	Others	Daily	Yes
380	Sushil Rai	M	26-35	Business	Daily	Yes
381	Tikaram Belbas	M	46-55	Agriculture	Daily	Yes
382	Kumar Pariyar	M	26-35	Others	Daily	Yes
383	Bikash B.K	M	18-25	Others	Daily	Yes
384	Bishal Tharu)	M	18-25	Others	Daily	Yes
385	Bechu Chaudhary	M	36-45	Business	Daily	Yes
386	Lal Bahadur Chetri	M	46-55	Others	Daily	Yes
387	Bansu tharu	M	36-45	Others	Daily	Yes
388	Purna Khati	M	36-45	Business	Daily	Yes
389	Raju thapa	M	36-45	Others	Daily	Yes
390	Prakash Chaudhary	M	36-45	Business	Weekly	Yes
391	Dhiraj Khanal	M	36-45	Business	Daily	Yes
392	Prakash Giri	M	26-35	Business	Daily	Yes
393	Karna Bahadur Gandarba	M	46-55	Others	Daily	Yes
394	Ajay Rana Magar	M	26-35	Others	Daily	Yes
395	Anil Poudel	M	26-35	Others	Daily	Yes
396	Chotulal Tharu	M	36-45	Others	Daily	Yes
397	Nar Bahadur Thapa Magar	M	46-55	Others	Daily	Yes
398	Gulab Tharu	M	Above 55	Others	Daily	Yes
399	Hari Prasad Poudel	M	36-45	Others	Daily	Yes
400	Gopal Prasa Gaide	M	46-55	Others	Daily	Yes
401	Kapil Ghimirey	M	26-35	Others	Daily	Yes
402	Tek Bahadur Tandan	M	26-35	Business	Daily	Yes
403	Santosh Tharu	M	18-25	Business	Daily	Yes
404	Pahal Bahadur Pun	M	26-35	Business	Daily	Yes
405	Ramu Panthi	M	36-45	Agriculture	Daily	Yes
406	Hari Prasad Pandey	M	36-45	Others	Daily	Yes
407	Som Bahadur Pokhrel	M	36-45	Others	Daily	Yes
408	Abishek Rijal	M	26-35	Business	Daily	Yes

Appendix E: Respondent Details

Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
409	Giri Raj Poudel	M	Above 55	Business	Daily	Yes
410	Bishnu Giri	M	46-55	Agriculture	Daily	Yes
411	Janga Bahadur Somai	M	36-45	Business	Daily	Yes
412	Ramu Tharu	M	26-35	Others	Daily	Yes
413	Gurudatta Gyawali	M	Above 55	Business	Daily	Yes
414	Shankar Kharel	M	46-55	Business	Daily	Yes
415	Baburam Pokhrel	M	36-45	Service	Daily	Yes
416	Bishnulal Gairey	M	Above 55	Service	Daily	Yes
417	Roshan Poudel	M	18-25	Business	Daily	Yes
418	Risab Tandan	M	36-45	Business	Daily	Yes
419	Sobhakar Kandel	M	36-45	Business	Daily	Yes
420	Milan Regmi	M	26-35	Business	Daily	Yes
421	Yubraj Adhikari	M	26-35	Business	Daily	Yes
422	Ramu Bhusal	M	46-55	Business	Daily	Yes
423	Navin Pokhrel	M	36-45	Business	Daily	Yes
424	Gokarna Thapa	M	46-55	Service	Daily	Yes
425	Sashi Gurung	M	26-35	Business	Daily	Yes
426	Manish Darlami	M	18-25	Others	Daily	Yes
427	Min Bahadur Shen	M	46-55	Service	Daily	Yes
428	Rukmagat Aryal	M	46-55	Agriculture	Daily	Yes
429	Tika Thapa	M	46-55	Business	Daily	Yes
430	Bhakta Bahadur Thapa	M	36-45	Others	Daily	Yes
431	Bhim Sunar	M	46-55	Others	Daily	Yes
432	Babu Ram Poudel	M	36-45	Others	Daily	Yes
433	Narayan Poudel	M	36-45	Business	Daily	Yes
434	Salikram Poudel	M	Above 55	Business	Daily	Yes
435	Keshav Raimajhi	M	46-55	Agriculture	Weekly	Yes
436	Narayan Pokhrel	M	36-45	Business	Daily	Yes
437	Sovakar Bhusal	M	46-55	Business	Daily	Yes
438	Dhiraj Bista	M	26-35	Business	Daily	Yes
439	Sandesh Kachyapati	M	46-55	Business	Daily	Yes
440	Sankhar Khanal	M	18-25	Others	Occasionally	Yes
441	Yamlal Pokhrel	M	46-55	Business	Daily	Yes
442	Bijaya Khanal	M	46-55	Business	Daily	Yes
443	Ashok Majhi	M	26-35	Others	Daily	Yes
444	Nabaraj Neupaney	M	26-35	Business	Daily	Yes
445	Suajn Majhi	M	18-25	Others	Daily	Yes
446	Jhabindra Rayamajhi	M	46-55	Business	Daily	Yes
447	Ramjan	M	36-45	Business	Daily	Yes
448	Sarvajed Bhusal	M	26-35	Business	Daily	Yes
449	Hum Lal Bhusal	M	46-55	Business	Daily	Yes

Appendix E: Respondent Details

Motorized Transportation User Group						
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel	Vehicle Ownership
450	Rajan Bhusal	M	18-25	Student	Daily	Yes
451	Thaneshwor Acharya	M	46-55	Business	Daily	Yes
452	Gopal Kafle	M	46-55	Service	Daily	Yes
453	Prakash Gauli	M	36-45	Service	Daily	Yes
454	Krishna Prasad Ghimire	M	46-55	Service	Daily	Yes
455	Dipak Gaire	M	36-45	Agriculture	Daily	Yes
456	Prem Bahdur Tharu	M	26-35	Others	Daily	Yes
457	Dilip Mahara	M	36-45	Others	Daily	Yes
458	Himal Thapa Magar	M	36-45	Business	Daily	Yes
459	Prem Narayan Bhusal	M	36-45	Business	Daily	Yes
460	Suklal Budathoki	M	26-35	Others	Daily	Yes
461	Madav Raj Marasini	M	46-55	Business	Daily	Yes
462	Madav prasad poudel	M	46-55	Business	Daily	Yes
463	Prem Prasad Acharya	M	36-45	Business	Daily	Yes
464	Laxman Malla	M	36-45	Others	Daily	Yes
465	Bishnu Parasad Koirala	M	36-45	Business	Daily	Yes
466	Surendra Prasad Bhattarai	M	26-35	Business	Daily	Yes
467	Krishna Sharma	M	26-35	Business	Daily	Yes
468	Suman Sunwar	M	26-35	Business	Daily	Yes
469	Bhaktiram Sunar	M	26-35	Business	Daily	Yes
470	Om Bahadur Kurmi	M	26-35	Business	Occasionally	Yes
471	Nabin Chaudhary	M	36-45	Business	Daily	Yes
472	Nirlal Chaudhary	M	36-45	Business	Daily	Yes
473	Hariram Sunwar	M	36-45	Business	Daily	Yes
474	Suresh Tharu Chaudhary	M	18-25	Others	Daily	Yes
475	Damber Dev Pandey	M	Above 55	Business	Daily	Yes
476	Chandra Ram Thani	M	36-45	Business	Daily	Yes
477	Gopal B.K	M	36-45	Business	Daily	Yes
478	Shyam Kumari	F	46-55	Business	Daily	Yes
479	Rakchhaya Ghimire	F	18-25	Others	Daily	Yes
480	Tanka Rana	M	36-45	Business	Daily	Yes
481	Dinesh Shakya	M	36-45	Business	Daily	Yes
482	Ram Prasad Belbase	M	46-55	Service	Daily	Yes
483	Srijana Subedi	F	36-45	Business	Occasionally	Yes
484	Manu karki	M	36-45	Business	Daily	Yes
485	Rita Khadka	F	36-45	Business	Daily	Yes
486	Prem Chaudhary	M	Above 55	Business	Daily	Yes
487	Hari Shrestha	M	46-55	Service	Daily	Yes
488	Pratap Acharya	M	26-35	Business	Daily	No
489	Om Prakas Subedi	M	36-45	Business	Daily	Yes

