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EXECUTIVE SUMMARY

This document constitutes the outcome of the Task 1.7.3 of Component 1 of the Road Safety Technical Assistance (TA) under the Results-Based Road Maintenance and Safety Project (RRSMP).

- *Task 1.7.3 Evaluate the efficiency and effectiveness of the monitoring and evaluation systems in the high-risk corridors and areas (and control corridors and areas).*

Component 1 activities aim to:

- *Support the Lead Office (Road Safety Department – MOTI) by developing internal capacities and procedures to conduct 'results-based' institutional functions:* ***...'Monitoring and Evaluation" to be capable of monitoring results and evaluating the effectiveness of interventions and ongoing programmes including management and coordination as required to delegate part of this function to the third-party organizations (e.g. Traffic Institute or private sector).***
- *Support the Lead Office both technically and administrative in multi-disciplinary tasks across the pillar areas of roads, vehicles, and road users.*
- *Provide on-job support and learning and formal training necessary to create a robust Lead Office.*

The main results to be achieved through the implementation of Component 1 activities and tasks are the following:

a) *Internal capacities and procedures of the Lead Office to conduct "Result Based" institutional functions are developed*

b) *Support to the Lead Office both technically and administrative is provided in multi-disciplinary tasks across a broad spectrum of road, vehicles, and road user spectrum*

c) *Training and on-job support and learning for creating robust Lead Office is provided.*

This report defines monitoring and evaluation, highlighting the complementary yet distinctive nature of each activity, details the design principles for developing a monitoring and evaluation system, including the challenges involved that the system must address, the key components of monitoring and evaluation systems and design principles for project and program monitoring and evaluation. The objective is to build the knowledge, skills and professional leadership required to initiate, and effectively manage monitoring and evaluation of road safety interventions which are essential for a results-based approach to road safety management.

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LIST OF ABBREVIATIONS AND ACRONYMS

AADT	Average Annual Daily Traffic
ADF	Albanian Development Fund
ANPR	Automated Number Plate Recognition
ARA	Albanian Road Authority
ARC	Albanian Road Code
ARDCS	Albania Road Design and Construction Standards
ARDM	Albanian Road Design Manual
ASP	Albanian State Police
ATC	Automatic Traffic Counts
ATP	Albanian Traffic Police
BSM	Blackspot management
CBMIE	Controlling Body in Ministry of Infrastructures and Energy
CSG	Central Steering Group
DRST	Directorate of Road Safety and Traffic
DRST	Directorate of Road Safety and Traffic
EC	European Commission
EG	Expert Group at the local level
ERA	Emergency Response Albania
EU	European Union
GDRTS	General Directorate of Road Transport Services
GoA	Government of Albania
GRD	General Roads Directorate
IMRSC	Inter-ministerial Road Safety Committee
INSTAT	Institute of Statistics
IoT	Institute of Transports
IPA	Instrument for Pre-Accession Assistance
iRAP	International Road Assessment Program
ITS	Intelligent Traffic System
JV	Joint Venture
M&E	Monitoring and Evaluation
MI	Ministry of Interior
MIE	Ministry of Infrastructure and Energy
NGO	Non-Governmental Organization
NSM	Network Safety Management
PAMECA	Police Assistance Mission of the European Community to Albania
PIARC	World Road Association
QKUM	National Emergency Medical Center
RRMSP	Results-based Road Maintenance and Safety Project
RSA	Road Safety Audit
RSAIU	Road Safety Audit and Inspection Unit
RSI	Road Safety Inspection

RSIA	Road Safety Impact Assessment
RSM	Road Safety Management
RSS	Road Safety Sector
SEETO	South-East Europe Transport Observatory
TA	Technical Assistance
TERN	Trans European Road network
ToR	Terms or Reference
TS	Technical Secretariat
WB	World Bank
WHO	World Health Organization

1. Introduction

This *Monitoring and Evaluation Systems Review Report* which focuses on the efficiency and effectiveness of the monitoring and evaluation systems in the high-risk corridors and areas (and control corridors and areas) constitutes Report for Task 1.7.3 of Component 1 for the Road Safety Technical Assistance (TA) under the Results-Based Road Maintenance and Safety Project (RRMSP). It sets out a National Monitoring and Evaluation framework that is first and foremost realistic and achievable, which will provide the GOA, the proposed Inter-ministerial Road Safety Committee (IMRSC), stakeholder agencies on the IMRSC and the Road Safety Sector with high quality and ongoing information on road safety progress in Albania. The framework reflects best practice and where it is realistic sets key performance indicators that are consistent with monitoring and reporting requirements set by the European Commission. It will provide the data required by the World Health Organization (WHO) for monitoring progress towards the 2030 global road safety targets.

The Road Safety Technical Assistance Project consists of four key outputs under the RRMSP, which include: (1) Strengthen the road safety department of the MoIE as the lead office; (2) Provide Technical assistance in safe road infrastructure; (3) **Establish sustainable Monitoring and Evaluation Systems;** and (4) Outline and prioritize unsafe behavior on Albanian roads with proposed, target driven awareness campaigns: On "Promotion" – Publicity and Awareness Campaigns Targeting Unsafe Behaviors.

Within Project Component 1, Activity 7 aims to *Support the Lead Office (Road Safety Department – MOTI) by developing internal capacities and procedures to conduct "Result based" institutional functions: ...".*

M&E Activities comprise four main Tasks, with seven subtasks and 10 outputs as detailed in Table 1.

Table 1: Component 1 M&E Tasks and Deliverables

	Subtask no.	Key Deliverable
Task 1.7.1: Design and support project monitoring and evaluation systems for the high-risk corridors and areas (and control corridors and areas).	1.7.1a	Specification Document of typical (characteristic) road safety performance measures in the high-risk corridors and areas
	1.7.1b	Baseline Survey Results Report in the high-risk corridors and areas
	1.7.1c	Specification and costing of survey equipment, data processing and storage system, and staffing requirements (and Technical Specifications for procurement of survey equipment, if required).
	1.7.1d	Guidelines for conducting surveys and data processing for quarterly and annual reporting.
	1.7.1e	List of suppliers of data surveying services
	1.7.1f	Capacity Development Report on "on-the-job support" for the baselines and ongoing data surveys.
	1.7.1g	Project Results Indicators Review Report
Task 1.7.2: Training lead agency staff for monitoring and evaluation including ARA, and Police and associated national consulting staff and private institutes.		Capacity Development Workshop Report on Monitoring and Evaluation
Task 1.7.3: ***Evaluate the efficiency and effectiveness of the monitoring and evaluation systems in the high-risk corridors and areas (and control corridors and areas).***		***Monitoring and Evaluation System Review Report***
Task 1.7.4: Prepare (national) post-project program and guidelines for the establishment of a network-wide monitoring and evaluation system.		Post-project, network-wide monitoring and evaluation program including reviewed Guidelines.

