Crash data systems within the Eastern Partnership Road Safety Observatory

Emma MacLennan, EASST
Tatiana Mihailova, World Bank
Katerina Folla, NTUA
George Yannis, NTUA
The Eastern Partnership Road Safety Observatory (EaP RSO) is an initiative of the EaP countries aiming to reduce road fatalities and injuries by sharing good practices and interchanging data.

The EaP RSO is supported by the World Bank (WB) jointly with the European Commission.

A Technical Secretariat will be hosted by Georgia and is comprised by the International School of Economics at Tbilisi State University Policy Institute (ISET) and the Eastern Alliance for Safe & Sustainable Transport (EASST).

The EaP RSO will house country-level data and act as a catalyst in strengthening national crash data systems and the harmonization of crash data among the EaP countries.
Objective and Methodology

- **Objective**: to support the launch of the EaP RSO, with a focus on assessing the crash data systems of the five EaP countries: Armenia, Azerbaijan, Georgia, Moldova and Ukraine.

- A **questionnaire** was sent to national stakeholders and **interviews** followed.

- Ten criteria for the **benchmarking** of the crash data systems were used based on a previous assessment of WB in 2017.

- Replies were received from **Armenia, Georgia and Moldova**.

- The results of the crash data reviews are presented in **country level notes**.
Crash and Road Safety Data Collection
Road Crash Statistics

- Fatality rates in the EaP countries were **higher than the EU average** (from 1.6 to 2.8 times higher) in 2021.

- Armenia recorded **12.4 fatalities per 100,000 inhabitants**, which is the highest rate among the examined countries.

- The most significant improvement over the period 2010-2020 was recorded in Moldova with a **decrease of about 46%** in road crash fatalities.

- In Georgia and Azerbaijan fatalities were **reduced by 34%** and **25%** respectively.

- Armenia was the only country which presented an **increase** in road fatalities.
Crash Database

- In all countries, **Traffic Police** is the responsible authority for the crash data collection.
- A **paper-based data collection form** is used at the crash scene for all countries, while in Georgia a new electronic module was introduced in 2021, which is used in a test mode.
- In Armenia, the crash data collection form was modified in 2019, with data structure and most variables being based on the **EC CADaS protocol**.
- In Moldova, the latest modification to the scope of crash data collection was done in 2008.
- **Quality control procedures** by Police take place before the inclusion of data in the central database in all countries.
- **Electronic central crash databases** held by Traffic Police exist in all countries.
Database Software

- In Armenia, a **digital database for road crash data** was established in 2019, to which only authorized officials by the Road Police have access. Data can be exported in MS Excel format.

- In Georgia, **two types of software** are currently used: the patrol police crew board computers core system and the pilot web application. Disaggregate anonymized road crash data are also exported in Excel files.

- In Moldova, **MS SQL software** is used. Data can be accessed online, is password-protected, and data queries by other stakeholders can be also conducted.

- The new electronic module of Georgia is expected to be **GIS oriented**, while in Armenia GIS features are expected to be introduced in 2023. The crash database of Moldova lacks GIS interface, but has the option to use point location.
Data on Crashes and Injuries

- The **30-days definition** for road fatalities has been adopted by Armenia and Moldova.
- There is no differentiation between serious and slight injuries in the crash databases of Georgia and Armenia.
- Injury definitions are **not based on international standards** in any country (e.g. ICD, AIS, etc.).
- The 30-days definition and MAIS standard for serious injuries will be introduced in the next road safety strategic plan of Georgia.
- Armenia has made significant progress in the national crash data structure and variables in order to be more compatible with the CADaS protocol, while Moldova has made no progress since 2017.
- After full implementation of the new electronic module, **21 out of 28 MiniCADaS variables** will be available in Georgia for submission to the EaP RSO.
Availability of Road Safety Data

- In Armenia and Moldova, disaggregate crash data are shared with other authorities upon an **official request**.
- In Georgia, detailed crash data are shared with specific Ministries. It is planned to **openly share the database** with other involved agencies through a platform created for data sharing.
- For all countries, **few aggregate statistics** are openly available through dedicated websites.
- **Vehicle fleet** and **driver license** registries are available in all countries; in Armenia data are confidential and no data were provided.
- In Armenia and Moldova, **road length** data by type of road (urban, interurban roads and motorways) are available.
- No **SPIs** are collected.
Benchmarking of Crash and Road Safety Data Systems
Legislation, Institution & Software Platform

- The concept of a crash / road safety database is **not clearly referenced in the law** in any country, except Azerbaijan.
- In most countries, there is **one institution** tasked with leading the establishment and development of a road safety database.
- Armenia, Moldova and Georgia have **software platforms**, which allow updating the data structure in a simple manner and facilitate data input and exporting.
All countries have developed crash databases that are **online available**, which may enable the data exchange between different institutions and organizations.

The new electronic module of Georgia disposes **GIS features**, while in Moldova there is the option to use point locations.
Database availability & Update

- The principle of an "open by default" road safety database has not been adopted by any country, while progress has been made in Georgia and Moldova to provide access to detailed crash data to other authorities in the future.

- In Moldova and Georgia, updates of crash data are undertaken regularly, on an annual or semi-annual basis.
Willingness to exchange data & Connectivity

- Georgia is willing to **exchange crash data** with other authorities or organizations under a non-restrictive manner.

- Other available road safety databases at national level are **not connected** with the crash database in any country.

Concept of Road Safety Database

* 2017 assessment

Connectivity

* 2017 assessment

Crash data systems within the Eastern Partnership Road Safety Observatory
Conclusions & Recommendations

➢ Georgia has made significant progress in almost all examined criteria used for the assessment of its crash data system.

➢ Armenia has made significant progress in the transformation of its national crash data structure, which should be a priority for Moldova as well.

➢ The establishment of a valid death registration system should be considered for all countries, in order to better validate the crash data collected by the Police and estimate the effect of under-reporting.

➢ The need for high quality crash data and the establishment of a central road safety database should be emphasized to all involved stakeholders, and especially to Police, which will allow in the long-term a data-driven approach to the decision making process.
Crash data systems within the Eastern Partnership Road Safety Observatory

Emma MacLennan, EASST
Tatiana Mihailova, World Bank
Katerina Folla, NTUA
George Yannis, NTUA