Appendix E: Respondent Details

Non- Motorized Commuters					
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel
1	Saroj Acharya	M	36-45	Business	Daily
2	Buddhiman Gurung	M	Above 55	Business	Daily
3	Kamal Prasad Aryal	M	Above 55	Others	Daily
4	Deepa Chand	F	46-55	Business	Daily
5	Sita Acharya	F	26-35	Others	Daily
6	Sita Bhusal	F	26-35	Business	Daily
7	Bibek Shrestha	M	36-45	Agriculture	Daily
8	Dipak Rudracharya	M	26-35	Business	Daily
9	Bal Krishna Bhandari	M	18-25	Others	Occasionally
10	Jeevan Shrestha	M	18-25	Business	Daily
11	Tuleshwor Chaurasiya	M	26-35	Business	Daily
12	Khima Mahato Chhetri	F	36-45	Others	Daily
13	Nirajan Shrestha	M	Above 55	Others	Daily
14	Gyan Bahadur Suji	M	36-45	Labor	Daily
15	Briju Harijan	M	36-45	Others	Daily
16	Lakhi Upadhye	M	Above 55	Others	Daily
17	Simran Banu	F	26-35	Business	Daily
18	Shanta Bhusal	F	46-55	Business	Daily
19	Shushil Pariyar	M	18-25	Others	Daily
20	Babita Paudel	F	26-35	Others	Occasionally
21	Kamala Bhatarai	F	26-35	Business	Daily
22	Ram Chandra K.C	M	36-45	Others	Daily
23	Nirmala Sahi	F	26-35	Student	Occasionally
24	Mohan GC	M	36-45	Business	Daily
25	Pushpa Roka Magar	F	18-25	Others	Daily
26	Manisha Gautam	F	18-25	Service	Daily
27	Bhupal Sing Pardhan	M	46-55	Others	Daily
28	Hari Prasad Poudel	M	36-45	Business	Daily
29	Yam Bahadur Pun	M	Above 55	Others	Occasionally
30	Santosh Khanal	M	46-55	Service	Daily
31	Sushila Chettri	F	18-25	Service	Daily
32	Ambika Suryabanshi	F	26-35	Others	Daily
33	Sevu Magar	F	18-25	Student	Daily
34	Saroj Sunar	M	18-25	Business	Daily
35	Sushila Rana	F	18-25	Service	Daily
36	Goma Nepali	M	36-45	Others	Daily
37	Siva Prasad GR	M	Above 55	Business	Daily
38	Nidhi Prasad Pandey	M	46-55	Business	Daily
39	Ishwor Khati	M	26-35	Others	Daily
40	Taranath Pokhrel	M	Above 55	Others	Daily
41	Yam Bahadur Kuwar	M	Above 55	Others	Daily
42	Chandra Mani Subedi	M	Above 55	Others	Daily
43	Lal Bahadur Bhandari	M	Above 55	Agriculture	Daily

Appendix E: Respondent Details

Non- Motorized Commuters					
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel
44	Milan Salami	M	18-25	Others	Daily
45	Alim Pratap	M	18-25	Others	Daily
46	Jaman Sing Thapa	M	Above 55	Others	Daily
47	Ram Bahadur Tharu	M	Above 55	Others	Daily
48	Ram Prasad Pokhrel	M	Above 55	Business	Daily
49	Sirjana Chaudhary	F	26-35	Business	Daily
50	Tularaj Gadyauli	M	36-45	Agriculture	Daily
51	Naren Gyawali	M	46-55	Business	Daily
52	Bhim Bahadur Pandey	M	Above 55	Business	Daily
53	Iswori Parsad Neupane	M	Above 55	Business	Daily
54	Ram Chohaye	M	18-25	Labor	Daily
55	Kopila Baral	F	46-55	Others	Daily
56	Rupa Karmacharya	F	26-35	Business	Daily
57	Kusum Chettri	F	18-25	Others	Daily
58	Nawaray Gewal	M	Above 55	Business	Daily
59	Devi Pariyar	F	46-55	Others	Occasionally
60	Agan Dhar Sharma	M	Above 55	Agriculture	Daily
61	Saraswati Pariyar	F	46-55	Others	Weekly
62	Kiran Adhikari	M	36-45	Agriculture	Occasionally
63	Binita Gyawali	F	26-35	Service	Daily
64	Subarna Thapa	M	36-45	Business	Daily
65	Jitendra Poudel	M	18-25	Student	Daily
66	Saraswati Chaudhary	F	26-35	Business	Daily
67	Kamal Khanal	M	36-45	Business	Daily
68	Jagalal Giri	M	46-55	Business	Daily
69	Mamta Neupane	F	18-25	Others	Daily
70	Krishna Bhandari	M	46-55	Business	Daily
71	Sita Ghimirey	F	36-45	Business	Daily
72	Shanta Poudel	F	36-45	Business	Daily
73	Manisha Chaudhary	F	26-35	Business	Daily
74	Bipin Gautam	M	36-45	Agriculture	Daily
75	Arjani Karmacharya	F	26-35	Service	Daily
76	Ruk Bahadur Thapa	M	Above 55	Business	Daily
77	Radhe Panti	F	36-45	Agriculture	Weekly
78	Chandramani Neupane	M	36-45	Business	Daily
79	Kamal Rijal	M	Above 55	Service	Daily
80	Radhika Aryal	F	46-55	Business	Daily
81	Devi Adhikari	F	26-35	Agriculture	Daily
82	Prakash GC	M	26-35	Business	Daily
83	Rojina Pokhrel	F	26-35	Business	Daily
84	Liladhar Adhikari	M	Above 55	Others	Daily
85	Manisha Kharel	F	18-25	Business	Daily
86	Minakshi Regmi	F	18-25	Business	Daily

Appendix E: Respondent Details

Non- Motorized Commuters					
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel
87	Ramesh Ghimire	M	36-45	Business	Daily
88	Bhimlal B.K	M	Above 55	Business	Daily
89	Yam Somarey	M	36-45	Others	Daily
90	Ravilal Neupane	M	Above 55	Business	Daily
91	Dil Bahadur Gurung	M	Above 55	Service	Daily
92	Tulasha Pokhrel	F	26-35	Business	Daily
93	Bala Ram Bhattarai	M	Above 55	Agriculture	Daily
94	Sirajana Panta	F	26-35	Others	Daily
95	Usha Kandel	F	36-45	Others	Daily
96	Tingudh Tharu	M	Above 55	Others	Daily
97	Khamanda Pokhrel	M	Above 55	Business	Daily
98	Akriti Thapa	F	26-35	Student	Daily
99	Babu Ram Pandey	M	46-55	Business	Daily
100	Jiblal Panti	M	Above 55	Others	Daily
101	Hari Narayan Bhattarai	M	Above 55	Business	Daily
102	Sabitri Karki	F	36-45	Business	Daily
103	Dipak Acharya	M	46-55	Business	Daily
104	Bhupendra Sahi	M	26-35	Business	Weekly
105	Bishnu Karki	M	Above 55	Business	Daily
106	Him Bahadur Karki	M	Above 55	Agriculture	Daily
107	Giri Raj Ghimire	M	46-55	Business	Daily
108	Daya Raj Aryal	M	Above 55	Business	Daily
109	Om Prakash Kaliraj	M	Above 55	Business	Daily
110	Bhola Yadav	M	46-55	Others	Daily
111	Subahari Aryal	M	46-55	Agriculture	Daily
112	Rishi Ram Poudel	M	Above 55	Others	Daily
113	Kamala Bhusal	F	46-55	Business	Daily
114	Himal Tharu	M	26-35	Student	Daily
115	Dayaram Acharya	M	36-45	Business	Daily
116	Narayan Ghimire	M	26-35	Service	Daily
117	Rabindra Sapkota	M	26-35	Business	Daily
118	Rajan Khanal	M	26-35	Business	Daily
119	Bikram Bhusal	M	26-35	Business	Daily
120	Sushila Adhikari	F	26-35	Others	Daily
121	Bishnu Parsad Poudel	M	46-55	Service	Daily
122	Pushpa Aryal	M	26-35	Agriculture	Daily
123	Asmita Chaudhary	F	18-25	Student	Daily
124	Sabitra Sirish	F	36-45	Business	Daily
125	Kalpana Chaudhary	F	26-35	Business	Daily
126	Anu Tharu	F	18-25	Student	Daily
127	Parbati Adhikari	F	36-45	Business	Daily
128	Shashi Gupta	M	36-45	Business	Daily
129	Pratima Pokhrel	F	36-45	Business	Daily

Appendix E: Respondent Details

Non- Motorized Commuters					
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel
130	Kishor Tharu	M	18-25	Others	Daily
131	Damodar Bhattarai	M	Above 55	Business	Daily
132	Akshya Chaudhary	M	26-35	Agriculture	Daily
133	Laxmi Sunar	F	26-35	Business	Daily
134	Ram Parsad Khanal	M	Above 55	Others	Daily
135	Basanta Adhikari	F	36-45	Business	Daily
136	Ram Dev Nau	M	18-25	Others	Daily
137	Sachin Adhikari	M	26-35	Student	Weekly
138	Prabhu Dayal Chaudhary	M	26-35	Agriculture	Daily
139	Durga Dhatta Bhandari	M	Above 55	Agriculture	Daily
140	Sudhan Bikram Malla	M	Above 55	Business	Daily
141	Sita Basnet	F	36-45	Business	Daily
142	Rumakhar Ghimire	M	Above 55	Others	Daily
143	Riyaz Ahmad	M	18-25	Others	Daily
144	Sabita Bhandari	F	26-35	Business	Daily
145	Dharma Bahadur Rawal	M	36-45	Business	Daily
146	Suresh Kuwar	M	26-35	Student	Daily
147	Anita Poudel	F	46-55	Business	Daily
148	Gita Thapa	F	26-35	Business	Daily
149	Sita Kunwar	F	18-25	Others	Daily
150	Gobinda Pokhrel	M	36-45	Business	Daily
151	Ram Bahadur Kunwar	M	36-45	Business	Weekly
152	Ramesh Agrawal	M	Above 55	Business	Daily
153	Kalpana Kunwar	F	36-45	Business	Daily
154	Sita Gautam	F	Above 55	Business	Daily
155	Chhabilal Bhusal	M	Above 55	Business	Daily
156	Bijaya B.K	M	26-35	Business	Daily
157	Man Bahadur Kunwar	M	46-55	Others	Daily
158	Krishna Bahadur Thapa	M	Above 55	Agriculture	Daily
159	Prem Buda Magar	M	46-55	Agriculture	Daily
160	Jeep Lal B.K	M	36-45	Agriculture	Daily
161	Maya Neupane	F	36-45	Business	Daily
162	Khama Puri	F	46-55	Agriculture	Daily
163	Jay Kumari Rana	F	36-45	Business	Daily
164	Shrijana Chand	F	18-25	Service	Daily
165	Rup Narayan Gajurel	M	Above 55	Agriculture	Daily
166	Iman Singh	M	Above 55	Others	Daily
167	Deepak Thapa	M	46-55	Others	Daily
168	Resma Tamang	F	26-35	Business	Daily
169	Devi Ale Magar	F	36-45	Business	Daily
170	Maya Limbu	F	36-45	Others	Daily
171	Anita Gurung	F	Above 55	Others	Daily
172	Mina Rana Magar	F	46-55	Business	Daily

Appendix E: Respondent Details

Non- Motorized Commuters					
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel
173	Mankala Matura Chettri	F	Above 55	Others	Daily
174	Prabin chaudhary	M	26-35	Labor	Daily
175	Jit Kumar Ale Magar	M	36-45	Labor	Daily
176	Om Prakash GC	M	46-55	Others	Daily
177	Lilaram Ghimirey	M	Above 55	Business	Daily
178	Gangadhar Luitel	M	Above 55	Business	Daily
179	Kamal BD. Malla	M	Above 55	Business	Daily
180	Shanker Chettri	M	36-45	Business	Daily
181	Mohan Sahi	M	Above 55	Business	Daily
182	Bhup Narayan Shrestha	M	46-55	Business	Daily
183	Sushil Bohora Chetteri	M	18-25	Student	Daily
184	Khadak BD Chettri	M	36-45	Agriculture	Daily
186	Shiva BD Chettri	M	36-45	Business	Daily
197	Arjun Aryal	M	46-55	Business	Daily
187	Matikala Ghimirey	F	46-55	Business	Daily
188	Santi Poudel	F	18-25	Student	Daily
189	Mohamad Ajad	M	18-25	Others	Daily
190	Bhupal Subedi	M	36-45	Business	Daily
191	Dhurba Dhungana	M	18-25	Business	Daily
192	Iswora Subedi	F	36-45	Business	Daily
193	Bishnu Kumari Ghimirey	F	46-55	Business	Daily
194	Bhojraj Ghimirey	M	Above 55	Business	Daily
195	Samiskshya Aryal	F	18-25	Student	Daily
196	Hira Ghimirey	F	26-35	Student	Daily
185	Pushpa Gupa	F	26-35	Business	Daily
198	Mitra Kharel	M	Above 55	Agriculture	Daily
199	Surya Thapa	M	Above 55	Agriculture	Daily
200	Lekhnath Belbas	M	Above 55	Agriculture	Daily
201	Dhanapati Belbas	M	46-55	Agriculture	Daily
202	Pushpa Poudel	F	36-45	Others	Daily
203	Shanti Devi Bhandari	F	Above 55	Business	Daily
204	Hemraj Khanal	M	46-55	Business	Daily
205	Dhurba Tharu	M	18-25	Student	Daily
206	Raj Kumar Chaudhary	M	36-45	Agriculture	Daily
207	Narayan Prasad Pandey	M	Above 55	Business	Daily
208	Sabitra Pandey	F	Above 55	Business	Daily
209	Ramu Mahatra	M	46-55	Agriculture	Daily
210	Dil Bahadur Thapa	M	Above 55	Agriculture	Daily
211	Ramlal Khanal	M	46-55	Business	Daily
212	Iswor Prasad Adhikari	M	Above 55	Business	Daily
213	Uma Gurung	F	Above 55	Business	Daily
214	Hari Lal Pandey	M	46-55	Business	Daily
215	Rupa Pandey	F	46-55	Business	Daily

Appendix E: Respondent Details

Non- Motorized Commuters					
S.N.	Name of Respondent	Gender	Age	Occupation	Frequency of Travel
216	Mina Bhusal	F	36-45	Business	Daily
217	Gopal Bhandari	M	36-45	Business	Daily
218	Bhola Prasad Thyaru	M	36-45	Others	Daily
219	Manish Chettri	M	18-25	Business	Daily
220	Binod Ghimire	M	46-55	Business	Daily
221	Gita Khanal	F	36-45	Business	Daily
222	Rabindra Chaudary	M	36-45	Business	Daily
223	Pashupati Kachyapati	M	Above 55	Business	Daily
224	Ram Bhagat Tharu	M	46-55	Agriculture	Daily
225	Bina Bista	F	46-55	Business	Daily
226	Sagar Adhikari	M	18-25	Student	Occasionally
227	Pravadebi Poudel	F	Above 55	Others	Daily
228	Gobinda Prasad Pandey	M	Above 55	Others	Daily
229	Bishnu Bahadur Thapa	M	36-45	Business	Daily
230	Bimala Poudel	F	36-45	Business	Daily
231	Bina Adhikari	F	36-45	Business	Daily
232	Bibek Adhikari	M	46-55	Business	Daily
233	Mitralal Bhusal	M	46-55	Others	Daily
234	Gopal Acharya	M	46-55	Business	Daily
235	Shanta Devi Acharya	F	Above 55	Business	Daily
236	Ishwor Gaire	M	26-35	Business	Daily
237	Tek Narayan Joshi	M	Above 55	Business	Daily
238	Nischal Joshi	M	18-25	Student	Daily
239	Kritika Kumi	F	26-35	Student	Daily
240	Hiralal Subedi	M	46-55	Business	Daily
241	Mabin Sapkota	M	36-45	Agriculture	Daily
242	Jenisha Subedi	F	18-25	Student	Daily
243	Shanta Pandey	F	46-55	Business	Daily
244	Suman Neupane	M	18-25	Business	Daily
245	Hari Acharya	M	Above 55	Agriculture	Daily
246	Devi Mahat	F	36-45	Business	Daily
247	Manish Tharu	M	36-45	Business	Daily
248	Dimesh Thapa	M	Above 55	Agriculture	Weekly
249	Mohan Adhikari	M	26-35	Labor	Daily
250	Prakash Shrestha	M	46-55	Business	Daily
251	Nabin Kumar Chaudhary	M	36-45	Business	Daily
252	Nirjan Agrawal	M	36-45	Agriculture	Daily
253	Sajjan Adhikari	M	26-35	Agriculture	Daily
254	Birendra Sapota	M	36-45	Business	Daily

Appendix E: Respondent Details

Governmental and Non-Governmental Organization/ Associations					
S.N.	Name of the Office	Name of Respondents	Gender	Age	Position
1	Maitri Yatayat	Rishi Ram Khanal	M	46-55	Counter Incharge
		Rudra Acharya	M	46-55	Co-counter Incharge
2	Butwal Sub-Metropolition City Office	Rukmagat Basyal	M	46-55	Infrastructure Section Chief
3	Butwal Sub-Metropolition City Office	Devi Prasad Poudel	M	36-45	Assistant Sub-Inspector of police
4	Rupandehi Bepar Sang	Manahari Basyal	M	46-55	Secretary
5	Paschim Bus Bewasaye	Rishi Neupane	M	36-45	Member
6	Pradesh yuwa Parishad lumbini,Butwal	Talikram Poudel	M	46-55	Section Officer
		Bhagrida Adhikari	M	26-35	Section Officer
		Saroj Khanal	M	26-35	Organization Member
7	Road Division Butwal,Rupandehi	Sharad Acharya	M	26-35	Engineer
		Niraj kumar Rajbansi	M	26-35	Engineer
8	Vechile Fitness Test Center	Rohit Sah	M	18-25	Mechanical Supervisor
9	Livestock Development Office-Sainamaina-04	Dr.Madhav Poudel	M	26-35	Veterinary Officer
		Indra Khadka	M	Above 55	livestock Officer
10	Malmala Driving Center	Pabitra Pokhrel	F	18-25	Staff
		Sandeep Bhandari	M	26-35	Staff
		Krishna Bhattarai	M	26-35	Staff
		Bishnu Acharya	M	36-45	Staff
11	Ward No 3 Office Sainamaina Municipality,Rupandehi)	Tam Bahadur Purna	M	Above 55	Ward President
		Purna Prasad Acharya	M	36-45	Ward Secretary
		Gita Sharma	F	26-35	Office Assistant
		Birendra Tandan	M	26-35	Assistant Sub-Engineering
		Rajendra Prasad Chaudhary	M	Above 55	Ward Saday
		Nawalkiri Chaudhary	M	Above 55	Social Welfare
12	ward office sainamaina municipality	Amar Bahadur Khadel	M	36-45	Chairman sainamaina-2
		Dharmaraj Poudel	M	36-45	Ward Secretary
13	SainamainaMunicipality Ward No-1	Bhuwan Bahadur Chhetri	M	36-45	Ward President
		Umananda Ghimire	M	Above 55	Social Welfare
14	Elaka Police Office Runiyara , Rupandehi	Pabitra Poudel	F	36-45	Police Constable
		Gyan Prasad Ghimire	M	36-45	Police Constable
15	Construction allied Worker's Union Of Nepal	Hema Sharma	F	36-45	Office Head
		Mina Thapa	F	26-35	Assistant
16	Sainamaina Municipality	Ram Prasad Adhikari	M	46-55	Ward Chairman
		Hemraj Chaudhary	M	26-35	Secretary
17		Kopila Acharya	F	26-35	Na.Pa.Sa