The key output for Task 1.7 is a national, network-wide monitoring and evaluation program, including guidelines to enable the Government of Albania to monitor and assess its road safety performance.

This *Monitoring and Evaluation System Review Report* should be read in conjunction with the following deliverables:

- D-1.3 Appendix 3 - *Specification of typical (characteristic) road safety performance measures in the high-risk corridors and areas*, and
- D-1.4 Appendix 4 - *Baseline Road Safety Surveys in the High-Risk Corridors and Areas (and Control Corridors and Areas)*
- D-1.5 Appendix 4 - *Guidelines for conducting surveys and data processing for quarterly and annual reporting*.
- D1-5 Appendix 5 - *Specification and costing of survey equipment, data processing and storage system, and staffing requirements*
- D-2.4 Appendix 1 – *List of typical high-risk locations and recommended countermeasures*.
- D-2.5 Appendix 3 - *Concept Plan for Road Traffic Crash System* of Deliverable 3.1 of
- D2-5 Appendix 1 - *M&E of High-risk Corridors Report*

2. Monitoring and Evaluation Processes

The measurement of road safety outcomes is fundamental to effective road management towards their mitigation and prevention. In a *Safe System* approach, information is needed on risk exposure (traffic volumes, population data), final outcomes (socio-economic cost of road traffic crashes, deaths, and serious injuries) and intermediate outcomes for behaviours causally linked to reductions in deaths and serious injuries (e.g. mean speeds, levels of use of protective equipment etc.).

Monitoring is different to evaluation and there are clear distinctions between these two separate processes. However quality monitoring data significantly improves evaluation by feeding it with information.

Monitoring produces a snapshot of what is happening in real time. It is a continuous process taking place as an intervention is implemented. Monitoring answers the question "What is happening?". It allows regular measurement of the implementation progress of a strategy, program, or instrument/action, i.e. it concentrates on obtaining information about real progress.

Monitoring provides simple but instant managerial information that can be disseminated via real time 'dashboards.'

This information has to be interpreted and **explained**, and explanation usually occurs through evaluation. For instance, if the implementation of an intervention is going off plan, monitoring waves a red flag, thus providing a manager with an early warning and a signal that a corrective action may be needed. However, monitoring will not give an answer as to what has to be done to address the issue.

Evaluation interprets monitoring data. It explains whether, why and how an intervention works (or not) and addresses questions such as "Did the intervention meet its objectives?", "Are the interventions the most effective?", "Are project/programmes being implemented well?", "Can it be done better?" Evaluation helps understand why given effects were achieved, whether this is good or bad considering the given circumstances, how it happened, and whether it was an intervention that caused observed changes or rather whether there were other factors that influenced the outcome. Evaluation gives meaning and context to data and offers in-depth understanding of processes. Evaluation can take place either before, during (ongoing) or after an intervention is implemented and focuses on assessing either the goals achieved by an intervention (effectiveness), and/or the process of how the intervention functioned (efficiency).

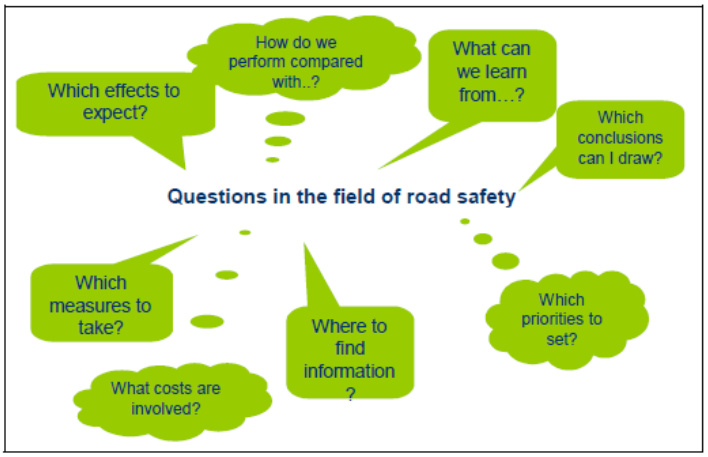

Figure 1: Frequently asked questions to an M&E system [Source: Wegman, 2003)

Best practice road safety monitoring occurs at the following levels:
Results-level:

- final safety outcomes (socio-economic cost of crashes, deaths, and serious injuries)
- intermediate safety outcomes (related to road risk ratings, prevalence of high-risk road user behaviours, post-crash response times, etc.)

Intervention level:

- outputs (related to agencies activity e.g. number of Police enforcement campaigns targeting speeding, drink driving, seat-belt wearing etc. conducted over 12-month period, no administrative sanctions issued, licence suspension etc.).
- Inputs e.g. resources spent on blackspot elimination projects or other infrastructure treatments

In Albania, currently the main road safety monitoring reports are:

- Annual Road Safety Report produced by the Road Safety Sector within the MoIE
- Annual Traffic Police Crash Data Report
- INSTAT annual statistical reports.
- Monitoring of exposure data such as vehicle volumes and major interventions implemented by individual agencies (e.g. road rehabilitation and blackspot elimination projects)

3. Current Road Safety Monitoring

Both the central and local governments in Albania share responsibility for road safety. Within the Central Government the Ministry of Infrastructure and Energy (MIE) and the Ministry of Interior (MI) share the main responsibility for most road safety M&E functions in Albania. Each stakeholder department/agency implements its core responsibilities individually, and without being formally held accountable of its performance to achieve the desired results. The MIE cannot formally direct other stakeholders to collect or submit data and information in order to monitor achievement of the desired results. The MIE remains dependent on other stakeholders for data and information, and its role in sectoral coordination and production of results remains limited.

The capacities and resources of the MIE and the MI are very limited. Currently, road safety monitoring or evaluation actions are usually undertaken as a component of a specific project funded by international institutions. However the Traffic Police are currently in the process of updating and increasing resources for road safety enforcement and reporting.

Traffic Police

The Directorate of Traffic Police collects data on crashes and road code violation statistics. Currently, annual road crash statistics and road code violation statistics are the main indicators used in Albania to monitor general road safety progress.

The Police database collects information and provides information on output and outcome measures including the following:

1. Number of accidents – including disaggregated data on fatal, serious, and minor injury accidents
2. Number of deaths – including breakdown for each of the 13 local Police sectors and motorways
3. Number of deaths and injuries - road users
4. Temporal factors in accidents
5. Number of deaths from crashes on main urban and interurban roads.
6. Number of accidents involving alcohol
7. Administrative penalties for Traffic Law Infringements:
    - Speeding
    - Not wearing a seat belt
    - Illegal overtaking
    - Use of cell phone while driving
    - Driving with a BAC over 0.05 g/dl
8. Penalties under Article 291 of the Criminal Code imposed for traffic law violation
    - Driving under the influence of alcohol
    - Driving without a licence
9. License suspension
    - Driving under the influence of alcohol
    - Speeding at or above 20km / hour over the posted speed limit.

