

Study

E-READI Road Transport Dialogue: Study on Recommendations for ASEAN Member States in aligning national road safety policies and action plans with the Global Plan: Decade of Action for Road Safety 2021-2030

E-READI: EU-ASEAN Dialogue on Road Transport

Placeholder for image

Enhanced Regional EU-ASEAN Dialogue Instrument

E-READI

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List of Acronyms

12VT	12 Voluntary Targets of the Global Plan
ADB	Asian Development Bank
ASEAN	Association of Southeast Asia Nations
AMS	ASEAN Member States
APEC	Asia Pacific Economic Forum
ASCN	ASEAN Smart Cities Network
ASEC	ASEAN Secretariat
BIGRS	Bloomberg Initiative for Global Road Safety
CLMV	Cambodia-Lao PDR-Myanmar-Viet Nam
DG MOVE	European Commission Directorate-General for Mobility and Transport
DRIVER	Data for Road Incident Visualisation, Evaluation and Reporting
EC	European Commission
E-READI	Enhanced Regional EU-ASEAN Dialogue Instrument
EU	European Union
EU-ABC	EU-ASEAN Business Council
EUD	Delegation of the European Union to ASEAN
EUMS	European Union Member States
FIA	Federation Internationale de l'Automobile
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH - German Agency for International Development
GP: DoA 11-20	Global Plan for the Decade of Action for Road Safety 2011-2020
GP: DoA 21-30	Global Plan for the Decade of Action for Road Safety 2021-2030
GRSP	Road Safety Grants Programme
iRAP	International Road Assessment Programme
IRTAD	International traffic Safety and Analysis Group

ITF	International Transport Forum
ITS	Intelligent Transport Systems
KPI	Key Performance Indicator
MRSSWG	ASEAN Multi-Sectoral Road Safety Special Working Group
MVUC	Motor Vehicle Users Charge
NGO	Non-Governmental Organisation
OECD	Organization of Economic Cooperation and Development
QCA	Qualitative Comparative Analysis
RADED	Road Accident Data Enhancement and Development
RS	Road Safety
SDGs	Sustainable Development Goals
SME	Small and Medium Sized Enterprises
STOM	(ASEAN) Senior Transport Officials Meeting
SNKE	Senior Non-Key Expert
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNECE WP 29	World Forum for Harmonisation of Vehicle Regulation
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNRSC	United Nations Road Safety Commission
VRU	Vulnerable Road User
WB	World Bank
WB GRSF	World Bank Global Road Safety Facility
WHO	World Health Organization

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Executive Summary

This Study Report (The Study) provides a framework with which to offer recommendations to ASEAN Member States (AMS) in successfully aligning to the Global Plan for the Decade of Action for Road Safety 2021-2030 (GP: DoA 21-30). It does so by drawing on previously identified gaps in AMS national road safety plans and activities and using proven successes of ASEAN and the European Union (EU) Member States (EUMS) in improving regional and national road safety. The Study and its recommendations do not replicate previously identified regional or global strategies, but offer an in-depth and evidence-based analysis of both EU and AMS experiences. Practical and achievable recommendations are then shaped, offering AMS best practice on how to align to the GP: DoA 21-30.

The Study examines the success of the EUMS and other International Transport Forum (ITF) member countries' strategies to implement the GP: DoA 21-30 as well as ASEAN Member States' achievement in implementing UN's previous Decade of Action for Road Safety 2011-2020 (GP: DoA 11-20). The Study accordingly investigates the current road safety challenges facing EUMS and their response, connecting their successful strategies with specific current AMS challenges, such as high traffic fatalities especially involving motorcyclists.

The Study also considers the outcomes and analysis from previous E-READI Road Safety Studies and Dialogue activities and includes a review of the implementation by AMS of the 2019 Gap Analysis Study recommendations and Harmonisation with UN Conventions Study and its country-specific recommendations.

Based on these findings, the Study develops subsequent conclusions and relevant and achievable recommendations for AMS to further align to the GP: DoA 21-30. In order to do so and to have a comprehensive understanding of the progress, challenges and priorities of AMS, the Study conducted an investigation with a three-part methodology. Firstly, a literature review, secondly, a questionnaire for AMS and thirdly, face-to-face interviews with AMS focal points and leads. An analysis of the data collected from this methodological approach was triangulated to ensure coherence and then summarised in matrices.

The Study concludes that **there is a need for an integrated approach to road safety to accomplish the goals and targets set out in the GP: DoA 21-30**. This refers to all stakeholders involved in, and affected by road safety, such as government, private sector, NGOs and civil society.

Findings show that accession and adoption of global conventions and legal standards in AMS, particularly with regard to the core road safety related UN legal instruments, which have proven to be an effective starting point in the reduction of national level road crash fatalities and injuries, has seen little progress.

The Study concludes that **there are three priority areas for AMS**. Firstly, **the strengthening of data collection, management and reporting with an electronic, synchronised system that also reports statistics to ASEAN and WHO**. Accordingly, there is a need for a universal data collection tool, together with training for all practitioners on how to use it and how to extract from it the information needed to focus interventions, and establish baseline assessments and develop KPIs that link to achievable targets. Levels of implementation and adoption of this monitoring and evaluation process currently differ across AMS, with some well on the way to realising this, and others adopting the technology required but not the training to use it.

Secondly, **that capacity building is enhanced for stakeholders and practitioners in AMS, especially at high levels and decision maker level**. Building Capacity and knowledge remains a key area for AMS

in strengthening road safety initiatives. It is needed across all stakeholders and interventions. Progress has been made in identifying where capacity building priorities lie, however, more needs to be done to meet these needs, both nationally and regionally. One area, for example, is **understanding of cost and impact of interventions**. This knowledge, besides determining budget spend, would also enable AMS to achieve greater success in accessing local and global funds. Another area is taking the Safe System approach to constructing national road safety strategies and action plans.

Thirdly, **enabling substantial behaviour change through effective awareness campaigns** linked to enforcement strengthening and other coordinated activities.

Enforcement remains one of the biggest challenges faced by the majority of AMS. The main reasons for a lack of effective enforcement come as a result of a lack in political endorsement, which leads to inadequate general deterrence for drivers breaching legislation and corruption of practitioners and also corruption. In addition, there are few advocacy programmes that persuade drivers and Vulnerable Road Users (VRUs) to understand legislative measures and the consequences of not adhering to them.

Should funds become available to engage additional resources, there may be considerable benefit and efficiency gains in the ASEAN Secretariat (ASEC) coordinating certain road safety enhancement activities across the region. Two areas for consideration could be firstly achieving behaviour change through the harmonisation of effective awareness campaigns, and secondly, the coordination of research and new technology appropriateness for road safety across ASEAN. The next MRSSWG meetings, may present opportunities to inform on the coordination of such activities.

The Study acknowledges throughout that **aligning and monitoring national road safety policies and action plans with the GP: DoA 21-30 has considerable positive effect on road safety outcomes**.

Recommendations include firstly, **action for the three priority areas of data, capacity building and behaviour change techniques**. Secondly, there are also **recommendations for the priority areas identified by UNECE**, which have been consolidated by the ASEAN Multisector Road Safety Special Working Group (MRSSWG). Third, are **recommendations that relate to each of the 12 Voluntary Targets that feature as part of the GP: DoA 21-30**. These have been categorised into short- and long-term achievability actions and act as a guideline for AMS to adapt and integrate into their road safety plans dependent on their current progress. Finally, regional level recommendations for ASEAN and E-READI that include coordination, non-duplication of effort, gathering of statistics, and fund access are also outlined as next steps and take into account the areas AMS will need to prioritise in order to reduce road crash fatalities and injuries by 2030.

The 'way forward' and next steps were discussed at the 3rd EU-ASEAN Workshop on Road Safety in Bangkok held from the 7th to the 9th of February 2023, an event that included a capacity building element in line with the recommendation of priority areas in this Report. The Participants concurred with the findings and recommendations of the Study and concluded that additional efforts on funding needed to be undertaken to realise the full potential of the actions associated with the Study Recommendations.

1 Introduction

1.1 Scope of this Study

The overall objective of this Study is to contribute to the high-level EU-ASEAN Dialogue on Road Transport in reducing road fatalities. It does this by continuing the EU-ASEAN exchange of information and experience in the area of road safety, aiming to deepen understanding and knowledge of ASEAN officials on safety dialogues of the key requirements for effective implementation of road safety policies.

The Study provides recommendations that help AMS prepare to align their road safety national policies and action plans with the GP: DoA 21-30 and to strengthen national road safety plan implementation, to enable a greater opportunity for AMS to reach the global target of reducing road traffic injuries and fatalities by at least 50% by 2030 and to facilitate a strong, safe transport network and strengthened economic integration.

The recommendations provided are based on an evidence-based analysis of global, regional and national progress and challenges of AMS and EUMS in meeting targets set out in the GP: DoA 21-30. The aim is for these recommendations to be achievable and relevant to AMS and to bring to light best practice for implementation and use based on successful implementation of EUMS.

The Study includes:

- A background on the current road safety position of ASEAN and the E-READI context in reducing road fatalities
- A methodology setting out the framework of analysis, the tools used, the methods of data collection and views of stakeholders
- Data collection, categorisation and validation results from both desk and field-based data collection processes
- Data information process and analysis using collected data
- Conclusions established from the analysis of literature, data and interviews
- Recommendations developed based on the conclusions found from the Study

1.2 Rationale

This Study follows evidence-based practice in order to develop suitable and relevant recommendations to AMS in aligning to the GP: DoA 2021-2030. These recommendations have taken into account:

- The progress, achievements and gaps of AMS in reaching targets set out in the GP: DoA 2011-2020
- The gaps and challenges of AMS in reaching targets set out in the GP: DoA 2021-2030
- EU Member States progress and achievements in reaching GP: DoA 2021-2030 targets

By cross referencing the identified progress and gaps of AMS against EU Member States' progress and best practice, this Study has developed recommendations that help prepare AMS in aligning their road safety national policies and implementing their action plans to the targets set out in the GP: DoA 21-30.

1.3 Findings

The triangulation of evidence found during the data collection process for this Study has identified:

- 3 priority areas for AMS in strengthening their national road safety action plans
- Recommendations against UNECE identified priority areas for AMS
- Specific recommendations associated to the 12 Voluntary Targets as set out as part of the GP: DoA 21-30
- Recommendations for next steps of the dialogue programme and for ASEAN as a regional entity

1.4 Next Steps / How to use this Study

Following the circulation of the Draft Report, the findings of the Study were presented at the 3rd EU-ASEAN Road Safety Workshop, that took place in February of 2023. Both the Study and Workshop activities are primarily designed to assist the AMS in implementing national road safety strategies that support progress in achieving the targets of the GP: DoA 21-30.

The Study itself should form a reference document for AMS implementing agencies as well as the systems of data collection and management within the AMS. Further afield, bordering regional countries will be able to take advantage of the Study to enable their road safety policies to be in line with ASEAN good practice.

The results of the Study will be supportive in delivering the E-READI objective of regional integration through dialogues and agreements supporting connectivity, business, trade, and economic growth through contributions from road safety. It is intended that the results of this Study will contribute to the proposed EU-ASEAN exchange of information and dialogue in the area of road transport aimed to facilitate a strong, safe, transport network and strengthened economic integration.

It is envisaged that these recommendations will enable a period of review to be undertaken by DG-MOVE to identify any targeted support to assist AMS initiatives. The comments and findings at the Workshop have been incorporated into this Study Report.

Action points to be taken forward by the AMS will be incorporated and it is recommended that these are given adequate resources to enable focused implementation of the policies.

2 Background

2.1 Road Safety in ASEAN

In 2020 over 156,000 road traffic crash casualties took place across ASEAN Member States. Improving road safety outcomes in ASEAN is not only important for the welfare and economic benefit of the populations of these countries but will also strongly influence the outcome of the GP: DoA 21-30 targets.

2.2 E-READI Context

E-READI supports ASEAN regional integration by drawing on European experience and know-how, whilst also promoting ASEAN peer-to-peer learning/exchanges through sectorial policy dialogues at all levels. It thereby supports policy development processes and capacity building in areas of joint interest.

The EU and ASEAN have an established dialogue between the EC Directorate-General for Mobility and Transport (DG MOVE) and ASEAN Senior Transport Officials Meeting (STOM), which in addition to regulatory and policy exchanges, help to identify and promote cooperation in new areas. Three dialogue meetings have taken place to date, where road safety has been identified as an important topic for cooperation.

The EU-ASEAN exchange of information and experience will be beneficial in deepening the understanding and knowledge of ASEAN officials on key requirements for the effective implementation of road safety policies. This, in turn, will ensure that these road safety targets are more likely to be met, leading to the optimisation of economic and social benefits. This exchange should also build on the road safety dialogue activities carried out to date and help prepare countries in aligning their road safety national policies and action plans with the GP: DoA 21-30.

3 Methodology

3.1 Approach

This methodology sets out the framework of analysis, data collection processes, management and stakeholder overview for this Study.

To identify recommendations for AMS on key requirements for effective implementation of road safety policies and how they are to align national road safety national policies and action plans with the GP: DoA 21-30 the Study has been divided into a series of tasks set out below:

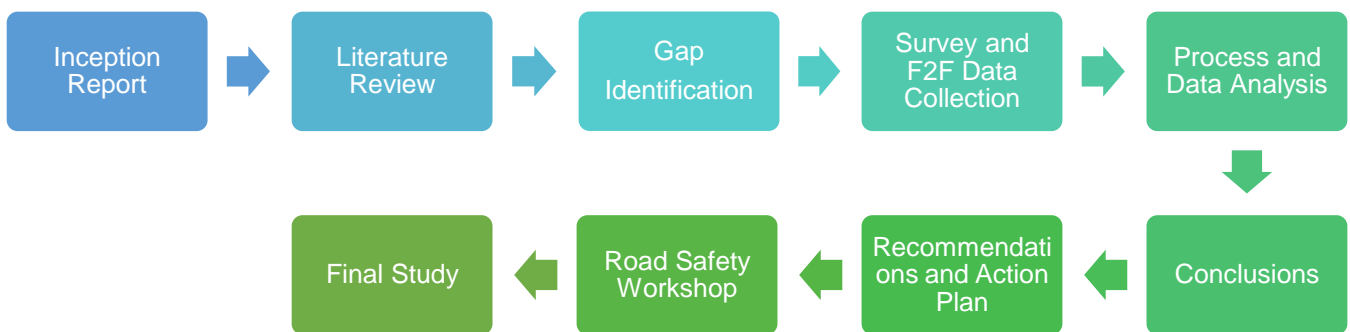


Figure 1: Methodology Approach

These tasks follow the key drivers for this Study, which are to:

- Collect robust evidence, including coherent data and statistics to establish the existing status of road safety policies and practices and road, crashes in AMS and EU Member States and to analyse where priority areas and gaps exist in successfully aligning to the GP: DoA 21-30.
- Validate evidence through the triangulation of data collection methods, such as through existing data and literature, e-questionnaires and interviews with senior road safety officials in the AMS.
- Formulate the rationale for the most effective initiatives that produce practical, value-for-money contributions towards aligning to the GP: DoA 21-30.

The completion of these core elements leads to a comprehensive programme of recommendations that aims to assist AMS in successfully aligning their road safety policies and action plans by the GP: DoA 21-30.

3.2 Data Collection

The collection of data for this Study comprises three key phases:

Data Collection Phase 1: Literature Review: desk-based research for the collection and categorisation of qualitative and quantitative data

Data Collection Phase 2: Survey-based questionnaire: field-based data collection from an audience of key stakeholders and road safety focal points within AMS and EUMS

Data Collection Phase 3: Face to Face and virtual interviews: 6 selected AMS for in-depth information and data validation

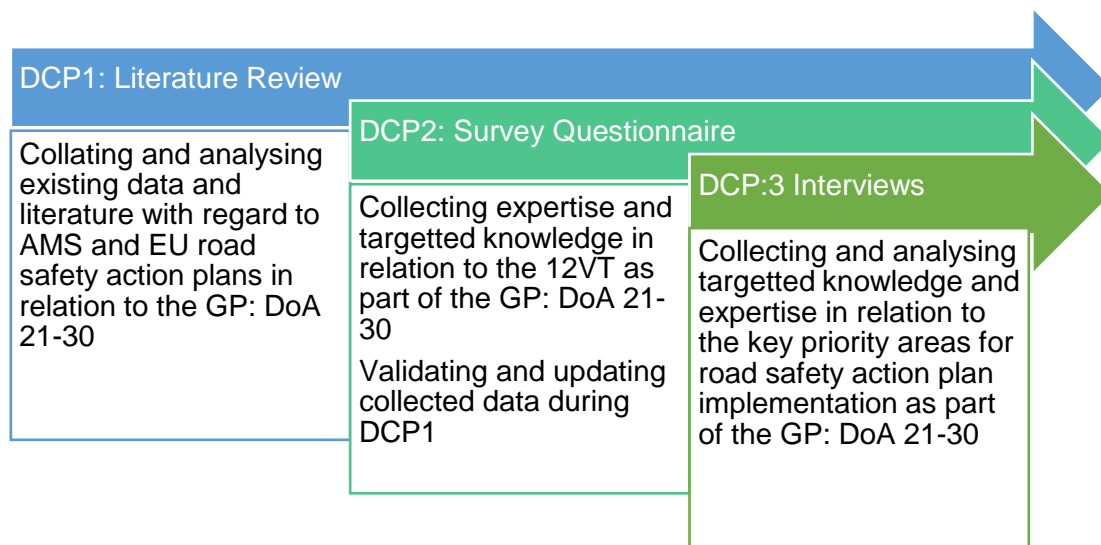


Figure 2: Data Collection Phases

At each level of data collection, an in-depth analysis is completed, this allows for cross-validation through triangulation of collected data and the identification of gaps in relevant, contemporary or available data at each collection phase.

3.2.1 Phase 1: Literature Review

The literature review uses secondary desk-based research to collect, catalogue and categorise relevant existing qualitative and quantitative data to this Study (See Bibliography). This includes a review of materials of previous activities of the Road Safety Dialogue and where appropriate, the collection of further material through the utilisation and communication of contacts within the EU, AMS and other multilaterals working on road safety

The literature review is sub-divided into three research categories to allow for a strategic approach to identifying relevant data:

1. ASEAN progress, achievements and challenges toward implementing the Global Plan for the Decade of Action for Road Safety 2011-2020
2. ASEAN progress, achievements and challenges toward implementing the Global Plan for the Decade of Action for Road Safety 2021-2030
3. EU Member States' successful strategies toward implementing the Global Plan for the Decade of Action for Road Safety 2021-2030

Data processing is undertaken to obtain an accurate understanding of the AMS and EUMS progress in aligning with the DoA 2021-2030. Conclusions are drawn from the collected data and gaps in data are identified. These gaps allow for a focus of Phase 2 and 3 on the data collection process.

3.2.2 Phase 2: Surveys

The second data collection phase consists of the dissemination of a digital questionnaire to the Multisectoral Road Safety Special Working Group (MRSSWG) Leads and Focal Points of the AMS (see Appendix MRSSWG Focal Points). This primary desk research aims to collect both quantitative and qualitative data that validates and updates the previous data collected in Phase 1. It also aims to plug any identified gaps in data and offers insight into specific AMS progress in aligning to the GP: DoA 21-30.

Formulated by the SNKE, this questionnaire is made up of questions relating to the 12 VTs as set out in the GP: DoA 21-30 and includes multiple-choice, open-ended and rating scale questions (See Appendix: Questionnaire Survey). Made digitally accessible through the use of a digital survey tool, Survey Monkey ensures accessibility and allows for the efficient collection of responses. The response rate is also improved as a result of the use of this digital tool due to layout and ease of use functions.