Appendix E: Respondent Details

Governmental and Non-Governmental Organization/ Associations					
S.N.	Name of the Office	Name of Respondents	Gender	Age	Position
	Agriculture Development Organization	Chabilal Kharel	M	46-55	Ka.Ma
18	Sainamaina Drinking Water Organization	Bibisha Poudel	M	26-35	Staff
		Vishnu Khad	M	36-45	Staff
		Narayani Gautam	F	46-55	Staff
		Chakravarti Giri	M	26-35	Staff
		Chetanaryan Bhandari	M	46-55	Staff
19	Nepal Telecom Maintenance Station	Lal Madi Upadhya	M	36-45	Security
20	Sainamaina Municipality Buddhnagar Rupandehi	Arun Khanal	M	36-45	Engineer
		Chiranjeevi Pandey	M	46-55	Sub-Engineer
21	Nepal Red-cross Society, District Office Rupandehi,	Diwakar Subedi	M	Above 55	District Project Officer
		Basanati Regmi	F	36-45	Community Officer
22	Sainamaina Ward No.11 Office	Ram Prasad Bhusal	M	46-55	Ward President
		Kemraj Sapkota	M	26-35	Office assistant
23	Sainamaina Municipality Ward No.6 Office	Minaram Pandey	M	26-35	Ward Secretary
		Radha Aryal	F	36-45	Social Operator
24	Basic Health Service Center, Ward No. 9	Hari Dhakal	M	36-45	PHI
		Bipana Sapkota	F	26-35	A.N.M
		Premika Puri Balal	F	36-45	Staff
25	Sainamaina Ward No.8 Office	Durga Maya Chhetri	F	36-45	Office Executive
		Narayan Prasad Neupane	M	46-55	Ward Member
26	Sainamaina Ward No.9 Office	BhanuBhakta Pandey	M	36-45	Member
		Kebal Tharu	M	36-45	Member
		Tulshi Prasad Rijal	M	Above 55	Member
27	Sainamaina Ward No.7 Office, Rupandehi	Rajkumar Chaudhary	M	26-35	Ward President
		Jhumj Dharlami	F	36-45	Ward Member
28	Sainamaina Municipality Ward No.1 Office	Subesh G.C.	M	26-35	Ward Secretary
		Sagar Regmi	M	36-45	Ward Secretary
29	Banganga Municipality Ward No 1 Office ,Bairiya	Sanju Kumar Sak Magar	M	46-55	Ward President
		Laxmi Bahadur Katri	M	Above 55	Ward Chairman
		Bishnu Kharel	M	18-25	Jornalist
		Chetan Bist	M	18-25	Jornalist
30	Banganga Municipality , Agricultural Development Sector , Kapilbastu	Lesh Bahadur K.C	M	46-55	Agricultural Development Executive Officer
		Dhasiram Acharaya	M	Above 55	Agricultural Development Executive Officer

Appendix E: Respondent Details

Governmental and Non-Governmental Organization/ Associations					
S.N.	Name of the Office	Name of Respondents	Gender	Age	Position
31	District Traffic Police Office , Kapilbastu	Dipak Thapa	M	26-35	Assistant Sub Inspector Of Police
		Rishiram Ghimire	M	36-45	Police Senior Head Constable
32	Barganga Municipality Ward No 2 Office	Santa Pandey	F	Above 55	Executive Member
		Bhim Lal Sapkota	M	Above 55	Member
		Santosh Thapa	M	46-55	Ward Secretary
33	Sub Division Forest Office , Pipra	Ishwori Parsad Poudel	M	46-55	Officer
		Shiv Kumar Yadav	M	46-55	Forester
		Prem B.K	M	18-25	Forester
		Dhayandra Pathar	M	46-55	Forester
		Suresh Bhusal	M	36-45	Armed Forester
		Parbati Bhattarai	F	26-35	Forester
		Maya Chhetri	F	46-55	Forester
34	Pipra Kothi Mahila Society , Banganga Municipality -02,Pipra	Baburam Ghimire	M	Above 55	Secretary
		Muna Gyawali	F	26-35	Worker
35	Pipra Hospital , Kapilvastu	Narendra Pra. Pokhrel	M	36-45	Chief Administrative Officer
		Milan Pokhrel	M	26-35	IT Officer
36	Hulak Office , Banganga Municipality , Pipra ,Kapilvastu	Amrit Acharaya	M	18-25	Buyer
		Kamala G.C	F	46-55	Postman
37	Banganga Municipality Office	KeshabRaj Bhattarai	M	46-55	Section Officer
		Dipak Thapa	M	36-45	Assistant Fifth
		Bindu Sharma Kharel	F	36-45	Assistant Fifth
38	Banganga Yatayat Bebasaye Samiti	Toran Thapa	M	46-55	Treasure
		Prakash Tandan	M	46-55	Accident Secretary
39	Siddhartha Social Development Center,Gajeda-4	Surya Kumari Shahi	F	Above 55	Ward President
		Soma Poudel	F	46-55	Treasure
40	Kapilvastu Chamber Of Commerce and Industries	Subash Poudel	M	26-35	Chief Officer
		Durga Dhakal	F	26-35	Assistant Officer
41	Elaka Police Office ,Pipra	Krishna Parsad Khanal	M	46-55	Pra.Ba.Na.Ne
		Mahesh Pokhrel	M	26-35	Pra.Sha.Ne
		Sushil Bhattarai	M	36-45	Pra.Sha.Ne
42	Banganga Municipality Ward No.4	Chinku Tharu	M	36-45	Ward Member
		Nand Kishor Tharu	M	36-45	Ward Member
		Krishna Parsad Kandel	M	46-55	Ward Secretary
43	Elaka Police Office , Banganga	KeshabRaj Poudel	M	26-35	Cha.Su
		Chabilal Poudel	M	46-55	Cha.Su
		SukunRaj B.k	M	26-35	Cha.Su
44		Puskar Bhusal	M	18-25	Secretary

Appendix E: Respondent Details

Governmental and Non-Governmental Organization/ Associations					
S.N.	Name of the Office	Name of Respondents	Gender	Age	Position
	Ward No7 Office , Banganga Municipality	Moon Bahadur Pandey	M	46-55	Ward President
		Tej Kumari Poudel	F	46-55	Assistance Officer
45	Phulbari Community Forestry User Group , Motipur	Mina Thapa Chhetri	F	36-45	Secretary
		Amar B. Gurung	M	Above 55	Treasure
		Krishna Parsad Gaur	M	Above 55	Sub Treasure
46	Banganga Municipality Ward No 8 Office	Shalendra Belbase	M	36-45	Ward President
		Juna Devi Tharu	F	36-45	Ward Secretary
47	Sub Division Forest Office ,Gorusinghe	Shiv Bahadur K.C	M	36-45	Forest Secretary
		Dharma Bahadur Oli	M	36-45	Forester
48	Snake Bite Treatment Center	Sharada Ghimire	F	36-45	A.N.M
		Dharmendra Mandal	M	26-35	Piuth
49	Elaka Police Office ,Gorusinghe, Kapilvastu	Pom Parsad Bhusal	M	46-55	Sub Inspector Of Poilce
		Dil Bahadur Rana	M	36-45	Constable
50	Buddi Health Post	Bomlal Bhandari	M	36-45	Sr. A.H.W Officer
		Sarita Bharati	F	26-35	Sr. A.H.W Officer(Fifth)
		Madhu K Bhusal	F	26-35	Sr.AH.W Officer(Fifth)
51	Hulak Office, Buddhabhumi Municipality , Gorusinghe , Kapilvastu	Poshraj Chapagai	M	26-35	Chief Officer
		Anju Acharya	F	36-45	Harkat
		Kamal Rijal	M	36-45	Harkash
		Madhu Panti	F	46-55	Hulaki
52	Bhddhabhumi Municipality , Ward no 4,Buddi	Sushil Kumar Chaudhary	M	36-45	Ward President
		Puspha Gaire	F	26-35	Ward Secretary
53	BuddhaBhumi -2 ,Gorusinghe	Shankar Bahadur Biral	M	46-55	C0-Ward President
		Mahendra Bhusal	M	46-55	Ward President
54	Hulaki Rajmarga Yojana Office , Gorusinghe	Narayan Fulel	M	26-35	Na.Su
		Sushil Ghimire	M	26-35	Sub Engineer
		Jhamak Tharu	M	46-55	Assistant Officer
55	Jaynagar Health Post	Isha Khadka	F	26-35	H. Assistant
		Shanta Gautam	F	26-35	A.N.M
		Bishnu Parsad Banjade	M	Above 55	Office Assistant
56	Buddhabhumi Municipality , Hanuman Chowk ,Buddi	Keshab Gyawali	M	26-35	Officer
57	Nagarik Aarogya Sewa Kendra	Bimari Khanal	M	26-35	IT Officer
		Keshab Belbase	M	26-35	Assistant (Fifth)
		Dharmendra Kori	M	26-35	Ka.Sa
58	Shri Shamsheer Dal Gana	Bhupendra Subedi	M	36-45	Sub-Combatant
		Upendra Hamal	M	36-45	Hudra

