

Association
mondiale
de la Route



World Road
Association



Road Safety Inspections in
Romania and in Vietnam
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ROAD SAFETY SEMINAR
Lome, Togo
October 2006

ROAD SAFETY Inspections (RSI) in Romania and Vietnam

- The development aid projects
- The accident data, an issue of under reporting
- The main safety deficiencies of the countries road infrastructures
- The content of of the RSI guidelines
- Proposals for the implementation of RSI

The Development Aid projects

- 1. Technical Assistant for Road Safety Measures Implementation in Romania (Europe Aid/114414/D/SV/RO) 2004**
“Implementation of a Road Safety Audit System” inclusive training
- 2. Swedish International Development Aid (SIDA) for Safer Roads in Vietnam**
2006, Development of Road Safety Audit and Inspection Guidelines inclusive training

Two different activities in the Terms of Reference of both projects:

Road Safety Audits

of existing roads = RSI

Accident investigations
and safety surveys



to detect existing
deficiencies and to
improve the situation

Road Safety Audit

of road design = RSA

for larger investments
or major maintenance

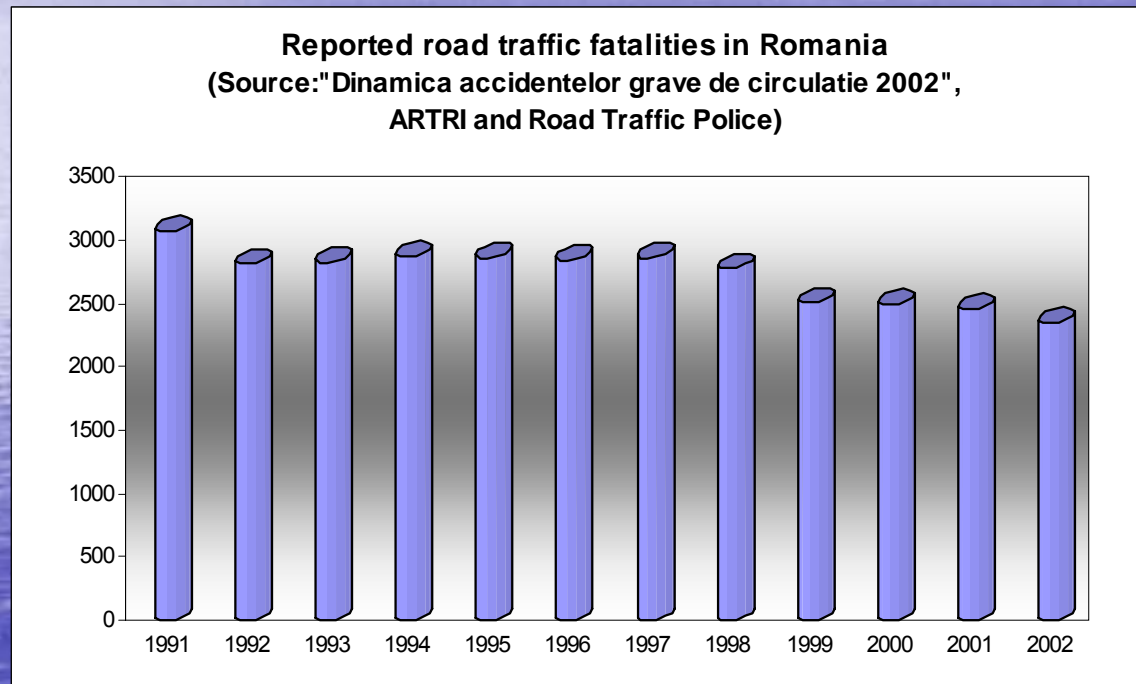


to eliminate design
faults and **prevent**
human errors

What is Road Safety Inspection ?