The 2020 report on *Analysis of Road Accidents and Administrative for the 9 months of 2020* notes that *"Draft amendments to the Road Code of the Republic of Albania have been prepared in order to strengthen sanctions for the use of mobile phones or other mobile devices while driving, technical controls, temporary traffic licenses, registered vehicles and driving licenses. issued by foreign countries, speed limits, implementation of the "3-year provisional driving license" and other changes related to the powers of handling administrative measures and additional administrative sanctions in the chapter "norms of conduct".*

Institute of Statistics (INSTAT)

INSTAT provides summary statistics on road traffic accident deaths, casualty data to enable calculation of serious injuries, data on alcohol involvement in fatal crashes, vehicles, and population data to enable calculation of crash costs, deaths per 10,000 vehicles and deaths per 100,000 population.

Road Safety Sector, MIE

The Road Safety Sector (RSS) within the MIE which is also called the *Road Safety Lead Office* is responsible for M&E to provide data and other information to develop evidence-based transport policy, legislation and bylaws, strategy and to inform the development of the National Program for Road Safety Improvement and defend it to the Council of Ministers.

RSS *Annual Road Safety Analysis* reports collect and analyze Traffic Police and INSTAT data to present a picture of road crashes and road code violations. Information provided includes:

1. Cost of Crash estimate
2. Number of accidents – including disaggregated data on fatal, serious, and minor injury accidents
3. Expenditure on major infrastructure treatments

The Albanian Road Authority (ARA) is responsible for M&E related to road network. ARA currently collects data to monitor the safety and operation of the national road network such as traffic volume and black spot data.

Institute for Research and Analysis on Road Accidents Evaluations
The Institute for Research and Analysis on Road Accidents which carries out studies on all modes of transport in Albania and is the principal national evaluation agency.

Best practice road safety monitoring occurs at the following levels:

- final safety outcomes (socio-economic cost of crashes, deaths, and serious injuries)
- intermediate safety outcomes (related to road risk ratings, prevalence of high-risk road user behaviours, post-crash response times, etc.)
- outputs (related to agencies activity e.g. number of Police enforcement campaigns targeting speeding, drink driving, seat-belt wearing etc. conducted over 12-month period).

In Albania, the main road safety monitoring reports:

- Annual Road Safety Report produced by the Road Safety Sector within the MoIE
- Annual Traffic Police Crash Data Report
- Monitoring of output activities implemented by individual agencies (e.g. road rehabilitation projects)

4. Best practice Road Safety Monitoring and Evaluation Systems

A well-functioning national monitoring and evaluation system is essential is essential to achieve the benefits of scale which accelerate progress towards achieving road safety targets. A national M&E system is made up of the set of interlinked activities that must be undertaken in a coordinated way to plan for monitoring and evaluation, to collect and analyse data, to report information and to support decision making on policy and the implementation of interventions and ongoing programs.

The system should reflect key attributes including:

- coordination of efforts across all key government stakeholder agencies
- coordination of efforts at national and sub-national governance levels
- high degree of comparability of M&E data, with clear and agreed definitions of key terms, and strict protocols for data collection, entry and analysis which are agreed by all key agencies involved.
- regular communication among key stakeholder agencies which collect and analyse data
- coordination of efforts and communication between government and civil society stakeholders
- transparency and sharing of data on road traffic crashes, fatalities, and serious injuries.

4.1 Pre-requisites for a National Monitoring and Evaluation System

To be effective and sustainable a national M&E system must deliver timely and high-quality data and information that adds value. The system must serve each of the many key stakeholder agencies and the information flowing from the system must match their needs. For example highway engineers need geocoded data, consistently coded crash severity and first impact factors in each crash while campaign managers need data on road user class, sex, age, licence status, as well as data on temporal and behavioural factors crash and information and data on attitudes and behaviours. Governance of the M&E system is a key issue – especially issues related to quality control and confidentiality.

A critical function of a strengthened Albanian road safety M&E system is that for the next decade it consistently uses a set of long-term, nationally agreed safety performance indicators (SPIs) to monitor results of high level and also intermediate outcome levels for each road safety pillar area. These SPIs should be generally consistent with SPIs set by the European Commission.

To be sustained over the next decade, M&E systems must be cost effective and 'lean.' That is the M&E System should collect and analyse only data on high level results and the outcome of interventions global research shows are causally linked to serious crash risk and/or injury severity (fatalities, and serious injuries) and only data that are required, value adding and useful for developing road safety policy, strategy, legislation or for developing evidence-based major programs/initiatives.

The main prerequisites for an effective and sustainable M&E system are:

1. The M&E system must provide value added data and information that is valuable to all of its stakeholders.
2. The M&E system must be kept simple and lean i.e. it only collects valuable data that can be processed to create value added. It must not burden its stakeholders with too many requirements around data collection and reporting obligations.
3. Agencies providing information must receive valuable feedback, data, and information.

4. Access to the M&E system must be broad and easy. Information should be available online in user friendly formats and the system should allow quick access to data. Dashboards are ideal for presenting summary data in user friendly format.
5. Individual systems which supply data to the M&E system should be compatible with the M&E systems
6. National and sub-national M&E systems are coordinated and set and comply with uniform standards of data quality and collection. This promotes the harmonization of evaluation approaches and the development of an evaluation culture and quality standards within the public sector.
7. M&E systems include feedback mechanisms and are monitored to ensure that system information (outputs) provided meet the needs of end users and is used by them and that all stakeholder agencies are fully engaged in the system.
8. Capacity building is provided to professionals at national and sub-national levels to build up both the methodological and technical skills among M&E practitioners. Support services are provided at institutional level.
9. Conflict of interest is avoided. Evaluations should be conducted by an external and independent evaluator.
10. The M&E system must receive sufficient and stable government funding (at least) to 2030.
11. Where it is possible, the key performance indicators (KPIs) used in the M&E system are consistent with the KPIs proposed by the EC for use in member countries.

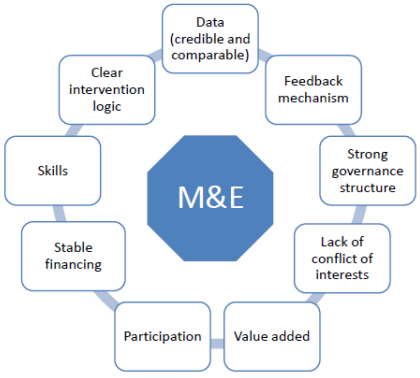

Figure 2: Pre-requisites for a high-quality, sustainable M&E system (Source: World Bank)

4.2 Monitoring and Evaluation within the Road Safety Management System

An institution carrying out high level national M&E is a service provider and generates information that should feed into a decision-making process of various stakeholders such as government agencies, universities and transport research centres, transport industry providers, civil society agencies involved in road safety.

It is necessary for the agency managing the M&E system to consult with stakeholders when planning the organisational structure for M&E System. Each partner's responsibilities and information requirements should be considered. Planning should address budget, physical resource needs, staffing levels and required technical capacity and equipment, responsibilities and internal linkages, training needs, relationships with partners and stakeholders, horizontal and vertical lines of communication and authority.