Appendix E: Respondent Details

Governmental and Non-Governmental Organization/ Associations					
S.N.	Name of the Office	Name of Respondents	Gender	Age	Position
59	Civil Health Service Center Sibraj	Surendra Prasad Poudel	M	36-45	Head Of Office
		Ravi Khanal	M	18-25	Compu operater
60	Basic Health Service hospital	Birendra Mishra	M	46-55	In Charge
		Dr.Amit Pandey	M	36-45	MO
61	Shivaraj Municipality	Ramj Thapa Nepali	M	26-35	Engineer
		Mohan Adhikari	M	26-35	Sub-Engineer
62	Ward Police Office Chandrauta	Sujan Shah	M	26-35	Inspector
		Nawraj Shah	M	46-55	Pranbhi Right
63	Division Forest Office Kapilvastu (gautam Buddha)	Shivshankar Prasad	M	Above 55	K.K.A
		Ram Galan	M	36-45	K.K.A
64	Agriculture Department,Shivraj Municipality	Keshav Prasad bhusal	M	36-45	Junior technician
		Shanti Maya Adhikari	F	36-45	Officer
65	Post Office Shivraj N.Pa Chandrauta Corporation	Prem Prakash Oli	M	26-35	Kharidar
		Khimanand a Belbase	M	46-55	Halkara
		Manisha Tharu	F	26-35	Halkara
66	Shivraj Municipality Animal Service Branch Chandrauta Kapilvastu	Andul Umar Musalman	M	26-35	Associate Animal Health Technician
		Imran Paori	M	18-25	Associate Animal Health Technician
67	Shivraj Municipality Ward No 5 Office	Netra Prasad Belbas	M	46-55	Ward President
		Resham Khanal	M	26-35	Computer Professional
68	District Traffic Police Office , Chandrauta	Shiv Kumar Chaudhary	M	26-35	Na.Su
		Moti Prasad Pokhrel	M	46-55	Na.Su
		Bipin Kumar Rai	M	18-25	Ka.Sa
69	Surveyor's Office Chandaia	Sandip Sapkota	M	26-35	Surveyor
		Mohan Lamsal	M	18-25	Surveyor
70	Cargo Office Chandrauta Kapilvastu	Bipin basnet	M	26-35	K.A
		Janki Baniya	F	26-35	Office Assistant
71	Shivraj Nagarpalika Ward No.3 Kharendra	Teklal Sapkota	M	46-55	Ward President
		Basanta Panti	M	46-55	Sub-Engineer
72	Chanai Health Post	Jit Bdr.B.C	M	46-55	Officer 6th
		Bir Bdr.Rahan Magar	M	36-45	Sr.AHW
73	Varkulpur Health Post	Sita Poudel Belbas	F	36-45	S.A.HA.O.Pachau
		Bhima Gairo	F	26-35	S.A.HA.O.Pachau
74	Buddhanhumi-9, Barkalpur	Pramod Acharya	M	36-45	Ward Chairman
		Bed Prakash Tharu	M	46-55	Ward Member

APPENDIX F: User Experience

Appendix F: User Experience

1. User Experience

A separate section has been allocated in the questionnaire to collect the ratings based on the road users' experience on the road section. This section is not defined to be a separate attribute contributing to the satisfaction rating but the questionnaires in this section has provided crucial information regarding the road users' experiences related to the road section.

1.1. Overall Quality of Road

The road users were asked about their satisfaction with the overall quality of the road section. 75% of the respondents have rated the overall quality of the road section as dissatisfactory. 5% of the respondents have rated the road section to be satisfactory whereas 18% of the respondents think that the road section is neither satisfactory nor dissatisfactory. 2% of the respondents have rated the overall quality of road is highly dissatisfactory whereas none of the respondents have rated the overall quality of road is highly satisfactory.

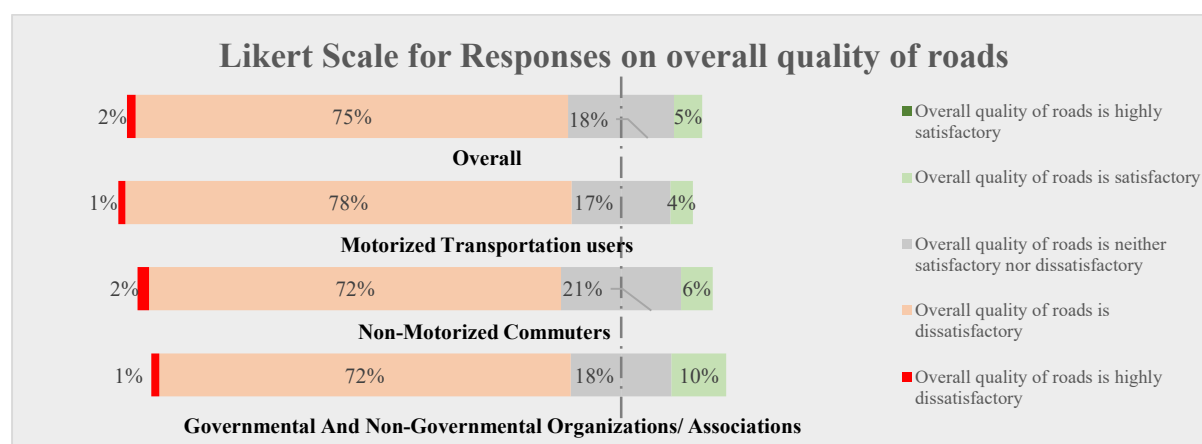


Figure 1.1 Overall Quality of Road

1.2. Complaint Redressal System

The road users were asked if they have made complaints to the government/ road authorities regarding problem faced while travelling in the road. Only 4% of the interviewees have said that they have made complaints to the authorities. When the people who have registered, complaints were asked to rate the complaint redressal system of the agency, majority of them rated the redressal system negatively. 74% of the respondents have rated the complaint redressal system to be dissatisfactory whereas 9% of the respondents think it to be highly dissatisfactory. 3% of the respondents said they were satisfied with the redressal system while other 15% said they were neither satisfied nor dissatisfied. All of the respondents from motorized transportation group have shown dissatisfaction with the redressal system. Governmental and non-governmental organization/ association personnel were the only user group with positive responses.

