

Strategic road safety policies and research needs in Europe and the United States of America

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Abstract

In this paper the policies set up by the European Union and the United States of America to decrease the crashes significantly in the near future are presented. These policies address specific issues of the road infrastructure, the driver and the vehicle. These policies as well as the experience gained up to now in the field of road safety have highlighted some areas of knowledge gaps in road safety, which have to be addressed in the near future from the transportation community worldwide. Those strategic research needs and recommendations ranging from crash data collection and analysis to road design issues are discussed, to give highway engineers in practice and academia the necessary impulses to tackle long-term, high-risk road safety problems.

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Keywords – Road safety, policies, plans, European Union, United States of America

1. Introduction

While road safety has remained a major concern of all societies around the world since the massive introduction of the automobile as a primer mobility mode, its impact has never been as agonizing as in the last years. Being the 11th cause of death in 1990, it is expected to reach the 3rd rank by 2020 showing an overall increase of 67% [1]. Despite the improvements observed in road safety in the recent years especially due to a crackdown on drunk driving, increased use of seatbelts and helmets and more widespread use of airbags, traffic crashes are still the leading causes of death in the developed world. Based on EU road safety statistics the approximately yearly 40000 fatalities observed in the EU-15 countries correspond to the population of Monte-Carlo. If to this number the 1,7 million injured persons are added and the total societal cost associated to these tremendous numbers is calculated, the amount results to 160 billion € corresponding to 160% of the EU annual budget. A similar situation is observed in the U.S. where in 2001, 42116 Americans were killed and 3 million injured in traffic crashes. A worldwide effort is therefore needed from all road safety stakeholders to define measures, activities and actions to reverse this trend.

The effort to address road safety is not an easy one. Beyond the fact that road safety is indeed a system involving the driver, the roadway and the vehicle, the development stages of a crash according to [1] has to incorporate four major risk factors: