

13th PRI World Congress & Exhibition on
"Road Governance & Its Impact on Roads Safety:
Achieving UN Decade of Action's Road Safety Targets"

Tunis, Tunisia
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المنظمة الدولية للوقاية من حوادث الطرقات
La Prévention Routière Internationale



الجمعية التونسية للوقاية من حوادث الطرقات
Association Tunisienne de la Prévention Routière

Road Safety Investments and Interventions in South East Europe

Stergios Mavromatis, George Yannis, Alexandra Laiou



National Technical University of Athens (NTUA)
Department of Transportation Planning and Engineering

Background

- Road accidents is a **serious problem** of the countries of **South-East Europe** and common action is necessary to improve road safety in this wider part of Europe.
- Generally, the number of **road fatalities per million of population** in EU countries of the South East regions is **higher than the respective EU average**.
- The “**ROSEE - ROad safety in SEE regions**” project of the SEE Transnational Cooperation Program covered **Italy** (IT), **Romania** (RO), **Hungary** (HU), **Greece** (GR), **Slovenia** (SI) and **Bulgaria** (BG) and involved representatives from national authorities, universities, NGOs and research centres.
- The objective of this paper is the exploration of a number of proposed **investments and interventions** for the **improvement of road safety in South-East European regions**.



Scope of proposals on investments and interventions

Exploitation of the ROSEE project results for the development of proposals on investments and interventions for the improvement of road safety in South-East European regions with regard to:

- Road safety legislation, policy and institutional capacity (LPIC)
- Road infrastructure
- Road user behaviour

Proposals on investments and interventions drafted:

- **separately** for each of these three subjects
- using a **common methodology**



Methodology

A **three step** methodology:

1. Use of **measures** and **priorities identified** within the ROSEE project
2. Exploitation of input from **existing lists** of proposals and recommendations
3. **Assessment** and **ranking** of road safety measures based on:
 - the **estimated safety benefit**
 - the **implementation cost**
 - the **implementation time**by **more than 100** road safety stakeholders



LPIC investments and interventions – overall results

Investment Proposals	Partner countries recording high safety benefit	Partner countries recording low implementation cost	Partner countries recording short implementation time
Legislation for infrastructure safety management	6	4	0
Legislation for efficient enforcement	6	4	1
Evaluating measures effectiveness	6	2	0
Development of road safety national Plan	6	1	1
Road safety inspection (RSI)	6	1	0
Setting up dedicated road safety budget	6	0	1
High risk site treatment program	6	0	1
Road Safety Audits (RSA)	5	2	0
Monitoring implementation progress of measures	5	2	0
Improved Emergency Medical Service	5	0	2
Emergency Call system (eCall)	5	0	1
Legislation for training, licensing, education	4	4	0
Setting up road safety targets	4	3	1
Road accident analyses	4	0	1
Operation of national road safety agency	4	0	0
Accident data collection system	4	0	0
Monitoring road safety indicators	3	2	0
European Road Assessment Programme (EuroRAP)	3	1	0
Trauma management performance	3	0	3
Legislation for new offences	2	5	0
Coordinate enforcement and promotion campaigns	2	1	3
Campaigns supporting the national programme	2	0	3
Emergency lanes in congestion	2	0	2

LPIC investments and interventions – overall results

- Institutional issues, legislative issues and infrastructure safety management concentrate most of the highly effective investment proposals.
- Legislative issues are considered the easiest to implement in most partner countries.
- Most of the examined proposals were related to high implementation cost.
- Almost all of the examined proposals are considered effective in the long-term in all partner countries.
- In half countries, communication and trauma management performance proposals are the only ones considered to need a short implementation time to provide benefit.



LPIC investments and interventions – conclusions

- In many partner countries most Legislation, Policy and Institutional Capacity investments are related to **high safety benefit**.
- However, most such proposals are considered relatively **expensive** to implement and **effective on the long-term**.
- The proposals considered to provide **high safety benefit at low cost**, in most partner countries are:
 - legislation for infrastructure safety management
 - legislation for efficient enforcement
- However, both investments **need time** to show their effect on the improvement of road safety.



Road Infrastructure investments and interventions – overall results



Investment Proposals	Partner countries recording high safety benefit	Partner countries recording low implementation cost	Partner countries recording short implementation time
Implementation of safety barriers	6	0	2
Development of roundabouts	4	0	0
Implementation of motorcyclist safety barriers	4	0	2
Speed humps	3	2	4
Raised pedestrian crossings	3	1	4
Creation of speed transition zones	3	1	3
Implementation of traffic lights at intersections	3	0	4
Improvement of sight distances	3	0	2
Delineators and horizontal road markings	2	4	3
Upgrade of existing pedestrian crossing	2	2	3
Traffic signs (regulatory)	1	4	5
Chevrons	1	4	4
Changing from unrestricted speed to speed limit	1	4	4
Raised road markers	1	3	3
Improvement of existing traffic lights	1	1	4
Rumble strips	1	1	3
Traffic signs (warning)	0	5	6
Traffic signs (guide)	0	4	4
Implementation of stop signs at intersections	0	4	5
Lowering existing speed limit	0	4	3
Post-mounted delineators	0	3	4
Implementation of yield signs at intersections	0	3	3