Appendix F: User Experience

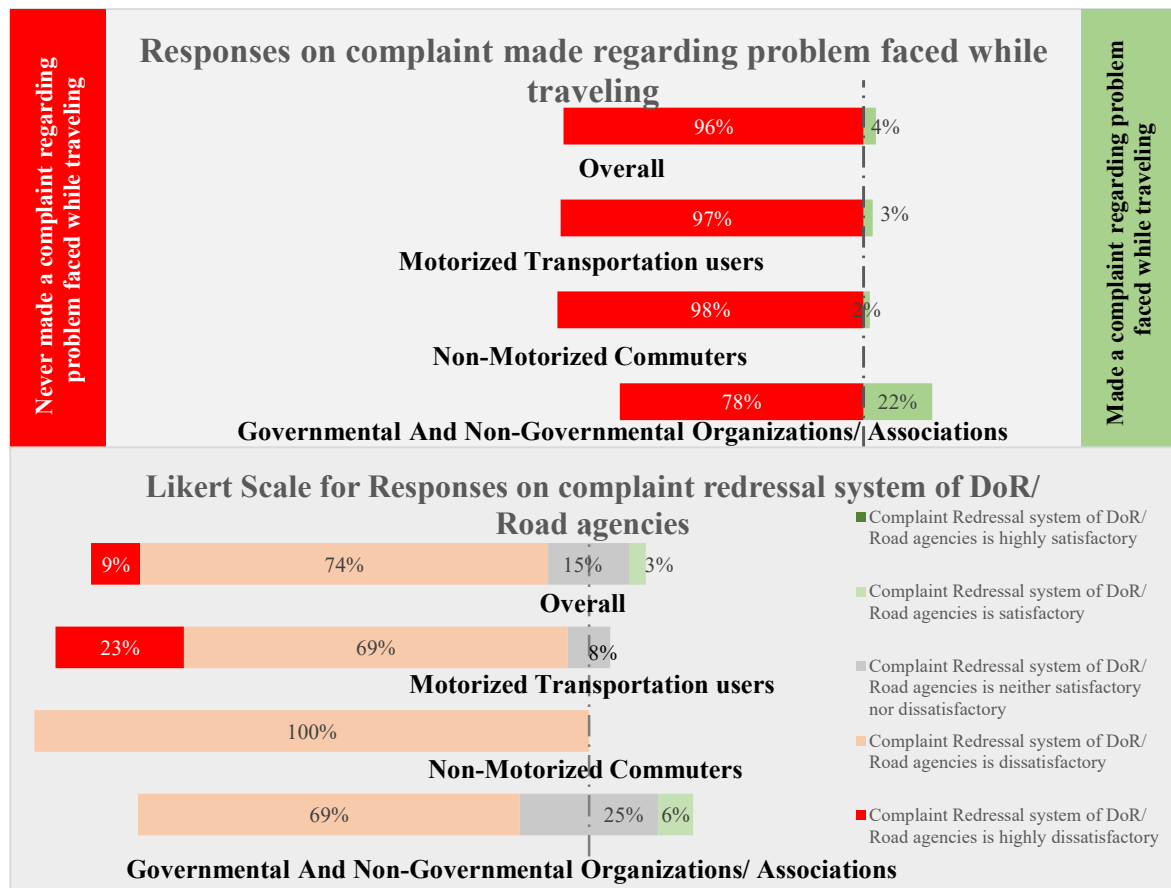


Figure 1.2 Complaint Redressal System

1.3. Timely Response on Road Problems

The interviewees were asked how satisfied they were with DOR or responsible road agencies resolving maintenance, quality and repairing related problem on time. Majority i.e., 82% of the respondents answered the timely resolving of the road problems to be dissatisfactory. Only 1% answered that the timely response of responsible agencies was satisfactory while 17% gave neutral answers. None of the respondents stated the timely resolving of road issues by the responsible agencies to be highly satisfactory.

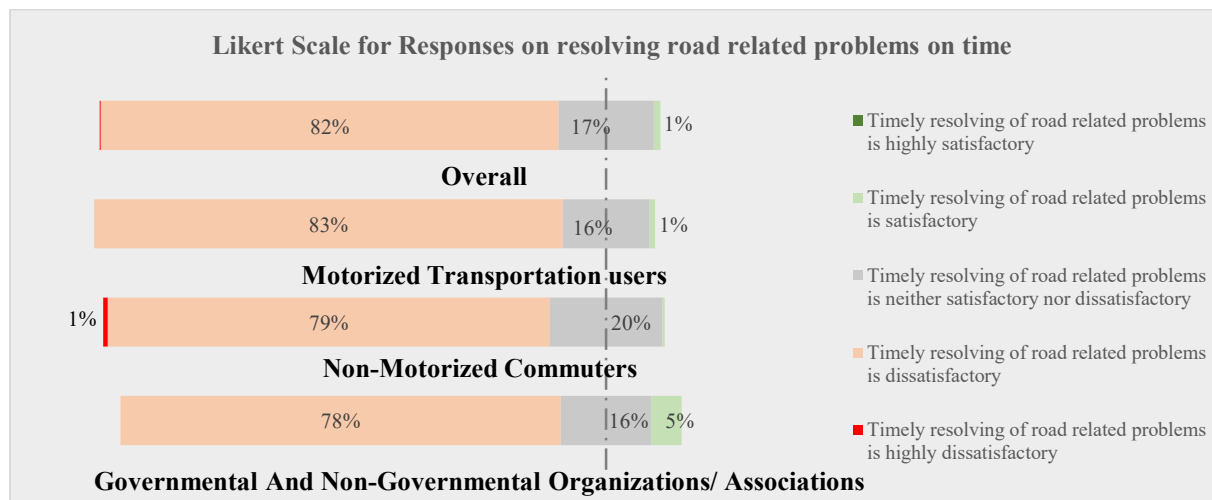


Figure 1.3 Timely Response on Road Problems

Appendix F: User Experience

1.4. Road Maintenance Works

The road user when asked about their satisfaction with the road maintenance work, majority of them said they were dissatisfied. 80% of the respondents rated the maintenance works to be dissatisfactory while 1% rated it to be highly dissatisfactory. 4% of the surveyed road users stated the maintenance works to be satisfactory while 15% said it was neither satisfactory no dissatisfactory. None of the respondents claimed the road maintenance works to be highly satisfactory.