The World Bank recommends[1] that road safety lead agencies adopt the road safety management (RSM) system which links desired results with road safety interventions and institutional implementation arrangements for

[1] World Bank. Road Safety Management Capacity Reviews and Safe System Projects Guidelines. 2013

the lead agency (and other key stakeholder agencies). The key feature of the RSM system is its *results-focus*. All institutional management functions and all interventions focus on results - that is reducing the number of fatalities and serious injuries caused by road traffic crashes. The management system also ensures that management functions and interventions within all road safety pillar areas are monitored to ensure they are efficiently implemented as intended. Monitoring and evaluation is also required to assess whether, and the extent to which the goals and targets set each at level of results - outputs, intermediate and final outcomes - are being met. This system is set out in Figure 4 that follows.

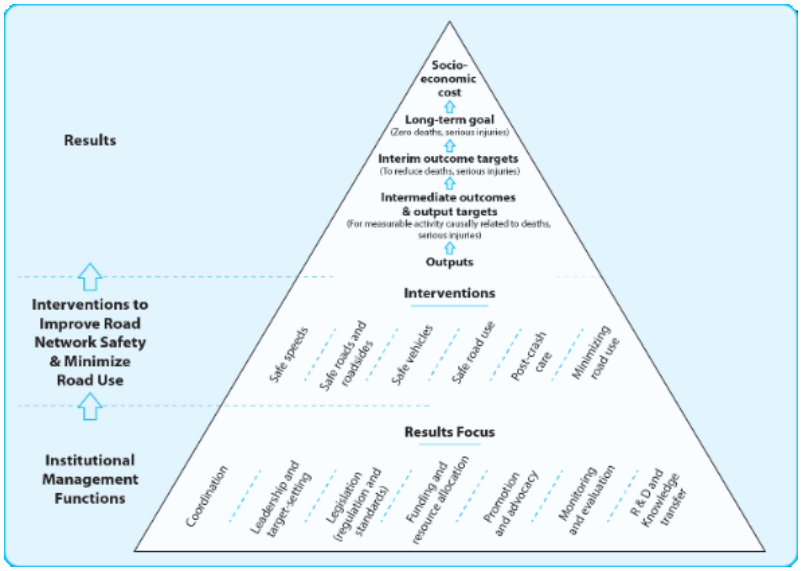

Figure 3 - Road Safety Management System. (Source: Bliss and Breen)

4.3 M&E System Management

The Road Safety Sector (RSS) within the Ministry of Infrastructure and Energy (MoIE), should 'own' and manage the national road safety M&E system. This office, which is also the road safety lead agency, is also proposed to own and manage the updated crash database and to act as the Technical Secretariat of the Inter-ministerial Road Safety Committee (IMRSC)[2] which is proposed to include senior level representatives from the main road safety stakeholder agencies listed below:

- Prime Minister/Vice Prime Minister office
- Ministry of Infrastructure and Energy
- Ministry of Interior
- Ministry of Defence
- Ministry of Environment, Forestry and Water Administration
- Minister of Education and Science
- Ministry of Health
- Ministry of Justice
- Ministry of Finance

Consolidation of all high level, national M&E analysis, and reporting activities within one agency will ensure that the M&E systems of all internal MIE agencies are compatible and also compatible with the (proposed)

[2] See Task reports for Component 1 Activity 1.2 *Prepare a road map for the establishment role of the Secretariat*

Traffic Police database. Most importantly it will facilitate the provision regular of updates on key SPIs to IMRSC representatives who can provide performance feedback to their respective agencies.

4.4 National M&E Dashboard

Summary monitoring data should be presented on a Dashboard in real time. An example of the City of London Road safety Dashboard is below.

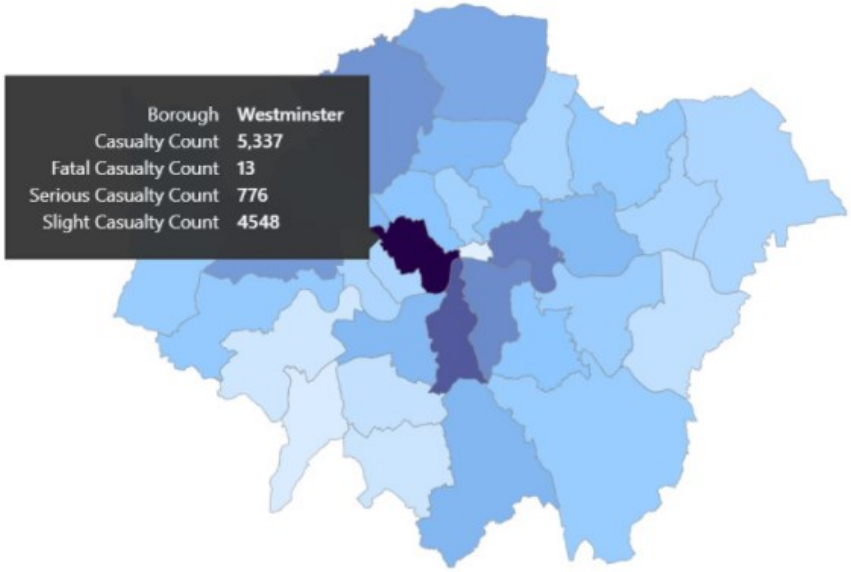

Figure 4 - City of London Road Safety Dashboard

5. Identification of High-Risk Corridors and Control Corridors

To identify the high-risk corridors and areas the Consultant analysed casualty crashes which occurred on the road network managed by Albanian Road Authority (ARA) for the 3-year period 2016-2018, using **collision density** (*crashes per km*) as a key indicator. Road sections were ranked into five risk categories from Category 1 (highest crash risk) to Category 5 (lowest crash risk). For the purpose of ongoing monitoring and reporting within an M&E system road sections within categories 1 and 2 are identified as 'high risk' corridors.

5.1 Identification of High-Risk Corridors

Category 1 includes road sections with a crash density of 2-14.

Category 2 includes road sections with a crash density of 1-2. Seven road sections representing about 10% of the analysed network classified as 'high risk' and include:

1. A1 Milot – Rubik (10 km)
2. SH1 Tirana – Fushe Kruje (16 km)
3. SH1 Thumane – Lezhe – Shkoder – Ivanaj (92 km)
4. SH2 Tirana – Durres (34 km)
5. SH4 Durres – Rrogozhine (33 km)
6. SH52 Vore – Fushe Kruje (11 km)
7. SH56 Tirana – Ndroq (14 km)

Figure 1 shows the high-risk corridors.

5.2 Selection of Control Corridors for M&E

When one or more high-risk road sections are selected as 'Case Corridors' for road safety interventions (for example engineering treatments, installation of fixed speed monitoring devices or coordinated Police enforcement and media campaigns), they should be matched with similar Category 1 and 2 road sections to act as 'Control Corridors' which are not subject to the intervention and which are a suitable distance from the treated corridors so that there cannot be any 'halo' effect of the treatments on driver behaviour.

