

The most effective areas and safety measures to tackle in road safety in Albania

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Introduction

Road Safety Strategy in Albania and supporting Action Plan, drafted in 2000 should be reviewed and updated by the new "White Paper" 2011, which reviewed the entire system of road safety policies in the EU; second action plan of the strategy is based on the philosophy of "Vision Zero" but Albania has no technical, technological, administrative and financial resources needed to support this philosophy; Third in this document states that: "this document is open, long-term and should be evaluated and amended by Road Safety National Council (RSNC) in order to improve, at intervals (eg. annually)," but actually is not improved or changed not once so far from RSNC.

The objective of "National Road Safety Strategy 2011 – 2020" is:

 The number of deaths in road accidents should be reduced to the extent of 30-50% by 2020 compared with 2009. This is equivalent to a maximum of 250 fatalities in 2020.

Performance indicators

The analysis of data (for the moment till 2014 are available) will form the basis for future planning work for road safety and will give an answer which of performance indicators is the most important change to improve road safety.

Road safety trends based on the results described in the number of deaths and seriously injured and also certain indicators of road safety. The analysis requires an explanation about how the road safety situation could have been affected by the measures taken and what factors may have influenced the results (e.g demographic changes).

 Expenses related to road safety, should be seen as a high priority and as an investment in time and space, and not as a cost.



Data on Mobility and Safety 2010-2014

YEAR			Change in % 2013-2014		
Data	2011	2012	2013	2014	
Fatalities	322	334	295	264	- 10.5 %
Seriously injured	448	481	478	361	- 24.4 %
Light injured	1702	1754	2025	1992	-1.6 %
Fatalities/ 100 000 inhabitants	11.09	11.52	10.18	9.12	-10.4
Number of vehicles	410 629	394 485	445 956	490 899	+10.1 %
Motorisation number of vehicles /10 000 inhabitants	1415	1361	1540	1697	+ 10.2 %

Indicators of road safety performance analyzed in reference to the target levels are:

- > Compliance with speed limits in the local road network
- The impact of alcohol
- > Use of safety belts
- Use the helmet on motor bikes
- Vehicle Safety
- National road safety
- > Local road safety:

• Safety of pedestrians, bicycles and mopeds crossings in urban areas

- Safe crossings in urban areas
- >Emergency services
- >The impact of the fatigue level among vehicle drivers
- >Assessment of the measures taken in regard to road safety



Effect on accidents

- In most cases the effect of a road safety measure is stated as the percentage change in the number of accidents or injured road users
- Uncertainty is stated as a 95% confidence interval
- A distinction is made between different versions of a measure and different levels of accident severity
- Most summary estimates of effect are based on meta-analysis
- Emphasis has been put on the methodologically best studies



Effects of selected road safety measures

- Converting junctions to roundabouts
- Installing guardrails
- Installing and improving road lighting
- Traffic calming
- Speed limits
- Seat belts
- Crash helmets
- Driver training
- Road safety campaigns
- Speed enforcement



Converting junctions to roundabouts

	Percentage change in the number of accidents			
	Accident severity	Best estimate	95% confidence interval	
All roundabouts	All severities	-36	(-43; -29)	
All roundabouts	Fatal accidents	-66	(-85; -24)	
All roundabouts	Injury accidents	-46	(-51; -40)	
All roundabouts	Property damage only accidents	+10	(-10; +35)	
Previous yield junctions	All severities	-40	(-47; -31)	
Privious signalised junctions	All severities	-14	(-27; +1)	
X-junctions	All severities	-34	(-42; -25)	
T-junctions	All severities	-8	(-28; +18)	
Roundabouts in rural areas	All severities	-69	(-79; -54)	
Roundabouts in urban areas	All severities	-25	(-34; -15)	





Why are roundabouts so effective?

- Can we believe that roundabouts will normally improve safety?
 - Yes, a roundabout will normally reduce the number of injury accidents, in particular the most severe
- Why are they effective?
 - The number of conflict points between traffic movements is reduced from 32 to 9 in four-leg junctions and from 9 to 6 in three-leg junctions
 - Entering traffic must give way to circulating traffic; this reduces speed and makes drivers more attentive
 - The deflection provided by the central island reduces speed
 - Collisions will occur at sharp angles with small differences in speed

Guardrails

Table 1.15.1: Effects on accidents of guardrails along the roadside

	Percentage change in the number of accidents				
Accident severity	Types of accident affected	Best estimate	95% confidence interval		
New guardrail alor	ng embankment				
Fatal accidents	Running-off-the-road	-44	(-54, -32)		
Injury accidents	Running-off-the-road	-47	(-52, -41)		
Unspecified	Running-off-the-road	-7	(-35, +33)		
Changing to softe	r guardrails				
Fatal accidents	Running-off-the-road	-41	(-66, +2)		
Injury accidents	Running-off-the-road	-32	(-42, -20)		















Road Signs

In Albania during 2013 about 27,6 % of fatalities has happened during night time in the dark .



Lightening reduce fatalities from 13% - 75 % as for tipe of road.

In the national plan is foressen till 2020 to implement measures for putting the barriers on roads, lightining of roundabouts and completation of all signs in all national road net.