The analysis of the data collected from the surveys follows the process drawn out in the figure below:

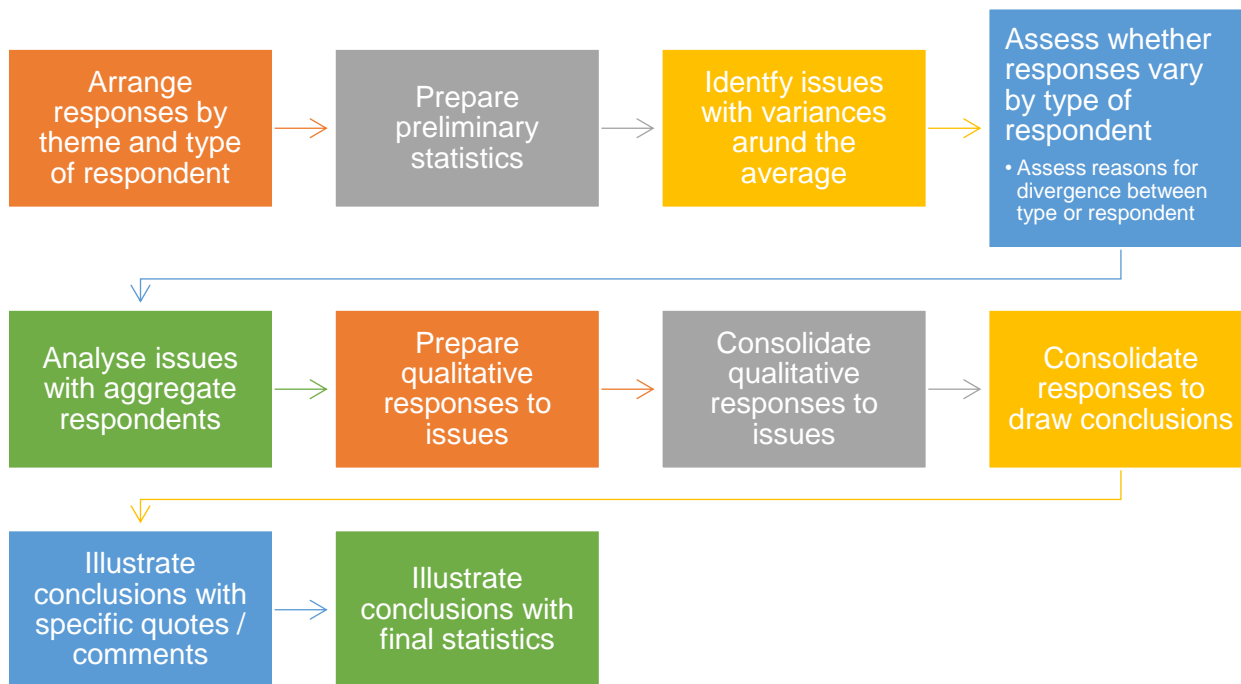


Figure 3: Data collection analysis

The results have been used to confirm data, identify missing data, identify innovation and ideas, and ascertain/validate the data and information held to analyse and contribute to the knowledge for the Study.

3.2.3 Phase 3: Interviews

The final data collection phase encompasses field-based research in the form of face-to-face and virtual interviews with MRSSWG leads and focal points from a sampling of 6 AMS. Undertaken by the SNKE, the interview questions follow the 7 key themes for road safety action implementation offered by the GP: DoA 21-30 (see Appendix: Mission Crib Sheet). This is an important phase for the data collection process in this Study not only in validating data as part of an evidence-based practice but also in understanding the key barriers and challenges AMS face when implementing recommendations on road safety.

The 6 AMSs selected for an interview were:

- Cambodia
- Indonesia
- Lao PDR
- Malaysia
- Philippines
- Vietnam

Each interview was semi-structured following consistent formulation and questions for each AMS. These include open-ended primary questions supported by secondary questions to ensure responses are elaborated and context is given.

Each interview is recorded and the analysis of responses follows the process of Data Collection in Phase 2.

3.3 Analysis

3.3.1 Theory of Analysis

The theory of analysis has been developed following evidence-based practice. The scope of this analysis is to cover relevant and successful studies and practice in the road safety sector in the EU where the AMS have identified gaps in reducing road crash fatalities. This serves as a foundation for the recommendations set out in this Study.

Evidence based practice has evolved over the last 50 years as a reasoned and comprehensive approach that allows for systemic improvements and finding solutions which do not put an extra burden on road users. Safety policies and strategies are therefore able to be developed comprehensively with a focus on results, aiming to eliminate road deaths and serious injuries by adopting tried and tested interventions that are more likely to succeed in aligning to and reaching the targets of the GP: DoA 21-30.

3.3.2 Process of Analysis

The qualitative and quantitative data that has been collected and catalogued for this Study has been analysed using Thematic Content Analysis. This involved categorising the data available into themes that have been identified as key global road safety structures (see *Structure of Analysis*). The SNKE coded the data in line with the identified themes with close consideration to any new themes/categories that arose during the analysis (i.e. the addition of Technology as a newly identified gap in AMS literature).

The secondary data and literature that was compiled, summarised and catalogued into a word-processing document. Three priority areas emerged and relevant data was drawn under each heading. Once compiled and validated, summaries were written and key elements relevant to the Study were extracted. The summaries were used to draw key conclusions on the current status of AMS and EUMS progress in aligning to the GP: DoA 2021-2030.

The second data collection phase allowed for focused questions to be asked to the MRSSWG Focal Points in each AMS. Questions were designed to draw quantifiable answers allowing for succinct analysis to take place. Data was recorded and analysed using an Excel database.

3.3.3 Structure of Analysis

Thematic analysis has been shaped by the following key global road safety elements (see also Appendix Five Pillars of Road Safety; Appendix: GP:DoA 21-30; Appendix 12 Voluntary Global Targets) :

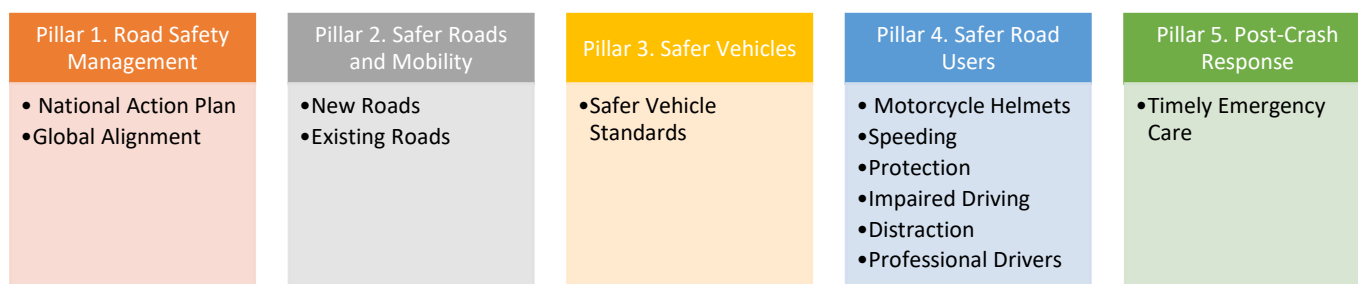


Figure 4: Five Pillars of Road Safety and the 12 Voluntary Global Targets

7 Key areas are set out by the GP: DoA 21-30 acting as a guiding tool accompanying the structure of this Study:

1. Actions
2. Roles and Responsibilities
3. Funding
4. Capacity Building
5. Data: Collection, Monitoring and Evaluation
6. Gender
7. New Technology

3.4 Road Safety Workshop

The findings of the Study were presented at the 3rd EU-ASEAN Road Safety Workshop that took place in February 2023, to assist the AMS in implementing national road safety strategies that support progress in achieving the targets of the GP: DoA 21-30. It is envisaged that these recommendations will enable a period of review to be undertaken by DG-MOVE to identify any targeted support to assist AMS initiatives.

The comments and findings at the Workshop have been incorporated into the Final Study Report.

The recommendations from this Study will contribute to the high-level EU-ASEAN Dialogue on Road Transport to strengthen the cooperation between the EU and ASEAN in improving road safety in the ASEAN region. The dialogue-based outcomes will facilitate a safer transport network.

3.5 Management

E-READI managed the Study and facilitated the SNKE undertaking the assignment. The E-READI team and the SNKE worked together to agree on methodologies and contacting AMS and the protocols involved.

3.5.1 Stakeholder Workplan

Stakeholder	Role	Participation
E-READI: Minna-Liisa Saneri, Aldo Dell'Ariceia, and Tantra Shalladin, Eva Situmorang	Overall management and administration of the Study Provide programme and project management and timesheet/payment processing	Email, Teams, and Visit
ASEAN SECRETERIAT: Beny Irzanto, Muhammad Fajri Arief Mahmuda	Overall technical, cultural, and historical guidance and to provide existing materials detailing previous activities of the Road Safety dialogue. Coordinator for AMS	Email, Teams, and Visit

ASEAN MEMBER STATES MRSSWG leads and focal points	To provide data and updates or clarifications on the progress of national policies that aim to deliver targets set out in the Global Plan for Road Safety 2021-2030 and in Global Plan for Road Safety 2011-2020	Interviews, Surveys, Presentations Some visited
DG MOVE: Pedro Sanjurjo Hanck and Peter Whitten	To provide EU position and strategy. Also, data on strategies and subsequent experiences in meeting the targets set out in the EU Policy Framework for Road Safety 2021-2030 and the Global Plan of Action for Road Safety 2021-2030.	Email, Teams
ITF: Rachele Poggi	To provide ITF data on relevant sections of the Study	Email
EU-ABC: Christopher Humphrey	EU-ASEAN Business Council inputs	Email
Delegation of the European Union to the ASEAN, Pierre Destexhe, Robert Frank	Keep informed	Email
WHO	Data on road crashes and country performance	Email
GIZ: Patrick Jannaschk- Schmitz	Contract management	Email
SNKE	Synthesise findings of the draft report with the outcomes of the 3rd EU-ASEAN Workshop and revise the Final Report	

Table 1: Stakeholder Workplan

4 Data Collection Results

4.1 Literature Review

4.1.1 Overview

The literature review has identified the progress to date of AMS in implementing the recommendations set out in the GP: DoA 11-20 through the analysis of available documentation. It has also identified the main gaps and challenges the AMS face in aligning to the GP: DoA 21-30. By drawing on and analysing EU Member State strategies and progress in achieving the targets outlined in the GP: DoA 21-30 this literature review has also been able to compile a catalogue of best practice and/or examples of how EU Member States have overcome challenges that also impact AMS (See Appendix Case Studies).

As well as contributing to the formation of recommendations in the final stage of this Study, these conclusions have also aided in developing the second and third data collection phase, where identified gaps have informed the development of a survey and interview questions. This has allowed for the collection of further data and information on new developments and AMS-specific data, as well as valuable verification of data already collected, all of which has been used to develop recommendations on how AMS can effectively align to the GP: DoA 2021-2030.

4.1.2 ASEAN progress, achievements and challenges toward implementing the Global Plan for the Decade of Action for Road Safety 2011-2020

During this first Decade of Action, AMS endorsed and adopted the Safe System Approach within their National Road Safety plans, aligning to the GP: DoA 11-20 by setting targets to reduce their road traffic deaths and injuries by 50%. As part of evaluating AMS's progress (see Appendix: AMS Progress in implementing Five Pillars) in achieving this target numerous studies have been undertaken and regional level strategies have been developed (see Appendix: Regional Strategies and Recommendations). As part of this two E-READI led studies were undertaken, the first a Gap Analysis, which saw the identification of three priority areas for AMS to focus on in reducing their traffic related deaths and injuries: Data, Policy and Programmes (See Appendix: Gap Analysis). The second called for AMS to harmonise their national road safety agendas to UN legal instruments and resolutions to enhance road safety interventions (See Appendix Harmonisation to UN Conventions and Road Safety Instruments). Capacity building needs have also been identified in order to underpin the delivery of recommendations drawn by these two studies (See Appendix Capacity Building).

The most critical factors that have limited success for AMS in the first DoA have been identified as:

1. **Funding:** substantially inadequate funding of road safety and commitment to road safety improvements by the funding agencies
2. **Indicators:** lack of robust timebound road safety targets, identification of KPIs, and ambiguous lead agency identification for road safety
3. **Data:** poor crash and other road safety data

4.1.3 ASEAN progress, achievements and challenges toward implementing the GP: DoA 21-30

The Safe Systems principles remain at the core of this new Decade of Action, with a global target of reducing road crash deaths and injuries by 50%. The GP: DoA 21-30 includes a comprehensive guide on how to progress the Safe Systems Approach (through funding, capacity building, and technologies) and who should be sharing the responsibility for the effective implementation of this approach (government, civil society, private sector, funders and UN agencies). Since the GP: DoA 21-30 has been published, all AMS have included in their National Road Safety Plans the target of reducing traffic fatalities and injuries

by 50% by 2030 (with the exception of Brunei Darussalam with a target of zero road accident fatalities by 2030) (See Appendix: AMS Road Safety National Plans / KPIs)

The GP: DoA 21-30 also includes voluntary global performance targets, as a means to enable countries to monitor and report on their progress on road safety efforts. These act as a guide to countries' efforts and accelerate progress toward safer roads. Progress of AMS against the new Decade of Action can be seen (Appendix: MRSSWG 12th Meeting AMS Updates) as part of updates to their national road safety action plans made during the MRSSWG 12th meeting.

Further recommendations based on the targets set out in the GP: DoA 21-30 have been set out by UNECE and have been agreed on by MRSSWG to ensure the acceleration of the development of road safety in ASEAN Member States. These include five identified areas for road safety improvements in ASEAN Countries and recommendations to AMS in achieving them (See Appendix: UNECE Priority Areas).

Further to the challenges identified in the first DoA, AMS face two challenges that impact all current and future road safety interventions:

1. **Capacity Building:** priorities for AMS are in training leadership and management teams, legislative and policy training, database use and systems training, auditing and evaluation training, and an increase in collaborative work across experts and practitioners, cost analysis training, funding proposal development training
2. **Monitoring and evaluation:** For effective monitoring and evaluation concise and relevant KPIs must first be established. This is currently a challenge for AMS as the targets and interim targets remain broad and difficult to measure. A universal data system is also needed for effective data collection and analysis.

4.1.4 EU Member States' successful strategies toward implementing the Global Plan for the Decade of Action for Road Safety 2021-2030

This chapter details EU practice in implementing road safety initiatives that are successful on both regional and national scale, and directly relate to the challenges currently being faced by AMS in aligning to the GP:DoA 21-30. These should be considered by ASEC and AMS as examples to adapt and use as a guide to help strengthen their own road safety action.

The EU Road Safety Policy Framework 2021-2030, also based on the Safe System approach in accordance with the GP: DoA 21-30, calls for multisectoral and multi-disciplinary action to meet timed targets and performance tracking in the reduction of road crash injuries and fatalities. The EU Commission is responsible for initiating EU legislation and policies, setting the framework for the road safety policies. A High-Level Group on Road Safety, constituting of high-ranking representatives from each EUMS national administration implements this Framework, providing strategic advice. The Group operates in an informal setting without any formal rules of procedure and its role has been enhanced to include strategic advice and frequent feedback, based on revised, transparent working methods. One meeting of the group per year is now open to stakeholders, and in addition, the Commission is planning to hold results conferences every two years.

The Framework provides a comprehensive set of measures for priority areas and key performance indicators for EUMS to use in assessing progress. The Commission works alongside EUMS to determine the KPIs used to measure progress, with an aim to collect comparable data. It provides financial support to EUMS to facilitate work on methodology and measurements where necessary. Following the adoption of the Framework 2021-2030 The European Transport Safety Council (ETSC) released a Briefing: EU Strategic Action Plan on Road Safety, assessing the initiatives and detailing suggestions for further

development and implementation. This specifically welcomes the adoption and inclusion of new KPIs guided by the long-term Vision Zero. The Briefing argues the high importance and significance of KPIs for road safety and act as a key way for identifying policy needs and detect the emergence of problems at an early stage.

All EUMS have also established a monitoring and evaluation process for the targets set out in their national plans. This is noteworthy due to the structures of support that exist for EU Member States in the collection and harmonised reporting of KPIs for road safety. A partially EC funded project, 'Baseline' assists authorities of EUMS in this as well as contributing to building capacity of those who do not yet have relevant data.

4.1.4.1 *EU Technology Progress*

The advance of technology in the EU should also be recognised with regard to the implementation of road safety procedures and initiatives. Automation is used in data management, vehicle features, infrastructure, enforcement measures and many more areas offering efficient resources to reducing road safety issues (see Appendix: Smart Transport and Infrastructure Technology). However, the combined presence of vehicles with a wide range of automated features and traditional vehicles in mixed traffic will pose a new risk, especially for vulnerable road users. This is an area of development within the EU, lending an opportunity to AMS who may see this as their next development step towards reducing road crash fatalities and injuries.

The EU have undertaken a number of steps to implement new technology including the development of research institutes and advisories, dedicated investment and infrastructure and developing a strong collaborative approach across member states and partners. This again lends AMS an evidence-based successful approach and one that is replicable for ASEAN.

4.1.5 *Conclusion: Key Lessons*

The EU's advancement of successful road safety planning, development and delivery paves a way for AMS and ASEC in strengthening road safety action and aligning to the GP: DoA 21-30. The following details specific areas of interest to AMS in relation to the challenges and gaps in road safety strategies currently faced.

- **Regional High-Level Groups:** The EU has developed a number of frameworks for leading agencies and actors to strategically and successfully develop and deliver road safety initiatives. The EU Commission is responsible for initiating EU legislation and policies, setting the EU Road Safety Policy Framework 2021-2030. A High-Level Group on Road Safety, constituting of high-ranking representatives from each EUMS national administration, implements the framework. It provides strategic advice to Member States and the Commission works alongside EUMS to determine the KPIs used to measure progress, with an aim to collect comparable data. It also identified where support is needed and provides financial support to EUMS to facilitate work on methodology and measurements where necessary.
- **Assisting Development of National Road Safety Strategies and Action Plans:** The EU High-Level Group on road safety allows for EUMS representatives to share strategies and action plans whereby commonalities are identified as good practice. Future plans include also to with EUMS to monitor implementations progress with an aim to produce a report in the near future. **Evaluation of Road Safety Action Plans:** Interim technical evaluations of the policies and road safety interventions are undertaken which contribute significantly to sharpening the focus on priority areas and developing recommendations to further strengthen the interventions as well as ensuring they align to societal objectives. This influences capacity and investment into road safety. Leading bodies, such as the European Transport Safety Council (ETSC), an independent non-profit making organisation contribute significantly to ensuring KPIs are guided by evidence-based information by

assessing initiatives which identify emerging problems at an early stage and offer an opportunity for shaping additional recommendations where support is needed.

- **Integrated Action:** The EU Road Safety Policy Framework sets out roles and responsibilities of all actors playing a part in road safety and in measuring progress against the KPIs on deaths and serious injuries. Voluntary commitments from all sectors also feature and help to guide stakeholders. This ensures accountability of all stakeholders and encourages an endorsed cooperative approach to reducing road crash fatalities and injuries.
- **Setting Key Performance Indicators:** EU level KPIs are agreed on by Member States and the EC. Many EUMS are already collecting, or, in the near future, planning to collect data for these KPIs and are supported financially by the EC to do so.
- **Universal Data Systems:** EUMS have established a monitoring and evaluation process for evaluating the targets set out by their national plans and by the EC. Structures of support exist for EUMS in the collection and harmonised reporting of disaggregate crash data (The EC CARE database contains details of the around 1 million road crashes per year in the EU that led to death or injury) and a set of KPIs for road safety through a partially EC funded project 'Baseline' (next phase will be known as 'Trendline') which assists authorities in EUMS to build capacity in collecting comparable data. This constitutes the basis for setting targets for the KPIs and monitoring and evaluation progress in road safety at both a national and EU level.
- **Technology Adoption:** EU-wide automation is used in data management, vehicle features, infrastructure, enforcement measures and many more areas offering efficient resources to reducing road safety issues.

4.2 Survey

The collection of data through the literature review allowed for the identification of the following areas and with it the development of a questionnaire distributed to AMS representatives:

- Gaps in data and knowledge
- Need for updated data or clarification
- Validation of collected data

Two surveys were developed for the purpose of this Study:

1. Questionnaire AMS: E-READI Road Transport Dialogue: Survey on the Progress and Updates of AMS in Aligning National Road Safety Policies and Action Plans in Accordance with the Global Plan: Decade of Action for Road Safety 2021-2030 (See Appendix: Questionnaire Survey)
2. Questionnaire EUMS: E-READI Road Transport Dialogue: Survey on EU Best Practice in Aligning National Road Safety Policies and Action Plans in Accordance with the Global Plan Decade of Action for Road Safety 2021-2030

'Questionnaire AMS' was distributed to 27 ASEAN Multi-Sectoral Road Safety Special Working Group (MRSSWG) Focal Points (see Appendix MRSSWG Focal Points). After consultation with DG MOVE, the 'Questionnaire EUMS' was not deemed suitable as a result of survey fatigue amongst the required recipients and was not disseminated. This has not had a consequence to this Study as further desk-research and collaboration with ITF, DG MOVE, and E-READI were able to off-set any related gaps. The development of 'Questionnaire AMS' included the compilation of key survey questions customised according to the findings of the literature review. This includes the identification of gaps in literature and data of AMS, giving Member States an opportunity to update any information given since 2020, as well as comment on their progress specifically toward implementing the GP: DoA 21-30 targets. The structure of the survey followed the 12 VT that feature as part of the GP: DoA 21-30, with the addition of a question on the implementation or need for new road safety related technology.

