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ROAD SAFETY, PILLAR OF THE MILLENNIUM DEVELOPMENT

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Abstract: In this paper are presented the main principles of road safety resulted by the International Roads Congresses and Worldwide Groups, Committees, Meetings etc. in Road Safety Management area.

Key words: road safety, road accidents, safety management

1. INTRODUCTION

“Road safety is a vital part of reaching the millennium development targets” [1], due to which only an expanded global endeavor that would sum up the efforts at the level of each country could create a safe living environment beyond doubt.

Cooperation between industrialized states for road safety has a long history. One hundred years ago, the first International Roads Congress was held in Paris in 1908, followed by the first Road Traffic Convention from 1909. It was the benchmark for the commencement of international cooperation in view of setting out common rules and promoting efficiency and safety of road traffic.

2. MAKE ROADS SAFE!

The Report [1] of the Commission for Global Road Safety from the end of year 2009 that has the slogan “Make roads safe!” supplies the following recommendations:

- due to the fact the new road infrastructure is vital for reaching the development targets, it is recommended that at least 10% of all road infrastructure projects be dedicated to road safety;
- applying the action plan having a minimum 10-year duration for insuring the global road safety in the countries with average income as well as in those with small income, even if the plan must be financed from external funding (USD 200 million from governmental funds and USD 100 million from other sources);

- in order to encourage and support the global diminishment of the number of deaths or injuries in traffic, it is recommended the setting of some ambitious objectives but attainable objectives that are supported by the key performance indicators at national level;

Representatives of the Commission for Global Road Safety are elected by the International Federation of Motor Vehicles based on acknowledging their authority at international level in the area of researching and developing the road safety area and, at the same time they are remarkable persons that can give cooperation-related recommendations at legislative level. Rt. Hon. Lord Robertson of Port Ellen KT. GCMG is the president of the Commission. He was NATO Secretary General (1999-2003), member of the Commons Chamber (1978- 1999), he received a medal for peace and he was awarded the Doctor Honoris Causa title by over 15 universities. At the time of his visit in Romania in 2003 as NATO Secretary General, he was awarded the Docotor Honoris Causa title by the SNSPA University, within the first class of the postgraduate program of NATO executive studies.

According to the Report of the Commission for Global Road Safety, the roles of assessment systems for road safety are:

- **to inform** the consumers on the safety level of different types of vehicles according to the standards set out by the national and international authorities and the independent programs for new vehicles;
- **to promote** the safety concept used in the improved design of certain vehicles and for designing the road infrastructure;
- **to develop** independent safety systems for the traffic of Europe.



Fig. 1 Education on road safety begins in childhood [1]

At world level, the state of affairs is severe and it happens often that the victims of road accidents remain invisible to the society. Although tragic for those involved, this fact becomes a hidden epidemic.

The international Euro RAP [2] non-profit association is one of the many organizations that try to bring together roads, authorities and vehicle makers in order to develop an independent road safety system.

This determines the risk level by using a standard protocol:

- **risk maps** for the road users that would point to them the risk they are subject to on a certain road sector, according to the rate of previous accidents;
- **performance determination**, roads assessment and classifying them, with focus on the “roads with high accident risk” on which the users are exposed and still are numerous victims for which the authorities should be warned to take measures, and the “improved roads” identified as good practice model and for the competition for reaching excellence be encouraged;
- calculating the **road protection level** that would allocate to each road a “safety and protection score” relying on the manner in which the road protects the users against the main cause of deadly accidents.

Table 1. Haddon matrix for preventing accidents and injuries in traffic

| | | POPULATION | VEHICLES | ENVIRONMENT |
|------------|---------------------------|--|--|---|
| Ante-crash | Preventing accidents | Education / classes concerning attitude / behavior | Able to travel on the road / lights, breaks, tires, etc. | Designing the markings and signs, maintaining the roads |
| Accident | Preventing injuries | Use of protection means | Airbag, seat belt, etc | Protection means (barriers), pedestrian markings |
| Post-crash | Keeping the persons alive | Knowing the first aid actions – access to medical care | Easy to access / fire hazard | Survival instruments |

In the same report, the key priorities for a national level action in order to improve the road safety are mentioned:

- Setting out a scale of traits of traffic issues classified on accident types, distribution among user groups, locations and routes needed for optimizing the paths;
- Setting out the priorities in order to act optimally by using the maximum information quantity that may be acquired in exchange of the cost accepted;
- Setting out the institutional arrangements required for implementing the strategy;
- Preparing an action plan with measures specific to each country.

The world report on preventing traffic accidents proposes several actions for road safety that involve the national level in order for prevention measures to be taken:

At governmental level:

- setting out the road safety as priority;
- developing a multi-disciplinary attitude on the road safety;

- setting out some national safety plans;
- creating road safety budgets and enhancing the investments for efficient activities in order to remove the traffic-related hazards;



Fig. 2 Guiding traffic in an intersection [1]

By the legislative framework:

- hardening the legislation on the mandatory character of putting on the seat belt for the front seats and the back ones, wearing protection helmets for motorcyclers and bicyclers;
- punishing severely the drunkenness while driving;
- providing safe, efficient and sustainable public transport means;
- encouraging the walking and bicycle using;
- setting out some correct speed limitations;
- setting out some high standards of vehicles and roads safety;
- taking some firm measures against the users that violated the traffic rules imposed by law;

By the public health care system:

- creating pre-hospital emergency services specialized in taking over vehicle accident victims;
- developing the medical skills and knowledge belonging to the staff specialized in treating trauma due to road accidents;

Motor vehicle makers

- endowing all vehicles with the minimum equipment required by law concerning the users safety;
- responsible advertisement of vehicles that focuses on performance;
- improving the motor vehicles' safety systems by investing in research and development surveys in this area.

Community, civil society, the individual

- encouraging the governments to take measures for making the roads safe;
- helping the implementation of a safe and efficient public transportation system that would satisfy the vehicle users, the pedestrians and bicyclers;
- promoting some national awareness campaigns on road safety but also on the impact and medical cost of accidents;
- identifying the local traffic issues;
- responsible behavior by observing the legislation and rules in force.

The surveys showed that the users most exposed to accident hazards are children and young persons. In countries with a low economic level, the most probable to be hurt are pedestrian children, and in developed countries the young persons that drive vehicles.



Fig. 3 Exposure to accident on a road with speed limitation of 100 km / hour [1]

According to the UN Guidebook for setting out some ambitious but achievable targets at world level concerning the road safety, the member states are encouraged to implement the five pillars step by step relying on the recommendations of “World Report for preventing road accidents” proposed by Commission for Global Road Safety [3].

Table 2. The pillars of road safety

| International coordination for the global architecture of road safety | | | | |
|---|------------------------------|------------------------------|------------------------------|------------------------------|
| 1st pillar | 2nd pillar | 3rd pillar | 4th pillar | 5th pillar |
| Road safety management | Infrastructure | Safe vehicles | Road user behavior | Post-crash care |

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