Star Rating Maps - The Case in Serbia

The inspected road from Belgrade to Cacak is part of the international road IA-2, i.e., M-22 road. It includes 13 sections and the total length of 131.1 km.

The following figures contain some of the hazardous objects in the roadside area, as well as unsafe engineering measures.

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**SENSoR project produces comparable results**

By adopting the RAP methodology the SENSoR project enables the comparison of the SEE road network safety capacity at a global level.

**RAP Programmes have been implemented:**

- In 90 countries worldwide
- 650,000km have been measured and mapped

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**Bank Ready Safer Roads Investments Plans**

Where Star Ratings provide a measure of risk on a road, Safer Roads Investments Plans identify ways in which the Star Ratings can be improved in a cost-effective manner.

EnRap protocol considers more than 70 proven road improvement options to generate affordable and economically sound Safer Roads Investment Plans that will save lives. These measures range from low-cost road markings and pedestrian refuges to cost-intersection upgrades and full highway duplication. Indicative recommended engineering countermeasures for improving safety of the inspected road in Serbia are presented in the next figure.

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**EU road safety with no borders**

A Safe pan-European road network is the backbone of the sustainable transport system capable of delivering fast, affordable and reliable transport solutions in Europe. The free movement of people and goods is a noble European goal and the decision by EU nations to develop trans-European networks is a practical expression of it. EU nations have committed themselves to ensure the sustainable mobility of persons and goods under the best possible social, environmental and safety conditions.

Safety is the primary concern of any European traveller exercising "freedoms" guaranteed by the EU integration process. Combining freedoms with safety transnational approach brings greater value because it:

- Improves accessibility through making access across borderless Europe safer
- Encourages the introduction of coordinated methodologies and policies involving national and international stakeholders
- Provides opportunity for convergence of current practices, reinforcing the needs for harmonisation at EU level
- Creates a system of benchmarking by encouraging cooperation and involving countries with differing road safety performance and different ways of addressing varying risk on roads

**From measurement of road safety conditions in South East Europe to national actions - the SENSoR Project**

As SENSoR builds its Road Safety Atlas for South East Europe, the safety performance of Europe’s roads is becoming more transparent. The idea of mapping the safety of our roads to common standards is proving highly effective. As each country is added, more of Europe’s citizens, policy makers and road engineers can share a common understanding about where the risky roads are. These results are helping build awareness in public, policymakers and professional engineers about the variable safety performance of Europe’s road infrastructure.

As a result, SENSoR is stimulating a new, practical and informed debate about what can and should be done, given the high economic returns available from reducing road crashes. Many countries in Europe are choosing to use measurements devised by EuroRAP with support from the European Commission in developing their own national road safety action plans. By doing so, they can see whether their roads are getting safer over time and how well they are doing compared with other countries.

The vision for the South East Neighbourhood Safe Routes (SENSoR) project is to build a South East Europe free of high risk roads. The project builds on outstanding cooperation among automobile clubs, research institutes and authorities in the South East Europe region. Together they are committed to identifying high risk roads using consistent and standardised Road Assessment Programmes (RAP) technology and methodology, mapping the safety of roads and raising awareness among civil society and professionals alike of the importance of safe road infrastructure. The SENSoR project builds on the already established and well advanced Road Assessment Programme (RAP) experience, including previous work in the development of Risk Maps, based on recorded deaths and serious injuries and traffic censuses, the safety rating of the infrastructures (Star Rating) and the development of "bank ready" high-return Safer Roads Investment Plans (SRIP).
The Road Trauma in SE Europe

In countries where detailed crash and traffic data are available, RAP risk maps give an objective view of where people are being killed or seriously injured on a road network and where their crash risk is greatest. They capture the combined risk arising from the interaction of road users, vehicles and the road environment. Road sections are allocated into colour-coded categories from high risk to low risk.

Almost 19,000 km of roads in South East Europe has been assessed within the SENSoR project including roads in Greece, Slovenia, Hungary, Slovakia, Romania and Serbia.

Risk Mapping

Legend
- Fatal and serious crashes per billion vehicle kilometres
  - Low risk
  - Low-medium risk
  - Medium risk
  - Medium-high risk
  - High risk
- Motorways
- Signed/unguessed roads
- Other roads
- International boundary

Risk Maps - The Case in Greece

The developed Risk Map for Greece covers 4.600 km of the TEN-T road network for the period 2008-2010.

Inspecting & Rating Roads

Star Ratings are based on road inspection data and road design risk factors. They provide a simple and objective measure of the level of safety built-in to the road. Five-star roads (green) are the safest, and one-star (black) are the least safe.

Using specially equipped vehicles, software and trained analysts, SENSoR inspections focus on more than 30 different road design features that are known to influence the likelihood of a crash and its severity. These features include intersection design, road cross-section and markings, road hazards, footpaths and bicycle lanes.

Using EuroRAP protocols, SENSoR Project Partners achieved a survey of more than 15,000 km of various roads in countries of the South East Europe. Approximately 90% of roads surveyed are part of TEN-T network while the other 10% represents dangerous regional roads.

Roads performance tracking in Greece

The results show lower risk rates (related to the previous time period assessed) mainly wherever infrastructure has been upgraded.