The Survey formulation was customised according to the target audience and 'Survey Monkey', an online survey tool, was employed ensuring ease of access and a high response rate. The online tool has also allowed for a systematic analysis and has ensured the collection of qualitative and quantitative data through the use of multiple-choice, open-ended and rating scale questions. Of the 27 questionnaires distributed, 16 were returned, including from Cambodia, Lao PDR, Myanmar, Indonesia, Philippines, Brunei Darussalam and Singapore. Of these, 8 were fully completed, from which data has been extrapolated and has been used for the analysis of this phase of data collection. This is a completed response rate of around 30%, which is classified as a 'good' response rate with regard to questionnaire response reviews. Gaps in the collection of data from the questionnaires were further elaborated on in the third data collection phase where interviews took place. It is to be noted that the questionnaire responses form part of a larger triangulation of evidence for a high-quality analysis to take place for this Study.

The questionnaires have allowed for validation of the literature review findings as well as significant updates on data and information found from existing sources. The results from the questionnaires have also developed an understanding of need from AMS in order to successfully align with the GP: DoA 21-30 and the 12 VT, and thereby making a significant contribution to reducing road crash fatalities and serious injuries.

4.2.1 FINDINGS

4.2.1.1 12 Voluntary Target Progress

Questions focusing on areas of support needed by AMS to achieve the 12 VT by 2030 set out as part of the GP: DoA 21-30 shows significant need in areas such as funding, monitoring and evaluation, and stronger laws alongside more effective enforcement (See Figure 5). Other areas of support needed specified by those who answered included: a need for awareness and advocacy campaigns, the establishment of research institutions and growing knowledge on road safety mechanisms, and increased political commitments at higher levels.

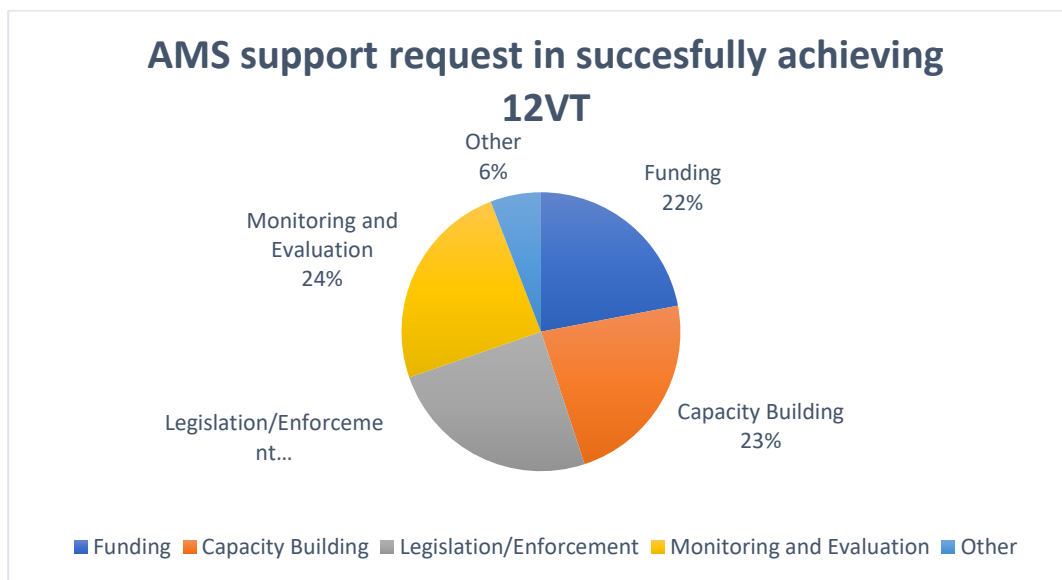


Figure 5: AMS Support Request in Achieving 12 VT

4.2.1.2 Funding

Half of the respondents felt that the national funding available in their countries for road safety was adequate for the effective operation of the lead agency. Similarly, 50% believed that since 2020 new funding sources had been identified to support reaching the national road safety targets in their country.

This included:

- Motor Vehicle Users Charge (MVUC)
- National Road Safety Council
- State Budget

Despite this, some responses indicate that although diverse sources of funding exist, the total does not fully cover what is needed to accomplish the targets set out in the National Road Safety Action Plans.

4.2.1.3 Monitoring and Evaluation

75% of respondents indicated that their road safety database system is computerised and is updated with a variety of data sources:

- Police
- Health and Hospital
- Insurance
- Vehicle and Driver details

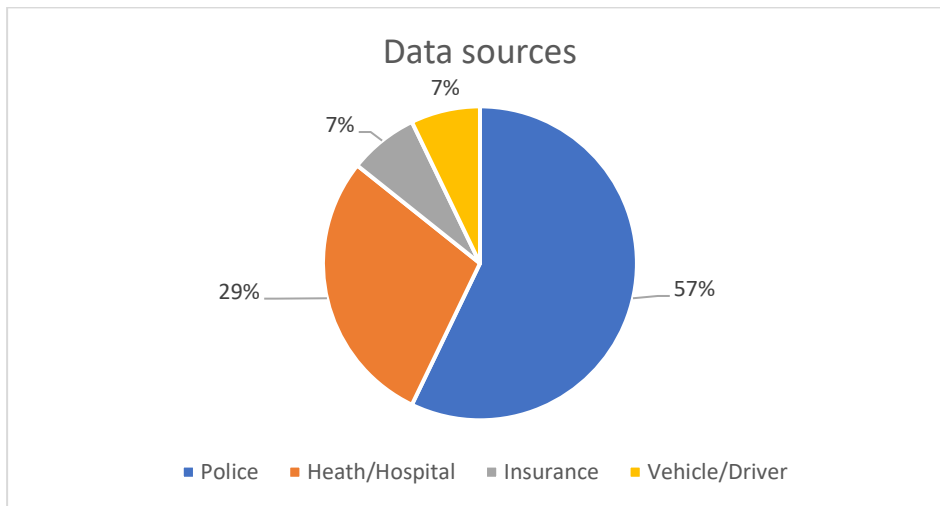


Figure 6: Road Safety Data Sources

Only one AMS (Brunei Darussalam) responded that the data uploaded to the system is updated in real time using the Road Accident Data Enhancement and Development system (RADED) and one AMS reported that the use of DRIVER was being introduced as part of the procedure for reporting crashes.

50% of respondents indicated that the monitoring and evaluation of data occurs on a yearly basis, 25% on a 6 monthly basis and 12.5% on a quarterly basis.

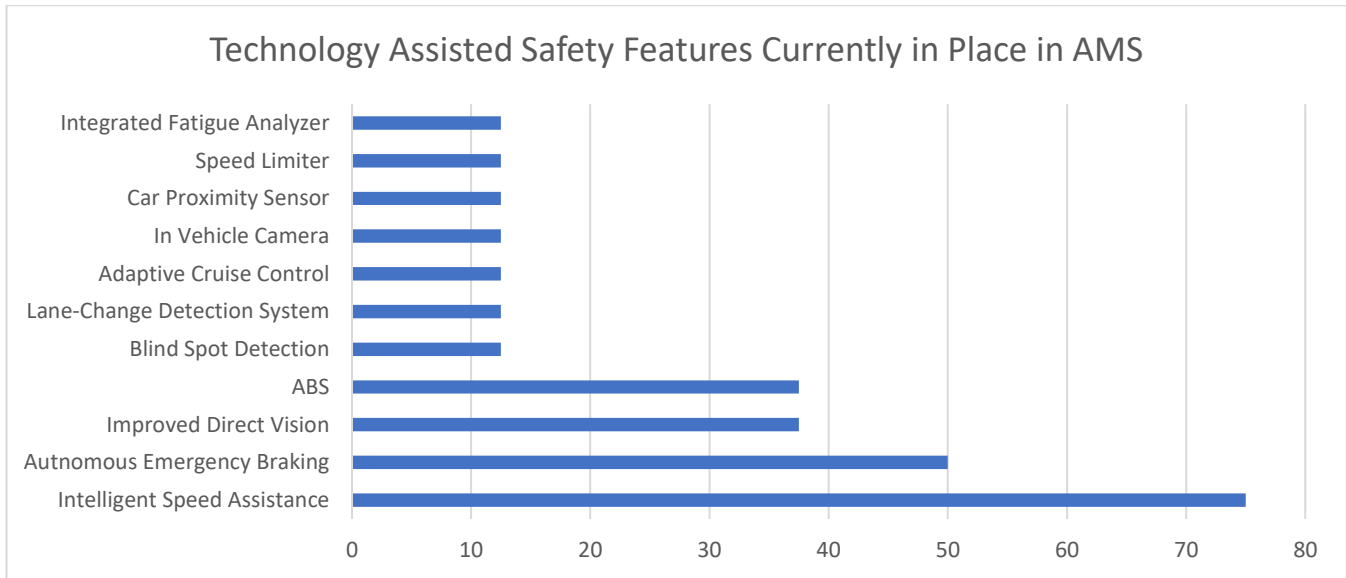
Monitoring and Evaluation was high on the list of priorities for AMS with regard to need for support in delivering a national road safety plan in alignment with the GP: DoA 21-30.

4.2.1.4 Capacity Building

With regard to capacity building, respondents flagged the need for more developed knowledge, closer collaboration with research institutions and experts in the field, and a need for staff training at all levels. When asked if a research institute had been put in place since 2020, 75% responded no with the remaining answering 'partially'.

4.2.1.5 Technology

Technology features as the final element of the survey questionnaire and aims to gauge technological adoption as part of AMS national road safety intervention. Although not an element of the 12 VT, technology features as part of a developed response to road safety and cuts across many of actions referenced in the GP: DoA 21-30.



4.3 Face to Face and Virtual Meetings

As part of the evidence-based research process using a triangulation of data, the third data collection phase consisted of face-to-face interviews held in six selected AMS, as seen below. The visits to AMS gave an opportunity to understand the issues and solutions for accelerating progress towards achieving the targets of the Global Plan, including ascertaining the AMS’ readiness and development of their National Action Plan.

The planning of the Mission was carried out with the assistance of ASEC and E-READI and involved the coordination and arrangements made through the MRSSWG’s leads and focal points. Meetings were held with road safety stakeholders as nominated by the leads and focal points of the MRSSWG.

A briefing took place with E-READI prior to the meetings with AMS and covered the itinerary, agendas and AMS meetings’ content and focus. A briefing sheet was prepared for each AMS (see Appendix: Mission Crib Sheet). The final meeting of the mission was held with E-READI and ASEC and formed a debriefing session for the SNKE to summarise the findings of the meetings with AMS and for ASEC to exchange information on related documents and initiatives such as ‘List of Minimum Set of Road Crash Reporting Data’ as agreed by the MRSSWG and the ‘Five Areas for Road Safety Improvements in ASEAN Countries’ supplied by the UNECE.

AMS	Meeting Date	Representative
Indonesia	10 th Oct 2022	Ministry of Transportation. E-READI
Malaysia	11 th Oct 2022	Unit Keselamatan Pengangkutan Darat, and MIROS, Ministry of Transport.

Cambodia	13 th Oct 2022	Ministry of Public Works and Transport. Road Traffic Safety Department
Lao PDR	15 th Oct 2022	Division of Land Traffic and Driving License Management Ministry of Public Works and Transport
Vietnam	16 th Oct 2022	Road Infrastructure Management and Maintenance Division and Science-Technology, Environment and International Cooperation Division. Department For Roads
Philippines	19 th Oct 2022 20 th Oct 2022	Land Transportation Office-Central Office Department of Transportation Department of Public Works and Highways
Indonesia	21 st Oct 2022	E-READI and ASEC

4.3.1 Overview of Findings

Most AMS had similar issues arising from the challenges that they faced to varying degrees and most AMS voiced similar priorities for their own and others' assistance. They were asked about prioritisation of challenges and prioritisation of suggested interventions and 3rd party assistance. The final question asked was what they would find most helpful to read in the Study recommendations. The overall Study findings purposefully offer a generalised view across AMS without concentrated regard to each of the AMS's distinct issues. In response to this the recommendations that stem from the analysis taken place throughout this Study are designed to be adaptable in order to be actionable by all AMS within their specific environments where such actions may not already be taking place.

4.3.2 Challenges to improving road safety raised by AMS

Roles and Responsibilities

- Lack of clear national processes that can be replicated and adapted to provincial and municipal areas
- Lack of trickle-down effect of knowledge and expertise from national to local areas
- Lack of road safety knowledge and lack of specialists.
- Some AMS reported that representatives at higher level in government are largely absent.
- Few AMS had effective communication conduits with other RS stakeholders and subsequent lack of RS contribution. These may be other Ministries, NGOs, Private sector.

Funding

- Almost all AMS raised concerns about low budget allocations, the management of road safety funds and lack of knowledge how to obtain funds and where to apply.
- Lack of funding and lack of knowledge about advocacy programming to change behaviour both short term and long term

Capacity Building

- Almost all AMS raised concerns over the knowledge of road safety policies and techniques for themselves and colleagues including those on National Road Safety Committees

- Inadequate and inaccurate data collection and management with systems lacking consistency, and comprehensiveness.
- Police coordination issues and erratic crash data results.
- Inadequate systems for collecting and managing data; AMS reported inadequate training for data management staffing.
- Inadequate sources of data (for validation and data cleaning processes ensuring reliable data).

Advocacy

- Poor driving behaviours lead to greater road crash numbers.
- Inadequate knowledge of how to change behaviours effectively including political agreements, funding, and techniques.
- Standards and policies on what is safe are largely absent. Prioritisation of RS issues and impact of actions are not effective as knowledge of decision makers is low with poor data resulting in inadequate remedies (black spot improvements taking RS budgets rather than education and policy on good design for prevention).
- Nearly all AMS had some issues with the police lack of road safety knowledge, lack of training in data production and lack of commitment and enforcement.
- Few AMS had structured procedures for assessing and introducing new technology, its cost, and benefit. There was a lack of understanding on quick wins when adopting new technology.

4.3.3 Mission Conclusions

All AMS were enthusiastic about the work on road safety and were keen to hear about ASEAN initiatives. AMS initiated discussion and ideas on harmonisation, standardisation and cost sharing across the region that could be managed by ASEC.

Most AMS were keen to hear and understand other countries' successes, especially in AMS, and all commented on their concern for the general lack of knowledge of road safety policies and processes of their colleagues, especially the law enforcement agencies. Capacity building was a priority for all.

The AMS road safety initiatives tended to be compartmentalised in that they were usually one agency in one Ministry, sometimes Public Works had the lead, and other times Ministry of Transport or Department for Roads.

The Mission conversations largely co-related and confirmed the findings of the literature review, the survey responses, and the results of previous studies. However, the discussions often opened up underlying issues and causes rather than symptoms of the challenge and exposed the interlinkages that offered an opportunity to understand how to prioritise actions.

Collaboration amongst stakeholders was seldom achieved in practice and the opportunities for assistance and funding from other ministries, NGOs, and the private sector were rarely pursued. There was a general concern about lack of funding, the compartmentalising of funding and lack of research knowledge on valuing interventions and their corresponding impact. Many had little economic evaluation of the cost of road crashes, or cost benefit analyses on interventions.

The Mission, therefore, focused on the main challenges facing AMS and their priorities. The mission was successful in producing a dialogue of what could be done and by whom and how the recommendations could be best shaped to respond to the needs of the AMS.

5 Conclusions

5.1 Overview of Findings

This conclusion sets out the main findings from the triangulation of data collected as part of the data collection phases of this Study. Priority areas for AMS have been identified which have been categorised into respective focus areas as set out by the GP: DoA 21-30.

Attention has also been given to the EU findings as part of this Study, which serve as evidence based best practice for AMS to gain insight and vision for their own solution focused road safety activities. These also serve as a foundation from which recommendations have been developed, adapted to ASEAN experience, capacity and priorities.

Findings indicate that there remains a much-needed focus from global, regional, national and local efforts in reducing the number of road crash related fatalities and injuries worldwide. For AMS there are specific priority areas which must be addressed in order to achieve the most current global target of reducing road related fatalities by 50% by 2030, these are summarised below and elaborated within this chapter:

GP: DoA 21-30 Focus Areas	Identified Priority Areas for AMS
Actions	SMART KPIs across all pillars based on scientific evidence in successful reduction of road crash fatalities and injuries Focus on Motorcycle Safety, Speed, VRU Safety, Enforcement Nationwide, Post-crash response Global Alignment in priority areas
Roles and Responsibilities	Multiple Stakeholder Engagement and Endorsement Cross-sectoral / cross-agency advocacy Multisector, multi-agency and multidiscipline action plans and commitments Legislative and political endorsement Awareness campaigns
Funding	Intervention Value Analysis Road Crash fatalities and injuries cost analysis Effective and coordinated response to gaps in funding – multi-sector opportunities / sources: capacity building for practitioners in developing funding proposals
Capacity Building	Need for Management and Leadership capacity building Research / expert and professional capacity building Forums for knowledge sharing on common issues Data literacy and use capacity needs of all practitioners Use and management of new technology capacity building and training Technical specialist training and development
Data Collection, Monitoring and Evaluation	Universal data collection system Automated / digital database with access to all stakeholders Definition of monitoring and evaluation processes Use of collected data in shaping policy Need for triangulation (or increase in) of data sources Reporting of data and progress on higher level (ASEAN)
Gender	Collect and measure gender balance data within transport sector Better understanding and awareness of nexus: climate change - gender equality – transport and contribution to SDGs as a whole

	Focus on gender differences in relation to road safety needs for potential targeted advocacy / education / response opportunities / understanding of mobility needs Increased access to opportunities for women in transport sector (career development opportunities / pathways from education to work)
New Technology	Use of advanced technologies to be evaluated and integrated as part of the road safety action plan

Table 2: Priority Areas for AMS

5.2 Setting KPIs

The Study has found that there are gaps in setting and measuring suitable KPIs alongside the targets specified in AMS national action plans. Similarly, there is a lack of consistent interim target setting amongst AMS against measurable KPIs.

Learnings from EU practice show the successful impact of EU level set KPIs (See Appendix: Baseline) as a way for both the collection of comparable data across member states and for the identification of implementation needs. This strengthens funding opportunities and capacity building support to ensure progress towards targets is measured effectively and used as part of target and KPI setting in reducing road crash fatalities and injuries. ASEAN and its member states would also benefit from this design, especially in the area of collecting comparable data sets, measuring progress and identifying the capacity support needs to implement KPIs both on a regional and national level. Regional KPI setting, implementing and measuring will directly impact AMS national road safety policies and action plans

For AMS looking to align to the GP: DoA 21-30, adopting these recommended indicators is advisable. ASEAN has an opportunity to include, adapt and develop these indicators as part of a regional strategy and will have an opportunity to monitor road safety performance as a whole following the GP: DoA 21-30. Following the indicators set out for the 12VT also provides AMS with an opportunity to regularly report to the ASEAN Secretariat on road safety statistical data for regional monitoring purposes. AMS would benefit from using the suggested Actions-Outcomes-Impact logic (see Appendix: Actions-Outcomes-Impact Logic) described in 'Towards the 12 Voluntary Global Targets for Road Safety' (see Appendix: 12 voluntary Global Targets) which sets out:

- a) One or more key elements required to achieve the target
- b) Possible ways to measure these elements (indicators)
- c) Possible sources for the data for measurements
- d) A method for calculating the indicators

5.3 Integrated Approach

All evidence suggests the need for an integrated approach to road safety to accomplish the goals and targets set out in the GP: DoA 21-30. This refers to all stakeholders involved in, and affected by road safety such as government, private sector, NGOs and civil society.

- **Government:** AMS are seen to lack sufficient political endorsement for road safety and the efficacy of Lead Agencies is limited. This has an impact on provincial and State level road safety programmes and has led to a lack of resources, guidance, technical expertise and funding from national governments to extend understanding and incorporation of road safety measures into provincial authority and community activities. There is also a deficiency in collaboration across government ministries, such as education and road safety. AMS would benefit from integrating agendas and sharing priorities.