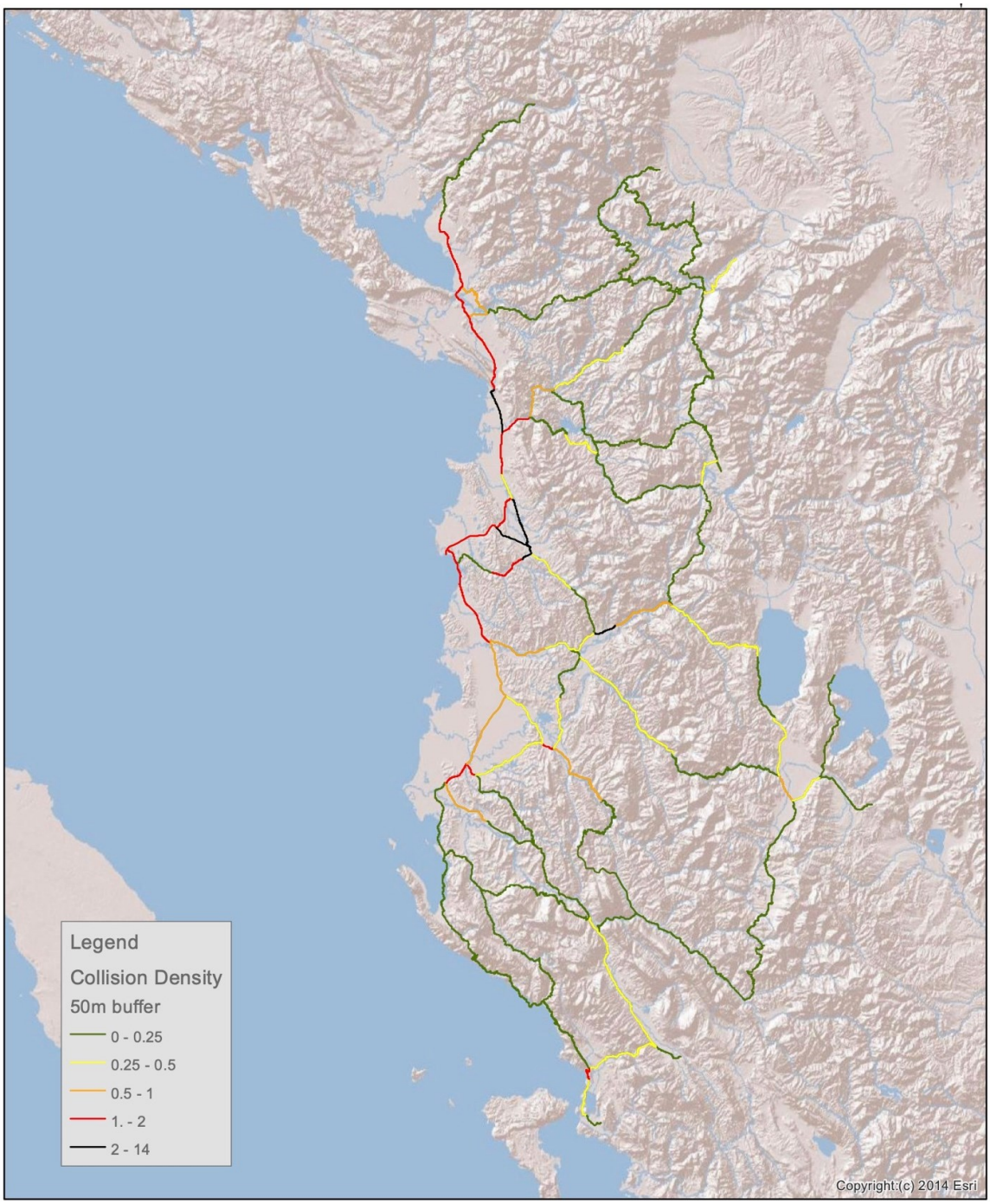

Figure 5– Risk assessment of the national rural road network

6. Monitoring at the Implementation and Results Levels

There are two main levels of monitoring and both are important. The first is monitoring at the level of implementation to check on outputs and also inputs as required.

The second is conducted at the level of results to assess whether activities implemented are producing the desired results – reduction in the socio-economic cost of road trauma and reductions in the numbers of deaths and serious injuries. Results level monitoring should be the focus of national monitoring from 1st January 2021 to 31st December 2030.

6.1 Monitoring at the Level of Implementation

1. **Implementation level monitoring**

Each road safety stakeholder agency should monitor implementation which involves collecting data to track program outputs and outputs. These results should be presented to key stakeholder agencies.

Table 2 - Implementation level output measures

Outputs	Number of Interministerial Road safety Committee Meetings held since January 2021 Number of UN Road Safety Legal Instruments acceded to by GoA Number of Police enforcement operations implemented since January 2021 % of roadside alcohol breath tests per 1,000 inhabitants % of numbers of speeding tickets per 1,000 inhabitants Number of Road Safety Campaigns conducted. Upgrade of Police Crash data to EC standards	Data should be collected by individual stakeholder agencies and
Inputs	Resources for elimination of blackspots	

2. **Results level monitoring**

6.2 Monitoring at the Results Level

A national M&E System should be established to focus on monitoring at the level of results. Results level monitoring tracks:

1. **Final outcomes** such as the socio-economic cost of crashes, fatal crashes, deaths, and serious injuries**.**
2. **Intermediate outcomes** which focus on activities in intervention areas causally linked to reductions in deaths and serious injuries.

Recommended safety performance indicators to provide 'results level' information for the GoA and IMRSC are set out in Table 6.

Key stakeholder agencies must confirm these performance indicators, endorse baselines and the proposed frequency for collection of monitoring data, confirm responsibilities allocated to each key stakeholder agency, confirm reporting schedules, and make plans for:

- What results data is to be collected and when.
- How results data are to be collected and analysed.
- Who collects and analyses results data.
- How results data are shared and reported.

The European Commission (EC) *Road safety for the interim evaluation of Policy Orientation on Road Safety 2011-2020* report in 2015 highlighted the need to focus on performance monitoring for the following:

Road infrastructure outcomes:

- head-on crashes
- run-off-road crashes
- intersection crashes and
- pedestrian and other vulnerable road user crashes.

Key factors causally related to the risk and number of fatal injuries:

- are levels of speeding and drinking and driving
- non-use of protective equipment such as seatbelts, child restraints, and motorcycle helmets
- use of handheld mobile device (cell phone)
- the safety quality of vehicles and roads and
- emergency medical response (post-crash care).

