

LISBOA 2010 16th World Meeting

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THEME 2: ROAD SAFETY & SECURITY

Workshop: Cost-effective solutions and original solutions in Developing and Developed Countries

President: Adrian Walsh

Moderator: António Macedo

Papers for oral presentation

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By LOVEGROVE, Gordon

INTRODUCTION OF ROUNDABOUTS IN CROATIA

PRELIMINARY EXPERIENCES

- **Past and present experience regarding the concept and design of roundabouts in the Republic of Croatia is presented**
- **Although the implementation of roundabouts has proved to increase road safety in general, some problems remain, mainly with old designs, related to capacity and traffic safety (motorized, bicycle, pedestrian)**
- **For further improvements through interventions and reconstructions, research is underway applied to real traffic conditions in Croatia, taken into account accident records and geometry, as a basis for the elaboration of advanced guidelines for the design and construction of roundabouts**
- **The importance of the on-going research project “Correlation of design and safety at intersections with circular traffic flow” is highlighted, and some practical outcomes are presented**

IMPROVING ROAD SAFETY FOR NORTH EASTERN STATE ROADS OF INDIA A CASE STUDY

- A general picture is drawn on the road safety situation in Asia and particularly in India, where a high number of road deaths occur as a consequence of a combination of factors, among which the high proportion of two and three wheelers, population density, pedestrian traffic, rapid motorization and deficient infrastructures
- The case of North-East Region of India is focused as regards its state roads, which have deteriorated over the years due to several factors (adverse and extreme climatic conditions, failure of pavement courses, increasing traffic loads and lack of funds for timely and adequate maintenance)
- A main reference is made to a program of works called the North Eastern State Roads Investment Program (NESRIP), which intends to address the roads maintenance and safety related issues, where a number of interventions are included (road safety audit, black spots identification, improvement of road geometry, roadway widening, flexible pavement reconstruction, drainage provisions, protective works)

SUSTAINABLE TRANSPORTATION - TRANSPORTATION SAFETY

- **The road safety situation in Nigeria is addressed, as a common problem to other developing countries, with relation to a huge increase in the demand of passenger and freight transport by roads in the last decade**
- **An overview of the main causes of road traffic crashes is presented, associated to the driver (human errors), the vehicle and the road, where drivers and pedestrians often compete for the same space, namely in urban areas**
- **A 3 years study on road safety is reported, which was undertaken, for the Federal Road Safety Commission, having as case study the Bode Saadu road, where interventions were made and some results obtained**
- **The referred study involved part of the interventions within an overall strategy, designated as 6 E's (Engineering, Enlightenment, Education, Enforcement, Environment and Evaluation), and among its conclusions is that further attention is needed to the road factor, namely to the improvement of road condition**

LOW-COST TECHNICAL MEASURES FOR RURAL ROAD SAFETY ENHANCEMENT IN BEIJING

- **Considerations are drawn on the definition of “rural roads” used in China, according to its highway network classification, presenting specific features which require measures for safety enhancement, not all in line with those regulated for application in higher standard highways**
- **A focus is posed on the study and implementation of low cost technical measures using technology and solutions specially adapted to the referred roads’ physical and social environment, including innovative treatments, the use of new materials and new structures for road signs**
- **A brief presentation of each measure is made, which were applied in rural roads at the Mentougou District, in the west of Beijing, through an implementation process aiming at extending the so called “Highway Safety Enhancement Project” (HSEP) to this type of roads**
- **It is stated that, so far, the results have showed, besides a substantial reduction of investment costs, a good acceptance of the measures by the road users, their effectiveness in general terms, the effect of each one requiring, however, further evaluations**

SUB REGIONAL WEST AFRICAN COUNTRIES ROAD SAFETY SPECIFIC ISSUES

- **A series of specific problems encountered in Sub –Regional West African Countries are listed and characterized (insufficient safety devices, problems with maintenance, vehicles inspection issues, lack of enforcement of traffic laws, public transport deficiencies), which contribute to road accidents in this part of a Continent that shows a disproportionate share of global road fatalities, according to the WHO**
- **It is stated that, in spite of the poor records, there have been improvements in Senegal and other Sub Saharan countries, shown in general trends by accident statistics in recent years, due to several positive actions under a political will and commitment, as the launching of road safety policies and their management (setting up National Boards and organizing forums dedicated to road safety), as well as implementing safety measures directed to the main risk factors, better pre and post crash care services, and accrued efforts on improved accident reporting and data analysis**
- **Conclusions are drawn which indicate that further progress in road safety in the Region under consideration is needed, but can only be achieved by continuing to face the problem and through a concrete support to overcome the scarcity of resources, involving all the stakeholders, the engagement of citizens, and expertise and financial support from developed countries**

SUSTAINABLE ROAD SAFETY: A NEW NEIGHBOURHOOD ROAD PATTERN

- **The need to find ways to reduce the burden to society of injuries due to road collisions is emphasized, and, as a contribution to this purpose, road safety in urban networks related to the specific case of “neighborhood layout” is addressed**
- **The results of a research study are presented following previous developments in this subject area in Canada and in other countries, in order to estimate and compare the safety performance of different traditional and recently proposed neighborhood road network patterns**
- **The application of an advanced methodology is described applying prediction models using exposure, socio-demographic, transportation demand and network characterization variables**
- **The main conclusions of this study are presented, which can be of major help for the planning of new or for retrofitting existing neighborhoods, among which the indication that network patterns that include a higher proportion of 3-way intersections have been found to operate at a consistently higher level of safety, maintaining both mobility and accessibility**