- **Private Sector:** There is currently insufficient/minimal support, a lack in contribution and commitment from the private sector. Throughout AMS there are calls on companies and small and medium sized enterprises (SMEs) in line with the Stockholm Declaration, to pursue the attainment of road safety by applying Safe System principles throughout value chains, including internal practices in procurement, production, and distribution processes (see Appendix: Private Sector and Road Safety Nexus). AMS would benefit from developing government/private sector engagement in the following areas: funding through capital investments and identifying new sources of revenue; manufacturing to comply to safe standards and develop self-monitoring systems for suppliers; insurance companies to create incentives through premium pricing, offering protection to road crash victims, and re-investing in road safety; marketing to communicate safety features and safe driving in line with safety standards and legislation; and professional drivers (commercial fleets) to meet driver training and wellbeing standards (i.e. rest periods and restriction on driving hours).
- **Research Institutions:** There is a considerable need for technical and academic experts' involvement in the development and implementation of national road safety plans and policies. For AMS, this concerns not only building capacity within the academic and research fields and institutions to ensure specialists are trained to maintain high standards and engrain relevant knowledge within their practice, but also building capacity of policy and decision makers in understanding the value of research as a fundamental factor to national plan development and implementation (see Appendix: EU Research Institution Best Practice for example).
- **Civil Society (Advocacy):** There is a lack of funding dedicated to impactful and target driven awareness raising throughout AMS. Behaviour of drivers is a contributory cause for road crash fatalities, which itself is dependent on government approved and shared information, regulations and enforcement throughout AMS, making awareness raising and advocacy to the public a priority area for AMS. This will contribute to the overall advancement of civil society's role in holding governments and public authorities to account, making it a significant stakeholder in road safety action. A collaborative approach involving diverse sectors and agendas (i.e. education or climate change) is an option for AMS to develop an effective, well-funded and competent advocacy campaign.
- **Intersectional Collaboration towards Sustainable Development Goals:** an overall lack of funding and endorsement (both political and public) for road safety interventions has been recognised across all AMS. An effective method to advance the significance and increase funding towards road safety is through enhancing its significance across other global and national agendas, particularly those in line with the UN's Sustainable Development Goals (SDGs), such as the nexus between road safety, sustainable transport, climate change and equal opportunities (See Appendix: UNDG Capacity Building). For ASEAN an important starting point is knowledge and capacity building. Interdisciplinary approaches require an awareness of developmental and geographic context across the region to inform best practice and actions plans

With the involvement of all stakeholders, it will be possible to:

- Bridge the gap between a global vision and national commitments and concrete implementation
- Underscore road safety as a shared responsibility
- Increase collaboration, identify strategies and accountability of stakeholders, and encourage donor and private sector engagement for increased investments
- Allow for a dialogue on investment in road safety
- Allow for cross-sectoral interchange to optimise and streamline road safety strategies

5.4 Effective Enforcement

Enforcement is one of the biggest challenges faced by the majority of AMS. The main reasons for a lack of effective enforcement come as a result of lack of political endorsement, which leads to inadequate general deterrence for drivers breaching legislation, a lack in assigned resources, and a lack in personnel capabilities which contributes to the hindrance in effective enforcement.

Lack of political endorsement is also a leading cause for continued issues around corruption and bribery that occur across AMS with regard to road safety.

A lack of follow-on enforcement is also seen in a number of AMS, where sanctions or penalties induced are not effective enough, such as warning issues, rather than points deducted from a license. The areas most impacted by the lack of effective enforcement in AMS are speeding, the safety of VRUs, driving under the influence of alcohol or other psychoactive substances and now also distraction by mobile phones when driving. There is also a lack of advocacy programmes to make drivers and VRUs understand legislative measures and the consequences of not adhering to them.

The priority areas for AMS to consider when strengthening enforcement are:

- **Technical advances:** adoption of speed cameras and automated fine processing systems that are integrated with universal databases for effective analysis. This must be underpinned by capacity building of practitioners in using new systems and digital / non-digital resources (such as digital tablets, maintenance materials and specialist installation teams).
- **Review and strengthening of legislation:** increase in penalties and inspections, stricter regulations and follow up procedures. This includes road users and the practitioners involved in all levels of road safety implementation (i.e., law enforcement officers and vehicle inspections officials). This must be underpinned by political endorsement, funding and awareness campaigns to educated public and practitioners on changes in legislations and the consequences of violation.
- **Capacity building for practitioners:** Senior practitioners must be aware of what the material legislative opportunities are and be able to make proposals to the government on introducing and implementing legislative changes. Anti-corruption capacity building is an important area, particularly for field based practitioners and should be a priority across all AMS. To understand the gaps in legislative and regulatory system, observations, surveys and evaluation of AMS enforcement should be undertaken regularly to assess the efficacy of all efforts, which in turn will allow for both an acknowledgement of its impact and an understanding of where refinements are applicable to strengthen efforts.

5.5 Global Alignment

There remains little progress in the accession and adoption of global conventions and legal standards for AMS, particularly with regard to the core road safety related UN legal instruments (see Appendix: UN Road Safety Conventions and Road Safety Instruments,) which prove to be an effective starting point in the reduction of national level road crash fatalities and injuries. Particular attention amongst AMS should also be given to the UNECE WP 29 (World Forum for Harmonisation of Vehicle Regulation).

In order to achieve this, AMS would benefit from developing and building capacity in the following areas:

- **Collaboration** and partnership among global bodies, regional cooperation networks and subregional institutions, active in the field of road safety: each play a significant role in providing assistance, advice and support to policymakers and road safety practitioners in the effective implementation of relevant legal instruments.

- **Standardisation:** alignment of AMS policies and procedures across ASEAN to international standards: agreed best practice amongst all members that improves uniformity of data management, collection, monitoring and evaluation systems making it possible to highlight and understand more complex road safety issues and subsequently determine coordinated, strengthened and relevant solutions.

5.6 Universal Data Systems

A consistent outcome of the research undertaken is a need for a universal data collection tool, together with training for all practitioners on how to use it and how to extract from it the information needed to establish baseline assessments and KPIs that link to achievable targets. Levels of implementation and adoption of this monitoring and evaluation process differ across AMS, with some well on the way to realising this, and others adopting the technology but not the training to use it.

Another area in need of attention is the diversification of data sources. Police are currently the main data contributors of road crash data in AMS. More sources are required, including but not limited to hospital, vehicle registration and insurance data.

A lack in resources currently impacts how data is collected and how it is used and evaluated as part of the next stages of data validation and processing. The requirements for the collection of crash data in comparison to the collection of data against KPIs for example is considerably different, though equally as important. The digitalisation of data processes is taking place across AMS and is rising to this challenge, however a lack in capacity for using new technology, software, materials and processes both for collecting the data and analysing it, has proven more difficult.

Trained practitioners, technical assistance and frameworks that support the required processes, including universal guidelines and training on what and how data should be reported, legal frameworks that support the obligation of collecting and reporting data, and available resources such as easy use portable digital tablets that connect to the required database will prove useful to AMS in strengthening this area.

Another area of concern to road safety practitioners in AMS is the lack of, or inconsistency of reporting with regard to results of monitoring and evaluation of the data. This in turn is a cause for a lack of awareness, both on a high and low level, for road crash fatality impact on social and economic status of a country.

5.7 Capacity Building

Capacity building remains a key area for AMS in strengthening road safety initiatives and cuts across all stakeholders and interventions. Progress has been made in identifying where capacity building priorities lie, however more needs to be done to meet these needs, both nationally and regionally.

Areas of interest for targeted capacity building for AMS are listed below and particularly concern interest in areas such as smart transport, safety assessments, auditing, education and specialisation, international good practice knowledge sharing opportunities, universal data system operation, scientific research on behaviour change, and government agency and policy maker training.

- **Leadership and management:** training with the objective of strengthening road safety knowledge, particularly regarding the social and economic impact of road crash fatalities and strategy and operations development, as well as also a better understanding of the national road safety plan implementation process

- **Field based technical and experts:** legislative and policy training, database use and systems training, auditing and evaluation training, and an increase in collaborative work across experts and practitioners
- **Research institutions and universities:** relevant research of road safety mechanisms and development of research institutes in order to lead on a comprehensive multisectoral national road safety action plan with time bound targets
- **Data collection and management:** training on systems use, digital resources use, understanding KPIs and use of data, multi-source collaboration and awareness of all roles
- **Costing and value for money assessments:** cost analysis training, funding proposal development training
- **Knowledge sharing and evidence-based knowledge building:** EU and other similar Nation States portfolio of best practice capacity building for AMS to adapt and implement

AMS would benefit from developing and undertaking universal capacity audits in each of the above areas using integrated programmes for capacity development (see Appendix: UNDG Capacity Building)

5.8 Diversification of Funding Streams

Road Safety remains underfunded throughout AMS with little use of alternate funding opportunities to enhance interventions (see 'Integrated Approach'). The Study also found that government funding for road safety would benefit from being more effectively ring fenced when budgets are shared across ministries. Allocated road safety funding can be used by a number of departments if outcomes impact road use. This not only diminishes funding and resources for targeted road safety action but also waters down the impacts of other initiatives due to this shared budgeting.

There is a need for both the identification of diverse funding streams and enhanced capacity building for practitioners and senior management, in how to develop funding plans using intervention cost value analysis.

With regard to funding opportunities, the following options should be proactively explored by each AMS:

- **Domestic level:** other revenue sources including fuel taxes, insurance for vehicles, vehicle customs, registration licenses and speeding tickets.
- **International level:** options include private sector resources, philanthropic activities, such as Road Safety Grants Programme and the Bloomberg Initiative for Global Road Safety (BIGRS), international development initiatives, donations, and innovative forms of financing tools, such as green bonds and debt-for-nature swaps

An area AMS could also benefit from with regard to funding opportunities is through the identification of NGOs or other non-governmental agencies working to minimise road traffic accidents. A combined funding approach could lead to more impactful interventions and more successful achievements.

AMS would benefit from developing knowledge and expertise in understanding the most cost-effective evidence-based solutions to road safety issues that can be met with available budgets. The complexity of the funding environment is a barrier to many AMS accessing support. Building capacity within senior management teams and government officials will lead to an increase in funding opportunities. The use of evidence based best practice examples from EUMS or regionally similar nation states that have implemented cost effective solutions with finite budgets could prove advantageous when building solutions (see Appendix: World Bank Private Capital Mobilisation Process).

5.9 Gender Perspectives in Transport Planning

Based on the results of this Study, AMS have not yet prioritised gender as part of their road safety planning. Despite this, it is apparent that as part of the data collected gender is measured and acknowledged with men predominantly featuring as those involved in road crash fatalities and injuries.

Despite this, gender does not yet feature in the policy and intervention development for road safety initiatives, with little or no commitment to focusing on this area in the near future. It will be important for AMS to understand the value of gender inclusivity within road safety action planning, development and implementation, and for the leading agencies to understand their role in aligning gender equality goals to international standards and to the goals for road safety.

5.10 Adopting New Technology

AMS differ with regard to their response to the adoption of new technology to enhance their national road safety responses. In some cases, the use and implementation of new technology to assist with road safety initiatives feature only as part of long-term national plans rather than being part of more immediate priorities for road safety. Funding and high costs associated with resources and capacity building on use of new technology are reasons for the longer-term vision for the implementation of smart transport systems (see Diversification of Funding Sources).

A prominent issue that has been identified across the majority of AMS is the hesitation or reluctance to accelerate the uptake of technology such as Anti-Lock Braking Systems (ABS) for two-wheeled vehicles. The rate of motorcycle road fatalities in the ASEAN region is one of the highest in the world. Crash avoidance technologies such as ABS can make a potentially lifesaving difference, increasing rider stability, reducing stopping distances and decreasing rider fatalities by more than 30%. Many studies on the effectiveness of ABS as a road safety intervention exist with varied results, but overall is seen as statistically significant in reducing the number of crashes, when all levels of severity and types of crashes are considered as a whole. This adds to the continuous discourse around ABS, and despite this overall result, its penetration across AMS has been low due to the absence of government legislation and consumer awareness. The increase in costs to consumers in relation to purchasing new motorcycles that are ABS equipped is also a leading deterrence, as well as the improbable willingness of ABS fitment for pre-owned motorcycles, due to the costs this would add to drivers and the mass volume of these vehicle types across AMS. For this reason, the recommendation to instate ABS across all AMS is currently not set as a priority when looked at in comparison to more impactful interventions.

Despite resource associated challenges, there are quick wins associated to adopting and enhancing infrastructure, vehicle and data technology:

- the danger and frequency of accidents between trucks and Vulnerable Road Users could be significantly reduced through the widespread use of vehicle turning alerts. An example of this is alerts in the form of automated announcements are set to native languages, such as 'vehicle turning left', in order to alert VRU of the turning trucks. This would also require corresponding legislation for the registration of new trucks.
- Basic infrastructure needs to be provided by governments to ensure the most rapid and successful deployment of ITS safety technologies. One example of this is digital road maps and the location-identifying infrastructure that can motivate the development and deployment of location-based safety technologies. Other examples might be any roadside hardware or technology that would eventually be needed for vehicle/infrastructure co-operative systems. The presence of such hardware can in itself be a motivation for technological innovation and deployment.

6 Recommendations

The following section covers general recommendations to AMS. Some Member States have already, or plan to action areas of the following content on the three priority areas, the UNECE priority areas and the 12 VT.

6.1 Priority Areas and Recommendations

Priority Area 1: Data, Monitoring and Evaluation

Recommendation: To implement the use of a uniform electronic data collection and management system for collecting and managing road safety data at a national and regional level.

- A Minimum Set Data system such as DRIVER is recommended as the suggested data collection tool due to its comprehensive nature (this includes also the requirement and adoption of supporting policy and legal structures, The partial use already across AMS, and the opportunities available to AMS in access funding support in implementing the system as well as the capacity building around its use.
- Funding options in addition to those made available through DRIVER must be established to ensure all resources, training and regional roll out is ensured.
- Training programmes should be designed and include rollout to urban and rural areas.
- Data sources must be increased to include at a minimum: road traffic police data, health / hospital data, licensing and registration data, insurance data, road infrastructure data.
- Access to data sets/database must be made available to all stakeholders.
- Integration process of multiple stakeholders must be defined with collaborative training programmes and guidelines issued on how data should be registered (e.g. If road crash victim dies at the hospital rather than at the scene of the crash, the accountable body must register the death depending on the agreed process).
- All stakeholder decision makers, management and leadership must be made aware of the importance and impact this data system will make on road safety with regard to economic and social value.
- It is recommended that with regard to measuring progress against national road safety targets the data collected is measured against KPIs outlined as part of the 12VT and are to be used both nationally and regionally with data is reported to ASEAN Secretariat as part of overarching monitoring and evaluating progress to achieving regional targets and identifying gaps in capacity.
- Data literacy capacity building is a priority for practitioners and clear and universal guidelines should be issued as part of capacity building process for all stakeholders both inputting and evaluating data.
- Timebound target should be assigned to the implementation of this recommendation and interim targets identified to ensure progress is managed.
- Agreed and uniform data should be reported to ASEC and interim data reporting deadlines should be determined to learn where discrepancies could occur, allowing for early mitigation.
- Reviews of data collection system should take place regularly.
- Analysis should be undertaken of available funding and support resources available to AMS in developing capacity and integrating use of universal data system.
- On-ground practitioners and data collectors to undergo training on importance and significance of data collection purpose. In some cases, 'championing' practitioners who have excellent track record in collecting and updating data has a positive effect on other practitioners.
- Implementation and adoption of automated infrastructure technology to provide consistent and reliable data in certain areas of road safety (camera to identify: speeding, vehicle registration).
- Legal frameworks should be reviewed and developed to ensure the collection of data follows agreed process.

Priority Area 2: Capacity Building

Recommendation: To build capacity in understanding and analysing the cost, impact and value of road safety interventions for better road safety planning and funding.

- Development of a capacity building strategy will be necessary putting forward a set of common principles for measuring funding capacity development for all AMS.
- Leading research institution, or leading experts in cost analysis and road safety should be selected to provide evidence-based research.
- Cost analysis of current road safety condition and its impact on the social and economic status of each AMS should be undertaken and submitted to ASEC. A projection should also be made to understand continued impact if road crash fatalities and injuries are not reduced.
- Tailored training programmes for leadership and management officials on cost implication of road fatalities and injuries and the cross sectoral impact (health, social, economic). These should be facilitated and led by experts and professionals.
- Tailored training programmes to be developed for decision makers on how to use evidence-based results in road safety planning.
- Evaluation of prospect funders and available resources with regard to capacity building and road safety operations to be collated and shared amongst AMS with regard to programmes and availability of funding.

Priority Area 3: Behaviour Change

Recommendation: To develop effective public awareness campaigns to drive behavioural change of road users.

- Development of shared database accessible to all AMS containing global best practice, guidelines, techniques and examples of road safety advocacy, awareness raising and behaviour change programmes.
- Consideration could be given to a future project on Stakeholder mapping of NGO and private sector activity across ASEAN operating in cross-sector fields related to SDGs and road safety (such as climate change, gender equality, access to opportunities, sustainable cities, and health and wellbeing). This may well be supported by international organisations. From this partnership and collaboration proposals can be developed with more opportunities for developing road safety advocacy.
- Comprehensive behaviour-change strategies developed to include linked awareness and enforcement plans.
- Development of education sector partnership through establishing shared agenda.
- Evaluation of data collected to identify patterns of behaviour in road crashes. This is to be used to develop more targeted approach to reaching new audiences and potential partners, as well as developing awareness raising activities. This will also help to identify when in the year activities should take place.
- Evaluation of social platforms and other resources effective in reaching wide audiences followed by the development of frequent social media / marketing campaigns with pre-determined targets. This presents a significant opportunity for partnership work and funding.
- Partnership agreements developed as part of partnership work with clear timebound targets and accountability assigned to each stakeholder.

6.2 Recommendations against UNECE Priority Areas

UNECE Priority Area 1: Support ASEAN members with participation in Asia-Pacific Road Safety Observatory (APRSO) to improve road safety data. Effort led by WB, ITF, WHO and FIA.

Recommendations:

- See **Priority Area 1: Data, Monitoring and Evaluation: Develop Regional Uniform Electronic Data Collection and Management System.**

UNECE Priority Area 2: Promote safety of powered-two wheelers through adoption and implementation of UN helmet standard among ASEAN countries, namely UN regulation No. 22.

Recommendations:

- See: **VT7: Helmets:** By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%

UNECE Priority Area 3: Encourage ASEAN members to address safety and emissions of used vehicles market.

Recommendations:

- See: **VT 5: Vehicle Standards:** By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognised national performance requirements.

UNECE Priority Area 4: Promote the use of cleaner modes of mobility including Public Transport and Non-motorised transport.

Recommendations:

- Establish research association for sustainable multi-modal mobility committed to providing scientific competence, knowledge, advice to shape policy and programmes that move ASEAN to a green, safe, inclusive transport system.
- A focus on VRU and ensuring new road infrastructure is evaluated with VRU lens.
- ASEAN Smart Cities Network (ASCN) to continue to facilitate cooperation on smart cities development, catalyse bankable projects with the private sector, and secure funding and support from ASEAN’s external partners. As part of this capacity building activities should be undertaken by ASCN in specific priority areas and sharing best practice across AMS.

UNECE Priority Area 5: Encourage supporting ASEAN members to accede to all seven UN Road Safety conventions and its successful implementation.

Recommendations:

- See: **VT2: Global Alignment:** By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

6.3 Recommendations against 12 Voluntary Targets

The Study has developed the following recommendations for AMS to take forward in aligning their national road safety action plans to the GP: DoA 21-30. An overarching recommendation in line with achieving the 12VT is to generate a workplan which could be co-produced by all AMS as part of the workshop associated to this Study,

VT1: National Action Plan: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.
Current Status: Likely to be achieved
Priority Area of Support: Monitoring and Evaluation
Short Term Recommendations: <ul style="list-style-type: none"> • Adoption of interim targets and specific KPIs against identified baselines. Suggestion is to use 2019 figures as a baseline due to Covid-19 related disparities in transport use. Appropriate KPIs will be identifiable and short term/long term targets will be put in place in order to project tangible impact of national road safety action plan.