Table 3 – Exposure and Results level Monitoring measures

Level of Monitoring	Description	Comment
Exposure data	Annual traffic volume counts	ARA has established vehicle counters at a number of sites across the national network under its jurisdiction
	Population data	Population estimate data
High Level outcomes	Fatal crashes Fatalities Serious injuries	INSTAT annual casualty data should be used to calculate serious injuries. In the longer-term Traffic Police and Hospital definitions and collection of data for serious/major injury should be fully aligned.
Intermediate Outcomes	Data relating to the interventions within road safety pillar areas: Roads	These interventions are proven to be causally linked to road traffic crashes and trauma.

	Speeds Vehicles Road Users Post-crash Response	

Key performance indicators are essential in determining road safety performance. Outcome measures clearly indicate current road trauma trends and opportunities for intervention. KPIs should include the following elements:

- They should be clearly defined
- The measurement should be reliable
- The measurement should be readily available
- The measurement should be available within a reasonable timeframe

7. Setting Baselines for Monitoring to 2030

The *Specification of typical (characteristic) road safety performance measures in the high-risk corridors and areas* report recommended that baselines set in 2020 should be used for ongoing monitoring to 2030.

The Covid 19 pandemic significantly restricted road travel and exposure to traffic accident risk and impacted on traffic police enforcement throughout 2020 and to current period in 2021 and for the foreseeable short-term future. It also prevented surveys being conducted throughout 2020, and Q1 and Q2 in 2021. The variance in 2020 and 2021 annual data will obscure whether sustainable progress is being made.

The impact of Covid 19 pandemic is demonstrated below in Traffic Police data which compare data for the first nine months of 2019 and 2020.

Table 4- Road traffic crashes 2019 versus 2020 (Source: Albanian Traffic Police data)

Months	Accidents	Fatalities	Serious Injury	Minor Injury
First 9 months of 2019	1136	157	199	1214
First 9 months of 2020	903	138	136	890
Variation (number)	-233	-19	-64	-324

To ensure that baseline data accurately describe the situation prior to the pre-intervention period, no 2020 or 2021 data should be used to set baselines for national monitoring. For consistency it is recommended that the baseline for all high-level outcomes is established by averaging data for the period 2017-2019. Progress over the decade 2021 - 2030 should be monitored against this three-year baseline.

7.1 Socio Economic Cost of Crashes

The RSS *Annual Road Safety Analysis (2018) Report* included a general estimate of the socio-economic cost of crashes in Albania using the World Health Organization methodology of 1-3% of gross domestic product. Using an assumption of 2-2.5% of GDP and the Banore (Banka Boterore) 2016 GDP estimate of 11.9 billion USD the RSS estimated the socio-economic cost of accidents in 2018 was two hundred and fifty million USD ($250,000,000 USD).

It is recommended that this broad estimate calculation is replaced with the methodology used by WHO (based on the iRAP crash cost estimation formula) to calculate the average socio-economic cost of crashes per year over the most recent 3-year period 2017-2019 and use this as a baseline to annual crash cost calculation to 2030. As shown in Table the average annual cost of crashes in 2017-2019 is USD **$79,025,725**. This methodology should be used consistently each year from 2021-2030 to track changes.

The World Bank methodology (based on the iRAP methodology) is proposed for calculating the baseline for the socio-economic cost of crashes. Data used includes 2018 national GDP and fatality and serious injury data for three-year period 2017-2019.

Table 5- Recommended Methodology for Crash Cost Estimate

Socio-Economic Crash Cost using the World Bank methodology (based on iRAP methodology)	**Values Based on Banore (Banka Boterore) and INSTAT data**		
2018 GDP /Capita (Albania)	USD $5,268.85		
Cost of 1 fatality	30x GDP/Capita ($5,268.85) = $158,065.50		
Fatalities in 2017, 2018, 2019	222 (2017)	213 (2018)	227 (2019)
Cost of fatalities in 2017	$158,065.50 x 222 = $35,090,541		
Cost of fatalities in 2018	$158,065.50 x 213 = $33,667,951.50		
Cost of fatalities in 2019	$158,065.50 x 227 = $35,880,868.50		
Three-year average fatality cost, 2017-2019	$34,879,787		
Cost of 1 serious injury	4 x $5,268.85 = $21,075.40		
INSTAT serious injuries (SI) data OR 10 x Fatality	INSTAT data OR 10 x number of fatalities per year /		
Number of SI in 2017, 2018 and 2018 [INSTAT DATA]	2389 (2017)	2078 (2018)	1817 (2019) [INSTAT DATA]
Three-year average SI cost, 2017-2019	= $21,075.40 x (6284) = 132,437,813.60 /3 = $44,145,937.90		
Average annual socio-economic cost of traffic crashes in 2017-2019	Average cost = $79,025,724.90 [round up to $79,025,725]		

7.2 Fatal Crash Baseline

The fatal crash baseline should be established by averaging Traffic Police annual fatal crash data for the three-year period 2017-2019[3]. Data for the period 2021-2030 should be collected and reported annually.

7.3 Fatality Baseline

The fatality baseline should be established by averaging Traffic Police annual fatality data for the three-year period 2017-2019[4]. Data should be collected and reported annually for the period 2021-2030, including percentage change against the baseline.

[3] This is recommended to avoid use of 2020 and 2021 data that reflect the impact of the global Covid19 pandemic.
[4] This is recommended to avoid use of 2020 and 2021 data that reflect the impact of the global Covid19 pandemic.

7.4 Serious injury Baseline

INSTAT annual casualty data should be used to derive serious injury data for the three-year data for the period 2017-2019 and the three-year average used. Data should be collected and reported annually for the period 2021-2030, including percentage change against the baseline.

7.5 Fatality rate /100,000 population Baseline

The baseline fatality rate/100,000 population should be established by using INSTAT population estimates and Traffic Police annual fatality data for the three-year period 2017-2019[5].

2017	2018	2019	2017-2019 3-year average
7.8	7.4	8.0	7.7

Data should be collected and reported annually for the period 2021-2030, including percentage change against the baseline.

7.6 Fatality rate /10,000 vehicles Baseline

The baseline fatality rate/10,000 vehicles should be established by using vehicle registration data and Traffic Police annual fatality data for the three-year period 2017-2019[6].

2017	2018	2019	2017-2019 3-year average
4.1	3.7	3.3	3.7

Data should be collected and reported annually for the period 2021-2030, including percentage change against the baseline.

7.7 Alcohol as a Factor in Fatal Crashes Baseline

Traffic Police data on alcohol involvement in fatal crashes for the period 2017-2019 and the three-year average used. Data should be collected and reported annually for the period 2021-2030, including percentage change against the baseline.

7.8 Use of Seatbelts – Drivers and Passengers Baseline

The baseline should be set using 2016 data provided by traffic police to WHO.

7.9 Use of Motorcycle Helmets – Drivers and Passengers Baseline

The baseline should be set using 2016 data provided by traffic police to WHO. Data should be collected and reported every 2-3 years (as resources allow) commencing Q4 2021 or Q1 2022 and reported including percentage change against the baseline.