Installing road lighting

	Percentage change in the number of accidents			
Accident severity	Types of accidents affected	Best estimate	95% confidence interval	
Accidents in darkness on all typ	es of roads			
Fatal accidents	All accidents	-60	(-62; -57)	
Injury accidents	All accidents			
Controlled for publication bias		-14	(-23; -4)	
Not controlled for publication bias		-23	(-34; -11)	
Property damage only accidents	All accidents	-16	(-23; -10)	
Unspecified	Head-on collisions	-52	(-57; -46)	
Unspecified*	Head-on collisions	-20	(-54; +44)	
Unspecified	Rear-end collisions	-54	(-68; -33)	
Unspecified*	Rear-end collisions	-41	(-71; +21)	
Unspecified	Single vehicle accidents	-39	(-64; +3)	
Unspecified*	Single vehicle accidents	-5	(-50: +79)	

Table 1.18.1: Effects on accidents of lighting of previously unlit roads









Does road lighting always improve safety?

- Nearly all evaluation studies find that safety is improved
- However, most of the studies are of rather low quality
- Should we nevertheless believe in them?
- Yes, we should, because:
 - Effects have been replicated in many countries and during a long Period
 - The pattern in effects makes sense: if you improve lighting, effects are greater; if you reduce it, effects change direction
 - The pattern in effects also makes sense in that fatal accidents are reduced the most and pedestrian accidents more than accidents involving motor vehicles only
 - Darkness is a universal risk factor

Traffic calming

Effects on accidents of traffic calming according to design of evaluation study





Speed Limits in Albania

Road Safety Performance indicators	2009	2013	Objective for 2020	Estimated trend towards target
The percentage of traffic volume within the speed limits in the national road network	58,8%	42%	80%	Not in accordance with the required trend
The average travel speed	50 km/h	60 km/h	70 km/h	In accordance with the required trend

Non-enforcement of traffic rules





Speed limits

- A very important road safety measure with a long and troubled history
- It is still not universally applied (German autobahn) and there is often a pressure to raise speed limits
- It is the law which is more often violated than any other law in society
- It is not uncommon for 50 % of traffic to exceed speed limits
- This has no parallel: shoplifting is far less than 50 %; homicides occur at a lower rate than fatal traffic accidents, and so on

Speed limits

- Are speed limits really needed; why cannot motorists be allowed to choose speed freely?
- Briefly stated because they are not capable of doing so in a way that brings about the most desirable outcomes from a societal point of view
- There is certainly a large element of rationality in driver speed choice – however, there are also systematic deviations from rationality that are severe enough to justify guiding drivers in their choice by means of speed limits











Seat belts



All accidents during 2013



- % Unknown cases
- * % User of seatbelts and helmets
- * % Do not use seatbelts and helmets

Road Safety	2009	2013	Objective for	Estimated trend
Performance			2020	towards target
indicators				
The percentage	12,3 %	17,7 %	80%	Not in accordance
of those who				with the required
wear seatbelts				trend
and protective				
helmets				





Bicycle helmets



According to international studies, it shows that using a protective helmet can decrease the number of fatalities in accidents up to 50%.

- A measure that has generated much controversy
- Many cyclists are opposed to the use of helmets or to laws requiring helmets, fearing that cycling – which is good for health – may be reduced
- Evaluation studies are characterized by:
 - Extensive publication bias
 - Poor control for confounding factors
 - A clear time trend: helmets are getting less effective
 - No evaluation study has gained widespread acceptance
 - The discussion has been particularly heated in Australia

Driver training

- Young and inexperienced drivers have very high accident rate
- Gaining enough experience to reach a low level of risk takes considerable time (5-7 years)
- It has therefore been hoped that driver training can reduce some of the high risk of novice drivers and speed up the reduction of risk once the driving license has been obtained
- This hope is unfounded and it is extremely improbable that driver training could ever have favorable effect on safety



An impossible educational task

It has long been the hope of educators that novice drivers can learn not just the skills needed for safe driving, but also acquire an understanding that these skills develop slowly and have not been fully learnt by the time a driver is licensed. However, teaching young people not simply to acquire certain skills, but also to correctly assess the limits of their skills is an almost impossible task. It is, so to speak, impossible to teach people that they do not know anything, or that what they know is only a very small part of what they need to know. Gregersen (1996) reported a very interesting experiment that shows this. He compared two groups of novice drivers. One group had been given skills training to make the driver as skilled as possible in braking and performing an eva-



An impossible educational task

sive manoeuvre. The other group had been instructed that this task was very difficult and that they could not necessarily be expected to perform it successfully. The two groups then performed an evasive manoeuvre on a test track. Actually, the group that had been taught to master the skill and who erroneously believed that they did in fact master the skill, did a little worse on the task than the group who had been taught to have more modest expectations about their own performance.



Road safety campaigns

- It is very difficult to imagine a basis, which is not self-contradictory, for believing that such campaigns could have an effect
- If we believe that road users are, by and large, subjectively rational, i.e. they behave the way they think is best, there is no reason to believe that campaigns could have an effect, since road users see no reason to change their behaviour
- If, on the other hand, we believe that road users are not rational (by their own standards), then why would they pay attention to appeals to rationality



So, campaigns can have an effect after all

- But it is not very well known whether the mechanisms identified above are those that explain why some campaigns had an effect
- There are other validity issues affecting a number of evaluation studies – in particular poor control for potentially confounding factors
- Some of the campaigns that were included in CAST contained other measures in addition to pure publicity, in particular police enforcement





Key references

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Thank you