- Adoption of universally accessible database (such as DRIVER). A preferable outcome is for all AMS to use the same system. Based on this it will be possible to identify funding/support opportunities for implementation and use. Data literacy capacity building programme should be identified and funding should be allocated for meaningful results.
- Safe System Approach, all Five Pillars of Road Safety as well as the linked 12 VTs need to be addressed within national road safety plans, with timebound measurable KPIs and specific allocation of budget to ensure all are achievable.
- Progress on KPIs and the impact of the national road safety plan should be measured more frequently and results to be reported to ASEAN in order to evaluate progress made on a regional scale as well as nationally. Access to data collected should be universal across all stakeholders.
- Training on impact of National Road Safety Action Plan and implementation value analysis for decision makers.

Long term Recommendations

- Increase in frequency of regional level ASEAN-led meetings to be held to ensure regional solution focused approach can take place. This will enable gaps, areas of need for support, and appropriate appointment of support systems/approaches to be identified.
- Cross sectoral integrated approach for assigning budgets and delivering action plans (i.e., responding to the climate change, equal opportunities and transport nexus).
- Stronger partnerships built across all sectors to deliver road safety action plan (private sector, education sector and NGOs).

VT2: Global Alignment: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

Current Status: Somewhat likely to be achieved

Priority Area of Support: Capacity Building

Short Term Recommendations:

- As a priority, AMS to adopt improved vehicle standards to UNECE WP 29 (World Forum for Harmonization of Vehicle Regulation).
- In order to adopt successfully the following recommendations should be followed:
 - Translate the legal instrument into the national language;
 - Conduct and provide a cost-benefit analysis, outlining the fiscal and human resources required for implementation;
 - Determine a list of any required national legal reforms;
 - Consult with industry and civil society to ensure full transparency and legal certainty for professionals in fields affected by the new rules

Long Term Recommendations:

- AMS to adopt all 59 UN Conventions for Road Safety, giving priority to 7 road safety instruments listed below, following the above process recommendations:
 - 1968 Convention on Road Traffic;
 - 1968 Convention on Road Signs and Signals;
 - 1958 Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations;
 - 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles;

- 1998 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts;
- 1957 Agreement concerning the International Carriage of Dangerous Goods by Road (ADR);
- 1970 European Agreement concerning the Work of Crews of Vehicles Engage in International Road Transport (AETR).

VT3: New Roads: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three-star rating or more.

Current Status: Somewhat likely to be achieved

Priority Area of Support: Funding; Capacity Building; Monitoring and Evaluation

Short Term Recommendations:

- Star Rating targets to been included in all AMS National Road Safety Plans for all roads built from 2023 and more than 75% of motor vehicle journeys to meet 3-star road standards using the iRAP assessment approach
- Decision maker and technical teams to undertake iRAP Training with the support of iRAP

Long Term Recommendations:

- Knowledge sharing across ASEAN from MyRAP and ThaiRAP (see Appendix: iRAP) to advance relatable best practice.

VT4: Existing Roads: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.

Current Status: Somewhat likely to be achieved

Short Term Recommendations:

- Develop prospect funders to support investment (such as: UN Global Road Safety Fund, FIA School Assessment Grant Scheme, GRSP Road Safety Grants Programme);
- With the support of iRAP, adopt the use and implementation of risk mapping on national road networks with appropriate funding to ensure this is achievable;
- Identify the road network to be targeted and undertaking a base-line survey. With knowledge of the existing performance of the road network, appropriate targets and investment levels can be explored to ensure an informed and achievable target;
- Partner-led iRAP programme to assess the informed target of existing roads by 2030

Long Term Recommendations:

- Develop collected data, analytics and evaluation into communication sources to celebrate and advocate success.

VT 5: Vehicle Standards: By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognised national performance requirements.

Current Status: Somewhat likely to be achieved

Priority Area of Support: Funding; Enforcement; Capacity Building

Short Term Recommendations:

- Review and update of vehicle standards legislation and policy (such as more frequent inspections and define life end of older vehicles that no longer meet specifications)

<ul style="list-style-type: none"> • Build stronger partnerships through development and sharing of standards and guidelines with private sector (manufacturing and shipping, incl. for the transnational transportation of goods) • Capacity building and training for practitioners in assessing vehicle safety standards
<p>Long Term Recommendations:</p> <ul style="list-style-type: none"> • Adoption of technology to improve assessment in line with other AMS (cooperative) • Adoption of smart active and passive in-vehicle technology for safer vehicles and the policies and legislation that will accompany any changes • Develop international partnership and agreements on imported vehicle standards • Vehicle testing regimes to be compatible and universal across all AMS

VT6: Speeding: By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.

Current Status: likely to be achieved

Priority Area of Support: Funding; Enforcement

<p>Short Term Recommendations:</p> <ul style="list-style-type: none"> • Automated Infrastructure technology modernisation to better monitor speeding and develop automated enforcement opportunities (speed camera deployment) as well as mobile checks across the network; • Increase capacity of enforcement practitioners; • Increase penalties, fines and better follow-up of fines issued (this should also be considered regarding cross border violations). Fines to be implemented as part of a funding stream for Road Safety National Action Plan; • Develop national and ASEAN based awareness raising programmes to better educate on consequences of speeding. This should coincide with new policy/penalty increases to ensure public are aware of changes.
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<p>Long Term Recommendations:</p> <ul style="list-style-type: none"> • National review of speed restrictions and limits and development of national enforcement plan. This is to set out measurable targets to be measured each year through the use of an automated and universal data system; • Research and evaluation of impact of infrastructure calming measures for accident prone areas; • Evaluate areas most in need of special areas (such as schools) and ensure funding sources are appropriate to ensure realistic outcome against KPIs; • Best practice and national enforcement plan to be shared with other AMS; • Channel revenue from enforcement activity back into Road Safety; • Champion good practice amongst enforcement officers

VT7: Helmets: By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.

Current Status: Likely to be achieved

Priority Area of Support: Enforcement; Monitoring and Evaluation

<p>Short Term Recommendations:</p> <ul style="list-style-type: none"> • Adoption and implementation of UN helmet standard (Regulation 22); • Develop stronger partnership with private, education sector and NGOs to build and deliver advocacy and awareness programmes, and youth engagement workshops, to young people on the advantages of helmet wearing / consequences of not, new policies and legislation and how they can become actively engaged in advocacy programmes themselves; • Increase penalties and fines for non-compliance; • Employment and use of an automated data system for tracking and penalty issue.
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<p>Long Term Recommendations:</p> <ul style="list-style-type: none"> • Review current legislation on helmet wearing, including passenger and children • Cross-sectional ASEAN wide awareness campaigns

VT8: Vehicle Occupant Protection: By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.

Current Status: Somewhat likely to be achieved

Priority Area of Support: Funding, Capacity Building; Enforcement; Monitoring and Evaluation

<p>Short Term Recommendations:</p> <ul style="list-style-type: none"> • Increase penalties and fines for non-compliance to more than a warning: the penalties for non-compliance must be followed-up with effective, proportionate and dissuasive sanctions. • Proactive enforcement tasks should take place more than 3 times per year. Data to be collected with automated upload in universal and combined database.
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<p>Long Term Recommendations:</p> <ul style="list-style-type: none"> • Cross border enforcement • Best practice to be shared across ASEAN
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VT9: Impaired Driving: By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.

Current Status: Somewhat likely to be achieved

Priority Area of Support: Funding, Capacity Building; Enforcement; Monitoring and Evaluation

<p>Short Term Recommendations:</p> <ul style="list-style-type: none"> • Develop more effective follow-up process for non-compliance, such as imposing remedial measures for individuals with structural drinking problems and designing automated database for more effective enforcement; • Randomised breathalysing screening should be carried out regularly and where accidents occur as a result of impaired driving ensure all enforcement officers carry and undertake a breathalysing test; • Develop cross-sectoral targeted awareness campaigns using existing data on impaired driving

<p>Long Term Recommendations:</p> <ul style="list-style-type: none"> • Cross border exchange of information on road traffic violations to be reported through automated systems shared across AMS.
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VT 10: Distraction: By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.

Current Status: Somewhat likely to be achieved

Priority Area of Support: Enforcement

Priority Area of Support: Enforcement

<p>Short Term Recommendations:</p> <ul style="list-style-type: none"> • Development of legislation specifications on mobile phone distraction whilst driving. The sharing of best practice solutions internationally should be taken into consideration during this process; • Capacity building of enforcement process and practitioners on data collection using universal database.

<p>Long Term Recommendations:</p> <ul style="list-style-type: none"> • Comprehensive and relevant research undertaken by research institute to provide evidence to further strengthen decision making practice and enforcement prioritisation on distraction.

VT 11: Professional Drivers: By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.
Current Status: Somewhat likely to be achieved
Priority Area of Support: Enforcement; Monitoring and Evaluation
Short Term Recommendations: <ul style="list-style-type: none"> • Multi-sector development of universal guidelines shared with all users of professional vehicles. Additional recommendation is for official pledges to be made by all contractors ensuring the use and following of issued guidelines; • Automated dataflow through installation of video technology/camera use inside vehicle fleets to regulate and monitor professional driver behaviour to mitigate crashes; and determine accountability and evidence post-crash.
Long Term Recommendations: <ul style="list-style-type: none"> • Training and certification systems to be developed using evidence based best practice led by research institution. This to be delivered and assessed as a universal guiding practice by selected competent body.

VT12: Timely Emergency Care: By 2030, all countries establish and achieve national targets in order to minimize the time interval between a road traffic crash and the provision of first professional emergency care.
Current Status: Somewhat likely to be achieved
Priority Area of Support: Capacity Building
Short Term Recommendations: <ul style="list-style-type: none"> • Appointment of lead agencies/partnerships to undertake the effective coordination of provisions of pre-hospital and facility-based emergency medical services. Collaboration agreements and protocols on responsibilities may be required to ensure effective collaboration.
Long Term Recommendations: <ul style="list-style-type: none"> • Service specific training to build capacity in responding to crashes, including police on conducting investigation, fire service on removal of debris process; and ambulance personnel in medical support. Joint exercises as part of this training are recommended.

6.4 Recommendations to ASEAN Secretariat and E-READI on the next steps for dialogue and exchanges between EU and ASEAN

Knowledge and Capacity Building Coordination

AMS will benefit from regionally focused knowledge and capacity sharing opportunities, both amongst AMS and with the EU. Areas such as solution focused best practice examples, value-for-money governance, funding opportunities and access and guidelines in data management should be facilitated at a regional level for AMS to regularly engage with.

Regionally Focused KPIs for 12 Voluntary Targets

It is strongly recommended to establish regionally focused KPIs that should be adopted, evaluated and reported on universally by AMS to measure comparable data within the region. This will also allow for the identification of where support to AMS is most needed in progressing road safety action plans and should be the beginning process for developing solution focused support to these areas, similar to the

responsibilities of the EC and the EUMS. A distinction between the collection of crash data and data on progress against KPIs must be made as collection methods differ, along with distinctive database requirements and reporting methods.

Coordination of Funding Opportunities

Regional support should also include the development of funder databases, for AMS to access information suitable to developing funding proposals in line with their strategy needs. Knowledge sharing and access to data (such as technological adoption best practice, funding availability, guidelines on data use and management and capacity building resources) should be managed on a regional level, with regular meetings attended by AMS representatives. Training, capacity building and resource sharing is recommended during these meetings to ensure value to AMS and ASEAN in reducing road crash fatalities and injuries.

Regional High-Level Groups

ASEC should consider support for AMS in regularly bringing together high-ranking representatives from each AMS to shape regional road safety frameworks to be implemented by the member States. This should also offer opportunities for sharing best practice, successful implementation and strategic advice amongst AMS.

Advice on Road Safety Action Plans

ASEC should also consider undertaking advice for the policies and strategies that AMS aim to deliver. This allows for an assessment of initiatives, measuring progress with an opportunity to further develop and strengthen the plans and activities being carried out. This also allows for the identification of areas in need of intensified support, redistributing resources, and solution-focused action plans.

Universal Data Systems

ASEC should consider the promotion and adoption of a region-wide comparable universal data collection and management system. The statistics resulting from this system could be managed and reported by ASEC.

Technology Adoption

ASEC could coordinate regional research institutions to assess the most relevant and viable technological advances for the priority needs of evidence-based based best practice should be considered when evaluating value, impact and the support mechanisms that must be put in place to ensure they are effective. Better incentives for the adoption of technology should also be developed for the consumers / drivers.

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8 Appendices

8.1 Appendix: Five Pillars of Road Safety



8.2 Appendix: GP: DoA 21-30



8.3 Appendix: 12 Voluntary Global Targets



TARGET 1
2020

Target 1: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.



TARGET 2
2030

Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.



TARGET 3
2030

Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.



TARGET 4
2030

Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.



TARGET 5
2030

Target 5: By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements.



TARGET 6
2030

Target 6: By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.



TARGET 7
2030

Target 7: By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.



TARGET 8
2030

Target 8: By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.



TARGET 9
2030

Target 9: By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.



TARGET 10
2030

Target 10: By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.



TARGET 11
2030

Target 11: By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.



TARGET 12
2030

Target 12: By 2030, all countries establish and achieve national targets in order to minimize the time interval between road traffic crash and the provision of first professional emergency care.

8.4 Appendix: Case Studies

EU Case Study: Replicating Sweden and 'Vision Zero'

Since launching the 'Safe Systems Approach' Sweden has seen steady reductions in both fatal and non-fatal road traffic crashes. A reason for this steady reduction can be linked to the introduction of 'Vision Zero' in 1997, a concept that originated in Sweden. This is a framework that sets milestone markers and recommendations to achieving a goal of zero road fatalities and strives to compensate for human errors through the implementation of a holistic, systemwide approach to road safety. Since its successful adoption in Sweden, many countries are moving towards this approach, in particular the EU, where most member states have developed national programmes, strategies and policies based on the baseline of Vision Zero. See ITF, 2018: *Zero Road Deaths and Serious Injuries Leading a Paradigm Shift to a Safe System*

Malaysian Institute of Road Safety Research (MIROS)

Provides knowledge on the road safety in AMS.

This includes information on the following: traffic laws and regulations, road **accident crash** data, road transport data, vehicle regulations concerning standard and inspections, driver training and driver testing, traffic police activities, road safety training in schools, road safety information/campaigns to the community.

ASEAN Case Study: Triangulation of Data in Thailand

As a result of international and regional commitments to Road Safety targets, Thailand was able to identify and address discrepancies between data sets and reporting road crash fatalities. 2013 showed this discrepancy in estimated deaths recorded as a result of road crashes, Thailand's estimate came to 14,789, and the WHO's estimate at 26,312. 'Ill-defined' causes of death within the registration system of Thailand's Ministry of Health were identified as a reason for the found discrepancy. To rectify this, a process of triangulation using three data sources (Police Information System, Central Insurance Company and Vital Registration of Death) have brought the estimate report much closer to that of the WHO. In 2016: the WHO estimated 22,491 deaths and Thailand, now using a triangulation of data sets, estimated 21,745. see: *ITF, 2019: Road Traffic Fatality Data integration: Thailand's Experience and Insights*

iRAP Case Study: Malaysia

The Malaysian Highway Authority KPI for highway safety improvements requires all concession companies to undertake improvements based on iRAP recommendations. A KPI target has been set for 5 highways per year to initiate safety improvement planning and implementation works.

Malaysia was the first company to receive ISO 39001:2012 certification for road traffic safety management systems and noted iRAP as the benchmark for safety improvement.

MIROS is one of 11 iRAP Centres of Excellence helping to guide the development of the global road infrastructure safety standard and tools.

Case Study France: Enforcement Laws for Pedestrians and driving under the influence.

A new decree released in 2018 details penalty increases for drivers in response to the evaluation of data on pedestrians involved in 517 road crash fatalities in 2017.

A priority for the new laws is to protect vulnerable road users, namely pedestrians. The laws call for an increased penalty of six points against the previous 4 to drivers' licenses where pedestrian priority is not respected. It also sets out the authority for law enforcement officers to forbid anyone convicted of an alcohol related offence from driving; those found driving despite this risk losing their license completely.

Other rules instigated by these enforcement laws include drivers facing the removal of three points from their drivers' license if found with too many passengers in the car, and an increase in law enforcement officers' authority to record driving infractions without stopping the vehicle involved.

Case Study Poland: New Enforcement Laws on driving under the influence.

Cars will be confiscated from those convicted of driving with excess alcohol or other impairing drugs in their bloodstream under new rules approved by parliament in Poland.

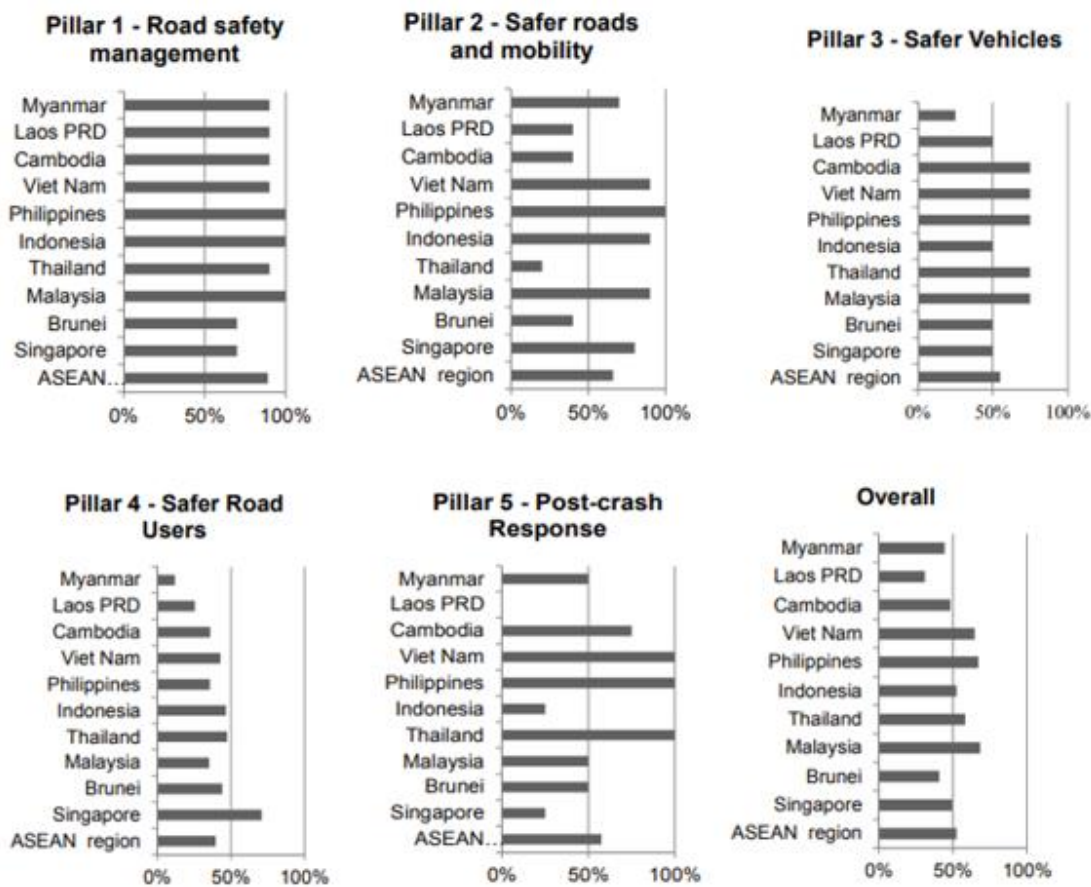
Anyone caught with 0.15% of alcohol in their blood or anyone who causes ~~a crash~~ an accident with at least 0.05% of alcohol in their blood will have their vehicle transferred to the ownership of the state. Under Polish law, the drink-driving limit is 0.02% of alcohol in the blood.

If a drink driver's car is destroyed in a ~~crash~~ accident, or if it does not belong to them, they will have to pay a fine equivalent to the value of the vehicle.

The new measures are among a number of recent steps taken to improve safety in Poland, which has one of the EU's highest rates of road deaths.

8.5 Appendix: AMS Progress in implementing Five Pillars

Their progress in implementing actions under these Five Pillars can be seen below. (The value of the index per pillar ranges from 0 to 100%, and it takes into account whether there is a total, partial or non-implementation of the actions under that pillar.)