7.10 Use of Handheld Mobile Phones

The baseline should be set in Q4 2021 or Q1 2022. Data should be collected and reported every 2-3 years (as resources allow) commencing and reported including percentage change against the baseline.

7.11 Post-crash Care

The EC KPI of '*Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services'* should be used. In

[5] This is recommended to avoid use of 2020 and 2021 data that reflect the impact of the global Covid19 pandemic.
[6] This is recommended to avoid use of 2020 and 2021 data that reflect the impact of the global Covid19 pandemic.

Albania it is recommended, subject to Ministry of Health concurrence and available resources that baselines and ongoing monitoring for this KPI occurs at five levels. Ministry of Health to determine the baseline year/s, number, and type of environment to be assessed and frequency of collection of ongoing monitoring data as resources allow:

1. Tier 1 cities and towns with population of 100,000
2. Tier 2 cities and towns with population of 30,000-100,000
3. Tier 3 towns with population of 10,000- 30,000 people
4. Rural flat area
5. Rural mountainous area

Thereafter data should be collected as resources allow.

7.12 Road Safety Management

A key Project recommendation is the full operational establishment of the Interministerial Road Safety Committee. No meetings have yet occurred. This should be a high-level output indicator measured annually to 2030.

7.13 Road Crash Database

The Crash Database Report recommended upgrading the current Traffic Police database to Common Accident Data Set (CADaS) and fully meet the minimum set of standardised data elements as recommended by EC Community data on road accidents (CARE).

When the database is upgraded to CADaS geocoded data should be collected and reported annually for the period 2021-2030, including percentage change against the baseline for:

1. Number of deaths from intersection crashes
2. of fatal crashes and deaths on highways
3. Number of fatal crashes and deaths on primary interurban roads
4. Number of fatal crashes and deaths on secondary interurban roads
5. Number of fatal crashes and deaths on primary urban roads
6. Number of fatal crashes and deaths on secondary urban roads
7. Number of fatal crashes and deaths on local roads
8. Number of deaths from crashes on the identified as high-risk corridors.

7.14 Risk Based Classification of the Road Network

Directive 2019/1936 /EC on road infrastructure road management introduces a new proactive approach to the safety assessment of existing road network infrastructure[7]. The aim is to establish an accident and impact severity risk baseline for all high-risk sections/areas of the road network. The baseline reviews should be conducted through visual assessment on-site or by electronic review of the design characteristics of the road and classification of all high-risk sections/areas of the road network in classified into three categories according to their level of safety. The EC is producing guidelines on assessment and classification. The EC recommended

[7] Directive 2019/1936 /EC for assessment of road network sections in operation for more than three years which have a large number of serious accidents in proportion to the traffic flow.

that Baseline data collection is completed by 2024. Thereafter ongoing monitoring assessments should be conducted every five years.

Blackspot Elimination

The elimination of blackspots n is causally linked to reductions in fatal crashes, fatalities, and serious injuries. Currently this is a major ARA focus and should be reported annually.

8. Proposed National Monitoring System Framework 2021-2030

The following output and outcome measure are recommended to be the focus of a National M&E System 2021 - 2030

Table 6 – National Monitoring System Framework 2021-2030

High Level Road Safety Management Output Measures							
Description of Key Performance Indicator	Baseline Period	Monitoring Frequency	Responsible Agency	Baseline	Current year	% change compared to baseline	Comment
i. Number of IMRSC meetings held	2020	Annual	RSS, MIE	0			
ii. Number of UN Legal Instruments to which GOA has acceded	2020	Annual	RSS, MIE				
iii. Road Safety Action Plan approved	2020.	Annual	RSS, MIE				
iv. Crash data base fully complies with standard Common Accident Data Set (CADaS) and minimum set of standardised data elements as recommended by EC Community data on road accidents (CARE).	2020	Annual	Traffic Police				
v. National RS Monitoring & Evaluation System established within the RSS, MIE	2020	Annual	RSS, MIE				

High level Outcome Measures							
Description of Key Performance Indicator	Baseline Period	Monitoring Frequency	Responsible Agency	Baseline	Current year	% change compared to baseline	Comment
1. Socio-economic cost of crashes	2017-2019 av.	Annual	RSS, MIE	$79,025,725			
2. Number of deaths from road traffic crashes (RTC)	2017-2019 av.	Annual	Traffic Police	220.6			
3. Number of Serious Injuries resulting from RTC	2017-2019 av.	Annual	Traffic Police	2,315.3			
4. Number of RTC resulting in at least one death	2017-2019 av.	Annual	Traffic Police				
5. Number of deaths per 100,000 population	2017-2019 av.	Annual	RSS, MIE	7.7 (Police/ &			

				INSTAT data)			
6. Number of deaths per 10,000 registered vehicles	2017-2019 av.	Annual	RSS, MIE	3.8 (INSTAT data)			
Safe Roads outcome measures							
Description of Key Performance Indicator	Baseline Period	Monitoring Frequency	Responsible Agency	Baseline	Current year	% change compared to baseline	Comment
7. Number of deaths from head-on crashes	2017-2019 av.	Annual	Traffic Police				Upgrades to the Police Crash data base are required
8. Number of deaths from intersection crashes	2017-2019 av.	Annual	Traffic Police				
9. Number of deaths from crashes on main urban roads in metropolitan areas	2017-2019 av.	Annual	Traffic Police				
10. Number of deaths from crashes on main interurban roads	2017-2019 av.	Annual	Traffic Police				
11. Number of deaths from crashes on the identified 'high-risk' corridors.	2017-2019 av.	Annual	Traffic Police				
12. Number of assessed road sections in High-Risk Category 1	2024	Every 5 yrs.	ARA	0			
13. Number of assessed road sections in High-Risk Category 2	2024	Every 5 yrs.	ARA	0			
14. Number of assessed road sections in High-Risk Category 3	2024	Every 5 yrs.	ARA	0			
15. Number of black spots treated /eliminated	2019	Annual	ARA				
Safe Speeds outcome measures							
Description of Key Performance Indicator	Baseline Period	Frequency of monitoring	Responsible Agency	Baseline	Current year	% change compared to baseline	Comment
16. Percentage of light passenger vehicles travelling within the speed limit in free flow traffic in daylight hours- [motorways, rural highways, main urban roads] NB all vehicle speeds should be assessed if resources allow.	Traffic Police to set	At least every 2 yrs.	Traffic Police				Increased resources required

Safe Vehicles outcome measures

Description of Key Performance Indicator	Baseline	Frequency of measurement	Responsible Agency	Baseline	Current year	% change compared to baseline	Comment
17. Average age of passenger vehicles (years) [NB this is proposed as a proxy for the EC KPI related to EuroNCAP stars]	2017-2019 av.	Annual					