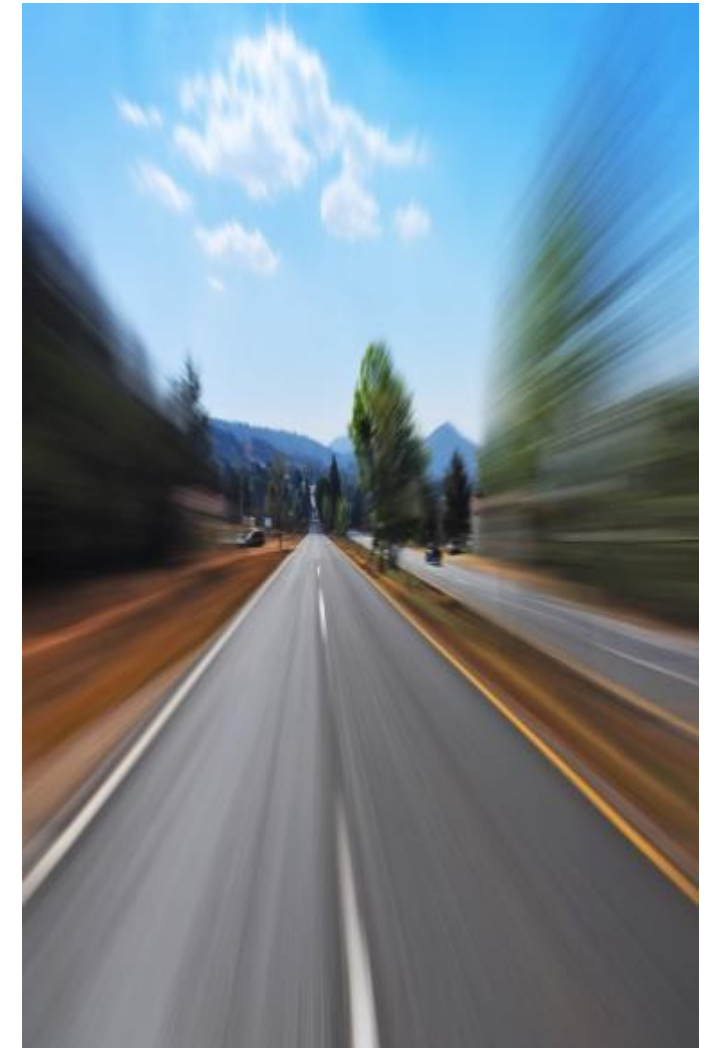


The **highest safety benefit** is related to:

- the implementation of safety barriers
- the development of roundabouts
- the implementation of motorcyclist safety barriers

Installation of traffic signs, such as stop signs at intersections, warning and guide signs is related to the **lowest cost** and **short implementation time**.

Cross-analysis of all criteria showed that **speed humps** are the most effective measure, related to high safety benefit, low cost and short time to take effect.



ROSEE countries differ widely in regard to:

- road network conditions
- road maintenance and managing
- road user behavior
- vehicle fleet and ownership
- general social and economic background
- legislation
- enforcement

thus, **different measures act differently between countries.**

Generally, measures with the highest safety benefit are neither the fastest nor the cheapest to implement.



Road User Behaviour investments and interventions – overall results

Investment Proposals	Partner countries recording high safety benefit	Partner countries recording low implementation cost	Partner countries recording short implementation time
Intensive police enforcement of child restraint use	6	4	4
Intensive police enforcement of helmet use	6	4	3
Traffic enforcement programs at high-risk times and locations	6	2	3
Improving bicycle visibility	5	5	3
Penalties for drunk driving	5	4	5
Mandatory wearing of helmets for moped and motorcycle riders	5	4	4
Intensive police enforcement of mobile use while driving	5	3	4
Intensive police enforcement of seat belt use	5	3	3
Education, training for young drivers	5	2	1
Intensive police enforcement of drink-driving	5	1	4
Increased random breath testing	5	1	2
Installation of speed cameras	5	1	2
Mobility and safety education at all school levels	5	0	0
Use of reflective devices by pedestrians	3	6	3
Road safety campaign against drinking and driving	3	2	1
Road safety campaign addressing young road users	3	2	1
Campaigns for the use of mobiles while driving	3	2	1
Using health professionals as advocate for road safety	3	2	1
Promoting walking and cycling	3	1	2
Campaigns for seat belt and helmet use	3	1	2
Campaigns for speeding	3	1	2
Campaign against dangerous and risky driving	3	1	2
Road safety television advertising supporting police enforcement	3	0	2
Lowering of speed limits	2	6	5
Introduction of speed limits	2	6	3
Licensing for mopeds	2	4	1
Periodically first aid education and training at school, for drivers	2	2	1
Gradual driver license	1	2	1
Voluntary training for bus and truck drivers	0	3	1

Road User Behaviour investments and interventions – overall results

- The **highest safety benefit** was related to measures focusing on **speed, enforcement and visibility** while the **lowest**, to **voluntary training** for bus and truck drivers, **first aid training** and **campaigns**.
- Measures of **enforcement, legislation, penalties** and **reflective devices for pedestrians and cyclists** are considered to be of low cost for achieving the desired safety benefits.
- **Campaigns and education** are related to **high cost** and **long implementation time** in most countries.
- **Lowering speed limits and strengthening penalties for drinking and driving** are measures **fast to implement** and will have the **quickest positive safety benefit**.



- **Not all measures** considered to have the largest safety benefits are the fastest to implement or are of low **cost**.
- **Legislative measures** such as enforcing traffic laws and increasing penalties for drinking and driving **scored high** overall.
- Most measures with **low overall scores** focus on **education** and **campaigns**.
These measures were ranked as having **low safety benefit, high costs** and taking generally a **long time to show impact**.



Conclusions

- The analysis of the assessment results per country revealed **important differences** among the partners that may be attributed to particular **local characteristics** and **conditions**.
- The **proposed investments** and **interventions** may serve as a **basis** for **road safety authorities** and **stakeholders**, in their efforts to enhance the overall capacity to coordinate, promote and operate the networks from a road safety perspective to achieve the road safety objectives set at national and transnational level.



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