8.6 Appendix: Regional Strategies and Recommendations

This 2016 Regional Strategy also sets out a strategic direction for AMS to consider when strengthening their commitment to road safety, and are areas that have since been prioritised by AMS in their road safety efforts:

- Harmonisation of standards, road rules and legislation
- Capacity building
- Knowledge development through research and evaluation
- Monitoring and reporting progress

As a unique sub region, ASEAN Member States also belong to other organisations, such as Asia Pacific Economic Forum (APEC) and the United Nations Economic and Social Commission for Asia and the Pacific. AMS also fall under broader South East Asia Regional Strategies, such as those compiled by The World Health Organisation (WHO). The purpose of this particular strategy is to minimise the burden of road traffic injury in the SEA Region based on the evidence generated by the Second Global Status Report on Road Safety 2013 through concentrated action in alignment with UN and WHO frameworks:

- Decade of Action for Road Safety 2011-2020
- Resolution of the WHO Regional Committee for South-East Asia 2010
- Recommendations on the Expert Group on Preventing Motorcycle Injuries in Children
- Strategic approaches for injury prevention and control

Following the 5 pillars the Strategy sets out the responses from SEA Region Member States following a recommended strategy. These include 12 suggestions as part of the recommended strategy:

1. Multisectoral approach
2. Designated lead agency
3. Capacity building of personnel working in road safety in different sectors
4. Comprehensive programmes to improve road user behaviour
5. Education and public awareness
6. Integration of road traffic injury prevention with core health function
7. Sharing knowledge, evidence, information and networking
8. Data and research evidence generation for policy planning
9. Improve vehicle safety
10. Development of sustainable alternative commuting systems
11. Improved roads and infrastructure
12. Innovative mechanism for sustainable funding

The ASEAN Transport Strategic Plan defines a collective regional goal of reducing road fatalities by 50% by 2020, following a target to reduce this another 25% in 2021-2030. It also identifies the ASEAN strategy for achieving these targets aligns to the DoA 2011-2020 Safe Systems framework, under the 5 Pillars of Road Safety.

The Asian Development Bank (ADB) offers initial observations based on the challenges and progress made by the region in response to the DoA of 2011-2020 and offers recommendations for the next steps in meeting global road safety targets. The main challenges have been identified as:

- Lack of allocated funding by governments
- Limited donor funding for ADB's member states
- Road safety components in ADB were small and local rather than systemic
- Safe Systems Approach seen as an improved plan
- There is a need for government agencies to be brought together
- A need to address the research and development gap
- Lack of focus for gender aspect
- More specificity needed around speed management
- Funding should reflect safer road programmes as mass-based rather than individual projects

- Absence of universal free emergency care
- Safety performance indicators are not appropriate for MS needs and need better monitoring and enforcement
- Technology opportunities are not being taken

Recommendations based on the observed challenges:

- Tie actions to targets: targeted approach
- Shift from general to specific interventions
- More regular monitoring
- More funding and government attention
- Setting intermediate outcomes
- Build public demand for road safety

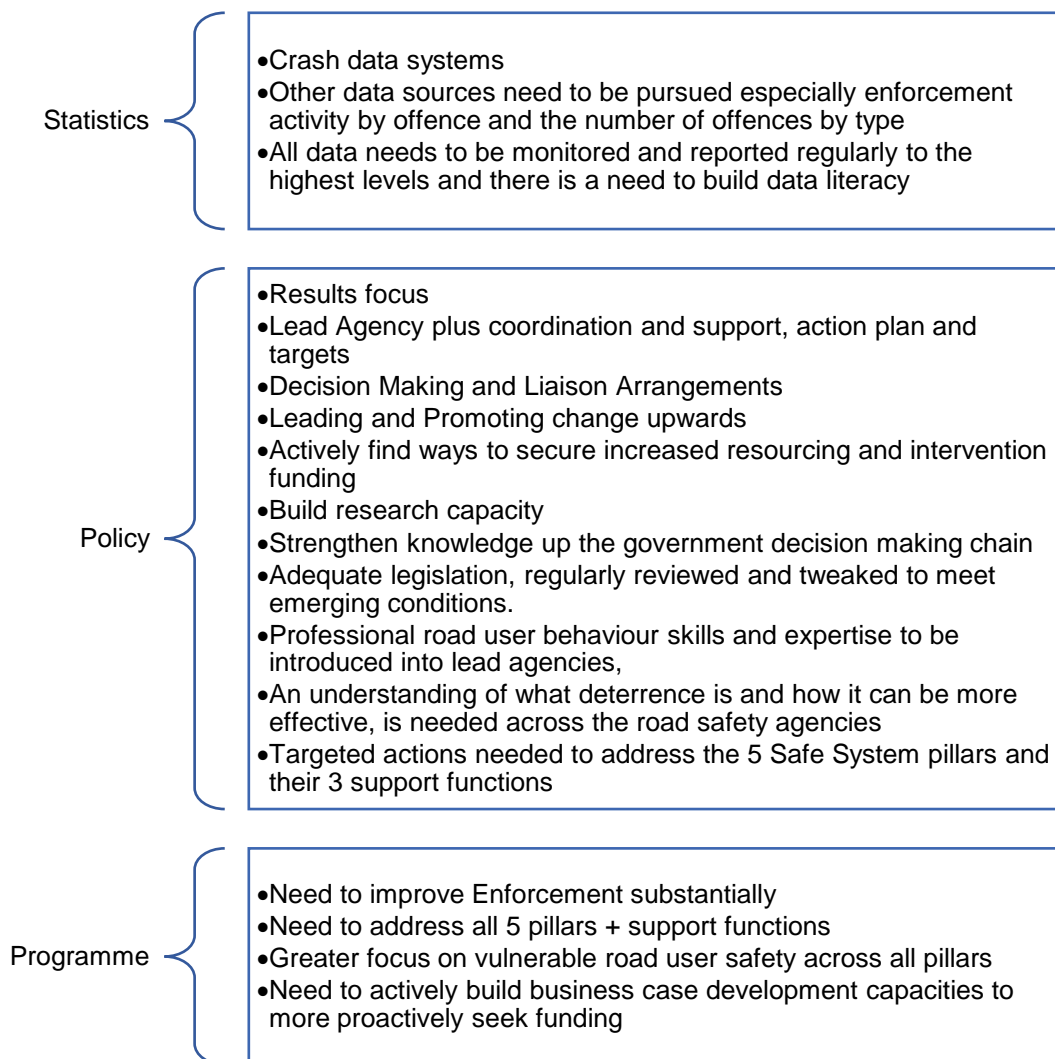
8.7 Appendix 5: Gap Analysis Identified Gaps

- **Statistics gaps:** these relate to crash and non-crash data availability, data sharing constraints, limits to the scope of data collected and gaps in data analysis capacities. Road Safety data literacy was also identified as a prerequisite for performance improvement in all AMS. Partnering with high income countries, such as through IRTAD, has been suggested as a way of improvement.
- **Policy gaps:** refer to institutional management gaps and policy intervention gaps. The first identifies gaps in safety standards, rules and associated performance targets in the planning, design, operation and use of the road network; the latter relates to legislative gaps and the use of tools, such as iRAP in reducing risks of roads.
- **Programme gaps:** identifies gaps in enforcement and political endorsement. Electronic enforcement technologies have been recommended as performance and enforcement improvements.

Key indicators		BRUNEI	CAMBODIA	INDONESIA	LAO PDR	MALAYSIA	MYANMAR	PHILIPPINES	SINGAPORE	THAILAND	VIETNAM
Statistics And Data System	Fatality trend										
	Motorcycles/Pedestrians										
	Existence of data system										
	Data analysis - Usefulness										
Policies	National Strategy/Target/Plan										
	Funding sources										
	Legislative extent and depth										
	Monitoring-Evaluation-Research										
	Vehicle Safety										
Programmes	National Programmes in place										
	Enforcement										
	Engineering-Audit-Inspection										
	Emergency Assistance										

Note

- Major gap
- Concerning gap
- Acceptable stage



Subsequent to The Gap Analysis Study, the 1st Road Safety Workshop was held in Brussels, where AMS representatives were able to discuss issues around the identified gaps in their national road safety agendas. The AMS representatives endorsed the need for capacity building and training support to underpin the delivery of the recommendations given as part of meeting the identified gaps and meeting the global DoA 2011-2020 targets. These are listed below:

Detailed Capacity Building/ Training Need Agreed By All AMS
Needs for holistic risk awareness, RSM to counter staff turnover, agreed lead agency, improved decision making & coordination, informing superiors of evidence-based opportunities, high level road safety awareness programmes, general deterrence, resourced/ accountable speed enforcement
Crash and non-crash data adequacy, partnerships and data access
Data analysis
Needs for Value of life for business cases, adequate funding, alternative sources
Need for detailed training on Value of life calculation
Need to measure performance, adopt targets, evaluate programme impact
Need for research capacity
Improved high level road safety Awareness, strategic and operational performance focus
Improve ministerial awareness of resourcing needs, need for improved general deterrence and for increased political support for enforcement
VRU safety improvement, infrastructure safety standards, use of iRAP and other tools, review speed limits, implement improved infrastructure safety

Need for national trauma registries, strengthened trauma management systems, changes to injury insurance systems, improved ambulance systems

Legislative needs: Back seat belt wearing, child restraints, targeting drug driving and demerit point systems

	Priority Topics for Training and Capacity Building	Priority Recommendations or learning from EU Experience
Lao PDR	National Road Safety Committee staff training	Road Safety Leadership Management
	Engineering and auditing in central and local level training	Auditing and Engineering
	VRU safety improvement and reach	Road Safety Public Awareness Campaign: VRU reach
Singapore	VRU safety improvement	VRU safety improvement
	Improved safety infrastructure	Improved safety infrastructure
	Special zones with reduced speed limit	Special zones with reduced speed limit
Myanmar	Improved high level safety awareness, strategic and operational performance focused training	Data collection and analysis system and procedure: nationwide analysis
	Training for VRU safety improvement: use if iRAP and other tools	Road infrastructure design: nationwide guidelines (blackspots and technology)
	Knowledge Sharing Training concerning helmets (UN Reg 22)	High level training (STOM): high level intervention
Thailand	Accident data collection: agency / organisation specific collection, sharing and consolidation	Motorcycle Safety: training programmes, improve road infrastructure, improve driver's license
	Road safety audit training: road design	Access Management Highways: city planning
	Road safety awareness: lawmakers	Speed Management: legislation and enforcement

8.8 Appendix: UN Road Safety Conventions and Road Safety Instruments

There are 59 United Nations legal instruments in the area of inland transport which are administered by the United Nations Economic Commission for Europe (UNECE). Of the 59 conventions, seven road safety instruments are considered to be priorities for accession:

- 1 1968 Convention on Road Traffic
- 2 1968 Convention on Road Signs and Signals
- 3 1958 Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations
- 4 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles
- 5 1998 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts
- 6 1957 Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- 7 1970 European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport (AETR)

8.9 Appendix: Harmonisation to UN Conventions and Road Safety Instruments

The second E-READI led Study: Study on Harmonizing of ASEAN Road Safety Regulations with UN legal Instruments and Resolutions Based on Road Crash Data Analysis' considers an identified gap in AMS adhering to and fully implementing the major United Nations road safety related agreements and conventions as set out in the DoA 2011-2020. This coincides with the 2016 ASEAN Regional strategic goal of 'harmonisation of standards road rules and legislations.

The Study was able to address the correlation between the adoption of UN road safety legal instruments and the reduction in road crash fatalities to assist in building road safety recommendations to AMS. It builds on the EU-ASEAN exchange of information and dialogue in the area of road transport by examining the successes of EU Member States' adoption of UN conventions and resolutions and their subsequent lowering of road crash fatalities in their country. It recommends that closer harmonisation to UN legal instruments for road safety regulations and standards, supports a reduction in road crashes and a more effective management of road safety in AMS. As part of its analysis, it identifies four key areas for harmonisation:

- road crash data collection and management,
- vehicle specification,
- enforcement,
- road signs and road markings.

Country	1949/1968 Conventions on Road Traffic	1968 Convention on Road Signs and Signals	1958 and 1998 Agreement on vehicle regulations	1997 Agreement on periodical vehicle inspections
Indonesia	s	s	n	n
Laos PDR	n	n	n	n
Malaysia	a	n	a	n
Thailand	s	s	a	n
Cambodia	a	a	n	n
Myanmar	n	n	n	n
Philippines	a	s	n	n
Singapore	n	n	n	n
Vietnam	a	a	n	n

Figure 7: Four Key Areas for Harmonisation

Figure 7 Key:

s	Signed
a	Acceded
n	Non-aligned

The 2nd EU-ASEAN Workshop on Road Safety recommends that longer term and potentially deeper institutional support can be developed through targeted policy discussions with AMS, as well as through private sector partnerships. Its outcomes included:

- i) common understanding and awareness of latest policy, practical measures and success to reduce fatalities,
- ii) the measures being adopted by each region and respective member states.

8.10 Appendix: AMS Road Safety National Plans / KPIs

AMS	KPI Road Safety
Brunei Darussalam	<p>2010 as its baseline, Brunei aims to achieve a reduction of 35% in fatality rates by 2020 (i.e: 4 fatalities per 100,000 population), 60% reduction in victims killed or seriously injured (KSI) by 2025, 35% reduction in slight casualties by 2025 and 70% reduction in children Killed or seriously injured (KSI) by 2025.</p> <p>There is an effort to enhance the quality of vehicles imported into the country, Brunei has implemented a mandatory minimum vehicle safety feature requirement.</p> <p>In Brunei, the behaviour of users in the traffic system is well regulated. Speed limits in Brunei are established nationally with a maximum speed limit in city road driving set at 50 km/h and further reduction by means of traffic calming measures on residential roads. Maximum speed limits for Highways and Primary Roads are set at 100km/h and 80km/h respectively and for Secondary roads at 65km/h. These speed limits are currently under review with possible reductions in the future.</p> <p>This country has a strong national motorcycle helmet law covering passenger use and helmet standards. Likewise, there are national laws on child restraints and hand-held mobile phone usage. To ensure drivers are more disciplined, careful and compliant of road rules and regulations, Brunei introduced a Demerit point system known as "SiKAP" ("Sistem Keselamatan Amalan Pemandu").</p>
Cambodia	The institutional capacity for road safety in Cambodia includes a lead national agency

	and a strategy funded partially in the national budget. In addition, the country benefits from a regulatory framework for formal safety audits for road constructions, and programmes of regular inspections to existing roads. Nevertheless, Cambodia could take measures at national level to promote investment in public transportation and protect VRUs while its vehicle fleet increases gradually.
Indonesia	A number of items in UN Regulation on Vehicles Standards have been harmonized into the related regulations in Indonesia. The country requires seat belts to be installed for driver and front passengers for all cars (Traffic and Transport Law no. 22/2009 clause 57 article (3) and (4); Government Regulation no. 55/2012 clause 46 article (1) and (2)). The national road safety strategy is funded partially in the national budget toward the 50% reduction target for fatalities. The country benefits from a regulatory framework for formal road safety audit programmes at all stages of road construction (from design to road operational stages), road safety inspections to existing roads, blackspot investigations programme, and also functional road worthiness assessments for both new and existing roads. Finally, Indonesia has national policies to encourage investment in public transport, walking and cycling.
Lao PDR	Regulations to some extent on: speed, alcohol
Malaysia	Some extent regulated: speed, drink driving laws, helmet wearing Finally, Malaysia has a strong record of research and authors working on road safety. This is comparable with countries such as Singapore.
Myanmar	Myanmar's institutional capacity for road safety includes a lead national agency and a well-defined strategy funded partially in the national budget. And fairly complete regulatory framework for safety audits Some extent of regulation: speed, drink driving
Philippines	The institutional capacity for road safety includes a lead national agency and a well-defined road safety strategy funded in the national budget. budget. In addition, the country has a fairly complete regulatory framework for formal safety audits for road constructions, policies promoting walking and cycling and investment in public transport Some extent regulated: speeds anti drinking drug law strengthened, helmets.
Singapore	Singapore has a lead national agency for road safety and a strategy funded partially by the national budget. Going forward, Singapore will need to continue strengthening its road safety strategy by establishing measurable targets. In addition, the country benefits from a strong regulatory framework that covers both the roads and the pavements, including speed limits, as well as alcohol and helmet-wearing laws, for bicycles. To achieve this, Singapore is working towards extending its cycling network island wide to 700 km by 2020. Regulations are being refined to prescribe maximum travelling speeds for bicycles and personal mobility devices (PMD) on pavements and cycling paths, as well as other rules on safe riding. Notable strengths include the enforcement for of all the national its stringent road safety related laws which are undoubtedly the toughest in the region. Strong research, Singapore is also the country with the most research on road safety in the ASEAN region with the highest number of authors affiliated to Singapore's institutions.
Thailand	The institutional capacity for road safety has a lead national agency and strategy funded partially in the national budget. To some extent regulates: speeds drink driving, helmet wearing
Vietnam	Some extent regulated: speeds, drink driving phones. A notable strength is the enforcement of the national regulation, especially the motorcycle helmet law but further effort is needed to ensure that the helmets worn comply with official standards.

8.11 Appendix: MRSSWG 12th Meeting AMS Updates

GP: DoA 21-30: Priority Areas	MRSSWG 12 th Meeting: AMS Developments in line with GP: DoA 21-30
Actions (relating to Five Pillars of Road Safety)	<ul style="list-style-type: none"> • Targets and KPIs are currently under development with overarching targets matching the 50% reduction rate goal by 2030 • Speeding, helmet use, impaired driving and vehicle standards continue to be issues across AMS • All AMS have adopted iRAP as part of the Safer Roads Pillar objectives (See Annex AMS : iRAP for further detail on the impact this has had)
Roles and Responsibilities	<ul style="list-style-type: none"> • Increase in collaborating with partners/stakeholders outside of government, particularly in the area of public engagement and awareness raising campaigns as well as strengthening road safety education system • Development in partnerships being built to tackle road safety issues
Funding	<ul style="list-style-type: none"> • Acknowledgment for need of further and more diverse funding sources • Investment needed for use of new technology • Investments needed for data management systems
Capacity Building	<ul style="list-style-type: none"> • Acknowledgement of severe capacity gaps, particularly for decision making level and practitioner level
Data: Collection, Monitoring and Evaluation	<ul style="list-style-type: none"> • Acknowledgement for need to address lack of universal and automated data management system • The use of DRIVER has been initiated, however there remains a lack in capacity or training funding to ensure effective adoption
Gender	<ul style="list-style-type: none"> • A lack in development in this area
New Technology	<ul style="list-style-type: none"> • Acknowledgement for need of technology modernisation in all areas of road safety

8.12 Appendix: UNECE Priority Areas

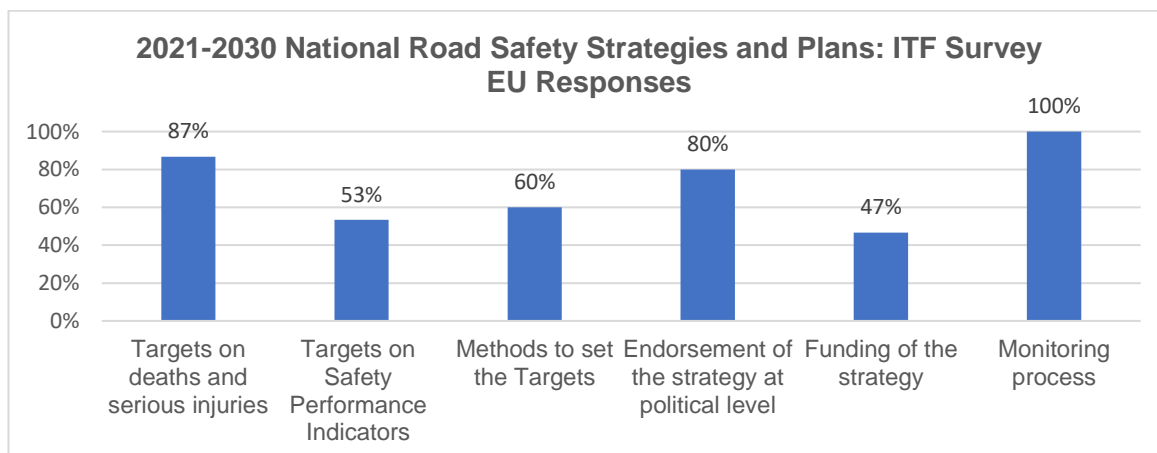
1. Support ASEAN members with participation in Asia-Pacific Road Safety Observatory (APRSO) to improve road safety data. Effort led by WB, ITF, WHO and FIA.
 - a. Highlight data discrepancy: WHO estimated for 10 ASEAN countries (2018): 113,869. National reported: 79,422. Myanmar and Viet Nam have the largest data discrepancy.
2. Promote safety of powered-two wheelers through adoption and implementation of UN helmet standard among ASEAN countries, namely UN regulation No. 22.
 - a. Asia accounts for 78% of total motorized two-wheeler fatalities in the world.
 - b. Motorcyclists are more than 26 times more likely to die in a road crash. Quality and use of motorcycle helmets vary across the region and are paramount for safety on the roads.
 - c. In Thailand, 70 per cent of the road deaths involve motorized two-wheelers and on average, 5,500 persons die annually.
 - d. In Viet Nam, 80 per cent of the road crashes involve motorized two-wheelers and on average, 8,000 persons die annually
3. Encourage ASEAN members to address safety and emissions of used vehicles market.
 - a. Special Envoy collaborates with UNEP and UNECE efforts to mitigate the negative safety and environmental impact of the used car market.

