Current and future challenges of the European Road Safety Observatory

Konstandinos Diamandouros³, Robert Bauer², Katerina Folla¹, Alexandra Laiou¹, Klaus Machata², Christian Brandstaetter², George Yannis¹

¹National Technical University of Athens, Greece
²Austrian Road Safety Board (KFV), Austria
³European Road Federation (ERF), Belgium

Marrakesh, 12 October 2017
The ERSO is the information system of the European Commission with harmonised specialist information on road safety practices and policy in European countries.

The framework of ERSO was developed within the SafetyNet project (2004-2008), in which 22 institutes from 17 countries cooperated.

Its content was updated and expanded within the DaCoTA project (2010-2012), in which 17 institutes participated.

Current updates of the ERSO (2015-2018) are carried out by NTUA, KFV and ERF for the EC DG-MOVE.
In 2010, the EU set a target of reducing road deaths by 50% by 2020, compared to 2010 levels, followed an earlier target set in 2001 to halve road deaths by 2010, which was almost accomplished.

In 2016, about 25,500 people were killed and 135,000 people were seriously injured in road accidents in the EU.

In 2016, EU road fatalities were reduced by 2% after two years of stagnation and by 19% since 2010.

On average about 8% of road fatalities occurred on motorways, 37% in urban areas and 55% on rural roads.

Car occupants accounted for 46%, pedestrians for 21% and motorcyclists for 14% of road fatalities.

Speeding, drink or distracted driving and non-use of safety devices are the leading causes of death and serious injury in Europe.
The role of the ERSO

- Data collection and analysis are essential for the road safety management process.

- Within the development of ERSO, road safety related data and knowledge at European level (28 EU and 4 EFTA countries) were gathered and made available to road safety professionals and decision makers.

- Data included in ERSO (macroscopic and in-depth) concern:
  - Road accidents
  - Risk exposure
  - Safety performance indicators
  - Under-reporting of accidents
  - Country characteristics
  - Social costs
  - Traffic laws and measures
  - Accident causation data
  - Accident injury data

- The knowledge section contains several reports on important road safety issues, as well as the road safety country profiles.
Methodological challenges

- Definition of **common protocols** for data collection
- **Availability** of data
- Systematic **collection** of data and information
- **Analysing** data
- **Presentation** of the results responding to user’s needs
- **Continuity** in making all results publicly available
The Annual Accident Reports (AAR)
- Overview – major issues
- Time series – last 10 years in detail
- Fatalities of last year (People involved, Modes of transport, Accident characteristics, Periods of time, Type of area/road, Weather conditions etc.)

17 Traffic Safety Basic Facts (BFS)
- Main Figures
- Children
- Young people
- Youngsters
- Elderly (aged >64)
- Pedestrians
- Cyclists
- Motorcycles & Mopeds
- Car Occupants
- HGVs & Buses
- Motorways
- Roads outside urban areas
- Urban Areas
- Seasonality
- Single Vehicle Accidents
- Gender

Road Safety Country Overviews
- Structure and Culture
- Programmes and Measures
- Road Safety Performance Indicators
- Road Safety Outcomes
- Social Cost
- Synthesis
ERSO Knowledge

• 22 Traffic Safety Syntheses
  - Pedestrians and Cyclists
  - Work-related Road Safety
  - Speed & Speed Management
  - Cell Phone Use while Driving
  - Fatigue
  - Power Two Wheelers
  - Novice Drivers
  - Older Drivers
  - Serious injuries
  - Driver Distraction
  - Children
  - Alcohol
  - eSafety
  - Post Impact Care
  - Roads
  - Speed Enforcement
  - Vehicle Safety
  - Cost-Benefit Analysis
  - Integration of road safety in other policy areas
  - Quantitative Targets
  - Road Safety Management
  - Safety Ratings

• 64 Infographics based on the above reports are available

Konstantinos Diamandouros, «Current and future challenges of the European Road Safety Observatory»
ERSO added value

- ERSO is a powerful road safety information system with comparable information among European countries.
- ERSO results can contribute significantly to:
  - monitoring road safety trends
  - understanding underlying road safety risk factors in combination with a more detailed analysis
  - benchmarking road safety performances
  - identification of best practices
Need for more data and knowledge in Europe

- Effective road safety management systems need to be based on evidence.

- Road accident and casualty data are insufficient for monitoring and understanding road safety.

- Additional data need to be co-examined:
  - risk exposure data
  - safety performance indicators (SPI)
  - economic and health indicators
  - road safety rules and regulations
Next steps for improved road safety data and knowledge in Europe

- More surveys for **exposure, performance indicators, driver behaviour**

- Establish a common methodology in order to estimate the **real number of serious (and slight) road injuries** under the same definitions.

- More **large scale experiments** (in-depth accident investigation, naturalistic driving, driving simulator)

- More research and analyses to **support policy making**
Injury database

- MAIS3+ has to be adopted by all European countries for defining injury severity and data be collected under this definition.

- Establish a frequent Pan-European survey linking police and hospital data, using a common methodology and definitions, in order to estimate the real number of serious (and slight) road injuries.

- Establish a Pan-European in-depth accident investigation network (e.g. based on the DaCoTA recommendations).

- Comparable injury data at disaggregate level for detailed analyses focusing on specific road user types (e.g. VRUs), area types (e.g. cities) etc.
Exposure and Performance Indicators databases

• Development of the appropriate **sampling and methodological framework** for data sampling and surveys.

• **Types of sources:**
  • Questionnaires to national representatives (NR), governmental or independent experts;
  • Roadside observational surveys on representative sections of the road network;
  • Questionnaire surveys on representative samples of road users.

• Development of the **Exposure and Road Safety Performance Indicators Databases** with a powerful communication interface.

• Carry out **targeted analyses** to support evidence based decision making.
Conclusions

• High need to enrich ERSO with more data and indicators mainly concerning:
  • Exposure data
  • Road Safety Performance Indicators
  • Serious injuries (MAIS 3+)
with data to be collected systematically by a uniform methodology.

• ERSO should guide European decision makers to collect and exploit systematically high quality road safety data in order to better support local, regional and national policies, programmes and measures.
Current and future challenges of the European Road Safety Observatory

Konstandinos Diamandouros³, Robert Bauer², Katerina Folla¹, Alexandra Laiou¹, Klaus Machata², Christian Brandstaetter², George Yannis¹

¹National Technical University of Athens, Greece
²Austrian Road Safety Board (KFV), Austria
³European Road Federation (ERF), Belgium

Marrakesh, 12 October 2017