Safe Road User outcome measures

Description of Key Performance Indicator	Baseline	Measurement Frequency	Responsible Agency	Baseline	Current year	% change compared to baseline	Comment
18. Number of deaths of young driver and young moped/motorcycle drivers (up to 25 years)	2017-2019 av.	Annual	Traffic Police				
19. Number of deaths of older drivers and motorcycle riders (aged 65 or more years)	2017-2019 av.	Annual	Traffic Police				
20. Number of motorcyclist deaths	2017-2019 av.	Annual	Traffic Police				
21. Number of bicyclist deaths	2017-2019 av.	Annual	Traffic Police				
22. Number of pedestrian deaths	2017-2019 av.	Annual	Traffic Police				
23. Number of deaths from crashes involving a heavy vehicle (regardless of whether the heavy vehicle is considered to be at fault).	2017-2019 av.	Annual	Traffic Police				
24. Number of alcohol involved crashes	2017-2019 av.	Annual	Traffic Police				
25. Percentage of drivers driving within the legal limit for blood alcohol content (BAC)	Traffic police to set	Annual	Traffic Police				
26. Percentage of DRIVERS using a seatbelt	2016 (Police Data)	Every 2-3 years	Traffic Police	85%			
27. Percentage of adult PASSENGERS using a seatbelt	2016 (Police Data)	Every 2-3 years	Traffic Police	80%			
28. Percentage of child occupants using a child	2016	Every 2-3	Traffic Police	-			

restraint	(Police Data)	years					
29. Percentage of drivers of powered two wheelers wearing a protective helmet	2016 (Police Data)	Every 2-3 years	Traffic Police	75%			
30. Percentage of passengers on powered two wheelers wearing a protective helmet	2016 (Police Data)		Traffic Police	60%			
31. Percentage of drivers NOT using a handheld mobile device	2019 or before Q3 2021 / Q2 2022	Every 2-3 years	Traffic Police	-			

Post-crash Care outcome measures

Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services

Description of Key Performance Indicator		Baseline Period	Frequency of measurement	Responsible Agency	Baseline	Current year	% change compared to baseline
Urban areas	32. Time elapsed in Tier 1 cities and towns with population of 100,000 or more	Ministry of Health to set	Every 1-2 yrs.	Ministry of Health			
	33. Time elapsed in Tier 2 towns with population of 30,000-100,000						
	34. Time elapsed in Tier 3 towns with population of 10,000- 30,000						
Rural flat area	35. Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services						
Rural mountainous area	36. Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services						

9. Evaluation Criteria

Evaluations are costly. They should initially focus on evaluating high-value infrastructure treatments and to assess pilot interventions which have the potential to be applied at national level if effective.

Evaluations should prioritize infrastructure treatments, technical programs (e.g. new speed camera systems; new traffic recording systems; new traffic penalty / licence database or crash database systems and police enforcement programs (focusing on speeding and drunk driving).

Evaluations should be conducted by an external agency to ensure objectivity.

Moving from monitoring to evaluation requires the use of criteria. The core criteria commonly used in the evaluation of road safety interventions are:

Impact	The effect of the project on serious crashes, fatalities, and serious injuries.
Relevance	The appropriateness of project objectives to the road safety issues intended to be addressed, and the extent to which these issues are causally linked to road trauma.
Effectiveness	How well the outputs contributed to the achievement of project purpose and the overall goal(s).
Efficiency	Whether project outputs have been achieved at reasonable cost, i.e. how well inputs have been used in activities and converted into outputs.

Prior to the commencement of the intervention/s on a high-risk corridor or area, relevant data should be collected for both the treatment (Case) corridor or area and the matched Control corridor or area to establish before baselines against which to monitor selected performance indicators following the intervention.

1. **Collection of Post-Intervention Results Data**

Following completion of the intervention on the Case Corridor/s systematic monitoring of selected performance indicators for both the Case and Control Corridors is undertaken at specific prescribed period e.g. at end of years 1, 2 and 3 year to enable evaluation.

2. **Evaluation of Post-Intervention Results**

- Changes that have occurred in serious crashes, fatalities, and serious injuries on the Case Corridor and the Control Corridor to see if the intervention has had any effect and whether safety objectives have been met.
- Assess the impact of the intervention on traffic and driver behaviour (especially speeding)
- Highlight any unintended effects on traffic movements or crash occurrence (e.g. migration of serious crashes downstream from a speed camera location, increase in travel speed and crashes as the result of road rehabilitation)
- Assess the effects of the treatment on the local environment (especially safety and movement of vulnerable road users)
- Assess public response to the treatment: its acceptability in general and any concerns about safety in particular.

Evaluation is conducted periodically at certain points. It is about objectively assessing the effectiveness of an ongoing program, a completed engineering initiative, or behavioural project. To ensure objectivity, evaluations should be conducted by an external agency.

The aim of an evaluation is to determine the relevance of the pre-defined outputs and outcomes, efficiency, effectiveness, impact, and sustainability.

An evaluation should provide credible and useful information on what elements and activities have or have not worked and why. Feedback on lessons learned will improve future strategies, policies and initiatives and provide a basis for accountability. The following table sets out the most important evaluation principles and requirements:

Table 7: Road Safety Evaluation Principles

Evaluation Principle	Key issues
1. Cost effective	The results/findings from the evaluation process should be used to benefit future policies, projects, and programs. The benefits of results/findings should be greater than the cost of conducting the evaluation.
2. Used by management	Results/findings and "lessons learned" should be used as the basis for future management policy decisions.
3. Useful	Evaluation findings must be viewed as relevant and useful to improve road safety practice.
4. Credible	The evaluation process must be transparent and must include successes and failures.
5. Participatory	Program managers, implementation partners (e.g. truck and bus industry, prefectures, districts) and target groups (e.g. truck drivers, pedestrians) should be included in the evaluation process.
6. Professionally designed	The evaluation process must be professionally designed and planned. The objective and scope of the evaluation, research methods, standards, performance indicators and resources required to complete the evaluation must be defined.

10. Common characteristics of weak or failed Monitoring and Evaluation Systems

Evaluations of existing M&E systems have shown certain common characteristics, weaknesses, and recurrent problems which are important causes of divergence between M&E theory and actual practice in the field.

- poor system design in terms of collecting more data than are needed or can be processed
- inadequate staffing of M&E systems both in terms of quantity and professional capability of staff
- missing or delayed baseline studies
- delays in processing data, often as a result of inadequate processing facilities, incorrect/outdated software, and staff shortages
- delays in analysis and presentation of results, caused by lack of agency leadership, lack of political will, shortages of senior staff, and by faulty survey designs that produce data that cannot be used
- monitoring results which remain unused even where monitoring is effective

M&E systems generally become weakened for three main reasons:

1. Interventions or programs are not designed in a way that facilitates their monitoring and/or evaluation (e.g. they do not have stated goals, objectives, defined targets and intended effects).
2. M&E systems bring no added value to external agencies due to a failure to collect accurate and useful data that adds value.
3. M&E systems fail/fail to timely share data that other agencies need to develop their policies, strategies, and programmes and/or for evaluations or research.

In these situations, systems can quickly become unsustainable through un/underfunding and lack of necessary human resources and professional skill levels required.

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