- b. Special Envoy has been engaging with regional integration bodies, import countries, and other stakeholders to support the initiative on the political level.
- c. The transport sector is responsible for approximately 23% of total energy-related CO2 emissions and is set to increase if current trends continue.
- 4. Promote the use of cleaner modes of mobility including Public Transport and Non- motorized transport.
 - a. Using safe public transport is cheaper and less taxing on the environment compared to private vehicles; carbon emissions per head is largely reduced.
 - b. Research shows that travelling on public transport is 10 times safer than travelling in private cars.
 - c. Non-motorized transport (NMT) – walking, cycling, is a zero-emission form of transport
- 5. Encourage supporting ASEAN members to accede to all seven UN Road Safety conventions and its successful implementation.
 - a. Brunei, Cambodia, Laos, and Singapore are not a contracting party to any of the seven conventions. Indonesia, Myanmar, Philippines, Viet Nam, Thailand, and Malaysia to only 2 or 3 conventions.
 - b. Becoming a contracting party to all the UN legal instruments can have a huge impact on achieving progress in road safety and safer transport systems.

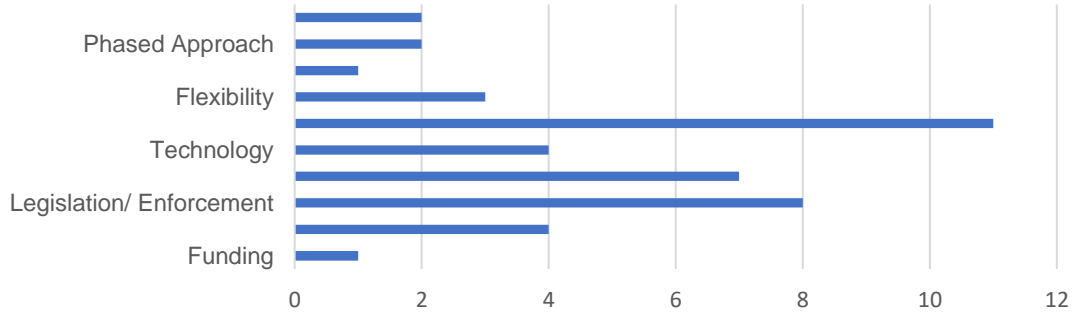
8.13 Appendix: EU Road Safety Policy

On the publication of the GP: DoA 21-30, the EU developed a regional plan, the ‘EU Road Safety Policy Framework 2021-2030: Next steps towards ‘Vision Zero’’. This addresses the key actions and recommendations the EU is taking to meet new intermediate targets for the new decade:

EU Responses to an ITF survey reflect the implementation or mention of these 7 areas in their responses to the survey and are captured below. It is important to note that not all national policies had been fully completed or approved at the time of responding. A full breakdown of EUMS responses can be found in **Error! Reference source not found.**



EU Member States National Strategy on Road Safety: Homogeneity



8.14 Appendix: EUMS National Road Safety Plan Targets

	New National Road Safety Strategy YES/NO	Time period the new strategy will cover	Road death reduction target	Serious injury reduction target
AT	Under development	2021-2030	50% (2017-2019av.-2030)	50% (2017-2019av.-2030)
BE	Under development	2021-2030	Under development	Under development
BG	YES, finalised	2020-2030	50%	50%
CY ⁷¹	YES, finalised	2021-2030	50% (2019-2030)	50% (2019-2030)
CZ	YES, finalised	2021-2030	50% (2017-2019av.-2030)	50% (2017-2019av.-2030)
DE ⁷²	YES, finalised	2021-2030	40% (2021-2030)	NO
DK ⁷³	YES, finalised	2021-2030	Max 90 road deaths in 2030	Max 900 seriously injured in 2030
EE ⁷⁴	Current	2016-2025	52% (2016-2025)	31% (2016-2025)
EL	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)
ES	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)
FI	Under development	2022-2026 (tbd)	YES (tbd)	YES (tbd)
FR	Current	2018-2021	50% (2019-2030)	50% (2019-2030)
HR	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)†
HU	Current	2020-2022	NO	NO
IE	Under development	2021-2030	50% (2017-2019av.-2030)	50% (2017-2019av.-2030)
IT	Under development	2021-2030	50% (2017-2019av.-2030)	50% (MAIS3+) (2017-2019av.-2030)
LU ⁷⁵	Current	2019-2023	NO (Vision Zero)	NO (Vision Zero)
LV ⁷⁶	Under development	2021-2027	NO (Vision Zero)	NO (Vision Zero)
LT ⁷⁷	YES, finalised	2020-2030	50% (2019-2030)	NO
MT	Current	2014-2024	NO	NO
NL ⁷⁸	NO, Activity Plans instead of a strategy, finalised	2018-2030	NO	NO
PL	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)
PT ⁷⁹	Under development	2020-2030	50%	50%
RO	Under development	n/a	NO	NO
SE	NO, management by objectives	2020-2030	50% (2017-2019av.-2030)	25% (2017-2019av.-2030)
SI ⁸⁰	Current	2013-2022	50% (2011-2020)	50% (2011-2020)
SK	Under development	2021-2030	50% (2021-2030)	50% (2021-2030)
UK ⁸¹	NO, Road Safety Statement 2019	June 2019-June 2021	NO	NO
CH	Current	No time limit	Max 100 road deaths by 2030	Max 2,500 serious injuries by 2030
IL	YES, finalised	2020-2030	50% (2021-2030)	50% (2021-2030)
NO ⁸²	Current	2018-2021	Max 50 deaths by 2030	Max. 350 deaths and serious injuries by 2030
RS	Under development	2021-2025 or 2030	YES (tbd)	YES (tbd)

8.15 Appendix: Baseline

The European Commission of the European Union (EU) has elaborated a list of key performance indicators (KPIs) for road safety to gain a clearer understanding of the different issues influencing overall safety performance. This minimal set of performance indicators has been selected in close cooperation with experts and authorities from the EU member states as a compromise between optimal information and practical feasibility (figure B2.5.1).

The Baseline Project (<https://baseline.vias.be>) aims to collect a set of harmonized indicators based on a common methodology. This methodology (preliminary versions were published in May 2021) will update older European manuals for the collection of SPIs (Hakkert, Gitelman, and Vis 2007).

Figure B2.5.1 The Baseline Project: List of KPIs for Road Safety, with Definitions

KPI area	KPI definition
Speed	Percentage of vehicles travelling within the speed limit
Safety belt	Percentage of vehicle occupants using the safety belt or child restraint system correctly
Protective equipment	Percentage of riders of powered two wheelers and bicycles wearing a protective helmet
Alcohol	Percentage of drivers driving within the legal limit for blood alcohol content (BAC)
Distraction	Percentage of drivers NOT using a handheld mobile device
Vehicle safety	Percentage of new passenger cars with a EuroNCAP safety rating equal or above a predefined threshold
Infrastructure	Percentage of distance driven over roads with a safety rating above an agreed threshold
Post-crash care	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

Source: The Baseline Project website: <https://baseline.vias.be>; European Commission 2019; Hakkert, Gitelman, and Vis 2007.

8.16 Appendix: Smart Transport and Infrastructure Technology

Advanced Braking Systems	Emergency	Automatic detection of potential collision and activation of vehicles braking system to slow the vehicle and mitigate collision
Alcohol Immobilisers		Installed in cars, trucks, and buses as a standardised interface facilitating the subsequent installation of alcohol immobilisers
Drowsiness / Alerts	Attention	For cars, vans, trucks and buses a system that assesses driver's attention by analysing systems, alerting driver when necessary
Distraction Alerts		For cards, vans, truck and buses a system capable of assisting the driver to pay attention to the traffic situation and alerting them when they are distracted
Event data recorder		Passenger cars and van, a system to record and store critical parameters and information related to the vehicle shortly before and immediately after a collision
Emergency braking signal		For passenger cars, vans, trucks and buses a rear light function that indicated to other road users behind the vehicle that a large deceleration force has been applied to the vehicle in relation to prevailing road conditions
Enhanced seat belts		To cover width of the frontal occupants cars and vans providing extra protection on impact
Additional safety glass		For cars and vans in the case of head on impact with a pedestrian or cyclist

Intelligent speed control	For cars, vans and buses a system that helps the driver maintain a speed appropriate to road conditions by providing specific and appropriate feedback
Lane departure warning system	For cars and vans a system that warns the driver that the vehicle is drifting out of its lane
Occupant protection (side impact)	In cars and vans
Reversing Camera / Detection system	For cars, vans, trucks and buses
Tyre pressure monitoring system	For vans and buses, a system that evaluates tyre pressure and fluctuations and transmits the relevant information of the user while driving
Detection and warning of VRUs (front side of vehicle)	For trucks and buses
Improvement to direct view (drivers position to VRU)	For trucks and buses

Vehicle Technology			
Active	Anti-lock Braking Systems (ABS)	Passive	Airbags
	Electronic Stability Control (ESC)		Seatbelts
	Blind Spot Detection (BSD)		Whiplash Protection (WLP)
	Tyre Pressure Monitoring (TPMS)		Occupant sensing systems
	Adaptive Cruise Control (ACC)		
	Lane Departure Warning and Assist		
	Automated Emergency Braking		
	Backup Cameras		
	Alcohol Detection		
	Global Positioning System (GPS)		

Infrastructure Technology			
Sensors / Data collection	CCTV	Equipment warning issuant	Speed Feedback Indicators
	Roadside traffic sensors		Animal Detection Systems
	Automated Speed Enforcement		Weather/road/traffic information display system
	Red light evasion detection		
	Railway level crossing		

8.17 Appendix: Questionnaire Survey

Contact Details	
Name	
Title	
Organisation	
Address	
Phone Number	
Email	
Country	

National Action Plan				
What proportion of the road safety targets as set out in your current National Road Safety Action Plan have been successful/achieved to date?				
100%	50% Other			
Have there been any updates to the Road Safety targets/indicators outlined in the National road safety policy, strategy and plan since 2020? If so, please provide details of the target and timeframe:				
Yes	No			
Details:				
Please detail the time period in years for the implementation of the current/new plan of National Road Safety Action Plan				
Please detail the proportion of the target that is forecasted to be achieved up to end of 2030				
100%	75%	50%	25%	Other:
Is national funding available for the effective operation of the lead agency?				
Yes	No			
Is the Road Safety Database computerised?				
Yes	No			
How frequently is the data updated?				
Yearly	6 months	Monthly	Other	
Please select which data sources are available				
Police	Health/Hospital	Insurance	Other:	
What is the frequency of monitoring and evaluation of data?				
Yearly	6 Months	Quarterly	Monthly	Other
Has a specialist road safety research institution been put in place since 2020 and is funding available?				
Yes	Partially	No		

Have any new sources of funding been identified to support reaching the national road safety targets since 2020, please detail below				
Yes	No	Detail		
On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statement be achieved by 2030:				
National lead agency will coordinate, monitor, evaluate and implement the multi-sectoral national road safety action plan.				
1	2	3	4	5
In order to achieve the global target of 'By 2020, all countries establish a comprehensive multisectoral National Road Safety Action Plan with time-bound targets' what does your country need to do to achieve this successfully?				
Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation	
Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)				

Global Alignment				
Since 2020 have there been any updates or changes to the national ratification or accession to global or regional legal institutions (UN, ASEAN, SEA). Please detail below:				
On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:				
Ratification or accession to one or more of the core road safety-related UN legal instruments				
1	2	3	4	5
In order to achieve the global target of 'By 2030, all countries accede to one or more of the core road safety-related UN legal instruments' what does your country need to do to achieve this successfully?				
Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation	
Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)				

New Roads	
Since 2020 have there been any updates or changes to the implementation of the National Plan on new roads? Please detail below	
On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:	

This country has implemented technical standards* for new roads that take into account the safety of all road users, or that are aligned with the relevant UN Conventions and regulate compliance to those standards

*National technical standards that specify minimum safety requirements for each road user and/or safe road design specifications that are implemented across all road agencies in a country. The standards shall specify the outcome or the necessary road features that are required to provide minimum safety levels for all road users, when and where they shall be applied and how they must be designed.

1	2	3	4	5
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This country is using systematic approaches to assess/audit new roads

1	2	3	4	5
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In order to achieve the global target of 'By 2030, all countries accede to one or more of the core road safety-related UN legal instruments'¹ what does your country need to do to achieve this successfully?

*Include the Convention on Road Traffic and the Convention on Road Signs and Signals and the UNESCAP Asian Highway Design Standards for Road Safety

Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation
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Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)

Existing Roads

Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on existing roads? Please detail below

On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:

This country developed and implemented a plan for the improvement of the existing roads that take into account the safety of all road users

1	2	3	4	5
---	---	---	---	---

This country uses systematic approaches* to assess/audit existing roads

*Established systems that include organisational structures, accountabilities, policies, standards and procedures that cover the approval, financing, design, operation and maintenance of new roads.

1	2	3	4	5
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In order to achieve the global target of: 'By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety' what does your country need to do to achieve this successfully?

Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation
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Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)

Vehicle Standards

Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on vehicle standards? Please detail below

On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:

This country implements high quality safety standards* for new vehicles

*In vehicle safety, high quality safety standards equate to UN vehicle safety standards or equivalent national performance requirements.

1	2	3	4	5
---	---	---	---	---

This country uses systematic approaches* for vehicle assessments

*Established systems that include organisational structures, accountabilities, policies, standards and procedures that cover the approval, financing, design, operation and maintenance of new roads

1	2	3	4	5
---	---	---	---	---

This country implements high quality safety standards for export of used vehicles

1	2	3	4	5
---	---	---	---	---

In order to achieve the global target of: 'By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements' what does your country need to do to achieve this successfully?

Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation
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Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)

Speeding

Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on speeding? Please detail below

On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:

This country has legislation setting appropriate speed limits and effective enforcement*

*Enforcement activities, in particular police checks, penalties and sanctions, that sufficiently deter a large proportion of road users from non-compliance with speed limits via well-resourced and professionally trained enforcement personnel and/or automated speed enforcement system(s).

1	2	3	4	5
---	---	---	---	---

This country has reduced by half the proportion of vehicles travelling over the posted speed limit

1	2	3	4	5
---	---	---	---	---

This country has a national and where appropriate subnational data systems on speeding violations and speeding-related injuries and fatalities

1	2	3	4	5
---	---	---	---	---

This country has achieved reductions in speeding-related injuries and fatalities				
1	2	3	4	5
In order to achieve the global target of: 'By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities' what does your country need to do to achieve this successfully?				
Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation	
Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)				

Motorcycle Helmets				
Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on motorcycle helmets? Please detail below				
On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:				
This country has legislation requiring motorcycle riders to wear a helmet properly fastened and meeting appropriate standards* for protection				
*Domestic legislation to refer to UN Regulation 22 or equivalent national standard international standards				
1	2	3	4	5
This country effectively enforces legislation on helmet use				
1	2	3	4	5
This country implements regulations on safety for child and adult helmets sold				
1	2	3	4	5
This country has a national and where applicable subnational data system* on helmet use				
*Systems at a provincial, state, regional, local level within a country that gather helmet-related road trauma data.				
1	2	3	4	5
This country has the proportion of motorcycle riders, correctly using a helmet is close to 100%				
1	2	3	4	5
In order to achieve the global target 'By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%' what does your country need to do to achieve this successfully?				
Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation	
Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)				

Vehicle Occupant Protection				
Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on vehicle occupant protection? Please detail below				

On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:				
This country has and is effectively enforcing legislation requiring the use of safety belts for all motor vehicle occupants				
1	2	3	4	5
This country has and is effectively enforcing legislation requiring the use of child restraint systems meeting appropriate standards*				
*An authorised statement that sets minimum specifications to ensure that safety belts and child restraints will be of sufficiently high quality to be effective in reducing injuries/deaths. For safety belts these standards should be based on UN Regulations Nos. 16 (Safety-belts) and 14 (Safety anchorages) or equivalent national standards such as FMVSS 209 (Seat belt assembly) and 210 (Seat belt assembly anchorages) or equivalent until a UN GTR will be developed on the same subject. For child restraint systems, these standards should be based on UN Regulation Nos. 44 and 129 (Enhanced Child Restraint Systems) and UN Regulation No. 145 (ISOFIX anchorage systems, ISOFIX top tether anchorages and Size seating positions) or equivalent national standard such as FMVSS 225 until a UN GTR will be developed on the same subject.				
1	2	3	4	5
This country's proportion of all motor vehicle occupants using safety belts is close to 100%				
1	2	3	4	5
This country's proportion of all child motor vehicle occupants using standard child restraints systems is close to 100%				
1	2	3	4	5
This country has and is effectively enforcing* regulations on safety for child restraints systems sold				
*Enforcement activities, in particular police checks, penalties and sanctions, that sufficiently deter a large proportion of road users from non-compliance with use of certified restraint system related laws via well-resourced and professionally trained enforcement personnel.				
1	2	3	4	5
This country has a national and where applicable subnational data on use of safety belts, as well as appropriate use of child restraint systems				
1	2	3	4	5
In order to achieve the global target 'By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%' what does your country need to do to achieve this successfully?				
Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation	
Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)				

Impaired Driving				
Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on impaired driving Please detail below				
On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:				
This country has appropriate legislation and effective enforcement* on driving under the influence of alcohol and/or other psychoactive substances				

Enforcement activities, in particular police checks, penalties and sanctions, that sufficiently deter a large proportion of road users from non-compliance with impaired driving laws via well-resourced and professionally trained enforcement personnel.

1	2	3	4	5
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This country has national and where applicable subnational data on driving under the influence of alcohol and/or psychoactive substances and related road traffic fatalities and injuries

1	2	3	4	5
---	---	---	---	---

This country has reduced by half the number of road traffic injuries and fatalities related to driving under the influence of alcohol and/or other psychoactive substances.

1	2	3	4	5
---	---	---	---	---

In order to achieve the global target 'By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances' what does your country need to do to achieve this successfully?

Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation
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Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)

This country has acceded to international/regional regulation on driving time and rest periods for professional drivers

1	2	3	4	5
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This country has regulation, effective enforcement* and auditing of driving time and rest periods for professional drivers

*Enforcement activities, in particular checks, penalties and sanctions, that sufficiently deter a large proportion of road users from non-compliance with regulations for professional drivers, via well-resourced and professionally trained enforcement personnel. Regulations may be enforced either by traffic police or another government agency with specific powers.

1	2	3	4	5
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In order to achieve the global target By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area' what does your country need to do to achieve this successfully?

Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation
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Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)

Distraction

Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on distraction? Please detail below

On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:

This country has and is effectively enforcing legislation on restricting or prohibiting the use of mobile phones while driving

1	2	3	4	5
---	---	---	---	---

This country has national and where applicable subnational data systems on the use of mobile phones while driving

1	2	3	4	5
---	---	---	---	---

In order to achieve the global target 'By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving' what does your country need to do to achieve this successfully?

Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation
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Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)

Emergency Care

Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on emergency care? Please detail below

On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:

This country has achieved the national targets of the time interval between a crash resulting in serious injury and the provision of first professional emergency care

1	2	3	4	5
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This country has appointed agencies for effective coordination of the provisions of pre-hospital and facility-based emergency medical services

1	2	3	4	5
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In order to achieve the global target 'By 2030, all countries establish and achieve national targets in order to minimize the time interval between a road traffic crash and the provision of first professional emergency care area' what does your country need to do to achieve this successfully?