- *RSI is a*
- *systematic road safety assessment of **existing roads***
- *carried out by a qualified inspector or a team of inspectors*
- *who report on the roads accident potential*
- *for all kinds of road users*

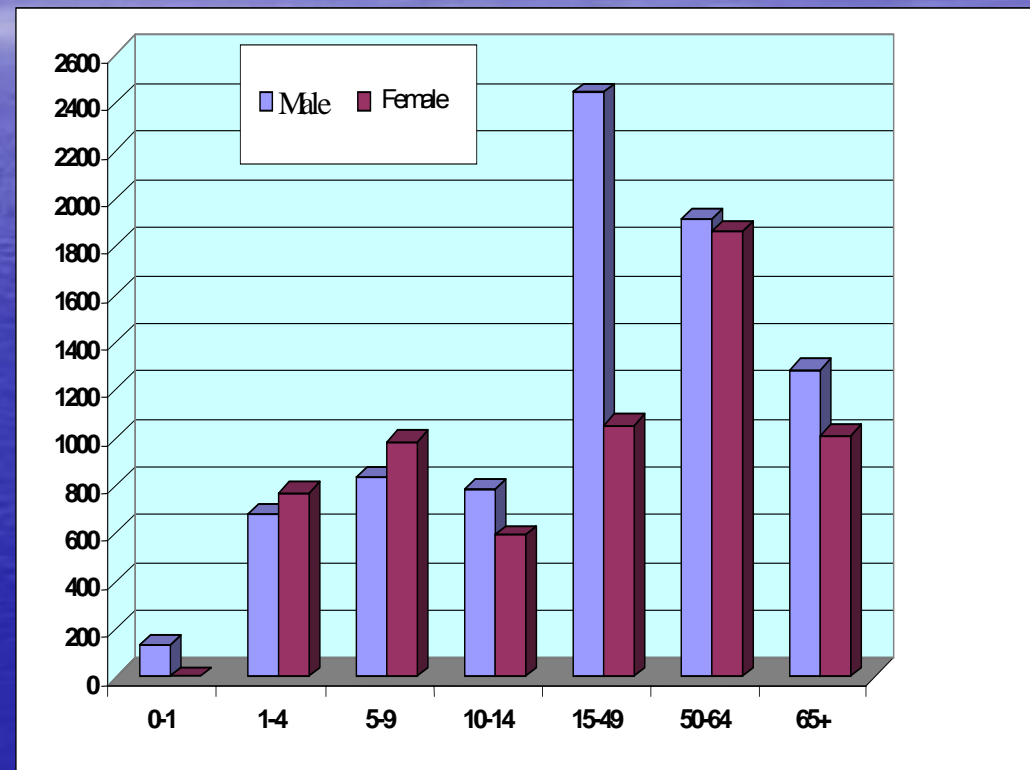
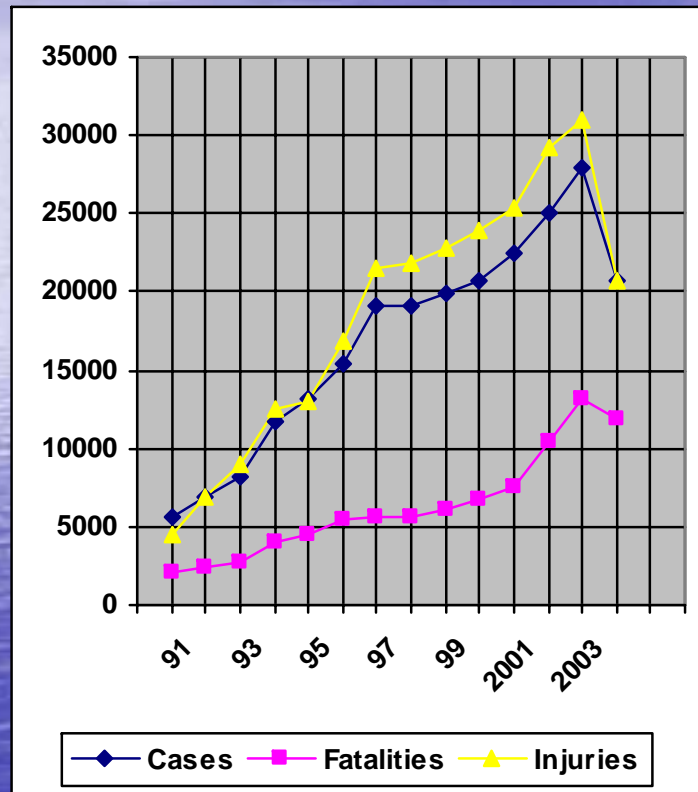
Romanian accident data, an issue of doubtful reporting