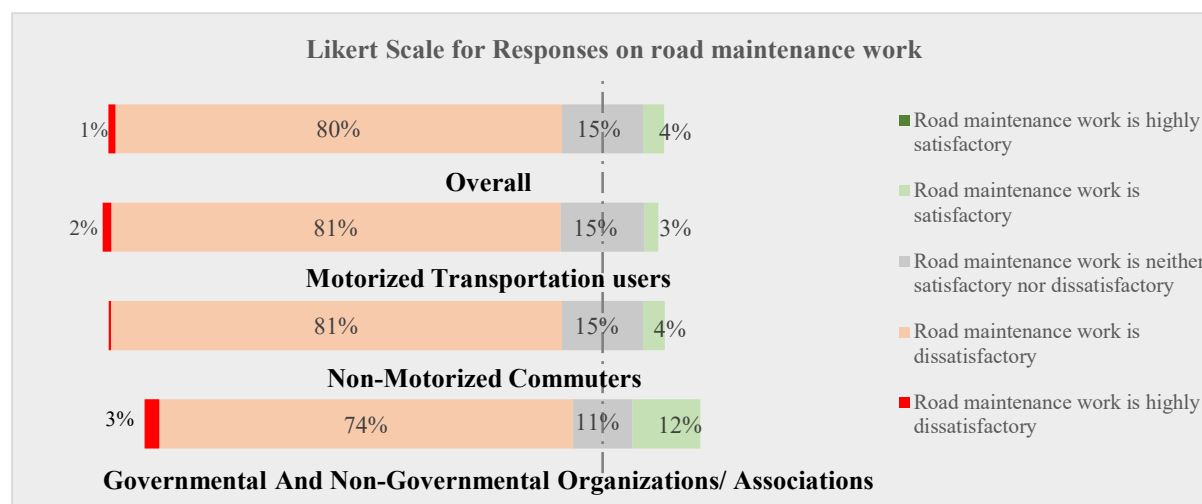


Figure 1.4 Road Maintenance

1.5. Road Quality Compared to Other Sections

The road users when asked to compare the quality of Butwal-Gorusinghe-Chandrauta section with other road section, most of them said that the road quality of this section is comparatively dissatisfactory. 46% of the respondents believe that road section is comparatively dissatisfactory while 32% think the road to be satisfactory. 21% of the respondents rated the road section to be neither satisfactory nor dissatisfactory compared to the other road sections. 1% of the respondents have rated the road section to be highly satisfactory compared to other sections. Comparatively larger portion of governmental and non-governmental organization/ association personnel rate the road section to be satisfactory.

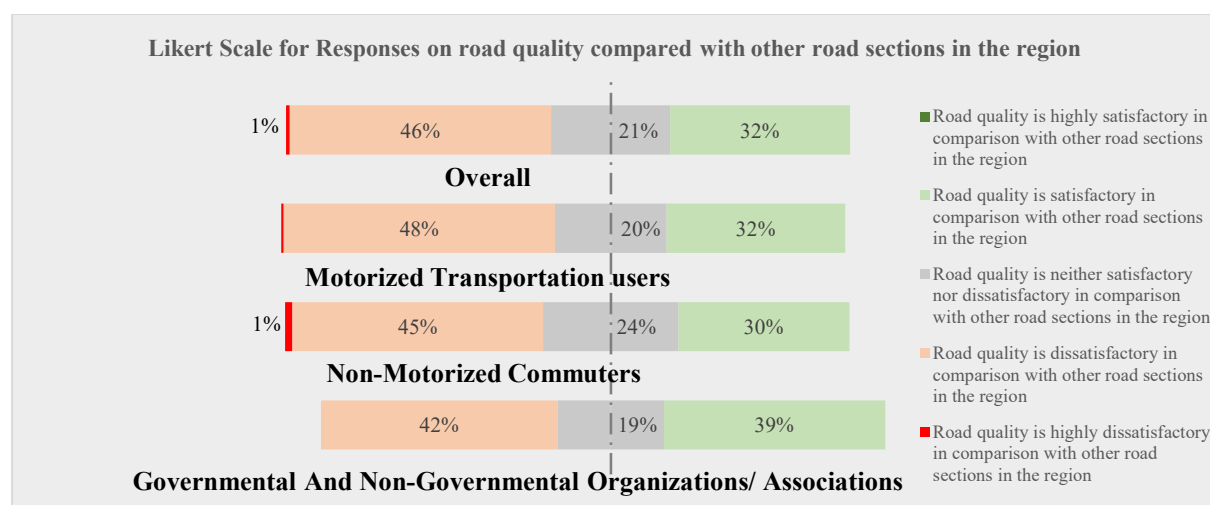


Figure 1.5 Road Quality Compared to Other Sections

Appendix F: User Experience

1.6. Authorities Responsible for Road Maintenance

The road users were asked if they knew who was responsible for road maintenance works and majority of them, i.e., 89% answered that Department of Roads (DoR) was responsible.

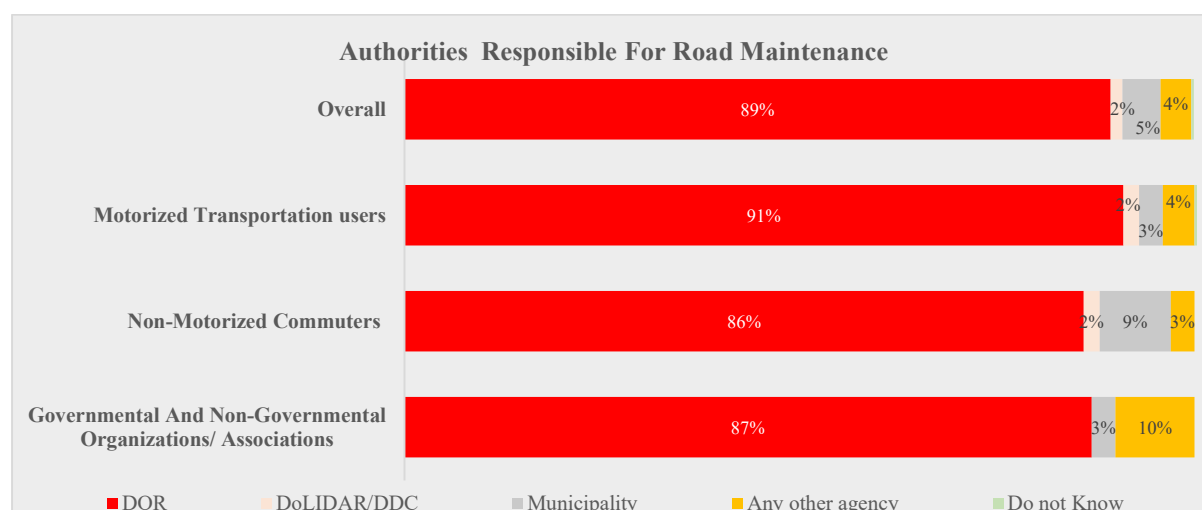


Figure 1.6 Authorities Responsible for Road Maintenance

1.7. What Road Users have to say from their experience of the road

Places where maintenance is needed

The road users were asked to mention locations where maintenance is required. These are the top ten places that they pointed out (arranged from highest suggested and lower):

1. Murgiya
2. Sarauli
3. Saljhandi
4. Kalauni
5. Basgadi
6. Kalika Chowk
7. Pushpalal Chowk
8. Ranibagiya
9. Chandrauta
10. Jitgadi
11. Imiliya
12. Rammapur
13. Jharbaira
14. Dhankhola

Innovative solutions and technologies to improve road quality

“The Defect Liability Period needs to be of 5 years. The contracts should be based on the performance of the contractor for the maintenance of roads.” Sharad Acharya, Engineer, Road Division-Butwal (Gov/ Non-Gov Org.)

Appendix F: User Experience

Enhancement of quality and serviceability of road

“The lanes to the right and left of the existing highway needs to be constructed before scarifying the existing pavement during the upgrading of the highway” Devi Prashad Paudel, Assistant Police Inspector (Gov/ Non-Gov Org.)

“Special focus should be given in the quality of pavement construction with use of quality aggregate, sand, stone from certified seller. Public/ mass transportation needs to be prioritized.” Sharad Acharya, Engineer, Road Division-Butwal (Gov/ Non-Gov Org.)

“International design codes need to be followed for design and construction works. The design should be done for heavy vehicles” Ankit Adhikari (Motorized User)

“The road needs to be widened with proper provisions of overhead bridge, street lights, footpaths, drainage systems etc.” Krishna Bhandari (Non-motorized User)