Funding	Capacity Building	Legislation/Enforcement	Monitoring/Evaluation
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Other: (i.e.: Relevant research outcomes on rationale for road safety mechanisms; Political support)

Professional Drivers

Since 2020 have there been any updates or changes to the implementation of the National Road Safety Action Plan on professional drivers? Please detail below

On a scale of 1 (being the lowest) to five (being the highest) how likely will the following statements be achieved by 2030:

New Technology

Please select the following technology assisted safety features currently in place:

Intelligent Speed Assistance	Autonomous Emergency Breaking	Improved direct vision for trucks	Other
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If in place are these features mandatory?

Mandatory	Not Mandatory	Will be mandatory by 2030	Other
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8.18 Appendix: MRSSWG Focal Points

Country	MRSSWG Lead	MRSSWG Focal Points
Brunei Darussalam	Mr. Ridzuan Bin Hj Ahmad Acting Director, Land Transport Department Ministry of Transport and Infocommunications Brunei Darussalam ridzuan.ahmad@mtic.gov.bn	Mr. Muhammad Hadri bin Awang Nasib Policy and International Division, Land Transport Department Ministry of Transport and Infocommunications Brunei Darussalam hadri.nasib@jpd.gov.bn
Cambodia	Mr. Chanthy Sochiva Deputy Director General General Directorate of Public Works Ministry of Public Works and Transport Cambodia c.sochiva@gmail.com	Mr. Sattya Boran Deputy Director Road Traffic Safety Department, Ministry of Public Works and Transport Cambodia sattya.boran@yahoo.com Mr. Vantha Prum Director Road Traffic Safety Department Ministry of Public Works and Transport Cambodia vantha_prum@yahoo.com
Indonesia	Ms. Yanti Marlina Head of Section of Road Safety Development	Mr. Heri Prabowo Head of Safety Management

Country	MRSSWG Lead	MRSSWG Focal Points
	Directorate of Road Transport Means Ministry of Transportation yanti.marliana13@gmail.com ; Emka.sarana@gmail.com	Directorate of Road Transport Means Ministry of Transportation Emka.sarana@gmail.com copy: advokasidarat@gmail.com Ms. Shendy Revilla Putri Staff of Safety Management Directorate of Road Transport Means Ministry of Transportation shendyrp@gmail.com
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Myanmar	Mr. Aung Ye Tun Assistant Secretary	Ms. Nwe Nwe Khin Deputy Director

Country	MRSSWG Lead	MRSSWG Focal Points
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Thailand	Dr. Prapatpaow Awakul Director International Affairs Division Ministry of Transport Thailand prapatpaow@yahoo.com	Ms. Mek Kanpitcha Transport Technical Officer Office of the Permanent Secretary International Division Ministry of Transport Thailand Mek.kanpitcha@gmail.com
Viet Nam	Dr. To Nam Toan Director of Science - Technology, Environment and International Cooperation Department Directorate for Roads of Viet Nam Ministry of Transport Viet Nam tnamtoan@yahoo.com; toantn.dr.vn@mt.gov.vn	Ms. Kieu Thi Diem Deputy Director Transport Safety Department Ministry of Transport Viet Nam diemkieu750@gmail.com Mr. Tran Xuan Binh Official of Science - Technology, Environment and International Cooperation Department Directorate for Roads of Viet Nam Ministry of Transport binhtranxuantvn@gmail.com ; binhtx.dr.vn@mt.gov.vn

8.19 Appendix: Mission Crib Sheet

Primary Question	Relevance: why is this here / what do we need from this	Useful information	Example Answer	Secondary Question
<p>Could you tell me about the progress (including successes and challenges) in implementing the 5 pillars of road safety as part of the Safe System Approach?</p>	<p>To understand the main successes and challenges in implementing each of the pillars To validate all collected data</p>	<p>Safe System approach has 5 main pillars of action:</p> <ol style="list-style-type: none"> 1. Road Safety Management 2. Safer roads and Mobility 3. Safer Vehicles 4. Safer Road Users 5. Post-crash response 	<ol style="list-style-type: none"> 1. A main challenge for us in Road Safety Management is adequate awareness and endorsement of decision makers 2. We have successfully conducted audits on new and existing roads 3. We have seen an increase in the amount of vehicle inspection centres 4. We have launched new awareness campaigns for safer roads 5. We face funding challenges in nationalising/full coverage for emergency assistance 	<p>Can you elaborate on the main challenges you face in implementing actions for each pillar in each of these focus areas:</p> <ul style="list-style-type: none"> - Roles and responsibilities. E.g. lack of stakeholder (gov, NGO, Academic, Society) involvement/ engagement or do not have political endorsement - Targets. E.g. KPIs have not been clearly defined, time bound targets have not been set - Funding. E.g. actions are not fully funded, need for other funders - Capacity Building. E.g. training for managers is not available/ adequate, or technical teams are not specialised - Data Collection, Monitoring and Evaluation. E.g. issues in data collection processes, or systems/data collection and management are not appropriate - Gender. E.g. opportunities for women in transport/ data on women as road users is collected - New Technology. E.g. capacity or

				funding issues for adoption and use
How and how often is progress against these targets and actions measured?	To understand if evidence-based methodology is used when shaping road safety policy	For Road Safety during 2021-2030: \$110m - endorsed and funded by the government, development partners and NGOs and Private Sector (post crash response has the most dedicated pot \$50,000)	We measure our progress on road safety against KPIs each year. This information is then disseminated to key stakeholders, such as the government and private funders to help re-focus targets for the next 2 years	How is this information used to shape National Road Safety Action Plans
Based on the recommendations from previous Studies and Frameworks (such as ASEAN Regional Road Safety Strategy or ADB), what would you say are the biggest challenges in implementing them?	To understand the progress and challenges of previous recommendations to AMS (as set out in previous Studies and Regional Frameworks) with the purpose of understanding barriers to previous recommendations in order to develop achievable recommendations	ASEAN Regional Strategy Recommendations: -Harmonisation of standards, road rules and legislation -Capacity building -Knowledge development through research and evaluation -Monitoring and reporting progress ADB Recommendations: -Tie actions to targets: targeted approach -Shift from general to specific interventions -More regular monitoring -More funding and government attention -Setting intermediate outcomes -Build public demand for road safety Gap Analysis Recommendations: See country specific sheet	We have experienced challenges in building capacity in decision making teams as a result of funding	What would help / what support would you need in achieving the recommendations? E.g. funding / ASEAN coordinated programme / involvement or buy in of other stakeholders
At what stage of progress is your National Road Safety Plan for 2021-2030 ?	To understand next steps needed to finalise and implement a National Action Plan	See country specific sheet	We have finalised KPIs for Safer Roads and have secured a budget of \$\$\$\$. We are awaiting political and legislative endorsement on the new targets against	What would help / what support would you need in finalising and achieving this Action Plan E.g. funding / ASEAN coordinated programme / involvement or buy in

			speeding in special zones	of other stakeholders / capacity
What are the main areas of interest / need with regard to lowering road crash fatalities and injuries?	To understand key areas that can be cross-referenced to EU experience in developing relevant recommendations	See country specific sheet	Motorcycle fatalities are extremely high on rural roads / Limited political endorsement / Limited social awareness / Speed / alcohol Enforcement is an issue in urban areas	Are there any specific areas you feel EU experience can guide on your main challenges?

8.20 Appendix: Actions-Outcomes-Impact Logic

Phases	Key elements	Possible ways to measure	Source	Method
Actions	A national action plan for road safety with time-bound targets (*)	Publication of a national action plan for road safety with targets (*)	Ministry of Transport or lead agency	Publication of the plan
	Nominantion of a lead agency by government	Establishment of a lead agency	Prime Minister Ministry of Transport	Official statement
	Implementation of the national action plan	Proportion of interventions that have been or are being implemented on time	Lead agency (or other agency or Ministry of no lead agency exists)	Various methods (depending on the intervention)
	Regular update of the targets (*)	Number of years between updates of the targets (*)	Lead agency	Official statement
	Operation of the lead agency (*)	Budget of the lead agency (*)	Lead agency	Official statement
Outcome	The interventions foreseen in the national plan are achieved	Proportion of interventions that have been implemented successfully	Lead agency	Assessment study
	The targets listed in the national plan are achieved	Proportion of targets in the national plan that have been achieved	Lead agency	Various methods (depending on the target)
Impact	Reduction of the negative impact of the contributing factors	Number of road injuries and fatalities	Statistics on road injuries and fatalities (in general collected by the police)	Sums of the number of road injuries and fatalities
	Overall reduction in road injuries and fatalities	Relative number of road injuries and fatalities, taking into account population and exposure	Statistics on road injuries and fatalities (in general collected by the police)	Division of the number of road injuries and fatalities by unit of exposure or population

8.21 Appendix: Private Sector and Road Safety Nexus

FIGURE 4 THE NEXUS BETWEEN THE PRIVATE SECTOR AND ROAD SAFETY ISSUES

Auto	safe product development and use, protection of customer base, regulatory costs
Oil & Gas, Chemical	transport of product is key to business and improved road transport management helps to manage major safety and environmental risks
Alcoholic & Other Beverage	safe product use, protection of consumers, ensuring safe transport of product that guarantees supply
Diversified Technology	market for goods
Consumer Device	safe product use (cell phones, handheld devices)
Construction	transport of materials, safety of workers
Agribusiness /Forestry	transport of product is key to business and improved road transport management helps to manage major safety risks
Banking & Insurance	bears burden of insuring and paying out on accidents
Tourism	safe transport of tourists to sites, creating positive image of locale to increase number of visitors

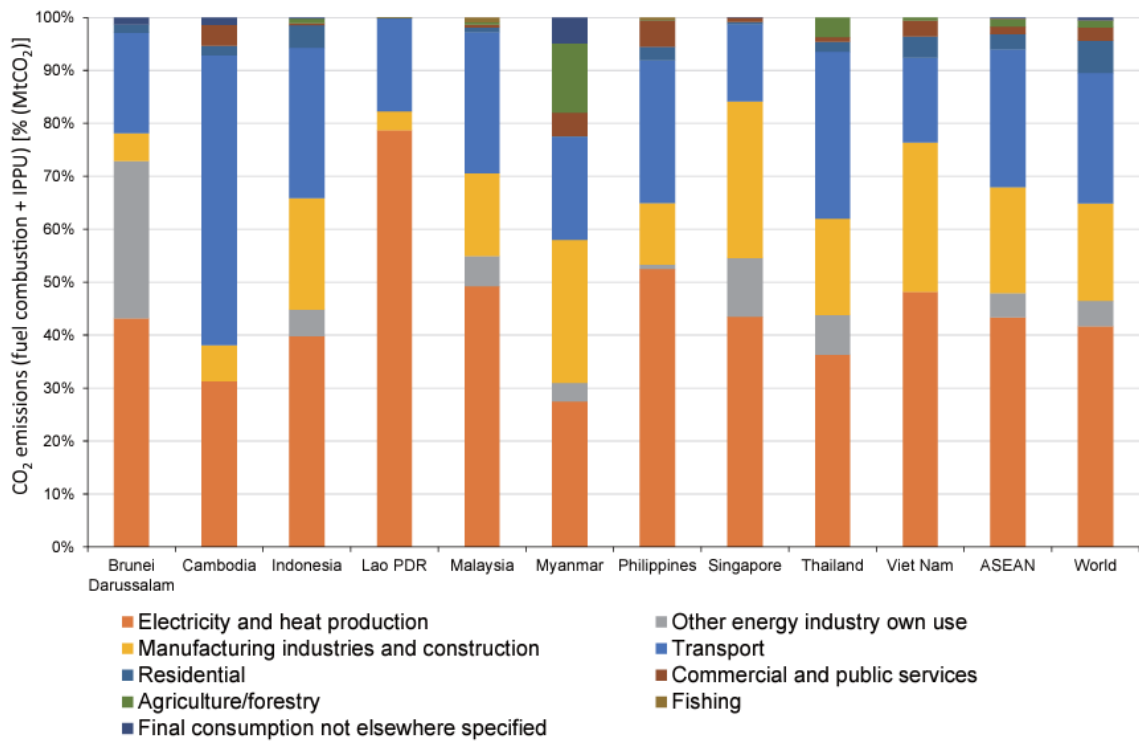
FIGURE 5 POTENTIAL PRIVATE SECTOR INTERVENTIONS INTO ROAD SAFETY

	ENABLING FRAMEWORK			ON-THE-GROUND DELIVERY			
	SAFETY CULTURE, RULES & STANDARDS	MANAGEMENT	FUNDING	AWARENESS RAISING	TRAINING & CAPACITY BUILDING	PRODUCT DEVELOPMENT & DISTRIBUTION	INFRASTRUCTURE ADAPTATION
CORE BUSINESS	Company policies requiring personnel to practice safe driving; safe device use (cell phones); safe alcohol consumption	Identify leaders within the company to drive safety culture	Part of core business or country/regional business	Training company personnel on importance of safety as part of corporate culture; leadership within company on safety	Fleet driver training; educate and train business partners along the supply chain	Safety features embedded in vehicle; minimization of distractive features in vehicle; technological adaptations to address distractibility and use of handheld devices while driving	Road markers; safety signage; other products to increase infrastructure safety
COMMUNITY INVESTMENT & PHILANTHROPY	Community safe driving campaigns; community campaigns on seatbelt and child seat use; community campaigns on safe alcohol consumption	Encourage managers to engage with organizations to share business skills/help in assessments/ donate expertise	Donations for training and awareness-raising programs	Engage in child seat, seat belt use, safe driving campaigns; engage in schools	Donating expertise, products, and premises for training-the-trainer purposes	Donate materials (reflective materials to schools and high-impact areas, etc.); donate car seats; donate inspection services	Enable technical employees to donate time to engage with other experts to create infrastructure adaptation solutions
POLICY DIALOGUE & RULE MAKING	Encourage vehicle and road worthiness standards; encourage anti-corruption campaigns and law enforcement, including speed, blood alcohol limits, vehicle maintenance	Identify relevant legal and policy bodies related to road safety and engage in local capacity building	N/A	Policymaker education on health and economic impacts and indicators	Encouragement of anti-corruption and law enforcement	Engage in policy dialogue around safe technologies, technology transfer, and rigorous science-based approaches based on good practices and assessment	Encourage rigorous assessment of current state of roads and road mix; facilitate discussions on best approaches to deal with road user mix/ congestion/safe vehicles, etc.

8.22 Appendix: Eu Example Research Institution Best Practice

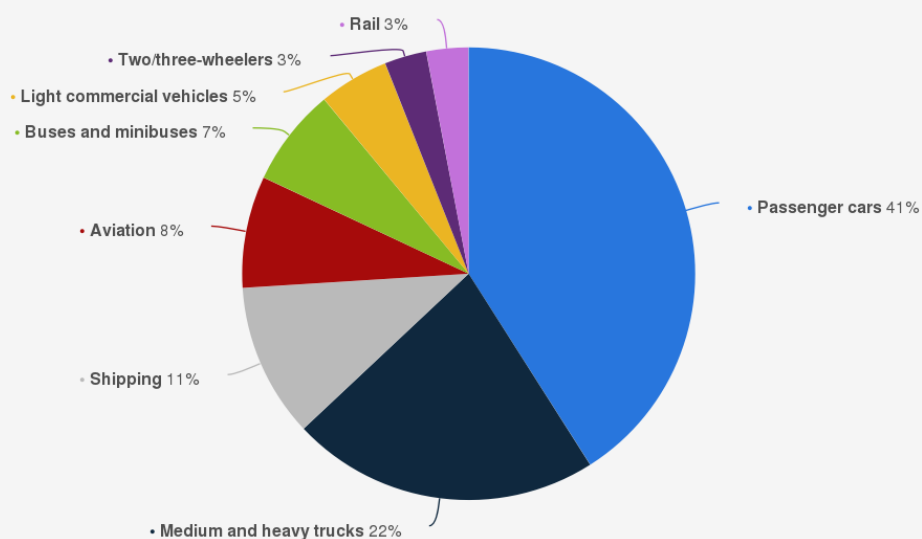
An example of successful research organisation practice at an EU level can be seen when looking at the European Conference of Transport Research Institutes (ECTRI), an international NPO bringing together 28 major transport research institutes and universities across Europe, which accounts for over 4,000 scientific and research staff in the field of transport. As a research association for sustainable multi-modal mobility, it is committed to provide scientific competence, knowledge and advice to shape policy and programmes that move the EU to a green, safe, efficient and inclusive transport system.

Appendix: SDG: Sustainable Transport and the role of Road Safety



Country	Energy	Transport	Industry	Agriculture	Forest(ry) & Land Use (FOLU)	Waste
Brunei Darussalam						
Cambodia						
Indonesia						
Lao PDR						
Malaysia						
Myanmar						
Philippines						
Singapore						
Thailand						
Vietnam						
Total	10	9	8	6	7	6

Distribution of carbon dioxide emissions produced by the transportation sector worldwide in 2020, by subsector



Source
IEA
© Statista 2021

Additional Information:
Worldwide; 2020; Based on 2020 transportation sector CO2 emissions of 7.3 billion metric tons

8.23 Appendix: UNDG Capacity Building

A number of techniques and approaches have been developed in response to strengthening capacity for interventions worldwide. The United Nations Development Group (UNDG) have developed an integrated programme on capacity development as a means and a primary objective in the implementation of the 2030 Agenda for Sustainable Development. The strategy puts forward a set of common principles for measuring capacity development that will apply generally to all relevant interventions, though their importance, level of use, and customisation will be determined within the specific context of each intervention (See FIGURE below). Used as a template, this could be adopted by AMS in their capacity development for the road safety interventions needed, both nationally and regionally across ASEAN.

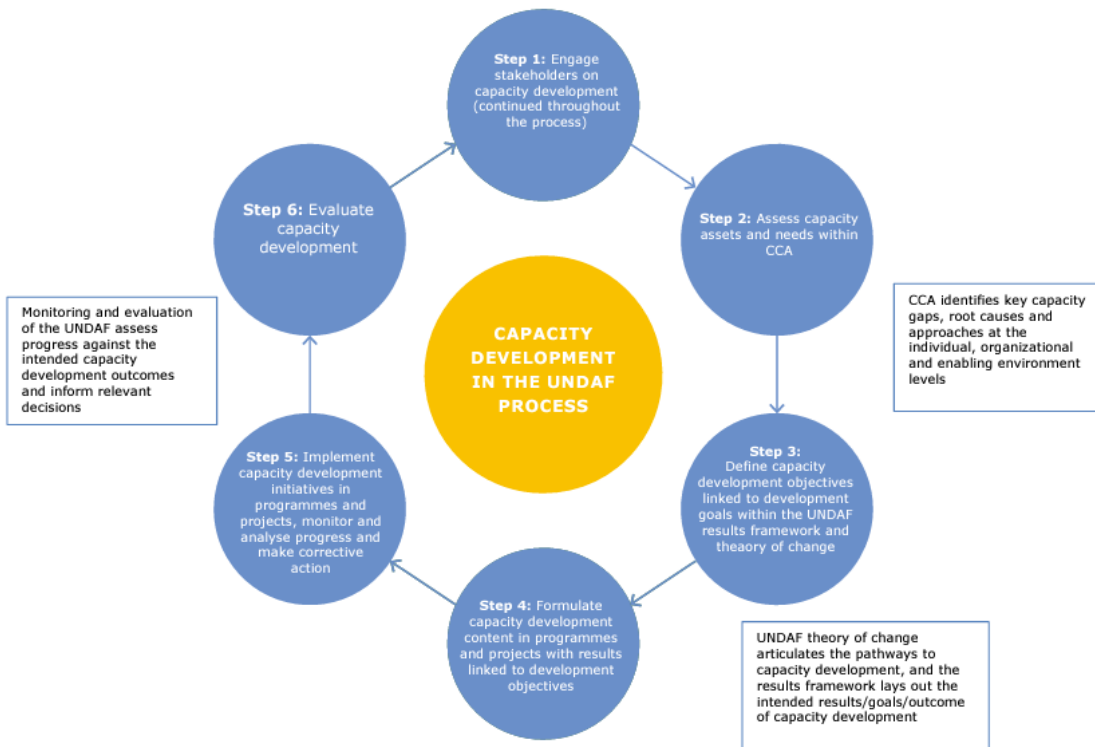


Figure 2: Capacity development during the UNDAF cycle⁵

8.24 Appendix: World Bank Private Capital Mobilisation Process

As an example, the World Bank has comprehensive studies that AMS should be utilised on how funding can be sourced, used and found. See figure below on private capital mobilisation process:



8.25 Appendix: iRAP