- About 2.400 fatalities in 2004
- but less than 6.000 seriously injured!
- Unbelievable!

Officially 12 fatalities per 100.000 inhabitants
but accident reporting is doubtful

Vietnamese accident data, an issue of underreporting



Officially 14 fatalities per 100.000 inhabitants,
but 50% underreporting is estimated

The main safety deficiencies of the countries road infrastructures found by RSI

- **Function and surrounding**
- **Cross sections**
- **Alignment**
- **Intersections**
- **Traffic signing and marking**
- **Road side features, obstacles**
- **Passive safety installations**
- **Needs of none motorized road users**

Checklists

Road Safety Inspection - Checklist for Interurban Roads Nr.Section

Issue	No.	Question	Yes/ No	+	-	Remarks
1. Function and surrounding	1	Is the design of the road according to its function and hierarchy in the network?				
	2	Are there mixed functions?				
	3	Do we realize the change of functions carly enough (around 300 m ahead)?				
	4	Are transitions installed between different functions?				
2. Cross section Climate and water	1	Is the cross section appropriate to the function?				
	2	Are any facilities put in place to counter climatic problems effective?				
	3	Is there sufficient drainage for the road and surrounds?				
	4	Is there an open drainage system within the safety zone?				

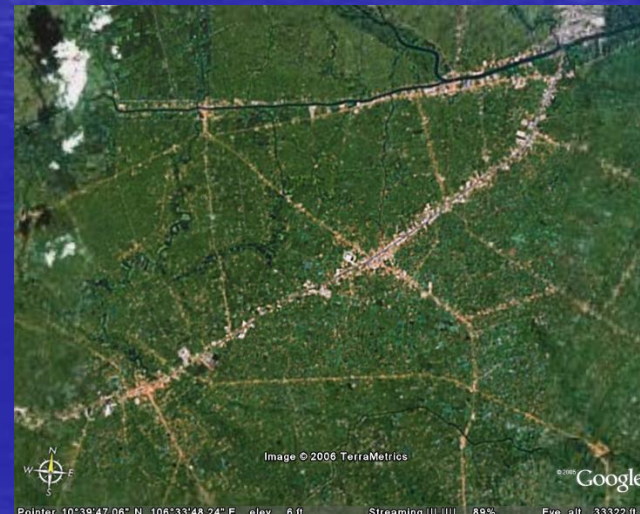
Mixed functions along linear settlements

Romania



26.10.2006

Vietnam



10

Lack of access control along interurban roads

- Unregulated private access to interurban roads develops to endless linear settlements with high risks for pedestrians and other vulnerable road users



Different speed regulations for different vehicles in Vietnamese towns



The image shows a speed limit sign with two columns: 'LOẠI PHƯƠNG TIỆN' (Vehicle Type) and 'TỐC ĐỘ TỐI ĐA KM/H' (Maximum Speed in km/h). The sign is divided into four rows, each representing a different vehicle category and its corresponding speed limit.

