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BeMagazine

Road Safety Advances



Be-Safe Development

Project presentation



Dear Colleagues,

I am proud to launch the first issue of Be-Safe project newsletter and I hope this quarterly newsletter will become an opportunity to discuss about road (un)safety and its relevant economical, social and human impacts. These impacts are huge and,

in 2010 in Belarus the recorded road accident fatalities were 1,199 and the fatality rate was 125.7 fatalities/million inhabitants while the comparable fatality rate in the European Union (EU) in 2010 was 61 fatalities/million inhabitants.

This difference is due to many factors, among the other strong commitment of European Commission (EC) on road safety as also stressed in the white paper (EC White Paper – European Transport Policy for 2010 – Time to Decide. EC 2001) that highlights the importance of setting up a European Road Safety Observatory and of managing road safety policy on an evidence base involving research institutions.

Starting from this consideration the main aim of Be-Safe project is to strengthen the role of research in managing road safety policy on an evidence-base in Belarus. Be-Safe is financed by the European Union (EU) through the Tempus programme that supports the Academic cooperation between EU higher education institutions and those from neighborhood countries.

In the Be-Safe consortium 7 research institutions, 3 from EU and 4 from Belarus, are involved. Concerning the EU research institutions beside the Research Centre for Transport and

Logistics (CTL) that is the project coordinator, the EU partners are well known research institutions in Europe and at international level, namely: Loughborough University and National Technical University of Athens (NTUA). The EU research institutions have already worked together in SafetyNet and DaCoTA projects among the others. The Belarusian partners are well known Belarusian Universities, namely: Belarusian National Technical University (BNTU), Belarusian State University of Transport (BelSUT), Brest State Technical University (BrSTU) and Belarus State Economic University (BSEU).

The project started in December 2013, has a duration of 36 months and the total cost of the activities is of 1,288,000 € of which 1,158,450 € funded by the EU.

Be-Safe proposal aims at transferring to Belarus the most recent knowledge and good practices developed in Europe in the field of road safety and Local Universities are the key actors to start this process. Starting from these concepts and knowledge developed within the European Road Safety Observatory developed by EU partners, the project aims to:

- Developing and test in Belarus two 1st level University Masters (60 ECTS) according to the Bologna process standards, one for Engineering faculties and one for Economics faculties.
- “Train the Trainer” supporting Local Academics in defining and delivering the Masters;
- Providing each Local University with a laboratory dedicated to road safety.

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Road Safety Statistics

Road Safety performance comparison between EU States and Belarus

Introduction

In the framework of the Be-safe project, the present note aims to contrast road safety situation as well as current road safety trends in Belarus against EU States. The comparison is drawn based on various indicators for specific time periods.

Period 2001 - 2010

Based on 3rd Road Safety Action Plan (RSAP), the European Union had set itself an ambitious target of halving the yearly number of road fatalities between 2001 and 2010. Although the overall target was nearly achieved, the 43% reduction in road fatalities has proved to be a turning point in motivating EU States, in particular those facing the greatest challenges, to reduce the number of road fatalities.

In Belarus, the road safety situation began to change radically after the year 2006 where 1,726 people died as a result of traffic accidents. Ever since, there is a continuous effort at State level aiming to reduce the number of fatalities in road accidents. During the same year (2006), a national RSAP titled "The Concept of Road Safety of the Republic of Belarus for the Period 2006 - 2015" was released. One of its primary goals was to reduce the number of people killed in road accidents in 2015 by at least 500 people compared to 2005 (1,673 fatalities).

Fig. 1 shows the percentage change in road fatalities between 2001 and 2010 in EU States as well as Belarus.

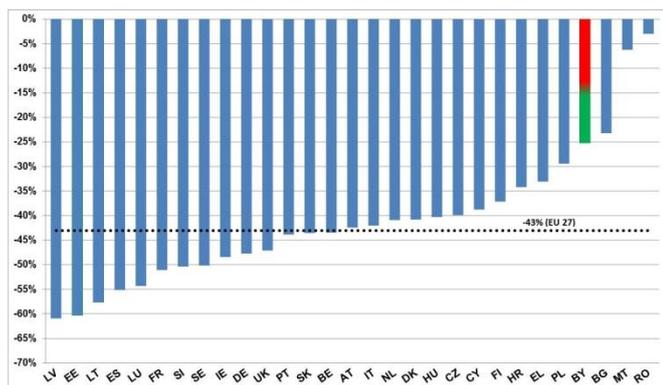


Fig. 1 – Percentage Change in Road Fatalities Between 2001 and 2010.

Period 2011 - 2020

In 2010, the European Union renewed its commitment to improving road safety by setting a target of further reducing road fatalities by 50% by 2020, compared to 2010 levels, thus retaining the level of ambition regarding the priority and importance in addressing this major concern.

The results of Belarusian RSAP, on the other hand, which covers

the period 2006 – 2015, can be seen during the current decade where the reduction trends of road fatalities have remarkably improved and are among the best performing European countries. For example, in 2013, the number of fatal road accidents, though still a major issue, decreased to 892, a figure which is beyond the expectations set in 2006. Moreover, road fatalities in 2013, decreased by 25% in comparison to 2010 (Fig. 2).

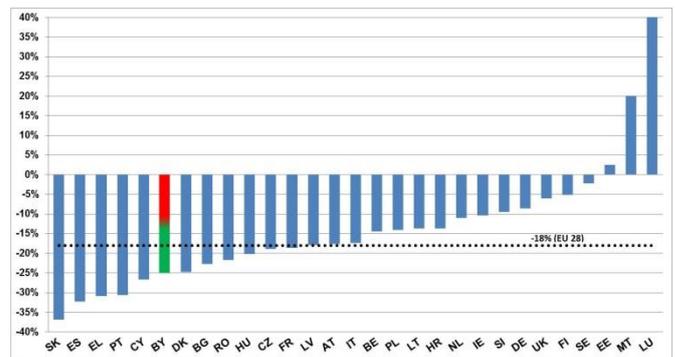


Fig. 2 - Percentage Change in Road Fatalities Between 2010 and 2013.

However, a more precise and descriptive manner in utilizing road fatalities to point out the current level of road safety between countries, is to associate the number of road fatalities per million of inhabitants (road mortality). Fig. 3 provides the relevant comparison regarding EU States and Belarus for 2010 and 2013 respectively.

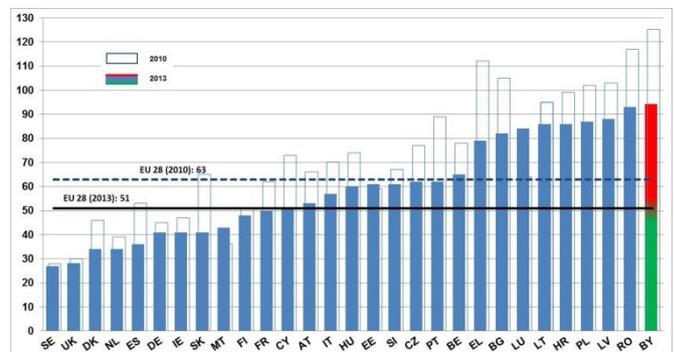


Fig. 3 - Road fatalities per million of inhabitants for 2010 and 2013.

Regarding Belarus, it can be seen that despite the significant reduction in the number of road fatalities per million of inhabitants, the country performed worse than all EU States both in 2010 and in 2013 respectively.



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Results of International Road safety research

DaCoTa

Results from the Road Safety Data Collection Transfer and Analysis project (DaCoTA)



This article summarises the findings of the DaCoTA project some text and diagrams were taken from the full report and used in this article. The full report is available on the project website as well as all the individual deliverables for each of the 6 key research areas. <http://www.dacota-project.eu/>

Background

The ultimate aim of DaCoTA was to further develop the European Road Safety Observatory (ERSO) by implementing new approaches to gather, structure and apply policy-related safety data in key areas. The ERSO culminates this work by bringing together the range of data and knowledge sources in a central web site to support safety policy making at both EU and national level.

http://ec.europa.eu/transport/road_safety/specialist/erso/index_en.htm

The European Commission announced the development of the European Road Safety Observatory in the 2001 Transport White Paper¹ with the intention to 'co-ordinate all community activities in the fields of road accident and injury data collection and analysis'. The EU funded project 'SafetyNet' established the framework for ERSO between 2004-2008 through its development of standards and protocols for core data and knowledge tools and its incorporation within the DG-MOVE website. The DaCoTA project has continued on from SafetyNet with maintained support from DG-MOVE and co-funding from the European Commission within the 7th framework programme.