LOẠI PHƯƠNG TIỆN	TỐC ĐỘ TỐI ĐA KM/H
 	70
 	60
  	50
 	40

- The inconsistency of regulations is a problem for safe behaviour
- But most of all the different speeds of the vehicles will cause dangerous overtaking manoeuvres

Romania

Unsafe cross sections

Vietnam



26.10.2006

Black Spots at lane subtractions

Romania



20.10.2000

Vietnam



To direct the slow traffic into the fast is dangerous. Reduce number of lanes as a process of overtaking

Romania

Lack of guidance in curves

Vietnam



- no super elevation
- view on the road course is obstructed by vegetation
- poor guidance by chevrons



No guidance by chevrons
in the whole country

Black spots at intersections of the Y-type in Romania



**No clear regulations for the right of way
and many conflict points**

Black spots at intersections of the Y-type in Vietnam



No clear regulations for the right of way and many conflict points

The needs of none motorized road users are widely neglected

Romania



Sidewalks are often occupied

and

Pedestrian crossings unprotected



Vietnam



Romania

Road side obstacles

Vietnam



The Drainage System is often a linear obstacle in both countries



More obstacles are Culverts, Delineators Km-stones Poles and other Road equipment



Very heavy delineators

26.10.2006

Windows in the passive safety installation

Romania



Vietnam



Passive safety Installations

As

dangerous obstacles



Catalogue of deficiencies and remedies

As annexes to the countries

Road Safety Inspection Guidelines

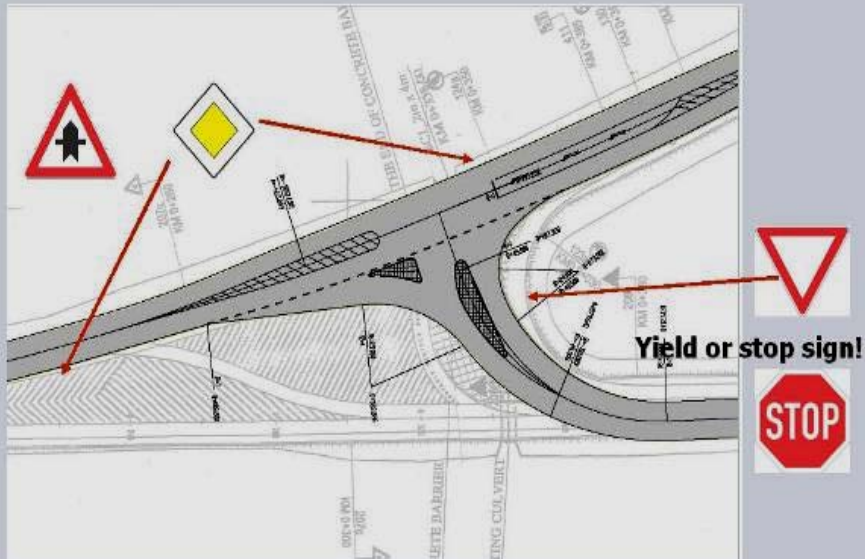


Edition July 2006

The catalogues of deficiencies and remedies content:

- The specific road situation of the countries
- Fundamental principles for safe roads
- Special Remedies on speed and
- Proposals of treatments for the different road components following the structure of the checklists

Cheaper and safer solutions



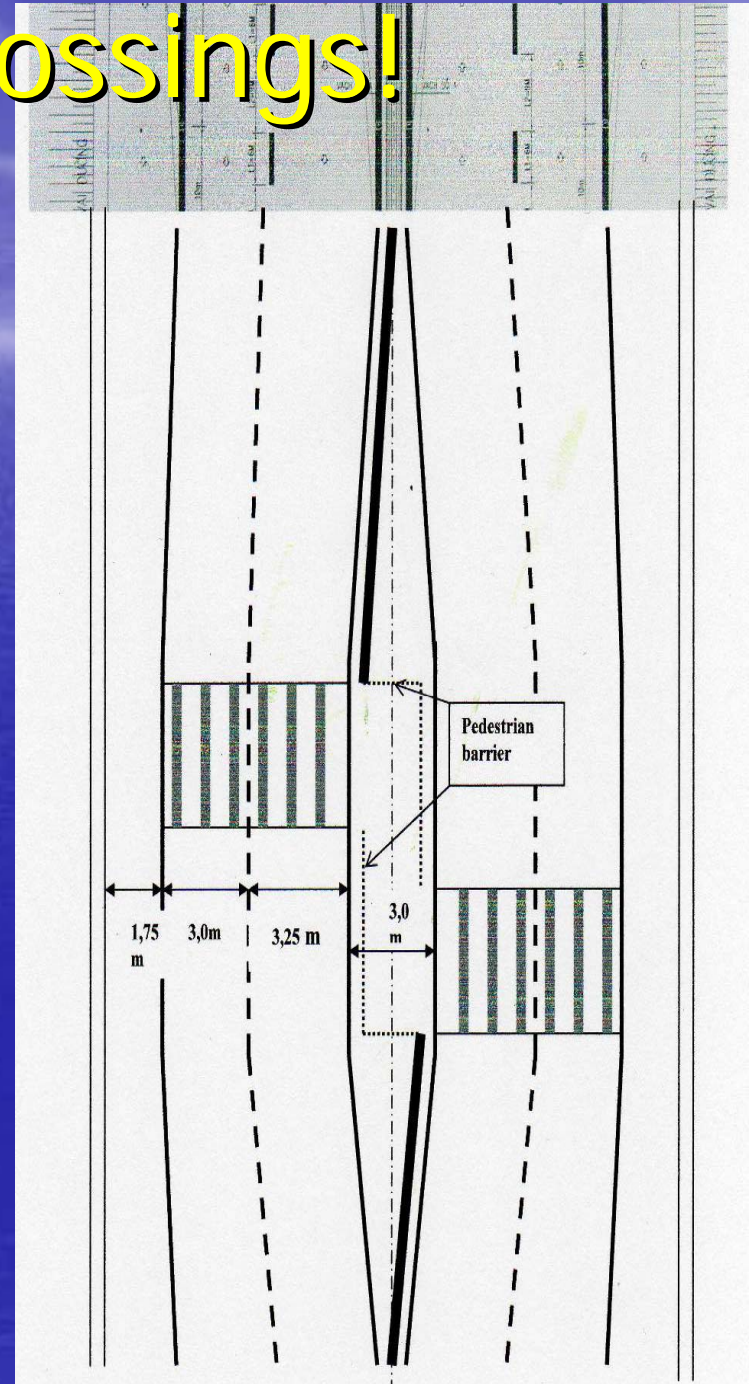
Second Possibility - Changing into a (single-lane) roundabout

An intersection of the T-Type or a round about would save 250.000 US\$ and many lives and injuries

Improve pedestrian crossings!



26.10.2006



Content of the guidelines for RSI

- The countries recent road safety facts
- Fundamental Road Safety Principles and Practice
- The Road Safety Management System
- The procedure of Road Safety inspections
- About the road safety inspectors and their certification

Structure of the RSI training courses

- One weeks lectures, exercises and field studies along the checklists.
- Some weeks home work for own road safety inspection reports
- One weeks for presentation and discussion of these reports, more lectures, exercises and field studies
- Final conference about the Road Safety Inspection guideline and the Catalogue of deficiencies and remedies

Certificates



CỤC ĐƯỜNG BỘ VIỆT NAM
Vietnam Road Administration



Swedish National Road Consulting AB

CHỨNG CHỈ CERTIFICATE

Chứng nhận
This is to certify that

Ông/Bà (Mr/Ms): **Phạm Bá Bình**
Sinh ngày (Birthday): **23/04/1964**
Đơn vị (Organization): **Sở Giao thông vận tải Thái Nguyên**
(Thai Nguyen Provincial Department of Transport)

Đã hoàn thành khóa học
“THẨM ĐỊNH AN TOÀN ĐƯỜNG BỘ”
được tổ chức tại Việt Nam trong thời gian 5 tuần.
has successfully completed the 5 week course on
“ROAD SAFETY INSPECTION AND AUDIT”
held in Vietnam.