A series of research phases was undertaken for each of 6 key areas of data and knowledge to identify the most appropriate indicators or knowledge areas and to develop the most suitable protocols to be adopted in the ERSO. The research was undertaken by a team of researchers and co-ordinated by Loughborough University, these 6 key research areas are summarised below

- Policy-making and safety management processes
- Pan-European in-depth accident investigation network
- Data Warehouse
- Decision support

- Safety and eSafety
- Driver behaviour monitoring through naturalistic observations.

Policy-making and safety management processes

There were two purposes to the research on road safety policy within this project.

- Identify the needs for data and decision-support tools of road safety decision-makers, managers and other key stakeholders in order and make ERSO as relevant as possible for all the tasks involved in policy-making.
- Develop knowledge on road safety management systems at the national level, both from a theoretical and logical point of view (defining "good practice" criteria and testing them) and from a practical point of view (describing and assessing existing road safety management systems in European countries, collecting practical ways to achieve elements of "good practice" and laying the grounds for a European observatory of road safety management to be integrated into ERSO).

Mixed qualitative and quantitative methods were used to collect data on road safety management policy across Europe. An initial consultation of a panel of decision making road safety experts was undertaken to establish needs and policies in Europe. Following these initial consultation interviews for the decision support tools and needs a further consultation of road safety stakeholders was undertaken as an online survey.

Overall the stakeholders want more data and knowledge in road safety related decision making but also there was discontent about the current poor availability of such information.

Pan-European in-depth accident investigation network

In-depth accident investigation is key to understanding the causes and consequences of crashes. The detailed data obtained from these investigations is useful to all stakeholders as it provides data to answer current and future research questions for example to support the EU target of reducing fatalities by 50% by 2020.

Overall this in-depth accident data provides detailed information on all aspects of the accident, including the road environment, vehicle, road user (Fig. 1). Also in addition to the data collected other factors are calculated as part of a case analysis such as impact speed, injury mechanisms and causation information.

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International Best Practices

Shared Spaces

In recent years, especially in northern European Countries, the concept of Shared Space (Fig. 1) has been spreading, based on the idea of integrating and interacting different road users in the same space, in order to give back the road not only their transit function, but also that of place to meet and socialize.



Fig. 1 - Shared space in Netherlands.

The application of this new concept involves the elimination, or at least, the reduction of the strong elements of separation among different types of road users and the complete removal of traffic signs.

In addition to social and environmental value of this approach, some authors argue the elimination of signs and barriers will increase road safety of pedestrians and other road users, encouraging them to be more prudent and concentrated (Baillie-Hamilton, 2004).

Despite these considerations, some questions remain open:

- Do Shared spaces actually increase road safety, especially

for pedestrians?

- What are the areas in which it is recommended to realize the Shared spaces?
- Are there guidelines or recommendations for Shared spaces design?

In recent years international research has begun to provide answers to these questions.

Shared spaces - the genesis

Pedestrians are considered vulnerable road users because their safety is at risk more than other users. To maximize at the same time, road safety and vehicle flows eligible, the different components are traditionally segregated. This approach, deriving from the early works of Le Corbusier in the 30s, is one of the key principles of modern traffic engineering. Unfortunately, it is strongly focused on traffic and provides the intensive use of barriers and signs.

In response to the this dominant approach, the concept of Shared Space has been stated, aiming to give the road back their own features of meeting and socializing, in addition to the mere transit function.

The concept of "pedestrian priority" area was for the first time carried out by Michel Deronzier in the 80s and then taken up by Tim Pharoah, to describe existing examples of layout of roads, without the typical segregation among different road users.

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