Khóa học do Tổ chức phát triển quốc tế Thụy Điển và Ủy ban An toàn giao thông quốc gia tài trợ;
Cục Đường bộ Việt Nam và Công ty Tư vấn đường bộ quốc gia Thụy Điển tổ chức thực hiện.

*The course was arranged under the auspices and sponsorship of the Swedish International
Development Agency & National Traffic Safety Committee of Vietnam and organized by Vietnam
Road Administration and Swedish National Road Consulting AB.*

Hà Nội, ngày 14 tháng 7 (July), 2006

Mai Văn Đức
Chủ tịch Cục Đường bộ Việt Nam
Chairman of Vietnam Road Administration

Roberto Bauducco
GD.C.ty Tư vấn đường bộ quốc gia Thụy Điển
Managing Director of
Swedish National Road Consulting AB

Our proposals for the implementation of Road Safety Inspections

- Improve the cooperation between Transport police and road Administrations by common road accident commissions
- Training of policemen and engineers in common courses of accident investigations and road safety inspections
- Implement accident commissions by legal regulations in the road act (of Romania)

Epilog: Romania, National Road 1



3 accident with 10 fatalities in 2004!

Obvious deficits:



**Negative crossfall in
the curve**

26.10.2006



Low skid resistance

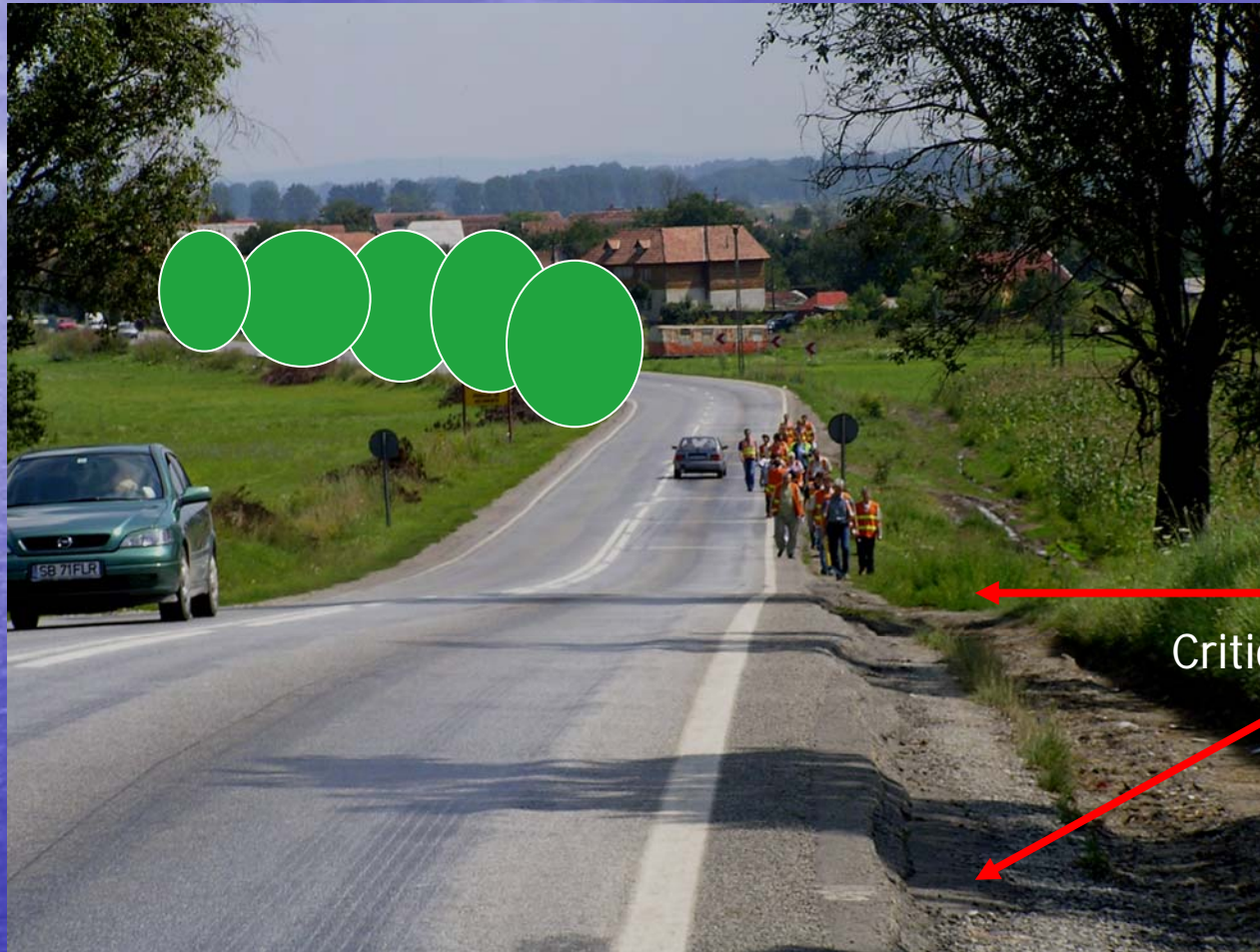
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Don't stop your investigation at the place where the accidents have ended!



**But check the location 300m ahead,
where overtaking was not anymore prohibited...
A misleading signal to the drivers!**

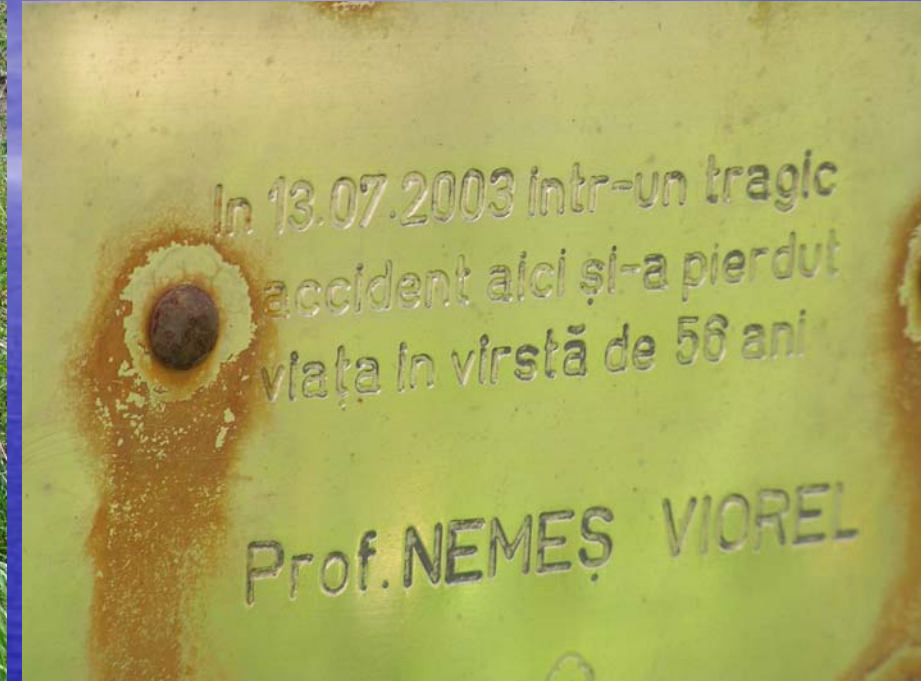
The road course was not detectable



Critical road side

Imagine the situation in darkness!

Prof. Nemes Viorel felt himself safely



- He got a wrong message and drove faster downhill
- He couldn't realize the road course going to the left
- He couldn't realize the negative cross fall in the curve
- He couldn't realize the low skid resistance and
- **He died in the age of 56 on the 13th July 2003**



Thank you for your attention

11 8 2004